

MEMORANDUM

TO: City Council
FROM: City Manager
DATE: September 19, 2019
SUBJECT: Comments on Agenda Items, Meeting of September 24, 2019

ITEM 8.A. A representative from Southern California Edison Company will make a presentation on their wildfire mitigation plan.

ITEM 8.B. Staff will provide the City Council with an update of Los Angeles County's 2020 new voting procedures, including a brief video. In addition, information about a "mock election" will be shared, to be held on September 28 and 29 at 50 locations throughout the County. One will be held at Pamela Park.

ITEM 8.C. A public safety update will be provided by Public Safety Director Brian Villalobos.

ITEM 12.D (Consent Calendar). This is to consider approving two new crossing guard agreements, one with the Duarte Unified School District (DUSD), and one with the California School of the Arts (CSArts). The City has recently contracted with All City Management Services (ACMS) for these services. To share the costs of the crossing guards, the City has partnered with DUSD and CSArts. The City and DUSD/CSArts would each contribute 50% of the direct costs of the contract with ACMS associated with the school crossing guard program at the following locations:

DUSD – Royal Oaks Drive at Royal Oaks School, Mt. Olive Drive at Royal Oaks Drive, Buena Vista Street at Kellwil Way, Mel Canyon Road at Deerlane Drive, Crestfield Drive at Central Avenue.

CSArts – Central Avenue at Highland Avenue, Highland Avenue to CSArts Driveway

ITEM 12.E (Consent Calendar). A proclamation will be issued designating October 2, 2019, as Clean Air Day in the City of Duarte. The City was awarded a grant to promote Clean Air Day. In partnership with Foothill Transit, the City will be hosting two "Transit Parties" promoting clean air transit on that day, one at the Duarte Senior Center from 11:00 a.m. – 1:00 p.m., and one at the Duarte Teen Center from 3:00 p.m. – 5:00 p.m. These Transit Parties will have food, drinks, music, giveaways, trivia, and educational materials on the all-electric DuartEbus system. The goal is to increase ridership and provide educational materials to our senior and teen populations about clean air transit. The City encourages all residents, businesses, employees, and community members to participate in Clean Air Day activities to help clear the air for all Californians.

ITEM 12.F (Consent Calendar). This is to authorize the release of subdivision bonds in the amount of \$735,200 related to the construction of improvements at Third Street and Oak Avenue. All conditions of the project's permit have been met, and the work has been completed and accepted by the Engineering Division.

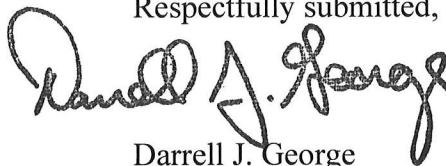
ITEM 12.G (Consent Calendar). This is a resolution to adopt a City debt management policy. Senate Bill 1029 (Hertzberg) provides a requirement that public agencies in California adopt a debt management policy prior to any new bond issuance, or the refunding/reissuance of existing debt. Before issuing or refunding/reissuing debt, each public agency issuing debt must have a Council-approved debt management policy.

The debt management policy issue arose in the review the City Attorney's office was doing in connection with an opinion letter being requested on the Climatec matter, as part of the proposed financing agreement. As part of finalizing that transaction, the City will be called upon to verify that it has such a policy in place. It appears that we do not have one to date, so the adoption of one is proposed for this evening, and should occur prior to final action on the Climatec project.

ITEM 14. This is a Public Hearing to authorize an Energy Performance Contract and Measurement and Verification Agreement with Climatec, LLC, along with a Master Tax-Exempt Lease/Purchase Agreement with U.S. Bancorp Governmental Leasing and Financing, Inc. At the August 27, 2019, meeting, the City Council adopted Resolution 19-19 making the necessary findings to authorize the implementation of an infrastructure modernization program, and approved, in draft form, the three agreements associated with the project. At that time, Council also directed staff to return the item on September 24, 2019, to approve the final scope of work.

Since the last public hearing, both staff and the City Attorney's office have been working with Climatec to finalize the previously reviewed agreements, and incorporate requested changes by the Council into the scope of work. The specific changes in the scope of work include: additional irrigation controllers, addition of flow sensors and master valves, and lighting and building automation at the Duarte Historical Museum. Since the last staff report and due to the enhanced scope of work in the smart irrigation system, that line item cost has increased from \$59,804 to \$133,578, and adding the new category of Irrigation Master Valves and Slow Sensors for \$385,282, bringing the overall project cost to \$2,750,427, and \$6,020,343 for the overall lifecycle savings.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Darrell J. George". The signature is stylized with a large, looped "D" and a cursive "George".

Darrell J. George
City Manager

Pasadena Star-News

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5007700

CITY OF DUARTE
1600 E. HUNTINGTON DRIVE
DUARTE, CA 91010

PROOF OF PUBLICATION (2015.5 C.C.P.)

STATE OF CALIFORNIA County of Los Angeles

I am a citizen of the United States, and a resident of the county aforesaid. I am over the age of eighteen years and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of PASADENA STAR-NEWS, a newspaper of general circulation for the City of Pasadena, by the Superior Court of the County of Los Angeles, State of California, on the date of June 22, 1927, Case Number 225647. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

09/03/2019

I declare under the penalty of perjury that the foregoing is true and correct.

Executed at Monrovia, LA Co. California
On this 3rd day of September, 2019.



Signature

(Space below for use of County Clerk Only)

Legal No. **0011309615**

DUARTE CITY COUNCIL NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that, pursuant to California Government Code section 4217.12, the City Council of the City of Duarte will hold a Public Hearing at 7:00 p.m. on Tuesday, September 24, 2019, in the Council Chambers, 1600 Huntington Drive, Duarte, California, regarding adoption and award of an Energy Performance Contract and Measurement and Verification Agreement with Climatec, LLC, and a Master Tax-Exempt Lease/Purchase Agreement with U.S. Bancorp Governmental Leasing and Financing, Inc.

The Public Hearing is for the purpose of taking public comment on, and considering and authorizing the execution of these agreements, pursuant to findings the City Council has made that the cost of the energy conservation services to the City will be less than the anticipated marginal cost to the City of electrical, thermal, or other energy than would have been consumed by the City in the absence of the program, that funds for the service of the related improvements are anticipated to be available from funds that otherwise would have been used by the City for purchase of electrical, thermal, or other energy required by the City in the absence of the energy conservation facilities to be developed under the proposed energy conservation services with Climatec, LLC. The City Council will also be asked to find the project implementing such measures is exempt from the California Environmental Quality Act under CEQA Regulations section 15301, relating to existing facilities.

Any interested party may appear in person, or by agent, and be heard. If this matter is challenged in Court, there will be a limit to only those issues that were raised at the Public Hearing described in this Notice, or in written correspondence delivered to the City Council at, or prior to, the Public Hearing. Written correspondence may be sent to Duarte City Hall, City Clerk's Office, 1600 Huntington Drive, Duarte, CA 91010-2592.

Copies of the applicable agreements, or further information, may be obtained from the City Manager's Office, phone (626) 357-7931.

Marla Akana
City Clerk

PUBLISH:
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Pasadena Star News, Tuesday, September 3, 2019
Duarte City Hall, Duarte Public Safety Office, Duarte

8/29/19

Ad#11309615

Agenda Memo City Manager's Office

To: Mayor Paras-Caracci and Members of the Duarte City Council
From: Karen A. Herrera, Deputy City Manager
Date: 9/18/19
Re: **ADOPTION OF FINAL AGREEMENTS AUTHORIZING THE IMPLEMENTATION OF THE CITY OF DUARTE INFRASTRUCTURE MODERNIZATION PROGRAM PURSUANT TO GOVERNMENT CODE SECTION 4217.10-18**

RECOMMENDATION: City staff is recommending that the City Council, by motion, approve two agreements with Climatec LLC for both installation and measurement/verification and associated US Bancorp Government Leasing and Finance Inc. financing agreement for the design/build implementation of comprehensive infrastructure modernizations throughout the City and authorize City Manager to execute the agreements on behalf of the City and direct staff to file a notice of exemption under CEQA Regulations section 15301.

BACKGROUND: At the August 27, 2019 meeting, the City Council adopted Resolution No. 19 R-19 making the necessary findings to authorize the implementation of an infrastructure modernization program pursuant to Government Code Section 4217.10-18 and approving, in draft form, the three agreements associated with the project. City Council directed staff to return the item on September 24, 2019, for final approval of the agreements.

In connection with that direction, staff has re-noticed the public hearing, and also proposes that City Council make a finding under the California Environmental Quality Act (CEQA) that the entry into these agreements is exempt from CEQA, under 14 California Code of Regulations section 15301, relating to Existing Facilities. The objectives of the program are to:

- 1) Comprehensively modernize aging energy/building/water infrastructure;
- 2) Complete improvements with costs being covered by utility savings;
- 3) Reduce rising utility costs, operating expenditures, and piecemeal maintenance costs associated with outdated and/or obsolete equipment;
- 4) Incorporate smart, connected, sustainable technology to improve City livability & services
- 5) Create a higher service level for the Duarte community through enhanced street and building lighting, facility heating and cooling; swimming pool heating etc.

DISCUSSION: Since the last public hearing, both staff and the City Attorney's office have been working with Climatec to finalize the previously reviewed agreements and incorporate requested changes by the Council into the scope of work. The specific changes in the scope of work are as follows:

- Original Irrigation Scope
The original scope of work included 29 irrigation controllers and focused on parks & major buildings. The scope would have provided a smart weather-based irrigation control system to allow for ease of scheduling, remote control capabilities from a single front-end interface and alerts if a controller stopped functioning.
- Revised Irrigation Scope
The revised scope of work includes 65 irrigation controllers and focuses on parks, major buildings, medians, sidewalks and HOA areas. The scope provides a smart weather-based irrigation control system to allow for ease of scheduling, remote control capabilities from a single front-end interface, and alerts if a controller stops functioning. Additionally, the scope has been revised to include flow sensors and master valves. The purpose of flow sensors is to allow for immediate alerts if there is a leak or ruptured pipe, and the purpose of master valves is to allow for automatic shut-off when a leak or ruptured pipe is detected.
- Duarte Historical Museum
Scope now includes lighting & building automation modernizations at the Museum.

Prior to the Council finalizing the agreements, a public hearing must be held in order to meet the statute and CEQA requirements. If approved, construction will consist of the following projects and is anticipated to cost approximately \$2.8 million dollars.

- LED Street Light Modernization
- Roof Mounted Solar PV System
- High Efficiency Heating & Cooling Equipment
- Interior & Exterior LED Lighting Modernization
- Smart Connectivity Street Light Control System
- Smart Building Automation System
- Solar Thermal Pool Heating
- Smart Irrigation Weather-Based Control System
- Irrigation Master Valves & Flow Sensors

If approved tonight, Council can expect one or more of the projects to commence in fall of 2019 and the entire scope is expected to take approximately 12 to 18 months to complete.

FISCAL IMPACT: The City will not incur any additional expenditures related to implementing the Infrastructure Modernization Program. The program pays for itself and provides a positive lifecycle savings of approximately \$6 million from the General Fund over the life of the new equipment (15 years for infrastructure improvements and 30 years for solar) **Per the Measurement and Verification Agreement, (Exhibit C) Climatec provides a contractual guarantee** for savings performance to ensure the City is made whole on its investment. If savings are not realized, then Climatec is required to pay the City for the amount of the savings shortfall.

The following chart illustrates the cost/savings analysis of the scope of work. As noted at the last meeting with Council on this project, interest rates have dramatically dropped to 2.42%. Thus, staff and the Climatec team are recommending the zero capital contribution scenario. Note: Since the last staff report and due to the enhanced scope of work in the smart irrigation system, that line item cost has increased from \$59,804 to \$133,578 and adding the new category of Irrigation Master Valves and Slow Sensors for \$384,282 bringing the overall project cost to \$2,750,427 and \$6,020,343 for the overall lifecycle savings.

City of Duarte Infrastructure Modernization Program Financing		
Category	Cost*	Lifecycle Savings**
LED Street Light Modernization	\$884,605	\$1,948,542
Roof Mounted Solar PV System	\$541,722	\$1,253,599
High Efficiency Heating & Cooling Equipment	\$233,280	\$364,587
Interior & Exterior LED Lighting Modernization	\$186,041	\$596,847
Smart Connectivity Street Light Control System	\$167,311	\$292,549
Smart Building Automation System	\$121,276	\$263,329
Solar Thermal Pool Heating	\$98,332	\$317,991
Smart Irrigation Weather-Based Control System	\$133,578	\$385,238
Irrigation Master Valves and Slow Sensors	\$384,282	\$597,661
Total	\$2,750,427	\$6,020,343

***Project Cost Breakdown** **\$2,750,427**

- \$2,750,427 - Municipal Lease Purchase Program (2.42% interest rate)
- \$ 0 - City Contribution
- \$81,673 - Utility Grants/Incentives

****Lifecycle Savings Breakdown** **\$6,020,343**

- \$3,713,243 – General Fund Operating Budget savings from reduced utility & maintenance costs over the life of the new equipment (15 years for infrastructure improvements and 30 years for solar)
- \$2,307,100 – Avoided capital expenditures based on capital improvement & deferred maintenance projects that would have been funded in the next 1-3 years and financing the entire project. Also requires an annual payment of \$35,000 for 15 years which would be recouped after the lease.

Climatec has provided various items of disclosure regarding the costs and interest rates applicable to the financing contemplated by the financing agreement, which the City has requested to avoid any issues that might exist under Government Code section 5852.1. Those disclosures are attached as Exhibit A.

CEQA EXEMPTION:

Staff proposes that City Council make a finding under the California Environmental Quality Act (CEQA) that the entry into these agreements is exempt from CEQA, under 14 California Code of Regulations section 15301, relating to Existing Facilities. That section exempts "minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency determination." Here, the project proposes to modify existing facilities to reduce energy or water demands, and to produce energy efficiency. but involves no or negligible expansion of the facilities in question, and therefore fits within the scope of the exemption. Assuming Council agrees, staff requests its direction to file a notice of exemption under this provision.

ATTACHMENTS:

1. Exhibit A: Disclosure pursuant to Government Code Section 5852.1
2. Exhibit B: Installation Agreement
3. Exhibit C: Measurement & Verification Agreement
4. Exhibit D: Financing Agreements

GOVERNMENT CODE SECTION 5852.1 DISCLOSURE

The following information consists of estimates that have been provided by Climatec, which have been provided to the City in good faith:

- (A) True interest cost of the Lease: 2.42%
- (B) Finance charge of the Lease (sum of all costs of issuance and fees/charges paid to third parties): \$0
- (C) Net proceeds to be received (net of finance charges, reserves and capitalized interest, if any): \$ 2,750,427.00
- (D) Total payment amount through maturity: \$ 3,312,555.30

The City Attorney's office estimates the total amount of attorney's fees expended on the transaction to date, and likely to be expended through finalization of the agreements, to be six thousand dollars (\$6,000.00).

INSTALLATION AGREEMENT FOR *City of Duarte, CA*

TERMS AND CONDITIONS

ATTACHMENTS

- Attachment "A" – Scope of Work
- Attachment "B" - Lighting Summary
- Attachment "C" – Mechanical Inventory
- Attachment "D" - Technical Appendix
- Attachment "E" – Solar PV Installation

ENERGY PERFORMANCE CONTRACT

This Contract entered into as of September 24, 2019 ("Effective Date") is made by and between:

City of Duarte, CA
("Purchaser") with its principal place of business at
1600 Huntington Drive, Duarte, CA 91010
and

Climatec LLC
With its principal place of business at
2150 Towne Centre Place, Suite 200
Anaheim, CA 92805

Purchaser and Climatec LLC agree as follows:

1. **INSTALLATION.** Climatec LLC shall provide Purchaser with an Energy Efficiency Program, as identified in **Attachment(s) A, B, C, D and E** and incorporated herein by reference (hereinafter referred to as the "Work") at the total fixed price of \$2,750,427.00 (Two million, seven hundred fifty thousand four hundred twenty seven and 00/100 dollars including required taxes and Performance and Payment Bonds (the "Contract Amount").

Climatec LLC is responsible for the design, engineering, permits, fees, approvals, project management, installation, startup, training, checkout, warranty, and insurance specifically associated with the Work to be performed. Climatec LLC is not responsible for any equipment, systems, controls, pre-existing climate control equipment deficiencies, balancing, duct cleaning, existing deficient conditions, etc. not specifically included in this Agreement. Climatec LLC will provide submittals and engineered drawings (if required), for Purchaser's technical review and written approval, prior to initiating construction. All construction and associated cleanup shall be performed and scheduled so as to minimize any disruption with any ongoing Purchaser activities. The Purchaser is responsible for Ethernet drops at each location for Energy Management System communication. This proposal offer is valid until December 23, 2019.

2. **SCOPE OF WORK.** Once this contract is executed by the Purchaser and Climatec LLC, Climatec LLC may not revise the contract in any way except by mutual agreement with the Purchaser. Prior to the contract being signed by both parties, Climatec LLC reserves the right to revise any or all portions of the agreement.

This agreement is based upon the use of straight time labor only unless stated otherwise in this agreement. Purchaser agrees to provide Climatec LLC with access to existing field utilities (electricity, toilets, drinking water, etc.) without charge. Climatec LLC agrees to keep the jobsite clean of debris arising out of its own operations. Purchaser shall not back charge Climatec LLC for any cost or expenses without Climatec LLC's written consent. Unless specifically noted in the statement of the scope of the work or services undertaken by Climatec LLC under this agreement, Climatec LLC's obligations under this agreement expressly exclude any work or service of any nature associated or connected with the identification, abatement, clean up, control, removal or disposal of environment Hazards or dangerous substances, to include but not to be limited to asbestos, PCBs, or mold discovered in applicable installation sites. Any language or provision of the agreement elsewhere contained which may authorize or empower the Purchaser to change, modify or alter the scope of work or services to be performed by Climatec LLC shall not operate to compel Climatec LLC to perform any work relating to Hazards without Climatec LLC's express written consent.

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3. **SOLAR INSTALLATION.** The scope of work excludes correction of concealed conditions that could not have been ascertained by general visual inspection. The scope excludes correction of any existing or previous violations of laws, codes or utility requirements and errors and omissions of the customer or other contractors not communicated to Climatec LLC. Customer will provide all discretionary permits (permits requiring the discretion of the issuer) required in time to execute the work within the agreed upon schedule. Climatec LLC will provide all non-discretionary, ministerial (permits not requiring thought and discretion of the issuer) permits required for the provision of the solar installation. Customer agrees to promptly execute and return provided Preliminary Interconnection Documentation (initial or preliminary paperwork or documentation required by the Utility for interconnection of the System to be executed by the System Owner), Preliminary Rebate Documentation (documentation comprising the initial or preliminary paperwork required by the administrator of the Rebate or the Rebate to be reserved) (if applicable), and Site Owner Consent Documentation (agreement from the site owner to install system on the real property identified in the proposal) (if applicable). Scope will include commercially reasonable efforts to promptly obtain the PTO (Permission to Operate) from Customer's utility. The monitoring equipment provider will provide monitoring hosting services for the first five (5) years of operation. Customer warrants that they hold title to the installation site and agree to the solar installation on that site.

Terms applicable to the solar scope are as follows:

- a. **Interconnection Agreement** – means an agreement between the Purchaser and a particular utility involved for interconnection of the solar output to the electrical grid.
- b. **Interconnection Equipment** – all equipment (including wiring and conduit and metering for net metering) on the Purchaser side of the main service meter to enable proper interconnection of the solar system to the grid.

(3.1) Design – Climatec LLC shall prepare the Design Submittals (prepared by qualified individuals). The Submittal shall be submitted to Purchaser for approval. Purchaser shall provide approvals within thirty (30) calendar days from receipt. If not received within thirty (30) days, the submittal may be deemed approval by Climatec LLC.

(3.2) Unforeseen Site Conditions – Within 10 days of discovery, Climatec LLC will notify Purchaser in writing of (a) subsurface or latent physical conditions at the site differing materially from those described in any contract or Purchaser documentation. Climatec LLC and the Purchaser acknowledge inspecting the sites for the solar installations and attest that no generally visible deficiencies were noted.

4. **INVOICING & PAYMENTS.** Climatec LLC may invoice the Purchaser for any equipment and/or materials installed at a job site. Purchaser agrees to pay Climatec LLC amounts invoiced upon receipt of invoice. Waivers of lien will be furnished upon request, as the work progresses; to the extent payments are received. If Climatec LLC's invoice is not paid within forty five (45) days of its issuance, it is delinquent and Climatec LLC may add 1% per month interest onto delinquent amounts.
5. **INDEPENDENT CONTRACT.** It is agreed between Purchaser and Climatec LLC that Climatec LLC shall perform the Work as an independent contractor. Climatec LLC may use subcontractors to perform work hereunder, provided Climatec LLC shall fully pay said subcontractors and in all instances remain fully responsible for (a) the proper completion of this agreement and (b) supervising such subcontractor's work and for the quality of the work they produce.
6. **MATERIALS.** All materials shall be new, in compliance with all applicable laws and codes, and shall be covered by a manufacturer's warranty, if appropriate. If the materials or equipment included in this agreement become temporarily or permanently unavailable, the time for performance of the work shall be extended to the extent thereof, and in case of permanent unavailability, Climatec LLC shall (a) be excused from furnishing said materials or equipment, and (b) be reimbursed for the difference between the cost of the materials or equipment permanently unavailable and the cost of a reasonable substitute therefore.
7. **COMPLETION.** The work specified in Section 1 shall be considered completed upon approval by the Purchaser, provided that the Purchaser's approval shall not be unreasonably withheld. The nature of the work is that it consists of multiple projects and/or sites, as noted in Attachment A (Scope of Work). Once work on a project or a site is deemed by Climatec LLC to be substantially complete (that is available for beneficial use by the Purchaser with the Scope of Work for that site or project functioning as required) except for minor items (a punch list), Climatec LLC

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will provide a Notice of Substantial Completion for that site or project to the Purchaser. Final Completion, as previously noted, will occur once the entire Scope of Work is complete for all sites and projects.

8. **WARRANTY.** Climatec LLC warrants that the equipment and systems provided under this contract shall be free from defects in material and workmanship arising from normal usage for a period of one year from the date of beneficial use or eighteen months from delivery of said equipment or systems. Within the warranty period, if Purchaser provides written notice to Climatec LLC of any such defects within thirty (30) days after the appearance or discovery of such defect, Climatec LLC shall, at its option, repair or replace the defective equipment and return said equipment to Purchaser. All transportation charges incurred in connection with the warranty for equipment shall be borne by Purchaser, unless otherwise provided for in manufacturer warranties. These warranties do not extend to any equipment which has been repaired by others, abused, altered or misused, or which has not been properly and reasonably maintained. All transferrable manufacturer warranties associated with the equipment will be transferred to the Purchaser. These warranties are in lieu of all other warranties, expressed or implied, including but not limited to those of merchantability and fitness for a specific purpose.
9. **LIABILITY.** Climatec LLC shall not be liable for any special, indirect, or consequential damages arising in any manner from the equipment, material, or systems furnished or the work performed pursuant to this agreement.
10. **TAXES.** The price of this agreement includes duties, sale, use, excise or other similar taxes required by federal, state or local laws in effect at the time of agreement execution. 8
11. **DELAYS.** Climatec LLC shall not be liable for any delay in the performance of the work resulting from or attributed to acts of circumstance beyond Climatec LLC's control, including but not limited to acts of God, riots, labor disputes, conditions of the premises, acts or omissions of the Purchaser, or other Contractors or delays caused by suppliers or subcontractors of Climatec LLC, etc. If Purchaser delays project for greater than 60 days, Climatec LLC can recover any cost inflation on un-billed materials that were either stored or yet to be purchased.
12. **REBATES, UTILITY INCENTIVES, AND GRANTS** Unless otherwise stated in the project scope-of-work, or cash flow analysis, any and all lighting rebates (which Climatec represents have already been deducted from the project price), incentives, grants that are earned through the course of this project from public or private utilities, municipalities, development districts or state funding are 100% the property of Climatec LLC or their designee. All other rebates, incentives, or grants, if available, will be the property of the Purchaser. The paperwork, inspections and verification required to collect these monies are the sole responsibility of Climatec LLC. The customer agrees to assist Climatec LLC where required by the jurisdiction in the form of data required for the application and authorizing signatures. In the event the Customer incurs expenses related to the processing of the applications, Climatec LLC shall reimburse these direct costs. All rebates will be initially received by Climatec LLC and disbursed according to this contract. Purchaser makes no representation nor warranty regarding the eligibility of Climatec to receive or achieve of such lighting rebates, or incentives, in the amounts estimated by Climatec or at all, nor regarding their continuing availability at any level or amount. Climatec shall not adjust any pricing or any other charges to Purchaser hereunder on account of any reduction, disallowance, or variance in Climatec's ability to receive or achieve such rebates, incentives, or grants.
13. **TAX CREDITS, TAX DEDUCTIONS AND 179d QUALIFYING CREDITS** Unless otherwise stated in the contract, any and all eligible tax credits or incentives that can be earned through the course of this project from State, Local or Federal agencies for energy efficient design are 100% the property of Climatec LLC or their designee. The paperwork, inspections and verification required to collect these credits are the sole responsibility of Climatec LLC. The customer agrees to assist Climatec LLC where required by the jurisdiction in the form of data required for the application and authorizing signatures and/or transfers. In the event the Customer incurs expenses related to the processing of the applications, Climatec LLC shall reimburse these direct costs. If there is a change in tax credits, deductions or 179-D credits that are a part of this project, such change will not result in a change to the price of the project.
14. **COMPLIANCE WITH LAWS.** Climatec LLC shall comply with all applicable federal, state, and local laws and regulations. All licenses and permits required for the prosecution of the work shall be obtained and paid for by Climatec LLC.

- 15. CLIMATEC LLC'S LICENSE AND DIR REGISTRATION.** In order to perform the work required by this Agreement, Climatec LLC shall possess a valid, active license in the classification(s) required issued by the State of California, which shall remain valid and active throughout the Project. In addition, Climatec LLC must be registered with DIR as a public works contractor.
- 16. WAGE RATES.** Pursuant to the provisions of Article 2, commencing with Section 1770 of the Labor Code, OWNER has ascertained the general prevailing rate of per diem wages in the locality in which this public work is to be performed for each craft, classification, or type of worker needed to execute this Agreement. The general rates of per diem wages are available at OWNER's office. In the event that the listed or posted rates are in error, CLIMATEC LLC is responsible to pay those rates determined by the Director of Industrial Relations to be applicable, and OWNER shall not be responsible for any damages arising from the error.
- 17. PAYROLL RECORDS.** It is the responsibility of CLIMATEC LLC to comply with the provisions of Labor Code Section 1776 dealing with the maintenance and inspection of employee payroll records.
- 18. PREVAILING WAGE.** The project is subject to prevailing wage monitoring and enforcement by the Department of Industrial Relations (DIR). Climatec LLC and all subcontractors will be subject to the requirements of Subchapter 4.5 of Chapter 8 of Title 8 of the California Code of Regulations. Climatec LLC and all subcontractors will be required to furnish electronic certified payroll records to the DIR on a frequency not less than monthly using the DIR's eCPR system at http://www.dir.ca.gov/Public-Works/eCPR_System-iForm.html. Climatec LLC shall comply with all requirements of the Labor Code and attendant regulations pertaining to prevailing wage monitoring and compliance as required by the DIR, including, but not limited to, posting job site notices prescribed by Title 8 CCR § 16451(d). Climatec LLC shall permit OWNER, the DIR or their designee to interview Climatec LLC's employees concerning compliance with prevailing wage, apprenticeship, and related matters, whether or not during work hours, and shall require each subcontractor to provide OWNER, the DIR or their designee with such access to its employees.
- 19. APPRENTICES.** If applicable, CLIMATEC LLC shall comply with the requirements of Labor Code Section 1777.5 dealing with the employment of apprentices.
- 20. DISPUTES.** Written notice of any Dispute must be provided to the other party, describing specific details of the dispute relating to changes in Work or claim for additional compensation, within fourteen (14) days of the occurrence of the condition. This notice must be provided via certified mail. For a reasonable period commencing on the day written notice of Dispute was provided, but not to exceed thirty (30) days, the parties shall in good faith attempt to resolve the Dispute. If the parties are unable to resolve the Dispute during this period, the parties shall proceed to binding arbitration. The arbitrator shall be neutral and mutually acceptable. The arbitrator shall determine all rights and obligations under this Agreement and the award of the arbitrator shall be final, binding, and enforceable. Any award issued pursuant to this provision may be enforced in a court of competent jurisdiction, and each party hereby consents to that jurisdiction. All venues for arbitration shall be in the locality in which the project is located. The prevailing party in arbitration shall recover reasonable legal fees and costs as determined by the arbitrator. .
- 21. CHANGE ORDER (Mid-Performance Amendments).** Climatec LLC and the Purchaser recognize that:
- Purchaser may desire a mid-job change in the specifications or scope that would add time and cost to the specified work or inconvenience Climatec LLC.
 - Other provisions of the Agreement may be difficult to carry out because of unforeseen events, such as material shortage or labor strikes. If these or other events beyond the control of the parties reasonably require adjustments to this agreement, the parties shall make a good faith attempt to agree on all necessary particulars. Such agreements shall be put in writing, signed by the parties and added to this agreement. Failure to reach agreement shall be deemed a dispute to be resolved as agreed in section 14 of this agreement.
- 22. INSURANCE.** Climatec LLC will maintain comprehensive liability and other insurance in amounts not less than those set forth below. Such insurance shall protect Climatec LLC and the Purchaser against any claims, losses,

liabilities and expenses arising from the Work, whether performed by Climatec LLC or any subcontractor of Climatec LLC. The coverage shall include:

- a. Workmen's Compensation and Employers Liability Insurance - \$1,000,000 each accident; \$1,000,000 each employee/disease; and \$1,000,000 policy limit.
- b. Comprehensive or Commercial General Liability - Bodily injury liability of \$1,000,000 per occurrence and general aggregate liability of \$2,000,000 per occurrence.
- c. Comprehensive Automobile Insurance – Combined single limit of \$1,000,000 per occurrence.

If the Purchaser requires that Climatec LLC maintain any special insurance coverage, policy, amendment, or rider, the Purchaser shall pay the additional cost.

23. **INDEMNITY.** The Parties hereto agree to defend, indemnify, and hold harmless each other from any and all liabilities, claims, expenses, losses or damages, including attorney's fees which may arise in connection with the execution of the work herein specified and which are caused, in whole or in part by the negligent act or omission of the indemnifying Party. Nothing herein constitutes any waiver of any of the Purchaser's statutory immunities.
24. **OCCUPATIONAL SAFETY AND HEALTH.** The Parties hereto agree to notify each other immediately upon becoming aware of any alleged violation of, the Occupational Safety and Health Act (OSHA) relating in any way to the project or project site.
25. **ENTIRE AGREEMENT.** This agreement, upon acceptance, shall constitute the entire agreement between the parties and supersedes any prior representations or understandings.
26. **CHANGES.** No change or modification of any of the terms and conditions stated herein shall be binding upon Climatec LLC unless accepted by Climatec LLC in writing.
27. **SEVERABILITY.** If one or more of the provisions of this agreement are held to be unenforceable under laws, such provision(s) shall be excluded from these terms and conditions and the remaining terms and conditions shall be interpreted as if such provision were so excluded and shall be enforced in accordance to their terms and conditions.
28. **COUNTERPARTS.** This agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument. A signature on a copy of this agreement received by either party by facsimile or portable document format (PDF) is binding upon the other party as an original. The parties shall treat a photocopy of such facsimile as a duplicate original.
29. **ASSIGNMENT.** Climatec LLC retains the right to assign its rights and obligations of this agreement with written consent of Purchaser.
30. **ACKNOWLEDGMENT.** Both Climatec LLC and the Purchaser acknowledge having read this agreement and all contract documents incorporated herein and have executed this agreement on the date written above.

31. APPROVAL. Each party represents that the person that has executed this agreement on its' behalf is authorized to do so.

IN WITNESS WHEREOF, the parties have caused their duly authorized officers to execute this Agreement effective as of the date first above written.

City of Duarte, CA

Signature

Print Name

Title

Date

Climatec LLC

Signature

Print Name

Title

Date

Attachment “A”

Scope of Work

City Wide Measures

Street Lighting

- ✱ Retrofit (23) existing HID Cobra heads on LS-2, LS-3, and TC-1 energy tariffs to new, high efficiency LED lighting systems.
- ✱ Refurbish and Retrofit (687) existing HID lamps in existing decorative bell shaped street light fixtures on LS-2, LS-3, and TC-1 energy tariffs to new, high efficiency LED lighting systems.

Scope includes:

- Remove the existing Bell fixtures from the City's poles and ship fixtures to the facility.
- Temporarily install Cobra Head fixtures to provide lighting during refurbishing process.
- Disassemble fixture, remove old lamp and all appurtenances.
- Sandblast, clean, chemically etch, prime, and paint Bell housing.
- Retrofit the fixture with an LED kit.
 - Kit includes a dimmable driver
- Add a new 7-pin control receptacle to the Bell fixture
- Ship the refurbished Bell fixture to the City and re-install it on the pole
- Install the Climatec supplied Smart Control Node on the fixture

Scope excludes:

- Any electrical upgrades to undisclosed poles, or additional lighting.

Street Lighting Controls

- ✱ Provide and install an open protocol street lighting control and monitoring system to control (674) applicable street lighting fixtures. The system will be capable of automatically dimming the fixture by a set amount during dusk and dawn hours to maximize energy savings, as well as notifying city personnel when a light is not functioning properly. In addition, the system can act as a platform for future additions (at an additional cost per feature) including parking sensors, security monitoring, and public Wi-Fi.

Irrigation

- ✱ Install (65) Wi-Fi ready weather based smart irrigation control systems. The controller's Wi-Fi will communicate via a dedicated 4G Hot Spot system. The system will monitor local weather and soil evapotranspiration on a daily basis and automatically adjust the controller's irrigation to climatic requirements. Schedules can also be customized and adjusted remotely using the systems web based interface. Please see the Irrigation Summary in Attachment D for additional information on Irrigation Scope, quantities, and locations. 4G Communication network includes a one-time purchase of a 4G cellular hotspot from Freedom Pop or similar 4G Hotspot provider. Purchase includes 200Mb of data per month free without subscription. This plan does not expire. Any data use above 200Mb will be billed to the customer at \$0.02/Mb. Typical controller use is under 500Mb/month.
- ✱ Install (51) flow sensor / master valve assemblies capable of detecting unexpected flow events (ie: ruptured pipes) and responding by shutting off the main water supply. Scope includes the installation of the flow sensor, interlock to the master valve, typical trenching requirements and start-up/testing of the new system. If any major issues are discovered during the construction phase while uncovering the existing system, the issues will be compiled in a brief report and submitted to the City for further

action. Please see the Irrigation Summary in Attachment D for additional information on Irrigation Scope, quantities, and locations.

Chamber of Commerce

Lighting

- ✱ Retrofit identified interior T8 fluorescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- ✱ Remove and replace (1) existing thermostat controlling (1) Rooftop Packaged Unit at the Chamber of Commerce with a Wi-Fi based HVAC thermostat that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

City Hall

Lighting

- ✱ Retrofit identified interior T8 and CFL lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- ✱ Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- ✱ Remove and replace the existing Building Automation System (BAS) and (12) existing zone thermostats controlling the buildings (12) Variable Volume & Temperature (VVT) zones at City Hall with Wi-Fi based controls that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the zone thermostats, damper controls, and system controller. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Solar PV Electric Generation

- * Install a 109.6kW (DC) solar power generating system. Scope includes engineering, site testing, construction, commissioning, and monitoring of the solar power system, as well as support to execute the utility interconnection agreement. Climatec shall install a data acquisition system to provide system performance monitoring for the City. PV arrays to be installed on the roof of the City Hall and Community Center Buildings.

Community Center

Lighting

- * Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace the existing Building Automation System (BAS) and (3) existing zone thermostats controlling the buildings (3) Variable Volume & Temperature (VVT) zones at City Hall with Wi-Fi based controls that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the zone thermostats, damper controls, and system controller. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Fitness Center

Lighting

- * Retrofit identified interior T8 and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace the existing Building Automation System (BAS) and (4) existing zone thermostats controlling the buildings (4) Variable Volume & Temperature (VVT) zones at City Hall with Wi-Fi based controls that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the zone thermostats, damper controls, and system controller. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no

reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Renewables

- ✱ Install a solar thermal water heating system for the outdoor swimming pool. The system will be an active direct drain-back type with unglazed solar collectors located on the rooftop of the fitness center. Current natural gas heating system will remain unchanged to provide backup pool heating.

Scope Includes:

- Installation of solar collectors and interconnecting piping.
- Start-up/testing of the new system.
- Support to the City to maintain roof warranty (if any) but can't guarantee the manufacturer's acquiescence.

Scope Excludes:

- Repair of undisclosed structural deficiencies and associated upgrades/modifications to existing roof.

Senior Center

Lighting

- ✱ Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- ✱ Retrofit identified exterior building mounted CFL systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- ✱ Remove and replace (11) existing thermostats controlling (11) Split System Units at the Senior Center with Wi-Fi based HVAC thermostats that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Mechanical

- ✱ Replace seven (7) split system heat pump units with new high efficiency units of similar size and capacity. Please refer to the Mechanical Replacement Inventory in Attachment C for equipment size and location.

Scope of Work Includes:

- Removal of existing split system units (fan coil and condensing unit).
- Proper disposal or containment of refrigerant.
- Provide and install new equipment as required.
- Disconnection/reconnection of the existing electrical, installation of new electrical disconnects.
- Condensate connections.

- Start-up/testing of the new units, and connection to the existing HVAC control system. All equipment removed shall be disposed of per EPA guidelines.
- Integration of occupancy sensors to reset room temperature during unoccupied periods.

Scope Excludes:

- Undisclosed electrical and structural upgrades/modifications.
- Roofing repairs not directly related to the scope of mechanical work.

Teen Center

Lighting

- * Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- * Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- * Remove and replace (5) existing thermostats controlling (5) Split System Units at the Teen Center with Wi-Fi based HVAC thermostats that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Mechanical

- * Replace five (5) split system gas/electric units with new high efficiency units of similar size and capacity. Please refer to the Mechanical Replacement Inventory in Attachment C for equipment size and location.

Scope of Work Includes:

- Removal of existing split system units (furnace, evaporating coil, and condensing unit).
- Proper disposal or containment of refrigerant.
- Provide and install new equipment as required.
- Disconnection/reconnection of the existing electrical and gas lines, installation of new electrical disconnects.
- Condensate connections.
- Start-up/testing of the new units, and connection to the existing HVAC control system. All equipment removed shall be disposed of per EPA guidelines.
- Integration of occupancy sensors to reset room temperature during unoccupied periods.

Scope Excludes:

- Undisclosed electrical and structural upgrades/modifications.
- Roofing repairs not directly related to the scope of mechanical work.

Public Safety Station

Lighting

- ✱ Retrofit identified interior T8 fluorescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- ✱ Remove and replace (1) existing thermostat controlling (1) Rooftop Packaged Unit at the Public Safety Station with a Wi-Fi based HVAC thermostat that allows network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Royal Oaks Park Building

Lighting

- ✱ Retrofit identified interior T8 fluorescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- ✱ Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- ✱ Remove and replace (3) existing thermostats controlling (3) Rooftop Packaged Units at the Royal Oaks Park Building with Wi-Fi based HVAC thermostats that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Duarte Park Building

Lighting

- ✱ Retrofit identified interior T8, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting

scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.

- ✱ Retrofit identified exterior building mounted and pole mounted CFL and HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Duarte Museum

Lighting

- ✱ Retrofit identified interior T12, CFL, and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors and/or dimming control, if provided, will be identified within the Lighting Summary.
- ✱ Retrofit identified exterior building mounted CFL and incandescent lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Controls

- ✱ Remove and replace (2) existing thermostats controlling (2) Split System Furnaces at the Duarte Museum with Wi-Fi based HVAC thermostats that allow network access for remote temperature set point and schedule adjustments, alerts, and occupancy based control. The scope includes integration of occupancy sensors, installation, setup, networking, and commissioning of the thermostats. Occupancy sensors allow for temperature set back during unoccupied periods. The new control system will be connected through the City's existing local area network (LAN) where available and excludes any repairs, upgrades or improvements to the existing network, including areas with poor reception or no reception. The scope excludes evaporative cooling units, heating only units, ductless split system units, and window AC units, or modifications to any other existing controls at the site.

Aloysia Moore Park

Lighting

- ✱ Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Beardslee Park

Lighting

- ✱ Retrofit identified exterior building mounted and pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Encanto Park & Nature Walk

Lighting

- ✱ Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Royal Oaks Park and Extension

Lighting

- ✱ Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Thorsen Park

Lighting

- ✱ Retrofit identified exterior pole mounted HID lighting systems with new high efficiency LED lighting systems. Please see the Lighting Summary in Attachment B for exact information on lighting scope, quantities, and locations. Occupancy sensors (on board or fixture mounted) and/ or dimming control, if provided, will be identified within the Lighting Summary.

Project Wide Note: All work in the scope of this project will be performed in compliance with California's Title 24 Building and Energy codes.

Attachment “B”
Lighting Summary

City of Duarte
Terms and Conditions – Att B

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Aloysia Moore Park -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Flag Pole(s)

1st Floor

Rf#-2 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314	1	NL026/fld	- New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.026	4,380	114	0.274	1,200
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Building/Area: Park

1st Floor

Rf#-1 Rm - Ext - Pole Mount	HPS 1L post top lantern, HPS 70w, HID ballast	6	95	0.57	4,380	2,497	6	RL027/s/gcs	- (1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.162	4,380	710	0.408	1,787
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Qty and kW for Aloysia Moore Park :	7	0.9	7	0.2	0.7
kWh for Aloysia Moore Park :		3,811		824	2,987

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Beardslee Park -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Park

1st Floor

Rf#-1 Rm - Ext - Pole Mount	HPS 1L post top lantern, HPS 70w, HID ballast	1	95	0.095	4,380	416	1	RL027/s/gcs	- (1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.027	4,380	118	0.068	298
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Building/Area: RR Bldg

1st Floor

Rf#-2 Rm - Ext - Wall Mount	MH 1L wm wall pack, MH 50w, HID ballast	1	68	0.068	4,380	298	1	NL030/wp/ft	- New LED wall pack (FT), 50,000-Hr L70 rated life, 30w	30	0.03	4,380	131	0.038	166
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Qty and kW for Beardslee Park :	2	0.2	2	0.1	0.1
kWh for Beardslee Park :		714		249	464

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Chamber of Commerce -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Open Office	2x4x 2L rec trf, F32T8 32w, electronic ballast	12	59	0.708	1,700	1,204	12	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ec	26	0.312	1,700	530	0.396	673
Rf#-2 Rm - Office	2x4x 2L rec trf, F32T8 32w, electronic ballast	2	59	0.118	1,700	201	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	1,700	88	0.066	112
Rf#-3 Rm - Office	LED 1L rec can, LED ?w, n/a	2	0	0	1,700	0	2	DND - DND: (do not do, fixtures left as is)		0	0	1,700	0	0	0
Rf#-4 Rm - Kitchen	LED 1L rec can, LED ?w, n/a	2	0	0	1,700	0	2	DND - DND: (do not do, fixtures left as is)		0	0	1,700	0	0	0
Rf#-5 Rm - RR	LED 1L rec can, LED ?w, n/a	2	0	0	1,700	0	2	DND - DND: (do not do, fixtures left as is)		0	0	1,700	0	0	0
Rf#-6 Rm - Storage	1x4x 2L sm wp, F32T8 32w, electronic ballast	2	59	0.118	500	59	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.052	500	26	0.066	33
Rf#-7 Rm - All Exterior Space (DNE)	DND (do not do, left as is), n/a, n/a		0	0	1,092	0	0	DND - DND: (do not do, fixtures left as is)		0	0	1,092	0	0	0
Qty and kW for Chamber of Commerce :		22		0.9			22				0.4			0.5	
kWh for Chamber of Commerce :						1,463									
													644	818	

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



City Hall -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: CH Main Bldg															
1st Floor															
Rf#-1 Rm - Reception	1x4x 2L sm box, F32T8 28w, electronic ballast	1	50	0.05	3,640	182	1	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	3,640	95	0.024	87
Rf#-2 Rm - Reception	1x3x 1L under cabinet, F25T8 25w, electronic ballast	2	26	0.052	3,640	189	2	RLT831 -	(1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	12	0.024	3,640	87	0.028	102
Rf#-3 Rm - Lobby	LED 1L can, LED ?w, n/a	1	0	0	3,640	0	1	DND -	DND: (do not do, fixtures left as is)	0	0	3,640	0	0	0
Rf#-4 Rm - Office - to left of entry	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	2,800	560	4	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.104	2,800	291	0.096	269
Rf#-5 Rm - Counter	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	3,640	728	4	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	3,640	379	0.096	349
Rf#-6 Rm - Parks & Rec	2x4x 2L rec trf, F32T8 28w, electronic ballast	9	50	0.45	3,640	1,638	9	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.234	3,640	852	0.216	786
Rf#-7 Rm - Parks & Rec	1x3x 1L under cabinet, F25T8 25w, electronic ballast	4	26	0.104	3,640	379	4	RLT831 -	(1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	12	0.048	3,640	175	0.056	204
Rf#-8 Rm - Office 1	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,800	280	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.052	2,800	146	0.048	134
Rf#-9 Rm - Office 2	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,800	280	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.052	2,800	146	0.048	134
Rf#-10 Rm - Main Hallway	1x4x 2L pm box, F32T8 28w, electronic ballast	22	50	1.1	3,640	4,004	22	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.572	3,640	2,082	0.528	1,922
Rf#-11 Rm - Main Hallway	LED 1L track spot light, LED ?w, n/a	3	0	0	3,640	0	3	DND -	DND: (do not do, fixtures left as is)	0	0	3,640	0	0	0
Rf#-12 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	3,000	450	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	3,000	234	0.072	216
Rf#-13 Rm - WRR	CF 1L rec square 12", CFS-15w, CFL ballast	1	15	0.015	3,000	45	1	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.0085	3,000	26	0.0065	19
Rf#-14 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	3,000	450	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	3,000	234	0.072	216
Rf#-15 Rm - MRR	CF 1L rec square 12", CFS-15w, CFL ballast	1	15	0.015	3,000	45	1	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.0085	3,000	26	0.0065	19
Rf#-16 Rm - Finance	2x4x 2L rec trf, F32T8 28w, electronic ballast	8	50	0.4	3,640	1,456	8	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.208	3,640	757	0.192	699
Rf#-17 Rm - Finance	1x3x 1L under cabinet, F25T8 25w, electronic ballast	4	26	0.104	3,640	379	4	RLT831 -	(1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	12	0.048	3,640	175	0.056	204
Rf#-18 Rm - Asst City Mgr	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	2,800	560	4	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	26	0.104	2,800	291	0.096	269
Rf#-19 Rm - Admin	2x4x 2L rec trf, F32T8 28w, electronic ballast	8	50	0.4	3,640	1,456	8	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.208	3,640	757	0.192	699
Rf#-20 Rm - Admin	1x3x 1L under cabinet, F25T8 25w, electronic ballast	6	26	0.156	3,640	568	6	RLT831 -	(1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	12	0.072	3,640	262	0.084	306
Rf#-21 Rm - City Mgr	2x2x 2L rec trf, F17T8 17w, electronic ballast	9	33	0.297	2,800	832	9	RLT822 -	(2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast ews	20	0.18	2,800	504	0.117	328

W* = wall switch sensor; C* = ceiling sensor; E* = existing sensor, L* Dimming Control

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



City Hall -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-22 Rm - City Mgr	CF 1L rec can, CFP-26w, CFL ballast	1	30	0.03	2,800	84	1	RL013/ckit -	(1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0085	2,800	24	0.0215	60
Rf#-23 Rm - RR	CF 2L sconce, CFS-15w, CFL ballast	1	30	0.03	2,800	84	1	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.0085	2,800	24	0.0215	60
Rf#-24 Rm - Conference	2x2x 2L rec trf, F17T8 17w, electronic ballast	4	33	0.132	3,640	480	4	RLT822 -	(2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	20	0.08	3,640	291	0.052	189
Rf#-25 Rm - Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,800	280	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	2,800	146	0.048	134
Rf#-26 Rm - Office	1x3x 1L under cabinet, F25T8 25w, electronic ballast	5	26	0.13	2,800	364	5	RLT831 -	(1) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	12	0.06	2,800	168	0.07	196
Rf#-27 Rm - Back Hall	2x2x 2L rec trf, F17T8 17w, electronic ballast	3	33	0.099	3,640	360	3	RLT822 -	(2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.06	3,640	218	0.039	142
Rf#-28 Rm - Back Hall	LED 1L can, LED ?w, n/a	2	0	0	3,640	0	2	DND -	DND: (do not do, fixtures left as is)	0	0	3,640	0	0	0
Rf#-29 Rm - Kitchen	LED 1L can, LED ?w, n/a	7	0	0	2,500	0	7	DND -	DND: (do not do, fixtures left as is)	0	0	2,500	0	0	0
Rf#-30 Rm - Files	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	500	100	4	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	500	52	0.096	48
Rf#-31 Rm - Copy	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	3,640	728	4	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	3,640	379	0.096	349
Rf#-32 Rm - Comm Develop	2x4x 2L rec trf, F32T8 28w, electronic ballast	16	50	0.8	3,640	2,912	16	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.416	3,640	1,514	0.384	1,398
Rf#-33 Rm - Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	2,800	560	4	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	2,800	291	0.096	269
Rf#-34 Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	1,092	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0
Rf#-35 Rm - Ext - Pole Mount	LED 1L post globe, LED ?w, n/a		0	0	1,092	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0

Building/Area: CY Flag Pole(s)

1st Floor

Rf#-48 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314	1	NL026/flid -	New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.026	4,380	114	0.274	1,200
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Building/Area: CY Garage

1st Floor

Rf#-44 Rm - Ext - Wall Mount	HPS 1L flood, knuckle, HPS 70w, HID ballast	6	95	0.57	4,380	2,497	6	NL026/flid -	New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.156	4,380	683	0.414	1,813
Rf#-45 Rm - Ext - Wall Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314	1	NL026/flid -	New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.026	4,380	114	0.274	1,200

Building/Area: CY Parking

1st Floor

Rf#-49 Rm - Ext - Pole Mount	HPS 1L Brnz Sq Pole, Rect Arm 23', HPS 250w, HID ballast	4	295	1.18	4,380	5,168	4	NL072/p/s -	New LED area light, tenon mount, 100,000-Hr L70 rated life, 72w, onboard dimming ^{CCb}	72	0.288	1,095	315	0.892	4,853
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City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



City Hall -

PRE-RETROFIT								POST RETROFIT							
Location		Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-50 Mount	Rm - Ext - Pole	MH 1L flood, knuckle, MH 100w, HID ballast	5	128	0.64	4,380	2,803	5	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.13	4,380	569	0.51	2,234
Rf#-51 Mount	Rm - Ext - Pole	HPS 1L flood, adj yoke, HPS 150w, HID ballast	2	195	0.39	4,380	1,708	2	NL054/p/s - New LED area light, pole or bldg mount, 100,000-Hr L70 rated life, 54w, onboard dimming OCCb	54	0.108	1,095	118	0.282	1,590

Building/Area: CY Portable Off

1st Floor

Rf#-36 Rm - Open Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	5	50	0.25	3,640	910	5	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.13	3,640	473	0.12	437
Rf#-37 Rm - Locker	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	3,640	182	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.026	3,640	95	0.024	87
Rf#-38 Rm - WRR	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	950	48	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.026	950	25	0.024	23
Rf#-39 Rm - MRR	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	950	48	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.026	950	25	0.024	23
Rf#-40 Rm - Storage	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24
Rf#-41 Rm - Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	2,800	420	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.078	2,800	218	0.072	202
Rf#-42 Rm - Ext - Wall Mount	LED 2L flood EMS, LED ?w, n/a	1	0	0	4,380	0	1	DND - DND: (do not do, fixtures left as is) ^{EMS}	0	0	4,380	0	0	0
Rf#-43 Rm - Ext - Wall Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314	1	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w ^{EMS}	26	0.026	4,380	114	0.274	1,200

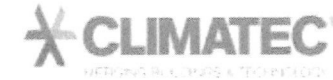
Building/Area: CY Trailer

1st Floor

Rf#-46 Rm - All Interior Space (no lights)	DND (do not do, left as is), n/a, n/a		0	0		0	0	DND - DND: (do not do, fixtures left as is)	0	0	0	0	0	0
Rf#-47 Rm - Ext - Wall Mount	HPS 1L flood, knuckle, HPS 70w, HID ballast	2	95	0.19	4,380	832	2	NL026/fld - New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	26	0.052	4,380	228	0.138	604

Qty and kW for City Hall :	190	10.7	190	4.4	6.3
kWh for City Hall :	39,040			13,743	25,297

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Community Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd	
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Lobby	1x4x 2L rec trf, F32T8 32w, electronic ballast	11	59	0.649	2,500	1,623	11	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.286	2,500	715	0.363	907	
Rf#-2 Rm - MRR	1x4x 2L rec trf, F32T8 32w, electronic ballast	3	59	0.177	3,000	531	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.078	3,000	234	0.099	297
Rf#-3 Rm - WRR	1x4x 2L rec trf, F32T8 32w, electronic ballast	3	59	0.177	3,000	531	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.078	3,000	234	0.099	297
Rf#-4 Rm - Laundry	CF 2L sm drum, CFP-26w, CFL ballast	1	60	0.06	1,800	108	1	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life		19	0.019	1,800	34	0.041	74
Rf#-5 Rm - Office	2x4x 2L rec trf, F32T8 32w, electronic ballast	4	59	0.236	1,800	425	4	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.104	1,800	187	0.132	238
Rf#-6 Rm - Conference	2x4x 2L rec trf, F32T8 32w, electronic ballast	8	59	0.472	2,500	1,180	8	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.208	2,500	520	0.264	660
Rf#-7 Rm - Art Room	2x4x 2L rec trf, F32T8 32w, electronic ballast	6	59	0.354	1,800	637	6	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.156	1,800	281	0.198	356
Rf#-8 Rm - Kitchen	2x4x 2L rec trf, F32T8 32w, electronic ballast	3	59	0.177	1,800	319	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.078	1,800	140	0.099	178
Rf#-9 Rm - Main Room	Inc. 1L rec can Dimming, Inc. 250w T4, n/a	30	250	7.5	2,000	15,000	30	RL0281/s - (1) LED 28w screw in lamp, 120/277, 50,000-Hr rated life, 3000K, E11 mini base		28	0.84	2,000	1,680	6.66	13,320
Rf#-10 Rm - Main Room	CF 1L rec can, CFS-30w P24, CFL ballast	2	30	0.06	2,000	120	2	RL091/s/r20 - (1) LED 8w R20 screw in lamp, 4000K		8	0.017	2,000	34	0.043	86
Rf#-11 Rm - Stage	Inc. 1L rec can Dimming, Inc. 250w T4, n/a	4	250	1	2,000	2,000	4	RL0281/s - (1) LED 28w screw in lamp, 120/277, 50,000-Hr rated life, 3000K, E11 mini base		28	0.112	2,000	224	0.888	1,776
Rf#-12 Rm - Stage	CF 2L sm drum, CFP-26w, CFL ballast	1	60	0.06	2,000	120	1	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life		19	0.019	2,000	38	0.041	82
Rf#-13 Rm - Back Stage	CF 2L sm drum, CFP-26w, CFL ballast	2	60	0.12	1,200	144	2	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life		19	0.038	1,200	46	0.082	98
Rf#-14 Rm - Video	CF 2L sm drum, CFP-26w, CFL ballast	1	60	0.06	500	30	1	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life		19	0.019	500	10	0.041	20
Rf#-15 Rm - Video	1x4x 2L sm wp, F32T8 32w, electronic ballast	2	59	0.118	500	59	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.052	500	26	0.066	33
Rf#-16 Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	1,092	0	0	DND - DND: (do not do, fixtures left as is)		0	0	1,092	0	0	0
Qty and kW for Community Center :		81		11.2			81			2.1			9.1		
kWh for Community Center :						22,826						4,403		18,422	

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Duarte Park Building -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-5 Rm - Ext - Eave Mount	CF 1L rec can, CFS-20w, CFL ballast	7	20	0.14	4,380	613	7	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.0595	4,380	261	0.0805	353
Rf#-6 Rm - Ext - Wall Mount	LED 1L wm wall pack, LED ?w, n/a	4	0	0	4,380	0	4	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-6 Rm - Ext - Wall Mount	LED 1L wm wall pack, LED ?w, n/a	4	0	0	4,380	0	4	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0

Building/Area: Playground

1st Floor															
Rf#-10 Rm - Ext - Pole Mount	MH 1L flood, tenon, MH 400w, HID ballast	2	458	0.916	4,380	4,012	2	NL106/p/s -	New LED area light, pole or bldg mount, 100,000-Hr L70 rated life, 106w, onboard dimming-CCC	106	0.212	1,095	232	0.704	3,780

Building/Area: RR Bldg

1st Floor															
Rf#-4 Rm - Ext - Wall Mount	HPS 1L wm sq on arm, HPS 70w, HID ballast	4	95	0.38	4,380	1,664	4	NL030/wp/ft -	New LED wall pack (FT), 50,000-Hr L70 rated life, 30w	30	0.12	4,380	526	0.26	1,139
Rf#-5 Rm - Ext - Wall Mount	LED 1L wm vandal, LED ?w, n/a	1	0	0	4,380	0	1	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-6 Rm - Ext - Wall Mount	CF 2L wm wall pack, CFP-32w, CFL ballast	1	70	0.07	4,380	307	1	RL0132/h -	(2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.019	4,380	83	0.051	223

Qty and kW for Duarte Park Building :	23	1.5	23	0.4	1.1
kWh for Duarte Park Building :		6,596		1,102	5,495

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Encanto Park / Nature Walk -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Park

1st Floor

Rf#-1 Rm - Ext - Pole Mount	HPS 1L deco bell, HPS 100w, HID ballast	7	138	0.966	4,380	4,231	7	RL027/s/gcs -	(1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.189	4,380	828	0.777	3,403
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Building/Area: RR Bldg

1st Floor

Rf#-2 Rm - Ext - Wall Mount	LED 1L fxt, n/a, n/a		0	0	1,092	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0
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Qty and kW for Encanto Park / Nature Walk :	7	1.0		7		0.2	0.8
kWh for Encanto Park / Nature Walk :				4,231		828	3,403

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Fitness Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Main Bldg

1st Floor

Rf#-1 Rm - Lobby	CF 1L rec can, CFS-30w P24, CFL ballast	14	30	0.42	4,732	1,987	14	RL091/s/r20 -	(1) LED 8w R20 screw in lamp, 4000K	8	0.119	4,732	563	0.301	1,424
Rf#-2 Rm - Lifeguard Office	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-3 Rm - Men's Locker	1x4x 2L rec trf, F32T8 28w, electronic ballast	11	50	0.55	4,732	2,603	11	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.286	4,732	1,353	0.264	1,249
Rf#-4 Rm - Men's Locker	CF 1L rec square 12", CFS-15w, CFL ballast	2	15	0.03	4,732	142	2	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.017	4,732	80	0.013	62
Rf#-5 Rm - Women's Locker	1x4x 2L rec trf, F32T8 28w, electronic ballast	11	50	0.55	4,732	2,603	11	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.286	4,732	1,353	0.264	1,249
Rf#-6 Rm - Women's Locker	CF 1L rec square 12", CFS-15w, CFL ballast	2	15	0.03	4,732	142	2	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.017	4,732	80	0.013	62
Rf#-7 Rm - Stair	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	4,732	710	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	4,732	369	0.072	341
Rf#-10 Rm - Storage	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12
Rf#-11 Rm - Office	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	3,500	175	1	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	3,500	91	0.024	84
Rf#-12 Rm - Exercise	2x4x 2L rec trf, F32T8 28w, electronic ballast	18	50	0.9	4,732	4,259	18	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.468	4,732	2,215	0.432	2,044
Rf#-13 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-14 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-15 Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	4,380	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-16 Rm - Pool	LED 1L pool lights, LED ?w, n/a		0	0	1,092	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0

Basement

Rf#-8 Rm - Court 1	1x4x 2L rec trf, F32T8 28w, electronic ballast	16	50	0.8	4,732	3,786	16	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.416	4,732	1,969	0.384	1,817
Rf#-9 Rm - Court 2	1x4x 2L rec trf, F32T8 28w, electronic ballast	16	50	0.8	4,732	3,786	16	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.416	4,732	1,969	0.384	1,817

Building/Area: Pool Equipment

1st Floor

Rf#-17 Rm - Pool Pump Room	1x4x 2L sm vapor tight, F32T8 28w, electronic ballast	3	50	0.15	50	8	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	50	4	0.072	4
Rf#-18 Rm - Pool Generator Room	1x4x 2L sm vapor tight, F32T8 28w, electronic ballast	3	50	0.15	50	8	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	50	4	0.072	4
Rf#-19 Rm - Ext - Roof Mount	MH 1L flood, adj yoke, MH 250w, HID ballast	1	295	0.295	4,380	1,292	1	NL072/p/s -	New LED area light, tenon mount, 100,000-Hr L70 rated life, 72w, onboard dimming 0-10V	72	0.072	1,095	79	0.223	1,213

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Fitness Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Qty and kW for Fitness Center :		108		5.2			108				2.5			2.7	
kWh for Fitness Center :						21,973							10,376		11,598

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Museum -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Living Room A	2x4x 2L rec trf, F40T12 34w, magnetic ballast	4	72	0.288	1,100	317	4	RLT842b -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, (1) new electronic ballast/ driver	26	0.104	1,100	114	0.184	202
Rf#-2 Rm - Living Room B	2x4x 2L rec trf, F40T12 34w, magnetic ballast	6	72	0.432	1,100	475	6	RLT842b -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, (1) new electronic ballast/ driver	26	0.156	1,100	172	0.276	304
Rf#-3 Rm - Bedroom 1	2x4x 2L rec trf, F40T12 34w, magnetic ballast	2	72	0.144	1,100	158	2	RLT842b -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, (1) new electronic ballast/ driver	26	0.052	1,100	57	0.092	101
Rf#-4 Rm - Kitchen	2x4x 3L rec trf, F40T12 34w, magnetic ballast	2	115	0.23	1,100	253	2	RLT843b -	(3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, (1) new electronic ballast/ driver	39	0.078	1,100	86	0.152	167
Rf#-5 Rm - Office	2x4x 2L rec trf, F40T12 34w, magnetic ballast	2	72	0.144	1,100	158	2	RLT842b -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, (1) new electronic ballast/ driver	26	0.052	1,100	57	0.092	101
Rf#-6 Rm - Closet	2x4x 3L rec trf, F40T12 34w, magnetic ballast	1	115	0.115	50	6	1	RLT843b -	(3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, (1) new electronic ballast/ driver	39	0.039	50	2	0.076	4
Rf#-7 Rm - Bathroom	LED 1L rec can, LED ?w, n/a	1	0	0	250	0	1	DND -	DND: (do not do, fixtures left as is)	0	0	250	0	0	0
Rf#-8 Rm - Custodian	2x4x 3L rec trf, F40T12 34w, magnetic ballast	1	115	0.115	50	6	1	RLT843b -	(3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, (1) new electronic ballast/ driver	39	0.039	50	2	0.076	4
Rf#-9 Rm - Ext - Wall Mount	Inc. 2L flood EMS, Inc. 75w P38, n/a	4	75	0.3	4,380	1,314	4	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K EMS	8	0.034	4,380	149	0.266	1,165
Rf#-10 Rm - Ext - Wall Mount	Inc. 3L wm sconce cdl, Inc. 40w cndl, n/a	1	120	0.12	4,380	526	1	RL091/cdl -	(3) LED 8.5w candelobra screw in lamp, 4000K	8	0.0085	4,380	37	0.1115	488
Rf#-11 Rm - Ext - Wall Mount	CF 1L sconce, CFS-15w, CFL ballast	1	15	0.015	4,380	66	1	RL091/s -	(1) LED 8.5w A19 screw in lamp, 4000K	8	0.0085	4,380	37	0.0065	28
Qty and kW for Museum :		25		1.9		25				0.6			1.3		
kWh for Museum :						3,279							713		2,564

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Public Safety -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Lobby	2x4x 4L rec trf, F32T8 28w, electronic ballast	7	99	0.693	8,760	6,071	7	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.364	8,760	3,189	0.329	2,882
Rf#-2 Rm - Director	2x2x 2L rec trf, FB31T8 32w, electronic ballast	2	59	0.118	2,900	342	2	RLT822u -	(2) 2' LED "U" T8 lamp 17w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	2,900	151	0.066	191
Rf#-3 Rm - Director	2x4x 4L rec trf, F32T8 28w, electronic ballast	2	99	0.198	2,900	574	2	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.104	2,900	302	0.094	273
Rf#-4 Rm - Director Closet	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24
Rf#-5 Rm - Open Office / Hall	2x4x 4L rec trf, F32T8 28w, electronic ballast	8	99	0.792	8,760	6,938	8	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.416	8,760	3,644	0.376	3,294
Rf#-6 Rm - Open Office / Hall	1x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	8,760	438	1	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	8,760	228	0.024	210
Rf#-7 Rm - Files	2x4x 3L rec trf, F32T8 28w, electronic ballast	4	50	0.2	500	100	4	RLT843 -	(3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	39	0.156	500	78	0.044	22
Rf#-8 Rm - Crime Prevention	2x4x 3L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,900	290	2	RLT843 -	(3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	39	0.078	2,900	226	0.022	64
Rf#-9 Rm - Special Assignment	2x4x 3L rec trf, F32T8 28w, electronic ballast	2	50	0.1	2,900	290	2	RLT843 -	(3) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	39	0.078	2,900	226	0.022	64
Rf#-10 Rm - Storage	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24
Rf#-11 Rm - Sergeant	2x4x 4L rec trf, F32T8 28w, electronic ballast	2	99	0.198	2,900	574	2	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.104	2,900	302	0.094	273
Rf#-12 Rm - Probation	2x4x 4L rec trf, F32T8 28w, electronic ballast	2	99	0.198	2,900	574	2	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.104	2,900	302	0.094	273
Rf#-13 Rm - Data	2x4x 4L rec trf, F32T8 28w, electronic ballast	4	99	0.396	2,900	1,148	4	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.208	2,900	603	0.188	545
Rf#-14 Rm - Public Safety	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	2,900	145	1	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	2,900	75	0.024	70
Rf#-15 Rm - MRR	2x4x 4L rec trf, F32T8 28w, electronic ballast	6	99	0.594	3,500	2,079	6	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.312	3,500	1,092	0.282	987
Rf#-16 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	3,500	350	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	3,500	182	0.048	168
Rf#-17 Rm - WRR	2x4x 4L rec trf, F32T8 28w, electronic ballast	6	99	0.594	3,500	2,079	6	RLT844 -	(4) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	52	0.312	3,500	1,092	0.282	987
Rf#-18 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	3,500	350	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	3,500	182	0.048	168
Rf#-19 Rm - All Exterior Space (DNE)	DND (do not do, left as is), n/a, n/a	0	0	0	1,092	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	1,092	0	0	0
Qty and kW for Public Safety :		57		4.7			57				2.5			2.1	
kWh for Public Safety :						22,443							11,926		10,519

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Royal Oaks Park Building -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Main Bldg

1st Floor

Rf#-1 Rm - Lobby	4x4x 6L sm box, F32T8 28w, electronic ballast	3	149	0.447	1,000	447	3	RLT846 -	(6) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	78	0.234	1,000	234	0.213	213
Rf#-2 Rm - Main Room	4x4x 6L sm box, F32T8 28w, electronic ballast	9	149	1.341	1,000	1,341	9	RLT846 -	(6) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	78	0.702	1,000	702	0.639	639
Rf#-3 Rm - RR	CF 2L rec can, CFP-26w, CFL ballast	2	60	0.12	1,000	120	2	RL013/ckit -	(1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.017	1,000	17	0.103	103
Rf#-4 Rm - Custodian	CF 2L rec can, CFP-26w, CFL ballast	1	60	0.06	350	21	1	RL013/ckit -	(1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0085	350	3	0.0515	18
Rf#-5 Rm - Storage 1	1x4x 2L sm strip, F32T8 28w, electronic ballast	2	50	0.1	350	35	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	350	18	0.048	17
Rf#-6 Rm - Storage 2	1x4x 2L sm strip, F32T8 28w, electronic ballast	2	50	0.1	350	35	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	350	18	0.048	17
Rf#-7 Rm - Electrical	1x4x 2L sm strip, F32T8 28w, electronic ballast	1	50	0.05	350	18	1	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	350	9	0.024	8
Rf#-8 Rm - Storage 3	1x4x 2L sm strip, F32T8 28w, electronic ballast	3	50	0.15	350	53	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	350	27	0.072	25
Rf#-9 Rm - Storage 4	1x4x 2L sm strip, F32T8 28w, electronic ballast	3	50	0.15	350	53	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	350	27	0.072	25
Rf#-10 Rm - Storage 5	CF 2L rec can, CFP-26w, CFL ballast	1	60	0.06	350	21	1	RL013/ckit -	(1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0085	350	3	0.0515	18
Rf#-11 Rm - Storage 6	CF 2L rec can, CFP-26w, CFL ballast	1	60	0.06	350	21	1	RL013/ckit -	(1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0085	350	3	0.0515	18
Rf#-12 Rm - Ext - MRR	CF 2L rec can, CFP-26w, CFL ballast	4	60	0.24	4,380	1,051	4	RL013/ckit -	(1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.034	4,380	149	0.206	902
Rf#-13 Rm - Ext - WRR	CF 2L rec can, CFP-26w, CFL ballast	4	60	0.24	4,380	1,051	4	RL013/ckit -	(1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.034	4,380	149	0.206	902
Rf#-14 Rm - Ext - Eave Mount	LED 1L sm square, LED ?w, n/a	0	0	0	4,380	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0

Building/Area: Park

1st Floor

Rf#-15 Rm - Ext - Pole Mount	HPS 1L post top lantern, HPS 70w, HID ballast	11	95	1.045	4,380	4,577	11	RL027/s/gc -	(1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.297	4,380	1,301	0.748	3,276
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Qty and kW for Royal Oaks Park Building :	47	4.2	47	1.6	2.5
kWh for Royal Oaks Park Building :	8,843			2,660	6,181

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Royal Oaks Park Extension -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Park Extension

1st Floor

Rf#-1 Rm - Ext - Pole Mount	HPS 1L post top lantern, HPS 70w, HID ballast	7	95	0.665	4,380	2,913	7	RL027/s/gcs -	(1) LED 27w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	27	0.189	4,380	828	0.476	2,085
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Qty and kW for Royal Oaks Park Extension :	7	0.7	7	0.2	0.5
kWh for Royal Oaks Park Extension :		2,913		828	2,085

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Senior Center -

PRE-RETROFIT							POST RETROFIT							
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg														
1st Floor														
Rf#-1 Rm - Lobby / Hall	CF 3L rec can - some emr, CFP-26w, CFL ballast	13	90	1.17	1,820	2,129	13	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.3705	1,820	674	0.7995	1,455
Rf#-2 Rm - Lobby / Hall	CF 2L rec can, CFP-26w, CFL ballast	6	60	0.36	1,820	655	6	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.051	1,820	93	0.309	562
Rf#-3 Rm - Lobby / Hall	1x3x 2L pm fxt, F25T8 25w, electronic ballast	3	46	0.138	1,820	251	3	RLT832 - (2) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	24	0.072	1,820	131	0.066	120
Rf#-4 Rm - Lobby / Hall	1x4x 2L pm fxt, F32T8 28w, electronic ballast	9	50	0.45	1,820	819	9	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.234	1,820	426	0.216	393
Rf#-5 Rm - Closet	2x4x 2L rec trf, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12
Rf#-6 Rm - Office 1	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-7 Rm - Office 2	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-8 Rm - Office 3	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-9 Rm - Office 4	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,820	182	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,820	95	0.048	87
Rf#-10 Rm - Custodian	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ec}	26	0.026	500	13	0.024	12
Rf#-11 Rm - Custodian	Inc. 1L bare bulb, Inc. 40w A19, n/a	1	40	0.04	500	20	1	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K	8	0.0085	500	4	0.0315	16
Rf#-12 Rm - Dining	CF 3L rec can - some emr, CFP-26w, CFL ballast	2	90	0.18	1,820	328	2	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.057	1,820	104	0.123	224
Rf#-13 Rm - Dining	CF 2L rec can, CFP-26w, CFL ballast	7	60	0.42	1,820	764	7	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0595	1,820	108	0.3605	656
Rf#-14 Rm - Dining	LED 1L pm fxt, LED ?w, n/a	20	0	0	1,820	0	20	DND - DND: (do not do, fixtures left as is)	0	0	1,820	0	0	0
Rf#-15 Rm - Dining	2' 2L pm deco, not used, F17T8 17w, electronic ballast	20	33	0.66	1,820	1,201	20	DND - DND: (do not do, fixtures left as is)	33	0.66	1,820	1,201	0	0
Rf#-16 Rm - Dining	2x2x 2L rec trf, F17T8 17w, electronic ballast	2	33	0.066	1,820	120	2	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.04	1,820	73	0.026	47
Rf#-17 Rm - Dining Storage 1	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ec}	26	0.026	500	13	0.024	12
Rf#-18 Rm - Dining Storage 2	1x4x 2L sm wp, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ec}	26	0.026	500	13	0.024	12
Rf#-19 Rm - Dining Storage 3	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	500	26	0.048	24
Rf#-20 Rm - Dining Storage 4	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.052	500	26	0.048	24
Rf#-21 Rm - Stage	2x2x 2L rec trf, F17T8 17w, electronic ballast	6	33	0.198	500	99	6	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.12	500	60	0.078	39

W* = wall switch sensor; C* = ceiling sensor; E* = existing sensor, L* Dimming Control

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Senior Center -

PRE-RETROFIT							POST RETROFIT									
Location		Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-22	Rm - Kitchen	1x4x 2L sm wp, F32T8 28w, electronic ballast	7	50	0.35	1,820	637	7	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.182	1,820	331	0.168	306
Rf#-23	Rm - MRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.078	1,820	142	0.072	131
Rf#-24	Rm - WRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	ews	26	0.078	1,820	142	0.072	131
Rf#-25	Rm - Games	2x2x 2L rec trf, F17T8 17w, electronic ballast	1	33	0.033	1,820	60	1	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast		20	0.02	1,820	36	0.013	24
Rf#-26	Rm - Games	4' 4L sm circle, F32T8 28w, electronic ballast	6	50	0.3	1,820	546	6	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.156	1,820	284	0.144	262
Rf#-27	Rm - Lounge	2x2x 2L rec trf, F17T8 17w, electronic ballast	1	33	0.033	1,820	60	1	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast		20	0.02	1,820	36	0.013	24
Rf#-28	Rm - Lounge	4' 4L sm circle, F32T8 28w, electronic ballast	6	50	0.3	1,820	546	6	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast		26	0.156	1,820	284	0.144	262
Rf#-29	Rm - Lounge	CF 1L table lamp, CFS-15w, CFL ballast	2	15	0.03	1,820	55	2	RL091/s - (1) LED 8.5w A19 screw in lamp, 4000K		8	0.017	1,820	31	0.013	24
Rf#-41	Rm - Ext - Eave Mount	LED 1L rec can, LED ?w, n/a		0	0	4,380	0	0	DND - DND: (do not do, fixtures left as is)		0	0	4,380	0	0	0
Rf#-42	Rm - Ext - Wall Mount	CF 2L wm dome, CFP-26w, CFL ballast	5	60	0.3	4,380	1,314	5	RL0132/h - (2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life		19	0.095	4,380	416	0.205	898

2nd Floor

Rf#-30 Rm - Hall	1x3x 2L pm fxt, F25T8 25w, electronic ballast	2	46	0.092	1,820	167	2	RLT832 - (2) 3' LED T8 lamp 10w, 50,000-Hr L70 rated life, re-use existing electronic ballast	24	0.048	1,820	87	0.044	80
Rf#-31 Rm - Hall	CF 3L rec can - some emr, CFP-26w, CFL ballast	8	90	0.72	1,820	1,310	8	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.228	1,820	415	0.492	895
Rf#-32 Rm - Classroom	CF 3L rec can - some emr, CFP-26w, CFL ballast	4	90	0.36	1,820	655	4	RL0133/h - (3) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	28	0.114	1,820	207	0.246	448
Rf#-33 Rm - Classroom	CF 2L rec can, CFP-26w, CFL ballast	3	60	0.18	1,820	328	3	RL013/ckit - (1) LED 6" rec can kit, 4000K, 8.5/13/21w, 120/277, 50,000-Hr L70 rated life	8	0.0255	1,820	46	0.1545	281
Rf#-34 Rm - Classroom	1x4x 2L pm fxt, F32T8 28w, electronic ballast	7	50	0.35	1,820	637	7	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.182	1,820	331	0.168	306
Rf#-35 Rm - Music	4' 4L sm circle, F32T8 28w, electronic ballast	12	50	0.6	1,820	1,092	12	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.312	1,820	568	0.288	524
Rf#-36 Rm - Music	2x2x 2L rec trf, F17T8 17w, electronic ballast	2	33	0.066	1,820	120	2	RLT822 - (2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.04	1,820	73	0.026	47
Rf#-37 Rm - Storage	1x4x 2L sm wp, F32T8 28w, electronic ballast	2	50	0.1	500	50	2	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ec	26	0.052	500	26	0.048	24
Rf#-38 Rm - MRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	1,820	142	0.072	131
Rf#-39 Rm - WRR	1x4x 2L sm wp, F32T8 28w, electronic ballast	3	50	0.15	1,820	273	3	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.078	1,820	142	0.072	131
Rf#-40 Rm - Elevator	1x4x 2L sm strip, F32T8 28w, electronic ballast	1	50	0.05	500	25	1	RLT842 - (2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.026	500	13	0.024	12

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Senior Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Qty and kW for Senior Center :		186		8.9			186				4.1			4.9	
kWh for Senior Center :						16,010							7,110		8,897

W* = wall switch sensor; C* = ceiling sensor; E* = existing sensor, L* Dimming Control

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Teen Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Building/Area: Main Bldg															
1st Floor															
Rf#-1 Rm - Lobby	LED 1L rec can, LED ?w, n/a		0	0	1,770	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	1,770	0	0	0
Rf#-2 Rm - Lobby	CF 1L rec can, CFS-18w P38, CFL ballast	5	18	0.09	1,770	159	5	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.0425	1,770	75	0.0475	84
Rf#-3 Rm - Lobby	CF 1L track light, CFS-18w P38, CFL ballast	5	18	0.09	1,770	159	5	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.0425	1,770	75	0.0475	84
Rf#-4 Rm - Lobby	LED 1L cove light, LED ?w, n/a		0	0	1,770	0	0	DND -	DND: (do not do, fixtures left as is)	0	0	1,770	0	0	0
Rf#-5 Rm - Office	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-6 Rm - Closet	CF 1L rec can, CFS-18w P38, CFL ballast	2	18	0.036	200	7	2	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.017	200	3	0.019	4
Rf#-7 Rm - Games	CF 1L rec can, CFS-18w P38, CFL ballast	2	18	0.036	1,500	54	2	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.017	1,500	26	0.019	29
Rf#-8 Rm - Games	2x2x 2L rec trf, F17T8 17w, electronic ballast	16	33	0.528	1,500	792	16	RLT822 -	(2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.32	1,500	480	0.208	312
Rf#-9 Rm - Kitchen	1x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-10 Rm - MPR	2x2x 2L rec trf, F17T8 17w, electronic ballast	12	33	0.396	1,770	701	12	RLT822 -	(2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	20	0.24	1,770	425	0.156	276
Rf#-11 Rm - Hall	CF 1L rec can, CFS-18w P38, CFL ballast	5	18	0.09	1,770	159	5	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.0425	1,770	75	0.0475	84
Rf#-12 Rm - Computers	2x4x 2L rec trf, F32T8 28w, electronic ballast	4	50	0.2	1,770	354	4	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.104	1,770	184	0.096	170
Rf#-13 Rm - Boxing	2x2x 2L rec trf, F17T8 17w, electronic ballast	24	33	0.792	1,770	1,402	24	RLT822 -	(2) 2' LED T8 lamp 8w, 50,000-Hr L70 rated life, re-use existing electronic ballast	20	0.48	1,770	850	0.312	552
Rf#-14 Rm - Storage	1x4x 1L sm strip, F32T8 28w, electronic ballast	1	24	0.024	200	5	1	RLT841 -	(1) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	13	0.013	200	3	0.011	2
Rf#-15 Rm - Office 1	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	26	0.052	1,500	78	0.048	72
Rf#-16 Rm - Office 2	2x4x 2L rec trf, F32T8 28w, electronic ballast	2	50	0.1	1,500	150	2	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.052	1,500	78	0.048	72
Rf#-17 Rm - Custodian	1x4x 1L sm strip, F32T8 28w, electronic ballast	2	24	0.048	200	10	2	RLT841 -	(1) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast	13	0.026	200	5	0.022	4
Rf#-18 Rm - MRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	1,770	266	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.078	1,770	138	0.072	127
Rf#-19 Rm - MRR	CF 1L rec can, CFS-18w P38, CFL ballast	1	18	0.018	1,770	32	1	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.0085	1,770	15	0.0095	17
Rf#-20 Rm - WRR	1x4x 2L rec trf, F32T8 28w, electronic ballast	3	50	0.15	1,770	266	3	RLT842 -	(2) 4' LED T8 lamp 12w, 50,000-Hr L70 rated life, re-use existing electronic ballast ^{ews}	26	0.078	1,770	138	0.072	127
Rf#-21 Rm - WRR	CF 1L rec can, CFS-18w P38, CFL ballast	1	18	0.018	1,770	32	1	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.0085	1,770	15	0.0095	17

W* = wall switch sensor; C* = ceiling sensor; E* = existing sensor, L* Dimming Control

City of Duarte - Lighting Detail Report
(sorted by building, floor, area)



Teen Center -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd
Rf#-22 Rm - Various	Inc. 2L exit sign, Inc. 20w, n/a	7	40	0.28	8,760	2,453	7	NLX -	New LED exit sign with battery backup	2	0.0175	8,760	153	0.2625	2,300
Rf#-23 Rm - Ext - Eave Mount	CF 1L rec can, CFS-18w P38, CFL ballast	34	18	0.612	4,380	2,681	34	RL091/s/r30 -	(1) LED 8w R30 screw in lamp, 4000K	8	0.289	4,380	1,266	0.323	1,415
Rf#-24 Rm - Ext - Wall Mount	CF-2L wm dome, CFP-26w, CFL ballast	14	60	0.84	4,380	3,679	14	RL0132/h -	(2) LED 4 pin lamp, direct wire, 120/277v, 9.5w, 50,000-Hr L70 rated life	19	0.266	4,380	1,165	0.574	2,514
Rf#-25 Rm - Ext - Wall Mount	LED 1L wm wall pack, LED ?w, n/a	2	0	0	4,380	0	2	DND -	DND: (do not do, fixtures left as is)	0	0	4,380	0	0	0
Rf#-26 Rm - Ext - Pole Mount	HPS 1L deco bell, HPS 200w, HID ballast	5	250	1.25	4,380	5,475	5	RL045/s/gc -	(1) LED 45w corn cob style screw in lamp, 120/277, 50,000-Hr rated life, 5K, medium base	45	0.225	4,380	986	1.025	4,490

Qty and kW for Teen Center : 156 6.0 156

2.5 3.5

kWh for Teen Center : 19,285

6,389 12,896

City of Duarte - Lighting Detail Report
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Thorsen Park -

PRE-RETROFIT							POST RETROFIT								
Location	Existing Fixture Description	Qty	Wt/Fxt	kW	Hours	kWh	Qty	Retrofit Code	Description (Ltg control in RED)	Wt/Fxt	kW	Hours	kWh	kW Svd	kWh Svd

Building/Area: Flag Pole(s)

1st Floor

Rf#-1 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	2	300	0.6	4,380	2,628	2	NL026/flid	- New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	35	0.07	4,380	307	0.53	2,321
Rf#-2 Rm - Ext - Pole Mount	Inc. 1L flood, knuckle, Inc. 300w QH, n/a	1	300	0.3	4,380	1,314	1	NL026/flid	- New LED flood, knuckle mount, 50,000-Hr L70 rated life, 19w	35	0.035	4,380	153	0.265	1,161

Qty and kW for Thorsen Park :	3	0.9	3	0.1	0.8
kWh for Thorsen Park :			3,942		460 3,482

Attachment “C”
Mechanical Inventory

Mechanical Replacement Summary

City of Duarte - Existing Equipment Selected for Replacement										Proposed Equipment	
Site Name	Area Served	Equipment	Manuf.	Model No.	Serial No.	Capacity	Unit of Measure	Year	Electrical	Manufacturer	Model
Senior Center	2nd Floor Classroom	Split Sys Heat Pump	Lennox	HP21-513-3Y	5192M07325	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center		Split Sys Heat Pump	Lennox	HP21-513-3Y	5192M07326	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center		Split Sys Heat Pump	Lennox	HP21-413-3Y	5192M07340	3	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center		Split Sys Heat Pump	Lennox	HP21-513-3Y	5192M07312	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center	2nd Floor Dining Room	Split Sys Heat Pump	Lennox	HP21-513-3Y	519M07322	4	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center	Library TV Room	Split Sys Heat Pump	Lennox	HP21-413-3Y	5192M07352	3	Ton	1992	208/230-3-60	Lennox	In Kind_High Efficiency
Senior Center	Pool Hall	Split Sys Heat Pump	Lennox	HP21-413-3Y	5193B25940	3	Ton	1993	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4096E13116	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	0997E21773	5	Ton	1997	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4596E15365	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4596E15363	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency
Teen Center		Split Sys Furnace	Carrier	38CKB060500	4596E15381	5	Ton	1996	208/230-3-60	Lennox	In Kind_High Efficiency

		City of Duarte - Existing Irrigation Equipment Information			Proposed Equipment Information		
Active Stations	Total Stations	Building/Site Name	Location Notes	Additional Notes	Indoor / Outdoor	Wifi / Cellular	Proposed Model
6	12	Aloysia Moore Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
7	9	Aloysia Moore Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
6	16	Beardslee Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
10	12	Beardslee Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
24	24	City Hall	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>Wifi</i>	PHC-2400 Hydrawise/WiFi
40	40	Historical Museum & Encanto Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-4800 Hydrawise/Hot Spot
12	16	Duarte Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
15	16	Duarte Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
10	12	Duarte Skate Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
28	32	Encanto Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-3600 Hydrawise/Hot Spot
23	24	Encanto Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
4	18	Entrance Park	<i>Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
6	6	Glenn Miller Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
12	16	Hacienda Park	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
14	16	Lena Valenzuela Park	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
11	12	Northview Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
32	32	Ortis Gordon Sports Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-3600 Hydrawise/Hot Spot
3	4	Public Works Yard	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
31	32	Rancho Verde LSD	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-3600 Hydrawise/Hot Spot
4	8	Rancho Verde LSD	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
5	8	Royal Oaks Bike Trail - Buena Vista	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
20	24	Royal Oaks Bike Trail - Oak St	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-2400 Hydrawise/Hot Spot
5	8	Royal Oaks Bike Trail - Random Lane	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
11	15	Royal Oaks Bike Trail - RO School	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
16	16	Royal Oaks Park	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
12	12	Royal Oaks Park Extension	<i>Raised Pedestal Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-2400 Hydrawise/Hot Spot
12	12	Senior Center	<i>Interior Wall Mount</i>	<i>Replace</i>	<i>Indoor</i>	<i>Wifi</i>	PHC-1200 Hydrawise/WiFi
11	12	Sports Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	HCC-1200 Hydrawise/Hot Spot
9	13	Veteran's Memorial Park	<i>Raised Box Exterior Mount</i>	<i>Replace</i>	<i>Outdoor</i>	<i>4G Hot Spot</i>	PHC-1200 Hydrawise/Hot Spot
399	477		Total of 29 Controllers				

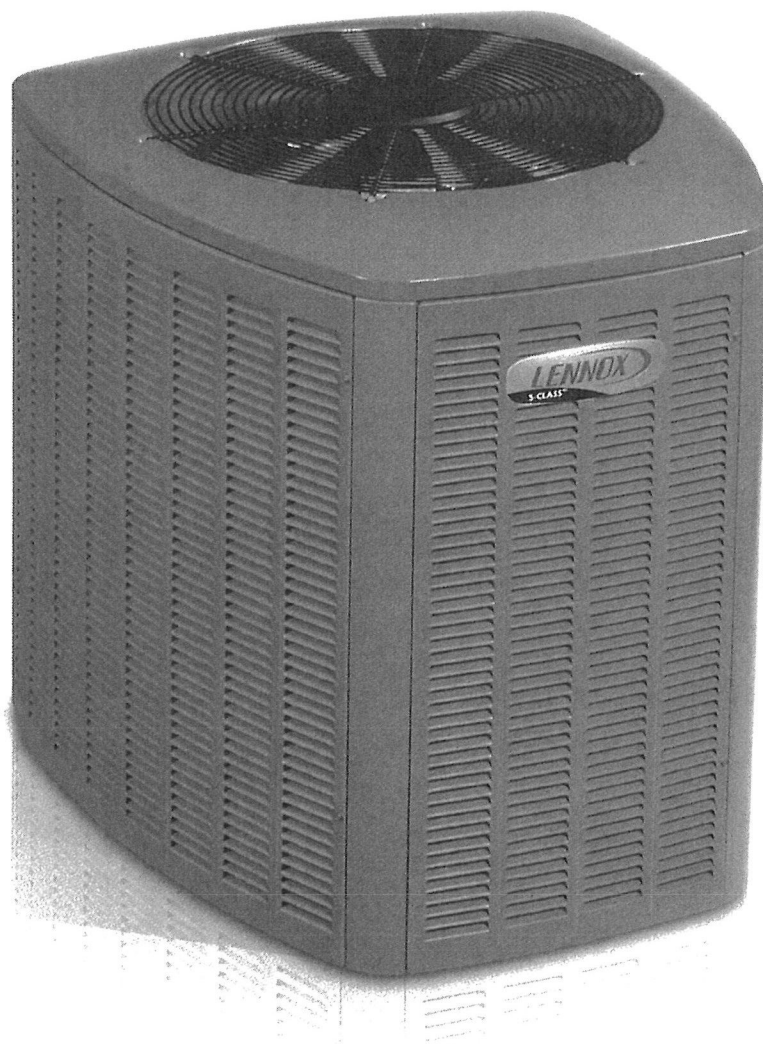
Attachment “D” Technical Appendix

S-CLASS®

High efficiency and dependability

**Commercial Air Conditioners and Heat Pumps
SSB/SPB Models**

**UP TO 16.5 SEER
AND 9.5 HSPF**



LENNOX
Innovation never felt so good.®

Superior efficiency for more of what you want, less of what you don't

Now you can create a better indoor environment while reducing energy bills. With efficiency ratings up to 16.5 SEER and 9.5 HSPF, the S-Class® SSB/SPB split-system units offer superior efficiency you can rely on.

S-CLASS® SPLIT SYSTEMS AT A GLANCE:

*Energy-efficient split systems
reduce utility bills while
maintaining comfort*

*Temperature and humidity
controls create a more comfortable
indoor environment*

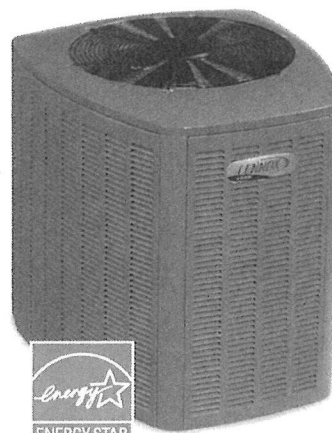
*SmartHinge™ louvered panels on
all sides, refrigerant service valves,
and easy-to-clean coils reduce costs
of installation and maintenance*

*Quiet design reduces sound levels
to 74 dB, eliminating much of the
noise of commercial split systems*

ENERGY STAR® certified

The S-Class split systems are available with a wide range of factory options, including a variety of voltages for increased flexibility. Field-installed accessories include low-ambient kit options and heat-pump-specific kits, like outdoor thermostats and monitoring kits. The versatility of the S-Class unit makes it the right choice for countless commercial applications.

Like all Lennox® equipment that features durable materials and advanced construction, S-Class units are high-quality systems designed to provide years of superior service.



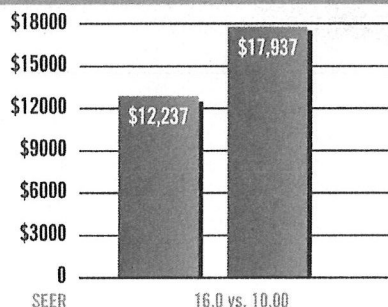
S-Class air conditioners and heat pumps are ENERGY STAR® certified products, helping to reduce energy spending and conserve natural resources. In addition to S-Class units, Lennox has developed a wide range of products that meet ENERGY STAR guidelines for energy efficiency.

High-efficiency units save year after year

The S-Class split systems feature efficiencies up to 16.5 SEER and are ENERGY STAR certified, which can significantly reduce utility bills.

The chart illustrates the 3-year cooling costs you can expect from 20 3-ton S-Class air conditioners versus 20 units with lower efficiency ratings. Actual savings may vary depending on system settings, equipment maintenance, local weather, actual construction, installation of equipment, duct system, hours of operation, local fuel rates and other factors.

Estimated 3-Year Cooling Cost for 20 Units



Utility rate source: U.S. Department of Energy national average energy rates

Building type: School (year-round)

City: Dallas

Software: Lennox Lifecycle Cost Calculator, version 3.0.9

EFFICIENCY RATING

*Up to 16.5 Seasonal Energy
Efficiency Ratio (SEER) and 9.5
Heating Seasonal Performance
Factor (HSPF)*

WARRANTIES

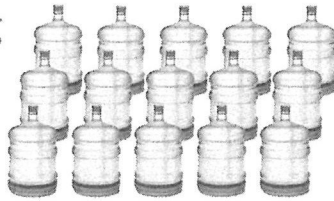
5-Year Limited Warranty
on compressor

1-Year Limited Warranty
on covered components and units

See warranty certificate for actual details.

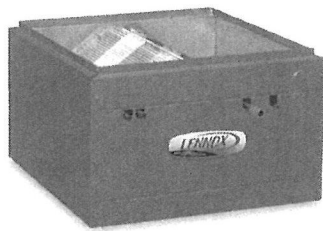
Moisture Control

**Removing
moisture
improves
IAQ**



Improve humidity control

Humidity is harder to control on mild-temperature days, when less cooling is needed. S-Class units were designed to remove more moisture than many other systems by shifting to a lower-capacity stage on mild days to match the heat load, then running long enough to reduce both temperature and humidity.



*Humiditrol®
Dehumidification
System*

To enhance humidity control even further, choose the optional Humiditrol® dehumidification system.* The patented dehumidification system controls temperature and humidity independently, reducing moisture and helping curb the spread of mold and other airborne contaminants.

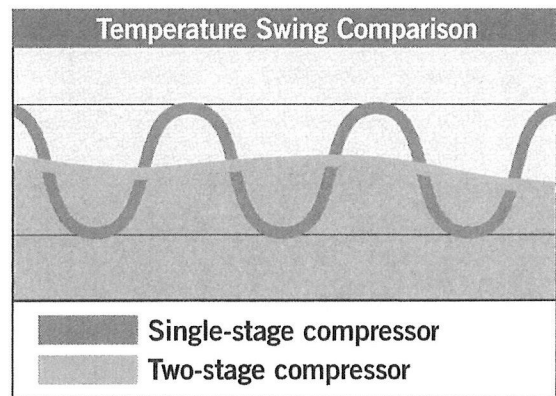
Minimum system requirements include:

- Humiditrol dehumidification system
- iComfort Wi-Fi® touchscreen thermostat**
- Lennox variable-speed furnace or air handler
- Lennox air conditioner or heat pump

Reduce installation and service hours

S-Class units feature contractor-friendly designs to reduce service time and help businesses control costs. Arriving fully charged with refrigerant and ready for installation, S-Class units have factory-wired control boxes and factory-tested coils.

The SmartHinge louvered-panel design allows quick and easy access to interior components from all sides, so the unit can be serviced in minimal time. For easy access to the refrigerant system, the units include central refrigerant line connections and fully serviceable brass valves. The suction valve can be completely shut off during service, while the liquid valve may be front-seated to manage refrigerant charge.



One compressor provides two-compressor benefits

Each model has two operating stages, so a single-compressor unit performs like a two-compressor system, using only the amount of energy necessary to keep occupants comfortable.

Using a two-stage scroll compressor, the S-Class units eliminate temperature swings and provide just the right amount of cooling, dehumidification or heating.

*Not for use with zoning applications.

**Select units will also require the Electronic Interface Module.

S-Class® air conditioner and heat pump performance specifications

	NOM TON.	MODEL	SOUND RATING dB ¹	COOLING DATA ^{2,3}			HEATING DATA ⁴			PHYSICAL DATA	
				ARI RATED CAP. (BTUH)	EFFICIENCY [SEER] ⁵	EFFICIENCY [EER]	EFFICIENCY [HSPF] ⁶	CAPACITY (BTUH)	COP	DIMENSIONS H X W X L [INCHES]	SHIP. WT. [LBS.]
AIR CONDITIONERS	3	SSB036H4	74	37,600	16.0	12.5	—	—	—	31.0 x 30.5 x 35.0	243
	4	SSB048H4	74	47,500	16.5	12.5	—	—	—	39.0 x 30.5 x 35.0	268
	5	SSB060H4	74	57,500	16.0	12.2	—	—	—	45.0 x 35.5 x 39.5	332
HEAT PUMPS	3	SPB036H4	76	38,000	16.5	13.5	9.5	36,800	3.44	35.0 x 35.5 x 39.5	273
	4	SPB048H4	76	48,500	16.0	12.5	9.5	45,500	3.62	35.0 x 35.5 x 39.5	294
	5	SPB060H4	78	58,500	15.7	12.2	8.5	61,500	3.62	45.0 x 35.5 x 39.5	353

¹ Sound rating number in accordance with test conditions included in ARI Standard 270.

² 5-ton-and-under equipment certified in accordance with ULE certification program, which is based on ARI Standard 210/240.

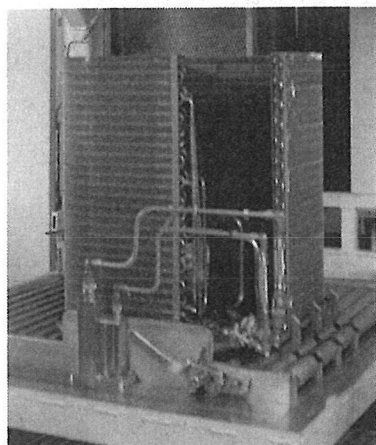
³ Cooling ratings, 95 °F (35 °C) outdoor air temperature and 80 °F (27 °C) db/67 °F (19 °C) wb entering indoor coil air.

⁴ High-temperature heating ratings, 47 °F (8 °C) db/43 °F (6 °C) wb outdoor air temperature and 70 °F (21 °C) entering indoor coil air.

⁵ Up to 16.0 SEER when the S-Class SSB048H4 split system is matched with the CX34-62C coil and SL280UH090V60C furnace.

⁶ Up to 9.5 HSPF when the S-Class SPB048H4 split system is matched with the EL180DF110E60C furnace.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.



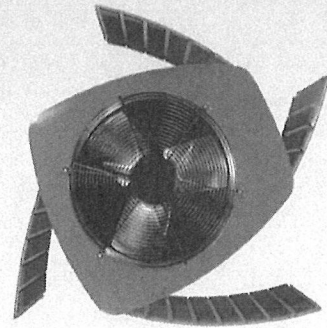
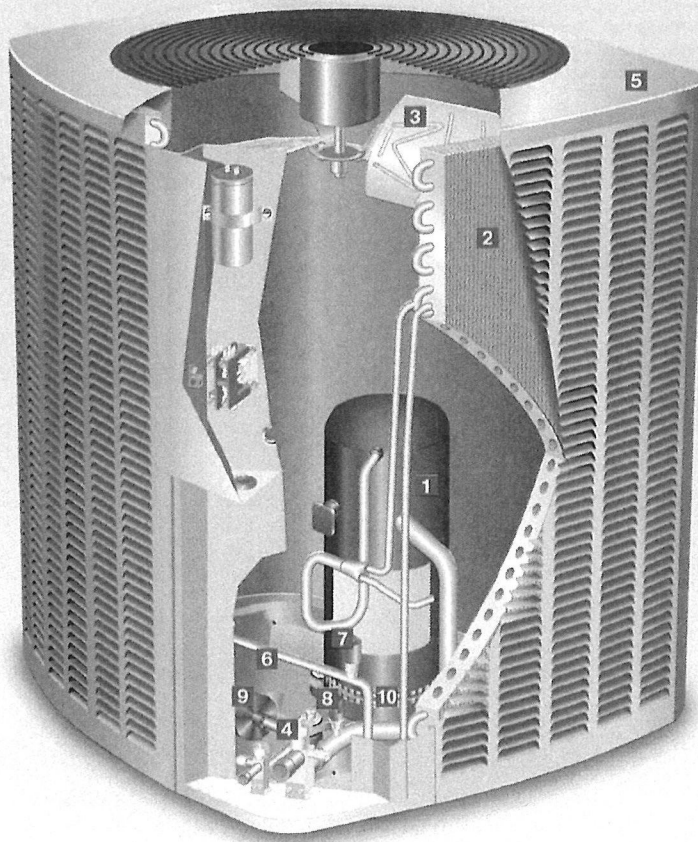
Lennox® products are built to last

Superior engineering, durable components and complete testing are combined to create split systems that operate dependably at start-up and for many years to come. Lennox® products are built with a wide range of durable components and safety features, including corrosion-resistant cabinets, drainage holes and enhanced fan guards. The SmartHinge™ louvered panels provide superior coil protection, eliminating the need for coil or hail guards.

Each unit features a two-stage scroll compressor with internal overload protection, a three-pole contactor and an enhanced coil and manifold design for excellent performance and reliability.

Low-ambient control kits allow cooling at temperatures as low as 30 °F to meet most commercial applications. ISO 9001-2000 building standards and rigorous testing practices assure quality and reliability.

High efficiency with excellent temperature and humidity control



SmartHinge™ Louvered Coil Protection: Allows quick, easy access to interior components from all sides, so the unit can be serviced in minimal time.

Quiet and efficient operation

- 1 Two-Stage Scroll Compressor:** Operates primarily on low stage, for more quiet and consistent comfort and humidity control.
- 2 High-Efficiency Outdoor Coil:** Provides exceptional heat transfer and low air resistance for high-efficiency operation.
- 3 Quiet, Direct-Drive Fan:** Precision balanced and designed to run slower for an enhanced level of quiet operation.

Easy installation and maintenance

- 4 Brass Service Valves:** Isolate the refrigeration system in outdoor units and allow for simple access.

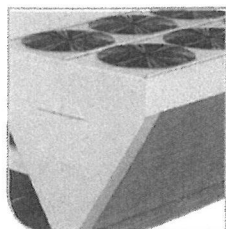
Reliable performance

- 5 Corrosion-Resistant Cabinet:** Galvanized steel under a two-layer painted surface protects against rust and corrosion.
- 6 Drainage Holes:** Prevent damaging moisture from collecting inside the basepan.
- 7 High-Pressure Switch:** Extends the life of the unit by providing a safeguard against excessive pressure.
- 8 Low-Pressure Switch:** Extends the life of the compressor by safeguarding against loss of charge.
- 9 High-Capacity Liquid Line Filter/Drier:** Extends the life of the unit by trapping moisture and dirt that could contaminate the system.
- 10 Crankcase Heater:** Protects the compressor against refrigerant migration that can occur during low-ambient operations.

Solutions for customized comfort

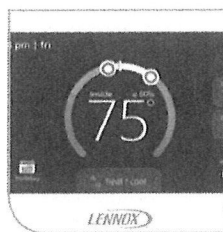
Don't just choose a Lennox product—choose a Lennox® Commercial Comfort System.

These complete packages of HVAC solutions provide tools to create a healthy and comfortable environment.



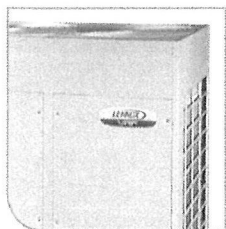
Packaged Units

- Emergence® Rooftop Units
- Strategos® Rooftop Units
- Landmark® Rooftop Units
- Raider® Rooftop Units



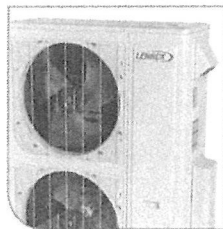
Commercial Controls

- Systems Integration Solutions
- Commercial Thermostats
- L Connection® Network Zoning



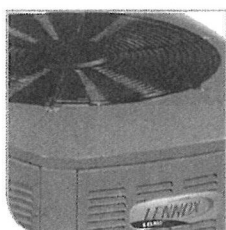
VRF

- Outdoor Units
- Indoor Units
- Controls



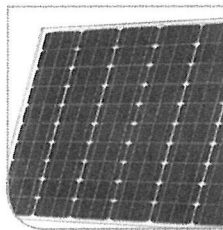
Mini-Split Systems

- Heat Pump Mini-Splits
- Low Ambient Heat Pump Mini-Splits
- Indoor Units
- Controls



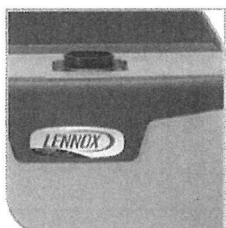
Split Systems

- S-Class® Air Conditioners/Heat Pumps
- T-Class™ Air Conditioners/Heat Pumps
- Air Handlers
- Indoor Coils



Solar Ready

- SunSource® Commercial Energy System



Heating

- Unit Heaters
- Duct Furnaces
- Furnaces



Indoor Air Quality

- Humiditrol® Dehumidification System
- Demand Control Ventilation
- Air Filters
- UVC Lamps



Visit us at www.lennoxcommercial.com, or contact us at 1-877-726-0024.

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23W49 12/16 PC86481

T-CLASS™

Performance and rugged durability

**Commercial Air Conditioners and Heat Pumps
TSA/TPA Models**

**UP TO 16.0 SEER
AND 9.7 HSPF**



LENNOX
Innovation never felt so good.®

Control operational costs with reliable, energy-efficient split systems

The T-Class™ TSA/TPA line of air conditioners and heat pumps from Lennox is designed to help achieve comfort as well as energy savings. Featuring high-quality components, these units offer excellent performance and reliability.

T-CLASS™ SPLIT SYSTEMS AT A GLANCE:

*High-efficiency units for
reduced energy usage*

Easy installation and maintenance

*A variety of sizes for increased
application flexibility*

*Excellent construction,
reliability and warranties*

ENERGY STAR® qualified

EFFICIENCY RATING

*Up to 16.0 Seasonal Energy
Efficiency Ratio (SEER) and 9.7
Heating Seasonal Performance
Factor (HSPF)*

WARRANTIES

*5-Year Limited Warranty
on compressor*

*1-Year Limited Warranty
on covered components*

See warranty certificate for actual details.

Energy efficiency

Lennox' energy-efficient design features high-efficiency scroll compressors and outdoor coils that provide exceptional heat transfer, low air resistance and efficient operation. These units are rated up to 16.0 SEER and 9.7 HSPF to save hundreds of dollars in heating and cooling costs compared to lower-efficiency models.

Easy installation and maintenance

Lennox® air conditioning and heat pump units are designed to install quickly. They arrive fully charged with factory-wired control boxes and factory-tested coils.

To ensure years of simple, low-cost service and maintenance, these units feature brass service valves, to provide easy access to the refrigerant system. The suction valve can be fully shut off, while the liquid valve may be front-seated to manage refrigerant charge.

Application solutions

Lennox offers a large selection of options to meet a wide range of commercial HVAC needs. For increased flexibility, customers may choose from a variety of voltages, including 208-230/3/60, 460/3/60, and 575/3/60. Field-installed accessories, such as low-ambient kit options, allow unit operation down to 30°F.

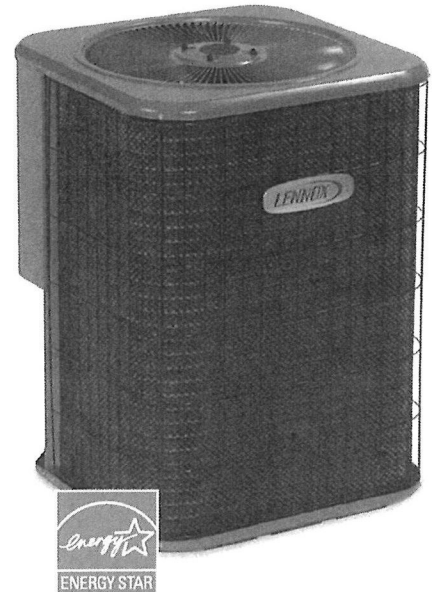
Excellent reliability

Lennox split systems feature durable components and safety features. Corrosion-resistant cabinets, drainage holes, and enhanced fan and coil guards protect against unexpected service costs. In addition, high-pressure switches are standard on all models. Other field-installed accessories, such as loss-of-charge and freezestat kits, provide additional protection when needed. All Lennox products are built according to demanding ISO-9001 standards and feature excellent warranties to provide peace of mind.

Humidity control

T-Class air conditioners and heat pumps are available with enhanced humidity control with the optional Humiditrol® dehumidification system.* Its patented design reduces moisture and helps to control the spread of mold and other airborne contaminants.

**Not for use with zoning applications.*



T-Class™ air conditioners and heat pumps are ENERGY STAR® qualified products, helping to reduce energy spending and conserve natural resources. In addition to T-Class units, Lennox has developed a wide range of products that meet ENERGY STAR guidelines for energy efficiency.

Field-installed accessories

Improved reliability

- **Compressor Low-Ambient Cutoff:** Prevents compressor operation when outdoor temperature is below 35°F.
- **Compressor Time-Off Control:** Improves compressor reliability by preventing short-cycling. Allows the compressor to start in an unloaded condition.
- **Loss-of-Charge Kit:** Protects compressor from damage due to low-refrigerant-charge conditions.
- **Hail Guards:** Constructed of louvered, heavy-gauge steel. Surround unit on all four sides. Prevent damage to the coil.
- **Freezestat:** Prevents system failure in cold conditions by cycling the compressor off when the suction line temperature falls below the setpoint.

Easy installation and maintenance

- **Mounting Base:** Extremely durable, lightweight, and sturdy high-density polyethylene provides a permanent foundation for outdoor units.
- **Unit Stand-Off Kit:** Raises unit off the mounting surface and away from potentially damaging moisture.
- **Refrigerant Line Kits:** Refrigerant lines are shipped cleaned, dried, pressurized and sealed at the factory for easy installation.

Application solutions

- **Low-Ambient Control to 30°F:** Allows unit operation down to 30°F.
- **Low-Ambient Control to 0°F:** Allows unit operation down to 0°F. Requires speed control and weatherproof kit (sold separately). Available for 208/230V models only.
- **Mild-Weather Kit:** Allows heating operation above 75°F (heat pump units only).

Quiet and efficient operation

- **Compressor Sound Cover:** Reinforced vinyl cover with fiberglass insulation helps lower operating sound levels.
- **Time-Delay Relay Kit:** Improves comfort by delaying the blower-off time during the cooling cycle.



*Humiditrol®
Dehumidification
System*

Enhanced humidity control

The Humiditrol® dehumidification system reduces moisture and controls the spread of airborne contaminants.

Minimum system requirements include:

- Humiditrol® dehumidification system
- iComfort Wi-Fi® touchscreen thermostat*
- Lennox® variable speed furnace or air handler
- Lennox air conditioner or heat pump

*Select units will also require the Electronic Interface Module.

T-Class™ standard-efficiency AC performance specifications

	NOM TON.	MODEL	SOUND RATING dB ¹	COOLING DATA ^{2,3}			HEATING DATA ⁴			PHYSICAL DATA	
				ARI RATED CAP. [BTUH]	EFFICIENCY [SEER] ⁵	EFFICIENCY [EER]	EFFICIENCY [HSPF] ⁶	CAPACITY [BTUH]	COP	DIMENSIONS H X W X L [INCHES]	SHIP. WT. [LBS.]
AIR CONDITIONERS	3	TSA036S4	76	36,000	14.5	12.0	—	—	—	29.25 x 24.25 x 24.25	135
	3.5	TSA042S4	80	42,000	14.0	12.0	—	—	—	29.25 x 28.25 x 28.25	178
	4	TSA048S4	80	51,000	14.5	12.5	—	—	—	37.25 x 28.25 x 28.25	194
	5	TSA060S4	80	60,500	13.5	11.5	—	—	—	33.25 x 28.25 x 28.25	218

T-Class™ high-efficiency AC/HP performance specifications

	NOM TON.	MODEL	SOUND RATING dB ¹	COOLING DATA ^{2,3}			HEATING DATA ⁴			PHYSICAL DATA	
				ARI RATED CAP. [BTUH]	EFFICIENCY [SEER] ⁷	EFFICIENCY [EER]	EFFICIENCY [HSPF] ⁸	CAPACITY [BTUH]	COP	DIMENSIONS H X W X L [INCHES]	SHIP. WT. [LBS.]
AIR CONDITIONERS	3	TSA036H4	76	35,800	16.0	13.5	—	—	—	37.25 x 28.25 x 28.25	164
	3.5	TSA042H4	78	43,000	15.5	13.0	—	—	—	29.25 x 28.25 x 28.25	198
	4	TSA048H4	78	49,500	15.2	12.5	—	—	—	37.25 x 28.25 x 28.25	221
	5	TSA060H4	80	58,000	15.0	12.5	—	—	—	33.25 x 32.25 x 32.25	238
HEAT PUMPS	3	TPA036H4	79	36,600	15.7	13.5	9.0	35,600	3.94	31.25 x 32.25 x 32.25	212
	3.5	TPA042H4	79	44,500	15.5	13.0	9.7	45,500	4.08	39.00 x 32.25 x 32.25	257
	4	TPA048H4	80	50,500	15.2	13.0	9.2	49,000	3.90	39.00 x 32.25 x 32.25	262
	5	TPA060H4	80	60,500	15.0	12.5	9.0	58,000	3.64	45.25 x 32.25 x 32.25	307

¹Sound rating number in accordance with test conditions included in ARI Standard 270.

²5-ton-and-under equipment certified in accordance with ULE certification program, which is based on ARI Standard 210/240.

³Cooling ratings, 95°F (35°C) outdoor air temperature and 80°F (27°C) db/67°F (19°C) wb entering indoor coil air.

⁴High-temperature heating ratings, 47°F (8°C) db/43°F (6°C) wb outdoor air temperature and 70°F (21°C) entering indoor coil air.

⁵Up to 14.5 SEER when the T-Class TSA048S4 split system is matched with the CX34-62C coil and the SL280UH110XV60C furnace.

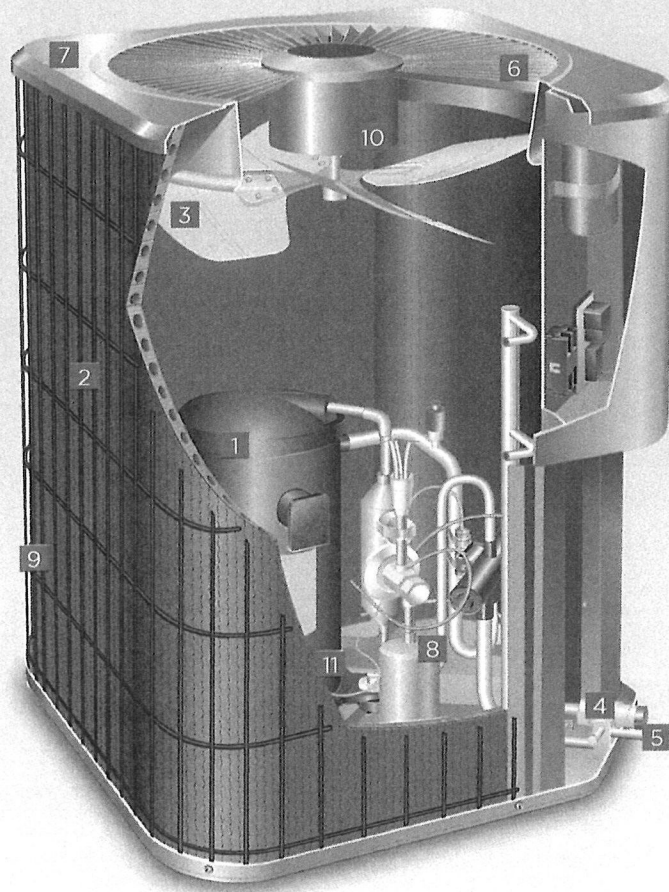
⁶Up to 8.7 HSPF when the T-Class TPA042S4 split system is matched with the CR33-50/60 and EL180DF110E60C furnace.

⁷Up to 16.0 SEER when the T-Class TSA036H4 split system is matched with the CX34-49 indoor coil and SLP98UH090XV48C furnace.

⁸Up to 9.7 HSPF when the T-Class TPA042H4 split system is matched with the CH23-68 indoor coil and EL180UH135E60D furnace.

Note: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change.

High efficiency with intelligent design and high-quality components



Quiet and efficient operation

- 1 Scroll Compressor:** Provides smooth, efficient and quiet operation.
- 2 High-Efficiency Outdoor Coil:** Provides exceptional heat transfer and low air resistance for high-efficiency operation.
- 3 Quiet, Direct-Drive Fan:** Precision-balanced, direct-drive fan is designed to run slower for an enhanced level of quiet operation.

Easy installation and maintenance

- 4 Brass Service Valves:** Isolate the refrigeration system in outdoor units and allow for simple access.
- 5 Refrigerant Line Connections and Electrical Inlets:** Located in one central area of cabinet for easy access.

Reliable performance

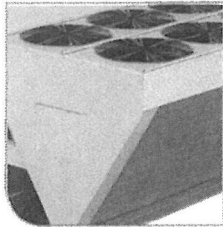
- 6 Fan Guard:** Heavy-duty guard increases safety.
- 7 Corrosion-Resistant Cabinet:** Galvanized steel under a two-layer painted surface protects against rust and corrosion.
- 8 Drainage Holes:** Prevent damaging moisture from collecting inside the basepan.
- 9 Enhanced Coil Guard:** Protects the outdoor coil, maintaining the efficiency of the unit. Heavy-gauge steel construction and non-corrosive PVC coating assure long-lasting protection.
- 10 Fan Motor:** Features a fully enclosed design with a rain shield to provide maximum protection from weather, dust, corrosion and moisture.
- 11 Crankcase Heaters:** Protect the compressor against refrigerant migration that can occur during low-ambient operations.

Solid-State Defrost Control: Monitors the condition of the coil. Quickly and efficiently clears the buildup of frost on the coil (heat pump unit only, not shown).

Solutions for customized comfort

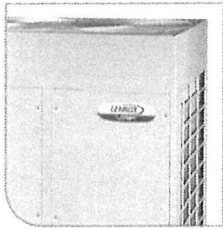
Don't just choose a Lennox® product—choose a Lennox Commercial Comfort System.

These complete packages of HVAC solutions provide tools to create a healthy and comfortable environment.



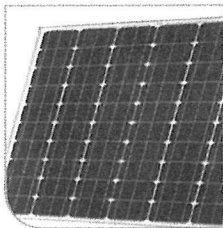
Packaged Units

- Emergence® Rooftop Units
- Strategos® Rooftop Units
- Landmark® Rooftop Units
- Raider® Rooftop Units



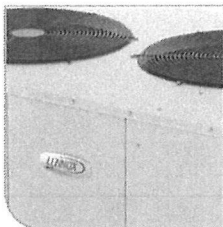
VRF

- Outdoor Units
- Indoor Units
- Controls



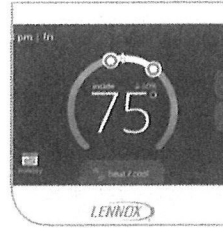
Solar Ready

- SunSource® Commercial Energy System



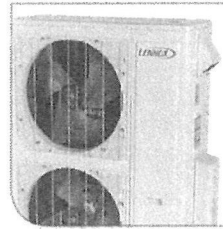
Split Systems

- Elite® Series Large Split Systems
- S-Class® Air Conditioners/Heat Pumps
- T-Class™ Air Conditioners/Heat Pumps
- Air Handlers
- Indoor Coils



Commercial Controls

- Systems Integration Solutions
- Commercial Thermostats
- L Connection® Network



Mini-Split Systems

- Wall-Mounted Non-Ducted
- Ceiling Cassette Non-Ducted
- Medium-Static Ducted
- Ceiling/Floor Non-Ducted



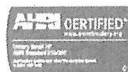
Heating

- Unit Heaters
- Duct Furnaces
- Furnaces



Indoor Air Quality

- Dedicated Outdoor Air System
- Humiditrol® Dehumidification System
- Demand Control Ventilation
- Air Filters
- UVC Lamps



Visit us at www.lennox.com, or contact us at 1-877-726-0024.

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13W06 01/18 PC83724

SunSaver ST™

Solar Pool Heating Collector Specifications

DESCRIPTION:

The SunSaver ST™ Solar Collector is manufactured in Chico, California. The collector is a specially developed, highly stabilized polyolefin and is of parallel, circular channel design. It is unglazed, un-insulated, and designed for low temperature applications such as swimming pool heating, heat pumps, aquaculture, hydroponics, and pre-heating.

DIMENSIONS:

	Collector Model Number		
	4 x 8, 2 x 8	4 x 10, 2 x 10	4 x 12, 2 x 12
Header Width	50-7/8", 26-7/8" (±1/8")	50-7/8", 26-7/8" (±1/8")	50-7/8", 26-7/8" (±1/8")
	1.29m, 0.68m (±3.2mm)	1.29m, 0.68m (±3.23mm)	1.29m, 0.68m (±3.23mm)
Panel Body Width	48", 24" (+1/4" - 0")	48", 24" (+1/4" - 0")	48", 24" (+1/4" - 0")
	1.22m, 0.61m (±6.4mm)	1.22m, 0.61m (±6.4mm)	1.22m, 0.61m (±6.4mm)
Overall Length	96" (±1/8")	120" (±1/8")	144" (±1/8")
	2.44m (±3.2mm)	3.05m (±3.2mm)	2.66m (±3.2mm)
Effective Area	32ft ² , 16ft ²	40ft ² , 20ft ²	48ft ² , 24ft ²
	2.97m ² , 1.47m ²	3.72m ² , 1.86m ²	4.46m ² , 2.23m ²
Weight (w/o fluid)	12.2lbs, 6.1lbs	14.3lbs, 7.2lbs	16.5lbs, 8.3lbs
	5.53kg, 2.77kg	6.49kg, 3.26kg	7.48kg, 3.76kg
Fluid Capacity	4.0gal, 2.0gal	4.7gal, 2.4gal	5.4gal, 2.7gal
	15.1L, 7.6L	17.8L, 9.1L	20.4L, 10.2L
Weight (w/ water)	46.0lbs, 23.0lbs	53.8lbs, 26.9lbs	61.7lbs, 30.8lbs
	20.8kg, 10.4kg	24.4kg, 12.2kg	28.0kg, 14.0kg

ROOF MOUNTING SPACE: Width = [Number of panels X 50-7/8" (1.29m)] + 24" (0.61m)
Length = Panel length + 24" (0.61m)

RACK SPACE: Width = [Number of panels X 50-7/8" (1.29m)] + 2" (0.05m)
Length = Panel length + 6" (0.15m)

FLOW: Maximum recommended flow = 0.20 gpm per ft² panel area (488 L/hr per m²)
3.47 psi head loss (23.9 kPa)
Minimum recommended flow = 0.05 gpm per ft² panel area (122 L/hr per m²)
0.23 psi head loss (1.6 kPa)
Recommended flow = 0.10 gpm per ft² panel area (244 L/hr per m²)
0.87 psi head loss (6.0 kPa)

PRESSURE:

NORMAL OPERATING PRESSURE

MAXIMUM INTERMITTENT PRESSURE

80°F (27°C)

0 to 30 psi
(0 - 207 kPa)

45 psi
(310 kPa)

212°F (100°C)

0 to 5 psi
(0 - 34 kPa)

5 psi
(34 kPa)

70°F (21°C)

Measured burst pressure of panel body = Over 300 psi (2069 kPa)

TEMPERATURE:

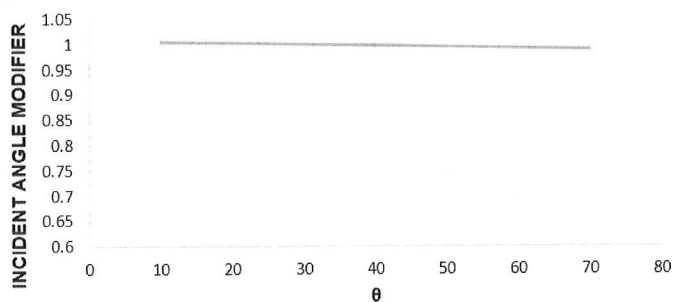
Normal operating temperature = 60°F to 90°F (16°C to 32°C)
Maximum continuous operating temperature = 212°F (100°C)
Maximum intermittent temperature (un-pressurized) = 250°F (121°C)
Melt temperature = 338°F (170°C)

SunSaverST™

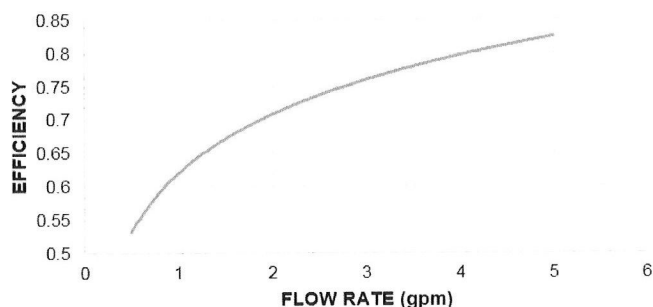
Solar Pool Heating Collector Specifications

CHEMICAL RESISTANCE:	Compatible with common collector fluids such as chlorinated or saline pool water.
CORROSION:	Non-corrosive
FREEZING:	The system should be drained before freezing conditions occur.
WEATHERABILITY:	Weatherometer, accelerated outdoor exposure, and other extensive laboratory testing demonstrates long-term weatherability of SunSaverST™ collectors (see warranty). Additionally, FAFCO's experience of 40+ years and over 2,000,000 collectors installed confirms that the proprietary stabilization and high mechanical strength results in negligible issues over the warranty period.
ABSORPTIVITY:	0.96
EMISSION:	0.90
TIME CONSTANT:	105 seconds
TESTED OUTPUT:	1,900 Btu/ft ² -day (5.9 kWh/m ² -day) (Per SRCC OG100 Certification # 10001773)
PERFORMANCE GRAPHS:	

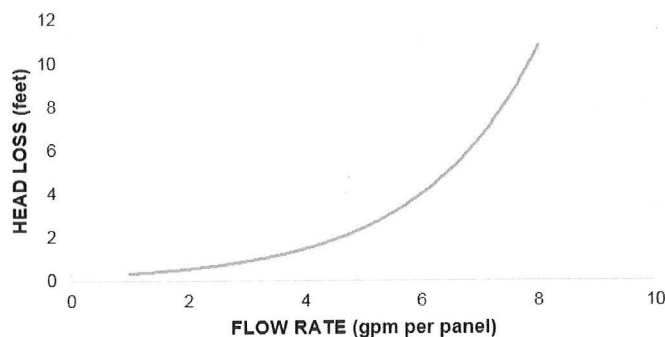
INCIDENT ANGLE CHARACTERISTICS



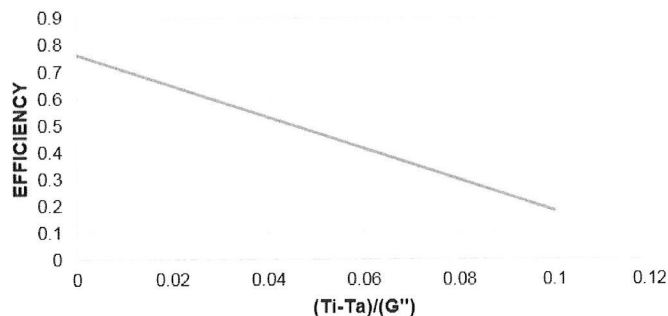
EFFICIENCY vs. FLOW
(for typical conditions)



PRESSURE VS. FLOW



MEASURED EFFICIENCY
(5 gpm flow rate, 3mph wind speed)



All specifications and dimensions set forth above are as estimated by FAFCO Inc., but are not intended to be precise and should not be relied upon as precise without independent verification. These estimated specifications and dimensions are subject to change without notice. Nothing contained herein is intended or should be construed to expand or extend FAFCO Inc.'s warranty, or establish any express or implied warranties of any nature, other than as contained in the Twelve Year Warranty Agreement. (FAFCO Inc. disclaims any other warranties and assumes no duty to provide notice if it becomes aware of any deficiencies in these estimates.) The reader accepts full responsibility for any use or application of these estimates and specifically understands and acknowledges the limited reliability of these estimates.



iSLC-3100-7P

CIMCON's Plug & Play Wireless Lighting Controller (iSLC) with Remote Monitoring, Dimming, GPS, Metering and Sensor Input Capabilities



4.53 in. W x 2.68 in. H
115 mm W x 67.98 mm H

CIMCON's iSLC-3100-7P is an intelligent wireless lighting controller with exceptional fault tolerance and a multitude of features. Each iSLC-3100-7P provides intelligent ON/OFF switching, dimming control, GPS, highly accurate power metering, analog and digital sensor inputs and constant status and health monitoring of your lighting fixtures.

Key Features of the iSLC-3100-7P

A Photocell in Every Controller

CIMCON's iSLCs operate immediately upon installation without dependency on the network.

A GPS in Every Controller

CIMCON's GPS capabilities reduce install times and eliminate future mapping issues. GPS coordinates for each iSLC are sent automatically to CIMCON's cloud-based Central Management System for overlay on a Google Maps interface. Without GPS, installers must manually record the pole ID, iSLC ID and its Latitude/Longitude location to map them correctly.

Extended Surge Protection

CATB surge protection is standard, while CATC surge protection is available as an option.

Full ANSI C136.41 7-pin Dimming Receptacle Support

CIMCON's iSLCs work with any lamp type or manufacturer with full support for all 7 pins on the ANSI C136.41 dimming receptacle for true "plug and play" installation. CIMCON's controllers support the addition of digital or analog sensors, such as motion, vehicle counts or environmental sensors through pins 6 and 7.

Revenue Grade Energy Metering

CIMCON's iSLCs monitor Current, Voltage, Frequency, Power Factor, kW and kWh, and offer metering accuracy as high as 0.5% for accurate consumption data and billing.

Fault Tolerance

Each CIMCON iSLC is a highly intelligent stand-alone device that utilizes the latest developments in self-organizing, self-healing, wireless technologies. Proper operation and execution of a light's schedule is not dependent on network communications.

Remote Control and Scheduling

CIMCON's iSLCs support multiple lamp control modes such as user configurable ON/OFF/DIM schedules programmed on a daily / monthly / special events basis, local ad-hoc control, photocell and astro-clock scheduling, and mixed mode scheduling incorporating sensor inputs.

Flexible Dimming Control

CIMCON's iSLCs support dimming through 0-10 VDC, PWM or DALI interfaces.

Fault Monitoring

CIMCON's iSLCs provide extensive fault monitoring to report on day burners, burnouts, lamp cycling, ballast failures, over/under voltage, abnormal power consumption, low power factors, communication failures and more. All faults are sent to CIMCON's cloud-based Central Management System for alarm routing, visualization and fault correction. Alerts can be sent directly to relevant users via emails or text messages (SMS) immediately when they occur. Alerts are time stamped and contain key parameters associated with the fault/alarm.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3100-7P

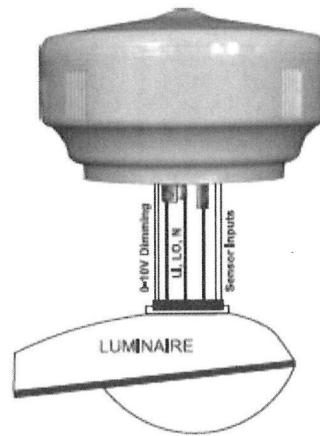
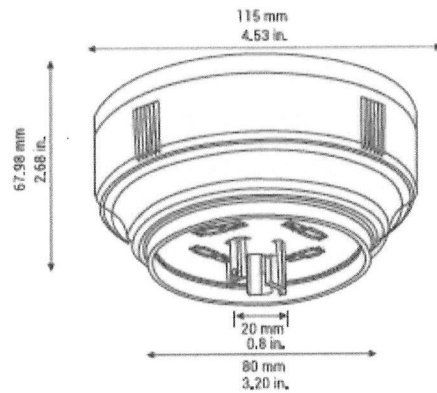
Technical Specifications

Controller	Powerful 32-bit Microcontroller	
Real Time Clock	Battery-backed RTC	
Storage Memory	192 kB Flash and 12 kB RAM	
Power Metering	Parameters measured: Voltage, Current, Power Factor, Frequency, kW and kWh	
Rated Load	1560VA 960 W	
Power Supply	Universal AC input 85 V-264 V, 50/60 Hz (305 V optional)	
Radio Communication	2.4 GHz, IEEE 802.15.4	
	RF Data Rate: 250 kbps	Transmit Power: +20 dBm
	Receiver Sensitivity: -104 dBm	Network Type: Self-forming mesh network
	Network Fault Tolerance: Self-healing mesh	Open Field Range: 5000 ft/1.5 km
	Data Protection: 256-bit AES encrypt	
	Hardware: IEEE 802.15.4-2003 CSMA-CA algorithm	
	Receiver Type: 22 Tracking/66 Acquisition Channel GPS Receiver GPS L1, C/A Code	
	Max. Update rate: 10 Hz	
	Sensitivity:	
	Tracking:	-165 dBm
GPS Module Specification (Optional)	Reacquisition:	-160 dBm
	Cold starts:	-147 dBm
	Time-To-First-Fix	
	Cold starts:	31s (typical)
	Warm starts:	30s
	Hot starts:	<1s
	EPO Assist:	13s (CTTF)
	Accuracy:	
	Automatic Positioning	2.5 m CEP
	Speed:	0.1 m/s
Dimming Interface	Analog Dimming (0-10 VDC)	
	Protection: Output Short Circuit protection	Maximum Current: 10 mA
	or	
Optional Sensor Inputs	PWM Dimming (10 V p-p, 400 Hz)	
	Maximum Current: 10 mA (Sink)	
	Provision of one Digital input and one Analog input that can be used for motion-based lighting controls, adaptive lighting or advanced lighting controls	
Surge Protection	Standard: 445 Joule CATB (6 kV/3 kA), Optional: 700 Joule CATC (20 kV/10 kA)	
Operating Conditions	-40°C to +70°C / -40°F to +158°F, 20% to 90% Rh non-condensing, IP67	
RoHS	Yes	
Central Management System	Web-based software allows remote configuration, monitoring, control, and reporting	
Certifications	UL, CE, RCM (AUS/NZ), VCCI (Japan)	

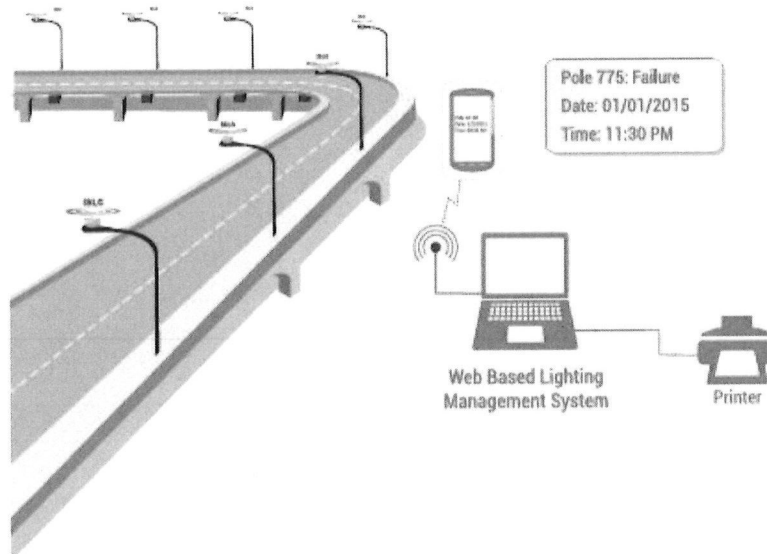
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iSLC-3100-7P

Mechanical Specifications



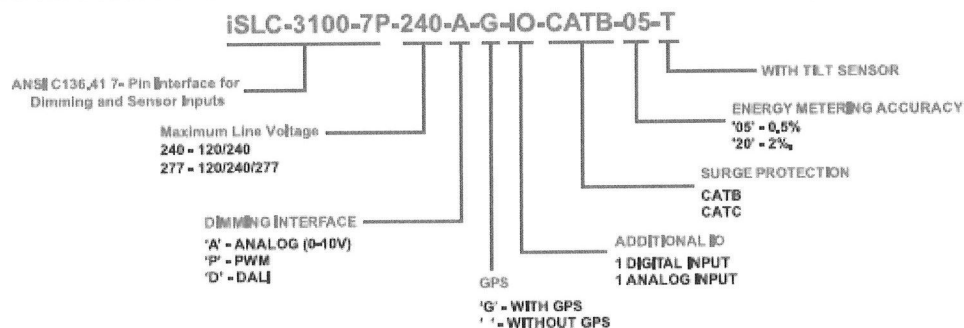
How It Works



To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3100-7P

Ordering Code



Ordering Guide

iSLC-3100-7P

PRODUCT ID	Maximum Line Voltage	DIMMING INTERFACE	GPS	ADDITIONAL IO	SURGE PROTECTION	ENERGY METERING ACCURACY	TILT
NEMA-7-pin SERIES	240 - 120/240 277 - 120/240/277	'A' - ANALOG 'P' - PWM 'D' - DALI	'G' = WITH GPS '-' = WITHOUT GPS	'IO' - 1 Digital & 1 Analog '-' - No Inputs	'CATB' - (6kV/3kA) 'CATC' - (20kV/10kA)	'05' - 0.5% '20' - 2%	'T' = WITH TILT SENSOR

Project Information

Project Name

Date

Comments

Prepared By

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Specifications subject to change without notice.
iSLC 3100-7P-07
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Wireless Gateway

CIMCON's Ethernet and Cellular Gateway



CIMCON
Lighting

Cities Simplified.



10.78 in. L x 6.81 in. W x 3.15 in. H
274 mm L x 173 mm W x 80 mm H

CIMCON's Wireless Gateway serves as a "switchboard" for a group of intelligent wireless lighting controllers (iSLCs) to communicate with the CIMCON cloud-based Central Management System. Gateways use backhaul communications networks such as GPRS, Ethernet and also include a ZigBee® radio module for self-organizing, self-healing local wireless mesh networking.

Key Features of the Wireless Gateway

Robust and Reliable

Communicates with up to 1,000 CIMCON intelligent wireless lighting controllers (iSLCs) spread across significant distances with high scalability and fault tolerance, using self-forming and self-healing mesh networking.

Wireless Technologies

CIMCON's Wireless Gateway utilizes the latest developments in wireless technologies to configure and collect data from CIMCON's intelligent wireless lighting controllers (iSLCs) and transmits data to and from the CIMCON cloud-based central server.

Local Intelligence

CIMCON's Wireless Gateway uses an extremely powerful 32-bit microcontroller that enables local complex logic and intelligence for faster response times and better performance.

Local Data Storage

CIMCON's Wireless Gateway can store large amounts of data in the event of a communication link failure. This data is transferred to the cloud and CIMCON's cloud-based Central Management System once the link is available, thus ensuring data integrity.

Multiple Connectivity Options

CIMCON's Wireless Gateway offers several wired and wireless options to connect to the cloud including Ethernet, Serial/USB interface and GPRS (Cellular) support.

Simple Remote Configuration

CIMCON's Wireless Gateway can be remotely configured from an easy-to-use web interface. Configurations include: input and output mapping, polling rates and GPS coordinates.

Multiple Protocol Support

CIMCON's Gateway provides support for several industry standard protocols that enable easy integration with other systems and networks.

Network Fault Tolerance

Multiple Wireless Gateways can be configured in fault tolerant mode to provide the highest levels of network availability.

Simple Installation

CIMCON's Wireless Gateway can be pole or rooftop mounted for easy installation.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

Wireless Gateway

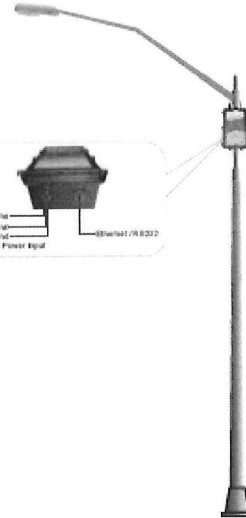
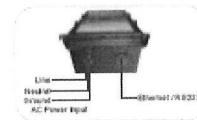
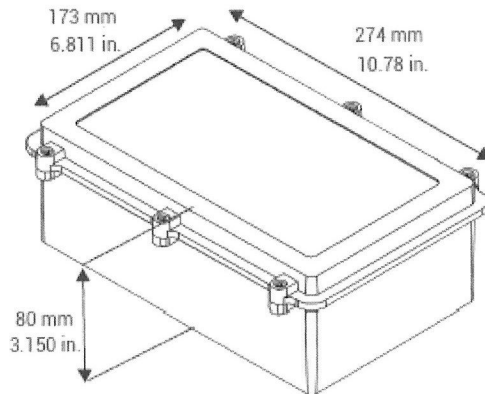
Technical Specifications

Processor	32 bit ARM A7 running at 696 MHz		
Real Time Clock	Battery-backed RTC		
Radio Communication	2.4 GHz, IEEE 802.15.4 Data Rate: 250 kbps Receiver Sensitivity: -102 dBm Network Fault Tolerance: Self-healing mesh Open Field Range: 5000 ft/1.2 km RF Transceiver Certifications: United States (FCC), Canada (IC) and Europe (ETSI)		Transmit Power: +18 dBm Network Type: Self-forming mesh network Hardware: CSMA/CA Mechanism Data Protection: 128-bit/256-bit AES encryption
GSM Characteristics	Multi-band (US/Canada) 4G: 700(B17)/850(B5)/AWS1700(B4),1900(B2) 3G: 850(B5)/1900(B2) 2G: 850/1900 (US-Verizon) 4G: 700(B13)/AWS1700(B4) (Europe) 4G: 800(B20)/1800(B3)/2600(B7) 3G: 850(B5)/900(B8),2100(B1) 2G: 900/1800 Mobile Originate, Mobile Terminated and Cell Broadcast PDU or Text Mode		
	Performance LTE 3GPP Release 9 (Category 3; 100 Mbps peak downlink/50 Mbps peak uplink) with HSPA+ 42/GPRS fallback		
GPS	Yes		
Wi-fi Communication	IEEE 802.11 b/g/n RF/PHY/MAC SOC Single spatial stream in 2.4GHz ISM band Advanced Equalization and Channel Estimation Supports IEEE 802.11 WEP, WPA, and WPA2 Security Advanced Equalization and Channel Estimation Advanced Carrier and Timing Synchronization Data Rate: 65Mbps Power Output: 19dbm Sensitivity: -98dbm		
Bluetooth	Bluetooth 4.0 (Basic Rate, Enhanced Rate and BLE) Class 1 and 2 transmission Adaptive Frequency Hopping Superior sensitivity and range		
Storage Memory	eMMC Flash Storage (2 GB SLC or 4 GB MLC)		
Power	Universal AC input 90-305 VAC, 50/60 Hz		
Power Back up	20-60 Sec		
Ports	Ethernet: 10/100 Base-T IPv4 and IPv6 compatible, RS-232, USB 2.480 M/bits Host (2) / Device (1)		
Installation	Pole Mount or Wall Mount		
Enclosure	Dimension: 274 mm x 173 mm x 80 mm Material: Aluminum Die cast		
Operating Conditions	-40°C to 70°C / -40°F to 158°F, 20% to 90% Rh non-condensing		
IP Rating	IP66		
Surge Protection	Standard: 445 Joule CATB (6kV/3kA), Optional: 700 Joule CATC (20kV/10kA)		

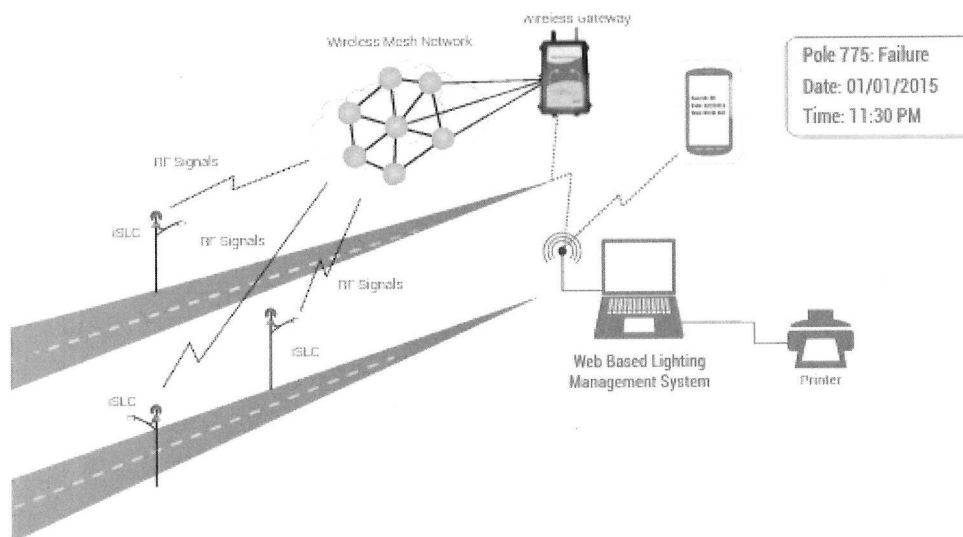
To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

Wireless Gateway

Mechanical Specifications



How It Works



To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3300

CIMCON's Plug & Play Wireless Lighting Controller with Remote Monitoring, Dimming, Metering and Sensor Input



7.32 in. L x 1.00 in. W x 1.25 in. H
185 mm L x 43 mm W x 32 mm H

CIMCON's iSLC-3300 is an intelligent wireless lighting controller that uses a highly robust and reliable self-forming and self-healing RF mesh network in a form factor that can be easily mounted inside or outside of any light fixture.

Each iSLC-3300 provides intelligent ON/OFF switching, dimming control, scheduling, highly accurate power metering and health monitoring of each light fixture. The iSLC-3300 also includes support for sensor inputs such as occupancy or ambient light sensors for control of each light or groups of lighting fixtures.

Key Features of the iSLC-3300

Robust and Reliable

Reliably operates over long distances in a self-healing, self-organizing network utilizing the latest developments in wireless RF technology.

Remote Control and Scheduling

The controller supports five lamp control modes. Control can be based on user-configurable ON/OFF/DIM schedules programmed on a daily / monthly / yearly / special events basis such as holidays, warehouse inventory and stocking events.

Power Metering

The iSLC-3300 intelligent wireless lighting controller (iSLC) can monitor electrical parameters such as Current, Voltage, Frequency, Power Factor, kW and kWh.

Controller Groups

Lights can be grouped by Zone, Floor or Area, based on different light level requirements.

Post Top Retrofit

The iSLC-3300 controller is perfect for retrofitting existing decorative post tops.

Dimming Controls

The iSLC-3300 controller supports dimming via 0-10 VDC, DALI or PWM with up to 10 dimming schedules. It also includes additional sensor interfaces for motion/occupancy sensors to enable motion-based dimming and ambient light sensors for daylight harvesting.

Fault Monitoring

Extensive fault monitoring is provided to report on lamp burnouts, ballast/driver failure, abnormal power consumption, low power factor, communication failure and more. All faults are sent to CIMCON's cloud-based Central Management System for visual alarms, trouble tickets and fault correction.

Alert Routing

Alarms can be sent directly to the appropriate users via emails or text (SMS) messages as soon as they occur. Messages are time stamped and contain key parameters associated with the fault/alarm.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

iSLC-3300

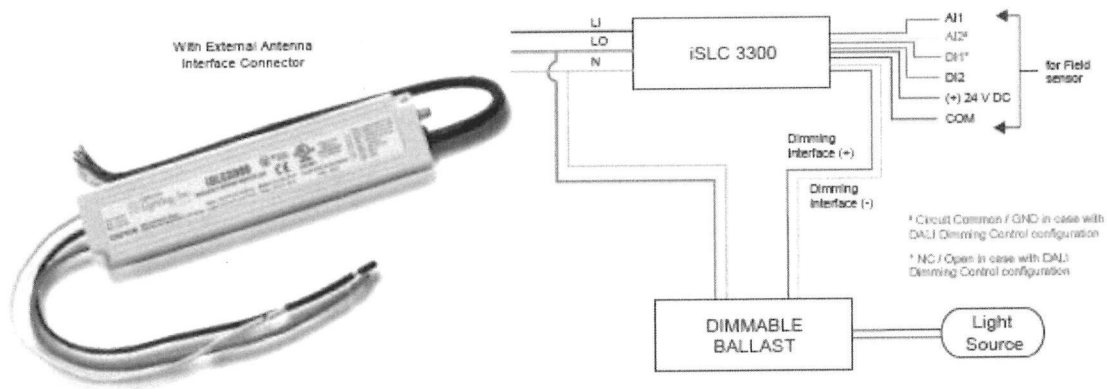
Technical Specifications

Controller	Powerful 32-bit Microcontroller	
Real Time Clock	Battery-backed RTC.	
Storage Memory	192 kB Flash and 12 kB RAM	
Power Metering	Parameters measured: Voltage, Current, Power Factor, Frequency, kW and kWh	
Rated Load	6A 120 VAC / 4A 277 VAC	
Power Supply	Universal AC input 90 VAC-305 VAC, 50/60 Hz	
Supply Input for the Motion Sensor	+24 VDC, 30 mA	
Radio Communication	2.4 GHz, IEEE 802.15.4	
	RF Data Rate: 250 kbps	Transmit Power: +8 dBm / +20 dBm (optional)
	Receiver Sensitivity: -104 dBm, 1% PER	Network Type: Self-forming mesh network
	Network Fault Tolerance: Self-healing mesh	Open Field Range: 1600 ft/0.5 km
	Data Protection: 128-bit AES encryption	
Antenna	Built-in Wire Whip antenna, Option for an External antenna	
Dimming Interface	Analog Dimming (0-10 VDC)	
	Protection: Output Short Circuit protection	
	or	Maximum Current: 10 mA
	PWM Dimming (10 V p-p, 400 Hz)	
Optional Sensor Inputs	or	Maximum Current: 10 mA (Sink)
	or	
	DALI (Model not compliance to UL)	
Surge Protection	Provision of two Digital inputs and two Analog inputs that can be used for motion-based lighting controls, adaptive lighting or advanced lighting controls	
Enclosure	200 Joule CATB (6 kV/3 kA)	
Operating Conditions	Indoor: Installation: Surface/Ceiling Mounted Material: Polycarbonate Dimensions: 185 mm x 43 mm x 32 mm	
RoHS	-25°C to +65°C / -13°F to +149°F, 20% to 90% Rh non-condensing	
Central Management System	Yes	
Certifications	Web-based software that allows remote configuration, monitoring, control and reporting	
	UL, CE, RCM (AUS/NZ), VCCI (Japan)	

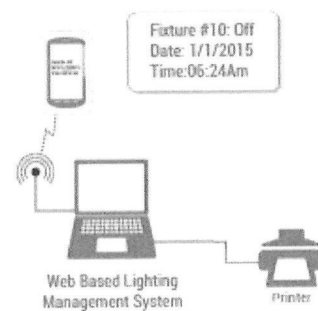
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iSLC-3300

Wiring Diagram



How It Works



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iSLC-3300

Ordering Guide

iSLC-3300

PRODUCT ID	Maximum Line Voltage	Dimming Interface	Additional IO	Energy Metering	Antenna
iSLC 3300	240 – 120V/240 277 – 120V/240/277	'A' – ANALOG (0 – 10V) 'P' – PWM 'D' – DALI	'IO' – 2 Digital & 2 Analog '-' – No inputs	'5' – 0.5% '2' – 2%	'I' – Internal 'E' – External

Project Information

Project Name

Date

Comments

Prepared By

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Specifications subject to change without notice
 iSLC 3300 IIS
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NearSky™ 360



CIMCON's "Plug & Play" Co-Located Sensor Platform for Connected Cities



CIMCON
Lighting

Cities. Simplified.



5.51 in W x 3.46 in H
140 mm W x 88 mm H

CIMCON's NearSky™ 360 edge and analytics hub is a configurable device to capture, analyze, aggregate and communicate sensor data within a Connected City. This device is designed to help quickly deploy various Smart City applications such as Environmental, Noise, Parking, Traffic and Security Monitoring. An ANSI compatible C135.41 7-pin connector at its base and ANSI compatible 7-pin receptacle at its top ensures quick "plug and play" installation and easy repositioning.

Key Features

Multi-Sensor Interface

CIMCON's NearSky™ 360 hub provides power, processing, and communications for a multi-sensor platform device. It includes a variety of communications interfaces (Ethernet, RS-485, USB) to 3rd party sensors (Environmental, Motion, Chemical/Gas, Vision, Sound, etc.).

Standard Modbus Support

Any 3rd party sensor with standard Modbus protocol for data read can be interfaced with NearSky™ 360.

Ability to Power Sensors

CIMCON's NearSky™ 360 hub can provide AC and DC power to various sensors connected to it; this speeds installation and reduces the cost of city-wide deployment.

Computing at the Edge

CIMCON's NearSky™ 360 hub has ample processing power for edge processing to analyze incoming data and create real time alerts and notifications.

Easy to Install

CIMCON's NearSky™ 360 hub offers full support for all 7-pins on the ANSI C135.41 dimming receptacle for true "plug and play" installation on any luminaire.

Configurable Design

CIMCON's NearSky™ 360 hub can host multiple sensor applications and communications capabilities (Wi-Fi, Ethernet, or over the existing lighting network) for true multi-vendor support

and backhaul options.

Co-exist with Lighting Controllers

CIMCON's NearSky™ 360 hub includes a 7-pin ANSI C135.41 pass-through receptacle at its top for installing intelligent lighting controllers.

Easy to Move

CIMCON's NearSky™ hub is "plug and play" and can be easily relocated as a city's requirements change.

Edge Analytics and Intuitive Central Management System (CMS)

CIMCON's NearSky™ 360 hub processes collected data at the edge and sends real-time alerts back to the CIMCON CMS along with aggregated results at the appropriate times. Traffic Density and motion-based Dimming applications are some of the built-in Video Analytics based applications.

Power Metering

CIMCON's NearSky™ 360 hub can monitor electrical parameters such as Current, Voltage, Frequency, Power Factor, kW and kWh of all the connected loads.

Power over Ethernet (POE+)

CIMCON's NearSky™ 360 hub provides one POE+ port to power and connect an IP Camera or other peripheral.

GPS and Tilt sensor

On-board GPS to provides the location of the device. A Tilt sensor has also been added to provide "knock down" alerts.

To learn more about CIMCON Lighting's solutions, please contact us at sales@cimconlighting.com

NearSky™ 360

Technical Specifications

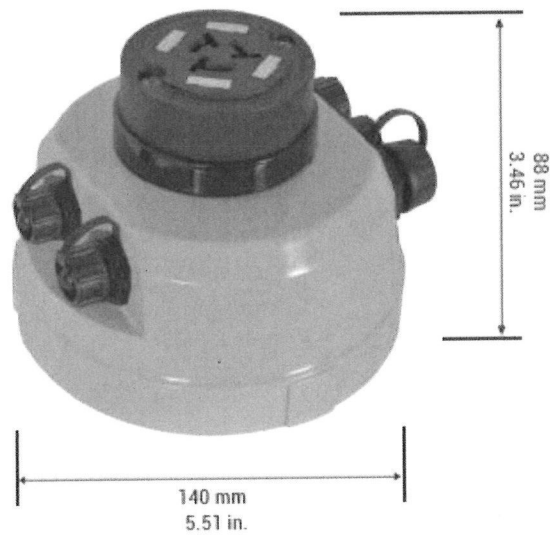
Controller	iMX6 series based Solo processor 1GB internal RAM 2GB SLC eMMC flash
Power Supply	AC input 85-264V, 50/60 Hz (metered)
Metering Accuracy	0.5%
Wireless Communications	Wi-Fi (802.11b/g/n) (backhaul) Bluetooth (4.0+EDR) (local)
Wired Communications	1x 10/100 base-T POE+ 1x 10/100/1000 base-T ethernet 1x USB-2.0 OTG interface 1x RS485
Supply for External Sensors	85-264V AC, 10A 24V DC, 100mA
GPS	Receiver Type: 22 Tracking/66 Acquisition Channel GPS Receiver GPS L1, C/A Code Max. Update rate: 10 Hz Sensitivity: Tracking: -165 dBm Reacquisition: -160 dBm Cold starts: -147 dBm Time-To-First-Fix: Cold starts: 31s (typical) Warm starts: 30s Hot starts: <1s EPO Assist: 13s (CTTFF) Accuracy: Automatic Position: 2.5 m CEP Speed: 0.1 m/s
Tilt	Bi-directional 45° and -45°, Non-sensitive to vibration
ANSI C136.41 Compatible NEMA 7-Pin Receptacle	Located on top of NearSky™ 360 hub (for pass-through interface of NEMA controller) Communication with SLC via internal RS485 interface. Order the SLC having RS485 interface to communicate with NearSky™ 360.
Surge Protection	700 Joule CATC (20kV/10kA)
Operating Conditions	-40°C to +50°C / -40°F to +122°F, 20% to 90% Rh non-condensing
RoHS	Yes
Central Management System	Web-based software allows remote configuration, monitoring, alerts, control, and reporting

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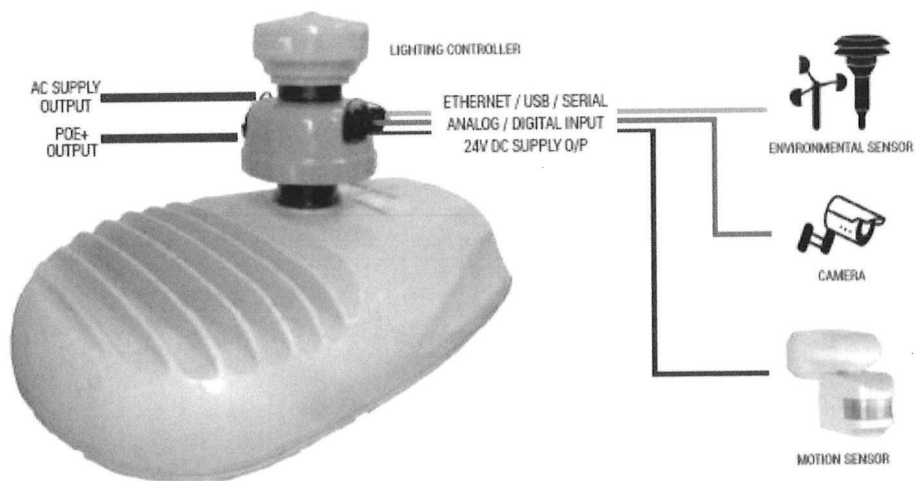
NearSky™ 360



Mechanical Specifications



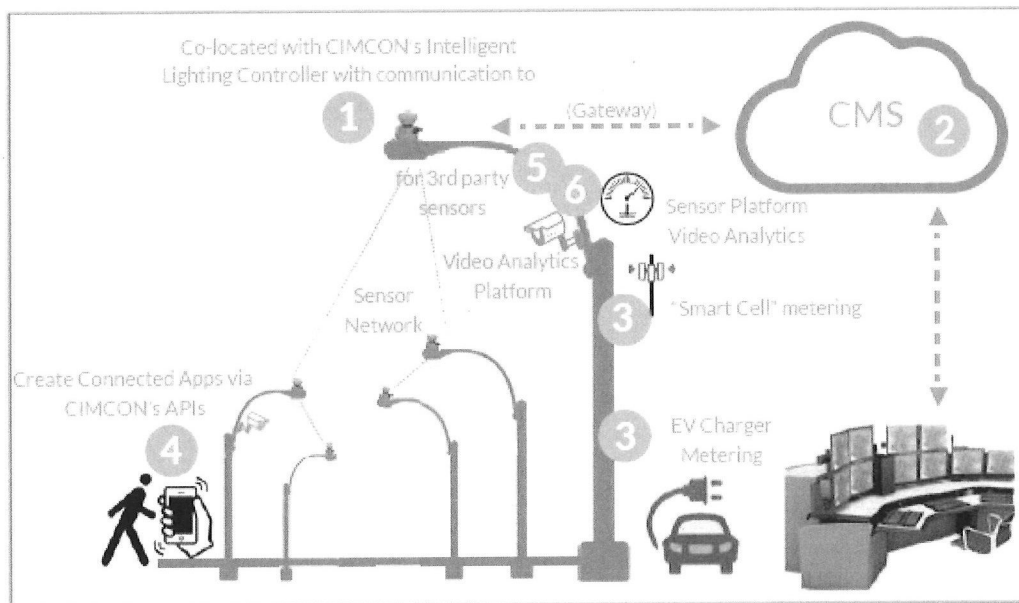
Wiring Diagram



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NearSky™ 360

How It works



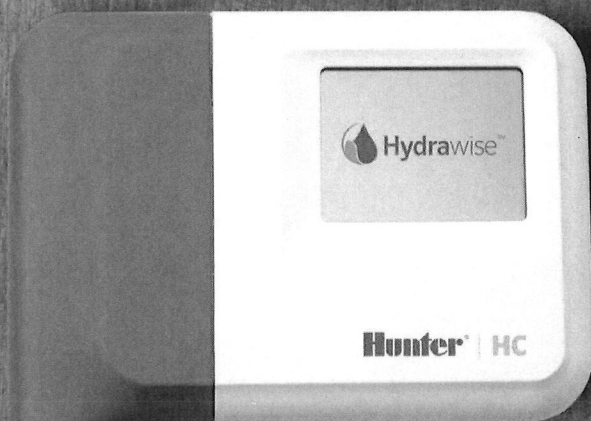
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RESIDENTIAL & COMMERCIAL IRRIGATION
Built on Innovation®



- 01 **Save time:** Manage from anywhere around the world
- 02 **Save water:** With Hydrowise Predictive Watering™
- 03 **Easy to use:** Dashboard control and touchscreen interface



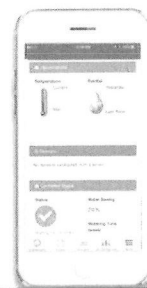
HC RESIDENTIAL WI-FI CONTROLLER WITH HYDRAWISE READY SOFTWARE

Manage your irrigation controller from anywhere worldwide using your smart device or web browser with Hydrowise cloud software. Predictive watering adjusts schedules based on temperature forecast, rainfall probability and wind and humidity to provide maximum water savings while keeping your landscape healthy and beautiful. Add a simple-to-install flow meter and set up automatic notifications to alert you of broken pipes or sprinklers.

Hydrowise cloud software is a user-friendly water management software. Each homeowner can use predictive watering adjustments to achieve water savings. Hydrowise software is also a powerful tool for professional contractors to do in-depth water management for their client's landscape, and monitor piping system and valves' electrical system. It is a professional cloud-based irrigation software that works for everyone.

The HC Controller is WaterSense-approved when connected to the Hydrowise web-based software.

■ **Learn more.** Visit hunterindustries.com, or contact your local sales manager.



Try Hydrowise now.
Visit hydrowise.com

HC CONTROLLER FEATURES & SPECIFICATIONS

Features

- New style fully functioning controller with touchscreen
- Wi-Fi-enabled for simple connection to the internet
- 6 and 12 station standard controllers
- 12 station expansion module allows for expansion to 36 stations
- Two customizable sensor ports
- Start times per program: 6
- Independent programs: 36
- Max station run time: 24 hours
- Hydrawise™ Ready
- Schedule adjustment based on local weather
- Watering overflow detection and alerts
- Wiring fault detection and alerts (12 station module)
- Flow meter measures water usage and leak detection
- Enclosure: Indoor plastic
- Warranty: 2 years

Electrical Specifications

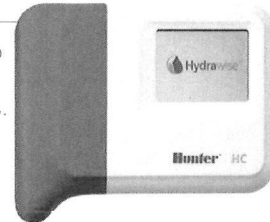
- CE, C-tick, FCC

Models

Plastic Indoor

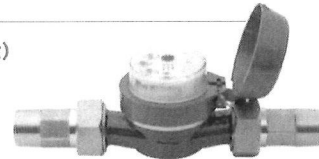
Height: 6.0"
Width: 7.0"
Depth: 1.3"

HC can be easily expanded up to 36 stations by adding two 12 station expansion modules.



Flow Meter (¾" coupling)

Length: 5.1"
Width: 3.1"
Height: 3.1"



Flow Meter (1" coupling)

Length: 6.3"
Width: 3.1"
Depth: 3.1"

HC - SPECIFICATION BUILDER: ORDER 1 + 2 + 3 + 4

1 Models	2 Transformer	3 Indoor/Outdoor	4 Options
HC-6 = 6 station controller with Wi-Fi connection HC-12 = 12 station indoor controller with Wi-Fi connection	00 = 120 VAC 01 = 230 VAC	i = Indoor model	(Blank) = No option E = 230 VAC with European connections A = 230 VAC with Australian connections

Examples:

HC-600i = 6-station 120 VAC indoor plastic controller with Wi-Fi connection
 HC-1200i = 12-Station 120 VAC indoor plastic controller with Wi-Fi connection
 HC-1200i-E = 12-Station 120 VAC indoor plastic controller, and with European cord

HC - OPTIONS

Models	Description
HC-1200M	12 station expansion module used to increase station count to 24 or 36
HC-075-FLOW	Flow meter with ¾" NPT thread
HC-100-FLOW	Flow meter with 1" NPT thread

Website hunterindustries.com | Customer Support 1-800-383-4747 | Technical Service 1-800-733-2823

Helping our customers succeed is what drives us. While our passion for innovation and engineering is built into everything we do, it is our commitment to exceptional support that we hope will keep you in the Hunter family of customers for years to come.

G. R. Hunter
 Gregory R. Hunter, President of Hunter Industries

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LIT-694-BR-US 8/16

FSL LED DECORATIVE FLOOD

Cat.#

Job

Type



HUBBELL
Outdoor Lighting

Approvals

SPECIFICATIONS

Intended Use:

Ultra compact LED flood with a variety of NEMA distributions for lighting applications such as safety/security, accent, flag pole, columns, or signs

Construction:

- Corrosion resistant, rugged die-cast aluminum housing with powder coat paint finish
- High impact UV stabilized acrylic outer lens protects LEDs and allows for cleaning and debris removal
- Vented housing isolates LED module from driver, maximizing product life and performance
- Visor and vandal lens available

LED:

- 7 high powered LED's (Stock)
- 10 high powered LED's (MTO)
- Ambient operating temperature -35°C to 40°C
- Stock Versions: 4000K and 5000K CCT
- MTO Versions: 3000K CCT nominal with 80 CRI, 4000K and 5000K CCT nominal with 70 CRI

Optical/Electrical

- Variety of NEMA distributions: - N (3x3), M (4x4), RM (5x4) and W (6x6) - for wide range of lighting applications; Stock version Wide (6x6) only
- 120-277V operation, 50/60Hz
- Driver IP66 and RoHS compliant

Optical/Electrical (Cont.)

- Comes standard with 10KV surge protection device
- 0-10V dimming driver standard, continuous dimming option to have leads pulled out for easy connection

Installation:

- Traditional 1/2" x 14 NPS threaded adjustable knuckle mounting
- Easy maintenance access to electrical components with removal of 4 screws from back of fixture housing.

Listings:

- IP66
- Listed to UL1598 for use in wet locations
- DLC Qualified (4000K and 5000K models only); Consult DLC website for more details: <http://www.designlights.org/QPL>

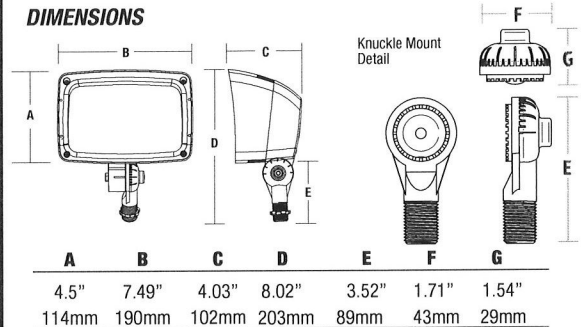
Warranty:

5 year limited warranty, for more information visit: <http://www.hubbellighting.com/resources/warranty/>

PRODUCT IMAGE(S)



DIMENSIONS



SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions		
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)
FSL-25 (Single carton 1 pc.)	2.66 lbs (1.2)	9.45" (24)	7.87" (20)	6.69" (17)
FSL-25 (Master carton 2 pcs.)	5.31 lbs (2.4)	16.54" (42)	10.04" (25.5)	7.68" (19.5)
FSL-25 (Single carton 1 pc.)	3.18 lbs (1.4)	11.81" (30)	9.45" (24)	7.48" (19)

Carton dimensions for shipping purposes only

CERTIFICATIONS/LISTINGS



IP66

ORDERING INFORMATION - STOCK VERSION

Catalog Number	Mount	Max Candle Power	Beam Pattern	Wattage	Drive Current	Voltage	Color Temperature	Lumens	LPW	Weight lbs. (kg)	Finish
FSL-25	1/2" thread	1814	Wide	25	700mA	120-277V	5000K	2664	106.5	6 (2.7)	Bronze
FSL-25-PCU	1/2" thread	1814	Wide	25	700mA	120-277V	5000K	2664	106.5	6 (2.7)	
FSL-25-4K	1/2" thread	1794	Wide	26	1050mA	120-277V	4000K	2406	92.5	6 (2.7)	
FSL-25-4K-PCU	1/2" thread	1668	Wide	26	700mA	120-277V	4000K	2463	98.5	6 (2.7)	

ORDERING INFORMATION - MADE TO ORDER

FSL

- 10L

- 25

-

-

-

-

- K

-

-

-

-

- F

FAMILY	# LEDS	WATTS	CCT	DISTRIBUTION	VOLTAGE	MOUNTING	FINISH	CONTROL OPTION	OPTIONS
FSL FACTOR Flood Small	10L 10 LED	25 25W	3K 3000K	N 3x3	U 120V-277V	K Knuckle	DB Bronze	PC ¹ Photocontrol (voltage specified and determined by voltage field)	F ¹ Fusing 120 or 277V only (determined by voltage field)
			4K 4000K	M 4x4	1 120V		BL Black		
			5K 5000K	RM 5x4	2 208V		WH White		
				W 6x6	3 240V		GR Gray		
					4 277V		PS Platinum silver	CD Continuous dimming	
							CC Custom Color		

1 - PC - photocell and F - Fusing options cannot be combined, only available as separate options



HUBBELL
Outdoor Lighting

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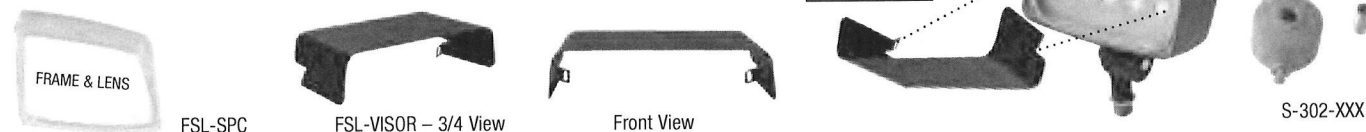
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ACCESSORIES/REPLACEMENT PARTS - Order Separately

Catalog Number	Description
FSL-SPC	Vandal resistant polycarbonate lens (Replaces existing acrylic fixture lens)
FSL-VISOR-XX ¹	Top/Bottom visor (Tap holes in lens frame for field installation)
93047942AC	Acrylic lens w/ gasket
93047957	FSL7, 25w, 120-277V Dimming driver, 1050mA
93043808	FSL10, 25w, 120-277V Dimming driver, 700mA
20750110264	Knuckle mount Dark Bronze finish. Contact factory for additional finishes
S-302	Slipfits 1 1/2" or 2" pipe (1.9" OD or 2 3/8" OD) with 1/2" N.P.S.M. hub; Gray
S-302-M51	Slipfits 1 1/2" or 2" pipe (1.9" OD or 2 3/8" OD) with 1/2" N.P.S.M. hub; Bronze
S-302-M52	Slipfits 1 1/2" or 2" pipe (1.9" OD or 2 3/8" OD) with 1/2" N.P.S.M. hub; White
TRN-XX ¹	Trunnion adaptor for 1/2" threaded knuckle mount

¹ Specify finish color to match fixture, e.g. DB - Bronze.



PERFORMANCE DATA - MTO

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	NEMA	FIELD ANGLE H° X V°	5K (5100K nominal, 70 CRI)			4K (4200K nominal, 70 CRI)			3K (3000K nominal, 80 CRI)		
						LUMENS	LPW ¹	MAX BEAM CANDLEPOWER	LUMENS	LPW ¹	MAX BEAM CANDLEPOWER	LUMENS	LPW ¹	MAX BEAM CANDLEPOWER
7	1050mA	26W	W	6 X 6	W	-	-	-	2406	92.5	1794	-	-	-
10	700mA	25w	N	3 x 3	32 x 32	2735	110	22259	2583	108	20172	2007	84	17546
			M	4 x 4	54 x 54	2742	109	8210	2511	105	7162	2008	84	5761
			RM	5 x 4	85 x 68	2250	88	3822	2124	89	3468	1714	71	2977
			W	6 x 6	107 x 107	2664	106.5	1814	2463	98.5	1668	1984	83	1494

¹ - Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

PROJECTED LUMEN MAINTENANCE - Stock

AMBIENT TEMP.	OPERATING HOURS - FSL-7					Calculated L70 (HOURS)
	0	25,000	50,000	60,000	100,000	
40°C / 104°F	0.99	0.91	0.85	0.84	0.76	>137,000

PROJECTED LUMEN MAINTENANCE - MTO

AMBIENT TEMP.	OPERATING HOURS - FSL-10					Calculated L70 (HOURS)
	0	25,000	50,000	60,000	100,000	
25°C / 77°F	1.00	0.98	0.96	0.96	0.94	>696,000
40°C / 104°F	0.99	0.96	0.95	0.94	0.92	>565,000

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

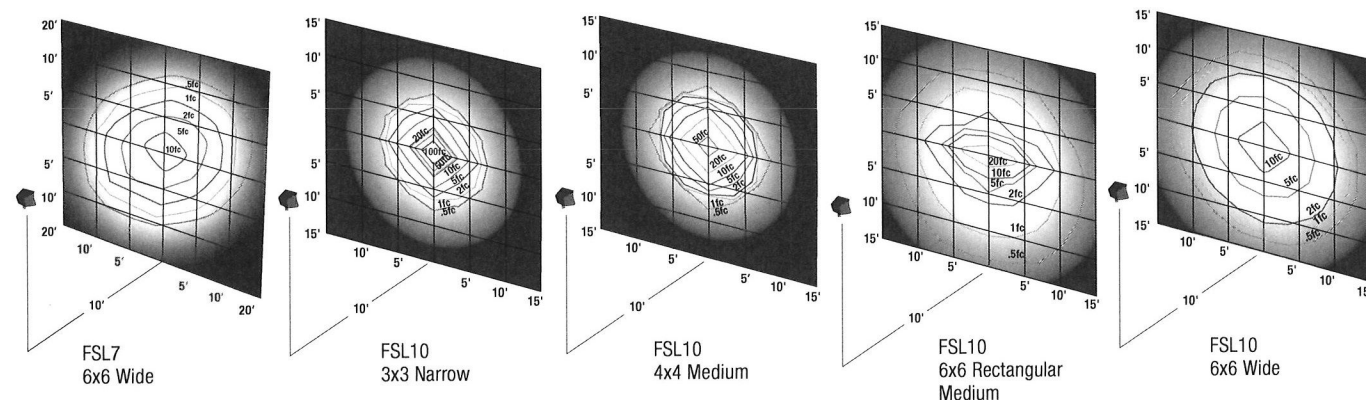
AMBIENT TEMPERATURE	LUMEN MULTIPLIER
0°C	1.02
10°C	1.01
20°C	1.00
25°C	1.00
30°C	1.00
40°C	0.99
50°C	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	CURRENT (Amps)	SYSTEM POWER (W)
7	1	1050mA	120	0.23	26
			277	0.11	26
10	1	700mA	120	0.204	25
			277	0.09	25

PHOTOMETRICS For additional photometric information and IES downloads, visit our web site at www.hubbelloutdoor.com



HUBBELL
Outdoor Lighting

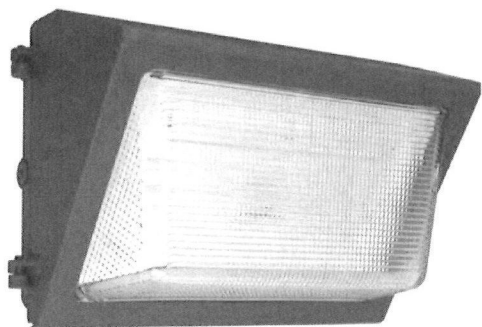
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WALLMAX™ OPEN FACE

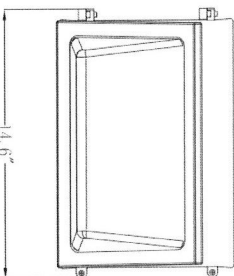
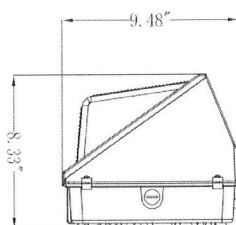
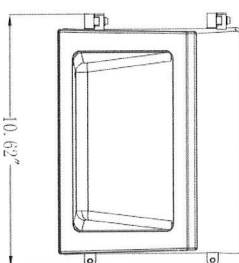
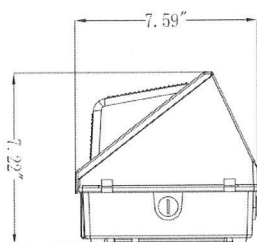
WP-OP Series



DIMENSIONS:

SIZE 1 - 28W & 40W

SIZE 2 - 28W, 40W, 50W,
80W & 120W



PRODUCT DESCRIPTION:

WallMax™ Open Face Wall Packs are ideal for brightly-lit outdoor environments in parking garages, entrances, public areas, schools, hospitals, hotels and outdoor walkways nationwide. The 28-, 40-, 50-, 80-, and 120-watt LED fixtures are energy-efficient replacements for up to 750-watt metal halide fixtures. The fixtures are rebatable, save energy, generate lower maintenance costs, and prevent light pollution.

FEATURES:

- Heavy-duty cast aluminum housing is polyester powder coated to be rust and corrosion proof
- High-quality shatter-resistant glass
- Sealed fixture is dirt and bug free
- 0-10V dimming driver standard
- 6kV integral surge suppression standard
- Six ½ NPS knockouts available for mounting convenience
- 10 Year Limited Warranty

CONTROLS:

120-277VAC Photocontrol:

- Power the fixture when light levels reach 20 lux or below
- Turn off the fixture at 30 lux or higher
- Operating temperature: 30°F-120°F

PIR Outdoor Daylight/Motion Sensor:

- Sensor provides multi-level control based on motion and/or daylight contribution for 0-10V DC Drivers
- All control parameters are adjustable remotely
- At least one FSIR-100 remote control must be ordered per project to be able to adjust factory settings for daylight / motion sensor
- For more information, please see supplementary datasheet for sensor model [MSWSFSP221B>>>](#)

MODEL SELECTION

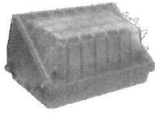
Typical order example: WP-OP28U-50B

WP-OP			-		B	
FAMILY	WATTAGE	VOLTAGE	-	LED MODULE	FINISH	OPTION
WP-OP= Open Face Wall Pack	28= 28W, 150W MH replacement	U= 120-277V	-	40= 4000K, CRI 80+	B= Bronze	(BLANK)= None
	40= 40W, 175W MH replacement	H= 347-480V	-	50= 5000K, CRI 80+	Contact Maxlite for additional finishes	PC= 120-277V Photocontrol
	50= 50W, 250W MH replacement					MS= PIR Daylight/Motion Sensor
	80= 80W, 400W MH replacement					L= Size 2 housing
	120= 120W, 750W MH replacement					LEM2= Size 2 housing, Battery Backup, -20° C
						LEM0= Size 2 housing, Battery Backup, 0° C

1. Not DLC listed. Not available with LEM2 or LEM0 options.

2. Motion Sensor performs at 20' up to 48' diameter. External model MSWSFSP221B-D will be provided on models with 120W, 347-480V, or -20 C Battery back up.

3. Use with 28W and 40W fixtures only. Not DLC listed.

ACCESSORIES			
ORDER CODE	MODEL NUMBER	DESCRIPTION	ACCESSORIES IMAGE
100679	WP-OP-S1PLATE-B	Beauty Plate, 14.50" X 9.50" X 0.08", Size 1, Bronze, 28W and 40W Models	
100461	WP-OP-S2PLATE-B	Beauty Plate, 18.1" * 8.7" * 0.08", Size 2, Bronze, 50W, 80W, and 120W Models	
102184	FSIR-100	Remote Control for daylight / motion sensor	
100821	WP-OP-S1VISOR-B	Cutoff Visor, Size 1, Bronze, 28W and 40W models	
100822	WP-OP-S2VISOR-B	Cutoff Visor, Size 2, Bronze, 50W, 80W and 120W models	
14099860	WP-OPSWG	Wire Guard, Size 1, Bronze, 28W and 40W models	
101499	WP-OPLWG	Wire Guard, Size 2, Bronze, 50W, 80W and 120W models	

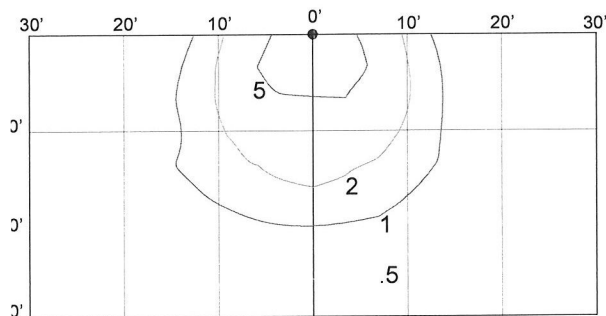
SPECIFICATIONS:

		28W	40W	50W	80W	120W
ITEM	SPECIFICATION	DETAILS				
GENERAL PERFORMANCE	Input Power (W)	28	40	50	80	120
	Lumens Delivered (in/lm)	3,770	5,645	7,065	11,375	16,945
	Efficacy (in lm/W)	136	138	138	140	140
	CRI	≥80				
	Lumen Maintenance (L85, TM-21 @ 25°C)	>100,000 hours				
	Color Temperature	4000K, 5000K				
	Spacing Criteria	Available upon request				
ELECTRICAL	Input Voltage	120-277V standard; 347-480V available				
	Power Factor	>90%				
	THD	<15%				
PHYSICAL	Housing	Die-Cast Polyester Aluminum				
	Mounting	Fits electrical box or mount directly				
QUALIFICATION	Qualification	DLC Premium, ETL, IP65				
	Environment	Outdoor, wet location				
	Warranty	10 Years				
	Operating Temperature	-40°F ~ 104°F (-40°C ~ 40°C)				
	Humidity	10%-90% RH, non-condensing				

Lighting layouts and spacing criteria available upon request.

LAYOUTS:

WP-OP 28W:

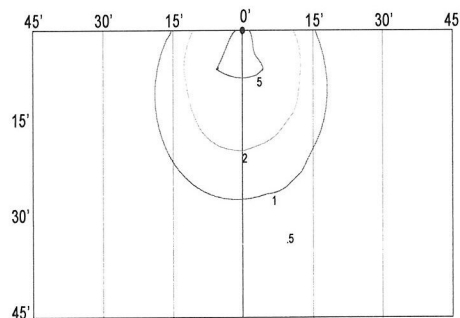


28W
3,640 LUMENS (SIZE 1 HOUSING)
10' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'
MULTIPLY BY:	1	0.67	0.50	0.40

WP-OP 40W:

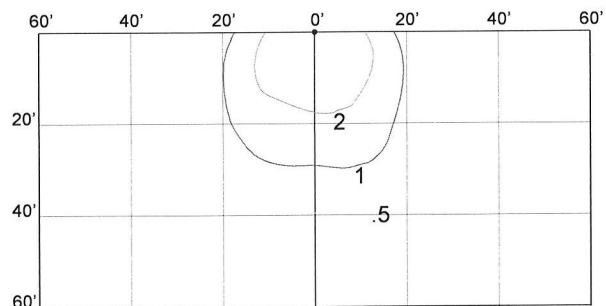


40W
5,540 LUMENS (SIZE 1 HOUSING)
15' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'
MULTIPLY BY:	1.50	1	0.75	0.60

WP-OP 50W:

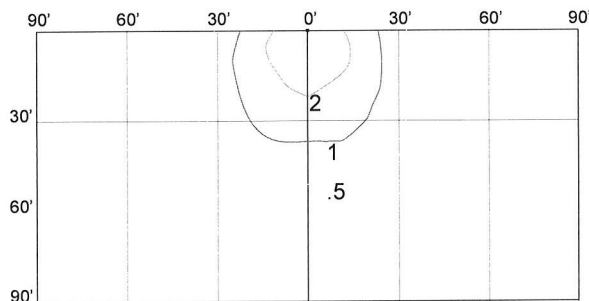


50W
7,065 LUMENS
20' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'
MULTIPLY BY:	2	1.33	1	0.80

WP-OP 80W:

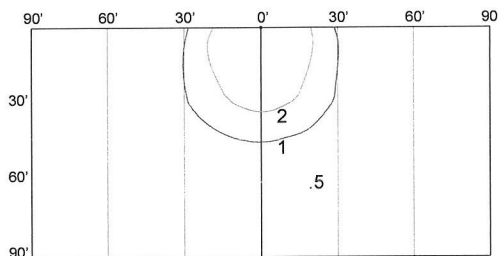


80W
11,375 LUMENS
30' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'	30'
MULTIPLY BY:	3	2	1.50	1.2	1

WP-OP 120W:

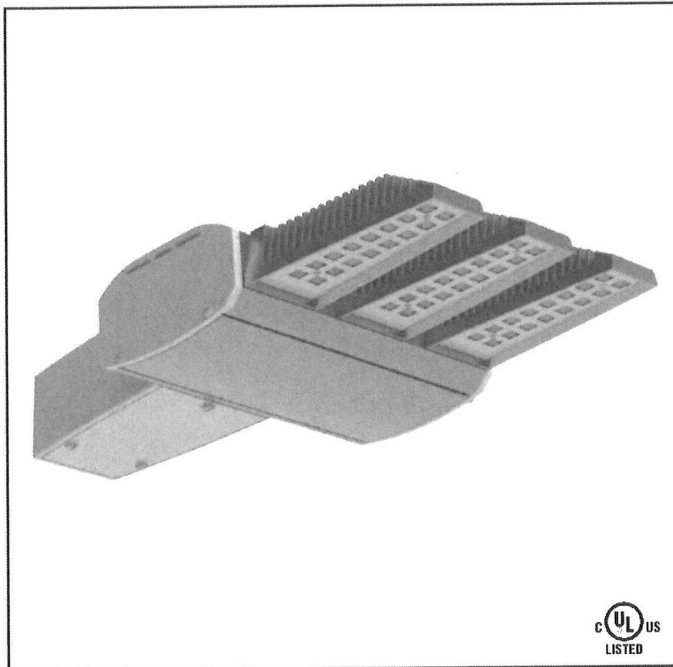


120W
16,945 LUMENS
30' MOUNTING HEIGHT

FOOT-CANDLE CORRECTION FACTOR:

NEW HEIGHT:	10'	15'	20'	25'	30'
MULTIPLY BY:	3	2	1.50	1.2	1

BSX-II LED Specifications



Project Name:

Catalog Number:

Type:

The new BOW SX LED Series continues the unique contemporary design inspired by the sleek styling of the BOW family. Separating the extruded aluminum driver housing and the individual die-cast aluminum linear LED engines: optimize the life of the LEDs and the Driver(s); and maximizes the lumen output of the fixture.

Each of the individual LED light engines come with 16 LEDs; for a max total of 64 LEDs. Nine optical distribution patterns are available.

Available in 3000, 4000 or 5000 Kelvin temperature.

A durable polyester powder coat finish is guaranteed for five years; and is available in standard or custom colors.

The BOW SX LED series is an exceptional choice for shopping centers, schools, office buildings, and general area lighting.

Ordering Information

MODEL	OPTICS	SOURCE	CURRENT	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS
BSX-II-2	T1	32LC	3	3K	UNV	PT	GY	PCR-120	RPP
BSX-II-3	T2	48LC	350mA	3000K	120-277V	Post Top	Grey	PhotoCell & Receptacle	Round Pole
BSX-II-4	T3	64LC	5	4K	8	MA	SL	PCR-208	Pole Adaptor
	T4		530mA	4000K	347V	Mast Arm Fitter	Silver Metallic	PhotoCell & Receptacle	For 3"Ø - 6"Ø Pole
	T4A		7	5K	5	KM	BK	PCR-240	UPMA
	T5		700mA	5000K	480V	Knuckle Mount	Black	PhotoCell & Receptacle	Universal Pole Mount Adaptor
	T5W		10			BOA	SBK	PCR-277	UPMA-R
	FN		1050mA			Bolt-On Arm	Smooth Black	PhotoCell & Receptacle	Universal Round Pole Mount Adaptor
	FM					TM	WH	PCR-480	DS
						Trunnion Mount	White	PhotoCell & Receptacle w/shorting cap	Decorative Shroud
						AWM	SWH	PER	ROT-R
						Adjustable Wall Mount	Smooth White	5 Pin Photo Receptacle w/shorting cap	Rotated Optics Right Side
								5PINPER	ROT-L
								7 Pin Photo Receptacle w/shorting cap	Rotated Optics Left Side
								7PINPER	CLS
								Requires Dimming Driver	Bank Side Cutoff Lower Shield
								DIM	RCLS
								0-10v Dimming Driver	Right Side Cutoff Lower Shield
								*No Control	LCLS
								WSC-8	Left Side Cutoff Lower Shield
								8" Mounting Height	UP
								WSC-20	Uplight Configuration
								9-20" Mounting Height	*Indoor Applications Only
								WSC-40	
								21-40" Mounting Height	
								10-15" Mounting Height	
								15-20" Mounting Height	
								21-40" Mounting Height	
								VWC	
								Visiware	
								Wireless Controls	
								*Consult Factory	

Housing

- The LED light engines are constructed of heavy-duty, die-cast aluminum, with external heat radiating fins.

Driver Compartment

- The separate driver housing is constructed of extruded aluminum, with vented cast aluminum end covers and stainless steel fasteners; for easy access to the LED driver(s); allowing for cooler operation and longer driver life. One-piece gasketing is utilized throughout the fixture for weather tight operation.

Thermal Management

- The BOW SX Series provides excellent overall thermal management by maximizing the fixture's heat sink capabilities. This enables the BOW SX Series to withstand higher ambient temperatures and drive currents without degrading LED life.
- The L70 test determines the point in an LEDs life when it reaches 70 percent of its initial output. The BOW SX Series LEDs have been determined to last a minimum of 100,000 hours in 25°C environments when driven at 350 mA.

Optical System

- The highest lumen output, LEDs are utilized in the BOW SX Series. IES distribution Types I, II, III, IV, IV-A, V, V-W, FN & FM are available. LED light engines come in multiples of 16 LEDs.
- CRI values are 70.

Quali-Guard® Finish

- The finish is a Quali-Guard® textured, chemically pretreated through a multiple-stage washer, electrostatically applied, thermoset polyester powder coat finish, with a minimum of 3-5 millimeter thickness. Finish is oven-baked at 400 °F to promote maximum adherence and finish hardness. All finishes are available in standard and custom colors. Finish is guaranteed for five (5) years.

Mounting

- An adjustable knuckle slip fits over a 2 3/8" Tenon, and allows for up to 90° degrees of vertical adjustment in 10° degree increments from horizontal, as well as full side to side adjustment with the knuckle mount.
- A round extruded 6" aluminum, Bolt-On Arm (BOA) with an in-pole nut plate. A Round Pole Plate Adapter (RPP) is required for mounting to round poles.
- A cast wall mount plate is available for wall mount applications.

Electrical Assembly

- The BOW SX Series is supplied with a choice of 350, 530, 700, or 1000 mA high-performance LED drivers, that accept 120v thru 480v, 50 Hz to 60 Hz, input. Power factor of 95%. Rated for -40 °C to +55 °C operations.
- Power factor of 90%.
- THD less than or equal to 20%
- 10 kV surge protector supplied as standard.
- 0-10v Dimming Driver supplied as standard.

Warranty

- Five (5) year Limited Warranty on entire system, including finish. For full warranty information, please visit VisionaireLighting.com.

Options

- Photocell & Receptacle
- Photo Receptacle
- Round Pole Plate Adapter
- Motion Sensor
- Universal Pole Mount Adapter
- Decorative Shroud
- Dimming Driver
- Wireless Controls
- Rotated Optics
- Cut-off Louver Shield

Listings

- BOW SX Series is UL Listed, suitable for wet locations.
- IP-65
- Powder Coated Tough™
- DLC Listed
- IDA Certification

DesignLights Consortium (DLC) qualified Product. Some configurations of this product family may not be DesignLights Consortium (DLC) listed, please refer to the DLC qualified products list to confirm listed configurations. <http://www.designlights.org/>
3000K must be selected for IDA certification.



BSX-II LED Specifications

Photometric Optical Summary

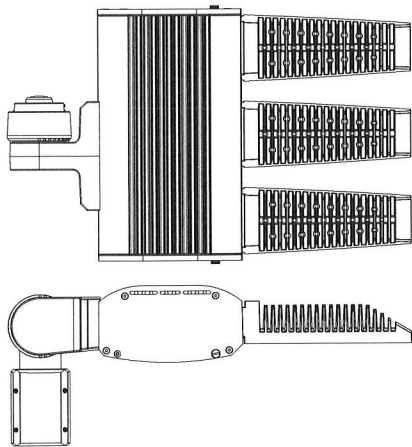
Not all optics are available on all fixtures. Check ordering chart for availability

Type I (T1)	Type II (T2)	Type III (T3)	Type IV (T4)	Type V (T5)	Type V-W (T5W)	Flood Narrow (FN)	Flood Medium (FM)
							

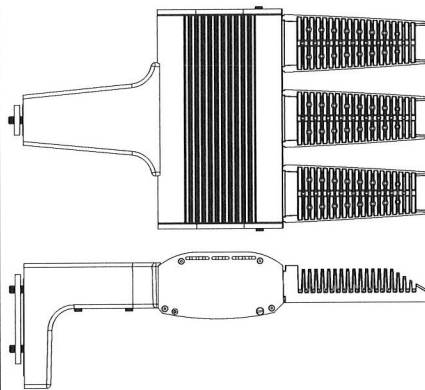
Dimensions

Knuckle Mount		Bolt-On Arm		Mast Arm		Post Top		Trunnion Mount		Trunnion Mount	
Width:	BSX-II-2 15"	Width:	BSX-II-2 15"	Width:	BSX-II-2 15"	Width:	BSX-II-2 15"	Width:	BSX-II-2 15"	Width:	BSX-II-2 15"
	BSX-II-3 15"		BSX-II-3 15"		BSX-II-3 15"		BSX-II-3 15"		BSX-II-3 15"		BSX-II-3 15"
	BSX-II-4 17"		BSX-II-4 17"		BSX-II-4 17"		BSX-II-4 17"		BSX-II-4 17"		BSX-II-4 17"
Depth:	BSX-II-2 29"	Depth:	BSX-II-2 27"	Depth:	BSX-II-2 28"	Depth:	BSX-II-2 27"	Depth:	BSX-II-2 25"	Depth:	BSX-II-2 25"
	BSX-II-3 29"		BSX-II-3 27"		BSX-II-3 28"		BSX-II-3 27"		BSX-II-3 25"		BSX-II-3 25"
	BSX-II-4 29"		BSX-II-4 27"		BSX-II-4 28"		BSX-II-4 27"		BSX-II-4 25"		BSX-II-4 25"
Height:	BSX-II-2 5"	Height:	BSX-II-2 9"	Height:	BSX-II-2 5"	Height:	BSX-II-2 5"	Height:	BSX-II-2 5"	Height:	BSX-II-2 8"
	BSX-II-3 5"		BSX-II-3 9"		BSX-II-3 5"		BSX-II-3 5"		BSX-II-3 5"		BSX-II-3 8"
	BSX-II-4 5"		BSX-II-4 9"		BSX-II-4 5"		BSX-II-4 5"		BSX-II-4 5"		BSX-II-4 8"

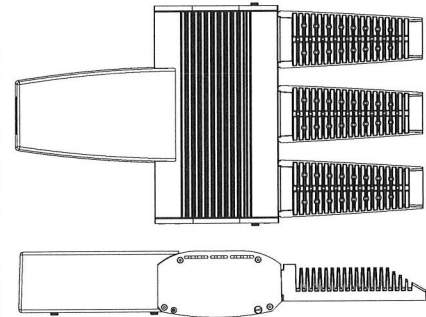
Knuckle Mount



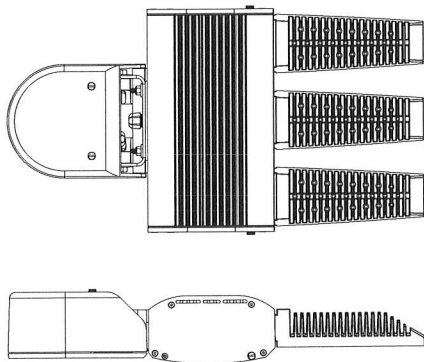
Bolt-On Arm



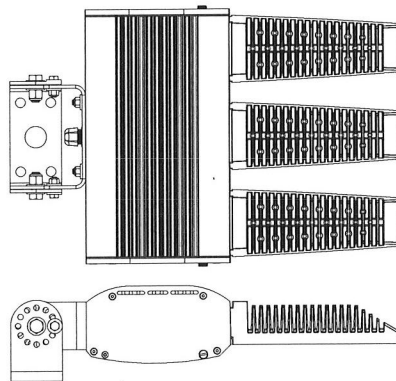
Mast Arm



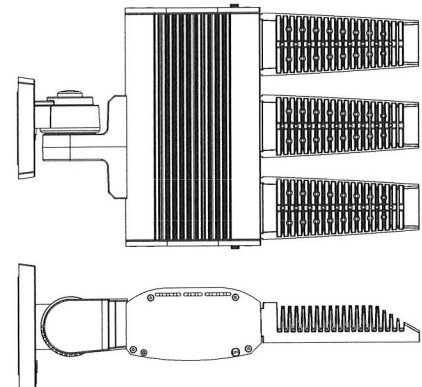
Post Top Mount



Trunnion Mount



Adjustable Wall Mount



BSX-II 3K Lumen Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type FN	Type FM	Watts
32	350	5285	4841	4850	4867	5497	4913	4649	5591	5728	36
	530	7438	6813	6826	6850	7736	6914	6543	7868	8061	53
	700	9737	8919	8936	8967	10127	9051	8565	10300	10553	72
	1050	12857	11778	11799	11841	13373	11952	11310	13601	13935	109
48	350	7669	7025	7038	7063	7976	7129	6746	8113	8311	54
	530	11044	10116	10135	10171	11486	10266	9715	11683	11969	81
	700	13981	12807	12831	12876	14541	12996	12298	14790	15153	106
	1050	19401	17772	17805	17868	20179	18035	17066	20524	21027	162
64	350	10704	9805	9823	9858	11133	9950	9416	11323	11601	73
	530	15462	14164	14190	14240	16082	14374	13602	16357	16758	107
	700	19459	17825	17858	17921	20239	18089	17117	20585	21090	139
	1050	25714	23556	23599	23682	26745	23904	22620	27203	27870	221
BSX-II 4K Lumen Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type FN	Type FM	Watts
32	350	5563	5096	5105	5123	5786	5171	4894	5885	6029	36
	530	7829	7172	7185	7210	8143	7278	6887	8282	8485	53
	700	10249	9389	9406	9439	10660	9527	9016	10842	11108	72
	1050	13534	12398	12420	12464	14076	12581	11905	14317	14668	109
48	350	8072	7395	7408	7434	8396	7504	7101	8540	8749	54
	530	11625	10649	10668	10706	12091	10806	10226	12298	12599	81
	700	14717	13481	13506	13554	15307	13680	12946	15568	15950	106
	1050	20422	18708	18742	18808	21241	18984	17965	21604	22134	162
64	350	11267	10321	10340	10377	11719	10474	9911	11919	12212	73
	530	16276	14910	14937	14990	16929	15130	14318	17218	17640	107
	700	20483	18763	18798	18864	21304	19041	18018	21668	22200	139
	1050	27068	24795	24841	24928	28153	25162	23811	28634	29336	221
BSX-II 5K Lumen Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type FN	Type FM	Watts
32	350	5338	4890	4899	4916	5552	4962	4696	5647	5786	36
	530	7513	6882	6895	6919	7814	6984	6609	7948	8143	53
	700	9835	9009	9026	9058	10229	9143	8652	10404	10659	72
	1050	12987	11897	11919	11961	13508	12073	11424	13739	14076	109
48	350	7746	7096	7109	7134	8057	7201	6814	8195	8395	54
	530	11155	10219	10237	10274	11602	10370	9813	11801	12090	81
	700	14122	12936	12960	13006	14688	13128	12423	14939	15306	106
	1050	19597	17952	17985	18048	20383	18217	17239	20731	21239	162
64	350	10812	9904	9922	9957	11245	10051	9511	11438	11718	73
	530	15618	14307	14334	14384	16245	14519	13739	16522	16928	107
	700	19655	18005	18038	18102	20443	18272	17290	20793	21303	139
	1050	25974	23794	23837	23921	27015	24145	22848	27477	28151	221
BSX-II EPA Data						BSX-II Weight					
Tilt Deg.	BSX-2	BSX-3	BSX-4	BSX-2	BSX-3	BSX-4					
0	.58	.58	.59	16 LBS	21LBS	26 LBS					
10	.58	.62	.77								
20	.62	.82	1.02								
30	.76	1.02	1.28								
40	.9	1.2	1.53								
50	1.01	1.36	1.75								
60	1.11	1.5	1.93								
70	1.14	1.6	2.06								
80	1.19	1.66	2.13								
90	1.21	1.68	2.14								

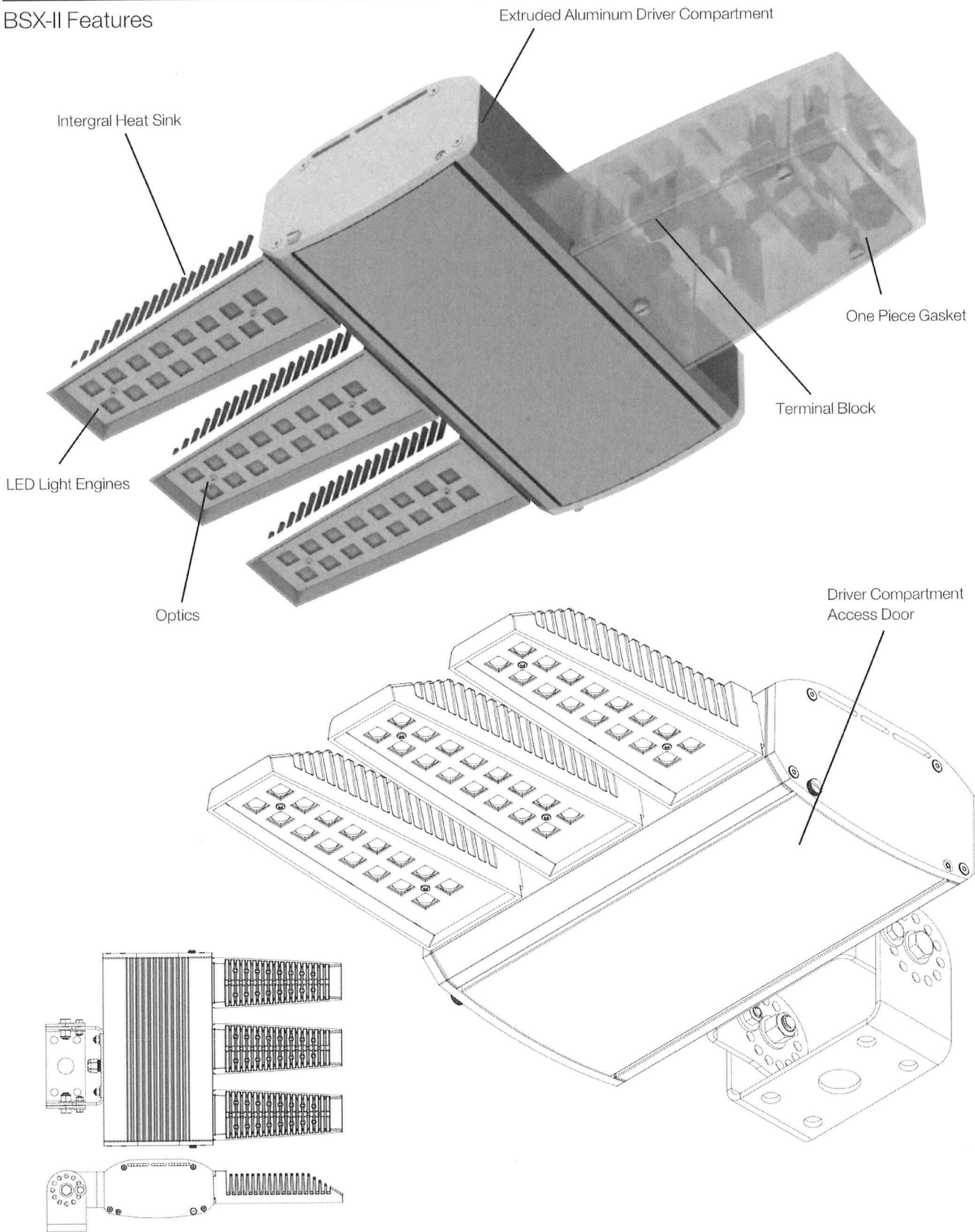
BSX-II LED Specifications

BSX-II 3K LPW Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type 5WR	Type FN	Type FM
32	350	147	134	135	135	153	136	129		155	159
	530	140	129	129	129	146	130	123		148	152
	700	135	124	124	125	141	126	119		143	147
	1050	118	108	108	109	123	110	104		125	128
48	350	142	130	130	131	148	132	125		150	154
	530	136	125	125	126	142	127	120		144	148
	700	132	121	121	121	137	123	116		140	143
	1050	120	110	110	110	125	111	105		127	130
64	350	147	134	135	135	153	136	129		155	159
	530	145	132	133	133	150	134	127		153	157
	700	140	128	128	129	146	130	123		148	152
	1050	116	107	107	107	121	108	102		123	126
BSX-II 4K LPW Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type 5WR	Type FN	Type FM
32	350	155	142	142	142	161	144	136		163	167
	530	148	135	136	136	154	137	130		156	160
	700	142	130	131	131	148	132	125		151	154
	1050	124	114	114	114	129	115	109		131	135
48	350	149	137	137	138	155	139	131		158	162
	530	144	131	132	132	149	133	126		152	156
	700	139	127	127	128	144	129	122		147	150
	1050	126	115	116	116	131	117	111		133	137
64	350	154	141	142	142	161	143	136		163	167
	530	152	139	140	140	158	141	134		161	165
	700	147	135	135	136	153	137	130		156	160
	1050	122	112	112	113	127	114	108		130	133
BSX-II 5K LPW Data											
#LED's	mA	Type 1	Type 2	Type 3	Type 4	Type 4A	Type 5	Type 5W	Type 5WR	Type FN	Type FM
32	350	148	136	136	137	154	138	130		157	161
	530	142	130	130	131	147	132	125		150	154
	700	137	125	125	126	142	127	120		145	148
	1050	119	109	109	110	124	111	105		126	129
48	350	143	131	132	132	149	133	126		152	155
	530	138	126	126	127	143	128	121		146	149
	700	133	122	122	123	139	124	117		141	144
	1050	121	111	111	111	126	112	106		128	131
64	350	148	136	136	136	154	138	130		157	161
	530	146	134	134	134	152	136	128		154	158
	700	141	130	130	130	147	131	124		150	153
	1050	118	108	108	108	122	109	103		124	127

BSX-II 3K BUG Data																															
LED's	mA	Type 1			Type 2			Type 3			Type 4			Type 4A			Type 5			Type 5W			Type T5WR			Type FN			Type FM		
32	350	2	0	2	1	0	2	1	0	1	1	0	1	1	0	1	2	0	1	3	0	1				3	0	1	3	0	1
	530	3	0	3	2	0	2	1	0	2	1	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	700	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	1	3	0	2				4	0	1	4	0	1
	1050	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
48	350	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	530	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	700	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
64	350	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	530	4	0	4	3	0	3	2	0	2	3	0	3	2	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	700	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	4	3	0	4	3	0	4	3	0	3	4	0	2	5	0	3				5	0	1	5	0	1
BSX-II 4K BUG Data																															
LED's	mA	Type 1			Type 2			Type 3			Type 4			Type 4A			Type 5			Type 5W			Type T5WR			Type FN			Type FM		
32	350	2	0	2	1	0	2	1	0	1	1	0	2	1	0	1	2	0	1	3	0	1				3	0	1	3	0	1
	530	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	700	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	1	3	0	2				4	0	1	4	0	1
	1050	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
48	350	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	530	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	700	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
64	350	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	530	4	0	4	3	0	3	2	0	2	3	0	3	2	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	700	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	4	3	0	4	3	0	4	3	0	3	4	0	2	5	0	3				5	0	1	5	0	1
BSX-II 5K BUG Data																															
LED's	mA	Type 1			Type 2			Type 3			Type 4			Type 4A			Type 5			Type 5W			Type T5WR			Type FN			Type FM		
32	350	2	0	2	1	0	2	1	0	1	1	0	1	1	0	1	2	0	1	3	0	1				3	0	1	3	0	1
	530	3	0	3	2	0	2	1	0	2	1	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	700	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	1	3	0	2				4	0	1	4	0	1
	1050	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
48	350	3	0	3	2	0	2	1	0	2	2	0	2	1	0	1	3	0	1	3	0	1				4	0	1	4	0	1
	530	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	700	3	0	3	3	0	3	2	0	2	2	0	2	2	0	2	3	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
64	350	3	0	3	2	0	3	1	0	2	2	0	2	2	0	1	3	0	2	3	0	2				4	0	1	4	0	1
	530	4	0	4	3	0	3	2	0	2	3	0	3	2	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	700	4	0	4	3	0	3	2	0	3	3	0	3	3	0	2	4	0	2	4	0	2				5	0	1	5	0	1
	1050	4	0	4	3	0	4	3	0	4	3	0	4	3	0	3	4	0	2	5	0	3				5	0	1	5	0	1

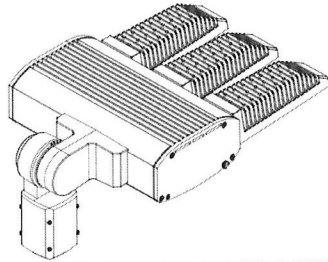
BSX-II LED Specifications

BSX-II Features



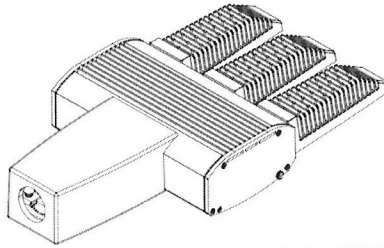
BSX-II Mounting Options

Knuckle Mount



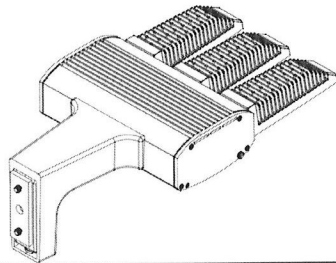
An adjustable knuckle slip fits over a 2 3/8" Tenon, and allows for up to 90° degrees of vertical adjustment in 10° degree increments from horizontal, as well as full side to side adjustment with the knuckle mount.

Mast Arm Mount



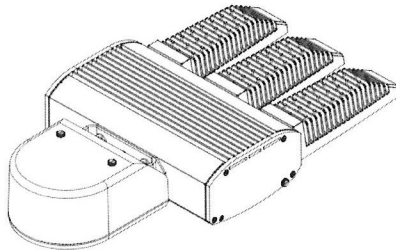
Mast Arm Fitter fits over a 2 3/8" tenon.

Arm Mount



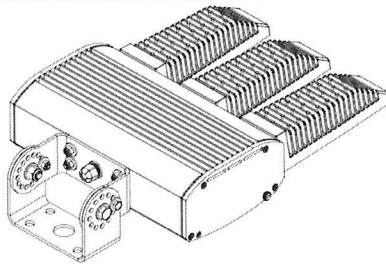
The Bolt -On Arm (BOA) utilizes a 2 piece cleat system for easy installation. A Round Pole Plate Adaptor (RPP) is required for mounting to round poles.

Post Top Mount



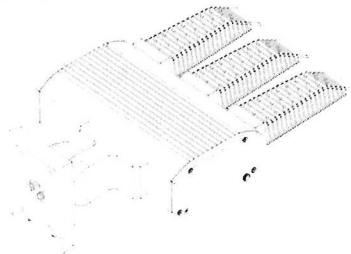
Post Top fits over a 2 3/8" tenon and is adjustable up to 45°.

Trunnion Mount



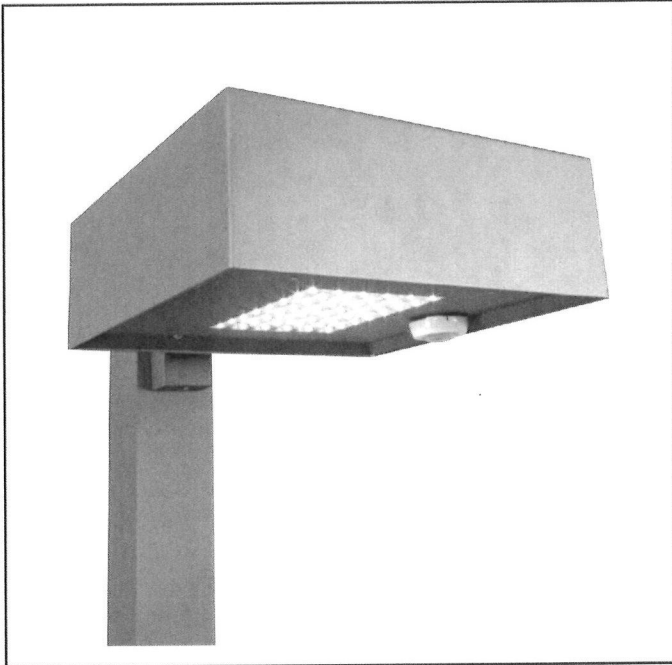
Trunnion Mount is adjustable up to 180°.

Wall Mount



Wall Mount is adjustable up to 90°.

PGS-1 LED Specifications



Project Name:

Catalog Number:

Type:

The new PGS LED luminaire from Visionaire combines contemporary design with new LED technology, while maintaining a traditional architectural fixture image. The LEDs Performance and Life are maximized by the unique integral aluminum heat sink. It is an ideal replacement for the high-maintenance HID fixtures of yesterday.

The LED housing is spun aluminum, with either 16, 32 or 48 LEDs. Mounting options include Yoke Mount, Arm Mount, Knuckle Mount or Wall Mount and a Universal Bolt-On Arm Mount. The Arm Mount is available with either a Quick Mount Pole Adaptor, or a Universal Quick Mount Pole Adaptor for retrofitting existing poles.

Seven optical distribution patterns are available. Choose between 3000, 4000 or 5000 Kelvin temperature of the LEDs.

A durable polyester powder coat finish is guaranteed for five years; and is available in standard or custom colors.

The PGS LED series is an exceptional choice for universities, shopping centers, parks and recreational areas; and general site lighting.

Ordering Information

MODEL	OPTICS	LEDs	CURRENT	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS
PGS-1	T1 T2 T3 T4 T4A T5 T5W T5WR	16LC 32LC 48LC	3 350mA 5 530mA 7 700mA	3K 3000K 4K 4000K 5K 5000K	UNV *120-277V 8 347V 5 480V	AM Arm Mount WM Wall Mount YM Yoke Mount KM Knuckle Mount UBOA Universal Bolt-On Arm Mount Round Pole Plate Adaptors (RPP) are to be ordered separately.	BZ Bronze BK Black SBK Smooth Black WH White SWH Smooth White GP Graphite GY Grey SL Silver Metallic CC Custom Color	PCR-120 Photocell & Receptacle PCR-208 Photocell & Receptacle PCR-240 Photocell & Receptacle PCR-277 Photocell & Receptacle PCR-480 Photocell & Receptacle PER 3 Pin Photo Receptacle w/shorting cap. 5PINPER 5 Pin Photo Receptacle w/shorting cap. Requires Dimming Driver 7PINPER 7 Pin Photo Receptacle w/shorting cap. Requires Dimming Driver WSC-8 Motion Sensor 8" Mounting Height WSC-20 Motion Sensor 9-20" Mounting Height WSC-40 Motion Sensor 21-40" Mounting Height Two options available w/ 300-1000 luminaire programming DIM 0-10v Dimming Driver EBPL Emergency Battery Pack VWC Visionaire Wireless Controls *Consult Factory	RPP Round Pole Plate Adaptor ROT-R Rotated Optics Right Side ROT-L Rotated Optics Left Side CLS Black Steel Cutoff Louver Shield

Housing

Heavy duty formed aluminum housing with internal heat sink for maximum heat dissipation. Silicone gasket is used for weather tight operation.

Mounting

For post top mounting, an adaptor fits over a 2 3/8" tenon secured with stainless steel hardware.

A Pre-Attached Aluminum Arm (AM) is supplied along with a Quick Mount pole adaptor, for fast and easy attachment to the pole.

An adjustable knuckle slip fits over a 2 3/8" Tenon, and allows for up to 90° degrees of vertical adjustment in 10° degree increments from horizontal, as well as full side to side adjustment with the knuckle mount.

For retro-fit applications, a Pre-Attached Aluminum Arm (UBOA) is supplied along with a Universal Quick Mount pole adaptor for fast and easy attachment to the pole.

Thermal Management

The PGS series provides excellent thermal management by mounting the LEDs to the substantial heat sink within the housing. This enables the Luminaire to withstand higher ambient temperatures and driver currents without degrading LED life.

Optical System

The highest lumen output LEDs are utilized. High-performance acrylic optics feature industry leading Type I, II, III, IV, IVA, and V optical distributions. Acrylic optics are impact-resistant and rated to 94 percent translucence.

L70 life of our LEDs is rated over 100,000 hours (for 350 mA). The optical system qualifies as IES full cutoff to restrict light trespass, glare and light pollution for neighborhood-friendly lighting.

CRI values are 70.

Quali-Guard® Finish

The finish is a Quali-Guard® textured, chemically pretreated through a multiple-stage washer, electrostatically applied, thermoset polyester powder coat finish, with a minimum of 3-5 millimeter thickness. Finish is oven-baked at 400° F to promote maximum adherence and finish hardness. All finishes are available in standard and custom colors.

Finish is guaranteed for five (5) years.

Electrical Assembly

The PGS LED series is supplied with a choice of 350, 530 or 700 mA high-performance LED drivers that accept 120v thru 480v, 50 Hz to 60 Hz, input. Power factor of 90%. Rated for -40°C operations.

10kV Surge Protector supplied as standard.

Warranty

• Five (5) year Limited Warranty on electrical components, Five (5) year on finish. For full warranty information, please visit visionairelighting.com.

Options

- Photocell & Receptacle
- Photo & Receptacle
- 0-10 Volt Dimming Driver
- Motion Sensor/Control Watt Stopper FSP-211
- Wireless Controls
- 10 kV surge protector
- Emergency Battery Pack
- Round Pole Plate Adapter
- Cutoff Louver Shield

Listings

- PGS is cUL listed, suitable for wet locations.
- IP65 Rated
- Powder Coated Tough
- DLC Listed
- IDA Certification



DesignLights Consortium (DLC) qualified Product. Some configurations of this product family may not be DesignLights Consortium (DLC) listed, please refer to the DLC qualified products list to confirm listed configurations. <http://www.designlights.org/>
3000K must be selected for IDA certification.

PGS-1 LED Specifications

Photometric Optical Summary

Not all optics are available on all fixtures. Check ordering chart for availability

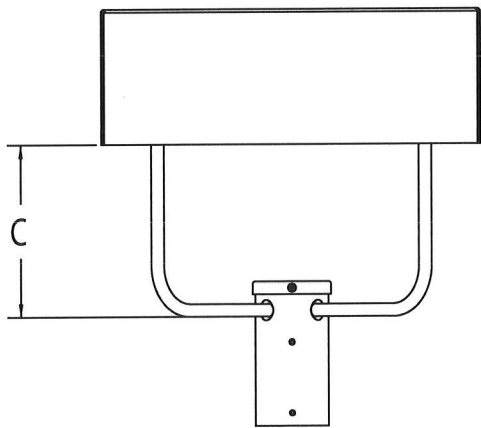
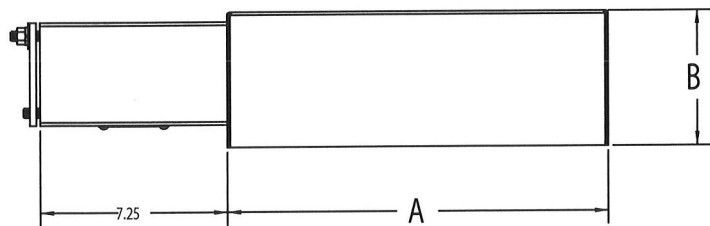
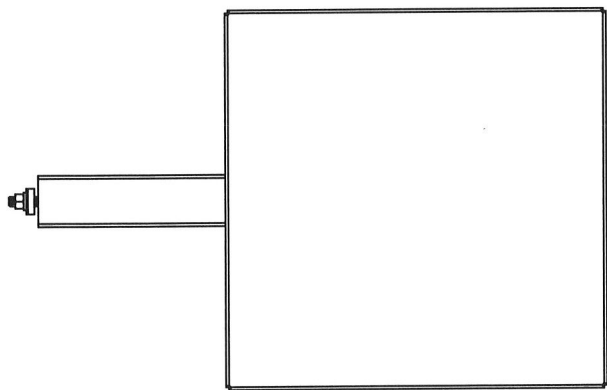
Type I (T1)	Type II (T2)	Type III (T3)	Type IV (T4)	Type IVA (T4A)	Type V (T5)	Type VW (T5W)	Type VWR (T5WR)
							
EPA Data		 0.70	 1.08	 1.4	 1.56	 1.78	 1.56

Dimensions

Width: PGS 16"

Height: PGS 5.0"

Weight: 20 LBS



PGS 3K Lumen Data									
LEDS	mA	T1	T2	T3	T4	T5	T5W	T5WR	Watts
16	350	2250	2081	2073	2032	2277	2056	2073	18
	530	3239	2997	2986	2926	3279	2961	2986	26
	700	4273	3954	4180	3860	4169	3906	3939	37
32	350	4761	4405	4388	4300	4819	4352	4388	35
	530	6817	6308	6283	6158	6900	6231	6284	52
	700	8619	7975	7944	7785	8723	7878	7944	71
48	350	7136	6603	6577	6446	7223	6523	6577	53
	530	9566	8851	8817	8641	9682	8744	8817	78
	700	12850	11890	11843	11607	13006	11745	11844	107
PGS 4K Lumen Data									
16	350	2368	2191	2183	2126	2397	2164	2183	18
	530	3410	3155	3143	3080	3451	3117	3143	26
	700	4498	4162	4400	4063	4388	4112	4146	37
32	350	5011	4637	4619	4527	5072	4581	4619	35
	530	7176	6640	6614	6482	7263	6559	6614	52
	700	9072	8394	8362	8195	9182	8292	8362	71
48	350	7512	6950	6923	6785	7603	6866	6924	53
	530	10070	9317	9281	9096	10192	9204	9281	78
	700	13526	12515	12467	12218	13690	12364	12467	107
PGS 5K Lumen Data									
16	350	2272	2102	2094	2053	2300	2077	2079	18
	530	3272	3028	3016	2956	3312	2991	2993	26
	700	4316	3994	4222	3899	4211	3945	3949	37
32	350	4809	4450	4432	4649	4867	4396	4399	35
	530	6886	6372	6347	6220	6970	6294	6299	52
	700	8706	8055	8024	7864	8811	7957	7964	71
48	350	7208	6670	6644	6452	7296	6589	6594	53
	530	9663	8941	8906	8728	9780	8832	8839	78
	700	12980	12010	11963	11724	13137	11864	11873	107

PGS-1 LED Specifications

PGS 3K LPW Data									
LEDS	mA	T1	T2	T3	T4	T5	T5W	T5WR	Watts
16	350	127	117	117	115	128	116	117	18
	530	124	115	115	112	126	114	115	26
	700	116	108	114	105	114	106	107	37
32	350	135	125	125	122	137	124	125	35
	530	131	121	121	118	133	120	121	52
	700	121	112	112	110	123	111	112	71
48	350	135	125	124	122	136	123	124	53
	530	123	113	113	111	124	112	113	78
	700	120	111	111	108	122	110	111	107
PGS 4K LPW Data									
16	350	133	124	123	120	135	122	123	18
	530	131	121	121	118	132	120	121	26
	700	123	113	120	111	120	112	113	37
32	350	142	132	131	128	144	130	131	35
	530	138	128	127	125	140	126	127	52
	700	128	118	118	115	129	117	118	71
48	350	142	131	131	128	143	130	131	53
	530	129	119	119	117	131	118	119	78
	700	126	117	117	114	128	116	117	107
PGS 5K LPW Data									
16	350	128	119	118	116	130	117	117	18
	530	126	116	116	113	127	115	115	26
	700	118	109	115	106	115	108	108	37
32	350	137	126	126	132	138	125	125	35
	530	132	123	122	120	134	121	121	52
	700	123	113	113	111	124	112	112	71
48	350	136	126	125	122	138	124	124	53
	530	124	115	114	112	125	113	113	78
	700	121	112	112	110	123	111	111	107

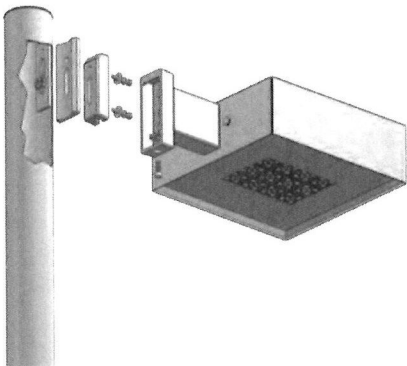
		PGS 3K BUG Data																					
		T1			T2			T3			T4			T5			T5W			T5WR			Watts
LEDS	mA	B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	B	U	G	
16	350	1	0	1	1	0	1	0	0	1	1	0	1	1	0	0	2	0	1				18
	530	2	0	2	1	0	1	1	0	1	1	0	1	2	0	0	2	0	1				26
	700	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	2	0	1				37
32	350	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				35
	530	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				52
	700	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	2				71
48	350	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				53
	530	3	0	3	2	0	3	1	0	2	2	0	2	3	0	1	3	0	2				78
	700	3	0	3	3	0	3	2	0	2	2	0	2	3	0	2	4	0	2				107
		PGS 4K BUG Data																					
16	350	1	0	1	1	0	1	0	0	1	1	0	1	1	0	0	2	0	1				18
	530	2	0	2	1	0	1	1	0	1	1	0	1	2	0	0	2	0	1				26
	700	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	3	0	1				37
32	350	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				35
	530	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				52
	700	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	2				71
48	350	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				53
	530	3	0	3	2	0	3	1	0	2	2	0	2	3	0	1	3	0	2				78
	700	3	0	3	3	0	3	2	0	2	2	0	2	3	0	2	4	0	2				107
		PGS 5K BUG Data																					
16	350	1	0	1	1	0	1	0	0	1	1	0	1	1	0	0	2	0	1				18
	530	2	0	2	1	0	1	1	0	1	1	0	1	2	0	0	2	0	1				26
	700	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	2	0	1				37
32	350	2	0	2	1	0	2	1	0	1	1	0	1	2	0	1	3	0	1				35
	530	3	0	3	2	0	2	1	0	2	1	0	2	3	0	1	3	0	1				52
	700	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	2				71
48	350	3	0	3	2	0	2	1	0	2	2	0	2	3	0	1	3	0	1				53
	530	3	0	3	2	0	3	1	0	2	2	0	2	3	0	1	3	0	2				78
	700	3	0	3	3	0	3	2	0	2	2	0	2	3	0	2	4	0	2				107

PGS-1 LED Specifications

Spider Mount Detail

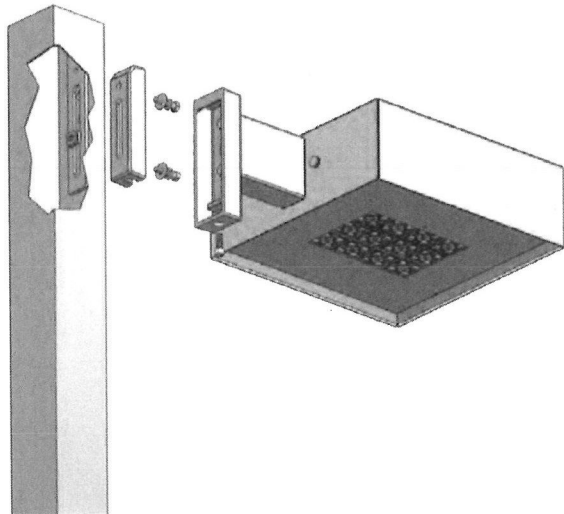


Arm Mount Assembly Drawing



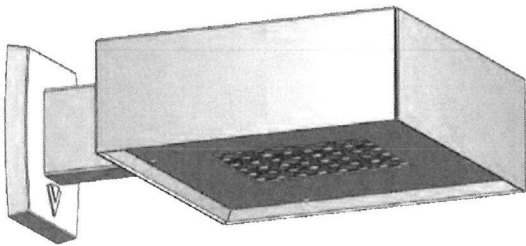
*Round Pole Plate Adapter
ordered separately.

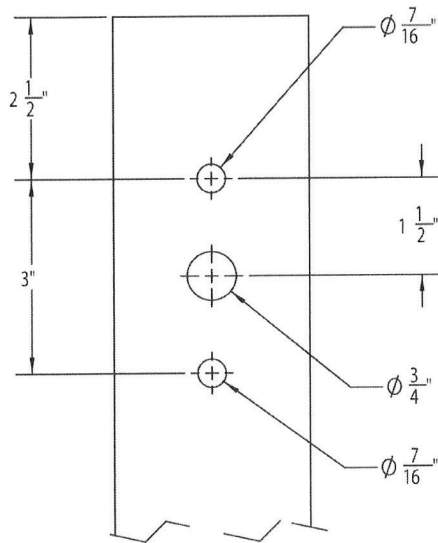
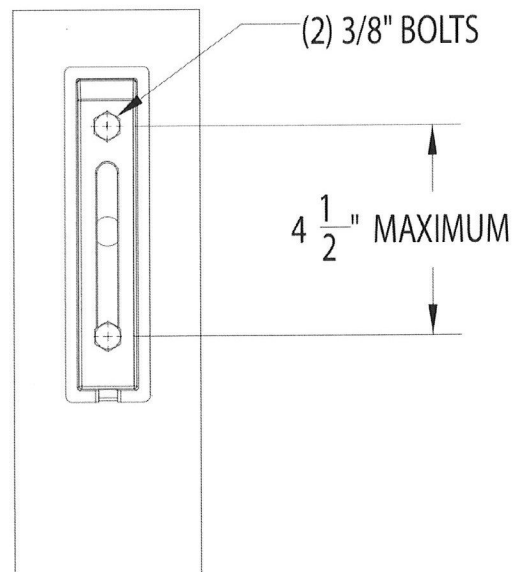
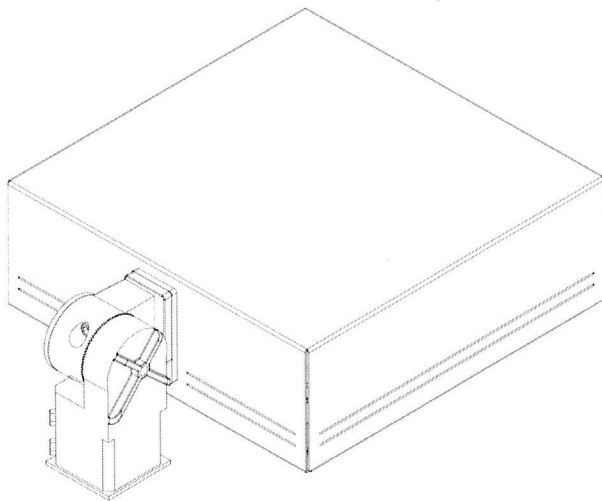
PGS UBOA Assembly Drawing



*Round Pole Plate Adapter
ordered separately.

PGS Wall Mount Drawing



Arm Mount Drill Diagram**UBOA Drill Diagram****PGS Knuckle Mount Drawing**



CEX

APPLICATION:

- Ideal for commercial where economy, appearance and the ultimate ease of installation and maintenance are desired. Solid-state electronics offer both reliability and low-cost performance.

FEATURES:

- Thermoplastic LED Exit Sign Compact size low-profile design LED exit sign.
- Innovative snap-together design allows for fast and easy installation.
- Letters 6" height with 3/4" stroke.
- Easily removable snap-out knockouts and chevron directional arrows.
- Single or double face configuration.
- 90+ minute emergency operation.
- Available in white or black housing.

MOUNTING:

- Universal (wall or ceiling) mounting.
- Universal knockouts on back plate allow for wall mounting directly to standard J-Box. Canopy and mounting hardware provided.

ELECTRICAL:

- 120/277V dual voltage operation standard.
- Charge rate and power AC mode green LED indicator light, battery disconnected mode red LED indicator light.
- Manual push-to-test switch provides for on-demand visual inspection of 30-second testing.

LAMPS:

- Energy consumption of 3.2W for red letters and 3.8W for green letters.
- LED lamps are operating in normal (AC input) and emergency (DC input) modes.

BATTERY:

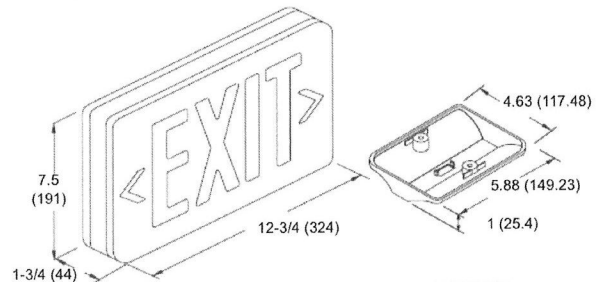
- 4.8V long-life, maintenance-free, rechargeable nickel-cadmium battery (self-powered) on emergency (EM) units.
- Fully automatic solid-state, two-rate charger initiates battery charging to recharge a discharged battery in 24 hours.
- Internal solid-state transfer switch automatically connects the internal battery to LEDs for minimum 90 minute emergency illumination.
- LVD (Low voltage disconnection) prevents battery from deep discharge.

OPTION:

- SDT: Self-diagnostic testing, continually diagnoses unit's performance and test system (Self-diagnostic testing for 30-second discharge once every 30-days and 30-minutes every six months) to ensure reliable operation and to meet electrical and life safety code.
- Dual circuit option on the AC-only unit enables it to be connected to two different (primary and secondary, one acting as a back-up for the other) supplies at the same time.

LISTING:

- 5 years limited warranty on materials and all electronics. Battery prorated for five years.
- LED lamps are 25 years limited warranty.
- UL listed for damp locations. (0°C -50°C) & meets UL924, NFPA 101 Life Safety Code, NEC, OSHA, Local and State Codes..
- ARRA compliant (optional).



All dimensions are in inches (millimeters).

CANOPY

ELECTRICAL INFORMATION

	Input Watts (W)	Input Amps (A)
Red Emergency Models	120V: 3.2 W 277V: 3.6 W	120V: 0.031 A 277V: 0.010 A
Green Emergency Models	120V: 3.8 W 277V: 4.4 W	120V: 0.033 A 277V: 0.017 A

ORDERING INFORMATION:

EXAMPLE: CEX-R-1-WH

MODEL	# OF FACE	LETTER COLOR	OPERATION	HOUSING COLOR
CEX	(Blank) Universal Single/Double Face	R Red G Green	(Blank) AC-only 1 Battery Back up 2 2-Circuit Operation	WH White Face/ White Housing BK Black Face/ Black Housing

OPTION

- WG-1** Steel Wire Guard (13.5" x 15" x 6")
- PCS-1** Polycarbonate Guard (3.25" x 9" x 2.75")
- BG-1** Vandal Shield Guard, Polycarbonate (15" x 22" x 8")
- SDT** Self Diagnostics
- SALIDA** SALIDA face plates
- SW** Special Wordings Sign
- ARRA** Assembled in USA for Buy American Act

SYLVANIA Luminaires

UltraLED™ RT

Recessed Downlight

Application

SYLVANIA UltraLED RT is a universal input voltage 5", 6" and 8" compatible LED recessed downlight kit that creates high performing white light and is optimized for new construction and retrofit applications utilizing pin-based compact fluorescent lamps. Installation is done quickly and easily in most standard six-inch and eight-inch frames. The SYLVANIA UltraLED RT series is designed to seamlessly integrate with SYLVANIA field-installable, integrated emergency battery back-up drivers.

Benefits and Features

- 85° beam angle
- Battery back-up ready connection increases the ease of installation
- High CRI (>90) ensures a high quality light
- Up to 94 LPW
- Offered in 700lm (9W), 900lm (12W), 1500lm (17W), 2000lm (23W), 3000lm (32W), 5000lm (57W) versions
- Energy savings up to 56%

Electrical

- Designed to operate at 120VAC or 120-277VAC (see ordering information for further details)
- Power Factor >.9
- THD <20%
- Phase-cut dimmable for RT5/6 700lm, 0-10V dimmable for all other versions

Rated Life

- ≥50,000 hours (L₇₀) @25°C

Warranty

- 5-year standard warranty

Ambient Operating Range

- -4°F to +104°F (-20°C to +40°C)

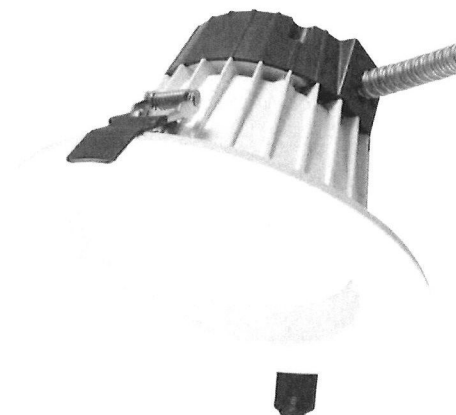
Item #

Type

Project

Notes

Date



Wattage Comparison

Traditional Source	LED System Wattage	Energy Savings
13W CFL	9W	31%
18W CFL	12W	33%
32W CFL	17W	47%
2x26W CFL	23W	56%
2x32W CFL	32W	50%
2x42W CFL	57W	32%

Certifications and Listings

- cETLus
- RoHS
- FCC
- ENERGY STAR®
- Classified for stand-alone and retrofit applications as per UL 1598/1598C
- RT6 and RT8 2000 lumens are IC rated for direct contact with insulation. Allows for installation without a housing
- Certified airtight as per ASTM E283-04

Installation

- Installation performed as a stand-alone kit is recommended for hard ceilings. Installation of a recessed incandescent frame is recommended for tiled ceiling application.



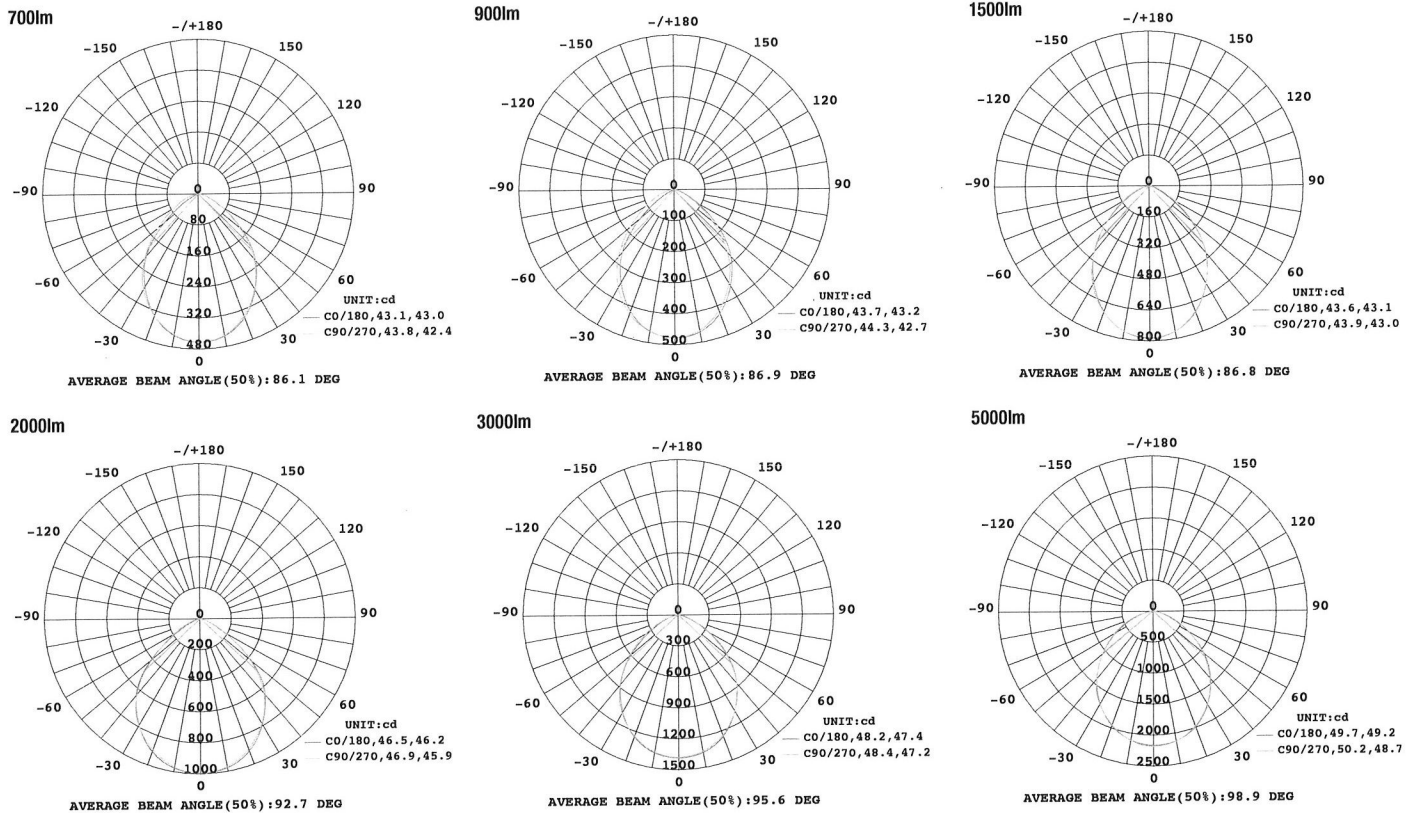
Ordering Guide

LEDRT	XX	/	R	3A	XXXX	X	X	/	9	XX
LEDRT = LED Downlights	Size 5/6 = 5/6" compatible can 6 = 6" compatible can 8 = 8" compatible can		Shape R = Round	Generation 3A = Generation 3A	Lumens output 700 = 700lm 900 = 900lm 1500 = 1500lm 2000 = 2000lm 3000 = 3000lm 5000 = 5000lm	Voltage U = 120-277V S = 120V	Dimming D = 0-10V T = Phase-Cut		CRI 9 = >90	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K

Ordering Information

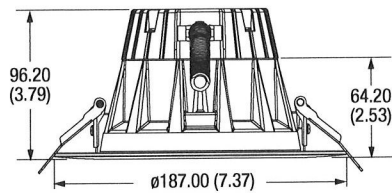
Item Number	Ordering Abbreviation	Power (W)	Input Voltage	Dimming	CRI	Color Temp (CCT)	Total Fixture Lumens	ENERGY STAR Listed	LPW
60765	LEDRT56/R3A700ST/927	9	120V	Phase-Cut	90	2700K	700	Yes	78
60766	LEDRT56/R3A700ST/930	9	120V	Phase-Cut	90	3000K	700	Yes	78
60767	LEDRT56/R3A700ST/935	9	120V	Phase-Cut	90	3500K	700	Yes	78
60768	LEDRT56/R3A700ST/940	9	120V	Phase-Cut	90	4000K	700	Yes	78
60769	LEDRT56/R3A700ST/950	9	120V	Phase-Cut	90	5000K	700	Yes	78
60770	LEDRT56/R3A900UD/927	12	120-277V	0-10V	90	2700K	900	Yes	75
60771	LEDRT56/R3A900UD/930	12	120-277V	0-10V	90	3000K	900	Yes	75
60772	LEDRT56/R3A900UD/935	12	120-277V	0-10V	90	3500K	900	Yes	75
60773	LEDRT56/R3A900UD/940	12	120-277V	0-10V	90	4000K	900	Yes	75
60774	LEDRT56/R3A900UD/950	12	120-277V	0-10V	90	5000K	900	Yes	75
60775	LEDRT6/R3A1500UD/930	17	120-277V	0-10V	90	3000K	1500	Yes	88
60776	LEDRT6/R3A1500UD/935	17	120-277V	0-10V	90	3500K	1500	Yes	88
60777	LEDRT6/R3A1500UD/940	17	120-277V	0-10V	90	4000K	1500	Yes	88
60778	LEDRT6/R3A1500UD/950	17	120-277V	0-10V	90	5000K	1500	Yes	88
60779	LEDRT8/R3A2000UD/930	23	120-277V	0-10V	90	3000K	2000	Yes	87
60780	LEDRT8/R3A2000UD/935	23	120-277V	0-10V	90	3500K	2000	Yes	87
60781	LEDRT8/R3A2000UD/940	23	120-277V	0-10V	90	4000K	2000	Yes	87
60782	LEDRT8/R3A2000UD/950	23	120-277V	0-10V	90	5000K	2000	Yes	87
60783	LEDRT8/R3A3000UD/930	32	120-277V	0-10V	90	3000K	3000	Yes	94
60784	LEDRT8/R3A3000UD/935	32	120-277V	0-10V	90	3500K	3000	Yes	94
60785	LEDRT8/R3A3000UD/940	32	120-277V	0-10V	90	4000K	3000	Yes	94
60786	LEDRT8/R3A3000UD/950	32	120-277V	0-10V	90	5000K	3000	Yes	94
60787	LEDRT8/R3A5000UD/930	57	120-277V	0-10V	90	3000K	5000	Yes	93
60788	LEDRT8/R3A5000UD/935	57	120-277V	0-10V	90	3500K	5000	Yes	93
60789	LEDRT8/R3A5000UD/940	57	120-277V	0-10V	90	4000K	5000	Yes	93

Photometric Data

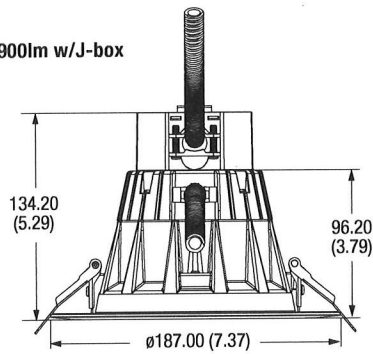


Physical Information

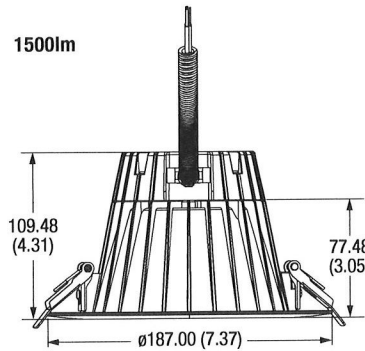
700lm & 900lm



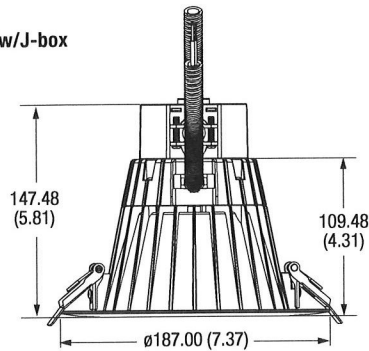
700lm & 900lm w/J-box



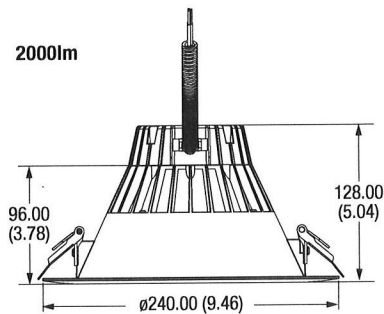
1500lm



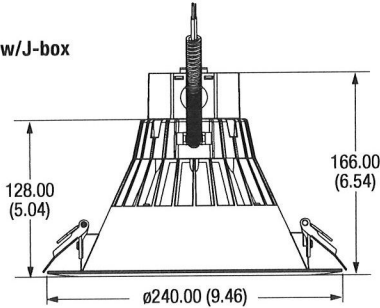
1500lm w/J-box



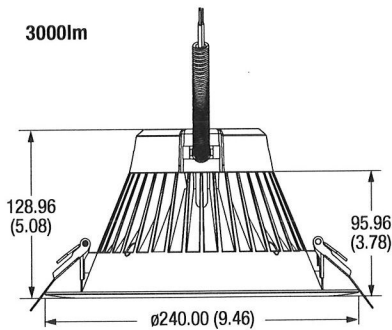
2000lm



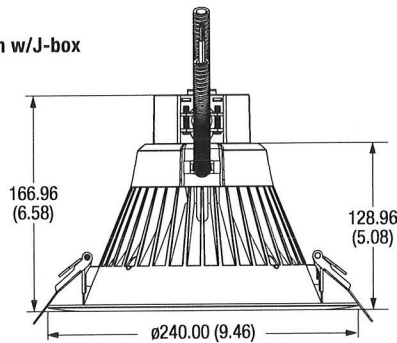
2000lm w/J-box



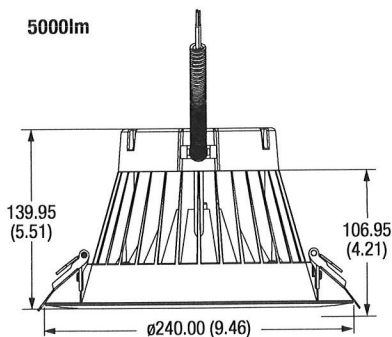
3000lm



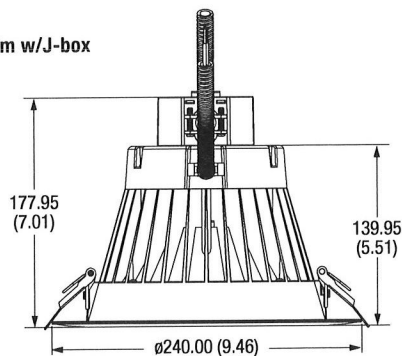
3000lm w/J-box



5000lm



5000lm w/J-box



Dimensions in mm (in)

Accessories

RT5/6 Retrofit Trim

75095	RT/5/6/TRIM/DKBZ	Dark bronze trim ring
75097	RT/5/6/TRIM/BLK	Black trim ring
75098	RT/5/6/TRIM/ORBZ	Bronze trim ring
75099	RT/5/6/TRIM/SN	Satin nickel trim ring

RT5/6 Trim Ring Extender

75082	RT6/8/TRIMEXT	Trim extender for 8" cans
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RT5/6 Rough In Frame

71708	LED/RT6H0/FRAME	6" recessed rough-in frame
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RT8 Retrofit Trim

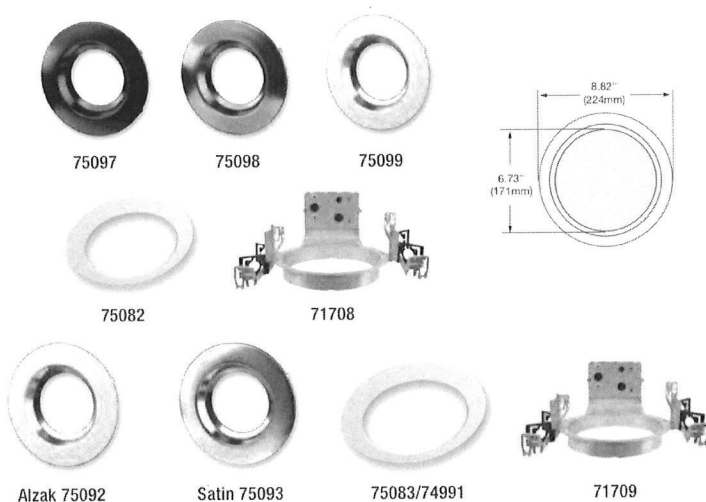
75092	RT8/TRIM/ALZAK	White trim and aluminum inner trim
75093	RT8/TRIM/SN	Satin nickel trim ring

RT8 Trim Ring Extender

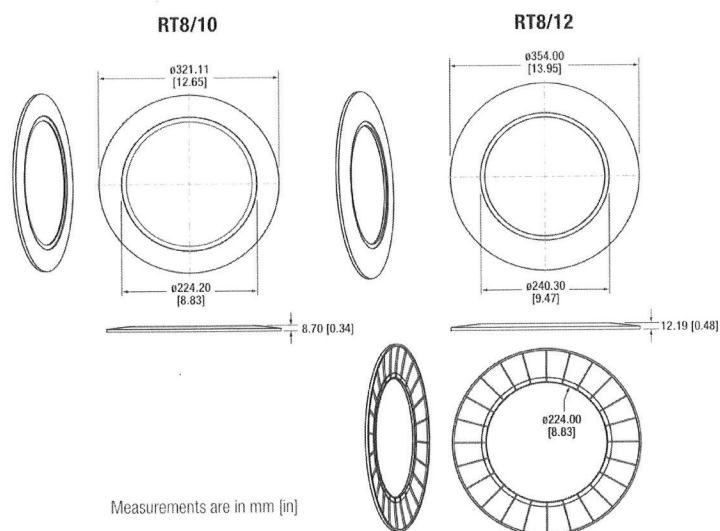
75083	RT8/10/TRIMEXT	Trim extender for 10" cans
74991	RT8/12/TRIMEXT	Trim extender for 12" cans

RT8 Rough In Frame

71709	LED/RT8/FRAME	8" recessed rough-in frame
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RT8 Trim Ring Extenders



Measurements are in mm [in]

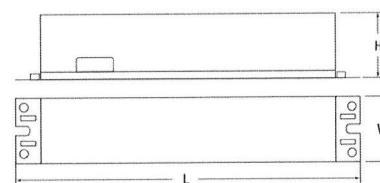
Emergency Battery Back-Up Accessories

Emergency Battery Back-Up Specs

NAED	Description	Input Voltage	Frequency	Input Current	Watt Hours	Max Mounting Height	Ambient Temp	Charging Time	Rating
60887	EMBB1A5WDC	120-277V _{AC}	50/60 Hz	100mA Max.	9.6wH	22.63ft	0-50°C	24 hours	Damp
60888	EMBB1A8WDC	120-277V _{AC}	50/60 Hz	100mA Max.	14.4wH	22.26ft	0-50°C	24 hours	Damp
60889	EMBB1A16WDC	120-277V _{AC}	50/60 Hz	100mA Max.	28.8wH	22.13ft	0-50°C	32 hours	Damp

Compatibility Table

RT	EMBB	Current (mA)	RT Lumens	Duration
LEDRT5/6R3A700ST9XX	EMBB1A5WDC	100	350	90 mins
LEDRT5/6R3A900UD9XX	EMBB1A5WDC	100	350	
	EMBB1A8WDC	150	500	
LEDRT6R3A1500UD9XX	EMBB1A8WDC	150	550	
		200	700	
LEDRT8R3A2000UD9XX	EMBB1A8WDC	150	550	
		200	700	
LEDRT8R3A3000UD9XX	EMBB1A8WDC	200	750	
	EMBB1A16WDC	300	1200	
LEDRT8R3A5000UD9XX	EMBB1A8WDC	200	750	
	EMBB1A16WDC	300	1200	

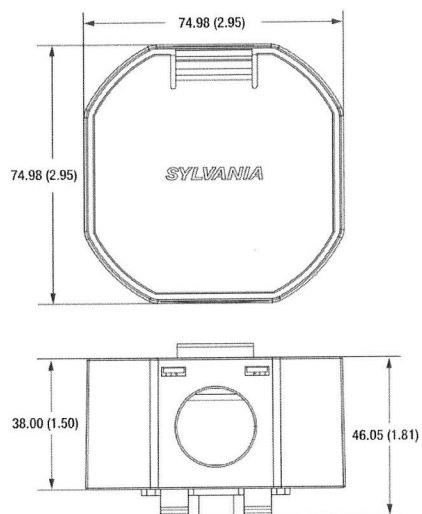


Dimensions	Length (mm)
H	55.5
W	55
L	256

Accessories (continued)

Junction Box

60891	ACC/RT/EMBB-J-BOX	Junction box for RT Emergency Battery Back-up (8 per SKU)
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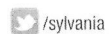
Dimensions in mm (in.)

Warranty Information

4 year standard warranty

LEDVANCE LLC
200 Ballardvale Street
Wilmington, MA 01887 USA
Phone 1-800-LIGHTBULB (1-800-544-4828)
www.sylvania.com

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All other trademarks are those of their respective owners.
Licensee of product trademark SYLVANIA in general lighting.
Specifications subject to change without notice.



/sylvania



/sylvania

Name: _____

Email: _____

Phone: _____



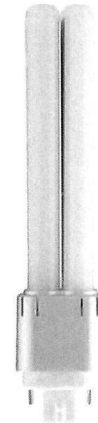
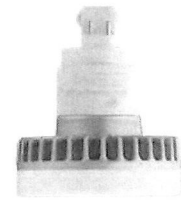
4 Pin Universal PL Lamp Retrofits - Type A/B


Models
LED-7324-XXK-G2, 2700K, 3500K & 4000K CCT
LED-7320-XXK-G2, 2700K, 3500K & 4000K CCT
LED-7318-XXA, 2700K, 3500K & 4000K CCT
Description

Light Efficient Design's 4 Pin PL Lamp Retrofit Lamps replace CFL lamps up to 26W. Unique lamp designs closely match existing PL lamp to deliver optimum light distribution. Type A/B Universal Driver- Works on Electronic Ballast or 120-277V Line Voltage.

Features

- 10W - 12W LED Replaces up to 26W CFL Lamps
- Up to 1,200 lumen output and 106 LPW efficacy
- Compatible with G24q or GX24q PL/CFL sockets
- Suitable for damp environments and semi-enclosed recessed fixtures or equivalent
- 50,000 hour rated LED life
- 5 Year Limited Warranty - see website for details
- Insect/dust resistant housing


LED-7324

LED-7320

LED-7318

TECHNICAL SPECIFICATIONS - 120-277V or Compatible Ballast - ALL MODELS cULus

MODEL	VOLTAGE	WATTAGE	LUMENS*	LPW*	REPLACES	BASE	CCT	CRI*	THD*	PF*	R9*	Duv*	LIGHT DISTRIBUTION	DIMMABLE
LED-7324-27K-G2	120-277V	11W	1200	110	26W 4 Pin	G24q or GX24q	2700K	>80	N/A	>.9	10	0.0002	120°	Yes - on a dimmable ballast. See Note *
LED-7324-35K-G2			1200	110			3500K	>80	N/A	>.9	22	-0.002		
LED-7324-40K-G2			1200	110			4000K	>80	N/A	>.9	25	0.0007		
LED-7320-27K-G2		10W	900	90			2700K	>80	N/A	>.9	19	-0.0007	Omni-Directional / 360°	Yes - on a dimmable ballast. See Note *
LED-7320-35K-G2			1000	100			3500K	>80	N/A	>.9	6	0.0014		
LED-7320-40K-G2			1000	100			4000K	>80	N/A	>.9	6	0.0005		
LED-7318-27A		12W	837	95			2700K	>80	N/A	>.9	8	N/A	120°	No
LED-7318-35A			1157	95			3500K	>80	N/A	>.9	12	N/A		
LED-7318-40A			1198	95			4000K	>80	N/A	>.9	12	N/A		

Packaging

MODEL	PRODUCT DIMENSION	PRODUCT WEIGHT	UNIT CARTON DIMENSION	UNIT CTN WT	SHIPPER CARTON DIMENSION	SHIPPER CTN WT	CARTON QUANTITY
LED-7324-G2	5.47 x 1.374 in.	0.4 Lbs.		0.3 lbs./13 kg.	12.5 X 15.6 X 5.1 in./ 320 X 395 X 130 mm.	4 lbs./1.8 kg.	24
LED-7320-G2	6.97 x 1.374 in.	0.4 Lbs.		0.3 lbs./13 kg.	10.5 X 7.25 X 7.25 in./ 266 X 184 X 184 mm.	4 lbs./1.8 kg.	24
LED-7318A	3.78 X 2.99 in.	0.4 Lbs.	3.2 X 3.2 X 4.7 in./ 81 X 81 X 119 mm.	0.4 lbs./18 kg.	18.1 X 9.44 X 6.88 in./ 460 X 240 X 175 mm.	20 lb./9.1 kg.	50

ENERGY SAVINGS vs. HID

LED Lamp Power (watts)	11
PL Lamp Power (watts)	26
PL Ballast Power (watts)	4
Total power Savings (watts)	18.9
Annual Energy Savings	\$10.62
Lifetime Energy Savings over 50,000 hrs)	\$103.95

Please see instruction sheet for a list of compatible ballasts.

* When using dimmable PL lamps on dimmable ballasts, it is necessary for the installer to verify the proper operation of the lamps. Due to the interaction of the Electronic Ballasts and LED PL lamps, the response may be non-linear and the lamps may flash or flicker at medium to low dimming levels.

These lamps are NOT dimmable on line voltage. When operated on line voltage they will operate at full power only.

For use with the LED-7318-XXA, the LED-7319 Socket extender will add about 1.7" to the length of the lamp. This may be useful to properly position the lamp in a deeper fixture.


Mounting Orientation

BASE DOWN		BASE UP		HORIZONTAL	
					
APPROVED		APPROVED		APPROVED	
Recommended Minimum Fixture Size		THERMAL SPECIFICATIONS			
		OPERATING TEMPERATURE		0°F to +85°F / -17°C to +30°C	
Width	6	IN-SITU TEMP MEASUREMENT/L70			
Height	6	LED TEMPERATURE*		N/A	
Volume (Cu. Cm.)	216	L70 LED LUMEN MAINTAINENCE*		N/A	
* FROM ISTMT REPORT AT 25°C					

LIGHT EFFICIENT DESIGN ■ 188 S. NORTHWEST HIGHWAY ■ CARY, IL 60013 ■ (847) 380-3540 ■ www.led-ltc.com

LED ENCLOSED RATED OMNIDIRECTIONAL A-LAMP
A19 GEN 6 SERIES



6W, 9W & 11W



15W



GU24 Base



PRODUCT DESCRIPTION:

MaxLite's LED enclosed rated Omnidirectional A-Line lamp replicate true A19 incandescents. They are suited to a wide variety of residential and commercial applications, including pendants, wall sconces and table and floor lamps.

FEATURES:

- 6W, 480lm, 40W Inc. replacement
- 9W, 800lm, 60W Inc. replacement
- 11W, 1100lm, 75W Inc. replacement
- 15W, 1600lm, 100W Inc. replacement
- Dimmable down to 10%
- Power factor: ≥ 0.70
- 25,000 hour life (L70 standards)
- CRI: ≥ 80
- Volts: 120V
- ENERGY STAR certified
- Available in E26 and GU24 base
- Suitable for dry and damp locations
- Suitable for use in fully enclosed luminaires
- Five year limited warranty

APPLICATIONS

- Pendants
- Table and floor lamps
- Sconces

ORDERING:

MODEL SELECTION (Full list of order codes on pg. 2)		Typical order example: E9A19DLED27/G6		
		DLED		/G6
FAMILY	BASE	DIMMABILITY	CCT	GENERATION
E6A19 = 6 watts, A19 E9A19 = 9 watts, A19 E11A19 = 11 watts, A19 E15A19 = 15 watts, A19	(OMIT) = E26 GU = GU24	DLED = Dimmable	27 = 2700K 30 = 3000K 40 = 4000K 50 = 5000K*	/G6 = Generation 6

NOTES:

1. E6A19DLED27/G6 is available in bulk pack (50pcs)
 2. E9A19DLED27/G6 is available in 4-Packs and bulk pack (50pcs)
- * 5000K CCT is only available as E9A19GUDLED50/G6

Specifications are subject to change without notice.

Phone: 1-800-555-5629 | Fax: 973-244-7333 | Web: www.maxlite.com | E-mail: info@maxlite.com

MAX18033
Revised: 06/19/18

SPECIFICATIONS:

		E6A19DLEDxx/G6	E9A19DLEDxx/G6	E11A19DLEDxx/G6	E15A19DLEDxx/G6
ITEM	SPECIFICATION	DETAILS			
GENERAL PERFORMANCE	Power Consumption	6W	9W	11W	15W
	Lumens Delivered	480	800	1100	1600
	Efficacy (lm/w)	80	88	100	106
	CRI	≥80			
	Color Temperature (CCT)	2700K, 3000K, 4000K, 5000K*			
	Lumen Maintenance (L70)	25,000 Hours			
ELECTRICAL	Power Factor	≥0.70			
	Input Voltage	120V			
PHYSICAL	Base Type	E26			
	Operating Temperature	-4°F - 104°F			
CERTIFICATION	Certification	ENERGY STAR, UL Listed, FCC, RoHS Compliant			
	Environment	Dry, Damp			
	Warranty	5 Year Limited			

Lighting layouts and spacing criteria available upon request

* 5000K CCT is only available as E9A19GUDLED50/G6

ORDERING:

ORDER CODE	MODEL	ENERGY STAR	WATTS	EQUIVALENCY	DELIVER LUMENS	EFFICACY (lm/w)	CRI	CCT	DIMENSIONS (W" x MOL")
E26 Base									
14099390	E6A19DLED27/G6	★	6	40W Inc.	480	80	80	2700K	2.36" x 4.25"
14099391	E6A19DLED27/G6/BP	★	6	40W Inc.	480	80	80	2700K	
14099392	E6A19DLED30/G6	★	6	40W Inc.	480	80	80	3000K	
14099393	E6A19DLED40/G6	★	6	40W Inc.	480	80	80	4000K	
14099394	E9A19DLED27/G6	★	9	60W Inc.	800	88	80	2700K	
14099395	E9A19DLED27/G6/4P	★	9	60W Inc.	800	88	80	2700K	
14099396	E9A19DLED27/G6/BP	★	9	60W Inc.	800	88	80	2700K	
14099397	E9A19DLED30/G6	★	9	60W Inc.	800	88	80	3000K	
14099398	E9A19DLED40/G6	★	9	60W Inc.	800	88	80	4000K	
14099399	E11A19DLED27/G6	★	11	75W Inc.	1100	100	80	2700K	
14099400	E11A19DLED30/G6	★	11	75W Inc.	1100	100	80	3000K	
14099401	E11A19DLED40/G6	★	11	75W Inc.	1100	100	80	4000K	
14099402	E15A19DLED27/G6	★	15	100W Inc.	1600	106	80	2700K	2.36" x 4.61"
14099403	E15A19DLED30/G6	★	15	100W Inc.	1600	106	80	3000K	
14099404	E15A19DLED40/G6	★	15	100W Inc.	1600	106	80	4000K	

★ ENERGY STAR certified

Specifications are subject to change without notice.

Phone: 1-800-555-5629 | Fax: 973-244-7333 | Web: www.maxlite.com | E-mail: info@maxlite.com

MAX18033
Revised: 06/19/18

ORDER CODE	MODEL	ENERGY STAR	WATTS	EQUIVALENCY	DELIVER LUMENS	EFFICACY (lm/W)	CRI	CCT	DIMENSIONS (W" x MOL")
GU24 Base									
14099405	E6A19GUDLED27/G6	★	6	40W Inc.	480	80	80	2700K	2.36" x 4.21"
14099406	E6A19GUDLED30/G6	★	6	40W Inc.	480	80	80	3000K	
14099407	E6A19GUDLED40/G6	★	6	40W Inc.	480	80	80	4000K	
14099408	E9A19GUDLED27/G6	★	9	60W Inc.	800	89	80	2700K	
14099409	E9A19GUDLED30/G6	★	9	60W Inc.	800	89	80	3000K	
14099410	E9A19GUDLED40/G6	★	9	60W Inc.	800	89	80	4000K	
100759	E9A19GUDLED50/G6	★	9	60W Inc.	800	89	80	5000K	
14099411	E11A19GUDLED27/G6	★	11	75W Inc.	1100	100	80	2700K	
14099412	E11A19GUDLED30/G6	★	11	75W Inc.	1100	100	80	3000K	
14099413	E11A19GUDLED40/G6	★	11	75W Inc.	1100	100	80	4000K	2.36" x 4.61"
14099414	E15A19GUDLED27/G6	★	15	100W Inc.	1600	106	83	2700K	
14099415	E15A19GUDLED30/G6	★	15	100W Inc.	1600	106	83	3000K	
14099416	E15A19GUDLED40/G6	★	15	100W Inc.	1600	106	83	4000K	

★ ENERGY STAR certified

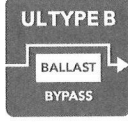
BOLLARD RETROFITS 360° OMNI DIRECTIONAL DESIGN



VOLTAGE**



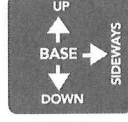
MEDIUM +
MOGUL BASES



INSTALL METHOD



OPERATING TEMP



MOUNTING



SURGE
PROTECTION



CRI

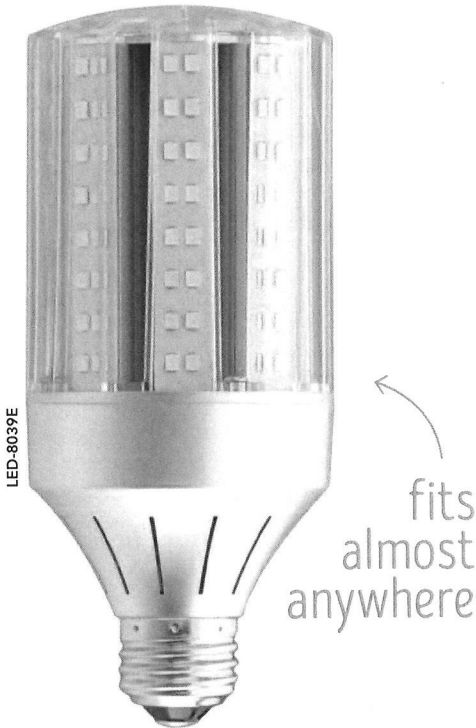


RATED LIFE



WARRANTY

bright & compact



- Available in 14W, 18W & 24W models replacing up to 150W HID.
- Multi-directional mounting capability & 360° design. Use base down, base up or base sideways without affecting performance.
- Pretested & potted drivers are burnt in 3x prior to shipping and protected against vibration & moisture.
- Expertly engineered to work efficiently in enclosed fixtures & damp environments, while also protected against insects & dust.
- Dual stage MOV protection with integrated 6kA surge.
- USA designed & specified LED driver.

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)*	BASE	DLC PRODUCT CODE
LED-8038E57-A	844006082970	70W	14W	2217	5700K	E26	N/A
LED-8039E57-A	844006080488	100W	18W	2465	5700K	E26	N/A
LED-8039M57-A	844006084394	100W	18W	2465	5700K	EX39	PVNFJNV1
LED-8029E57-A	844006080297	150W	24W	3425	5700K	E26	N/A
LED-8029M57-A	844006081560	150W	24W	3374	5700K	EX39	P17Z7EQS

* See page 2 for additional color temperatures.

** See page 2 for 347 volt options for Canada.



MOGUL OR 120V
MEDIUM BASE ONLY

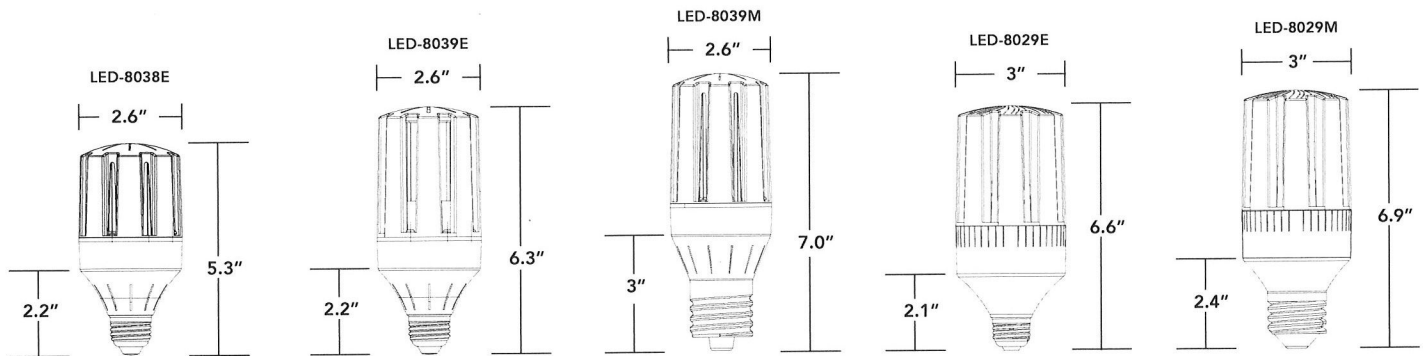



Light Efficient Design
RemPhos

FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

10.17.18 Information is subject to change without notice.

BOLLARD RETROFITS 360° OMNI DIRECTIONAL DESIGN



ORDERING GUIDE

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)	BASE	DLC PRODUCT CODE
LED-8038E30-A	844006082956	70W HID	14W	1840	3000K	E26	N/A
LED-8038E40-A	844006082963	70W HID	14W	2065	4000K	E26	N/A
LED-8038E57-A	844006082970	70W HID	14W	2217	5700K	E26	N/A
LED-8039E30-A	844006080495	100W HID	18W	2758	3000K	E26	N/A
LED-8039E40-A	844006080648	100W HID	18W	2983	4000K	E26	N/A
LED-8039E57-A	844006080488	100W HID	18W	2465	5700K	E26	N/A
LED-8039M30-A	844006084356	100W HID	18W	2758	3000K	EX39	PN8CHYH1
LED-8039M40-A	844006084370	100W HID	18W	2983	4000K	EX39	PI9GGI2F
LED-8039M57-A	844006084394	100W HID	18W	2465	5700K	EX39	PVNFJNV1
LED-8029E30-A	844006080396	150W HID	24W	3024	3000K	E26	N/A
LED-8029E40-A	844006080631	150W HID	24W	3422	4000K	E26	N/A
LED-8029E57-A	844006080297	150W HID	24W	3425	5700K	E26	N/A
LED-8029M30-A	844006081546	150W HID	24W	3431	3000K	EX39	PAKDVMFU
LED-8029M40-A	844006081553	150W HID	24W	3374	4000K	EX39	PN6Y8ECX
LED-8029M57-A	844006081560	150W HID	24W	3374	5700K	EX39	P17Z7EQS

347 VOLT OPTIONS FOR CANADA

PART #	UPC	REPLACES	WATTAGE	LUMENS	CCT (K)	BASE	DLC PRODUCT CODE
LED-8038E30C-A	844006082987	70W HID	14W	1789	3000K	E26	N/A
LED-8038E40C-A	844006082994	70W HID	14W	2037	4000K	E26	N/A
LED-8038E57C-A	844006083007	70W HID	14W	2155	5700K	E26	N/A
LED-8039E30C-A	844006082550	100W HID	18W	2919	3000K	E26	N/A
LED-8039E40C-A	844006082567	100W HID	18W	3053	4000K	E26	N/A
LED-8039E57C-A	844006082574	100W HID	18W	2695	5700K	E26	N/A
LED-8039M30C-A	844006084363	100W HID	18W	2919	3000K	EX39	PDYQHD1W
LED-8039M40C-A	844006084387	100W HID	18W	3053	4000K	EX39	PVLHXS0K
LED-8039M57C-A	844006084400	100W HID	18W	2695	5700K	EX39	P2NOX14J
LED-8029E30C-A	844006080952	150W HID	24W	3099	3000K	E26	N/A
LED-8029E40C-A	844006080969	150W HID	24W	3568	4000K	E26	N/A
LED-8029E57C-A	844006080976	150W HID	24W	3426	5700K	E26	N/A
LED-8029M30C-A	844006081721	150W HID	24W	3129	3000K	EX39	P76RARZA
LED-8029M40C-A	844006081714	150W HID	24W	3405	4000K	EX39	PN4K3SC8
LED-8029M57C-A	844006081707	150W HID	24W	3165	5700K	EX39	PA216JKT



FOR PRODUCT INFO ("LED" MODEL #) CONTACT.....Light Efficient Design • 188 S. Northwest Highway • Cary, IL 60013 • 847.380.3540 • led-llc.com
 FOR PRODUCT INFO ("RP" MODEL #) CONTACT.....RemPhos by Light Efficient Design • 30 Log Bridge Road, Building 200 • Middleton, MA 01949 • 877.997.3674 • remphos.com

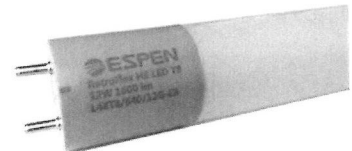
10.17.18 Information is subject to change without notice.

Features & Benefits

- No rewiring needed
- Works with fluorescent electronic ballast (Instant Start, Programmed Start, and Dimming)*
- Long life
- High CRI
- Instant on, no delay
- Convenient and quick installation
- Utilizes existing instant start or rapid start sockets
- Compatible with controls and sensors
- Dimmable
- Works in cold temperature applications
- Glass tube for superior optical performance
- 5 Year Warranty



* EMERGENCY BALLAST RESTRICTIONS



RetroFlex™
LED T8 LAMP • Simplicity.
Commercial Grade LED T8 Lamp

Specification Data (with Normal Ballast Factor)

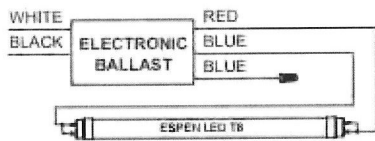
Order Code	Length	Lamp Wattage	System Wattage	CCT	Initial Lumens	CRI	Beam Angle	Lamp Efficacy	System Efficacy	Life	DLC
L24T8/835/8G-EB	24	8	10	3500K	1200	83	325	150	120	50000	Yes
L24T8/840/8G-EB	24	8	10	4000K	1200	83	325	150	120	50000	Yes
L24T8/850/8G-EB	24	8	10	5000K	1200	83	325	150	120	50000	Yes
L24T8/830/8G-EB	24	8	10	3000K	1200	83	325	150	120	50000	Yes

System Performance

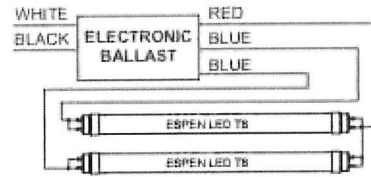
Lamp Model	Low Ballast Factor				High Ballast Factor			
	Lamp Power	System Power	Lumen Output	Lamp Efficacy	Lamp Power	System Power	Lumen Output	Lamp Efficacy
L24T8/835/8G-EB	7	10	945	135	10	13	1350	135
L24T8/840/8G-EB	7	10	945	135	10	13	1350	135
L24T8/850/8G-EB	7	10	945	135	10	13	1350	135
L24T8/830/8G-EB	7	10	945	135	10	13	1350	135

Wiring diagram

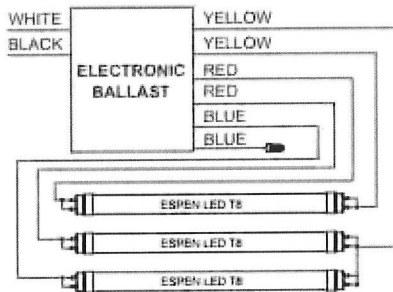
1-LAMP Instant Start Electronic Ballast



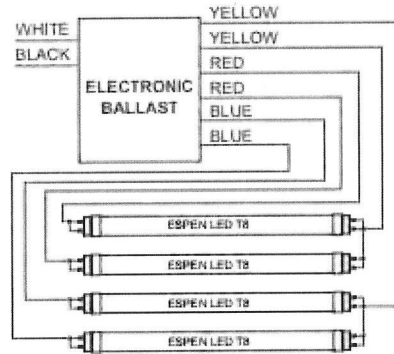
2-LAMP Instant Start Electronic Ballast



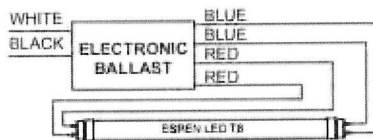
3-LAMP Instant Start Electronic Ballast



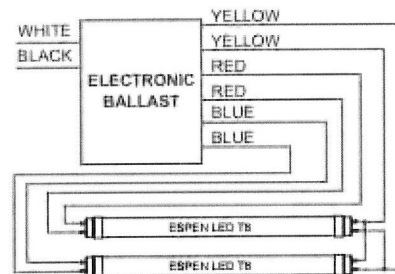
4-LAMP Instant Start Electronic Ballast



1-LAMP Programmed Start Electronic Ballast



2-LAMP Programmed Start Electronic Ballast



* Please refer to "Ballast Compatibility List" for compatible battery backup and/or emergency ballasts.

* Please refer to "Ballast Compatibility List" on Related Downloads.

Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are nominal unless noted otherwise.

Features & Benefits

- No rewiring needed
- Works with fluorescent electronic ballast (Instant Start and Programmed Start)
- Long life
- High CRI
- Instant on, no delay
- Convenient and quick installation
- Utilizes existing instant start or rapid start sockets
- Works with dimming ballast
- Compatible with controls and sensors
- Works in cold temperature applications
- Glass tube for superior optical performance
- 5 Year Warranty



* EMERGENCY BALLAST RESTRICTIONS



RetroFlex™
LED T8 LAMP • Simplicity.
Commercial Grade LED T8 Lamp

Specification Data

Order Code	Length	Power	Input Voltage (Depend on Ballast)	CCT	Initial Lumens	CRI	Beam Angle	Lamp Efficacy	System Efficacy	Life	DLC
LB48T8U6/830/12P-EB	48	16	120/277V, 347V	3000K	1800	83	240	150	112	50,000	Yes
LB48T8U6/835/12P-EB	48	16	120/277V, 347V	3500K	1800	83	240	150	112	50,000	Yes
LB48T8U6/840/12P-EB	48	16	120/277V, 347V	4000K	1800	83	240	150	112	50,000	Yes
LB48T8U6/850/12P-EB	48	16	120/277V, 347V	5000K	1800	83	240	150	112	50,000	Yes

System Performance

Lamp Model	Low Ballast Factor				High Ballast Factor			
	Lamp Power	System Power	Lumen Output	Lamp Efficacy	Lamp Power	System Power	Lumen Output	Lamp Efficacy

LB48T8U6/830/12P-EB

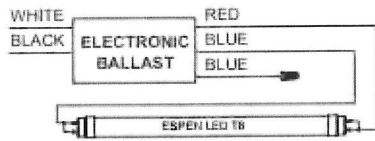
LB48T8U6/835/12P-EB

LB48T8U6/840/12P-EB

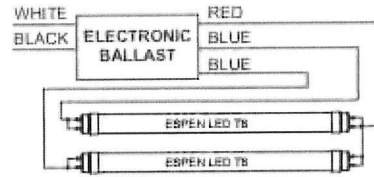
LB48T8U6/850/12P-EB

Wiring diagram

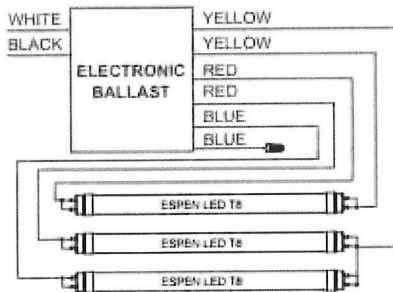
1-LAMP Instant Start Electronic Ballast



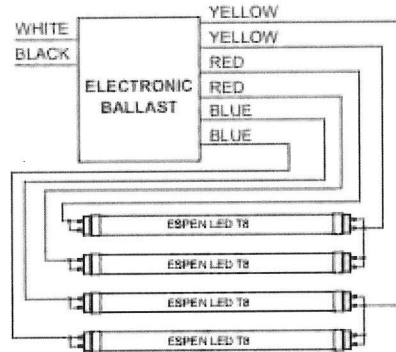
2-LAMP Instant Start Electronic Ballast



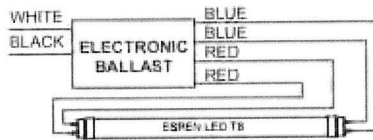
3-LAMP Instant Start Electronic Ballast



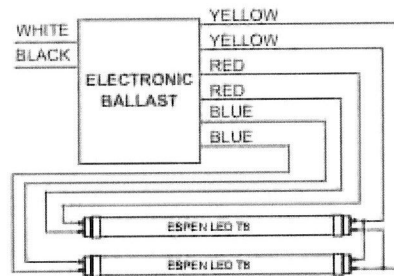
4-LAMP Instant Start Electronic Ballast



1-LAMP Programmed Start Electronic Ballast



2-LAMP Programmed Start Electronic Ballast



* Please check ballast compatibility list before installation.

Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are nominal unless noted otherwise.

Features & Benefits

- No rewiring needed
- Works with fluorescent electronic ballast (Instant Start, Programmed Start, and Dimming)*
- Long life
- High CRI
- Instant on, no delay
- Convenient and quick installation
- Utilizes existing instant start or rapid start sockets
- Compatible with controls and sensors
- Dimmable
- Works in cold temperature applications
- Glass tube for superior optical performance
- 5 Year Warranty



* EMERGENCY BALLAST RESTRICTIONS



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Commercial Grade LED T8 Lamp

Specification Data

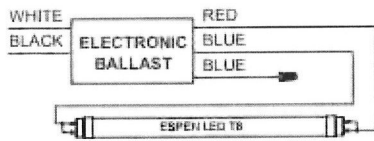
Order Code	Length	Lamp Wattage	System Wattage	CCT	Initial Lumens	CRI	Beam Angle	Lamp Efficacy	System Efficacy	Life	DLC
L48T8/830/12G-EB	48	12	14.5	3000K	1800	80+	325	150	124	50000	Yes
L48T8/835/12G-EB	48	12	14.5	3500K	1800	80+	325	150	124	50000	Yes
L48T8/840/12G-EB	48	12	14.5	4000K	1800	80+	325	150	124	50000	Yes
L48T8/850/12G-EB	48	12	14.5	5000K	1800	80+	325	150	124	50000	Yes

System Performance

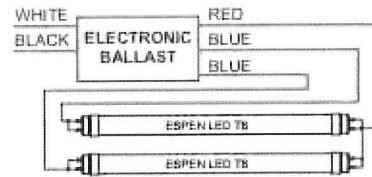
Lamp Model	Low Ballast Factor				High Ballast Factor			
	Lamp Power	System Power	Lumen Output	Lamp Efficacy	Lamp Power	System Power	Lumen Output	Lamp Efficacy
L48T8/830/12G-EB	9	12	1450	160	18	21	2700	150
L48T8/835/12G-EB	9	12	1450	160	18	21	2700	150
L48T8/840/12G-EB	9	12	1450	160	18	21	2700	150
L48T8/850/12G-EB	9	12	1450	160	18	21	2700	150

Wiring diagram

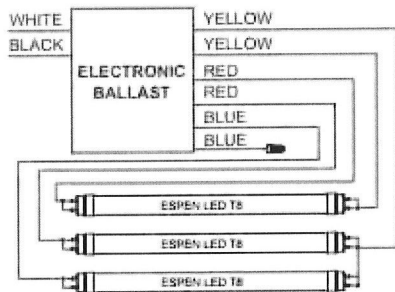
1-LAMP Instant Start Electronic Ballast



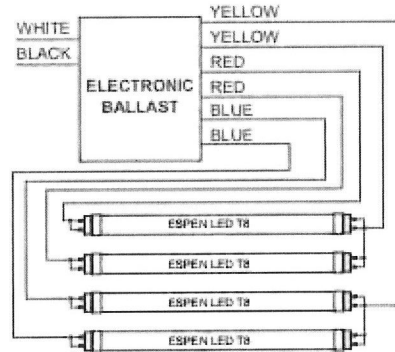
2-LAMP Instant Start Electronic Ballast



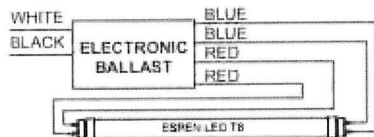
3-LAMP Instant Start Electronic Ballast



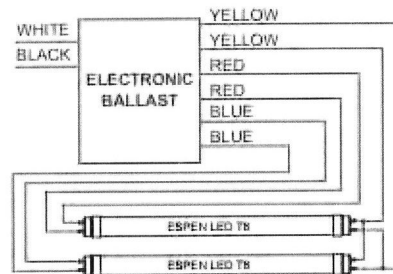
4-LAMP Instant Start Electronic Ballast



1-LAMP Programmed Start Electronic Ballast



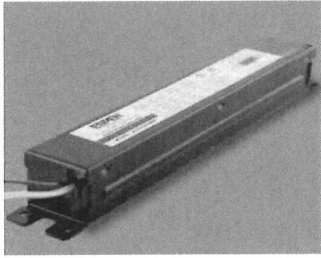
2-LAMP Programmed Start Electronic Ballast



* Please refer to "Ballast Compatibility List" for compatible battery backup and/or emergency ballasts.

* Please refer to "Ballast Compatibility List" on Related Downloads.

Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are nominal unless noted otherwise.



Model No.	VE2P32MVHIPE
Family	Elite
Ballast Type	Electronic
Lamp Operation	Parallel
Input Voltage	120/277V
Starting Method	Instant Start

PRODUCT SPECIFICATION

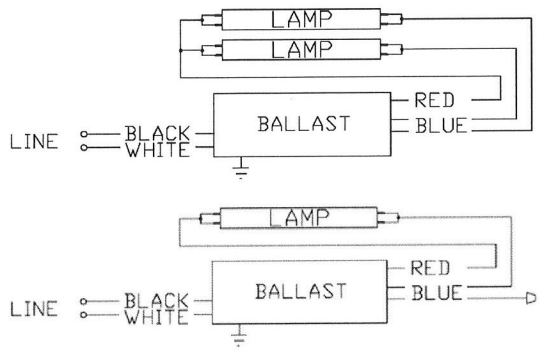
ELECTRONIC BALLASTS

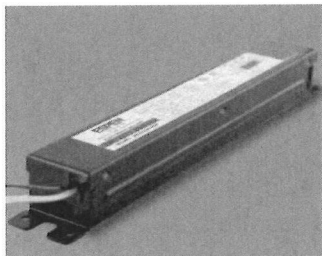
Lamp Type	No. of Lamps	Input Voltage (V)	Input Current (A)	Input Power (W)	Power Factor	MAX THD (%)	Ballast Factor	Min. Starting Temp.(F/C)	Lamp Current Crest Factor	B.E.F.
F17T8 17W	1	120/277	0.17/0.08	19	0.98	10	1.06	0	1.7	
F25T8 25W	1	120/277	0.23/0.10	28	0.98	10	1.05	0	1.7	
F32T8 32W	1	120/277	0.30/0.13	35	0.98	10	1.05	0	1.7	
F32T8/ES 25W	1	120/277	0.23/0.10	27	0.98	10	1.05	0	1.7	
F32T8/ES 28W	1	120/277	0.26/0.11	31	0.98	10	1.05	0	1.7	
F32T8/ES 30W	1	120/277	0.28/0.12	33	0.98	10	1.05	0	1.7	
F40T8 40W	1	120/277	0.35/0.15	41	0.98	10	1.01	0	1.7	
F17T8 17W	2	120/277	0.26/0.11	30	0.98	10	0.9	0	1.7	
F25T8 25W	2	120/277	0.37/0.16	43	0.98	10	0.88	0	1.7	
F32T8 32W	2	120/277	0.46/0.20	55/54	0.98	10	0.89	0	1.7	1.59/1.60
F32T8/ES 25W	2	120/277	0.39/0.17	44	0.98	10	0.89	0	1.7	
F32T8/ES 28W	2	120/277	0.41/0.18	49/47	0.98	10	0.89	0	1.7	1.82/1.70
F32T8/ES 30W	2	120/277	0.43/0.19	51	0.98	10/15	0.89	0	1.7	1.74/1.70

Physical Parameters

Enclosure	(in)	Lead Length	in.(+/-1.0)
Length	9.5	Black	
Width	1.3	White	
Height	1	Red	
Mounting	8.91	Blue	
		Yellow	

Wiring Diagram





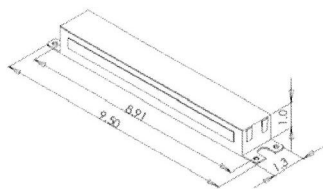
Model No.	VE3P32MVHIPHE
Family	Elite
Ballast Type	Electronic
Lamp Operation	Parallel
Input Voltage	120/277V
Starting Method	Instant Start

PRODUCT SPECIFICATION

ELECTRONIC BALLASTS

Lamp Type	No. of Lamps	Input Voltage (V)	Input Current (A)	Input Power (W)	Power Factor	MAX THD (%)	Ballast Factor	Min. Starting Temp.(F/C)	Lamp Current Crest Factor	B.E.F.
F17T8 17W	2	120/277	0.39/0.20	47	0.95	15	1.4	0	1.7	
F25T8 25W	2	120/277	0.54/0.24	64	0.98	10	1.32	0	1.7	
F32T8 32W	2	120/277	0.67/0.29	80/79	0.98	10	1.38	0	1.7	
F32T8/ES 25W	2	120/277	0.59/0.27	70	0.98	10	1.3	0	1.7	
F32T8/ES 28W	2	120/277	0.63/0.28	74	0.98	10	1.3	0	1.7	
F32T8/ES 30W	2	120/277	0.65/0.29	78	0.98	10	1.3	0	1.7	
F40T8 40W	2	120/277	0.86/0.37	102	0.98	10	1.3	0	1.7	
F25T8 25W	3	120/277	0.70/0.31	84	0.98	10	1.2	0	1.7	
F32T8 32W	3	120/277	0.93/0.40	110/108	0.98	10	1.17	0	1.7	1.06/1.08
F32T8/ES 25W	3	120/277	0.73/0.32	86	0.98	10	1.17	0	1.7	
F32T8/ES 28W	3	120/277	0.82/0.36	97	0.98	10	1.17	0	1.7	
F32T8/ES 30W	3	120/277	0.88/0.38	104	0.98	10	1.17	0	1.7	

Physical Parameters



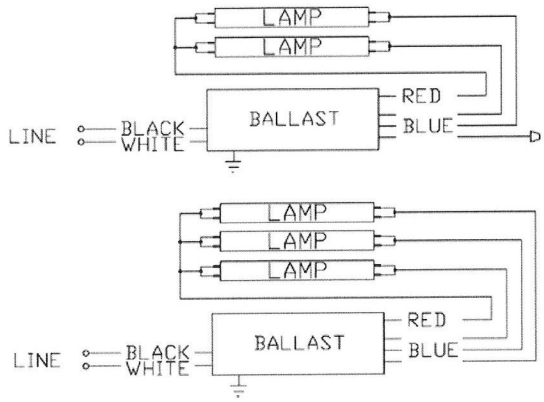
Enclosure (in)

Length	9.5
Width	1.3
Height	1
Mounting	8.91

Lead Length

	in.(+/-1.0)
Black	12
White	12
Red	36
Blue	24
Yellow	N/A

Wiring Diagram



FSP-211 Digital High/Low Passive Infrared Fixture Integrated Outdoor Sensor

Fully adjustable high and low dimmed light levels

Designed for LED fixtures; rated for extreme temperatures and up to 200,000 on/off cycles

Hold off setpoint with automatic calibration option for convenience and added energy savings



Adjustable via handheld wireless configuration tool

IP66 rated with choice of lenses for wet and outdoor locations, and mounting heights from 8' to 40'

Adjustable time delay and cut off delay



PROJECT
LOCATION/TYPE

Product Overview

Description

The FSP-211 mounts in an outdoor lighting fixture and provides multi-level control based on motion. The sensor also includes a photocell to measure the ambient light level. It controls 0-10 VDC LED drivers or dimming ballasts, as well as non-dimming ballasts and, with an FSP-Lx Lens, is rated for wet and cold locations. All control parameters are adjustable via a wireless configuration tool capable of storing and transmitting sensor profiles.

Operation

The sensor ramps lighting On to the selected High mode level when motion is first detected and the ambient light level is below the hold off setpoint. After the sensor stops detecting movement and the time delay elapses, lights fade to the Low mode level. If there is no motion during the subsequent cut off time delay, the lights will turn Off. If the sensor detects motion before the lights turn Off, it ramps the light level back to High, unless the daylight contribution is sufficient to hold lighting at Low.

Features

- Provides line voltage On/Off switching and 0-10 VDC dimming control
- Works with ballasts or LED drivers
- High and low modes fully adjustable from 0 to 10V
- Time delay from 5 to 30 minutes
- Optional cut off delay
- Adjustable ramp up and fade down times
- Optional daylighting setpoint features automatic calibration, or permits manual adjustment
- Configuration tool stores five sensor profiles for quick setup and adjustment of multiple sensors
- Polycarbonate construction; flame retardant, UV resistant, impact resistant, recyclable
- UL244A and UL508; IP66 rated (when fully assembled and installed) for use in wet locations

Wireless Handheld Configuration Tool

Initial setup and subsequent sensor adjustments are made using a handheld configuration tool (FSIR-100). This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cut off and more. The FSIR-100 is also used to initiate automatic calibration of the FSP-211 ambient light level setpoint. The setpoint is used to hold the controlled lighting off or at low level when there is sufficient daylight. The wireless tool stores up to five sensor parameter profiles to speed configuration of multiple sensors.

Applications

The slim, low-profile FSP-211 is designed for installation inside the bottom of a light fixture body. When fully assembled and installed in an IP66-rated fixture, the sensor and FSP-Lx lenses are IP66 outdoor rated. The sensor is ideal for areas such as parking facilities, gas stations, pedestrian pathways and warehouses. A choice of four lenses ensures complete coverage for mounting heights up to 40'.

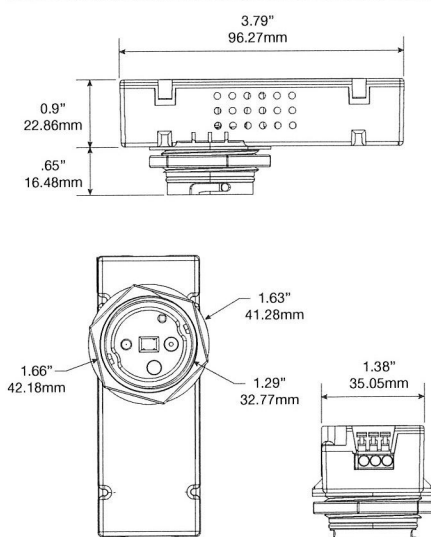


Specifications

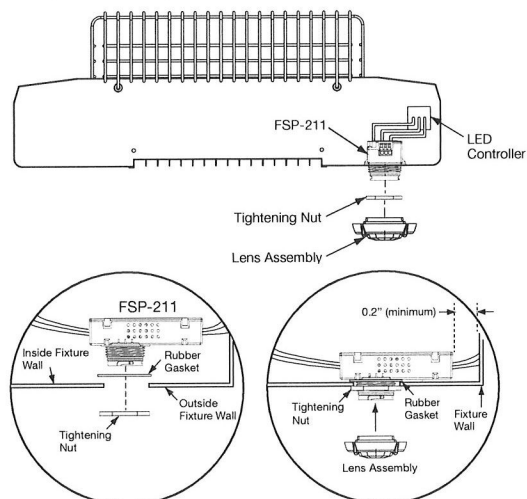
- 120/277 VAC, 50/60Hz
 - Load @120 VAC 0-800W ballast or incandescent
 - Load @277 VAC 0-1200W ballast
- 230 VAC, 50Hz; Load 0-300W ballast
- Relay life rating: 200,000 cycles (120/277 VAC); 50,000 cycles (230 VAC)
- High mode: 0-10 V; default 10 V
- Low mode: Off, 0-9.8 V; default 1 V
- Time delay: 30 sec., 5-30 min.; default 5 min.
- Cut off delay: none, 1-60 min. 1-5 hrs.; default 1 hr.
- Sensitivity: none, low, med, max; default max
- Setpoint: none, 1-250 fc, auto; default 4 fc
- Ramp up time: none, 1-60 sec.; default none
- Fade down time: none, 1-60 sec.; default none
- Operating temperature: -40-167°F [-40-75°C]
- Operating Humidity: 20-90%
- Weight: 2.8 oz [80 grams]
- IP66, CE compliant
- TUV, UL and cUL listed
- Five year warranty

Dimensions & Mounting

Sensor Dimensions



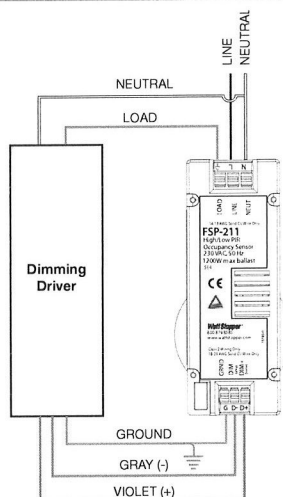
Sensor Mounting



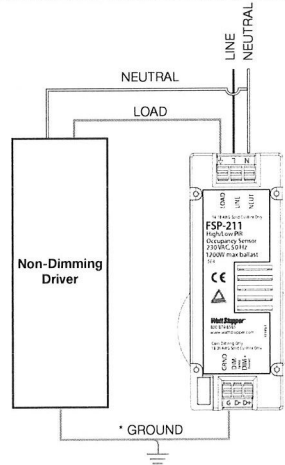
The FSP-211 accommodates fixture wall thickness up to 0.125" [3.18mm].

Wiring

Dimming Wiring Diagram



Non-Dimming Wiring Diagram



*The FSP-211 must be properly grounded.

Ordering Information

Catalog No.	Color	Description	Input Voltage
☐ FSP-211	White	Fixture mount, passive infrared motion sensor	120/277V, 50/60Hz or 230V, 50Hz
☐ FSIR-100	Black	Remote handheld configuration tool	[3] 1.5V AAA alkaline batteries

IRRIGATION SUMMARY

Building/Site Name	Controller	Flow Sensor	Master Valve	Scope Notes
Aloysia Moore Park	X			Only one Backflow at this site, with multiple controllers. This prohibits installation of a Flow Sensor/Master Valve system.
Aloysia Moore Park	X			
Beardslee Park	X	X	X	
Beardslee Park	X	X	X	
City Hall	X	X	X	
Duarte Park	X	X	X	
Duarte Skate Park	X	X	X	
Duarte Sports Park Fields	X	X	X	
Encanto Park @ Tennis Courts	X			Only one Backflow at this site, with multiple controllers. This prohibits installation of a Flow Sensor/Master Valve system.
Encanto Park	X			
210 Fwy Entrance Park (Buena Vista & Evergreen)	X	X	X	
Glenn Miller Park	X	X	X	
Hacienda Park	X	X	X	
Historical Museum & Encanto Park	X	X	X	
Lena Valenzuela Park	X	X	X	
Northview Park	X	X	X	
Ortis Gordon Sports Park	X	X	X	
Public Works Yard	X	X	X	
Rancho Verde LSD	X	X	X	
Rancho Verde LSD	X	X	X	
Royal Oaks Bike Trail - Buena Vista	X	X	X	
Royal Oaks Bike Trail - Oak St (Bridge)	X	X	X	
Royal Oaks Bike Trail - Random Lane	X	X	X	
Royal Oaks Bike Trail - RO School	X	X	X	
Royal Oaks Park	X			Only one Backflow at this site, with multiple controllers. This prohibits installation of a Flow Sensor/Master Valve system.
Royal Oaks Park	X			
Royal Oaks Park Extension	X	X	X	
Senior Center	X	X	X	
Teen Center	X	X	X	
Veteran's Memorial Park (Thorson)	X	X	X	

Building/Site Name	Controller	Flow Sensor	Master Valve	Scope Notes
Amberwood	X	X	X	
Brookridge rainguns	X	X	X	
Buena Vista Villas	X	X	X	
Central @ Nissan	X	X	X	
Citrus Villas	X	X	X	
Duarte Plaza	X	X	X	
Duarte Rd @ Bradbury (Earlington)	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Duarte Rd @ Cinco Robles	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Duarte Rd @ Hope Dr	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Duarte Rd @ Wardell	X	X	X	
Encanto Park @ Museum	X			Only one Backflow at this site, with multiple controllers. This prohibits installation of a Flow Sensor/Master Valve
Encanto Parkway @ Fish Canyon	X	X	X	
Encanto Parkway @ Hacienda	X	X	X	
Encanto Parkway @ Royal Oaks	X	X	X	
Highland and Business Center	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Huntington @ Chase Bank	X	X	X	
Huntington @ Cotter	X	X	X	
Huntington @ Santo Domingo	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Huntington @ Thai BBQ	X	X	X	
Huntington @ We Pack it All	X	X	X	
Las Brisas	X	X	X	
Las Lomas @ Conata	X	X	X	
Las Lomas @ Sunnydale	X	X	X	
Las Lomas Villas @ Adra	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Las Lomas Villas @ Linares	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Las Posadas East	X	X	X	
Las Posadas West	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Mike's Shopping East	X	X	X	
Mike's Shopping West	X			Median Location prohibits installation of Flow Sensor/Master Valve system due to street interference
Post Office	X	X	X	
Ridgecrest Estates	X	X	X	
Starcrest @ Westvale	X	X	X	
Vineyard @ Elda	X	X	X	
Vineyard @ Sunnydale	X	X	X	
Windsor Townhomes	X	X	X	

Attachment “E” Solar PV Scope of Work

**ATTACHMENT E
TO ENERGY SERVICES AGREEMENT**

SOLAR PV SCOPE OF WORK

SYSTEM LOCATION AND DESCRIPTION

1. Site Location	City of Duarte
	City Hall/Community Center/Fitness Center
2. Point of Interconnection	Meter # SCE 259000-076340
3. System Size *	109.6 kWdc
4. Year 1 Expected Energy (kwh)*	161,123 kWh

* Subject to minor adjustment depending on final design and siting.

1. Permits and Regulatory Fees

Fees for building, fire and electrical permits are not included in this contract.

Climatec includes durations of 12 weeks for procuring permit and regulatory approvals. Climatec will not be responsible for construction delays caused by permit and approval requirements from local jurisdictions or regulatory review bodies. Any delays in procuring permits will entitle Climatec a time extension change order to the contract as a day for day extension to our plan for obtaining required permits and/or approvals, as defined above or in the proposal schedule.

2. Utility Requirements

Proposal assumes all utility-owned electrical equipment serving the sites electrical distribution system has adequate capacity to handle the photovoltaic system output. No utility required electrical equipment upgrade or replacement is included in this proposal, including design and coordination thereof.

Any costs associated with unforeseen utility interconnection requirements, including but not limited to utility-owned equipment upgrades or additions, relay protection equipment external to the inverters, system impact studies, or telemetry requirements and interconnection studies are not included in this proposal.

3. Facility Equipment

The existing electrical panels are assumed to have provisions to accept cable connections on the primary side of the main service breaker, or adequate space and capacity for a new breaker.

Agreement excludes Short-Circuit Coordination Study for this project. Climatec will provide overcurrent settings that will be coordinated with City overcurrent settings.

Agreement assumes current switchboards / panelboards meet all code requirements.

Solar system includes all standard interconnection related equipment on the City side of the meter, including panel circuit breakers, utility and/or visible utility lockable disconnect switches, solar metering, conduit, and wiring. Additional City-side protection required by the utilities, above that provided by the certified inverters, is not included.

4. *Shading*

The proposal design is based on existing visual conditions on site. Removal of trees or other obstructions to install the solar arrays and system components is included in the proposal. Trees and/or other obstructions subsequently identified for removal or trimming by the City must be removed or trimmed prior to substantial completion or performance expectations/guarantees will require adjustment.

5. *Landscaping*

Irrigation reconfiguration to complete any foundation construction/conduit boring is not included.

6. *Commissioning*

The solar scope assumes commissioning requirements for the solar scope only.

7. *Monitoring*

Energy Management System Integration or similar control or SCADA system integrations to the new photovoltaic array(s) is excluded from this proposal. Solar monitoring communication and low voltage infrastructure is included in this proposal.

8. *Soil Conditions*

Existing site soil is assumed to have the following characteristics:

- IBC or UBC Table 1804A.2, Class 3 or equivalent Non-hazardous, sandy gravel and/or gravel
- Allowable foundation pressure greater than or equal to 2000 psf Lateral Bearing strength below grade equal to 200 (Lbs. /Sq. Ft./Ft. of depth)
- Lateral sliding coefficient of friction greater than or equal to 0.35. No sub-grade rocks or rock formations
- Adequate drainage
- No seismic-related hazards (e.g. faults, liquefaction, seismically-induced settlement, lateral spreading) Limited expansiveness
- Low to moderate corrosiveness (PH is less than 5.5, electrical resistivity is more than 1000 OHM-cm, chloride is less than 500 ppm, sulfate is less than 2000 ppm)
- Depth to start of passive pressure is 0.5 feet.

9. *Site Conditions Assumed*

A normal embed depth of 10 feet is assumed. If additional width, embed depth or spread footing is needed due to soil conditions, additional costs will be the responsibility of the client.

10. *Site Preparation.*

Prior to commencement of the Work, Purchaser shall be responsible for any necessary Site and/or roof preparation, including any roof structural assessment and correction.

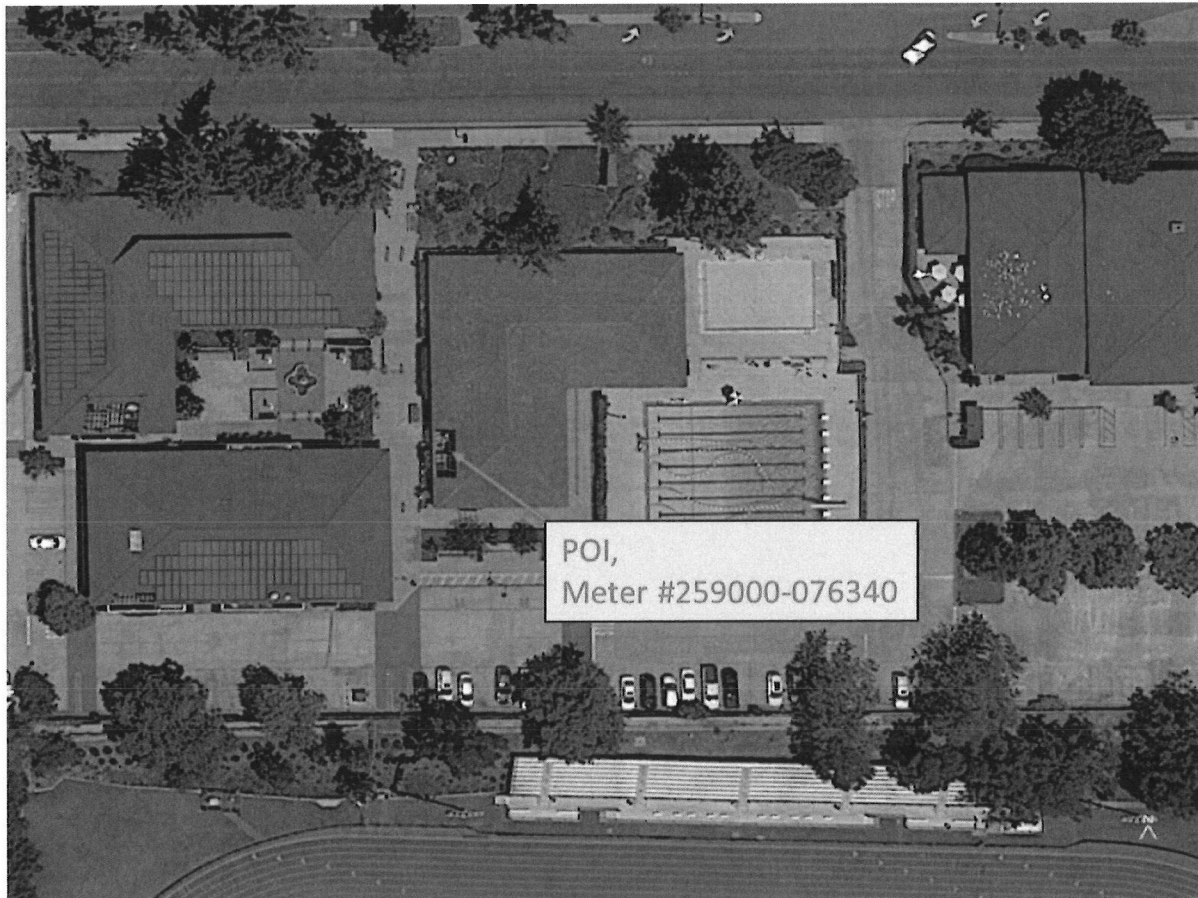
10. Data Transmission.

Where required, Purchaser shall cause to be installed a TCP/IP or telephone connection for data transmission and shall maintain such connection throughout the applicable Warranty Term.

11. Storage

City shall provide Climatec with an area for storage space located near the site for storage of materials, tools and equipment, and other purposes.

**City of Duarte:
Duarte City Hall & Fitness Center
109.6 kW, 252 SPR-435 Modules**



CLIMATEC MEASUREMENT AND VERIFICATION AGREEMENT FOR City of Duarte

SCOPE OF SERVICES

TERMS AND CONDITIONS

ATTACHMENTS

Attachment “A” – Guaranteed Savings Measurement & Verification

- I. Savings Guarantee
- II. Measurement And Verification Methods
- III. Selected Measurement And Verification Options
- IV. Specific M&V Plan For Each ECM:
 - a. Lighting System Upgrades
 - b. HVAC System Installation
 - c. HVAC Controls Upgrades
 - d. Solar PV System Installation

Attachment “B” – Utility Baseline Summary

Attachment “C” – Standards of Operation (Lighting & HVAC)

- I. Standards of Operation for HVAC
- II. Standards of Operation for Lighting

CLIMATEC M&V AGREEMENT

This Measurement and Verification ("M&V") Agreement ("Agreement") entered into as of August 27, 2019 ("Effective Date") is made by and between:

City of Duarte, CA ("Purchaser")
with its principal place of business at
1600 Huntington Drive, Duarte, CA 91010

and

Climatec LLC
with its principal place of business at
2150 Towne Centre Place, Suite 200, Anaheim, CA 92805

This agreement shall include the Attachment(s) listed below:

Attachment "A" - Guaranteed Savings Measurement & Verification

Attachment "B" - Utility Baseline Summary

Attachment "C" - Standards of Operation (Lighting & HVAC)

SCOPE OF SERVICES

Energy Savings Measurement & Verification Service:

Climatec LLC will provide measurement and verification services of the energy savings associated with Purchaser's Energy Retrofit Installation, as described in Attachment A - Scope of Work, located in the associated Installation Agreement. Energy Savings M&V reports will be provided to the Purchaser on an annual basis.

Term:

This Service Agreement shall commence upon the completion and acceptance of the Purchaser's energy retrofit installation project and receipt of final payment for the associated Installation Contract and shall continue for a term of 15 years. The Purchaser may terminate this service agreement at any time with a 60 day written notice. However, termination of this agreement will void any savings guarantee associated with this project.

Charges:

This Agreement shall be billed once per year and is due and payable within forty-five (45) days of the Purchaser's receipt of invoice, which shall be sent on or by June 30 of each year for the preceding twelve (12) month period. The annual Service Agreement charge is \$8,500 for the first three years and escalated at 4% annually for every subsequent year thereafter. This rate does not include taxes.

TERMS AND CONDITIONS

1. General Provisions:

1.1 Unless stated otherwise, the services provided under this Agreement shall be provided during Climatec LLC's normal business hours. Normal business hours are Monday through Friday, 8:00 A.M. to 5:00 P.M. inclusive, excluding holidays.

1.2 The Purchaser shall provide reasonable means of access to the equipment being measured or verified. Climatec LLC shall not be responsible for any removal, replacement, or refinishing of the building structure, if required to gain access to the

equipment. Climatec LLC shall be permitted to start and stop all equipment necessary to perform the services herein described as arranged with the Purchaser's representative.

1.3 This Agreement, when accepted in writing by authorized representatives of Purchaser and Climatec LLC, shall constitute the entire Agreement between the two (2) parties.

2. Charges:

2.1 For services specifically requested by purchaser and not covered by this Agreement, but performed by Climatec LLC upon the Purchaser's authorization, the Purchaser agrees to pay Climatec LLC within forty-five (45) days of presentation of properly itemized invoice(s) at Climatec LLC's then current rates.

2.2 If emergency service is requested by the Purchaser and inspection does not reveal any defect for which Climatec LLC is liable under this Agreement, the Purchaser will be charged at Climatec LLC's current emergency charge rates. The current hourly straight time rate is \$ 175.00.

3. Limitations of Liability:

3.1 Climatec LLC shall not be liable for any loss, delay, injury, or damage that may be caused by circumstances beyond its control including, but not restricted to; acts of God, war, civil commotion, acts of government, fire, theft, corrosion, floods, lightning strikes, freezes, strikes, lockouts, differences with workmen, riots, explosions, quarantine restrictions, delays in transportation, shortage of vehicles, fuel, labor or materials, or malicious mischief. IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR BUSINESS INTERRUPTION, LOSSES, OR CONSEQUENTIAL, INDIRECT, SPECIAL OR SPECULATIVE DAMAGES

3.2 Climatec LLC shall not be required to make safety tests, install new devices, or make modifications to any equipment to comply with recommendations or directives of insurance companies, governmental bodies,.

3.3 Climatec LLC shall not be required to make replacements or repairs necessitated by reason of negligence, abuse, misuse, unless such repairs are necessitated due to the actions or inaction of Climatec LLC, or its employees, representatives, agents, consultants, or subcontractors.

3.4 This agreement pre-supposes that all equipment is in satisfactory working order. Climatec LLC will inspect the equipment within sixty (60) days after the agreement takes effect and will advise the Purchaser of any equipment found to be in need of repair. If the Purchaser does not authorize Climatec LLC to make the repairs or if the Purchaser does not have the work performed, the equipment will be eliminated from coverage and the Agreement savings will be adjusted. Maintenance of existing equipment and systems is the responsibility of the Purchaser. Failure to properly maintain equipment and systems can result in reduced energy efficiency and may necessitate a baseline energy adjustment and annual Service Agreement charge will be proportionately reduced. There may be some equipment which, for reasons beyond Climatec LLC's control, cannot be inspected before this Agreement takes effect. Climatec LLC will inspect such equipment on the first visit where the equipment is available.

3.5 The amount of any present or future sales, use, occupancy excise, or other tax imposed by Purchaser. either on its own behalf shall not be paid by Climatec LLC.

3.6 If the equipment or software included under this Agreement is altered, modified, or changed by a party other than Climatec LLC, this Agreement shall be modified to incorporate such changes and the Agreement price and/or Savings shall be adjusted accordingly, and the Annual Service Agreement charge shall be adjusted accordingly.

3.7 Following twelve (12) months of service or any time thereafter, if individual item(s) cannot, in Climatec LLC's opinion, be properly repaired on-site because of excessive wear or deterioration, Climatec LLC may withdraw the item(s) from coverage upon ninety (90) days prior written notice. Energy savings may be adjusted accordingly.

3.8 This Agreement shall be governed by, construed, and enforced in accordance with the laws of the State of California.

4. Miscellaneous Provisions:

4.1 Safety and Security:

The services provided hereunder may occur on active Purchaser sites. As such, Climatec LLC shall ensure that its services on and around the Purchaser site comply with all applicable laws, regulations and standards including but not limited to, the fingerprinting requirements of the Education Code and any other legal requirements which may be applicable to Climatec LLC's activities on or about the Purchaser sites. While the Purchaser shall reasonably assist Climatec LLC in determining the applicable requirements, it shall be Climatec LLC's sole responsibility for determining and complying with all applicable laws, regulations, and standards.

4.2 Dispute Resolution:

a. In the event of any dispute whatsoever between the Parties, Parties shall exhaust every reasonable effort to settle or dispose of the same, including a discussion of the matter between senior executives of each Party.

b. Claims between Purchaser and Contractor shall first be resolved using the procedures set forth at California Public Contract Code section 9204. "Claims" are defined, pursuant to California Public Contract Code section 9204, as a separate demand by Contractor for one of the following: a time extension for relief from penalties for delay; payment of money or damages arising from work done; or payment of an amount disputed by Purchaser.

c. Upon receiving a claim sent by registered or certified mail, Purchaser must review and provide a written response within forty-five (45) days that identifies the disputed and undisputed portions of the claim. The forty-five (45) day period to respond may be extended by mutual agreement between the Parties. The claim is deemed rejected in its entirety if Purchaser does not issue a response. Any payment due on an undisputed portion of the claim must be processed within sixty (60) days after Purchaser's response. If a claimant disputes Purchaser's response or lack thereof, the claimant may demand to meet and confer for settlement of the issues in dispute. Any portion of a claim that remains in dispute after a meet and confer conference will be subject to nonbinding mediation process, as described in California Public Contract Code section 9204. Undisputed and unpaid claims accrue interest at seven percent (7%) per annum. A subcontractor or lower tier subcontractor may make a claim to the Purchaser through Contractor, as specified in California Public Contract Code section 9204. However, the procedures in this section shall not supersede the requirements of the Agreement with respect to Contractor's notification to Purchaser of such claim or extend the time for the giving of such notice as provided in the Agreement.

d. Any controversy or claim arising out of or relative to the Agreement, or the breach thereof, not adjusted or disposed of by mutual agreement between the Parties as described above, shall be first settled by mediation and then (in the absence of settlement after mediation), by arbitration under the American Arbitration Association Construction Arbitration Rules then in effect, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof, and arbitration decision shall be final and binding on the Parties and on all Parties subject to the following. Said arbitration proceedings shall be filed in the Regional office of the American Arbitration Association nearest to Purchaser. All arbitrators shall be bound by the terms of the Agreement. The expenses of any arbitration shall be borne equally by the Parties to the arbitration, provided that each Party shall pay for and bear the cost of its own experts, evidence, and counsel. The prevailing party in arbitration shall recover reasonable legal fees and costs as determined by the arbitrator.

e. Pending a final resolution of a Dispute, the Parties shall each proceed diligently and faithfully with performance of their respective obligations under this Agreement.

4.3 Indemnification:

To the extent it may lawfully do so, the Parties hereby indemnify, defend (with counsel of its choosing), and holds harmless the other party and its affiliates, directors, representatives, agents, officers, employees and volunteers from and against any and all liability or claim of liability, loss or expense, including defense costs and legal fees and claims for damages of whatsoever character, nature and kind, whether directly or indirectly arising from any third party actions from injury to or death of persons, and damage to or loss of property to the extent caused by or arising out of or connected with an act or omission of the indemnifying party, or an agent, invitee, guest, employee, or anyone in, on or about the Purchaser sites, including, but not limited to, liability, expense, and claims for: bodily injury, death, personal injury, or property damage caused by negligence, creation or maintenance of a dangerous condition of property, breach of express or implied warranty of product, defectiveness of product, or intentional infliction of harm, including any workers' compensation suits, liability, or expense, arising from or

connected with services performed by, or on behalf of the, indemnifying party, by any person pursuant to this Agreement; nonpayment for labor, materials, appliances, teams, or power, performed on, or furnished or contributed to the Purchaser sites. Notwithstanding the above, neither party shall be required to defend, indemnify and hold harmless the other for its own negligent acts and omissions or willful misconduct. It is the intent of the Parties that where negligence is determined to have been joint or contributory, principles of comparative negligence will be followed, and each Party shall bear the proportionate cost of any loss damage, expense or liability attributable to that Party's negligence. Nothing herein constitutes any waiver of any of the Purchaser's statutory immunities. .

5. **Occupational Safety and Health:** The Parties hereto agree to notify each other immediately upon becoming aware of any alleged violation of, the Occupational Safety and Health Act (OSHA) relating in any way to the project or project site.
6. **Entire Agreement:** This Agreement, upon acceptance, shall constitute the entire agreement between the parties and supersedes any prior representations or understandings.
7. **Changes:** No change or modification of any of the terms and conditions stated herein shall be binding upon either Party unless accepted by both Parties in writing.
8. **Severability:** If one or more of the provisions of this Agreement are held to be unenforceable under laws, such provision(s) shall be excluded from these terms and conditions and the remaining terms and conditions shall be interpreted as if such provision were so excluded and shall be enforced in accordance to their terms and conditions.
9. **Counterparts:** This Agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument. A signature on a copy of this agreement received by either party by facsimile or portable document format (PDF) is binding upon the other party as an original. The parties shall treat a photocopy of such facsimile as a duplicate original.
10. **Assignment:** Climatec LLC retains the right to assign its rights and obligations of this Agreement only with advance written consent of Purchaser.
11. **Acknowledgment:** Both Climatec LLC and the Purchaser acknowledge having read this Agreement, and all Attachments hereto, and have executed this agreement on the date written above.
12. **Approval:** Each party represents that the person that has executed this Agreement on its' behalf is authorized to do so.

City of Duarte

Climatec LLC

Signature

Signature

Print Name

Print Name

Title

President – Energy Services
Title

Date

Date

Attachment "A"

Guaranteed Savings Measurement & Verification

Attachment A

Guaranteed Savings Measurement & Verification

This document contains the energy savings Measurement and Verification (M&V) plan for the Energy Conservation Measures (ECMs) contained in the Installation Agreement. The following table summarizes the ECMs proposed. – See below Table 1.0

TABLE 1.0

Site	Lighting System Upgrades	HVAC System Installation	HVAC Control Upgrades	Solar PV System Installation
Chamber of Commerce	X		X	
City Hall	X		X	X
Community Center	X		X	
Fitness Center	X		X	
Senior Center	X	X	X	
Teen Center	X	X	X	
Public Safety	X		X	
Royal Oaks Park Building	X		X	
Duarte Park Building	X			
Aloysia Moore Park	X			
Beardslee Park	X			
Encanto Park/Nature Walk	X			
Royal Oaks Park Extension	X			
Thorsen Park	X			
Street Lighting (on TC-1, LS-2 & LS-3 Rates)	X			

The scope also includes implementation of new pool solar thermal heating system at the Fitness Center and new weather-based irrigation system upgrades. A specific Measurement and Verification Plan is submitted for each Energy Conservation Measure (ECM) to provide a comprehensive overall Plan for Purchaser. Energy savings are to be compared to the Utility Baseline Summary, as shown in Attachment B. Each measure's M&V Plan provides:

- A description of how the savings shall be verified for each ECM.
- Selection of specific protocol for verification of savings of each ECM.
- Requirements for measurement or other means to establish the ECM savings.

Climatec Building Technologies Group (Climatec LLC) is responsible for the pre-retrofit measurement, energy savings calculations, equipment installation, and required post retrofit verification as outlined herein. Purchaser agrees to operate and maintain all equipment installed. **Proper operation and maintenance of equipment and systems is critical to long-term achievement of energy savings.**

SAVINGS GUARANTEE

Climatec LLC warrants that Purchaser shall realize total energy savings, total water savings, total operational savings and utility rebates ("Guaranteed Project Savings") in excess of the total project cost during the course of the useful life of the equipment. The effective date will begin on the date of final acceptance of the Installation project and receipt of final payment for the associated Installation Contract and continue for a term not to exceed 15 years (Guarantee Period). Climatec LLC agrees to complete the M&V Report on an annual basis and deliver to the Purchaser within sixty (60) days of the anniversary date of final acceptance and annually thereafter. Project savings that are verified during the course of construction will be applied to the 1st year guaranteed project savings.

If the annual M&V Report demonstrates that the project will achieve one hundred percent (100%) or more of the Guaranteed Project Annual Savings, then Climatec LLC shall have satisfied its energy performance guarantee obligation and the Purchaser shall accept the Annual M&V Report.

In the event that an annual M&V Report savings value (including any excess, unapplied savings from previous years) does not meet the Guaranteed Project Savings in accordance with the M&V Plan, then Climatec LLC shall repair, replace, or substitute the ECM that is not performing at the required level, as identified in the M&V Report, and at Climatec LLC's expense. Following corrective action, Climatec LLC shall re-perform the relevant M&V work for the affected ECM(s) and amend or supplement the M&V Report. If the sum of the ECMs indicates that the Guaranteed Project Savings are met or exceeded, then no further remedy shall be required.

If, after the opportunity to make corrections, the M&V Report, as amended, indicates that verified savings are less than the Guaranteed Project Savings as shown in the Savings Summary, then Climatec LLC shall pay the Purchaser the shortfall amount.

The Purchaser agrees that project savings, which exceed the guaranteed amount in any one (1) year, may be applied to future year's savings to offset an energy savings shortfall. The savings guarantee will remain in effect for the term of this agreement. Cancellation of this agreement will result in the termination of the savings guarantee.

The Utility Baseline Summary, as shown in Attachment B, may be modified over the course of the Guarantee Period to adjust for changes in utility rates, number of days in utility billing cycle, square footage, energy using equipment, building occupancy and weather. This Guarantee is subject to the Purchaser's adherence to the Standards of Operation for Lighting and HVAC systems, as documented in Attachment "C" of this agreement.

MEASUREMENT AND VERIFICATION METHODS

Measurement and Verification (M&V) of energy savings is a methodology based on standard industry protocol intended to provide reasonable assurance that energy savings calculated are realized over the term of the contract.

The development of the M&V plan is based on the IPMVP-2016 (International Performance Measurement and Verification Protocol) and the application of sound engineering and business guidelines to the overall need for verification of energy savings for each ECM. This plan contains methodology that shall cost effectively provide assurance of equipment savings through short term or spot measurements, engineering calculations and/or direct utility billing comparisons. The necessary components to a well-established M & V Plan are:

- Specific identification of each ECM and proposed M & V. Reporting requirements for overall savings.
- Participation of all parties and any necessary coordination with independent review.

Methods of M&V vary in accordance with the type of project, level of assurance of savings, cost, and availability of data, financing constraints, and energy costs. The methods selected must be cost effective given the financial savings to the Purchaser. The methods used for the ECMs detailed herein were selected to minimize M&V cost while still providing a reasonable assurance of the savings calculations.

The IPMVP-2016 guideline provides the following options related to methodology for M&V:

Option A – Partially Measured Retrofit Isolation. Option A uses a combination of stipulated and/or measured factors to calculate baseline usage and savings associated with the ECM. Spot or short-term measurement would be used for the measured values. Stipulated values are supported by Purchaser input, historical data, or manufacturer data.

- Baseline and savings calculations are provided through engineering calculations, component or system models.
- Depending on number of points measured, Option A provides the least cost alternative to M&V.

Option B – Retrofit Isolation. Option B provides for measurement to provide data for assessing values or variables. Spot or short-term measurement, taken at the component and/or system level are taken when variations in factors can

be accounted for or eliminated. Continuous measurement at the component and/or system level can also be used to account for the variations in factors over time.

- Baseline and savings calculations are provided through engineering calculations, component or system models.
- Cost is variable depending on the points measured, and the term of the measurement process used. Option B provides a better scenario for ECMs where a small number of factors can be accurately measured with a measurement plan.

Option C – Whole Building. Option C involves the use of utility meters or whole building sub-metering to assess the energy performance of the entire building. After an ECM is implemented the billing data is assessed in accordance with an approved plan to determine actual ECM savings.

- Baseline is established through utility data and engineering/regression analysis.
- Engineering calculations or modeling initially provides estimated ECM savings.
- Actual ECM savings are based on the utility or metered data. Savings must be adjusted for changes in building operation and variables assumed in the engineering calculations or modeling (such as weather, occupancy, etc.).
- Cost of this approach is variable based on the availability of utility data, sub-metered data, and overall savings guarantee. If the metered data is used for a savings guarantee, all variables related to building performance must be measured and adjusted, usually on an annual basis. Option C usually requires a substantial amount of time and effort to establish the baseline, provide adjustments and track the savings.

Option D – Calibrated computer simulation. Option D uses computer-modeling techniques to provide an engineering model of component and/or system performance. The inputs to the computer simulation may be made by engineering estimates, short or long term measurements, and utility or other metered data. Once the model is properly calibrated it is used for the establishment of the baseline and savings by changing appropriate inputs.

- Baseline is established through a calibration process for the computer modeling. Appropriate measurements and inputs are reflected against regression analysis for the metered data.
- Once the model is calibrated and the baseline established inputs are varied for the proposed ECM to establish savings.
- Actual ECM savings are stipulated based on the computer model. There may be follow up calibration of the model with the ECM in place to affirm the overall building simulation model.
- Cost of this method varies based on the complexity and accuracy of model desired, availability of data and overall measurement required.

SELECTED MEASUREMENT AND VERIFICATION OPTIONS

For the ECM's covered under this M&V plan, the Table of Selected M&V Options, located on the following page summarizes the proposed **IPMVP Options selected**: See table 1.1 below

TABLE 1.1

Site	Lighting System Upgrades	HVAC System Installation	HVAC Control Upgrades	Solar PV System Installation
Chamber of Commerce	A		A	
City Hall	A		A	A
Community Center	A		A	
Fitness Center	A		A	
Senior Center	A	A	A	
Teen Center	A	A	A	
Public Safety	A		A	
Royal Oaks Park Building	A		A	
Duarte Park Building	A			
Aloysia Moore Park	A			
Beardslee Park	A			
Encanto Park/Nature Walk	A			
Royal Oaks Park Extension	A			
Thorsen Park	A			
Street Lighting (on TC-1, LS-2 & LS-3 Rates)	A			

The particular option selected for each ECM was based on a number of related issues including: ECM cost, ECM savings, cost of Measurement and Verification and the ability to accurately determine whole building operations. Savings from the irrigation system upgrades and the pool solar thermal system are stipulated and agreed by the Purchaser and are met upon the completed installation of these retrofit projects.

The baseline and the post-installation energy use depend on various system and external factors, such as energy demand, operating hours, weather conditions, motor loading, energy rates, and occupancy. Development of the baseline, post ECM consumption, cost avoidances and simple payback for each ECM covered by this M&V plan includes:

- Stipulated Values – These values are important in the overall calculations for energy consumption, financial calculations, and operating conditions. Climatec LLC and Purchaser have agreed to these values for purposes of establishing savings.
- Developed/Measured Values – These are the values determined by spot or short-term measurement. Values are determined based on a sound engineering approach to variable determination. Both values used for baseline consumption and values to be measured/determined as parts of the post ECM implementation are detailed.
- Assumptions – Some values that are assumed in order to calculate energy use are necessary in certain circumstances.
- Calculations – The necessary calculations for baseline energy and demand usage, the calculation of the energy and demand components with implementation of the ECM, the calculation of costs, and annual savings are the primary tool for assessing the estimated and actual savings of any ECM.
- Instrumentation – The type and specifications, if applicable, for any instrumentation used for developed/measured values is provided to ensure appropriate meters and measurement equipment is used for specified applications.
- Pre Retrofit Measurements – Each ECM may have a section detailing the measurements required prior to the retrofit. These measurements are used to establish the baseline or adjustments required to establish an accurate baseline.

- Post Retrofit Measurements – Each ECM may have a section that details the measurements required if any after the retrofit is completed. This section is utilized to detail the type of measurements required for verification of the energy savings calculations.
- Adjustments – Each ECM may have a section for adjustments. This section includes possible adjustments to the actual Energy Audit Report and energy information, appropriate adjustments to the M&V plan, and adjustments to any savings guarantee. This section is utilized to anticipate changes necessary due to field conditions and provide an appropriate response in the verification of actual energy and cost avoidances.
- Commissioning – Each ECM may have a section regarding the commissioning process. This provides the detail for how the savings will be verified upon project completion, and the type of inspection that will be completed, and the billing method for verified savings. This section is utilized to provide a standard approach for each ECM upon project completion.

Climatec LLC will follow the agreed-upon M&V protocols for the measurement period and will prepare post-installation reports with supporting documentation for the Purchaser. The cost of M&V is included in the project cash flow requirements.

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR LIGHTING SYSTEM UPGRADES

Introduction

This Measurement and Verification Plan (M&V) is specific to all lighting retrofits and occupancy sensor installations. The sites receiving these upgrades are listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option provides for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. For this retrofit, a representative sample of each of the fixture types will be measured. The same sample will be used for both pre and post retrofit calculations. Wattage shall be measured with an appropriate instrument that is properly calibrated.

Light Levels

A representative sample of the light levels shall be measured. Where rooms have similar or identical lighting design, it is not required that each room be measured. Light levels shall be measured by an appropriate instrument that is properly calibrated. Light level measurements apply to both pre and post retrofit areas and shall be recorded at the work surface. Where rooms do not have a specific work surface (such as gymnasiums) light levels shall be measured at the floor.

Documentation

All areas measured shall be documented. The data shall indicate areas that do not meet IESNA standard light level requirements. All instrumentation used shall be clearly documented.

Stipulated Values

Operating Hours are stipulated for purposes of M&V. Please see Attachment “C”, Lighting Standards of Operation for a complete list of lighting hours of operation. Stipulated values are agreed to by the Purchaser.

Savings Calculations

The calculations for the baseline energy consumption and post retrofit savings provide the basis for the overall financial viability of this ECM.

kWh and/or kW Savings

The electrical consumption reduction of a particular lighting ECM is determined by comparing the pre and post conditions applied to the hours agreed upon in the Standards of Operation.

$$\{[(\text{Existing watts/fixture}) \times (\text{existing quantity}) \times (\text{existing hours of operation})] - [(\text{proposed watts/fixture}) \times (\text{proposed quantity}) \times (\text{proposed hours of operation})]\} / 1000 = \text{kWh savings}$$

Dollar Savings

After calculating the kWh saved, the specific facility's average cost per kilowatt hour shall be used to determine dollar savings.

$$\begin{aligned} (\text{kWh saved}) \times (\text{average kWh rate}) &= \$ \text{ kWh saved} \\ (\$ \text{ kWh saved}) &= \text{the total dollars saved} \end{aligned}$$

Operational Savings

The Purchaser will realize maintenance and operational savings resulting from the new lighting system installations, extended warranties, and/or service agreements provided by Climatec LLC. The operational savings are stipulated and met upon the completed installation of the energy retrofit contract.

Adjustments

For this ECM the following adjustments are allowed for purposes of Measurement and Verification:

- Light level requirements may be modified as detailed in this plan.
- Changes in actual construction including number and/or type of fixtures. All changes shall be clearly documented and provided to the Purchaser's representative.
- Utility rates, billing days or degree days.

Commissioning

Commissioning shall consist of inspections and a final savings verification report. Inspections shall consist of:

- During the construction phase of the project, Climatec LLC shall keep a detailed record of the quantity and types of fixtures retrofitted and fixtures installed in each building. A post construction inspection is required by the responsible M&V party.
- After lighting modifications have been made, the installations shall be inspected to verify the retrofit counts by fixture code.
- Post retrofit lighting levels shall be measured to verify compliance with the contract standards.

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR HVAC SYSTEMS INSTALLATION

Introduction

This Measurement and Verification Plan (M&V) is specific to the installation of new high efficiency HVAC units at the sites listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option shall provide for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. For this retrofit, field data shall be collected which includes, unit counts, unit tonnage, nameplate horsepower and efficiency rating for each existing HVAC system.

Stipulated Values

Hours of Operation, heating/cooling loads and runtime hours of the existing HVAC systems are stipulated for purposes of M & V. Please refer to Attachment C, HVAC Standards of Operation in this agreement for specific operating hours and runtime hours for each HVAC unit or area. Stipulated values are agreed to by Purchaser.

Calculations

The calculations for the baseline energy consumption and post-retrofit savings provide the basis for the overall financial viability of these ECM's. The following equations summarize the calculation of savings:

Electric (kWh) Savings

The electrical usage reduction of this ECM is determined by the following equation:

$$((\text{Size of Existing HVAC Unit}) \times (\text{Unit Efficiency}) \times (\text{Stipulated Load Factor}) - (\text{Size of New Cooling Unit}) \times (\text{Unit Efficiency}) \times (\text{Stipulated Load Factor})) \times (\text{Annual Operating Hours}) = \text{kWh Savings}$$

Dollar Savings

After calculating the kWh saved, the specific facility's average cost per kilowatt hour shall be used to determine dollar savings.

$$(\text{kWh saved}) \times (\text{average kWh rate}) = \$ \text{kWh saved}$$
$$(\$ \text{kWh saved}) = \text{Total dollars saved}$$

Operational Savings

The Purchaser will realize maintenance and operational savings resulting from the new system installations, extended warranties, and/or service agreements provided by Climatec LLC. The operational savings are stipulated and met upon the completed installation of the energy retrofit contract.

Pre Retrofit Measurements

None required for this ECM.

Post Retrofit Measurements

None required for this ECM.

Adjustments

None required for this ECM.

Commissioning

Commissioning shall consist of inspections, and a final Commissioning report. The Inspections and Report shall consist of:

- Commissioning of the newly installed HVAC equipment shall include verification that each new unit is operating, as specified, in all modes (heat/cool).

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR HVAC CONTROLS UPGRADE

Introduction

This Measurement and Verification Plan (M&V) is specific to the energy management system upgrades at the sites listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option shall provide for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. The cooling and heating setpoints during occupied and unoccupied modes of the HVAC equipment will be verified and documented. For this retrofit, field data shall be collected which includes, unit counts, unit tonnage, nameplate horsepower, efficiency rating, operating schedules, cooling and heating temperature setpoints for each HVAC system.

Stipulated Values

Hours of operation and heating/cooling load factors are stipulated for purposes of M&V. Please refer to the Attachment C, HVAC Standards of Operations for specific existing and proposed operating hours for each HVAC unit or area. Stipulated values are agreed to by Purchaser.

Calculations

The calculations for the baseline energy consumption and post retrofit savings provide the basis for the overall financial viability of these ECM's. Post-retrofit operating schedules and trend reports will be used to verify the inputs such as operating hours, cooling/heating temperature setpoints that are used in the calculations to validate the savings. The following equations summarize the calculation of savings:

Electric (kWh) Savings

The electrical usage reduction of this ECM is determined by applying the stipulated runtime reduction to the calculated energy usage of the HVAC unit.

$$(\text{Size of HVAC unit}) \times (\text{Unit efficiency}) \times (\text{Stipulated load factor}) \times (\text{Existing annual operating hours} - \text{Proposed annual operating hours}) = \text{kWh savings}$$

Natural Gas (Therms) Savings

The natural gas usage reduction of this ECM is determined by applying the stipulated runtime reduction to the calculated energy usage of the HVAC unit.

$$(\text{Size of Heating unit}) \times (\text{Unit efficiency}) \times (\text{Stipulated load factor}) \times (\text{Existing annual operating hours} - \text{Proposed annual operating hours}) = \text{Therm savings}$$

Dollar Savings

After calculating the kWh saved and the Therms saved, the specific facility's average cost per kilowatt hour and the average cost per Therm of natural gas shall be used to determine dollar savings.

$$\begin{aligned} (\text{kWh saved}) \times (\text{average kWh rate}) &= \$ \text{ kWh saved} \\ (\text{Therms saved}) \times (\text{average Therm rate}) &= \$ \text{ Therms saved} \\ (\$ \text{ kWh saved}) + (\$ \text{ Therms saved}) &= \text{Total dollars saved} \end{aligned}$$

Operational Savings

The Purchaser will realize maintenance and operational savings resulting from the new system installations, extended warranties, and/or service agreements provided by Climatec LLC. The operational savings are stipulated and met upon the completed installation of the energy retrofit contract.

Pre Retrofit Measurements

Existing operating hours and cooling/heating temperature setpoints for each HVAC unit or area will be obtained from current thermostats/EMS.

Post Retrofit Measurements

Post-retrofit operating schedules, cooling and heating temperature setpoints in both occupied and unoccupied modes for the HVAC equipment will be obtained using the new controls system.

Adjustments

For this ECM the following adjustments are allowed for purposes of Measurement and Verification:

- Addition or subtraction to the conditioned square footage of facilities.
- Utility rates, billing days or degree days.
- Equipment changes.
- Increase or decrease in facility usage as associated with daily occupancy times and special events.

Commissioning

Commissioning shall consist of inspections, and a final Commissioning report. The Inspections and Report shall consist of:

- Commissioning of the newly installed energy management system (EMS) shall include verification that the operating schedules, cooling and heating temperature set points and the control sequences for the HVAC equipment have been programmed as specified.

SPECIFIC MEASUREMENT AND VERIFICATION PLAN

“OPTION A” FOR SOLAR PHOTOVOLTAIC INSTALLATION

Introduction

This Measurement and Verification Plan (M&V) is specific to the solar photovoltaic (PV) installations at the sites listed in the Table of Recommended Measures located at the beginning of this Attachment.

M&V Protocol

For this ECM, IPMVP Protocol – Option A shall be utilized. This option shall provide for the measurement of at least one variable pre and post retrofit with other variables allowed for stipulation. For this installation, the kilowatt-hour (kWh) production from the solar PV systems shall be measured and recorded.

Stipulated Values

The solar panel degradation factor (0.25%) and utility escalation rate (4%/year) are stipulated for the purposes of M&V. Stipulated values are agreed to by Purchaser.

Calculations

The calculations for the baseline energy consumption and post installation savings provide the basis for the overall financial viability of these ECM's. The following equations summarize the calculation of savings:

Electricity Production

Electricity production of the PV system is determined by recording the kilowatt hours (kWh) off the net electric meter/Data Acquisition System (DAS) and recording the results.

Dollar Savings

After recording the kWh generated from the PV system, the specific facility's average cost per kWh shall be used to determine dollar savings.

$$\begin{aligned} (\text{kWh generated}) \times (\text{average kWh rate}) &= \$ \text{ kWh saved} \\ (\$ \text{ kWh saved}) &= \text{Total dollars saved} \end{aligned}$$

Maintenance of System

Calculation of energy cost savings from the solar PV systems are contingent upon the Purchaser maintaining an active operations and maintenance (O&M) contract for the term of the solar lease agreement.

Pre Retrofit Measurements

Existing utility electrical energy (kWh) consumption as shown in Attachment B “Baseline Summary”.

Post Retrofit Measurements

Electrical energy (kWh) produced from the solar PV systems recorded from the net electrical meter/DAS.

Adjustments

For this ECM the following adjustments are allowed for purposes of Measurement and Verification:

- Addition or subtraction to the square footage of facilities.
- Utility rates, billing days or degree days.
- Addition or subtraction of electrical load at the facilities.
- Any structural failure in a building supporting the PV system.
- Unexpected weather conditions falling outside of the normal weather for the location.
- Legislative, administrative or executive action, regulation, order or requisition of any federal, state or local government, local utility or public utilities commission.
- There is an event of Force Majeure or changes in the conditions at or near any of the sites, which causes additional shading, soiling, or otherwise reduced performance of the solar PV systems.

Commissioning

Commissioning shall consist of inspections, and a final Commissioning report. The Inspections and Report shall consist of:

- Commissioning of the new solar PV system shall include securing the Utility Interconnect agreement with SCE, proper alignment of the solar panels and functional testing.

Attachment “B”

Utility Baseline Summary

Energy Baseline

City of Duarte											
Utility Baseline Summary											
Site Name	Address	Square Footage	1/1/2018 through 12/31/2018								
			Dollars Electric	kWh	\$ / kWh	Dollars Gas	Therms	\$ / Therms	Dollars Water	cGal	\$ / cGal
Chamber of Commerce	1735 Huntington Dr. Duarte CA 91010		\$301	1,167	\$0.26	\$0	0		\$222	157	\$1.42
City Hall	1850 HIGHLAND AVE	23,350	\$80,402	395,503	\$0.15	\$17	1	\$16.88	\$1,818	1,968	\$0.92
Community Center (electric included in City Hall)	1600 E Huntington Dr	6,500				\$99	75	\$1.31	\$22,679	39,768	\$0.57
Fitness Center (electric included in City Hall)	1600 E Huntington Dr	7,700				\$305	266	\$1.15	\$0	0	
Senior Center	1610 E Huntington Dr	13,475	\$21,074	92,967	\$0.23	\$60	40	\$1.50	\$7,898	11,110	\$0.71
Teen Center	1400 Buena Vista Street	6,665	\$14,997	52,276	\$0.29	\$20	4	\$5.05	\$6,741	10,828	\$0.62
Public Safety	1042 E Huntington Dr	3,500	\$6,937	52,306	\$0.13	\$0	0		\$877	502	\$1.75
Museum	777 Encanto Park		\$1,176	5,798	\$0.20	\$0	0		\$0	0	
Aloysia Moore Park	1100 Duarte Road		\$708	3,644	\$0.19	\$0	0		\$11,795	16,637	\$0.71
Beardslee Park	2000 Buena Vista Street		\$343	789	\$0.43	\$0	0		\$22,845	39,072	\$0.58
Bike Trail	Various		\$623	105	\$7.84	\$0	0		\$4,502	6,618	\$0.68
Duarte Sports Park Field B	1344 Bloomdale Street		\$7,914	96,939	\$0.08	\$10	9	\$1.10	\$42,225	66,874	\$0.63
Duarte Skate Park	1401 Central Avenue		\$0	0	\$0.31	\$0	0		\$13,985	23,790	\$0.59
Encanto Park / Nature Walk	751 Encanto Parkway		\$1,706	7,527	\$0.23	\$0	0		\$48,393	81,270	\$0.60
Valley View Park	205 Melcanyon Road		\$777	4,025	\$0.19	\$0	0		\$3,211	4,584	\$0.70
Hacienda Park	2695 Hacienda Drive		\$303	362	\$0.84	\$0	0		\$0	0	
Otis Gordon Sports Park	2351 Central Avenue		\$0	0	\$0.31	\$0	0		\$35,672	63,124	\$0.57
Royal Oaks Park	2627 Royal Oaks Drive		\$11,798	42,422	\$0.28	\$0	0		\$16,354	25,204	\$0.65
Royal Oaks Park Extension	2701 Royal Oaks Drive		\$0	0	\$0.31	\$0	0		\$0	0	
Third Street Park	1634 3rd St. Duarte CA 91010		\$0	0	\$0.31	\$0	0		\$1,728	1,855	\$0.93
Thorsen Park	2801 Huntington Dr		\$780	3,832	\$0.20	\$0	0		\$0	0	
TC-1	Various		\$13,267	74,013	\$0.18	\$0	0		\$0	0	
LS1	Various		\$114,628	342,919	\$0.33	\$0	0		\$0	0	
LS2	Various		\$40,930	452,076	\$0.09	\$0	0		\$0	0	
LS3	Various		\$4,421	45,175	\$0.10	\$0	0		\$0	0	
Street Lights	Various		\$12,572	101,382	\$0.12	\$0	0		\$0	0	
Landscape Irrigation	Various		\$9,511	38,525	\$0.25	\$0	0		\$44,325	71,841	\$0.62
Miscellaneous Other Meters	Various		\$10,812	49,471	\$0.22	\$619	615	\$1.01	\$135,677	206,618	\$0.66
Project Total		65,790	\$339,118	1,882,347	\$0.18	\$1,169	1,031	\$1.13	\$423,419	675,295	\$0.63

Attachment “C”

Standards of Operation for HVAC & Lighting

STANDARDS OF OPERATION

The hours of operation for the Purchaser's Lighting and HVAC systems, located on the following pages, were used to calculate the energy savings in the Savings Summary section of this agreement and will be used in all measurement and verification calculations.

City of Duarte							Lighting Standards of Operations					
Space Usage	24/7	Admin Open Area	Classroom m	Dusk /<Dawn	Dusk /Dawn	Hallway	Kitchen	Mech /Elec/Strg	MPR	Office Admin	Private Restroom	Restroom
Chamber of Commerce		1700		1092			1700	500		1700	1700	
City Hall		3640		1092	4380	3640	2500	500		2800	2800	3000
Community Center		2500		1092			1800	1200		2000		3000
Fitness Center		4732		1092	4380	4732		500		3500	1500	4732
Senior Center		1820	1820		4380	1820	1820	500		1820		1820
Teen Center	8760	1770	1770		4380	1770	1500	200	1770	1500		1770
Public Safety	8760			1092				500		2900		3500
Royal Oaks Park Building		1000			4380			350				1000
Duarte Park Building		3000			4380							3000
Museum		1100			4380		1100	50		1100		250
Post Office					4380			500				
Redevelopment Agency					4380			500				
Aloysia Moore Park					4380							
Beardslee Park					4380							
Bike Trail					4380			500				
Duarte Sports Park Field B				800								
Duarte Skate Park					4380			500				
Canto Park / Nature Walk				1092	4380							
Valley View Park					4380			500				
Hacienda Park					4380			500				
Lena Valenzuela Park					4380			500				
Montgomery Field					4380			0				
Northview Park					4380			500				
Orange Blossom Park					4380			500				
Otis Gordon Sports Park				910				1092				
Royal Oaks Park				910								
Royal Oaks Park Extension					4380							
Third Street Park					4380			500				
Thorsen Park					3000							
TC-1					4380							
LS1					4380							
LS2					4380							
LS3					4380							
Street Lights					4380							

HVAC Standards of Operation

City of Duarte HVAC Standard of Operations					
Facility	Business Day HVAC Schedule		Non-Business Day HVAC Schedule		Temperature Set
	Start Time	Stop Time	Start Time	Stop Time	Cooling (All Areas)
General City Energy Policy	1 Hour before open of normal business hours	At close of normal business hours	Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Chamber of Commerce	7:00 AM	4:30 PM	Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
City Hall	<u>Mon - Thurs</u> 6:30 AM	6:00 PM	Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Community Center	<u>Mon - Thurs</u> 6:30 AM	6:00 PM	Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Fitness Center	<u>Weekdays</u> 5:00 AM <u>Weekends</u> Sat - 7:00:00 AM Sun - 11:00 AM	9:00 PM 5:00 PM 5:00 PM	Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Senior Center	8:00 AM	2:00 PM	Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Teen Center	<u>Regular Schedule</u> 2:00 PM <u>Summer Schedule</u> 10:00 AM	8:00 PM 8:00 PM	Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Public Safety	24 hours per day, 365 days per year		Unoccupied or by Event Only		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability? Areas with Motion Sensors: Soft Set Back (No Motion for 15 minutes): 80 °F Hard Set Back (No Motion for 30 minutes): 90 °F
Royal Oaks Park			Unoccupied or		Occupied Setpoint: 76 °F (+/-2) Unoccupied Setpoint: 85 °F Occupied Setpoint will have ± 2°F Local Adjustability?

END

DOCUMENT CHECKLIST

PLEASE EXECUTE ONE (1) ORIGINAL SET OF ALL DOCUMENTS
(NO FRONT & BACK COPIES, PLEASE)

RETURN ALL ORIGINALS TO:
U.S. BANCORP GOVERNMENT LEASING AND FINANCE, INC.
FRANCINE NEVILLE
950 17TH STREET, 8TH FLOOR
DENVER, CO 80202
303-585-4054

- ☐ **Master Tax-Exempt Lease/Purchase Agreement** – This document must be executed in the presence of a witness/attestor. The attesting witness does not have to be a notary, just present at the time of execution.
- ☐ **Property Schedule No. 1** - This document must be executed in the presence of a witness/attestor. The attesting witness does not have to be a notary, just present at the time of execution.
- ☐ **Property Description and Payment Schedule – Exhibit 1**
- ☐ **Lessee's Counsel's Opinion – Exhibit 2.** This exhibit will need to be executed by your attorney, dated and placed on their letterhead. Your attorney will likely want to review the agreement prior to executing this opinion.
- ☐ **Lessee's General and Incumbency Certificate – Exhibit 3.** Include in your return package a copy of the board minutes or resolution for our files.
- ☐ **Payment of Proceeds Instructions – Exhibit 4.** Intentionally Omitted.
- ☐ **Acceptance Certificate – Exhibit 5.** Intentionally Omitted.
- ☐ **Bank Qualification and Arbitrage Rebate – Exhibit 6.**
- ☐ **Notification of Tax Treatment** – Please provide your State of Sales/Use tax Exemption Certificate.
- ☐ **Form 8038-G** – Blank form and instructions provided to Lessee. Please consult your CPA, local legal or bond counsel to fill out.
- ☐ **Escrow Agreement** – This document needs to be executed by the Executing Official defined in the Lessee's Certificate – Exhibit 3.
 - ☐ **Investment Direction Letter – Exhibit 1.** This document needs to be executed by the Executing Official.
 - ☐ **Schedule of Fees – Exhibit 2.**
 - ☐ **Requisition Request – Exhibit 3.** This document should be retained by Lessee and utilized to request disbursements from the escrow account. Please make copies and fill out as many as are needed.
 - ☐ **Final Acceptance Certificate - Exhibit 4.** This document should be retained by Lessee and provided to Lessor once all the proceeds have been disbursed from the escrow account.
 - ☐ **Class Action Negative Consent Letter – Exhibit 6.**
 - ☐ **IRS Form W-9.** This document should be retained by Lessee and submitted with the Requisition Request(s) for each vendor being paid. Please make copies and fill out as many as are needed.
- ☐ **Insurance Authorization and Verification** – To be filled out by the Purchaser and sent to your insurance carrier. A valid insurance certificate, or self-insurance letter if the Purchaser self-insures, is required prior to funding.

Master Tax-Exempt Lease/Purchase Agreement

Between: U.S. Bancorp Government Leasing and Finance, Inc. (the "Lessor")
13010 SW 68th Parkway, Suite 100
Portland, OR 97223

And: City of Duarte (the "Lessee")
1600 Huntington Drive
Duarte, CA 91010
Attention: Kristen Petersen
Telephone: (626) 357-7931 ext. 211

Dated: September 27, 2019

ARTICLE I DEFINITIONS

The following terms will have the meanings indicated below unless the context clearly requires otherwise:

"Agreement" means this Master Tax-Exempt Lease/Purchase Agreement, including all exhibits and schedules attached hereto.

"Code" is defined in Section 3.01(f).

"Commencement Date" is the date when the term of a Property Schedule and Lessee's obligation to pay rent thereunder commences, which date shall be set forth in such Property Schedule.

"Event of Default" is defined in Section 13.01.

"Lease Payments" means the Lease Payments payable by Lessee under Article VI of this Agreement and each Property Schedule, as set forth in each Property Schedule.

"Lease Payment Dates" means the Lease Payment dates for the Lease Payments as set forth in each Property Schedule.

"Lease Term" means, with respect to a Property Schedule, the Original Term and all Renewal Terms. The Lease Term for each Property Schedule executed hereunder shall be set forth in such Property Schedule, as provided in Section 4.02.

"Lessee" means the entity identified as such in the first paragraph hereof, and its permitted successors and assigns.

"Lessor" means the entity identified as such in the first paragraph hereof, and its successors and assigns.

"Nonappropriation Event" is defined in Section 6.06.

"Original Term" means, with respect to a Property Schedule, the period from the Commencement Date until the end of the budget year of Lessee in effect at the Commencement Date.

"Property" means, collectively, the property lease/purchased pursuant to this Agreement, and with respect to each Property Schedule, the property described in such Property Schedule, and all replacements, repairs, restorations, modifications and improvements thereof or thereto made pursuant to Section 8.01 or Article IX.

"Property Schedule" means a Property Schedule in the form attached hereto for Property Schedule 1. Subsequent Property Schedules pursuant to this Agreement shall be numbered consecutively, beginning with Property Schedule 2.

"Purchase Price" means the amount that Lessee may, in its discretion, pay to Lessor to purchase the Property under a Property Schedule, as provided in Section 11.01 and as set forth in the Property Schedule.

"Renewal Terms" means the renewal terms of a Property Schedule, each having a duration of one year and a term coextensive with Lessee's budget year.

"State" means the state where Lessee is located.

"Vendor" means the manufacturer or contractor of the Property as well as the agents or dealers of the manufacturer or contractor from whom Lessor or Lessee purchased or is purchasing all or any portion of the Property.

ARTICLE II

2.01 Property Schedules Separate Financings. Each Property Schedule executed and delivered under this Agreement shall be a separate financing, distinct from other Property Schedules. Without limiting the foregoing, upon the occurrence of an Event of Default or a Nonappropriation Event with respect to a Property Schedule, Lessor shall have the rights and remedies specified herein with respect to the Property financed and the Lease Payments payable under such Property Schedule, and except as expressly provided in Section 12.02 below, Lessor shall have no rights or remedies with respect to Property financed or Lease Payments payable under any other Property Schedules unless an Event of Default or Nonappropriation Event has also occurred under such other Property Schedules.

ARTICLE III

3.01 Covenants of Lessee. As of the Commencement Date for each Property Schedule executed and delivered hereunder, Lessee shall be deemed to represent, covenant and warrant for the benefit of Lessor as follows:

- (a) Lessee is a public body corporate and politic duly organized and existing under the constitution and laws of the State with full power and authority to enter into this Agreement and the Property Schedule and the transactions contemplated thereby and to perform all of its obligations thereunder.
- (b) Lessee will do or cause to be done all things necessary to preserve and keep in full force and effect its existence as a body corporate and politic. To the extent Lessee should merge with another entity under the laws of the State, Lessee agrees that as a condition to such merger it will require that the remaining or resulting entity shall be assigned Lessee's rights and shall assume Lessee's obligations hereunder.
- (c) Lessee has been duly authorized to execute and deliver this Agreement and the Property Schedule by proper action by its governing body, or by other appropriate official approval, and all requirements have been met and procedures have occurred in order to ensure the validity and enforceability of this Agreement and the Property Schedule, and Lessee has complied with such public bidding requirements as may be applicable to this Agreement and the

Property Schedule and the acquisition by Lessee of the Property thereunder. On or before the Commencement Date for the Property Schedule, Lessee shall cause to be delivered an opinion of counsel in substantially the form attached to the form of the Property Schedule as Exhibit 2.

- (d) During the Lease Term for the Property Schedule, the Property thereunder will perform and will be used by Lessee only for the purpose of performing essential governmental uses and public functions within the permissible scope of Lessee's authority.
- (e) Lessee will provide Lessor with current financial statements, budgets and proof of appropriation for the ensuing budget year and other financial information relating to the ability of Lessee to continue this Agreement and the Property Schedule in such form and containing such information as may be requested by Lessor.
- (f) Lessee will comply with all applicable provisions of the Internal Revenue Code of 1986, as amended (the "Code"), including Sections 103 and 148 thereof, and the regulations of the Treasury Department thereunder, from time to time proposed or in effect, in order to maintain the excludability from gross income for federal income tax purposes of the interest component of Lease Payments under the Property Schedule and will not use or permit the use of the Property in such a manner as to cause a Property Schedule to be a "private activity bond" under Section 141(a) of the Code. Lessee covenants and agrees that it will use the proceeds of the Property Schedule as soon as practicable and with all reasonable dispatch for the purpose for which the Property Schedule has been entered into, and that no part of the proceeds of the Property Schedule shall be invested in any securities, obligations or other investments except for the temporary period pending such use nor used, at any time, directly or indirectly, in a manner which, if such use had been reasonably anticipated on the date of issuance of the Agreement, would have caused any portion of the Property Schedule to be or become "arbitrage bonds" within the meaning of Section 103(b)(2) or Section 148 of the Code and the regulations of the Treasury Department thereunder proposed or in effect at the time of such use and applicable to obligations issued on the date of issuance of the Property Schedule.
- (g) The execution, delivery and performance of this Agreement and the Property Schedule and compliance with the provisions hereof and thereof by Lessee does not conflict with or result in a violation or breach or constitute a default under, any resolution, bond, agreement, indenture, mortgage, note, lease or other instrument to which Lessee is a party or by which it is bound by any law or any rule, regulation, order or decree of any court, governmental agency or body having jurisdiction over Lessee or any of its activities or properties resulting in the creation or imposition of any lien, charge or other security interest or encumbrance of any nature whatsoever upon any property or assets of Lessee or to which it is subject.
- (h) Lessee's exact legal name is as set forth on the first page of this Agreement. Lessee will not change its legal name in any respect without giving thirty (30) days prior notice to Lessor.

ARTICLE IV

4.01 Lease of Property. On the Commencement Date of each Property Schedule executed hereunder, Lessor will be deemed to demise, lease and let to Lessee, and Lessee will be deemed to rent, lease and hire from Lessor, the Property described in such Property Schedule, in accordance with this Agreement and such Property Schedule, for the Lease Term set forth in such Property Schedule.

4.02 Lease Term. The term of each Property Schedule shall commence on the Commencement Date set forth therein and shall terminate upon payment of the final Lease Payment set forth in such Property Schedule and the exercise of the Purchase Option described in Section 11.01, unless terminated sooner pursuant to this Agreement or the Property Schedule.

4.03 Delivery, Installation and Acceptance of Property. Lessee shall order the Property, shall cause the Property to be delivered and installed at the locations specified in the applicable Property Schedule and shall pay all taxes, delivery costs and installation costs, if any, in connection therewith. To the extent funds are deposited under an escrow agreement or trust agreement for the acquisition of the Property, such funds shall be disbursed as provided therein. When the Property described in such Property Schedule is delivered, installed and accepted as to Lessee's specifications, Lessee shall immediately accept the Property and evidence said acceptance by executing and delivering to Lessor the Acceptance Certificate substantially in the form attached to the Property Schedule.

ARTICLE V

5.01 Enjoyment of Property. Lessee shall during the Lease Term peaceably and quietly have, hold and enjoy the Property, without suit, trouble or hindrance from Lessor, except as expressly set forth in this Agreement. Lessor shall not interfere with such quiet use and enjoyment during the Lease Term so long as Lessee is not in default under the subject Property Schedule.

5.02 Location; Inspection. The Property will be initially located or based at the location specified in the applicable Property Schedule. Lessor shall have the right at all reasonable times during business hours to enter into and upon the property of Lessee for the purpose of inspecting the Property.

ARTICLE VI

6.01 Lease Payments to Constitute a Current Expense of Lessee. Lessor and Lessee understand and intend that the obligation of Lessee to pay Lease Payments hereunder shall constitute a current expense of Lessee and shall not in any way be construed to be a debt of Lessee in contravention of any applicable constitutional, statutory or charter limitation or requirement concerning the creation of indebtedness by Lessee, nor shall anything contained herein constitute a pledge of the faith and credit or taxing power of Lessee. Upon the appropriation of Lease Payments for a fiscal year, the Lease Payments for said fiscal year, and only the Lease Payments for said current fiscal year, shall be a binding obligation of Lessee; provided that such obligation shall not include a pledge of the taxing power of Lessee.

6.02 Payment of Lease Payments. Lessee shall promptly pay Lease Payments under each Property Schedule, exclusively from legally available funds, in lawful money of the United States of America, to Lessor in such amounts and on such dates as described in the applicable Property Schedule, at Lessor's address set forth on the first page of this Agreement, unless Lessor instructs Lessee otherwise. Lessee shall pay Lessor a charge on any delinquent Lease Payments under a Property Schedule in an amount sufficient to cover all additional costs and expenses incurred by Lessor from such delinquent Lease Payment. In addition, Lessee shall pay a late charge of five cents per dollar or the highest amount permitted by applicable law, whichever is lower, on all delinquent Lease Payments and interest on said delinquent amounts from the date such amounts were due until paid at the rate of 12% per annum or the maximum amount permitted by law, whichever is less.

6.03 Interest Component. A portion of each Lease Payment due under each Property Schedule is paid as, and represents payment of, interest, and each Property Schedule hereunder shall set forth the interest component (or method of computation thereof) of each Lease Payment thereunder during the Lease Term.

6.04 Lease Payments to be Unconditional. SUBJECT TO SECTION 6.06, THE OBLIGATIONS OF LESSEE TO PAY THE LEASE PAYMENTS DUE UNDER THE PROPERTY SCHEDULES AND TO PERFORM AND OBSERVE THE OTHER COVENANTS AND AGREEMENTS CONTAINED HEREIN SHALL BE ABSOLUTE AND UNCONDITIONAL IN ALL EVENTS WITHOUT ABATEMENT, DIMINUTION, DEDUCTION, SET-OFF OR DEFENSE, FOR ANY REASON, INCLUDING WITHOUT LIMITATION, ANY DEFECTS, MALFUNCTIONS, BREAKDOWNS OR INFIRMITIES IN THE PROPERTY OR ANY ACCIDENT, CONDEMNATION OR UNFORESEEN CIRCUMSTANCES. THIS PROVISION SHALL NOT LIMIT LESSEE'S RIGHTS OR ACTIONS AGAINST ANY VENDOR AS PROVIDED IN SECTION 10.02.

6.05 Continuation of Lease by Lessee. Lessee intends to continue all Property Schedules entered into pursuant to this Agreement and to pay the Lease Payments thereunder. Lessee reasonably believes that legally available funds in an amount sufficient to make all Lease Payments during the term of all Property Schedules can be obtained. Lessee agrees that its staff will provide during the budgeting process for each budget year to the governing body of Lessee notification of any Lease Payments due under the Property Schedules during the following budget year. Notwithstanding this covenant, if Lessee fails to appropriate the Lease Payments for a Property Schedule pursuant to Section 6.06, such Property Schedule shall terminate at the end of the then current Original Term or Renewal Term. Although Lessee has made this covenant, in the event that it fails to provide such notice, no remedy is provided and Lessee shall not be liable for any damages for its failure to so comply.

6.06 Nonappropriation. If during the then current Original Term or Renewal Term, sufficient funds are not appropriated to make Lease Payments required under a Property Schedule for the following fiscal year, Lessee shall be deemed to not have renewed such Property Schedule for the following fiscal year and the Property Schedule shall terminate at the end of the then current Original Term or Renewal Term and Lessee shall not be obligated to make Lease Payments under said Property Schedule beyond the then current fiscal year for which funds have been appropriated. Upon the occurrence of such nonappropriation (a "Nonappropriation Event") Lessee shall, no later than the end of the fiscal year for which Lease Payments have been appropriated, deliver possession of the Property under said Property Schedule to Lessor. If Lessee fails to deliver possession of the Property to Lessor upon termination of said Property Schedule by reason of a Nonappropriation Event, the termination shall nevertheless be effective but Lessee shall be responsible for the payment of damages in an amount equal to the portion of Lease Payments thereafter coming due that is attributable to the number of days after the termination during which the Lessee fails to deliver possession and for any other loss suffered by Lessor as a result of Lessee's failure to deliver

possession as required. In addition, Lessor may, by written instructions to any escrow agent who is holding proceeds of the Property Schedule, instruct such escrow agent to release all such proceeds and any earnings thereon to Lessor, such sums to be credited to Lessee's obligations under the Property Schedule and this Agreement. Lessee shall notify Lessor in writing within seven (7) days after the failure of the Lessee to appropriate funds sufficient for the payment of the Lease Payments, but failure to provide such notice shall not operate to extend the Lease Term or result in any liability to Lessee.

6.07 Defeasance of Lease Payments. Lessee may at any time irrevocably deposit in escrow with a defeasance escrow agent for the purpose of paying all of the principal component and interest component accruing under a Property Schedule, a sum of cash and non-callable securities consisting of direct obligations of, or obligations the principal of an interest on which are unconditionally guaranteed by, the United States of America or any agency or instrumentality thereof, in such aggregate amount, bearing interest at such rates and maturing on such dates as shall be required to provide funds sufficient for this purpose. Upon such defeasance, all right, title and interest of Lessor in the Property under said Property Schedule shall terminate. Lessee shall cause such investment to comply with the requirements of federal tax law so that the exclusion from gross income of the interest component of Lease Payments on said Property Schedule is not adversely affected.

6.08 Gross-Up. If an Event of Taxability occurs with respect to a Property Schedule, the interest component of Lease Payments on the Property Schedule shall thereafter be payable at the Taxable Rate, and Lessee shall pay to Lessor promptly following demand an amount sufficient to supplement prior Lease Payments on such Property Schedule so that Lessor receives the interest component of such Lease Payments, retroactive to the date as of which the interest component is determined to be includible in the gross income of Lessor for federal income tax purposes, calculated at the Taxable Rate, together with any penalties and interest actually imposed on Lessor as a result of the Event of Taxability. For purposes of this Section, "Event of Taxability" means, with respect to a Property Schedule, (a) a final determination by the Internal Revenue Service or a court of competent jurisdiction that the interest component of Lease Payments on the Property Schedule is includible for federal income tax purposes in the gross income of Lessor, or (b) receipt by Lessor of a written opinion of a nationally recognized public finance lawyer or law firm to the effect that there exists substantial doubt whether the interest component of Lease Payments on the Property Schedule is excludible for federal income tax purposes from the gross income of Lessor, in each case due to any action or failure to take action by Lessee. "Taxable Rate" means the interest rate at which the interest component of Lease Payments on a Property Schedule was originally calculated, divided by 0.79.

ARTICLE VII

7.01 Title to the Property. Upon acceptance of the Property by Lessee and unless otherwise required by the laws of the State, title to the Property shall vest in Lessee, subject to Lessor's interests under the applicable Property Schedule and this Agreement.

7.02 Personal Property. The Property is and will remain personal property and will not be deemed to be affixed to or a part of the real estate on which it may be situated, notwithstanding that the Property or any part thereof may be or hereafter become in any manner physically affixed or attached to real estate or any building thereon. If requested by Lessor, Lessee will, at Lessee's expense, furnish a waiver of any interest in the Property from any party having an interest in any such real estate or building.

7.03 Security Interest. To the extent permitted by law and to secure the performance of all of Lessee's obligations under this Agreement with respect to a Property Schedule, including without limitation all Property Schedules now existing are hereafter executed, Lessee grants to Lessor, for the benefit of Lessor and its successors and assigns, a security interest constituting a first lien on Lessee's interest in all of the Property under the Property Schedule, whether now owned or hereafter acquired, all additions, attachments, alterations and accessions to the Property, all substitutions and replacements for the Property, and on any proceeds of any of the foregoing, including insurance proceeds. Lessee shall execute any additional documents, including financing statements, affidavits, notices and similar instruments, in form and substance satisfactory to Lessor, which Lessor deems necessary or appropriate to establish, maintain and perfect a security interest in the Property in favor of Lessor and its successors and assigns. Lessee hereby authorizes Lessor to file all financing statements which Lessor deems necessary or appropriate to establish, maintain and perfect such security interest.

ARTICLE VIII

8.01 Maintenance of Property by Lessee. Lessee shall keep and maintain the Property in good condition and working order and in compliance with the manufacturer's specifications, shall use, operate and maintain the Property in conformity with all laws and regulations concerning the Property's ownership, possession, use and maintenance, and shall keep the Property free and clear of all liens and claims, other than those created by this Agreement. Lessee shall have sole responsibility to maintain and repair the Property. Should Lessee fail to maintain, preserve and keep the Property in good repair and working order and in accordance with manufacturer's specifications, and if requested by Lessor, Lessee will enter into maintenance contracts for the Property in form approved by Lessor and with approved providers.

8.02 Liens, Taxes, Other Governmental Charges and Utility Charges. Lessee shall keep the Property free of all levies, liens and encumbrances, except for the interest of Lessor under this Agreement. The parties to this Agreement contemplate that the Property will be used for a governmental or proprietary purpose of Lessee and, therefore, that the Property will be exempt from all property taxes. The Lease Payments payable by Lessee under this Agreement and the Property Schedules hereunder have been established to reflect the savings resulting from this exemption from taxation. Lessee will take such actions necessary under applicable law to obtain said exemption. Nevertheless, if the use, possession or acquisition of the Property is determined to be subject to taxation or later becomes subject to such taxes, Lessee shall pay when due all taxes and governmental charges lawfully assessed or levied against or with respect to the Property. Lessee shall pay all gas, water, steam, electricity, heat, power, telephone, utility and other charges incurred in the operation, maintenance, use, occupancy and upkeep of the Property. Lessee shall pay such taxes or charges as the same may become due; provided that, with respect to any such taxes or charges that may lawfully be paid in installments over a period of years, Lessee shall be obligated to pay only such installments as accrue during the then current fiscal year of the Lease Term for such Property.

8.03 Insurance. At its own expense, Lessee shall maintain (a) casualty insurance insuring the Property against loss or damage by fire and all other risks covered by the standard extended coverage endorsement then in use in the State and any other risks reasonably required by Lessor in an amount equal to at least the outstanding principal component of Lease Payments, and (b) liability insurance that protects Lessor from liability in all events in an amount reasonably acceptable to Lessor, and (c) worker's compensation insurance covering all employees working on, in, near or about the Property; provided that Lessee may self-insure against all such risks. All insurance proceeds from casualty losses shall be payable as hereinafter provided in this Agreement. All such insurance shall be with insurers that are authorized to issue such insurance in the State. All such liability insurance shall name Lessor as an additional insured. All such casualty insurance shall contain a provision making any losses payable to Lessor and Lessee as their respective interests may appear. All such insurance shall contain a provision to the effect that such insurance shall not be canceled or modified without first giving written notice thereof to Lessor and Lessee at least thirty (30) days in advance of such cancellation or modification. Such changes shall not become effective without Lessor's prior written consent. Lessee shall furnish to Lessor, on or before the Commencement Date for each Property Schedule, and thereafter at Lessor's request, certificates evidencing such coverage, or, if Lessee self-insures, a written description of its self-insurance program together with a certification from Lessee's risk manager or insurance agent or consultant to the effect that Lessee's self-insurance program provides adequate coverage against the risks listed above.

8.04 Advances. In the event Lessee shall fail to either maintain the insurance required by this Agreement or keep the Property in good repair and working order, Lessor may, but shall be under no obligation to, purchase the required insurance and pay the cost of the premiums thereof or maintain and repair the Property and pay the cost thereof. All amounts so advanced by Lessor shall constitute additional rent for the Lease Term for the applicable Property Schedule and shall be due and payable on the next Lease Payment Date and Lessee covenants and agrees to pay such amounts so advanced by Lessor with interest thereon from the date such amounts are advanced until paid at the rate of 12% per annum or the maximum amount permitted by law, whichever is less.

ARTICLE IX

9.01 Damage or Destruction. If (a) the Property under a Property Schedule or any portion thereof is destroyed, in whole or in part, or is damaged by fire or other casualty, or (b) title to, or the temporary use of, the Property under a Property Schedule or any part thereof shall be taken under the exercise or threat of the power of eminent domain by any governmental body or by any person, firm or corporation acting pursuant to governmental authority, Lessor and Lessee will cause the Net Proceeds (as hereinafter defined) of any insurance claim, condemnation award or sale under threat of condemnation to be applied to the prompt replacement, repair, restoration, modification or improvement of the Property, unless Lessee shall have exercised its right to defease the Property Schedule as provided herein, or unless Lessee shall have exercised its option to purchase Lessor's interest in the Property if the Property Schedule so provides. Any balance of the Net Proceeds remaining after such work has been completed shall be paid to Lessee. For purposes of Section 8.03 and this Article IX, the term "Net Proceeds" shall mean the amount remaining from the gross proceeds of any insurance claim, condemnation award or sale under threat of condemnation after deducting all expenses, including attorneys' fees, incurred in the collection thereof.

9.02 Insufficiency of Net Proceeds. If the Net Proceeds are insufficient to pay in full the cost of any repair, restoration, modification or improvement referred to in Section 9.01, Lessee shall (a) complete such replacement, repair, restoration, modification or improvement and pay any costs thereof in excess of the amount of the Net Proceeds and, if Lessee shall make any payments pursuant to this Section, Lessee shall not be entitled to any reimbursement therefor from Lessor nor shall Lessee be entitled to any diminution of the amounts payable under Section 6.02, or (b) defease the Property Schedule pursuant to Section 6.07, or (c) exercise its option to purchase

Lessor's interest in the Property pursuant to the optional purchase provisions of the Property Schedule, if any. The amount of the Net Proceeds, if any, remaining after completing such repair, restoration, modification or improvement or after such defeasance or purchase may be retained by Lessee.

ARTICLE X

10.01 Disclaimer of Warranties. LESSOR MAKES NO (AND SHALL NOT BE DEEMED TO HAVE MADE ANY) WARRANTIES, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING, WITHOUT LIMITATION, THE DESIGN, OPERATION OR CONDITION OF, OR THE QUALITY OF THE MATERIAL, EQUIPMENT OR WORKMANSHIP IN, THE PROPERTY, ITS MERCHANTABILITY OR ITS FITNESS FOR ANY PARTICULAR PURPOSE, THE STATE OF TITLE THERETO OR ANY COMPONENT THEREOF, THE ABSENCE OF LATENT OR OTHER DEFECTS (WHETHER OR NOT DISCOVERABLE), AND LESSOR HEREBY DISCLAIMS THE SAME; IT BEING UNDERSTOOD THAT THE PROPERTY IS LEASED TO LESSEE "AS IS" ON THE DATE OF THIS AGREEMENT OR THE DATE OF DELIVERY, WHICHEVER IS LATER, AND ALL SUCH RISKS, IF ANY, ARE TO BE BORNE BY LESSEE. Lessee acknowledges that it has made (or will make) the selection of the Property from the Vendor based on its own judgment and expressly disclaims any reliance upon any statements or representations made by Lessor. Lessee understands and agrees that (a) neither the Vendor nor any sales representative or other agent of Vendor, is (i) an agent of Lessor, or (ii) authorized to make or alter any term or condition of this Agreement, and (b) no such waiver or alteration shall vary the terms of this Agreement unless expressly set forth herein. In no event shall Lessor be liable for any incidental, indirect, special or consequential damage in connection with or arising out of this Agreement, the Property Schedules, or the existence, furnishing, functioning or use of any item, product or service provided for in this Agreement or the Property Schedules.

10.02 Vendor's Warranties. Lessor hereby irrevocably assigns to Lessee all rights that Lessor may have to assert from time to time whatever claims and rights (including without limitation warranties) related to the Property against the Vendor. Lessee's sole remedy for the breach of such warranty, indemnification or representation shall be against the Vendor of the Property, and not against Lessor, nor shall such matter have any effect whatsoever on the rights and obligations of Lessor with respect to this Agreement, including the right to receive full and timely payments hereunder. Lessee expressly acknowledges that Lessor makes, and has made, no representations or warranties whatsoever as to the existence or the availability of such warranties of the Vendor of the Property.

10.03 Use of the Property. Lessee will not install, use, operate or maintain the Property improperly, carelessly, in violation of any applicable law or in a manner contrary to that contemplated by this Agreement and the applicable Property Schedule. Lessee shall provide all permits and licenses, if any, necessary for the installation and operation of the Property. In addition, Lessee agrees to comply in all respects with all laws of the jurisdiction in which its operations involving any item of Property may extend and any legislative, executive, administrative or judicial body exercising any power or jurisdiction over the items of the Property; provided that Lessee may contest in good faith the validity or application of any such law or rule in any reasonable manner that does not, in the opinion of Lessor, adversely affect the interest of Lessor in and to the Property or its interest or rights under this Agreement. Lessee shall promptly notify Lessor in writing of any pending or threatened investigation, inquiry, claim or action by any governmental authority which could adversely affect this Agreement, any Property Schedule or the Property thereunder.

10.04 Modifications. Subject to the provisions of this Section, Lessee shall have the right, at its own expense, to make alterations, additions, modifications or improvements to the Property. All such alterations, additions, modifications and improvements shall thereafter comprise part of the Property and shall be subject to the provisions of this Agreement. Such alterations, additions, modifications and improvements shall not in any way damage the Property, substantially alter its nature or cause it to be used for purposes other than those authorized under the provisions of state and federal law; and the Property, on completion of any alterations, additions, modifications or improvements made pursuant to this Section, shall be of a value which is equal to or greater than the value of the Property immediately prior to the making of such alterations, additions, modifications and improvements. Lessee shall, at its own expense, make such alterations, additions, modifications and improvements to the Property as may be required from time to time by applicable law or by any governmental authority.

ARTICLE XI

11.01 Option to Purchase. Lessee shall have the option to purchase Lessor's entire interest in all of the Property subject to a Property Schedule and to terminate any restrictions herein on the Property under such Property Schedule on the last day of the Lease Term for a Property Schedule, if the Property Schedule is still in effect on such day, upon payment in full of the Lease Payments due thereunder plus payment of One (1) Dollar to Lessor. Upon exercise of the purchase option as set forth in this Section 11.01 and payment of the purchase price under the applicable Property Schedule, and performance by Lessee of all other terms, conditions and provisions hereof, Lessor shall deliver to Lessee all such documents and instruments as Lessee may reasonably require to evidence the transfer, without warranty by or recourse to Lessor, of all of Lessor's right, title and interest in and to the Property subject to such Property Schedule to Lessee.

11.02 Option to Prepay. Lessee shall have the option to prepay in whole the Lease Payments due under a Property Schedule, but only if the Property Schedule so provides, and on the terms set forth in the Property Schedule. Lessee shall give written notice to Lessor of its intent to purchase Lessor's interest in the Property at least sixty (60) days prior to the last day of the Lease Term for applicable Property Schedule.

ARTICLE XII

12.01 Assignment by Lessor. Lessor's right, title and interest in, to and under each Property Schedule and the Property under such Property Schedule may be assigned and reassigned in whole or in part to one or more assignees or subassignees by Lessor without the necessity of obtaining the consent of Lessee; provided that any assignment shall not be effective until Lessee has received written notice, signed by the assignor, of the name, address and tax identification number of the assignee. Lessee shall retain all such notices as a register of all assignees and shall make all payments to the assignee or assignees designated in such register. Lessee agrees to execute all documents, including notices of assignment and chattel mortgages or financing statements that may be reasonably requested by Lessor or any assignee to protect its interests in this Agreement and the Property Schedules.

12.02 Property Schedules Separate Financings. Assignees of the Lessor's rights in one Property Schedule shall have no rights in any other Property Schedule unless such rights have been separately assigned.

12.03 Assignment and Subleasing by Lessee. NONE OF LESSEE'S RIGHT, TITLE AND INTEREST IN, TO AND UNDER THIS AGREEMENT AND IN THE PROPERTY MAY BE ASSIGNED, SUBLEASED OR ENCUMBERED BY LESSEE FOR ANY REASON, WITHOUT THE PRIOR WRITTEN CONSENT OF LESSOR.

12.04 Release and Indemnification Covenants. To the extent permitted by applicable law, Lessee shall indemnify, protect, hold harmless, save and keep harmless Lessor from and against any and all liability, obligation, loss, claim and damage whatsoever, regardless of cause thereof, and all expenses in connection therewith, including, without limitation, counsel fees and expenses, penalties and interest (collectively, "Losses") arising out of or resulting from the entering into this Agreement, any Property Schedules hereunder, the ownership of any item of the Property, the loss of federal tax exemption of the interest on any of the Property Schedules, the ordering, acquisition, use, operation, condition, purchase, delivery, rejection, storage or return of any item of the Property or any accident in connection with the operation, use, condition, possession, storage or return of any item of the Property resulting in damage to property or injury to or death to any person; provided, however, that Lessee shall not be required to indemnify Lessor for Losses arising out of or resulting from Lessor's own willful or negligent conduct, or for Losses arising out of or resulting from Lessor's preparation of disclosure material relating to certificates of participation in this Agreement and any Property Schedule (other than disclosure material provided to Lessor by Lessee). The indemnification arising under this Section shall continue in full force and effect notwithstanding the full payment of all obligations under this Agreement, or the applicable Property Schedule, or the termination of the Lease Term for such Property Schedule for any reason.

ARTICLE XIII

13.01 Events of Default Defined. Any of the following shall constitute an "Event of Default" under a Property Schedule:

- (a) Failure by Lessee to pay any Lease Payment under the Property Schedule or other payment required to be paid with respect thereto at the time specified therein;
- (b) Failure by Lessee to observe and perform any covenant, condition or agreement on its part to be observed or performed with respect to the Property Schedule, other than as referred to in subparagraph (a) above, for a period of thirty (30) days after written notice specifying such failure and requesting that it be remedied is given to Lessee by Lessor, unless Lessor shall agree in writing to an extension of such time prior to its expiration; provided that, if the failure stated in the notice cannot be corrected within the applicable period, Lessor will not unreasonably withhold its consent to an extension of such time if corrective action is instituted by Lessee within the applicable period and diligently pursued until the default is corrected;
- (c) Any statement, representation or warranty made by Lessee in or pursuant to the Property Schedule or its execution, delivery or performance shall prove to have been false, incorrect, misleading or breached in any material respect on the date when made;

- (d) Lessee shall (i) apply for or consent to the appointment of a receiver, trustee, custodian or liquidator of Lessee, or of all or a substantial part of the assets of Lessee, (ii) be unable, fail or admit in writing its inability generally to pay its debts as they become due, (iii) make a general assignment for the benefit of creditors, (iv) have an order for relief entered against it under applicable federal bankruptcy law, or (v) file a voluntary petition in bankruptcy or a petition or an answer seeking reorganization or an arrangement with creditors or taking advantage of any insolvency law or any answer admitting the material allegations of a petition filed against Lessee in any bankruptcy, reorganization or insolvency proceeding; or
- (e) An order, judgment or decree shall be entered by any court of competent jurisdiction, approving a petition or appointing a receiver, trustee, custodian or liquidator of Lessee or of all or a substantial part of the assets of Lessee, in each case without its application, approval or consent, and such order, judgment or decree shall continue unstayed and in effect for any period of 60 consecutive days.

The foregoing provisions of Section 13.01 are subject to the following limitation: if by reason of force majeure Lessee is unable in whole or in part to perform its agreements under this Agreement and the Property Schedule (other than the obligations on the part of Lessee contained in Article VI hereof) Lessee shall not be in default during the continuance of such inability. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of Lessee.

A Nonappropriation Event is not an Event of Default.

13.02 Remedies on Default. Whenever any Event of Default exists with respect to a Property Schedule, Lessor shall have the right, at its sole option without any further demand or notice, to take one or any combination of the following remedial steps:

- (a) Without terminating the Property Schedule, and by written notice to Lessee, Lessor may declare all Lease Payments and other amounts payable by Lessee thereunder to the end of the then-current budget year of Lessee to be due, including without limitation delinquent Lease Payments under the Property Schedule from prior budget years, and such amounts shall thereafter bear interest at the rate of 12% per annum or the maximum rate permitted by applicable law, whichever is less;
- (b) Lessor may terminate the Property Schedule, may enter the premises where the Property subject to the Property Schedule is located and retake possession of the Property, or require Lessee, at Lessee's expense, to promptly return any or all of the Property to the possession of Lessor at such place within the United States as Lessor shall specify, and Lessor may thereafter dispose of the Property in accordance with Article 9 of the Uniform Commercial Code in effect in the State; provided, however, that any proceeds from the disposition of the property in excess of the sum required to (i) pay off any outstanding principal component of Lease Payments, (ii) pay any other amounts then due under the Property Schedule, and (iii) pay Lessor's costs and expenses associated with the disposition of the Property (including attorneys fees), shall be paid to Lessee or such other creditor of Lessee as may be entitled thereto, and further provided that no deficiency shall be allowed against Lessee except with respect to unpaid costs and expenses incurred by Lessor in connection with the disposition of the Property;
- (c) By written notice to any escrow agent who is holding proceeds of the Property Schedule, Lessor may instruct such escrow agent to release all such proceeds and any earnings thereon to Lessor, such sums to be credited to payment of Lessee's obligations under the Property Schedule;
- (d) Lessor may take any action, at law or in equity, that is permitted by applicable law and that may appear necessary or desirable to enforce or to protect any of its rights under the Property Schedule and this Agreement.

Notwithstanding the foregoing, if the proceeds are insufficient to pay items (i) to (iii) in Section 13.02(b) in whole, Lessee shall remain obligated after application of proceeds to items (i) and (ii), to pay in whole the amounts for item (iii).

13.03 No Remedy Exclusive. No remedy herein conferred upon or reserved to Lessor is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Agreement now or hereafter existing at law or in equity. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right or power may be exercised from time to time and as often as may be deemed expedient. In order to entitle Lessor to exercise any remedy reserved to it in this Article it shall not be necessary to give any notice, other than such notice as may be required in this Article.

13.04 Costs and Attorney Fees. Upon the occurrence of an Event of Default by Lessee in the performance of any term of this Agreement, Lessee agrees to pay to Lessor or reimburse Lessor for, in addition to all other amounts due hereunder, all of Lessor's costs of collection, including reasonable attorney fees, whether or not suit or action is filed thereon. Any such costs shall be immediately due and payable upon written notice and demand given to Lessee, shall be secured by this Agreement until paid and shall bear interest at the rate of 12% per annum or the maximum amount permitted by law, whichever is less. In the event suit or action is instituted to enforce any of the terms of this Agreement, the prevailing party shall be entitled to recover from the other party such sum as the court may adjudge reasonable as attorneys' fees at trial or on appeal of such suit or action or in any bankruptcy proceeding, in addition to all other sums provided by law.

ARTICLE XIV

14.01 Notices. All notices, certificates or other communications hereunder shall be sufficiently given and shall be deemed given when delivered or mailed by certified mail, postage prepaid, to the parties hereto at the addresses as specified on the first page of this Agreement (or at such other address as either party hereto shall designate in writing to the other for notices to such party), to any assignee at its address as it appears on the registration books maintained by Lessee.

14.02 Arbitrage Certificates. Unless a separate Arbitrage Certificate is delivered on the Commencement Date, Lessee shall be deemed to make the following representations and covenants as of the Commencement Date for each Property Schedule:

- (a) The estimated total costs, including taxes, freight, installation, and cost of issuance, of the Property under the Property Schedule will not be less than the total principal amount of the Lease Payments.
- (b) The Property under the Property Schedule has been ordered or is expected to be ordered within six months after the Commencement Date and the Property is expected to be delivered and installed, and the Vendor fully paid, within eighteen months from the Commencement Date. Lessee will pursue the completion of the Property and the expenditure of the net proceeds of the Property Schedule with due diligence.
- (c) Lessee has not created or established, and does not expect to create or establish, any sinking fund or other similar fund (i) that is reasonably expected to be used to pay the Lease Payments under the Property Schedule, or (ii) that may be used solely to prevent a default in the payment of the Lease Payments under the Property Schedule.
- (d) The Property under the Property Schedule has not been and is not expected to be sold or otherwise disposed of by Lessee, either in whole or in major part, prior to the last maturity of the Lease Payments under the Property Schedule.
- (e) There are no other obligations of Lessee which (i) are being sold within 15 days of the Commencement Date of the Property Schedule; (ii) are being sold pursuant to the same plan of financing as the Property Schedule; and (iii) are expected to be paid from substantially the same source of funds.
- (f) The officer or official who has executed the Property Schedule on Lessee's behalf is familiar with Lessee's expectations regarding the use and expenditure of the proceeds of the Property Schedule. To the best of Lessee's knowledge, information and belief, the facts and estimates set forth in herein are accurate and the expectations of Lessee set forth herein are reasonable.

14.03 Further Assurances. Lessee agrees to execute such other and further documents, including, without limitation, confirmatory financing statements, continuation statements, certificates of title and the like, and to take all such action as may be necessary or appropriate, from time to time, in the reasonable opinion of Lessor, to perfect, confirm, establish, reestablish, continue, or complete the interests of Lessor in this Agreement and the Property Schedules, to consummate the transactions contemplated hereby and thereby, and to carry out the purposes and intentions of this Agreement and the Property Schedules.

14.04 Binding Effect. This Agreement shall inure to the benefit of and shall be binding upon Lessor and Lessee and their respective successors and assigns.

14.05 Severability. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

14.06 Waiver of Jury Trials. Lessee and Lessor hereby irrevocably waive all right to trial by jury in any action, proceeding or counterclaim (whether based on contract, tort or otherwise) arising out of or relating to this Agreement or the actions of Lessor or Lessee in the negotiation, administration, performance or enforcement hereof.

14.07 Amendments, Changes and Modifications. This Agreement may be amended in writing by Lessor and Lessee to the extent the amendment or modification does not apply to outstanding Property Schedules at the time of such amendment or modification. The consent of all assignees shall be required to any amendment or modification before such amendment or modification shall be applicable to any outstanding Property Schedule.

14.08 Execution in Counterparts. This Agreement and the Property Schedules hereunder may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

14.09 Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State.

14.10 Captions. The captions or headings in this Agreement are for convenience only and in no way define, limit or describe the scope or intent of any provisions or sections of this Agreement.

14.11 Continuing Disclosure. Lessor acknowledges that, in connection with Lessee's compliance with any continuing disclosure undertakings (each, a "Continuing Disclosure Agreement") entered into by Lessee pursuant to SEC Rule 15c2-12 promulgated pursuant to the Securities and Exchange Act of 1934, as amended (the "Rule"), Lessee may be required to file with the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system, or its successor ("EMMA"), notice of its incurrence of its obligations under this Agreement and notice of any accommodation, waiver, amendment, modification of terms or other similar events reflecting financial difficulties in connection with this Agreement, in each case including a description of the material terms thereof (each such notice, an "EMMA Notice"). Lessee shall not file or submit or permit the filing or submission of any EMMA Notice that includes any of the following unredacted information regarding Lessor or the Escrow Agent: physical or mailing addresses, account information, e-mail addresses, telephone numbers, fax numbers, tax identification numbers, or titles or signatures of officers, employees or other signatories. Lessee acknowledges and agrees that Lessor is not responsible in connection with any EMMA Notice relating to this Agreement for Lessee's compliance or noncompliance (or any claims, losses or liabilities arising therefrom) with the Rule, any Continuing Disclosure Agreement or any applicable securities laws, including but not limited to those relating to the Rule.

IN WITNESS WHEREOF, Lessor and Lessee have caused this Agreement to be executed in their names by their duly authorized representatives as of the date first above written.

Lessor: U.S. Bancorp Government Leasing and Finance, Inc.
By:
Name:
Title:

Lessee: City of Duarte
By:
Name:
Title:

Attest:
By:
Name:
Title:

Property Schedule No. 1

Master Tax-Exempt Lease/Purchase Agreement

This **Property Schedule No. 1** is entered into as of the Commencement Date set forth below, pursuant to that certain Master Tax-Exempt Lease/Purchase Agreement (the "Master Agreement"), dated as of September 27, 2019, between U.S. Bancorp Government Leasing and Finance, Inc., and City of Duarte.

1. Interpretation. The terms and conditions of the Master Agreement are incorporated herein by reference as if fully set forth herein. Reference is made to the Master Agreement for all representations, covenants and warranties made by Lessee in the execution of this Property Schedule, unless specifically set forth herein. In the event of a conflict between the provisions of the Master Agreement and the provisions of this Property Schedule, the provisions of this Property Schedule shall control. All capitalized terms not otherwise defined herein shall have the meanings provided in the Master Agreement.
2. Commencement Date. The Commencement Date for this Property Schedule is September 27, 2019.
3. Property Description and Payment Schedule. The Property subject to this Property Schedule is described in Exhibit 1 hereto. Lessee shall not remove such property from the locations set forth therein without giving prior written notice to Lessor. The Lease Payment Schedule for this Property Schedule is set forth in Exhibit 1.
4. Opinion. The Opinion of Lessee's Counsel is attached as Exhibit 2.
5. Lessee's Certificate. The Lessee's Certificate is attached as Exhibit 3.
6. Proceeds. Exhibit 4 is intentionally omitted.
7. Acceptance Certificate. Exhibit 5 is intentionally omitted.
8. Additional Purchase Option Provisions. In addition to the Purchase Option provisions set forth in the Master Agreement, Lease Payments payable under this Property Schedule shall be subject to prepayment in whole at any time by payment of the applicable Termination Amount set forth in Exhibit 1 (Payment Schedule) and payment of all accrued and unpaid interest through the date of prepayment.
9. Private Activity Issue. Lessee understands that among other things, in order to maintain the exclusion of the interest component of Lease Payments from gross income for federal income tax purposes, it must limit and restrict the rights private businesses (including, for this purpose, the federal government and its agencies and organizations described in the Code § 501(c)(3)) have to use the Property. Each of these requirements will be applied beginning on the later of the Commencement Date or date each portion of the Property is placed in service and will continue to apply until earlier of the end of the economic useful life of the property or the date the Agreement or any tax-exempt obligation issued to refund the Property Schedule is retired (the "Measurement Period"). Lessee will comply with the requirements of Section 141 of the Code and the regulations thereunder which provide restrictions on special legal rights that users other than Lessee or a state or local government or an agency or instrumentality of a state or a local government (an "Eligible User") may have to use the Property. For this purpose, special legal rights may arise from a management or service agreement, lease, research agreement or other arrangement providing any entity except an Eligible User the right to use the Property. Any use of the Property by a user other than an Eligible User is referred to herein as "Non-Qualified Use". Throughout the Measurement Period, all of the Property is expected to be owned by Lessee. Throughout the Measurement Period, Lessee will not permit the Non-Qualified Use of the Property to exceed 10%.
10. Bank Qualification and Arbitrage Rebate. Attached as Exhibit 6.
11. Expiration. Lessor, at its sole determination, may choose not to accept this Property Schedule if the fully executed, original Master Agreement (including this Property Schedule and all ancillary documents) is not received by Lessor at its place of business by October 18, 2019.

IN WITNESS WHEREOF, Lessor and Lessee have caused this Property Schedule to be executed in their names by their duly authorized representatives as of the Commencement Date above.

Lessor: U.S. Bancorp Government Leasing and Finance, Inc.
By:
Name:
Title:

Lessee: City of Duarte
By:
Name:
Title:

Attest:
By
Name:
Title:

EXHIBIT 1**Property Description and Payment Schedule**

Re: **Property Schedule No. 1** to Master Tax-Exempt Lease/Purchase Agreement between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte.

THE PROPERTY IS AS FOLLOWS: The Property as more fully described in Exhibit A incorporated herein by reference and attached hereto. It includes all replacements, parts, repairs, additions, accessions and accessories incorporated therein or affixed or attached thereto and any and all proceeds of the foregoing, including, without limitation, insurance recoveries.

PROPERTY LOCATION:

Address

City, State Zip Code

USE: Energy Performance Contract - This use is essential to the proper, efficient and economic functioning of Lessee or to the services that Lessee provides; and Lessee has immediate need for and expects to make immediate use of substantially all of the Property, which need is not temporary or expected to diminish in the foreseeable future.

Lease Payment Schedule

Total Principal Amount: \$2,750,427.00

Payment No.	Due Date	Lease Payment	Principal Portion	Interest Portion	Termination Amount (After Making Payment for said Due Date)
1	27-Sep-2020	220,837.02	154,276.69	66,560.33	N/A
2	27-Sep-2021	220,837.02	158,010.19	62,826.83	2,511,284.33
3	27-Sep-2022	220,837.02	161,834.03	59,002.99	2,344,595.28
4	27-Sep-2023	220,837.02	165,750.42	55,086.60	2,173,872.35
5	27-Sep-2024	220,837.02	169,761.58	51,075.44	1,999,017.92
6	27-Sep-2025	220,837.02	173,869.81	46,967.21	1,819,932.02
7	27-Sep-2026	220,837.02	178,077.46	42,759.56	1,636,512.25
8	27-Sep-2027	220,837.02	182,386.93	38,450.09	1,448,653.71
9	27-Sep-2028	220,837.02	186,800.69	34,036.33	1,256,248.99
10	27-Sep-2029	220,837.02	191,321.27	29,515.75	1,059,188.09
11	27-Sep-2030	220,837.02	195,951.24	24,885.78	857,358.30
12	27-Sep-2031	220,837.02	200,693.26	20,143.76	650,644.24
13	27-Sep-2032	220,837.02	205,550.04	15,286.98	438,927.70
14	27-Sep-2033	220,837.02	210,524.35	10,312.67	222,087.61
15	27-Sep-2034	220,837.02	215,619.04	5,217.98	0.00
TOTALS:		3,312,555.30	2,750,427.00	562,128.30	

Interest Rate: 2.95%

Lessee: City of Duarte

By:

Name:

Title:

EXHIBIT A

Property Description

Scope of Work:

LED Street Light Modernization 39%
Roof Mounted Solar PV System 24%
High Efficiency Heating & Cooling Equipment 10%
Interior & Exterior LED Lighting Modernization 8%
Smart Connectivity Street Light Control System 7%
Smart Building Automation System 5%
Solar Thermal Pool Heating 4%
Smart Irrigation Weather-Based Control System 3%

EXHIBIT 2

Lessee's Counsel's Opinion

[To be provided on letterhead of Lessee's counsel.]

EXHIBIT 3

Lessee's General and Incumbency Certificate

GENERAL CERTIFICATE

Re: **Property Schedule No. 1** dated as of September 27, 2019 to the Master Tax-Exempt Lease/Purchase Agreement dated September 27, 2019 between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte.

The undersigned, being the duly elected, qualified and acting _____
(Title of Person to Execute Lease/Purchase Agreement)
of the City of Duarte ("Lessee") does hereby certify, as of September 27, 2019, as follows:

1. Lessee did, at a meeting of the governing body of the Lessee, by resolution or ordinance duly enacted, in accordance with all requirements of law, approve and authorize the execution and delivery of the above-referenced Property Schedule (the "Property Schedule") and the Master Tax-Exempt Lease/Purchase Agreement (the "Master Agreement") by the undersigned.

2. The meeting(s) of the governing body of the Lessee at which the Master Agreement and the Property Schedule were approved and authorized to be executed was duly called, regularly convened and attended throughout by the requisite quorum of the members thereof, and the enactment approving the Master Agreement and the Property Schedule and authorizing the execution thereof has not been altered or rescinded. All meetings of the governing body of Lessee relating to the authorization and delivery of Master Agreement and the Property Schedule have been: (a) held within the geographic boundaries of the Lessee; (b) open to the public, allowing all people to attend; (c) conducted in accordance with internal procedures of the governing body; and (d) conducted in accordance with the charter of the Lessee, if any, and the laws of the State.

3. No event or condition that constitutes, or with the giving of notice or the lapse of time or both would constitute, an Event of Default or a Nonappropriation Event (as such terms are defined in the Master Agreement) exists at the date hereof with respect to this Property Schedule or any other Property Schedules under the Master Agreement.

4. The acquisition of all of the Property under the Property Schedule has been duly authorized by the governing body of Lessee.

5. Lessee has, in accordance with the requirements of law, fully budgeted and appropriated sufficient funds for the current budget year to make the Lease Payments scheduled to come due during the current budget year under the Property Schedule and to meet its other obligations for the current budget year and such funds have not been expended for other purposes.

6. As of the date hereof, no litigation is pending, (or, to my knowledge, threatened) against Lessee in any court (a) seeking to restrain or enjoin the delivery of the Master Agreement or the Property Schedule or of other agreements similar to the Master Agreement; (b) questioning the authority of Lessee to execute the Master Agreement or the Property Schedule, or the validity of the Master Agreement or the Property Schedule, or the payment of principal of or interest on, the Property Schedule; (c) questioning the constitutionality of any statute, or the validity of any proceedings, authorizing the execution of the Master Agreement and the Property Schedule; or (d) affecting the provisions made for the payment of or security for the Master Agreement and the Property Schedule.

IN WITNESS WHEREOF, the undersigned has executed this Certificate as of September 27, 2019.

City of Duarte

By _____
Signature of Person to Execute Lease/Purchase Agreement

Print Name and Title of Person to Execute Lease/Purchase Agreement

INCUMBENCY CERTIFICATE

Re: **Property Schedule No. 1** dated as of September 27, 2019 to the Master Tax-Exempt Lease/Purchase Agreement dated as of September 27, 2019 between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte.

The undersigned, being the duly elected, qualified and acting Secretary or Clerk of the City of Duarte ("Lessee") does hereby certify, as of September 27, 2019, as follows:

As of the date of the meeting(s) of the governing body of the Lessee at which the above-referenced Master Agreement and the Property Schedule were approved and authorized to be executed, and as of the date hereof, the below-named representative of the Lessee held and holds the office set forth below, and the signature set forth below is his/her true and correct signature.

(Signature of Person to Execute Lease/Purchase Agreement)

(Print Name and Title)

IN WITNESS WHEREOF, the undersigned has executed this Certificate as of September 27, 2019.

Secretary/Clerk

Print Name
and Title: _____

EXHIBIT 4

Payment of Proceeds Instructions

Intentionally Omitted.

EXHIBIT 5

Acceptance Certificate

Intentionally Omitted.

EXHIBIT 6

Bank Qualification And Arbitrage Rebate

U.S. Bancorp Government Leasing and Finance, Inc.
13010 SW 68th Parkway, Suite 100
Portland, OR 97223

Re: **Property Schedule No. 1** to Master Tax-Exempt Lease/Purchase Agreement between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte

PLEASE CHECK EITHER:

Bank Qualified Tax-Exempt Obligation under Section 265

_____ Lessee hereby designates this Property Schedule as a "qualified tax-exempt obligation" as defined in Section 265(b)(3)(B) of the Code. Lessee reasonably anticipates issuing tax-exempt obligations (excluding private activity bonds other than qualified 501(c)(3) bonds and including all tax-exempt obligations of subordinate entities of the Lessee) during the calendar year in which the Commencement Date of this Property Schedule falls, in an amount not exceeding \$10,000,000.

or

_____ Not applicable.

Arbitrage Rebate

Eighteen Month Exception:

Pursuant to Treasury Regulations Section 1.148-7(d), the gross proceeds of this Property Schedule will be expended for the governmental purposes for which this Property Schedule was entered into, as follows: at least 15% within six months after the Commencement Date, at least 60% within 12 months after the Commencement Date, and 100% within 18 months after the Commencement Date. If Lessee is unable to comply with Section 1.148-7(d) of the Treasury Regulations, Lessee shall compute rebatable arbitrage on this Agreement and pay rebatable arbitrage to the United States at least once every five years, and within 60 days after payment of the final Lease Payment due under this Agreement.

Consult tax counsel if there is any chance that the Eighteen Month Exception will not be met.

Lessee: City of Duarte
By:
Name:
Title:

***Please be sure to select ONE option above.**

Language for UCC Financing Statements

Property Schedule No. 1

SECURED PARTY: U.S. Bancorp Government Leasing and Finance, Inc.

DEBTOR: City of Duarte

This financing statement covers all of Debtor's right, title and interest, whether now owned or hereafter acquired, in and to the equipment leased to Debtor under Property Schedule No. 1 dated September 27, 2019 to that certain Master Tax-Exempt Lease Purchase Agreement dated as of September 27, 2019, in each case between Debtor, as Lessee, and Secured Party, as Lessor, together with all accessions, substitutions and replacements thereto and therefore, and proceeds (cash and non-cash), including, without limitation, insurance proceeds, thereof, including without limiting, all equipment described on Exhibit A attached hereto and made a part hereof.

Debtor has no right to dispose of the equipment.

Notification of Tax Treatment to Tax-Exempt Lease/Purchase Agreement

This **Notification of Tax Treatment** is pursuant to the Master Tax-Exempt Lease/Purchase Agreement dated as of September 27, 2019 and the related Property Schedule No. 1 dated September 27, 2019, between Lessor and Lessee (the "Agreement").

- X Lessee agrees that this Property Schedule SHOULD be subject to sales/use taxes
- Lessee agrees that this Property Schedule should NOT be subject to sales/use taxes and Lessee has included our tax-exemption certificate with this document package
- Lessee agrees that this Property Schedule should NOT be subject to sales/use taxes and no tax-exemption certificate is issued to us by the State
- Lessee agrees that this Property Schedule is a taxable transaction and subject to any/all taxes
- Lessee agrees that this Property Schedule is subject to sales/use taxes and will pay those taxes directly to the State or Vendor

IN WITNESS WHEREOF, Lessee has caused this Notification of Tax Treatment to be executed by their duly authorized representative.

Lessee: City of Duarte
By:
Name:
Title:

ESCROW AGREEMENT

THIS ESCROW AGREEMENT ("*Escrow Agreement*") is made as of September 27, 2019 by and among U.S. Bancorp Government Leasing and Finance, Inc. ("*Lessor*"), City of Duarte ("*Lessee*") and U.S. BANK NATIONAL ASSOCIATION, as escrow agent ("*Escrow Agent*").

Lessor and Lessee have heretofore entered into that certain Master Tax-Exempt Lease/Purchase Agreement dated as of September 27, 2019 (the "*Master Agreement*") and a Property Schedule No. 1 thereto dated September 27, 2019 (the "*Schedule*" and, together with the terms and conditions of the Master Agreement incorporated therein, the "*Agreement*"). The Schedule contemplates that certain personal property described therein (the "*Equipment*") is to be acquired from the vendor(s) or manufacturer(s) thereof (the "*Vendor*"). After acceptance of the Equipment by Lessee, the Equipment is to be financed by Lessor to Lessee pursuant to the terms of the Agreement.

The Master Agreement further contemplates that Lessor will deposit an amount equal to the anticipated aggregate acquisition cost of the Equipment (the "*Purchase Price*"), being \$2,750,427.00, with Escrow Agent to be held in escrow and applied on the express terms set forth herein. Such deposit, together with all interest and other additions received with respect thereto (hereinafter the "*Escrow Fund*") is to be applied to pay the Vendor its invoice cost (a portion of which may, if required, be paid prior to final acceptance of the Equipment by Lessee); and, if applicable, to reimburse Lessee for progress payments already made by it to the Vendor of the Equipment.

The parties desire to set forth the terms on which the Escrow Fund is to be created and to establish the rights and responsibilities of the parties hereto.

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) in hand paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Escrow Agent hereby agrees to serve as escrow agent upon the terms and conditions set forth herein. The moneys and investments held in the Escrow Fund are for the benefit of Lessee and Lessor, and such moneys, together with any income or interest earned thereon, shall be expended only as provided in this Escrow Agreement, and shall not be subject to levy or attachment or lien by or for the benefit of any creditor of either Lessee or Lessor. Lessor, Lessee and Escrow Agent intend that the Escrow Fund constitute an escrow account in which Lessee has no legal or equitable right, title or interest until satisfaction in full of all conditions contained herein for the disbursement of funds by the Escrow Agent therefrom. However, if the parties' intention that Lessee shall have no legal or equitable right, title or interest until all conditions for disbursement are satisfied in full is not respected in any legal proceeding, the parties hereto intend that Lessor have a security interest in the Escrow Fund, and such security interest is hereby granted by Lessee to secure payment of all sums due to Lessor under the Master Agreement. For such purpose, Escrow Agent hereby agrees to act as agent for Lessor in connection with the perfection of such security interest and agrees to note, or cause to be noted, on all books and records relating to the Escrow Fund, the Lessor's interest therein.

2. On such day as is determined to the mutual satisfaction of the parties (the "*Closing Date*"), Lessor shall deposit with Escrow Agent cash in the amount of the Purchase Price, to be held in escrow by Escrow Agent on the express terms and conditions set forth herein.

On the Closing Date, Escrow Agent agrees to accept the deposit of the Purchase Price by Lessor, and further agrees to hold the amount so deposited together with all interest and other additions received with respect thereto, as the Escrow Fund hereunder, in escrow on the express terms and conditions set forth herein.

3. Escrow Agent shall at all times segregate the Escrow Fund into an account maintained for that express purpose, which shall be clearly identified on the books and records of Escrow Agent as being held in its capacity as Escrow Agent. Securities and other negotiable instruments comprising the

Escrow Fund from time to time shall be held or registered in the name of Escrow Agent (or its nominee). The Escrow Fund shall not, to the extent permitted by applicable law, be subject to levy or attachment or lien by or for the benefit of any creditor of any of the parties hereto (except with respect to the security interest therein held by Lessor).

4. The cash comprising the Escrow Fund from time to time shall be invested and reinvested by Escrow Agent in one or more investments as directed by Lessee. Absent written direction from Lessee, the cash will be invested in the U.S. Bank National Association Money Market Deposit Fund. See Exhibit 1 Investment Direction Letter. Lessee represents and warrants to Escrow Agent and Lessor that the investments selected by Lessee for investment of the Escrow Fund are permitted investments for Lessee under all applicable laws. Escrow Agent will use due diligence to collect amounts payable under a check or other instrument for the payment of money comprising the Escrow Fund and shall promptly notify Lessee and Lessor in the event of dishonor of payment under any such check or other instruments. Interest or other amounts earned and received by Escrow Agent with respect to the Escrow Fund shall be deposited in and comprise a part of the Escrow Fund. Escrow Agent shall maintain accounting records sufficient to permit calculation of the income on investments and interest earned on deposit of amounts held in the Escrow Fund. The parties acknowledge that to the extent regulations of the Comptroller of Currency or other applicable regulatory entity grant a right to receive brokerage confirmations of security transactions of the escrow, the parties waive receipt of such confirmations, to the extent permitted by law. The Escrow Agent shall furnish a statement of security transactions on its regular monthly reports. Attached as Exhibit 6 is the Class Action Negative Consent Letter to be reviewed by Lessee.

5. Upon request by Lessee and Lessor, Escrow Agent shall send monthly statements of account to Lessee and Lessor, which statements shall set forth all withdrawals from and interest earnings on the Escrow Fund as well as the investments in which the Escrow Fund is invested.

6. Escrow Agent shall take the following actions with respect to the Escrow Fund:

(a) Upon Escrow Agent's acceptance of the deposit of the Purchase Price, an amount equal to Escrow Agent's set-up fee, as set forth on Exhibit 2 hereto, shall be disbursed from the Escrow Fund to Escrow Agent in payment of such fee.

(b) Escrow Agent shall pay costs of the Equipment upon receipt of a duly executed Requisition Request (substantially in the format of Exhibit 3) signed by Lessor and Lessee. Lessor's authorized signatures are provided in Exhibit 5. Lessee's authorized signatures will be provided in Exhibit 3 of Master Lease Purchase Agreement. Escrow Agent will use best efforts to process requests for payment within one (1) business day of receipt of requisitions received prior to 2:00 p.m. Central Time. The final Requisition shall be accompanied by a duly executed Final Acceptance Certificate form attached as Exhibit 4 hereto.

(c) Upon receipt by Escrow Agent of written notice from Lessor that an Event of Default or an Event of Nonappropriation (if provided for under the Master Agreement) has occurred under the Agreement, all funds then on deposit in the Escrow Fund shall be paid to Lessor for application in accordance with the Master Agreement, and this Escrow Agreement shall terminate.

(d) Upon receipt by Escrow Agent of written notice from Lessor that the purchase price of the Equipment has been paid in full, Escrow Agent shall pay the funds then on deposit in the Escrow Fund to Lessor to be applied first to the next Lease Payment due under the Master Agreement, and second, to prepayment of the principal component of Lease Payments in inverse order of maturity without premium. To the extent the Agreement is not subject to prepayment, Lessor consents to such prepayment to the extent of such prepayment amount from the Escrow Fund. Upon disbursement of all amounts in the Escrow Fund, this Escrow Agreement shall terminate.

(e) This Escrow Agreement shall terminate eighteen (18) months from the date of this Escrow Agreement. It may, however, be extended by mutual consent of Lessee and Lessor in writing to Escrow Agent. All funds on deposit in the Escrow Fund at the time of termination under this paragraph, unless otherwise directed by Lessee in writing (electronic means acceptable), shall be transferred to Lessor.

7. The fees and expenses, including any legal fees, of Escrow Agent incurred in connection herewith shall be the responsibility of Lessee. The basic fees and expenses of Escrow Agent shall be as set forth on Exhibit 2 and Escrow Agent is hereby authorized to deduct such fees and expenses from the Escrow Fund as and when the same are incurred without any further authorization from Lessee or Lessor. Escrow Agent may employ legal counsel and other experts as it deems necessary for advice in connection with its obligations hereunder. Escrow Agent waives any claim against Lessor with respect to compensation hereunder.

8. Escrow Agent shall have no liability for acting upon any written instruction presented by Lessor in connection with this Escrow Agreement, which Escrow Agent in good faith believes to be genuine. Furthermore, Escrow Agent shall not be liable for any act or omission in connection with this Escrow Agreement except for its own negligence, willful misconduct or bad faith. Escrow Agent shall not be liable for any loss or diminution in value of the Escrow Fund as a result of the investments made by Escrow Agent.

9. Escrow Agent may resign at any time by giving thirty (30) days' prior written notice to Lessor and Lessee. Lessor may at any time remove Escrow Agent as Escrow Agent under this Escrow Agreement upon written notice. Such removal or resignation shall be effective on the date set forth in the applicable notice. Upon the effective date of resignation or removal, Escrow Agent will transfer the Escrow Fund to the successor Escrow Agent selected by Lessor.

10. Lessee hereby represents, covenants and warrants that pursuant to Treasury Regulations Section 1.148-7(d), the gross proceeds of the Agreement will be expended for the governmental purposes for which the Agreement was entered into, as follows: at least 15% within six months after the Commencement Date, such date being the date of deposit of funds into the Escrow Fund, at least 60% within 12 months after the Commencement Date, and 100% within 18 months after the Commencement Date. If Lessee is unable to comply with Section 1.148-7(d) of the Treasury Regulations, Lessee shall, at its sole expense and cost, compute rebatable arbitrage on the Agreement and pay rebatable arbitrage to the United States at least once every five years, and within 60 days after payment of the final rental or Lease Payment due under the Agreement.

11. In the event of any disagreement between the undersigned or any of them, and/or any other person, resulting in adverse claims and demands being made in connection with or for any moneys involved herein or affected hereby, Escrow Agent shall be entitled at its option to refuse to comply with any such claim or demand, so long as such disagreement shall continue, and in so refusing Escrow Agent may refrain from making any delivery or other disposition of any moneys involved herein or affected hereby and in so doing Escrow Agent shall not be or become liable to the undersigned or any of them or to any person or party for its failure or refusal to comply with such conflicting or adverse demands, and Escrow Agent shall be entitled to continue so to refrain and refuse so to act until:

(a) the rights of the adverse claimants have been finally adjudicated in a court assuming and having jurisdiction of the parties and the moneys involved herein or affected hereby; or

(b) all differences shall have been adjusted by Master Agreement and Escrow Agent shall have been notified thereof in writing signed by all of the persons interested.

12. All notices (excluding billings and communications in the ordinary course of business) hereunder shall be in writing, and shall be sufficiently given and served upon the other party if delivered (a) personally, (b) by United States registered or certified mail, return receipt requested, postage prepaid, (c) by an overnight delivery by a service such as Federal Express or Express Mail from which written

confirmation of overnight delivery is available, or (d) by facsimile with a confirmation copy by regular United States mail, postage prepaid, addressed to the other party at its respective address stated below the signature of such party or at such other address as such party shall from time to time designate in writing to the other party, and shall be effective from the date of mailing.

13. This Escrow Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective successors and assigns. No rights or obligations of Escrow Agent under this Escrow Agreement may be assigned without the prior written consent of Lessor.

14. This Escrow Agreement shall be governed by and construed in accordance with the laws in the state of the Escrow Agent's location. This Escrow Agreement constitutes the entire Agreement between the parties hereto with respect to the subject matter hereof, and no waiver, consent, modification or change of terms hereof shall bind any party unless in writing signed by all parties.

15. This Escrow Agreement and any written direction may be executed in two or more counterparts, which when so executed shall constitute one and the same agreement or direction.

IN WITNESS WHEREOF, the parties hereto have caused this Escrow Agreement to be duly executed as of the day and year first above set forth.

U.S. Bancorp Government Leasing and Finance, Inc., as Lessor
--

By:

Name:

Title:

Address: 13010 SW 68 th Parkway, Suite 100 Portland, OR 97223

City of Duarte, as Lessee

By:

Name:

Title:

Address: 1600 Huntington Drive Duarte, CA 91010
--

U.S. BANK NATIONAL ASSOCIATION, as Escrow Agent

By:

Name:

Title:

Address: U.S. Bank National Association 950 17 th Street, 12 th Floor Denver, CO 80202
--

EXHIBIT 1

**U.S. BANK NATIONAL ASSOCIATION
MONEY MARKET ACCOUNT AUTHORIZATION FORM
DESCRIPTION AND TERMS**

The U.S. Bank Money Market account is a U.S. Bank National Association ("U.S. Bank") interest-bearing money market deposit account designed to meet the needs of U.S. Bank's Corporate Trust Services Escrow Group and other Corporate Trust customers of U.S. Bank. Selection of this investment includes authorization to place funds on deposit and invest with U.S. Bank.

U.S. Bank uses the daily balance method to calculate interest on this account (actual/365 or 366). This method applies a daily periodic rate to the principal balance in the account each day. Interest is accrued daily and credited monthly to the account. Interest rates are determined at U.S. Bank's discretion, and may be tiered by customer deposit amount.

The owner of the account is U.S. Bank as Agent for its trust customers. U.S. Bank's trust department performs all account deposits and withdrawals. Deposit accounts are FDIC Insured per depositor, as determined under FDIC Regulations, up to applicable FDIC limits.

AUTOMATIC AUTHORIZATION

In the absence of specific written direction to the contrary, U.S. Bank is hereby directed to invest and reinvest proceeds and other available moneys in the U.S. Bank Money Market Account. The U.S. Bank Money Market Account is a permitted investment under the operative documents and this authorization is the permanent direction for investment of the moneys until notified in writing of alternate instructions.

City of Duarte

Company Name

Signature of Authorized Directing Party

Trust Account Number – includes existing and future sub-accounts unless otherwise directed

Title/Date

EXHIBIT 2

Schedule of Fees for Services as Escrow Agent Equipment Lease Purchase Escrow

CTS01010A	Acceptance Fee The acceptance fee includes the administrative review of documents, initial set-up of the account, and other reasonably required services up to and including the closing. This is a one-time, non-refundable fee, payable at closing.	WAIVED
CTS04460	Escrow Agent Annual fee for the standard escrow agent services associated with the administration of the account. Administration fees are payable in advance.	WAIVED
	Direct Out of Pocket Expenses Reimbursement of expenses associated with the performance of our duties, including but not limited to publications, legal counsel after the initial close, travel expenses and filing fees.	At Cost
	Extraordinary Services Extraordinary Services are duties or responsibilities of an unusual nature, including termination, but not provided for in the governing documents or otherwise set forth in this schedule. A reasonable charge will be assessed based on the nature of the services and the responsibility involved. At our option, these charges will be billed at a flat fee or at our hourly rate then in effect.	

Account approval is subject to review and qualification. Fees are subject to change at our discretion and upon written notice. Fees paid in advance will not be prorated. The fees set forth above and any subsequent modifications thereof are part of your agreement. Finalization of the transaction constitutes agreement to the above fee schedule, including agreement to any subsequent changes upon proper written notice. In the event your transaction is not finalized, any related out-of-pocket expenses will be billed to you directly. Absent your written instructions to sweep or otherwise invest, all sums in your account will remain uninvested and no accrued interest or other compensation will be credited to the account. Payment of fees constitutes acceptance of the terms and conditions set forth.

IMPORTANT INFORMATION ABOUT PROCEDURES FOR OPENING A NEW ACCOUNT:

To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify and record information that identifies each person who opens an account.

For a non-individual person such as a business entity, a charity, a Trust or other legal entity we will ask for documentation to verify its formation and existence as a legal entity. We may also ask to see financial statements, licenses, identification and authorization documents from individuals claiming authority to represent the entity or other relevant documentation.

EXHIBIT 3
REQUISITION REQUEST

The Escrow Agent is hereby requested to pay from the Escrow Fund established and maintained under that certain Escrow Agreement dated as of September 27, 2019 (the "*Escrow Agreement*") by and among U.S. Bancorp Government Leasing and Finance, Inc. (the "*Lessor*"), City of Duarte (the "*Lessee*"), and U.S. Bank National Association (the "*Escrow Agent*"), the amount set forth below to the named payee(s). The amount shown is due and payable under a purchase order or contract (or has been paid by and not previously reimbursed to Lessee) with respect to equipment being financed under that certain Master Tax-Exempt Lease Purchase Agreement dated as of September 27, 2019 (the "*Master Agreement*") and Property Schedule No. 1 thereto dated September 27, 2019 (the "*Schedule*" and, together with the terms and conditions of the Master Agreement incorporated therein, the "*Agreement*"), by and between the Lessor and the Lessee, and has not formed the basis of any prior requisition request.

PAYEE	AMOUNT	INVOICE NO.	EQUIPMENT

Total requisition amount \$ _____

The undersigned, as Lessee under the Master Agreement, hereby certifies:

1. The items of the Equipment being acquired with the proceeds of this disbursement have been delivered and installed at the location(s) contemplated by the Master Agreement. The Lessee has conducted such inspection and/or testing of the Equipment being acquired with the proceeds of this disbursement as it deems necessary and appropriate, and such Equipment has been accepted by Lessee.
2. The costs of the Equipment to be paid from the proceeds of this disbursement have been properly incurred, are a proper charge against the Escrow Fund and have not been the basis of any previous disbursement.
3. No part of the disbursement requested hereby will be used to pay for materials not yet incorporated into the Equipment or for services not yet performed in connection therewith.
4. The Equipment is covered by insurance in the types and amounts required by the Agreement.
5. No Event of Default or Event of Nonappropriation (if applicable), as each such term is defined in the Master Agreement, and no event which with the giving of notice or lapse of time, or both, would become such an Event of Default or Event of Nonappropriation has occurred and is continuing on the date hereof.
6. If Lessee paid an invoice prior to the commencement date of the Master Agreement, and is requesting reimbursement for such payment, Lessee has satisfied the requirements for reimbursement set forth in Treas. Reg. §1.150-2.

Request Date: _____

Lessor: U.S. Bancorp Government Leasing and Finance, Inc.
By:
Name:
Title:

Lessee: City of Duarte
By:
Name:
Title:

Exhibit 4

Final Acceptance Certificate

U.S. Bancorp Government Leasing and Finance, Inc.
13010 SW 68th Parkway, Suite 100
Portland, OR 97223

Re: **Property Schedule No. 1** to Master Tax-Exempt Lease/Purchase Agreement between U.S. Bancorp Government Leasing and Finance, Inc. and City of Duarte

Ladies and Gentlemen:

In accordance with the above-referenced Master Tax-Exempt Lease/Purchase Agreement (the "Master Agreement"), the undersigned ("Lessee") hereby certifies and represents to, and agrees with, U.S. Bancorp Government Leasing and Finance, Inc. ("Lessor"), as follows:

- (1) The Property, as such terms are defined in the above-referenced Property Schedule, has been acquired, made, delivered, installed and accepted on the date indicated below.
- (2) Lessee has conducted such inspection and/or testing of the Property as it deems necessary and appropriate and hereby acknowledges that it accepts the Property for all purposes.
- (3) No event or condition that constitutes, or with notice or lapse of time, or both, would constitute, an Event of Default or a Nonappropriation Event (as such terms are defined in the Master Agreement) exists at the date hereof.

Acceptance Date: _____

Lessee: City of Duarte
By:
Name:
Title:

Exhibit 6

Class Action Negative Consent Letter

September 27, 2019

City of Duarte
1600 Huntington Drive
Duarte, CA 91010

RE: USBGLF/City of Duarte - - Class Action Litigation Claims

Dear Kristen Petersen:

U.S. Bank National Association ("U.S. Bank") has established its policies and procedures relative to class action litigation claims filed on behalf of its clients' accounts. This policy may impact future claims filed by U.S. Bank on behalf of the above-referenced account. Listed below are the policies regarding class action litigation claims:

1. U.S. Bank will file class action litigation claims, at no charge, on behalf of open, eligible agency or custody accounts upon receipt of proper documented authorization. This notice, with your ability to opt out as further described below, constitutes such documented authorization.
2. U.S. Bank will not file claims for agency or custody accounts that were open during the class action period but were closed prior to receipt of any notice of the class action litigation.
3. Assuming requisite information is provided by the payor to identify the applicable account, settlement proceeds of the class action litigation will be posted within a reasonable time following receipt of such proceeds to the entitled accounts that are open at such time. If entitled accounts are closed prior to distribution and receipt of settlement proceeds, they will be remitted to entitled beneficiaries or successors of the account net of any research and filing fees. Proceeds, less any research and filing fees, will be escheated if the entitled beneficiaries or successors of the account cannot be identified /located.

If you wish U.S. Bank to continue to file class action litigation proofs of claim on behalf of your account, you do not need to take any further action. However, if you do not wish U.S. Bank to file class action proofs of claim on behalf of your account, you may notify us of this election by returning this letter with your signature and date provided below within 30 days or by filing a separate authorization letter with your Account Manager by the same date.

The authorization and understanding contained in this communication constitutes an amendment of any applicable provisions of the account document for the above-referenced account.

If you have any questions, please contact me at the below number.

Sincerely,

Mike McGuire
Vice President
303-585-4594

☐ No, U.S. Bank is not authorized to file class action litigation proofs of claim on behalf of the above-referenced account(s). By making this election, I acknowledge that U.S. Bank is not responsible for forwarding notices received on class action or litigation claims.

Authorized Signer

Date

INSURANCE AUTHORIZATION AND VERIFICATION

Date: September 27, 2019

Property Schedule No: 1

To: City of Duarte (the "Lessee")

From: U.S. Bancorp Government Leasing and Finance, Inc. (the
"Lessor")
1310 Madrid Street
Marshall, MN 56258

TO THE LESSEE: In connection with the above-referenced Property Schedule, Lessor requires proof in the form of this document, executed by both Lessee* and Lessee's agent, that Lessee's insurable interest in the financed property (the "Property") meets Lessor's requirements as follows, with coverage including, but not limited to, fire, extended coverage, vandalism, and theft:

Lessor, AND ITS SUCCESSORS AND ASSIGNS, shall be covered as both ADDITIONAL INSURED and LENDER'S LOSS PAYEE with regard to all equipment financed or leased by policy holder through or from Lessor. All such insurance shall contain a provision to the effect that such insurance shall not be canceled or modified without first giving written notice thereof to Lessor and Lessee at least thirty (30) days in advance of such cancellation or modification.

Lessee must carry GENERAL LIABILITY (and/or, for vehicles, Automobile Liability) in the amount of no less than \$1,000,000.00 (one million dollars).

Lessee must carry PROPERTY Insurance (or, for vehicles, Physical Damage Insurance) in an amount no less than the 'Insurable Value' \$2,750,427.00, with deductibles no more than \$10,000.00.

**Lessee: Please execute this form and return with your document package. Please fax this form to your insurance agency for endorsement. In lieu of agent endorsement, Lessee's agency may submit insurance certificates demonstrating compliance with all requirements.*

By signing, Lessee authorizes the Agent named below: 1) to complete and return this form as indicated; and 2) to endorse the policy and subsequent renewals to reflect the required coverage as outlined above.

Agency/Agent:		
Address:		
Phone/Fax:		
Email:		

Lessee: City of Duarte
By:
Name:
Title:

TO THE AGENT: *In lieu of providing a certificate, please execute this form in the space below and promptly fax it to Lessor at 303-585-5985. This fully endorsed form shall serve as proof that Lessee's insurance meets the above requirements.*

Agent hereby verifies that the above requirements have been met in regard to the Property listed below.

Print Name of Agency: **X**_____

By: **X**_____
(Agent's Signature)

Print Name: **X**_____

Date: **X**_____

Insurable Value: \$2,750,427.00

ATTACHED: PROPERTY DESCRIPTION FOR PROPERTY SCHEDULE NO.: 1

Our Commitment to California

Keeping our communities safe from wildfires

Sept. 4, 2019





California's wildfire problem is serious and worsening.

- Ten of the most destructive wildfires have happened since 2015
- About a quarter of our service area is located in high fire risk areas

Enabling California's clean energy future

- We're responding to the greatest societal challenge of our time—climate change and its impacts, including wildfires
- Clean energy and wildfire prevention and response go hand-in-hand

Legislative and Regulatory

- Aug. 31, 2018: CA Legislature passes Senate Bill 901
- Feb. 12, 2019: Gov. Newsom announces a Strike Force
- April 12, 2019: Strike Force issues its report
- May 29, 2019: Commission on Catastrophic Wildfire Cost and Recovery issues its report

- July 12, 2019: Signs Legislation to address California's growing wildfire threat
Incorporates Gov. Newsom's proposals to hold utilities accountable for mitigating wildfire threats.

Creates a wildfire fund that will help victims and affected communities recover and rebuild more quickly.

Establishes objective standards to help determine if a utility acted prudently to manage wildfire threats to ensure safety and resiliency.

Provides more reasonable direction on cost allocation for utilities.

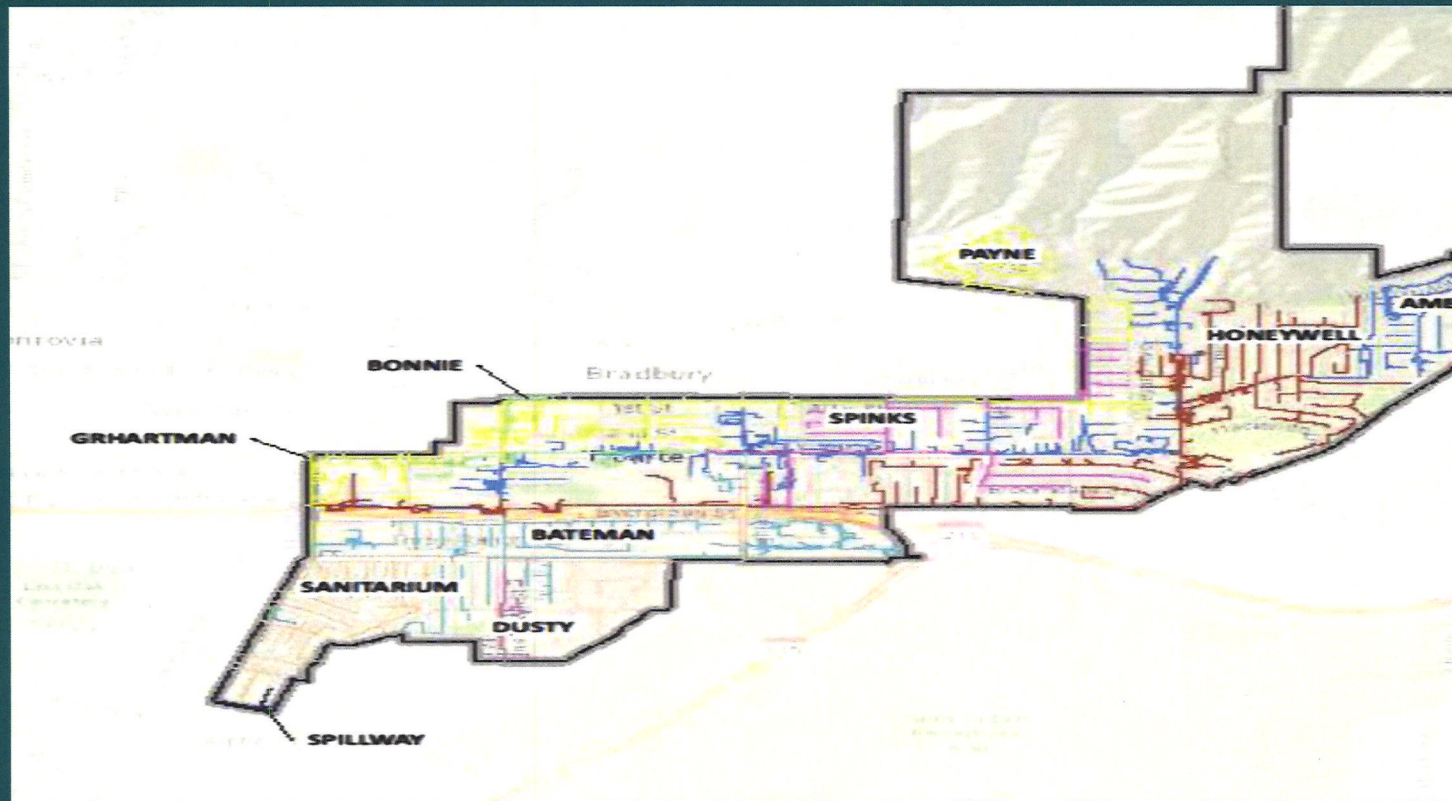
Duarte Circuit List (10)

- AMBRUS (16KV) 2,230
- BATEMAN (16KV) 1,090
- BONNIE (4.16KV) 461
- DUSTY (16KV) 265
- HONEYWELL (16KV) 1,755
- PAYNE (16KV) 2,232
- SANITARIUM (4.16KV) 901
- SPILLWAY (16KV) 1,013
- SPINKS (4.16KV) 471
- GRHARTMAN (16KV) 97

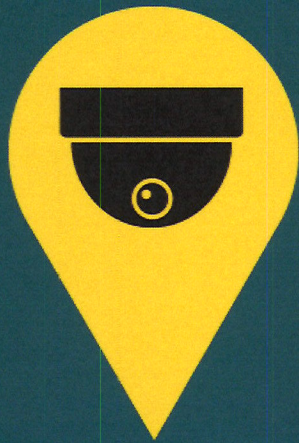
PSPS Circuits (4)

- AMBRUS
- HONEYWELL
- PAYNE
- SPINKS

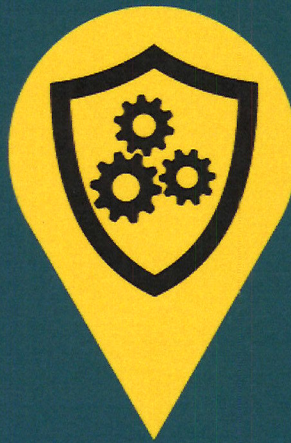
Duarte Circuit Map



A COMPREHENSIVE STRATEGY to prevent, combat and respond



**Bolstering Situational
Awareness Capabilities**



**Enhancing
Operational Practices**



**Hardening the
Electric Grid**

Mitigation Strategy based on Fire Science

Eliminating any side of the fire triangle can prevent ignitions

Weather
Conditions
(Wind, Humidity)



Energy from
Electrical
Infrastructure

Vegetation &
Structures



Inspections

- In less than five months: crews completed detailed ground-based inspections of 400,000-plus distribution and transmission structures in high fire risk areas
- Deploying helicopters and drones equipped with infrared, ultraviolet, LiDAR and HD image scanning to perform aerial inspections of our facilities in high fire risk areas





Vegetation Management

- Hazard tree removal (beyond traditional trim zone)
- 20-plus in-house certified arborists
- 500-plus vegetation management crews, totaling nearly 1,000 workers
- 900,000 trees inspected annually; 400,000 trees in high fire risk areas
- 700,000 pruned per year
- Vegetation removal at poles
- LiDAR surveying



Public Safety Power Shutoff

- De-energizing power lines to prevent ignitions
- Used during elevated fire conditions
- Primarily impacts circuits in high fire risk areas

High-Tech Cameras



- High-tech cameras help monitor potential wildfires in real time
- By 2020, we will install up to 160 cameras, providing 90% coverage of high fire risk areas



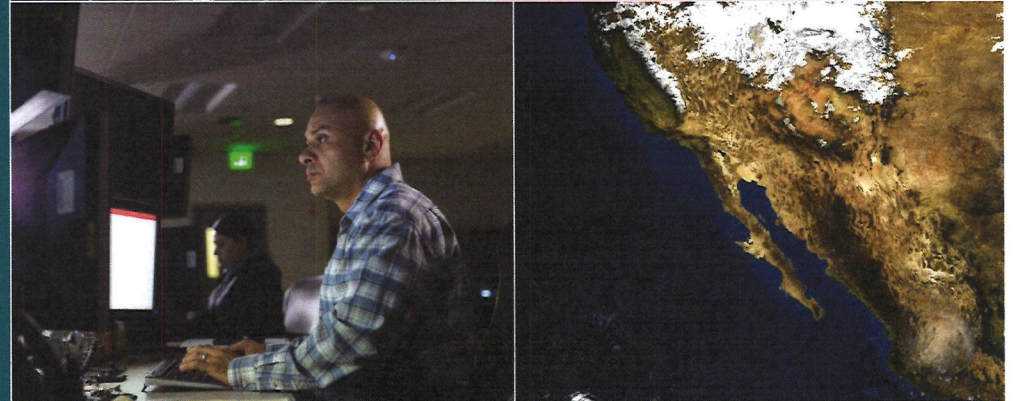
Weather Stations

- Technology that provides real-time weather forecasting in high fire risk areas
- Installing 850 weather stations by the end of 2020 as part of our wildfire mitigation program



Advanced Weather Modeling

- New state-of-the-art software with a high-resolution weather model forecasts weather conditions down to less than two miles
- 24/7 monitoring





Covered Conductor

- Insulated wires help reduce wildfire risk
- Installing 600 circuit miles of the insulated wire by 2020



Protective Devices and Reclosers

- 1,500-plus automatic reclosers programmed with more sensitive settings
- 7,500-plus fast-acting fuses installed



Undergrounding

- Evaluation of targeted undergrounding in high fire risk areas

Incident Command System

- More than **500 qualified response team members** who are on call for duty 24/7 on rotation for one week out of the month and can respond within two hours of notification.

Partnering with Local and State Agencies

- Coordination and integration with Cal OES, Operation Santa Ana and other emergency response efforts
- Funding a project to demonstrate novel aerial firefighting capability in Southern California



Talking With Our Communities

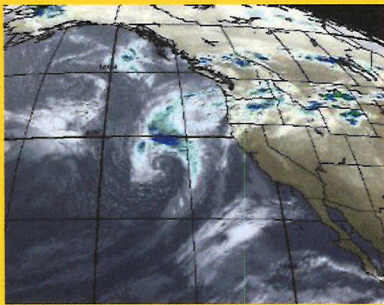
- More than 30 community meetings held in high fire risk areas
- Meetings scheduled with 120 cities, counties and tribal governments
- Statewide advertising campaign in market educating customers about preparing for power shutoffs
- Letters communicating potential power shutoffs planned for all customers in service territory

Investing in Our Communities

- Keeping our communities safer through wildfire mitigation and preparedness; first responder capacity building, community engagement, resiliency and disaster recovery

PSPS Decision Points

Decision points include, but are not limited to:



- SCE meteorologists forecast **strong wind** conditions in service area
- SCE fire scientist assessment **of fire potential** to include consideration of **weather** and **fuels**

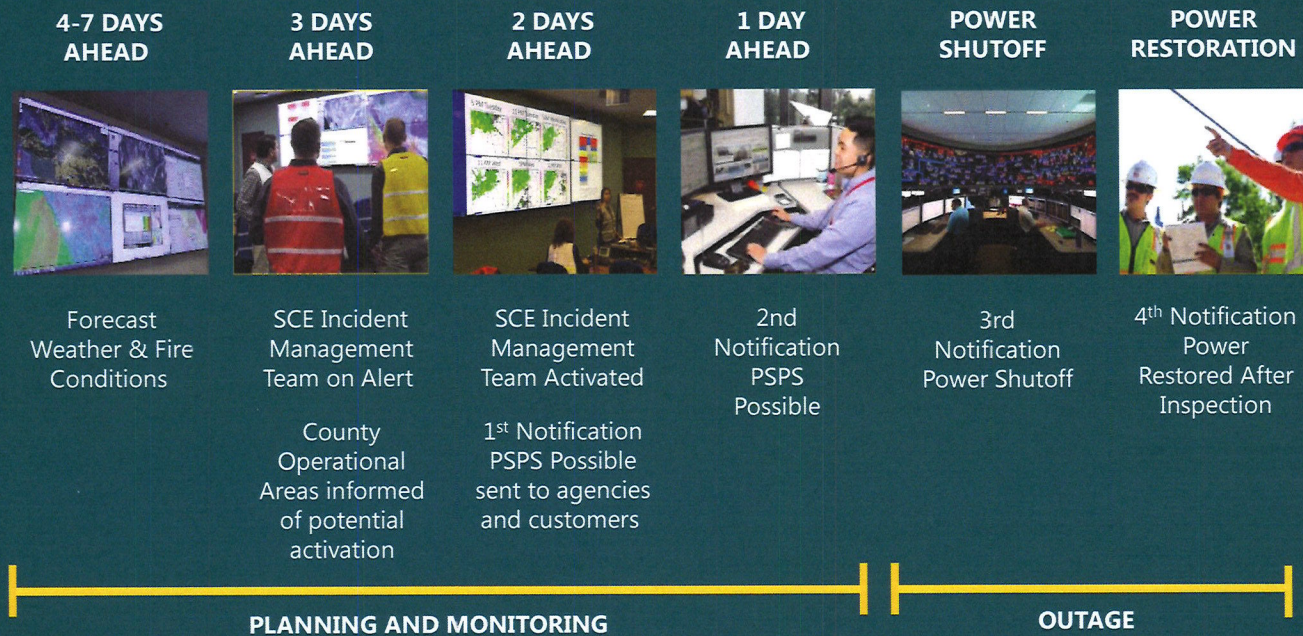


- Real-time observations from qualified electrical workers monitoring for **hazardous conditions** in the field



- Impact of de-energizing circuits on **first responders and essential services**

PSPS Ideal Timeline



*Erratic or sudden onset of conditions may impact our ability to provide advanced notice to customers.

Community Resilience and Emergency Preparedness



We all have a role in resiliency and preparedness

“Preparedness is everyone's job. Not just government agencies but all sectors of society -- service providers, businesses, civic and volunteer groups, industry associations and neighborhood associations, as well as every individual citizen -- should plan ahead for disaster. During the first few hours or days following a disaster, essential services may not be available. People must be ready to act on their own.”

-California Offices of Emergency Services

Useful Information

- Update Account Information www.sce.com/psps
- Information on SCE Wildfire Management Plan www.sce.com/wildfire
- Twitter - [@sce](https://twitter.com/sce)
- Facebook – www.facebook.com/sce
- Fire Cameras- www.alertwildfire.org
- Weather Stations – mesowest.utah.edu
- CPUC Wildfire Maps Information - www.cpuc.ca.gov/wildfiresinfo/
- Fire Preparedness - [calfire.ca.gov/fire_protection/
fire_protection_be_prepared](http://calfire.ca.gov/fire_protection/fire_protection_be_prepared)
- Red Cross Emergency Preparedness
www.redcross.org/get-help/how-to-prepare-for-emergencies.html
- FEMA Emergency Preparedness – www.ready.gov



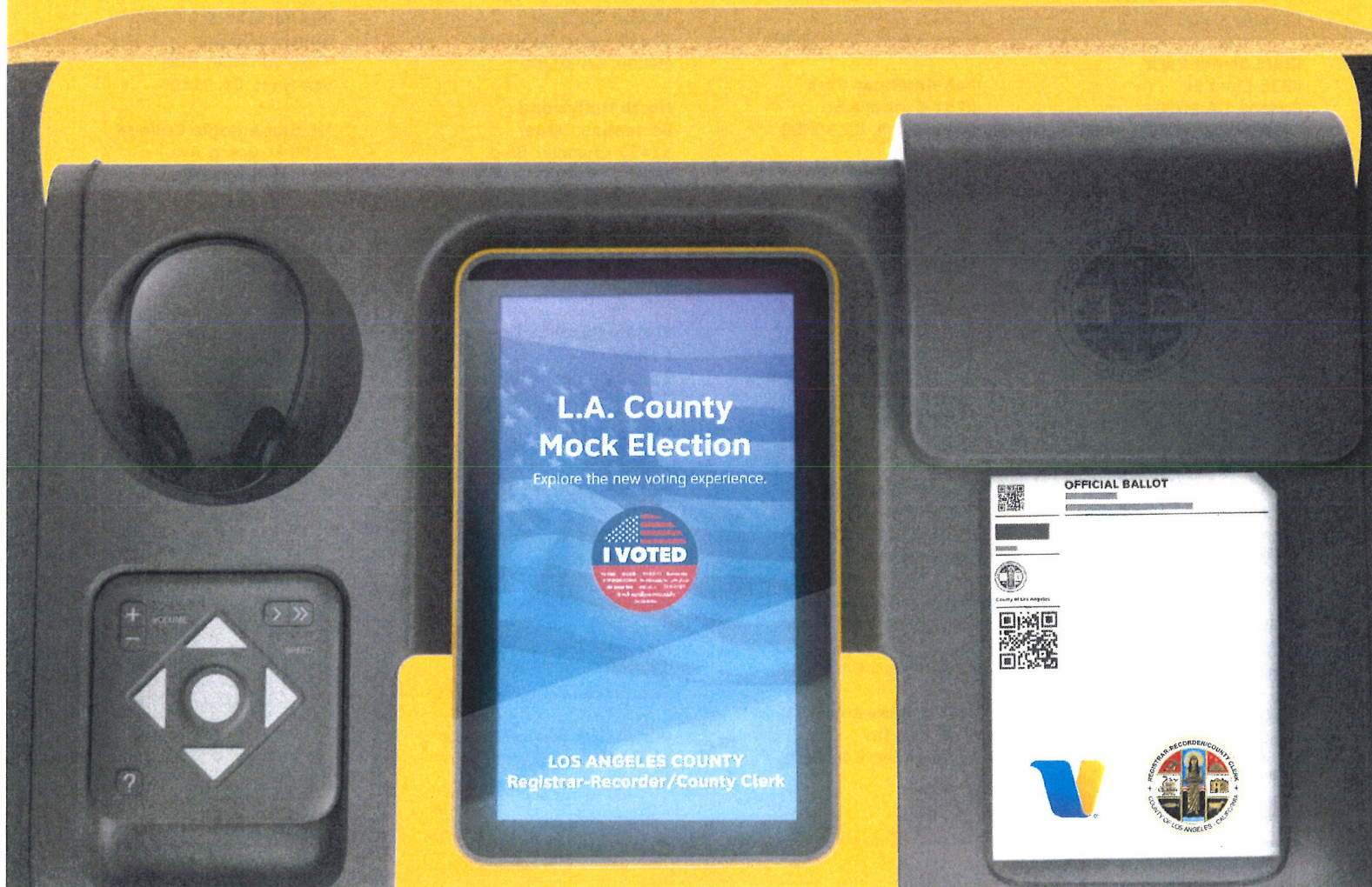
L.A. County is improving how you vote!

VOTING REVOLUTIONIZED

Explore the new voting experience.

September 28 & 29, 10:00 AM - 4:00 PM

Learn more: LAVote.net/Mock-Election





Los Angeles County
Registrar-Recorder/County Clerk

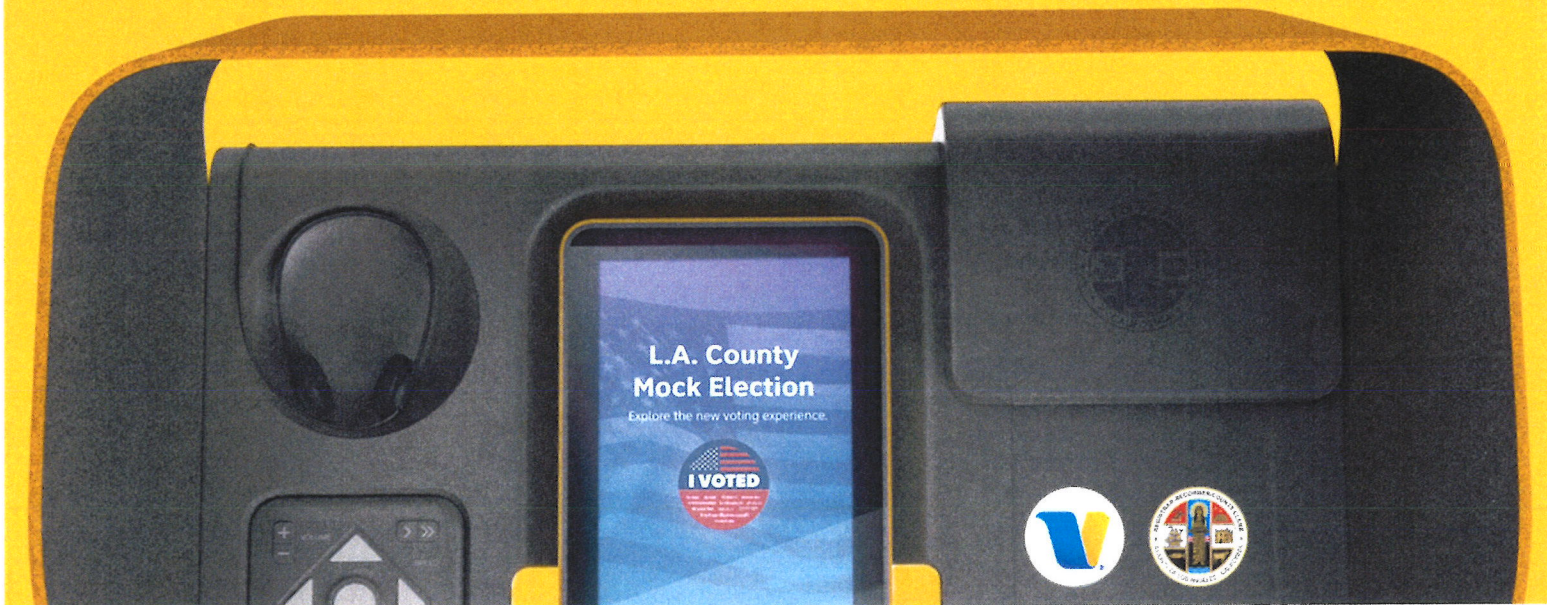
1,000 vote centers. 11 days. Vote anywhere.

***If you're 10 years old or 110 years old,
anyone can vote in the Mock Election.***

L.A. County Mock Election

This is Voting in 2020

Explore the new voting experience.



Save The Date

September 28-29 from 10 AM to 4 PM

Voting in L.A. County will soon change, and we want you to know about it.

Our office is partnering with 50 locations across the County and inviting everyone to experience the new voting system, Voting Solutions for All People.

We're keeping this light and fun, no real contests from past or future elections. But you will vote on things like your favorite sports team, park or music venue!

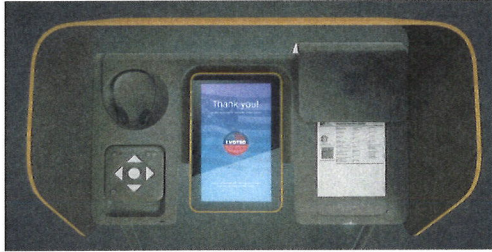
Celebs, Prize Giveaways and Much More

Select locations will have live DJs, surprise celebrities, food trucks and chances to **win L.A. experiences** such as: tickets to professional sports games, amusement parks, celebrity meet and greets and a whole lot more!

WHAT'S CHANGING?

In 2020, the County will introduce its new voting system, the *Voting Solutions for All People*. This system was custom designed just for L.A. County voters – take a look.

The Ballot Marking Device



The **Ballot Marking Device** makes it easy for voters to customize the voting experience to fit their needs. Voters can access 13 languages, adjust the touch screen to a comfortable angle, change the display settings such as text size and contrast, or go through the ballot using the audio headset and control pad.

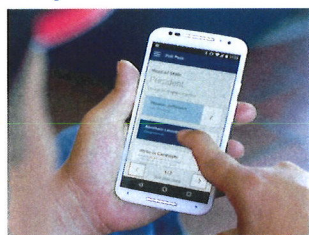
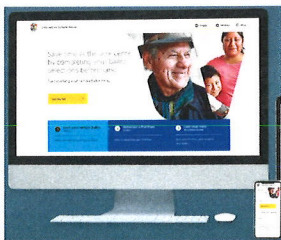
Security remains a top priority for L.A. County, that's why this device is **not** connected to a network or the internet. The easy-to-follow instructions can guide any voter through the voting process without the need for assistance.

Previously, voters with mobility or visual challenges were asked to go to a separate voting booth – not anymore. The Ballot Marking Device provides all the accessibility features previously available, and upgrades them all into one device.

Facts about the Ballot Marking Device

- A paper ballot is required to use the device
- There is no network or internet connection
- These do not count ballots
- The printed ballot will have a human-readable summary of selections
- Voters will review their ballot twice before casting
- Voters cast their ballot on the same device

Interactive Sample Ballot



The Interactive Sample Ballot is a convenient option for voters who want to access and mark their selections prior to arriving at the vote center. Using a computer, mobile phone, or personal device, voters can review their ballot information and make their selections. After going through the selection process, the Interactive Sample Ballot creates a Poll Pass (QR code) – like an airline boarding pass.

At the vote center, voters scan the Poll Pass to transfer their selections to the Ballot Marking Device (BMD). Then, a review screen will display, allowing voters a chance to make changes or cast their ballot.

Facts about the Interactive Sample Ballot:

- This is an optional tool that speeds up the voting process
- This is **not** online voting – voters need to take their Poll Pass to a vote center to complete the voting process
- No identifiable information is saved in the Poll Pass QR code
- Selections are **only** stored on the voter's personal device
- It's fully accessible and voters may use their assistive technology to complete a Poll Pass

The Electronic Pollbook (ePollbook)



The **Electronic Pollbook** (ePollbook) will replace the printed list of voters, and will be used by vote center staff to verify the registration eligibility of a voter in real time. In addition, ePollbooks will indicate if a voter has already voted anywhere in the County, and will not allow voting at multiple locations.

The ePollbooks will also allow the option of Conditional Voter Registration, which enables a voter to register and vote on the same day.

Voter information on the ePollbooks is not connected to the Ballot Marking Device or the tally system. They remain independent from one another to protect a voter's personal information. Printed ballots do not contain any voter information.

Facts about the ePollbook:

- Voters can check-in and go to any vote center within the County to vote
- Voter registration information can be updated in real time
- Allows Vote by Mail voters to cast a regular in-person ballot without needing to surrender their mailed ballot

**1,000 vote centers. 11 days.
Vote anywhere.**

**If you're 10 years old or 110 years old,
anyone can vote in the Mock Election.**

MOCK ELECTION VOTE CENTER LOCATIONS

OPEN 10:00 AM – 4:00 PM

Here is a list of participating locations. Find the location nearest to you by using our online Vote Center Locator on LAVote.net/Mock-Election.

Memorial Park
320 N. Orange Ave.
Azusa, CA 91702

Verdugo Recreation Center
3201 W. Verdugo Ave.
Burbank, CA 91505

Calabasas Senior Center
300 Civic Center Way
Calabasas, CA 91302

Carson Community Center
801 E. Carson St.
Carson, CA 90745

Liberty II Facility
19033 Studebaker Rd.
Cerritos, CA 90703

Taylor Reception Hall
1775 N. Indian Hill Blvd.
Claremont, CA 91711

Clara Street Park
4835 Clara St.
Cudahy, CA 90201

Culver City City Hall
9770 Culver Blvd.
Culver City, CA 90232

Pamela Park
2236 Goodall Ave.
Duarte, CA 91010

Glendale Central Library
222 E. Harvard St.
Glendale, CA 91205

Crowther Teen & Family Center
241 W. Dawson Ave.
Glendora, CA 91740

Petit Park Granada Hills
Recreation Center
16730 Chatsworth St.
Granada Hills, CA 91344

C. Robert Lee Activity Center
21815 Pioneer Blvd.
Hawaiian Gardens, CA 90716

Betty Ainsworth Sports Center
3851 W. El Segundo Blvd.
Hawthorne, CA 90250

Clark Building
861 Valley Dr.
Hermosa Beach, CA 90254

Lennox Park
10828 Condon Ave.
Inglewood, CA 90304

San Angelo Park
245 S. San Angelo Ave.
La Puente, CA 91746

Mayflower Gardens
6570 W. Avenue L 12
Lancaster, CA 93536

Living Stone Cathedral of Worship
37721 100th St. E
Littlerock, CA 93543

MacArthur Park
1321 E. Anaheim St.
Long Beach, CA 90813

Pan American Park
5157 Centralia St.
Long Beach, CA 90808

Bethel AME Church
7900 Western Ave.
Los Angeles, CA 90047

Cypress Park Branch Library
1150 Cypress Ave.
Los Angeles, CA 90065

Exposition Park - Dr. Mary McLeod Bethune Regional Library
3900 S. Western Ave.
Los Angeles, CA 90062

George Washington Carver Park
1400 E. 118th St.
Los Angeles, CA 90059

Japanese American Cultural and Community Center
244 San Pedro St.
Los Angeles, CA 90012

Los Angeles Zoo
5333 Zoo Dr.
Los Angeles, CA 90027

Pio Pico Koreatown
Branch Library
694 S. Oxford Ave.
Los Angeles, CA 90005

Ruben F. Salazar Park
3864 Whittier Blvd.
Los Angeles, CA 90023

Watts Labor Community Action Committee
10950 S. Central Ave.
Los Angeles, CA 90059

Yosemite Recreation Center
1840 Yosemite Dr.
Los Angeles, CA 90041

Lynwood Bateman Hall
11331 Ernestine Ave.
Lynwood, CA 90262

Malibu City Hall
23825 Stuart Ranch Rd.
Malibu, CA 90265

North Hollywood
Recreation Center
11430 Chandler Blvd.
North Hollywood, CA 91601

Los Angeles County Registrar-Recorder/County Clerk
12400 Imperial Hwy.
Norwalk, CA 90650

El Nido Pacoima Community Center
11243 Glenoaks Blvd.
Pacoima, CA 91331

Stephen Sorensen Park
16801 E. Ave. P
Palmdale, CA 93591

Villa Parke Community Center Branch Library
363 E. Villa St.
Pasadena, CA 91101

Pico Park Community Center
9528 Beverly Blvd.
Pico Rivera, CA 90660

Reseda Recreation Center
18411 Victory Blvd.
Reseda, CA 91335

Carolyn Rosas County Park
18500 Farjardo St.
Rowland Heights, CA 91748

Little Sisters Of The Poor
2100 S. Western Ave.
San Pedro, CA 90732

College Of The Canyons - Valencia Campus
26455 Rockwell Canyon Rd.
Santa Clarita, CA 91355

Santa Monica College
1510 Pico Blvd.
Santa Monica, CA 90405

Van Nuys/Sherman Oaks Recreation Center
14201 Huston St.
Sherman Oaks, CA 91423

Zev Yaroslavsky Family Support Center
7555 Van Nuys Blvd.
Van Nuys, CA 91405

Mt. San Antonio College
1100 N. Grand Ave.
Walnut, CA 91789

Plummer Park
7377 Santa Monica Blvd.
West Hollywood, CA 90046

South Whittier Library
11543 Colima Rd.
Whittier, CA 90604

SBCC Thrive LA
540 North Marine Ave.
Wilmington, CA 90744

MINUTES

JOINT CITY COUNCIL/CITY COUNCIL AS SUCCESSOR AGENCY TO DISSOLVED REDEVELOPMENT AGENCY/HOUSING AUTHORITY/COMMUNITY FACILITIES FINANCING AUTHORITY OF THE CITY OF DUARTE REGULAR MEETING – SEPTEMBER 10, 2019

CALL TO ORDER	The City Council/City Council as Successor Agency to Dissolved Redevelopment Agency/Housing Authority/Community Facilities Financing Authority of the City of Duarte met in a regular meeting in the Council Chambers, 1600 Huntington Drive, Duarte, California. Mayor Pro Tem Kang called the meeting to order at 7:08 p.m.
RECORDATION OF ATTENDANCE	The following were in attendance: PRESENT: Fasana, Finlay, Kang, Lewis, Reilly ABSENT: Urias, Paras-Caracci ADMINISTRATIVE STAFF PRESENT: City Manager George, City Attorney Cosgrove
ADOPTION OF AGENDA	Finlay moved, Reilly seconded to adopt the Agenda, and carried unanimously by those present.
PLEDGE TO THE FLAG	Victoria Rocha led the Pledge of Allegiance to the Flag.
MOMENT OF REFLECTION	Reilly provided a moment of reflection.
FITNESS/MENTAL WARM-UP	Lewis and Finlay provided the warm-up.
SPECIAL ITEMS Mayor's Youth Council update	Faith Peoples and Samantha Martinez provided an update of recent Mayor's Youth Council activities and upcoming Teen Center events.
Proclamation – Senior Center Month, September 2019	Mayor Pro Tem Kang read and presented the Proclamation for Senior Center Month, September 2019, to Recreation Coordinator Kelly Barnes and Senior Center volunteers and participants.
ANNOUNCEMENTS	Tina Carey, Duarte Chamber of Commerce, announced upcoming events and mixers in September, as well as Kiwanis installation dinner in October. Joanna Gee, Duarte Library, announced upcoming programs, story times, events, and classes in September, and stated Steve Hernandez is the new president of Friends of the Library, and Liz Reilly is the treasurer. Victoria Rocha announced upcoming community events, activities, meetings, and park programs in September and October.
ORAL COMMUNICATIONS	The following spoke on items not on the Agenda. Carol Daley – Homelessness. Rita Kwasnick – Wall on Huntington Drive by Asian Ceramics. Melissa Corwell – Homelessness. Bonnie Lee – Donut shop robbery. Karen Vance – Homelessness.

Rosemary Sabontian – Riverbed.
Steve Hernandez – Homelessness.
Lino Paras – Homelessness, Measure H.

George provided information about the recent meeting with the County Supervisor's office, and proposed innovation fund.

Fasana and Lewis requested a report back about the donut shop robbery.

ITEMS ADDED TO CONSENT

Fasana asked that attendance at the Santa Teresita Gala on October 26 be added to Item D. Finlay asked that the Duarte Education Foundation Dinner on October 19 also be added.

CONSENT CALENDAR

Finlay moved, Reilly seconded to approve the Consent Calendar as follows, and to add the items requested to Item D, and carried unanimously by those present.

Approve Items A, B, C.

Remove Item D.

ITEM REMOVED

Item D – Conference Attendance

Finlay discussed the expense policy adopted in June 2017, items submitted to City Council for final approval, and reimbursable lodging on approved trips.

ITEM D – APPROVED

Reilly moved, Kang seconded to approve Item D, and carried unanimously by those present.

BUSINESS ITEM

Duarte Pool year-round analysis,
proposed operating hours

Manuel Enriquez presented a PowerPoint about the Duarte Pool year-round analysis including background, services, total operating hours, pool usage data collection, operating cost comparison, and proposed operating hours.

There was discussion about classes, expenses, supplies, personnel, and utilities.

Finlay moved, Fasana seconded to approve the proposed hours of operation for Duarte Pool as outlined in the staff report, and carried unanimously by those present.

REPORTS/COMMUNICATIONS FROM COUNCIL/MANAGER/ ATTORNEY

COSGROVE: Discussed proposed legislation by Representative Chu regarding the San Gabriel Mountains.

GEORGE: Thanked Congressman Napolitano for facilitating a number of outreach meetings regarding homelessness, as well as Burrtec and Athens for providing bins.

REILLY: Stated she would not be in favor of Duarte being in the National Monument, announced Duarte Family Feud event on October 19, stated September 1 was the 80th anniversary of Hitler's invasion of Poland and World War II, and asked about the wall on Huntington Drive (Villalobos responded).

FINLAY: Stated there was a person walking in the evening wearing dark clothing in the middle of the street by the riverbed, she is afraid they could be hit, and inquired if we could talk with someone about the possibility of solar lights along the street near the riverbed.

LEWIS: Expressed his recollection of experiences related to 9/11 as a firefighter, stated 343 firefighters perished that day, and they will never be forgotten.

FASANA: Stated he was told if we were interested in becoming part of the National Recreation Area, our request should be submitted by September-October, asked that a discussion about the National Recreation Area be on the next Agenda, thanked staff for working with other government entities regarding homelessness, asked for a report about the status of vouchers, provided information to the City Manager about creation of the San Gabriel Regional Housing Trust Fund (Rubio – SB 751) (George stated staff will bring back a presentation), and stated Mayor Paras-Caracci requested that the meeting be adjourned in memory of Pedro P. Paras and William Vargas.

KANG: Stated homelessness is a huge issue, we need to work with the State to find a holistic solution, we need creative ways for affordable housing, and stated when he walked the trail, he observed vegetation, coyotes, and mosquitoes.

ADJOURNMENT

Finlay moved, Reilly seconded to adjourn the meeting at 8:39 p.m. in memory of Pedro P. Paras and William Vargas, and carried unanimously by those present.

Mayor Pro Tem Sam Kang

ATTEST:

City Clerk



City of Duarte

Council Warrant Register by Account

By Fund

Payment Dates 09/11/2019 - 09/24/2019

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 100 - GENERAL FUND					
100-1005-7614	STAMP-OUT INC	Signature Stamps (Lewis/Uria	135861		80.45
100-1005-7647	U.S. BANK	Coffee/Conversation w/CC Rei	8262019DG		22.85
100-1005-7650	U.S. BANK	Toney Lewis League Conf Reg	8262019DG		550.00
100-1010-7003	GOVERNMENT STAFFING SER	Part-Time Receptionist 8/19/1	129463		1,520.00
100-1010-7610	U.S. BANK	Victoria Rocha MMASC Confer	8262019DG		385.00
100-1010-7610	U.S. BANK	Victoria Rocha MMASC Event	8262019DG		5.00
100-1010-7610	U.S. BANK	Darrell George EWMP Lunch	8262019DG		42.23
100-1010-7610	U.S. BANK	Darrell George Mtg w/Sherry	8262019DG		3.75
100-1010-7610	U.S. BANK	Jeremy Pascue MMASC Confe	8262019DG		385.00
100-1010-7610	SAN GABRIEL VALLEY CITY MA	Karen Herrera Luncheon 9/18	9102019		30.00
100-1010-7610	SAN GABRIEL VALLEY CITY MA	Darrell George Luncheon 9/18	9102019		30.00
100-1010-7614	STAPLES ADVANTAGE	Office Supplies	3424869109		149.08
100-1010-7614	U.S. BANK	iPhone Equipment (Best Buy)	8262019DG		32.83
100-1010-7614	U.S. BANK	iPhone Equipment (Best Buy)	8262019DG		32.83
100-1010-7670	SAN GABRIEL VALLEY NEWSPA	Legal Advertising 7/2019	447495		284.00
100-1010-7670	SAN GABRIEL VALLEY NEWSPA	Legal Advertising 8/2019	451358		793.00
100-1010-7965	TOWNSEND PUBLIC AFFAIRS I	Statewide Parks Grant Applica	15072		5,000.00
100-1010-7965	CERRELL ASSOCIATES INC	Revenue Measure Education	17951		7,000.00
100-1010-7965	COLANTUONO, HIGHSMITH &	TUT Proposal Advice 8/2019	39941		280.00
100-1010-7980	THE SAUCE CREATIVE SERVICE	Fall 2019 City Newsletter	3664		1,412.09
100-1010-7980	THE SAUCE CREATIVE SERVICE	Fall 2019 City Newsletter Desi	3665		1,050.00
100-1010-7980	SMART & FINAL	Closed Session Food Supplies	54519		6.96
100-1010-7980	SMART & FINAL	City Anniversary Reception	66370		96.56
100-1010-7980	U.S. BANK	Special Council Meeting 7/30/	8272019KP		91.29
100-1015-7680	RUTAN & TUCKER LLP	General City Attorney (Retain	846546		9,002.60
100-1015-7686	RUTAN & TUCKER LLP	Environmental/Stormwater Li	846403		15,146.21
100-1015-7686	RUTAN & TUCKER LLP	General City Litigation 7/2019	846547		3,000.00
100-1015-7686	RUTAN & TUCKER LLP	Telecommunications Legal 7/2	846548		172.00
100-1015-7686	RUTAN & TUCKER LLP	D & D Design Legal 7/2019	846554		37.50
100-1020-7712	U.S. BANK	Spotify	8262019DG		9.99
100-1020-7712	U.S. BANK	Hootsuite 8/2/19 - 9/1/19	8262019DG		14.99
100-1020-7712	U.S. BANK	Facebook Ads	8262019DG		22.41
100-1020-7716	DUARTE UNIFIED SCHOOL DIS	City Anniversary Cake 8/27/1	2467		70.00
100-1020-7716	DEKRA-LITE INDUSTRIES INC	Miscellaneous Holiday Decora	ARINV008725		1,476.40
100-1020-7722	GRANICUS INC	Civica Website Hosting 9/19/1	117570		706.20
100-1020-7726	U.S. BANK	Adobe Creative Cloud	8272019KP		34.99
100-1020-7980	THE SAUCE CREATIVE SERVICE	Promo Item-Koozies	3687		677.44
100-1205-7613	THE SAUCE CREATIVE SERVICE	Fall 2019 City Newsletter	3664		1,412.10
100-1205-7613	THE SAUCE CREATIVE SERVICE	Fall 2019 City Newsletter Desi	3665		1,050.00
100-1205-7650	WARD SERVICE	Truck 13 Service	000076538		83.70
100-1205-7650	WARD SERVICE	Vehicle 10 Gauge Cluster/PM	000076578		1,995.31
100-1205-7650	MONROVIA BODY SHOP	Vehicle 24 Repair	9052019		275.00
100-1205-7655	T-MOBILE	Emergency Asset Tracking 7/2	082119		12.75
100-1205-7760	U.S. BANK	Darrell George Homeless Mtg	8262019DG	201826-Homeless Outreach	35.90
100-1205-7761	SUPERIOR CT OF CAL CO OF L	Citation Revenue Tax 8/2019	9112019		6,297.75
100-1205-7781	LOS ANGELES COUNTY SHERIF	July 3rd Fireworks Show Sheri	200174AL	201904-Contract Law-Tobacco	2,023.69
100-1205-7887	R.H.F. INC	Laser Battery Charger	74543		442.34
100-1211	NOHEMI HERNANDEZ	Computer Loan	9092019		3,000.00
100-1405-7612	U.S. BANK	Adobe Creative Cloud	8272019KP		76.45
100-1405-7614	STAPLES ADVANTAGE	Office Supplies	342081186		60.82
100-1405-7614	STAPLES ADVANTAGE	Office Supplies	3424386286		55.33
100-1405-7614	STAPLES ADVANTAGE	Credit for Invoice # 34243862	3424464034		-20.47
100-1405-7800	CHARLES ABBOTT ASSOCIATES	Building & Safety Services 8/2	60024		22,236.98

Council Warrant Register by Account

Payment Dates: 09/11/2019 - 09/24/2019

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
100-1405-7967	RKA CONSULTING GROUP	Public Works Inspections 7/20	29116		3,160.00
100-1405-7969	RKA CONSULTING GROUP	Engineering Plan Check 7/201	29117		640.00
100-1405-7969	RKA CONSULTING GROUP	Engineering Consulting 7/201	29118		1,577.50
100-1405-7969	RKA CONSULTING GROUP	Contract Engineering Services	29131		4,480.00
100-1405-7969	RKA CONSULTING GROUP	FY20 LLD Engineering Svcs 7/	29152		4,126.25
100-1405-7969	RKA CONSULTING GROUP	ATP Cycle 4 Ped Access/Bike S	29153		3,867.30
100-1410-7650	WARD SERVICE	Vehicle 9 PM Service	000076564		103.89
100-1410-7650	HOSE-MAN INC	Skid Steer Hydraulic Hose	2367747-0001-02		112.01
100-1410-7650	PRECISION AERIAL SERVICES I	Vehicle 2 Certification/Inspec	W14248		6,778.15
100-1410-7656	SUNWEST ENGINEERING	Underground Fuel Tank Inspe	190717-086		145.00
100-1410-7656	CUMMINS PACIFIC LLC	Emergency Generator Load B	X9-5383		1,256.76
100-1410-7980	MOUNTAIN VIEW TIRE & SER	Tire Disposal/Yard Waste	230436		21.35
100-1605-7614	STAPLES ADVANTAGE	Easel	3419570344		8.53
100-1605-7650	EAN SERVICES LLC	Van Rentals 8/1/19 - 8/31/19	22256513		473.88
100-1605-7728	CALIFORNIA STATE DEPARTME	Fingerprints Apps 8/2019	400072	202009- Duarte's Promise - A	45.00
100-1605-7728	DUARTE PIZZA COMPANY	AmeriCorps Orientation Lunc	469584	202009- Duarte's Promise - A	80.19
100-1605-7728	DUARTE RECREATION PETTY C	AmeriCorps Breakfast Meetin	9122019	202009- Duarte's Promise - A	24.97
100-1605-7730	U.S. BANK	Barrier Stakes (Braco Products	8262019ME		255.41
100-1605-7732	ROCKETOLOGY LLC	Children's Stage Entertainmen	1625		199.00
100-1605-7732	BUBBLEMANIA AND COMPAN	Children's Stage Entertainmen	18065		175.00
100-1605-7732	MAGIC JUMP RENTALS INC	City Picnic Inflatable Rental	259751		1,006.20
100-1605-7732	SMART & FINAL	City Picnic Supplies	31469		57.90
100-1605-7732	SMART & FINAL	City Picnic Table Covers	47845		39.39
100-1605-7732	THIPPHAVANH NORASINGH	City Picnic Entertainment	9/28/2019		1,200.00
100-1605-7732	GUILFORD ADAMS	Children's Stage Entertainmen	9/28/2019		140.00
100-1605-7732	RAVEN FIERRO	City Picnic Band	9/28/2019		875.00
100-1605-7732	EXTREME GAME TRUCK	Game Truck Rental (City Picnic	1190904181		500.00
100-1605-7733	SMART & FINAL	Senior Ctr Supplies	66328		125.89
100-1605-7733	U.S. BANK	Senior Ctr Decorations (Amaz	8262019ME		125.36
100-1605-7733	U.S. BANK	Pocket Dividers (Prairie Creek)	8262019ME		105.00
100-1605-7733	U.S. BANK	SC Staff Meeting 7/30/19 (Pan	8262019ME		88.22
100-1605-7733	U.S. BANK	Senior Ctr Supplies (Smart & F	8262019ME		184.55
100-1605-7733	U.S. BANK	SC 2-Zester/Grater (Amazon)	8262019ME		13.98
100-1605-7733	U.S. BANK	SC Netflix	8272019KP		21.74
100-1605-7733	RAVEN FIERRO	SC Lunch Time Lounge Perfor	9/16/2019		175.00
100-1605-7733	ACE BILLIARD SERVICE	SC Pool Table Move/Disassem	921687		150.00
100-1605-7735	DUARTE PIZZA COMPANY	TC Girls Night Out	469583		81.98
100-1605-7735	U.S. BANK	TC Cat 6 Wires (Amazon)	8262019ME		80.15
100-1605-7735	U.S. BANK	Teen Ctr Event 8/12/19 (Youn	8262019ME		177.15
100-1605-7735	U.S. BANK	TC Back to School BBQ (Smart	8262019ME		243.12
100-1605-7735	U.S. BANK	Hip Hop Int'l Event Tickets 8/3	8262019ME		504.00
100-1605-7735	U.S. BANK	Face Painting Supplies (Amazo	8262019ME		165.67
100-1605-7737	RALPHS GROCERY COMPANY	Beach Excursion Supplies 9/1	196728		21.96
100-1605-7737	SMART & FINAL	Beach Excursion Supplies 9/1	47846		217.30
100-1605-7739	THE SAUCE CREATIVE SERVICE	Fall 2019 City Newsletter	3664		2,824.19
100-1605-7739	THE SAUCE CREATIVE SERVICE	Fall 2019 City Newsletter Desi	3665		2,100.00
100-1605-7739	THE SAUCE CREATIVE SERVICE	Fall Class Flyers	3669		534.90
100-1605-7739	THE SAUCE CREATIVE SERVICE	Picnic Flyers	3670		488.00
100-1605-7741	CHALLENGER TEAMWEAR	Soccer Equipment	1021788-IN		159.32
100-1605-7741	CHALLENGER TEAMWEAR	Soccer Equipment	1027166-IN		176.32
100-1605-7741	CHALLENGER TEAMWEAR	T-Ball Jerseys	1029097-IN		2,220.70
100-1605-7741	U.S. BANK	PA Battery (Amazon)	8262019ME		35.95
100-1605-7741	U.S. BANK	Orange Tape (Amazon)	8262019ME		26.95
100-1605-7741	U.S. BANK	Canopy Spikes (Amazon)	8262019ME		19.60
100-1605-7741	U.S. BANK	PA Batteries (atbatt.com)	8262019ME		70.82
100-1605-7744	U.S. BANK	Summer Health Camp 7/31/1	8262019ME		369.00
100-1605-7745	U.S. BANK	TC Boxing Equipment (Title Bo	8262019ME		488.67
100-1605-7745	U.S. BANK	TC Boxing Show (Smart & Fina	8262019ME		292.95
100-1605-7980	U.S. BANK	Notice of Exemption Prop 68	8262019ME		76.75
100-1605-7980	U.S. BANK	Staff Birthday Cards/Gift Card	8262019ME		64.63

Council Warrant Register by Account

Payment Dates: 09/11/2019 - 09/24/2019

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
100-1605-7980	U.S. BANK	Sports Staff Apprecation 8/19	8262019ME		221.37
100-1605-7980	U.S. BANK	Lunch Meeting 7/25/19 (Dick	8262019ME		158.78
100-1610-7616	U.S. BANK	Swim Pace Clock (Swimoutlet.	8262019ME		644.24
100-1610-7617	FULLER ENGINEERING INC	Pool Chemicals	139531		469.81
100-1610-7618	KULLY SUPPLY INC	Drinking Fountain Plumbing P	497086		337.26
100-1610-7618	SMART & FINAL	SC Coffee Supplies	66329		226.76
100-1610-7618	MAINTEX INC	Janitorial Supplies	737028-01		31.07
100-1610-7618	U.S. BANK	PA System Shipping for Repair	8262019ME		75.00
100-1610-7618	U.S. BANK	Council Meeting Snacks (Smar	8262019ME		155.45
100-1610-7618	U.S. BANK	FC Shower Chair (Expressmed	8262019ME		40.34
100-1610-7618	U.S. BANK	SC Coffee Cup Sleeves (Amazo	8262019ME		60.80
100-1610-7636	CINTAS CORPORATION #693	Facility Maintenance Uniform	4028810099		74.09
100-1610-7636	CINTAS CORPORATION #693	Facility Maintenance Uniform	40292136940		35.00
100-1610-7636	CINTAS CORPORATION #693	Facility Maint Uniforms	4029835606		34.79
100-1610-7652	CARPIO DESIGNS	FC Equipment Reupholster	083119		1,423.50
100-1610-7652	CALIBER COMMERCIAL POOL	Comp & Training Pool Repairs	19260801		316.69
100-1610-7652	MONROVIA LOCK SHOP	CH Front Door Lock Replacem	23294		296.63
100-1610-7652	JOE'S JANITORIAL SERVICE	Duarte Pk Bldg Strip/Wax Floo	2385		450.00
100-1610-7652	CINTAS CORPORATION #693	Logo Mats	4029835606		20.68
100-1610-7652	EXECUTIVE ELEVATOR INC	SC Elevator Maintenance 8/20	86445		135.00
100-1610-8100	U.S. BANK	TC (4) 3-Piece Pub Sets (Amaz	8262019ME		481.64
100-1610-8100	U.S. BANK	TC (2) Coffee Tables (Amazon)	8262019ME		254.22
100-1805-7610	U.S. BANK	Staff Meeting Food 8/22/19 (	8272019KP		27.55
100-1805-7610	U.S. BANK	Kristen Petersen CalPERLA Co	8272019KP		905.88
100-1805-7610	U.S. BANK	Kristen Petersen Chamber Leg	8272019KP		30.00
100-1805-7610	U.S. BANK	Staff Meeting Food 7/25/19 (	8272019KP		44.61
100-1805-7610	U.S. BANK	Kristen P Exit Interview w/Sta	8272019KP		50.70
100-1805-7610	U.S. BANK	Kristen Petersen CalPERLA Co	8272019KP		792.00
100-1805-7610	KRISTEN PETERSEN	Meeting w/Councilmember	8282019		38.80
100-1805-7614	STAPLES ADVANTAGE	Office Supplies	3423382205		195.99
100-1805-7653	U.S. BANK	Online B/L Test	8272019KP		1.35
100-1805-7965	HINDERLITER, DE LLAMAS & A	Sales Tax Analysis Q3 2019	0032033-IN		1,785.66
100-1805-7980	U.S. BANK	Finance Ad Hoc Meeting 8/1/	8272019KP		285.14
100-1805-7980	U.S. BANK	Extra Keys (Appraiser's Field I	8272019KP		16.32
100-1805-7980	U.S. BANK	Finance Ad Hoc Mtg 8/15/19 (	8272019KP		292.37
100-1805-7980	U.S. BANK	Microsoft 365 7/27/19 - 8/26/	8272019KP		12.00
100-1810-7610	U.S. BANK	Michelle Brown NeoGov Conf	8272019KP		100.91
100-1810-7610	U.S. BANK	Michelle Brown NeoGov Conf	8272019KP		167.96
100-1810-7610	U.S. BANK	Michelle Brown NeoGov User	8272019KP		575.00
100-1810-7612	U.S. BANK	Kristen Petersen CalPERLA An	8272019KP		370.00
100-1810-7614	U.S. BANK	HR Office Supplies (Amazon)	8272019KP		63.53
100-1810-7660	CALIFORNIA STATE DEPARTME	Fingerprints Apps 8/2019	400072		128.00
100-1810-7660	DANIEL OROZCO	Livescan Refund-Charged in Er	9122019		23.00
100-1810-7660	CMC LIVESCAN & NOTARY SER	Livescan Services 8/2019	CMC-2298		207.00
100-1810-7671	PECKHAM & MCKENNEY	City Manager Recruitment (P	2		9,000.00
100-1810-7671	SMART & FINAL	FSM Recruitment Breakfast Sn	66440		18.06
100-1810-7671	U.S. BANK	Associate Planner Posting (AP	8272019KP		270.00
100-1810-7671	ALLIANCE RESOURCE CONSUL	Fin Svc Mgr Recruitment	9092019		1,200.00
100-1810-7673	IRWINDALE INDUSTRIAL CLINI	DOT Physical	132424-913696		50.00
100-1810-7980	NAVIA BENEFIT SOLUTIONS	FSA Processing Fee 8/2019	10208863		60.00
100-1815-7632	U.S. BANK	HR/Michelle-Adobe AcroPro	8272019KP		14.99
100-1815-7632	U.S. BANK	Adobe Creative Cloud	8272019KP		314.91
100-1815-7830	U.S. BANK	SC Elevator 911-Vonage	8272019KP		20.15
100-1825-7613	STAPLES ADVANTAGE	Dog License Paper	3419570345		78.50
100-1825-7614	CANON SOLUTIONS AMERICA	Copier Staples	146570131		321.13
100-1825-7614	U.S. BANK	Dept Suggestion Boxes (Amaz	8272019KP		71.75
100-1825-7630	CANON FINANCIAL SERVICES I	PS Copier Lease 9/1/19 - 9/30	20517667		399.67
100-1825-7630	CANON FINANCIAL SERVICES I	CH(2)/SC/TC Copier Lease 9/1	20544929		869.55
100-1825-7631	CANON FINANCIAL SERVICES I	PS Copier Maintenance 8/1/1	20517667		196.50
100-1825-7631	CANON SOLUTIONS AMERICA	CH (2) Copier Maintenance 7/	4030159735		886.34

Council Warrant Register by Account

Payment Dates: 09/11/2019 - 09/24/2019

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
100-1825-7631	CANON SOLUTIONS AMERICA	SC Copier Maintenance 7/16/	4030159736		92.01
100-1825-7631	CANON SOLUTIONS AMERICA	TC Copier Maintenance 7/16/	4030159737		32.16
100-1825-7980	SHRED-IT USA LLC	Document Shredding	8127930737		57.08
100-2026	AMANDA SERRANO	Equipment Deposit Refund	9102019		25.00
100-2120	CESAR PARTIDA	CC Rent Deposit Refund	R1494		500.00
100-2120	DREAMBUILDERS CUSTOM PO	Swimming Pool Deposit Refun	R1850/2019-203		500.00
100-2120	PAULINE BAUTISTA	ROP Bldg Rent Deposit Refun	R81121		150.00
100-2120	DIANNE MENDOZA	TC Rent Deposit Refund	R81168		300.00
100-2120	NARINE TCHEUBJIAN	Pool Rent Deposit Refund	R81209/69942		200.00
100-2120	LAURA ORTIZ	Pool Rent Deposit Refund	R81219/69945		200.00
100-2120	CINDERELLA BILUGAN	ROP Bldg Rent Deposit Refun	R81280		150.00
100-2120	ALMA ZARAZOA	CC Rent Deposit Refund	R81312		500.00
100-2120	JASMINE SARSADIAS	ROP Bldg Rent Deposit Refun	R81389		150.00
100-2121	MOORE IACOFANO GOLTSMA	Daurte Station Specific Plan/E	0060507	201915-Duarte Station Specifi	21,016.58
100-2121	THE SAUCE CREATIVE SERVICE	Military Banner US Army- Geo	3714		123.74
100-2121	TIPPING DUARTE LLC	Refund-Balance of CC&R Revi	R0740		123.06
100-4302	ENA STEVELEY	Citation Refund	DU020006949		60.00
100-4408	DUARTE UNIFIED SCHOOL DIS	Nextel Lease 9/2019	81316	250004 - Property Rent - Next	1,645.10
100-4808	WENDY HYDE	Pool Rent Deposit Refund	R81330/69948		200.00
Fund 100 - GENERAL FUND Total:					184,322.97

Council Warrant Register by Account

Payment Dates: 09/11/2019 - 09/24/2019

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 220 - GAS TAX FUN					
220-2225-8100	ELECNOR BELCO ELECTRIC INC	BBU & TS Improvements	14-0318-003	201906-Capital Improv-Phase	65,561.40
Fund 220 - GAS TAX FUN Total:					65,561.40

Council Warrant Register by Account

Payment Dates: 09/11/2019 - 09/24/2019

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 240 - LIGHTING AND LANDSCAPE DISTRICT FUND					
240-2410-7888	POOL & ELECTRICAL PRODUC	Duarte Plaza Fountain Mainte	21090969		38.50
240-2410-7888	SITEONE LANDSCAPE SUPPLY	Citywide Irrigation Repairs-M	93961681-001		303.69
240-2410-7891	SITEONE LANDSCAPE SUPPLY	Hunt Dr Median Irrigation Rep	93814052-001		280.06
240-2410-7891	SITEONE LANDSCAPE SUPPLY	Duarte Rd Median Repairs	94233824-001		272.51
240-2410-7906	WEST COAST ARBORISTS INC	Tree Trimming	151379		1,872.00
240-2410-7906	WEST COAST ARBORISTS INC	Tree Trimming (Grid 1)	151633		4,104.00
240-2410-7909	WEST COAST ARBORISTS INC	Tree Trimming	151379		4,608.00
240-2410-7909	WEST COAST ARBORISTS INC	Tree Trimming (Grid 1)	151633		12,888.00
240-2429-7887	LANDSCAPE WAREHOUSE INC	Raingun Repairs	4126603		16.67
240-2429-7887	SITEONE LANDSCAPE SUPPLY	Emblem Homes LLD Rainguns	93792231-001		457.71
240-2429-7887	SITEONE LANDSCAPE SUPPLY	Emblem Homes LLD Rainguns	93889603-001		149.49
240-2434-7887	ARBOR NURSERY PLUS	Plant/Tree Replacements	5869		76.10
240-2435-7887	ARBOR NURSERY PLUS	Plant/Tree Replacements	5869		76.65
Fund 240 - LIGHTING AND LANDSCAPE DISTRICT FUND Total:					25,143.38

Council Warrant Register by Account

Payment Dates: 09/11/2019 - 09/24/2019

Account Number	Vendor Name	Description (Item)	Payable Number	Project Account Key	Amount
Fund: 440 - PROPOSITION A TRANSIT FUND					
440-4405-7614	STAPLES ADVANTAGE	Office Supplies	3423382205		9.98
440-4405-7650	AUTOZONE	Yard Supplies	2814744296		41.56
Fund 440 - PROPOSITION A TRANSIT FUND Total:					51.54
Grand Total:					275,079.29

Report Summary

Fund Summary

Fund	Payment Amount
100 - GENERAL FUND	184,322.97
220 - GAS TAX FUN	65,561.40
240 - LIGHTING AND LANDSCAPE DISTRICT FUND	25,143.38
440 - PROPOSITION A TRANSIT FUND	51.54
Grand Total:	275,079.29

Account Summary

Account Number	Account Name	Payment Amount
100-1005-7614	Office Supplies	80.45
100-1005-7647	Travel & Exp - Reilly	22.85
100-1005-7650	Travel & Exp - Lewis	550.00
100-1010-7003	Part-Time/Temp Salaries	1,520.00
100-1010-7610	Travel, Mtgs & Conf	880.98
100-1010-7614	Office Supplies	214.74
100-1010-7670	Legal Notices	1,077.00
100-1010-7965	Professional Services	12,280.00
100-1010-7980	Other Expenses	2,656.90
100-1015-7680	City Attorney Legal	9,002.60
100-1015-7686	Other Legal Services	18,355.71
100-1020-7712	Community Information	47.39
100-1020-7716	Special Community Even	1,546.40
100-1020-7722	City Web Site	706.20
100-1020-7726	Council Cablecasting	34.99
100-1020-7980	Other Expenses	677.44
100-1205-7613	Duplications And Photos	2,462.10
100-1205-7650	Vehicle Maintenance	2,354.01
100-1205-7655	Emergency Services	12.75
100-1205-7760	Homeless Outreach Prog	35.90
100-1205-7761	Parking Ticket Collect	6,297.75
100-1205-7781	Contract Law Enforceme	2,023.69
100-1205-7887	Repairs & Replacements	442.34
100-1211	Computer Loan Program	3,000.00
100-1405-7612	Publications and Dues	76.45
100-1405-7614	Office Supplies	95.68
100-1405-7800	Building Department Ser	22,236.98
100-1405-7967	Public Works Inspection	3,160.00
100-1405-7969	City Engineer	14,691.05
100-1410-7650	Vehicle Maintenance	6,994.05
100-1410-7656	Emergency Generator	1,401.76
100-1410-7980	Other Expenses	21.35
100-1605-7614	Office Supplies	8.53
100-1605-7650	Vehicle Maintenance	473.88
100-1605-7728	Americorp's VIP Progra	150.16
100-1605-7730	Special Events	255.41
100-1605-7732	City Picnic	4,192.49
100-1605-7733	Senior Center	989.74
100-1605-7735	Teen Center	1,252.07
100-1605-7737	Adult Excursions	239.26
100-1605-7739	Publicity	5,947.09
100-1605-7741	Sports/Playground Progr	2,709.66
100-1605-7744	Nutrition Program Costs	369.00
100-1605-7745	Boxing Program	781.62
100-1605-7980	Other Expenses	521.53
100-1610-7616	Pool Supplies	644.24
100-1610-7617	Pool Chemicals	469.81
100-1610-7618	Building Supplies	926.68
100-1610-7636	Uniforms	143.88

Account Summary

Account Number	Account Name	Payment Amount
100-1610-7652	Building Maint Services	2,642.50
100-1610-8100	Other Capital Improvem	735.86
100-1805-7610	Travel, Mtgs & Conf	1,889.54
100-1805-7614	Office Supplies	195.99
100-1805-7653	Bank Charges	1.35
100-1805-7965	Professional Services	1,785.66
100-1805-7980	Other Expenses	605.83
100-1810-7610	Travel, Mtgs & Conf	843.87
100-1810-7612	Publications and Dues	370.00
100-1810-7614	Office Supplies	63.53
100-1810-7660	Other Services	358.00
100-1810-7671	Recruiting Advertisemen	10,488.06
100-1810-7673	Physical Exams	50.00
100-1810-7980	Other Expenses	60.00
100-1815-7632	Software Maintenance	329.90
100-1815-7830	Telephones	20.15
100-1825-7613	Duplications And Photos	78.50
100-1825-7614	Office Supplies	392.88
100-1825-7630	Equipment Lease	1,269.22
100-1825-7631	Equipment Maintenance	1,207.01
100-1825-7980	Other Expenses	57.08
100-2026	EE Equipment Deposit	25.00
100-2120	Refundable Deposits	2,650.00
100-2121	Pass Through Deposits	21,263.38
100-4302	Parking Citations	60.00
100-4408	Property Rental	1,645.10
100-4808	Swim Lesson Fees	200.00
220-2225-8100	Other Capital Improvem	65,561.40
240-2410-7888	Repairs-Citywide	342.19
240-2410-7891	Repairs-Medians	552.57
240-2410-7906	Tree Trim-Citywide	5,976.00
240-2410-7909	Tree Trim-Residential	17,496.00
240-2429-7887	Repairs & Replacements	623.87
240-2434-7887	Repairs & Replacements	76.10
240-2435-7887	Repairs & Replacements	76.65
440-4405-7614	Office Supplies	9.98
440-4405-7650	Vehicle Maintenance	41.56
Grand Total:		275,079.29

Project Account Summary

Project Account Key	Payment Amount
None	184,646.46
201826-Homelss Outreach	35.90
201904-Contract Law-Tobacco Grant	2,023.69
201906-Capital Improv-Phase I Batt Bkup-Ped Head	65,561.40
201915-Duarte Station Specific Plan-Expense	21,016.58
202009- Duarte's Promise - America's Promise Exp	150.16
250004 - Property Rent - Nextel Rent (Otis Gordon)	1,645.10
Grand Total:	275,079.29



City of Duarte

Council Warrant Register Over \$5000

By Payment Number

Payment Dates 091119 - 092419

Payment Number	Payment Date	Vendor #	Vendor Name	Account Number	Project Account Key	Payment Amount Item Amount
236	9/12/2019	4484	U.S. BANK			5,479.77
	8262019ME		Barrier Stakes (Braco Products)	100-1605-7730		255.41
	8262019ME		SC 2-Zester/Grater (Amazon)	100-1605-7733		13.98
	8262019ME		Senior Ctr Supplies (Smart & Final)	100-1605-7733		184.55
	8262019ME		Pocket Dividers (Prairie Creek)	100-1605-7733		105.00
	8262019ME		Senior Ctr Decorations (Amazon)	100-1605-7733		125.36
	8262019ME		SC Staff Meeting 7/30/19 (Panara Bre	100-1605-7733		88.22
	8262019ME		Hip Hop Int'l Event Tickets 8/3/19	100-1605-7735		504.00
	8262019ME		TC Back to School BBQ (Smart & Final	100-1605-7735		243.12
	8262019ME		Face Painting Supplies (Amazon)	100-1605-7735		165.67
	8262019ME		Teen Ctr Event 8/12/19 (Young's Gour	100-1605-7735		177.15
	8262019ME		TC Cat 6 Wires (Amazon)	100-1605-7735		80.15
	8262019ME		Canopy Spikes (Amazon)	100-1605-7741		19.60
	8262019ME		Orange Tape (Amazon)	100-1605-7741		26.95
	8262019ME		PA Battery (Amazon)	100-1605-7741		35.95
	8262019ME		PA Batteries (atbatt.com)	100-1605-7741		70.82
	8262019ME		Summer Health Camp 7/31/19 (Tanak	100-1605-7744		369.00
	8262019ME		TC Boxing Show (Smart & Final)	100-1605-7745		292.95
	8262019ME		TC Boxing Equipment (Title Boxing)	100-1605-7745		488.67
	8262019ME		Notice of Exemption Prop 68 Grant A	100-1605-7980		76.75
	8262019ME		Staff Birthday Cards/Gift Cards (Targe	100-1605-7980		64.63
	8262019ME		Lunch Meeting 7/25/19 (Dickey's BB	100-1605-7980		158.78
	8262019ME		Sports Staff Apprecation 8/19/19 (Th	100-1605-7980		221.37
	8262019ME		Swim Pace Clock (Swimoutlet.com)	100-1610-7616		644.24
	8262019ME		SC Coffee Cup Sleeves (Amazon)	100-1610-7618		60.80
	8262019ME		Council Meeting Snacks (Smart & Fin	100-1610-7618		155.45
	8262019ME		PA System Shipping for Repair (FedEx)	100-1610-7618		75.00
	8262019ME		FC Shower Chair (Expressmed.com)	100-1610-7618		40.34
	8262019ME		TC (4) 3-Piece Pub Sets (Amazon)	100-1610-8100		481.64
	8262019ME		TC (2) Coffee Tables (Amazon)	100-1610-8100		254.22
213466	9/24/2019	5046	CERRELL ASSOCIATES INC			7,000.00
	17951		Revenue Measure Education	100-1010-7965		7,000.00
213467	9/24/2019	5120	CHARLES ABBOTT ASSOCIATES INC			22,236.98
	60024		Building & Safety Services 8/2019	100-1405-7800		22,236.98
213476	9/24/2019	6042	ELECNOR BELCO ELECTRIC INC			65,561.40
	14-0318-003		BBU & TS Improvements	220-2225-8100	201906-Capital Improv-Phas	65,561.40
213492	9/24/2019	5454	MOORE IACOFANO GOLTSMAN INC			21,016.58
	0060507		Daurte Station Specific Plan/EIR 8/20	100-2121	201915-Duarte Station Speci	21,016.58
213496	9/24/2019	6105	PECKHAM & MCKENNEY			9,000.00
	2		City Manager Recruitment (Pmt 2 of	100-1810-7671		9,000.00
213498	9/24/2019	6112	PRECISION AERIAL SERVICES INC			6,778.15
	W14248		Vehicle 2 Certification/Inspection/Re	100-1410-7650		6,778.15
213501	9/24/2019	0904	RKA CONSULTING GROUP			17,851.05
	29116		Public Works Inspections 7/2019	100-1405-7967		3,160.00
	29117		Engineering Plan Check 7/2019	100-1405-7969		640.00
	29118		Engineering Consulting 7/2019	100-1405-7969		1,577.50
	29131		Contract Engineering Services 7/2019	100-1405-7969		4,480.00
	29152		FY20 LLD Engineering Srvcs 7/2019	100-1405-7969		4,126.25

Council Warrant Register Over \$5000

Payment Dates: 091119 - 092419

Payment Number	Payment Date Payable Number	Vendor # Description	Vendor Name	Account Number	Project Account Key	Payment Amount Item Amount
	29153	ATP Cycle 4 Ped Access/Bike Safety 7/		100-1405-7969		3,867.30
213503	9/24/2019	0196	RUTAN & TUCKER LLP			27,358.31
	846403	Environmental/Stormwater Lit (NPDE		100-1015-7686		15,146.21
	846546	General City Attorney (Retainer) 7/20		100-1015-7680		9,002.60
	846547	General City Litigation 7/2019		100-1015-7686		3,000.00
	846548	Telecommunications Legal 7/2019		100-1015-7686		172.00
	846554	D & D Design Legal 7/2019		100-1015-7686		37.50
213504	9/24/2019	4241	THE SAUCE CREATIVE SERVICES CORP			11,672.46
	3664	Fall 2019 City Newsletter		100-1010-7980		1,412.09
	3664	Fall 2019 City Newsletter		100-1205-7613		1,412.10
	3664	Fall 2019 City Newsletter		100-1605-7739		2,824.19
	3665	Fall 2019 City Newsletter Design		100-1010-7980		1,050.00
	3665	Fall 2019 City Newsletter Design		100-1205-7613		1,050.00
	3665	Fall 2019 City Newsletter Design		100-1605-7739		2,100.00
	3669	Fall Class Flyers		100-1605-7739		534.90
	3670	Picnic Flyers		100-1605-7739		488.00
	3687	Promo Item-Koozies		100-1020-7980		677.44
	3714	Military Banner US Army- George Tol		100-2121		123.74
213509	9/24/2019	3661	SUPERIOR CT OF CAL CO OF LOS ANGELES			6,297.75
	9112019	Citation Revenue Tax 8/2019		100-1205-7761		6,297.75
213510	9/24/2019	5339	TOWNSEND PUBLIC AFFAIRS INC			5,000.00
	15072	Statewide Parks Grant Application		100-1010-7965		5,000.00
213512	9/24/2019	1521	WEST COAST ARBORISTS INC			23,472.00
	151379	Tree Trimming		240-2410-7906		1,872.00
	151379	Tree Trimming		240-2410-7909		4,608.00
	151633	Tree Trimming (Grid 1)		240-2410-7906		4,104.00
	151633	Tree Trimming (Grid 1)		240-2410-7909		12,888.00
Payment Total:						228,724.45

Report Summary**Fund Summary**

Fund	Payment Amount
100 - GENERAL FUND	139,691.05
220 - GAS TAX FUN	65,561.40
240 - LIGHTING AND LANDSCAPE DISTRICT FUND	23,472.00
Grand Total:	228,724.45

Account Summary

Account Number	Account Name	Payment Amount
100-1010-7965	Professional Services	12,000.00
100-1010-7980	Other Expenses	2,462.09
100-1015-7680	City Attorney Legal	9,002.60
100-1015-7686	Other Legal Services	18,355.71
100-1020-7980	Other Expenses	677.44
100-1205-7613	Duplications And Photos	2,462.10
100-1205-7761	Parking Ticket Collect	6,297.75
100-1405-7800	Building Department Ser	22,236.98
100-1405-7967	Public Works Inspection	3,160.00
100-1405-7969	City Engineer	14,691.05
100-1410-7650	Vehicle Maintenance	6,778.15
100-1605-7730	Special Events	255.41
100-1605-7733	Senior Center	517.11
100-1605-7735	Teen Center	1,170.09
100-1605-7739	Publicity	5,947.09
100-1605-7741	Sports/Playground Progr	153.32
100-1605-7744	Nutrition Program Costs	369.00
100-1605-7745	Boxing Program	781.62
100-1605-7980	Other Expenses	521.53
100-1610-7616	Pool Supplies	644.24
100-1610-7618	Building Supplies	331.59
100-1610-8100	Other Capital Improvem	735.86
100-1810-7671	Recruiting Advertisemen	9,000.00
100-2121	Pass Through Deposits	21,140.32
220-2225-8100	Other Capital Improvem	65,561.40
240-2410-7906	Tree Trim-Citywide	5,976.00
240-2410-7909	Tree Trim-Residential	17,496.00
Grand Total:		228,724.45

Project Account Summary

Project Account Key	Payment Amount
None	142,146.47
201906-Capital Improv-Phase I Batt Bkup-Ped Head	65,561.40
201915-Duarte Station Specific Plan-Expense	21,016.58
Grand Total:	228,724.45



AGENDA MEMO

TO: DUARTE CITY COUNCIL
FROM: Brian Villalobos, Director of Public Safety
DATE: September 16, 2019
SUBJECT: Approval of Duarte Unified School District Crossing Guard Agreement

SUMMARY:

The City has recently contracted with All City Management Services (ACMS) for crossing guard services. To share the costs of the crossing guards the City of Duarte has partnered with the Duarte Unified School District (DUSD). The City and DUSD would each contribute 50% of the direct costs of the contract with ACMS associated with the school crossing guard program at the following locations:

Royal Oaks Drive at Royal Oaks School
Mt. Olive Drive at Royal Oaks Drive
Buena Vista Street at Kellwil Way
Mel Canyon Road at Deerlane Drive
Crestfield Drive at Central Avenue

RECOMMENDATION:

It is staff's recommendation that the City Council approve the agreement with the Duarte Unified School District.

FISCAL IMPACT:

This item was a part of the approved items as discussed at the annual budget meeting held on May 6, 2019. The allocated budget for this item is \$45,000. Duarte Unified and CSArts will reimburse the City for an additional \$45,000 as part of this annual agreement.

ATTACHMENTS:

- 1.) Signed DUSD Crossing Guard Agreement
- 2.) Exhibit A

AGREEMENT

The City of Duarte, hereinafter referred to as the "CITY", and the Duarte Unified School District, hereinafter referred to as the "DISTRICT", do enter into the following Agreement:

WHEREAS, the parties hereto desire to provide for a school crossing guard program at the locations shown in Exhibit "A".

WHEREAS, the parties will contract out for crossing guard services with All City Management Services, Inc. (ACMS), as shown is Exhibit "B", and to specify the respective responsibilities of such program.

NOW, THEREFORE, it is agreed as follows:

SECTION I.

For, and in consideration of, the covenants and conditions to be kept and performed by the CITY, as set forth in this Agreement, the CITY agrees:

- A. To manage a contract with ACMS, to provide crossing guards and to monitor and/or coordinate the school crossing guard attendance, and to schedule substitutes as necessary.
- B. To arrange with ACMS to provide training of crossing guards for locations as shown in Exhibit "A".
- C. To arrange with AMCS to provide the equipment associated with the school crossing guard program.
- D. To bear 50% of the direct and incidental contract costs, associated with the school crossing guard program at the following locations, which meet State traffic control warrants:

Royal Oaks Drive at Royal Oaks School
Mt. Olive Drive at Royal Oaks Drive
Buena Vista Street at Kellwil Way
Mel Canyon Road at Deerlane Drive
Crestfield Drive at Central Avenue

SECTION II.

For, and in consideration of, the covenants and conditions to be kept and performed by the DISTRICT, as set forth in this Agreement, the DISTRICT agrees:

AGREEMENT

- A. To bear 50% of the direct and incidental contract costs, associated with the school crossing guard program at the following locations, which meet State traffic control warrants:

Royal Oaks Drive at Royal Oaks School
Mt. Olive Drive at Royal Oaks Drive
Buena Vista Street at Kellwil Way
Mel Canyon Road at Deerlane Drive
Crestfield Drive at Central Avenue

SECTION III.

It is mutually agreed between the parties hereto as follows:

- A. Crossing guards assigned to the location shall not be construed to be traffic controllers.
- B. Crossing guards assigned to the location shall be responsible for pedestrian crossings only.
- C. Crossing guards assigned to the location will work the scheduled 180 days of the school year.
- D. Neither the CITY nor any officer, employee, or agent of the CITY shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by the DISTRICT in connection with any work, authority, or jurisdiction delegated to the DISTRICT under this Agreement. It is also understood and agreed that the DISTRICT shall fully indemnify, defend, and hold the CITY harmless from any liability imposed for injury occurring by reason of anything done or omitted to be done by the DISTRICT in connection with any work, authority, or jurisdiction delegated to the DISTRICT under this Agreement.
- E. Neither the DISTRICT nor any officer, employee, or agent of the DISTRICT shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by the CITY in connection with any work, authority, or jurisdiction delegated to the CITY under this Agreement. It is also understood and agreed that the CITY shall fully indemnify, defend, and hold the DISTRICT harmless from any liability imposed for injury occurring by reason of anything done or omitted to be done by the CITY in connection with any work, authority, or jurisdiction delegated to the CITY under this Agreement.

AGREEMENT

- F. This Agreement shall remain in full force and effect until either party requests an adjustment or modification.
- G. The effective date of this agreement is August 1, 2019.
- H. This Agreement shall be reviewed and approved annually by the City and the District.

CITY OF DUARTE

Mayor

Date

DUARTE UNIFIED SCHOOL DISTRICT

KEN BELL FOR DAVE
EDWARDS

Douglas Edwards, President

8/22/2019
Date

ATTEST:

City Clerk

Gordon Amerson, Superintendent

Exhibit A

School District Crossing Guards



Royal Oaks Dr at Royal Oaks
School



Mt Olive Dr at Royal Oaks Dr



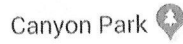
Buena Vista St at Kellwil Way



Crestfield Drive at Central Avenue



Mel Canyon Rd At Deerlane Dr





AGREEMENT FOR CROSSING GUARD SERVICES

This AGREEMENT FOR CROSSING GUARD SERVICES (the "Agreement") is dated May ~~30~~, 2019 and is between the CITY OF DUARTE (hereinafter called the "City"), and ALL CITY MANAGEMENT SERVICES, INC., a California corporation (hereinafter called the "Contractor").

WITNESSETH

The parties hereto have mutually covenanted and agreed as follows:

1. This Agreement is for a term which commences on or about July 1, 2019 and ends on June 30, 2020 and for such term thereafter as the parties may agree upon.
2. The Contractor will provide seven (7) personnel for City of Duarte equipped and trained in appropriate procedures for crossing pedestrians in marked crosswalks. Such personnel shall be herein referred to as a "Crossing Guard". Contractor will perform Department of Justice background check and E-Verify on prospective personnel in accordance with criminal background investigation requirements as specified per state. The Contractor is an independent contractor and the Crossing Guards to be furnished by it shall at all times be its employees and not those of the City.
3. The City's representative in dealing with the Contractor shall be designated by City of Duarte.
4. The City shall determine the locations where Crossing Guards shall be furnished by the Contractor. The Contractor shall provide at each designated location personnel properly trained as herein specified for the performance of duties as a Crossing Guard. The Contractor shall provide supervisory personnel to see that Crossing Guard activities are taking place at the required places and times, and in accordance with the terms of this Agreement.
5. The Contractor shall maintain adequate reserve personnel to be able to furnish alternate Crossing Guards in the event that any person fails to report for work at the assigned time and location and agrees to provide immediate replacement.
6. In the performance of its duties the Contractor and all employees of the Contractor shall conduct themselves in accordance with the conditions of this Agreement and all applicable laws of the state in which the Services are to be performed.
7. Persons provided by the Contractor as Crossing Guards shall be trained in all applicable laws of the state in which the Services are to be performed pertaining to general pedestrian safety in school crossing areas.
8. Crossing Guard Services (the "Services") shall be provided by the Contractor at the designated locations on all days in which school is in session in the area under City's jurisdiction. The

Contractor also agrees to maintain communication with the designated schools to maintain proper scheduling.

9. The Contractor shall provide all Crossing Guards with apparel by which they are readily visible and easily recognized as Crossing Guards. Such apparel shall be uniform for all persons performing the duties of Crossing Guards and shall be worn at all times while performing said duties. This apparel must be appropriate for weather conditions. The Contractor shall also provide all Crossing Guards with hand held Stop signs and any other safety equipment which may be necessary.
10. The Contractor shall at all times provide workers' compensation insurance covering its employees and shall provide and maintain liability insurance for Crossing Guard activities. The Contractor will provide to the City a Certificate of Insurance naming the City and its officials, officers and employees as additional insureds. Such insurance shall include commercial general liability with a combined single limit of not less than \$1,000,000.00 per occurrence and in aggregate for property damage and bodily injury. Such insurance shall be primary with respect to any insurance maintained by the City and shall not call on the City's insurance contributions. Such insurance shall be endorsed for contractual liability and personal injury and shall include the City, its officers, agents and interest of the City. Such insurance shall not be canceled, reduced in coverage or limits or non-renewed except after thirty (30) days written notice has been given to the City.
11. Contractor agrees to defend, indemnify and hold harmless the City, its officers, employees, agents and representatives, from and against any and all actions, claims for damages to persons or property, penalties, obligations or liabilities (each a "Claim" and collectively, the "Claims") that may be asserted or claimed by any person, firm, entity, corporation, political subdivision or other organization arising out of the negligent acts or omissions, or willful misconduct, of Contractor, its agents, employees, subcontractors, representatives or invitees.
 - a) Contractor will defend any action or actions filed in connection with any of said claims, damages, penalties, obligations or liabilities and will pay all costs and expenses including attorney's fees incurred in connection herewith.
 - b) In the event the City, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Contractor for such damages or other claims arising out of or in connection with the sole negligence of Contractor hereunder, Contractor agrees to pay City, its officers, agents, or employees, any and all costs and expenses incurred by the City, its officers agents or employees in such action or proceeding, including, but not limited to, reasonable attorney's fees.
 - c) In the event that a court determines that liability for any Claim was caused or contributed to by the negligent act or omission or the willful misconduct of City, liability will be apportioned between Contractor and City based upon the parties' respective degrees of culpability, as determined by the court, and Contractor's duty to indemnify City will be limited accordingly. Notwithstanding the forgoing, City does not waive any statutory tort or other immunities.
 - d) Notwithstanding anything to the contrary contained herein, Contractor's indemnification obligation to City for Claims under this Agreement will be limited to the maximum combined aggregate of Contractor's general liability and umbrella insurance policies in the amount of \$9,000,000 (Nine Million Dollars).

12. Either party shall have the right to terminate this Agreement by giving sixty (60) days written notice to the other party.
13. The Contractor shall not have the right to assign this Agreement to any other person or entity except with the prior written consent of the City.
14. The City agrees to pay the Contractor for the Services rendered pursuant to this Agreement the sum of Twenty Dollars and Seventy-one Cents (\$20.71) per hour, per Crossing Guard during the term. Contractor shall bill a minimum of 3.0 hours per day, per Crossing Guard, unless Contractor fails to perform service. Crossing Guard shifts shall be a maximum of 1.0 hours in the morning and 1.5 hours in the afternoon, unless otherwise requested by the City.
15. Payment is due within thirty (30) days of receipt of Contractor's properly prepared invoice.
16. Contractor may request a price increase during the term as a result of any legally-mandated increases in wages or benefits imposed in the state or municipality in which the Services are to be performed and to which Contractor's employees would be subject. Contractor shall provide City with 60 days-notice of its request to increase pricing. City agrees to review and respond to said notice within 30 days of receipt.
17. The City shall have an option to renew this Agreement. In the event this Agreement is extended beyond the end of the term set forth above, the compensation and terms for the Services shall be established by mutual consent of both parties.
18. This Agreement constitutes the complete and exclusive statement of the agreement among the parties with respect to the subject matter hereof and supersedes all prior written or oral statements among the parties, including any prior statements, warranties, or representations. This Agreement is binding upon and will inure to the benefit of the parties hereto and their respective heirs, administrators, executors, successors, and assigns. Each party hereto agrees that this Agreement will be governed by the law of the state in which the Services are to be performed, without regard to its conflicts of law provisions. Any amendments, modifications, or alterations to this Agreement must be in writing and signed by all parties. There will be no presumption against any party on the ground that such party was responsible for preparing this Agreement or any part of it. Each provision of this Agreement is severable from the other provisions. If any provision of this Agreement is declared invalid or contrary to existing law, the inoperability of that provision will have no effect on the remaining provisions of the Agreement which will continue in full force and effect.

[SIGNATURES FOLLOW ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year written below.

CITY

CONTRACTOR

City of Duarte

All City Management Services, Inc.

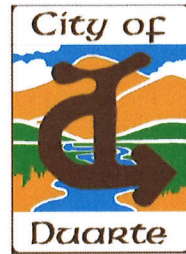
By 
Signature

By 
D. Farwell, Corporate Secretary

Darrell George / City Manager
Print Name and Title

Date May 30, 2019

Date 6/20/19



AGENDA MEMO

TO: DUARTE CITY COUNCIL
FROM: Brian Villalobos, Director of Public Safety
DATE: September 16, 2019
SUBJECT: Approval of California School of the Arts Crossing Guard Agreement

SUMMARY:

The City has recently contracted with All City Management Services (ACMS) for crossing guard services. To share the costs of the crossing guards the City of Duarte has partnered with the California School of the Arts (CSArts). The City and CSArts would each contribute 50% of the direct costs of the contract with ACMS associated with the school crossing guard program at the following locations:

Central Avenue at Highland Avenue
Highland Avenue at CSArts Driveway

RECOMMENDATION:

It is staff's recommendation that the City Council approve the agreement with the California School of the Arts.

FISCAL IMPACT:

This item was a part of the approved items as discussed at the annual budget meeting held on May 6, 2019. The allocated budget for this item is \$45,000. Duarte Unified and CSArts will reimburse the City for an additional \$45,000 as part of this annual agreement.

ATTACHMENTS:

- 1.) Signed CSArts Crossing Guard Agreement
- 2.) Exhibit A

AGREEMENT

The City of Duarte, hereinafter referred to as the "CITY", and the California School of the Arts – San Gabriel Valley, hereinafter referred to as the "CSArts", do enter into the following Agreement:

WHEREAS, the parties hereto desire to provide for a school crossing guard program at the locations shown in Exhibit "A".

WHEREAS, the parties will contract out for crossing guard services with All City Management Services, Inc. (ACMS), as shown in Exhibit "B", and to specify the respective responsibilities of such program.

NOW, THEREFORE, it is agreed as follows:

SECTION I.

For, and in consideration of, the covenants and conditions to be kept and performed by the CITY, as set forth in this Agreement, the CITY agrees:

- A. To manage a contract with ACMS, to provide crossing guards and to monitor and/or coordinate the school crossing guard attendance, and to schedule substitutes as necessary.
- B. To arrange with ACMS to provide training of crossing guards for locations as shown in Exhibit "A".
- C. To arrange with ACMS to provide the equipment associated with the school crossing guard program.
- D. To bear 50% of the direct and incidental contract costs, associated with the school crossing guard program at the following locations, which meet State traffic control warrants:

Central Avenue at Highland Avenue
Highland Avenue at CSArts Driveway

SECTION II.

For, and in consideration of, the covenants and conditions to be kept and performed by the CSArts, as set forth in this Agreement, the CSArts agrees:

- A. To bear 50% of the direct and incidental contract costs, associated with the school crossing guard program at the following locations, which meet State traffic control warrants:

AGREEMENT

Central Avenue at Highland Avenue
Highland Avenue at CSArts Driveway

SECTION III.

It is mutually agreed between the parties hereto as follows:

- A. Crossing guards assigned to the location shall not be construed to be traffic controllers.
- B. Crossing guards assigned to the location shall be responsible for pedestrian crossings only.
- C. Crossing guards assigned to the location will work the scheduled 180 days of the school year.
- D. Neither the CITY nor any officer, employee, or agent of the CITY shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by the CSArts in connection with any work, authority, or jurisdiction delegated to the CSArts under this Agreement. It is also understood and agreed that the CSArts shall fully indemnify, defend, and hold the CITY harmless from any liability imposed for injury occurring by reason of anything done or omitted to be done by the CSArts in connection with any work, authority, or jurisdiction delegated to the CSArts under this Agreement.
- E. Neither the CSArts nor any officer, employee, or agent of the CSArts shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by the CITY in connection with any work, authority, or jurisdiction delegated to the CITY under this Agreement. It is also understood and agreed that the CITY shall fully indemnify, defend, and hold the CSArts harmless from any liability imposed for injury occurring by reason of anything done or omitted to be done by the CITY in connection with any work, authority, or jurisdiction delegated to the CITY under this Agreement.
- F. This Agreement shall remain in full force and effect until either party requests an adjustment or modification.
- G. The effective date of this agreement is August 1, 2019.
- H. This Agreement shall be reviewed and approved annually by the City and CSArts.

AGREEMENT

CITY OF DUARTE

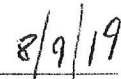
California School of the Arts

Mayor

Date



President



Date

ATTEST:

City Clerk

Superintendent

Exhibit A

CSArts Crossing Guards



Highland Ave at CSArts
Driveway



Central Ave at Highland Ave



Map data ©2018 Google



AGREEMENT FOR CROSSING GUARD SERVICES

This AGREEMENT FOR CROSSING GUARD SERVICES (the "Agreement") is dated May ~~30~~, 2019 and is between the CITY OF DUARTE (hereinafter called the "City"), and ALL CITY MANAGEMENT SERVICES, INC., a California corporation (hereinafter called the "Contractor").

WITNESSETH

The parties hereto have mutually covenanted and agreed as follows:

1. This Agreement is for a term which commences on or about July 1, 2019 and ends on June 30, 2020 and for such term thereafter as the parties may agree upon.
2. The Contractor will provide seven (7) personnel for City of Duarte equipped and trained in appropriate procedures for crossing pedestrians in marked crosswalks. Such personnel shall be herein referred to as a "Crossing Guard". Contractor will perform Department of Justice background check and E-Verify on prospective personnel in accordance with criminal background investigation requirements as specified per state. The Contractor is an independent contractor and the Crossing Guards to be furnished by it shall at all times be its employees and not those of the City.
3. The City's representative in dealing with the Contractor shall be designated by City of Duarte.
4. The City shall determine the locations where Crossing Guards shall be furnished by the Contractor. The Contractor shall provide at each designated location personnel properly trained as herein specified for the performance of duties as a Crossing Guard. The Contractor shall provide supervisory personnel to see that Crossing Guard activities are taking place at the required places and times, and in accordance with the terms of this Agreement.
5. The Contractor shall maintain adequate reserve personnel to be able to furnish alternate Crossing Guards in the event that any person fails to report for work at the assigned time and location and agrees to provide immediate replacement.
6. In the performance of its duties the Contractor and all employees of the Contractor shall conduct themselves in accordance with the conditions of this Agreement and all applicable laws of the state in which the Services are to be performed.
7. Persons provided by the Contractor as Crossing Guards shall be trained in all applicable laws of the state in which the Services are to be performed pertaining to general pedestrian safety in school crossing areas.
8. Crossing Guard Services (the "Services") shall be provided by the Contractor at the designated locations on all days in which school is in session in the area under City's jurisdiction. The

Contractor also agrees to maintain communication with the designated schools to maintain proper scheduling.

9. The Contractor shall provide all Crossing Guards with apparel by which they are readily visible and easily recognized as Crossing Guards. Such apparel shall be uniform for all persons performing the duties of Crossing Guards and shall be worn at all times while performing said duties. This apparel must be appropriate for weather conditions. The Contractor shall also provide all Crossing Guards with hand held Stop signs and any other safety equipment which may be necessary.
10. The Contractor shall at all times provide workers' compensation insurance covering its employees and shall provide and maintain liability insurance for Crossing Guard activities. The Contractor will provide to the City a Certificate of Insurance naming the City and its officials, officers and employees as additional insureds. Such insurance shall include commercial general liability with a combined single limit of not less than \$1,000,000.00 per occurrence and in aggregate for property damage and bodily injury. Such insurance shall be primary with respect to any insurance maintained by the City and shall not call on the City's insurance contributions. Such insurance shall be endorsed for contractual liability and personal injury and shall include the City, its officers, agents and interest of the City. Such insurance shall not be canceled, reduced in coverage or limits or non-renewed except after thirty (30) days written notice has been given to the City.
11. Contractor agrees to defend, indemnify and hold harmless the City, its officers, employees, agents and representatives, from and against any and all actions, claims for damages to persons or property, penalties, obligations or liabilities (each a "Claim" and collectively, the "Claims") that may be asserted or claimed by any person, firm, entity, corporation, political subdivision or other organization arising out of the negligent acts or omissions, or willful misconduct, of Contractor, its agents, employees, subcontractors, representatives or invitees.
 - a) Contractor will defend any action or actions filed in connection with any of said claims, damages, penalties, obligations or liabilities and will pay all costs and expenses including attorney's fees incurred in connection herewith.
 - b) In the event the City, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Contractor for such damages or other claims arising out of or in connection with the sole negligence of Contractor hereunder, Contractor agrees to pay City, its officers, agents, or employees, any and all costs and expenses incurred by the City, its officers agents or employees in such action or proceeding, including, but not limited to, reasonable attorney's fees.
 - c) In the event that a court determines that liability for any Claim was caused or contributed to by the negligent act or omission or the willful misconduct of City, liability will be apportioned between Contractor and City based upon the parties' respective degrees of culpability, as determined by the court, and Contractor's duty to indemnify City will be limited accordingly. Notwithstanding the forgoing, City does not waive any statutory tort or other immunities.
 - d) Notwithstanding anything to the contrary contained herein, Contractor's indemnification obligation to City for Claims under this Agreement will be limited to the maximum combined aggregate of Contractor's general liability and umbrella insurance policies in the amount of \$9,000,000 (Nine Million Dollars).

12. Either party shall have the right to terminate this Agreement by giving sixty (60) days written notice to the other party.
13. The Contractor shall not have the right to assign this Agreement to any other person or entity except with the prior written consent of the City.
14. The City agrees to pay the Contractor for the Services rendered pursuant to this Agreement the sum of Twenty Dollars and Seventy-one Cents (\$20.71) per hour, per Crossing Guard during the term. Contractor shall bill a minimum of 3.0 hours per day, per Crossing Guard, unless Contractor fails to perform service. Crossing Guard shifts shall be a maximum of 1.0 hours in the morning and 1.5 hours in the afternoon, unless otherwise requested by the City.
15. Payment is due within thirty (30) days of receipt of Contractor's properly prepared invoice.
16. Contractor may request a price increase during the term as a result of any legally-mandated increases in wages or benefits imposed in the state or municipality in which the Services are to be performed and to which Contractor's employees would be subject. Contractor shall provide City with 60 days-notice of its request to increase pricing. City agrees to review and respond to said notice within 30 days of receipt.
17. The City shall have an option to renew this Agreement. In the event this Agreement is extended beyond the end of the term set forth above, the compensation and terms for the Services shall be established by mutual consent of both parties.
18. This Agreement constitutes the complete and exclusive statement of the agreement among the parties with respect to the subject matter hereof and supersedes all prior written or oral statements among the parties, including any prior statements, warranties, or representations. This Agreement is binding upon and will inure to the benefit of the parties hereto and their respective heirs, administrators, executors, successors, and assigns. Each party hereto agrees that this Agreement will be governed by the law of the state in which the Services are to be performed, without regard to its conflicts of law provisions. Any amendments, modifications, or alterations to this Agreement must be in writing and signed by all parties. There will be no presumption against any party on the ground that such party was responsible for preparing this Agreement or any part of it. Each provision of this Agreement is severable from the other provisions. If any provision of this Agreement is declared invalid or contrary to existing law, the inoperability of that provision will have no effect on the remaining provisions of the Agreement which will continue in full force and effect.

[SIGNATURES FOLLOW ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year written below.

CITY

CONTRACTOR

City of Duarte

All City Management Services, Inc.

By 
Signature

By 
D. Farwell, Corporate Secretary

Darrell George / City Manager
Print Name and Title

Date May 30, 2019

Date 6/20/19



Proclamation

CLEAN AIR DAY

WHEREAS, air pollution adversely affects our health, and contributes to high rates of cancer and heart and lung diseases; and

WHEREAS, since California has some of the most polluted regions in the United States, it is vital that we protect the health and well-being of our residents, visitors, and workforce; and

WHEREAS, emissions from vehicles, industry, and even household sources significantly affect our natural environment, air quality, and well-being; and

WHEREAS, individual actions such as not idling vehicles, walking or biking to work and school, carpooling, and conserving energy can directly improve air quality in our region; and

WHEREAS, everyone can play a role, and education about air quality can raise community awareness, encourage better habits, and improve health; and

WHEREAS, the Coalition for Clean Air has designated October 2, 2019, as the second annual "Clean Air Day" in California, which was built on the idea that shared experiences unite people to action to improve community health, and has called on all Californians to join together to clear the air on October 2, 2019; and

WHEREAS, as the City of Health, the City of Duarte is committed to the health of our residents, workforce, visitors, and community at large, and on Clean Air Day, the City of Duarte, in partnership with Foothill Transit, will host DuartEbus Transit parties at the Duarte Senior Center and the Duarte Teen Center to promote clean air transit in our community;

NOW, THEREFORE, BE IT RESOLVED that the City of Duarte hereby proclaims October 2, 2019, as CLEAN AIR DAY in the City of Duarte, and encourages all residents, businesses, employees, and community members to participate in Clean Air Day activities to help clear the air for all Californians.

ATTEST:

City Clerk Marla Akana
Duarte, California

September 24, 2019

Mayor Tzeitel Paras-Caracci





CITY COUNCIL/AGENCY AGENDA REPORT

DATE: September 24, 2019

TO: Mayor and Duarte City Council

FROM: Teresa Renteria, Assistant Civil Engineer

SUBJECT: Release of Subdivision Bonds: Tract Map No.74365 for Construction Improvements at Third Street and Oak Avenue.

RECOMMENDED ACTION

Staff respectfully requests that City Council authorize the release of Subdivision Bond No. 382013-S, 382014-S, 382015-S, 382016-S, 382017-S, 382018-S, and 382019-S, in the sum of seven hundred thirty-five thousand two hundred and 00/100 (\$735,200.00) to AmTrust Surety, Irvine, CA 92614.

BACKGROUND

On December 12, 2017, the City Council of the City of Duarte approved a Subdivision Improvement Agreement and Tract Map No. 74365 to subdivide properties located at 1634 Third Street and 1101 Oak Avenue to accommodate 18 two-story, multi-family residential units and to relocate the existing Third Street Park from its midblock location to the southwest corner of Third Street and Oak Avenue. Per City of Duarte Development Code Article 5, Subdivisions, the Developer must complete various construction improvement and post certain security for the completion of said improvements. The Performance Bonds in the amount of \$735,200.00 were received and accepted by the Community Development Department/ Engineering Division as a security guarantee for the construction of concrete curbs, sidewalks and driveways, asphalt paving, sanitary sewer system, storm drain system, water system, and public park improvements.

ANALYSIS

All conditions of the Public Right of Way Permit have been met and the work has been completed and accepted by the Engineering Division.

ALTERNATIVES CONSIDERED

The alternative to this Council action would be to retain the bond and cash deposit. The City of Duarte Municipal Code Section 19.78.080(C.2.e) states, "In the event of

defective work, the security shall be held until all work is considered satisfactory and acceptable by the City". These conditions have been met; therefore, retention of the deposits would be in violation of the Municipal Code.

CONCLUSION

The developer has completed the development improvements in accordance to the Subdivision Improvement Agreement and Construction Plans. Therefore, staff recommends that the Subdivision Bond No. 382013-S, 382014-S, 382015-S, 382016-S, 382017-S, 382018-S, and 382019-S, in the sum of seven hundred thirty-five thousand two hundred and 00/100 (\$735,200.00) be released to AmTrust Surety, Irvine, CA 92614.

DISTRIBUTION: Community Development Director
 City Clerk
 Staff

Agenda Memo City Manager's Office

To: Mayor Paras-Caracci and Members of the Duarte City Council
From: Kristen Petersen, Assistant City Manager/Director of Administrative Services
Date: 9/18/2019
Re: RESOLUTION ADOPTING CITY DEBT MANAGEMENT POLICY

RECOMMENDATION: City staff is recommending that the City Council, by motion, approve a resolution adopting a debt management policy pursuant to Senate Bill 1029, codified as Government Code section 8855.

BACKGROUND: Senate Bill 1029 (Hertzberg), codified as Government Code section 8855, provides a requirement that public agencies in California adopt a debt management policy prior to any new bond issuance, or the refunding/reissuance of existing debt. Before issuing or refunding/reissuing debt, each public agency issuing debt must have a council-approved debt management policy that includes, at a minimum:

- The purposes for which debt proceeds may be used.
- The types of debt which may be issued by the public agency.
- The relationship of the debt to, and integration with, the public agency's capital improvement program or budget.
- Policy goals related to the public agency's planning goals and objectives.
- The internal control procedures that the local agency has implemented, or will implement, to ensure that the proceeds of the proposed debt issuance will be directed to the intended use.

DISCUSSION: The debt management policy issue arose in the review the City Attorney's office was doing in connection with an opinion letter being requested on the Climatec matter, as part of the proposed financing agreement. As part of finalizing that transaction, the City will be called upon to verify that it has such a policy in place. It appears that we do not have this to date, so the adoption of one is proposed for this evening, and should occur prior to any final action on the Climatec matter.

The attached proposed resolution and Debt Management Policy ("Policy") is consistent with current practices, and affords a number of procedural protections and policies to assure conservative, responsible management of debt by the City, while still remaining responsive enough for the City to take advantage of market-driven opportunities that periodically arise to benefit the long term financial health of the City. It will also provide elements of transparency in City financing activities. City staff will regularly review the City's financial practices and procedures, as well as the terms and conditions of current and future debt issuances, in order to ensure consistency with the proposed Policy and all other legal requirements associated with debt issuance in California. The Policy establishes procedures to ensure that the City's management of debt is prudent and consistent with all legal requirements.

The Policy does not authorize City Staff to issue debt or obligate the City to issue or refinance any debt. Any new debt issuance or refunding/reissuance of existing bonds would require additional City review and authorization.

FISCAL IMPACT: Costs of compliance with legal requirements of future financings will be wholly dependent on the timing, nature, and structure of such financings, and therefore cannot be predicted at this time. That said, the City staff does not expect the City to incur any additional expenditures beyond fixed staffing costs related to the adoption or implementation of the Debt Management Policy.

ATTACHMENT: Resolution No. 19-20

RESOLUTION NO.**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DUARTE
ADOPTING A DEBT MANAGEMENT POLICY**

WHEREAS, the City of Duarte is a municipal corporation and general law city organized and existing under the laws of the State of California (the "City"); and

WHEREAS, the City Council may issue bonds in the future or other financing obligations ("Local Debt") that would be subject to requirements for the filing of reports to the California Debt and Investment Advisory Commission ("CDIAC") pursuant to California Government Code section 8855 ("Section 8855"); and

WHEREAS, under Section 8855, municipal issuers of Local Debt must file a report (the "Report of Proposed Debt Issuance") in connection with the sale of any Local Debt issuance; and

WHEREAS, Senate Bill No. 1029 ("SB 1029"), effective January 1, 2017, amended Section 8855 to augment the information that a municipal issuer must provide CDIAC in connection with Local Debt issuances; and

WHEREAS, Section 8855, as amended by SB 1029, requires the Report of Proposed Debt Issuance to include a certification that the municipal issuer has adopted a local debt policy and the contemplated Local Debt issuance is consistent with such local debt policy; and

WHEREAS, Section 8855, subdivision (i)(1) requires that the local debt policy must include the following elements:

- A. The purposes for which the debt proceeds may be used;
- B. The types of debt that may be issued;
- C. The relationship of the debt to, and the integration with, the issuer's capital improvement program or budget, if applicable;
- D. Policy goals related to the issuer's planning goals and objectives; and
- E. The internal control procedures that the issuer has implemented, or will implement, to ensure that the proceeds of the proposed debt issuance will be directed to the intended use; and

WHEREAS, the City desires to adopt the Debt Management Policy as set forth in Exhibit A attached hereto (the "Policy");

NOW, the City Council of the City of Duarte hereby RESOLVES, DECLARES and ORDERS, as follows:

SECTION 1. The Policy is adopted to comply with the requirements of Section 8855, subdivision (i)(1).

SECTION 2. The Policy, as set forth in Exhibit A attached hereto, is hereby approved and adopted. The Policy shall be applicable to Local Debt issued by or on behalf of the City (including, but not limited to, assessment districts).

SECTION 3. The City Manager, the City Treasurer, the Director of Administrative Services, the Finance Officer, and all other officers of the City are hereby authorized and directed to effectuate the purpose of this Resolution and to implement the Policy, and any such actions previously taken by such officers are hereby ratified and confirmed.

PASSED, APPROVED and ADOPTED this _____ day of _____, 2019.

Mayor Tzeitel Paras-Caracci

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF DUARTE)

I, Marla Akana, City Clerk of the City of Duarte, County of Los Angeles, State of California, hereby attest to the above signature and certify that Resolution No. 19-20 was adopted by the City Council of said City of Duarte at a regular meeting of said Council held on the 24th day of September, 2019, by the following vote:

AYES: Councilmembers:

NOES: Councilmembers:

ABSENT: Councilmembers:

City Clerk Marla Akana
City of Duarte, California

EXHIBIT A

CITY OF DUARTE DEBT MANAGEMENT POLICY

I. PURPOSE

The purpose of this Debt Management Policy ("Policy") is to establish guidelines and parameters for the effective governance, management, and administration of the debt of the City of Duarte ("City"). This Policy is intended to comply with California Government Code section 8855, subdivision (i) ("Section 8855"), and any successor statute, and shall govern all debt that is contemplated or incurred by the City.

The City hereby recognizes that a fiscally prudent Policy is required to:

1. Maintain the City's sound financial position;
2. Ensure the City has the flexibility to respond to changes in future service priorities, revenue levels, and operating expenses;
3. Protect the City's creditworthiness;
4. Ensure that all debt is structured to protect both current and future taxpayers, ratepayers, and constituents of the City; and
5. Ensure that the City's debt is consistent with the City's planning goals, objectives, capital improvement program, and/or budget.

The main objectives of this Debt Management Policy are to establish conditions for the use of debt:

1. To ensure that debt capacity and affordability are adequately considered;
2. To minimize the City's interest and issuance costs;
3. To maintain the highest possible credit rating;
4. To provide complete financial disclosure and reporting; and
5. To maintain financial flexibility for the City.

II. BACKGROUND

The City is committed to fiscal sustainability by employing long-term financial planning efforts, maintaining appropriate reserve levels, and employing prudent practices in governance, management, budget administration, and financial reporting.

Debt levels and their related annual costs are important long-term obligations that must be managed within available resources. A disciplined, thoughtful approach to debt management includes policies that provide guidelines for the City to manage its debt consistent with available and reasonably anticipated resources. Therefore, the objective of this Policy is to provide written guidelines concerning the amount and type of debt that may be issued by the City and the ongoing management of debt obligations.

This Policy is intended to make all relevant information readily available to decision-makers and the public to improve the quality of decisions, provide justification for the structure

of debt issuances, identify policy goals, and demonstrate a commitment to long-term financial planning, including a multi-year capital plan. Adherence to this Policy signals to rating agencies and the capital markets that the City is well managed and able to meet its obligations in a timely manner.

III. POLICY GOALS RELATED TO PLANNING GOALS AND OBJECTIVES

The City is committed to long-term financial planning, maintaining appropriate reserve levels, and employing prudent practices in governance, management, and budget administration.

It is a policy goal of the City to protect taxpayers, ratepayers (if applicable), and constituents by utilizing conservative financing methods and techniques so as to obtain the highest practical credit ratings (if applicable), the lowest practical borrowing costs, and the most flexible borrowing terms. As such, this Debt Management Policy shall only apply to debt exceeding \$100,000.

The City shall comply with applicable state and federal laws as they pertain to debt and the procedures for levying and imposing related taxes, assessments, rates, or charges. Moreover, the City Council can amend this Debt Management Policy from time to time, and, on an ad hoc basis, approve exceptions to the Debt Management Policy for specific financings.

A Disclosure Officer shall be designated for each debt issuance. The Assistant City Manager or other position designated by the City Manager is the designated Disclosure Officer for debt issued by the City of Duarte and Assessment Districts that are not a direct obligation of the City. The City Treasurer or other position designated by the City Manager is the designated Disclosure Officer for the debt issued by Assessment Districts that is not a direct obligation of the City.

IV. CONDITIONS AND PURPOSES OF DEBT ISSUANCE

A. Acceptable Conditions for the Use of Debt

Debt could be considered to finance projects if:

1. It distributes costs of the asset over its useful life so that benefits more closely match costs for both current and future residents;
2. It is the most cost-effective funding means available to the City, taking into account cash flow needs, maintenance of prudent reserves, and other funding alternatives;
3. It is for infrastructure or energy efficiency improvements that will result in responsible energy use, reduction in greenhouse gas or other pollutant emission, or long term savings for the City
4. It is fiscally prudent and meets the guidelines of this Policy and the City's Municipal Code.

Any consideration of debt financing shall consider financial alternatives, including pay-as-you-go funding, proceeds derived from development or redevelopment of existing land and capital assets owned by the City, and use of existing or future cash reserves, or any combination

thereof.

B. Purposes for Which Debt May Be Issued

The City may consider financing for the acquisition, substantial refurbishment, replacement or expansion of physical assets, including land improvements. The primary purpose of debt would be to finance one or more of the following:

1. Acquisition and or improvement of land, right-of-way, leaseholds or long-term easements.
2. Acquisition of equipment or a capital asset with a useful life of three (3) or more years.
3. Construction or reconstruction of a facility.
4. The undergrounding, resiliency enhancement, or other improvement of utility infrastructure .
5. Refunding, refinancing, or restructuring debt, subject to refunding objectives and parameters discussed herein.
6. Although not the primary purpose of the financing effort, project reimbursable costs, which include: project planning, design, engineering and other preconstruction efforts; project-associated furniture, fixtures and equipment; and capitalized interest, original issue discount, underwriter's discount, and other costs of issuance.
7. Interim or cash flow financing, such as tax, revenue or bond anticipation notes.

C. Approval Process for the Issuance of Debt

Any issuance of debt, either through a public sale of securities, private placement or direct purchase, is subject to the formal approval of the City Council as a non-consent item on a City Council agenda. As part of the City Council approval, a formal resolution authorizing the issuance of a specific form of debt shall be required as part of the authorizing documents. In addition to the authorizing resolution, the City Council shall be provided copies of the various financing documents, including indentures, purchase agreements, and preliminary official statements (in the case of public sale).

V. STRUCTURE OF DEBT (FIXED RATE)

A. Term of Debt

Unless financially beneficial to do otherwise, debt shall be structured with the goal of spreading payments for the project, equipment, or capital asset over its useful life so that benefits more closely match costs for both current and future residents. The duration of borrowings by the City shall not exceed the useful life of the project, equipment, or capital asset it finances. The standard term of long-term borrowing is typically fifteen to thirty years.

B. Pace of Debt Payment

Accelerated repayment schedules reduce debt burden faster and reduce total borrowing

costs. Debt repayment shall be amortized through the most financially advantageous debt structure and, if applicable, to match the City's projected cash flow to the anticipated debt service payments, to the extent possible. "Backloading" of debt service should be considered only when one or more of the following occur:

1. Natural disasters or extraordinary or unanticipated external factors make payments on the debt in early years impractical; or
2. The benefits derived from the debt issuance can clearly be demonstrated to be greater in the future than in the present; or
3. Such structuring is beneficial to the City's aggregate overall debt payment schedule or achieves measurable interest savings; or
4. Such structuring will allow debt service to more closely match the revenues pledged to repay the debt.

C. Level Debt Service

To the extent practical, bonds will be amortized on a level debt service basis, and revenue bonds will be amortized on a level debt service basis. Revenue bonds may also be amortized such that debt service is proportional to the forecasted available pledged revenues, when practical, and in order to achieve the lowest rates possible. Bond repayments should not increase on an annual basis in excess of two percent (2%) without a dedicated and supporting revenue-funding stream.

D. Serial Bonds, Term Bonds, and Capital Appreciation Bonds

For each issuance, the City shall select serial bonds or term bonds, or both. On the occasions where circumstances warrant, Capital Appreciation Bonds ("CAB") may be used. The decision to use term, serial, or CAB bonds shall be based on market conditions.

E. Reserve Funds

The City shall strive to maintain a fund balance in the General Fund or other designated reserve at a level equal to or greater than the maximum annual debt service of existing obligations.

F. Capitalized Interest

Subject to applicable law, capitalized interest may be considered to the extent that the City wishes to defer the beginning of debt service to match available revenues with debt service. However, the City shall seek to minimize the use of capitalized interest, which defers debt service by increasing the size of a debt issue to fund interest.

G. Discount Bonds

While discount and deep discount bonds may reduce the interest cost of the bonds below that of par or premium bonds, they should be used in limited situations.

H. Premium Bonds

Premium bonds may provide for a lower overall interest cost compared to par or discount bonds. An analysis should be prepared comparing the yield to maturity and yield to call of the premium bond structure compared to alternative couponing. This comparison should be done on maturity-by-maturity basis. The value of the call option of the higher

coupon with respect to the future ability to refund should be reviewed as well.

I. Call Provisions for Bonds

In general, the City's bond debt obligations should include an optional redemption feature at par that arises not later than ten (10) years after the issuance of the debt. However, if market conditions exist where a call option at par arising later than ten (10) years after issuance of bond debt, or a "make-whole" call, would benefit the City, the authorizing bond resolution must explicitly provide staff the authorization to negotiate these options. The City Council should set parameters that guide staff's negotiations. It is the City's intent to maximize prepayment flexibility on all bond issues. Shorter call provisions may be considered on a case-by-case basis.

VI. TYPES OF DEBT

In order to maximize the financial options available to benefit the public, it is the policy of the City to allow for the consideration of issuing all generally accepted types of debt, including, but not exclusive to, subsections A to H below.

Neither the Finance Division nor the City Treasurer shall recommend a financing if it is determined that the financing could be indirectly detrimental to the financial standing of the City or such financing would otherwise not be in the best interests of the City.

The City may from time to time find that other forms of debt that would be beneficial to further its public purposes and may approve such debt without an amendment of this Debt Management Policy. To maintain a predictable debt service burden, the City will give preference in the future to debt that carries a fixed interest rate. An alternative to the use of fixed rate debt is variable rate debt.

The City may choose in the future to issue securities that pay a rate of interest that varies according to a pre-determined formula or results from a periodic remarketing of securities. When making the determination to issue bonds in a variable rate mode in the future, consideration will be given in regards to the useful life of the project or facility being financed or the term of the project requiring the funding, market conditions, credit risk and third party risk analysis, cost benefit of employing interest rate CAPS, and the overall debt portfolio structure when issuing variable rate debt for any purpose.

A. General Fund-Supported Debt

General Fund Supported Debt generally include Certificates of Participation ("COPs") and Lease Revenue Bonds ("LRBs"), which are lease obligations that are secured by a lease-back arrangement between the City and another related public entity. The general operating revenues of the City are pledged to pay the lease payments, which are, in turn, used to pay debt service on the LRBs or COPs. These obligations do not constitute indebtedness under the state constitutional debt limitation and, therefore, are not subject to voter approval.

Payments to be made under valid leases are payable only in the year in which use and occupancy of the leased property is available, and lease payments may not be accelerated. Lease financing requires the fair market rental value of the leased property to be equal to or greater than the required debt service or lease payment schedule. The City as lessee is obligated to place in its Annual Budget the rental payments that are due and payable during each fiscal year the City has

use of the leased property.

The City should strive to maintain its net General Fund-backed debt service at or less than ten percent (10%) of annually budgeted General Fund revenue. This ratio is defined as the City's annual debt service requirements on COPs and LRBs compared to total General Fund Revenues. This ratio, which pertains to only General Fund-backed debt, is often referred to as "lease burden."

B. Revenue Bonds

Long-term obligations payable solely from specific pledged sources, in general, are not subject to a legal debt limitation. Examples of such long-term obligations include those which achieve the financing or refinancing of projects provided by the issuance of debt instruments that are payable from restricted revenues or user fees (Enterprise Revenues) and revenues generated from a project.

In determining the affordability of proposed revenue bonds, the City shall perform an analysis comparing projected annual net revenues from pledged sources to estimated annual debt service on revenue bonds. The City should strive to maintain a debt service coverage ratio of at least 125% using historical and/or projected net revenues to cover annual debt service for bonds. The City may require a revenue rate increase or reduce operating costs so that revenues cover both operations and debt service costs, and create debt service reserve funds to maintain the required coverage ratio.

C. General Obligation (GO) Bonds

General Obligation Bonds are suitable for use in the construction or acquisition of improvements to real property that benefit the public at large. Examples of projects include libraries, parks, and public safety facilities. All GO bonds shall be authorized by the requisite number of voters in order to pass.

D. Joint Powers Authority (JPA) Revenue Bonds

The City may obtain financing through the issuance of debt by a joint exercise of powers agency with such debt payable from amounts paid by the City under a lease, installment sale agreement, or contract of indebtedness.

E. Capital Leases

Capital leases may be used to purchase buildings, equipment, furniture and fixtures. The term of any capital lease shall not exceed the useful life of the asset leased. Revenue bonds may be issued by the City or other entity that are secured by a City capital lease.

F. Short-term Borrowing

Short-term borrowing may be utilized for interim financing or for other purposes as described below. The City will determine and utilize the least costly method for short-term borrowing subject to the following policies:

- Bond Anticipation Notes (BANs) may be issued for capital related cash purposes to reduce the debt service during the construction period of a project or to provide interim financing for a project. The BANs shall not mature more than 5 years from the date of issuance.
- Lines of Credit shall be considered as an alternative to other short-term

borrowing options.

- Other Short-Term Debt may be used when such instruments provide an interest rate advantage or as interim financing.

G. Loans

The City is authorized to enter into loans, installment payment obligations, or other similar funding structures secured by a prudent source, or sources, of repayment.

H. Special Districts Financing

The Special Districts primarily consist of 1915 Act Assessment Districts ("Assessment Districts") and in the future may also include 1982 Mello-Roos Act Community Facilities Districts ("CFDs"). The City may consider requests for Special District formation and debt issuance when such requests address a public need or provide a public benefit. Each application shall be considered on a case-by-case basis as long as the City assumes no obligation under, or in connection with, such debt issuance.

VII. REFUNDING GUIDELINES

The designated Disclosure Officer shall monitor all outstanding City debt obligations for potential refinancing opportunities for debt obligations or disclosure responsibilities within his/her purview and should consider refinancing of outstanding debt to achieve annual savings. Any refinancing should not result in any increase to the weighted average life of the refinanced debt.

Under any savings scenario, the net present value assessment shall factor in all costs, including the total cost of issuance, escrow, and foregone interest earnings of any contributed funds on hand. Any potential refinancing shall additionally consider whether an alternative refinancing opportunity with higher savings can be reasonably expected in the future. When refinancing debt, it shall be the policy goal of the City to realize, whenever possible, and subject to any overriding non-financial policy considerations, minimum net present value debt service savings equal to or greater than 3.0% of the refunded principal amount.

Consideration of this method of refinancing shall place greater emphasis on determining whether an alternative refinancing opportunity with higher savings is reasonably expected in the future.

VIII. RELATIONSHIP OF DEBT TO CAPITAL IMPROVEMENT PROGRAM AND BUDGET

The City has established a Capital Improvement Program for replacing aging physical infrastructure. The City strives to maintain a level funding plan that will minimize the peaks and valleys in General Fund support levels and allows the funding of projects over time. The City will consider utilizing debt obligations only after giving due consideration to all available funding sources, including but not limited to available cash reserves, other strategic savings programs, available current revenues, potential future revenue sources, existing and potential grants, and all other financial sources legally available to be used for such purposes. When and if deemed an appropriate alternative, the City may issue debt for the purposes stated in this

Policy.

The City shall coordinate its debt issuances with the goals of its Capital Improvement Program by timing the issuance of debt to ensure that projects are available when needed in furtherance of the City's public purposes.

The City shall seek to issue debt in a timely manner to avoid having to make unplanned expenditures for capital improvements or equipment from its General Fund.

IX. INTERNAL CONTROL POLICIES

When issuing debt, in addition to complying with the terms of this Policy, the designated Disclosure Officer shall comply with any other applicable policies regarding initial bond disclosure, continuing disclosure, post-issuance compliance, and investment of bond proceeds for debt issuances or disclosure responsibilities within his/her purview.

The designated Disclosure Officer will periodically review the requirements of and will remain in compliance with the following:

- Any continuing disclosure undertakings under SEC Rule 15c2-12;
- Any federal tax compliance requirements, including without limitation arbitrage and rebate compliance, related to any prior bond issues; and
- The City's investment policies as they relate to the investment of bond proceeds.

Proceeds of debt will be held by the City or a third-party trustee.

X. COMMUNICATION, ADMINISTRATION AND REPORTING, AND INTERNAL CONTROL PROCEDURES

A. Rating Agency Relations and Annual or Ongoing Surveillance

The City Manager (or his or her written designee) shall be responsible for maintaining the City's relationships with Standard & Poor's Ratings Services, Fitch Ratings and Moody's Investors Service. In addition to general communication, the City Manager (or his or her written designee) shall:

- a. Ensure the rating agencies are provided updated financial information of the City as it becomes publicly available;
- b. If necessary, communicate with credit analysts at each agency as may be requested by the agencies; and
- c. Prior to a proposed new City debt issuance, schedule meetings or conference calls with agency analysts and provide a thorough update on the City's financial position, including the impacts of the proposed debt issuance.

B. Council Communication

The City Manager (or his or her written designee) should report feedback from rating agencies to the City Council, when and if available, regarding the City's financial strengths

and weaknesses and recommendations for addressing any weaknesses as they pertain to maintaining the City's existing credit ratings.

C. Debt Issue Record-Keeping

A copy of all debt-related records shall be retained at the City's offices. At minimum, these records shall include all official statements, bond legal documents/transcripts, resolutions, trustee statements, leases, and title reports for each City financing (to the extent available).

D. Compliance

When issuing debt, in addition to complying with the terms of this Policy, the City shall comply with any other applicable policies regarding initial bond disclosure, continuing disclosure, post-issuance compliance, and the investment of bond proceeds in accordance with applicable bond indentures and City Administrative Procedures (AP-009), concerning tax compliance with tax exempt bonds and Taxable Bonds. Without limiting the generality of the foregoing, the City shall periodically review the requirements of and shall remain in compliance with the following:

1. Continuing Disclosure

The designated Disclosure Officer shall comply with federal securities law, including any continuing disclosure undertakings entered into in accordance with Securities and Exchange Commission Rule 15c2-12 for debt obligations or disclosure responsibilities within his/her purview. The designated Disclosure Officer shall file the City's annual financial statements and other financial and operating data for the benefit of its bondholders within 270 days of the close of the fiscal year, or as required in any such agreement for any debt issue for debt obligations or disclosure responsibilities within his/her purview. The designated Disclosure Officer shall maintain a log or file evidencing that all continuing disclosure filings have been timely made for debt obligations or disclosure responsibilities within his/her purview.

2. Arbitrage Rebate

The use of bond proceeds and their investments shall be monitored by the designated Disclosure Officer with all Internal Revenue Code Arbitrage Rebate Requirements for debt obligations within his/her purview. The designated Disclosure Officer shall ensure that all bond proceeds and investments are tracked in a manner that facilitates accurate calculation; and, if a rebate payment is due, such payment is made in a timely manner for debt obligations within his/her purview.

3. Annual Reporting

California Government Code section 8855(k), or any successor statute, and the annual reporting requirements therein.

4. Other Compliance

Other compliance requirements imposed by regulatory bodies.

XI. AMENDMENT AND WAIVERS OF DEBT MANAGEMENT POLICY

- This Policy shall be reviewed and amended from time to time as appropriate, subject to City Council approval.
- There will be circumstances from time to time when strict adherence to a provision of this Policy is not possible or not in the best interest of the City.
- If the City staff has determined that a waiver of one or more provisions of this Policy should be considered by the City Council, it shall prepare an analysis for the City Council describing the rationale for the waiver and the impact of the waiver on the proposed debt issuance and on taxpayers, if applicable.
- Upon a majority vote of the City Council, one or more provisions of this Policy may be waived for a debt financing,
- The failure of a debt financing to comply with one or more provisions of this Policy shall in no way affect the validity of any debt issued by the City in accordance with applicable law.

XII. CONTINUING DISCLOSURE COMPLIANCE

The City shall remain in compliance with SEC Rule 15c2-12 by filing annual financial statements and other financial and operating data for the benefit of its bondholders as required in any such agreement for any debt issue and by filing notices of the enumerated events contained in SEC Rule 15c2-12. The City shall maintain a log or file evidencing that all continuing disclosure filings have been made within the time limits set forth in SEC Rule 15c2-12.

Upon the requirement of entering into a continuing disclosure obligation, the City Manager, the Assistant City Manager, the City Treasurer, or other senior staff, or other executive positions within the City, as relevant and appropriate, shall provide written notice to the designated Disclosure Officer of receipt by the City of any default, event of acceleration, termination event, modification of terms (only if material or may reflect financial difficulties), or other similar events (collectively, a "Potentially Reportable Event") under any agreement or obligation to which the City is a party and which may be a "financial obligation" as discussed below. Such written notice should be provided to the designated Disclosure Officer as soon as the City Manager or other senior staff is placed on written notice by City staff, consultants, or external parties of such event or receives written notice of such event so that the designated Disclosure Officer can determine, with the assistance of disclosure counsel, whether notice of such Potentially Reportable Event is required to be filed on EMMA pursuant to the disclosure requirements of SEC Rule 15c2-12. If filing on EMMA is required, the filing is due within 10 business days of such Potentially Reportable Event to comply with the continuing disclosure undertaking for the various debt obligations of the City.

The designated Disclosure Officer, or other senior staff or other executive positions within the City, as applicable, will report to the City Manager (or his or her written designee) the execution by the City of any agreement or other obligation which might constitute a "financial obligation" for purposes of SEC Rule 15c2-12 and which is entered into on or after October 1, 2019. Amendments to existing City agreements or obligations with "financial

obligation" which relate to covenants, events of default, remedies, priority rights, or other similar terms should be reported to the designated Disclosure Officer as soon as the City Manager, City Attorney, the Director of Administrative Services, or such other senior staff is placed on written notice by City staff, consultants, or external parties of such event or receives a written notice of such amendment requests. Notice to the designated Disclosure Officer is necessary so that he/she can determine, with the assistance of disclosure counsel, whether such agreement or other obligation constitutes a material "financial obligation" for purposes of SEC Rule 15c2-12. If such agreement or other obligation is determined to be a material "financial obligation" or a material amendment to a "financial obligation" described above, notice thereof would be required to be filed on EMMA within 10 business days of execution or incurrence. The types of agreements or other obligations that could constitute "financial obligations" and which could need to be reported on EMMA include:

1. Bank loans or other obligations which are privately placed;
2. State or federal loans;
3. Commercial paper or other short-term indebtedness for which no offering document has been filed on EMMA;
4. Letters of credit, surety policies or other credit enhancement with respect to the City's publicly offered debt;
5. Letters of credit, including letters of credit that are provided to third parties to secure the City's obligation to pay or perform (an example of this is a standby letter of credit delivered to secure the City's obligations for performance under a mitigation agreement);
6. Capital leases for property, facilities, fleet or equipment; and
7. Agreements which guarantee the payment or performance obligations of a third party (regardless of whether the agreements constitute guarantees under California law).

Types of agreements which could be a "financial obligation" under SEC Rule 15c2-12 include:

1. Payment agreements that obligate the City to pay a share of another public agency's debt service (for example, an agreement with a joint powers agency whereby the City agrees to pay a share of the joint powers agency's bonds, notes or other obligations); and
2. Service contracts with a public agency or a private party pursuant to which the City is obligated to pay a share of such public agency or private party's debt service obligation (for example, certain types of public-private partnership ("P3") arrangements).

Types of agreements that may be a "financial obligation" subject to SEC Rule 15c2-12 include:

1. Any agreement the payments under which are not characterized as an operation and maintenance expenses for accounting purposes if such agreement could be characterized as the borrowing of money.

The designated Disclosure Officer shall continue to work with the City Attorney and disclosure counsel to refine the definition of financial obligation going forward based on future SEC or MSRB guidance for debt obligations or disclosure responsibilities within his/her purview.

XIII. GLOSSARY

Arbitrage. The difference between the interest paid on the tax-exempt securities and the interest earned by investing the security proceeds in higher-yielding taxable securities. IRS regulations govern arbitrage on the proceeds from issuance of municipal securities.

Bond Anticipation Notes (BANs). Notes which are paid from the proceeds of the issuance of long-term bonds. Typically issued for capital projects.

Call Provisions. The terms of the bond giving the issuer the right to redeem all or a portion of a bond prior to its stated date of maturity at a specific price, usually at or above par.

Capitalized Interest. A portion of the proceeds of a bond issue which is set aside to pay interest on the same bond issue for a specific period of time. Interest is commonly capitalized for the construction period of the project.

Capital Lease. A lease obligation that has met the criteria to be categorized as a capital lease as opposed to an operating lease under generally accepted accounting principles. Capital leases are common in certain types of financing transactions involving the use of revenue bonds as opposed to general obligation bonds.

Competitive Sale. A sale/auction of securities by an issuer in which underwriters or syndicates of underwriters submit sealed bids to purchase the securities.

Continuing Disclosure. The principle that accurate and complete information material to the transaction which potential investors would be likely to consider material in making investment decisions with respect to the securities be made available on an ongoing basis.

Debt. Any obligations of the City for the payment of money issued pursuant to the City of Duarte Debt Management Policy.

Debt Service Reserve Fund. The fund in which moneys are placed which may be used to pay debt service if pledged revenues are insufficient to satisfy the debt service requirements.

Escrow. A fund established to hold moneys pledged and to be used to pay debt service on an outstanding issue.

General Obligation Bonds. Bonds issued by the City secured by the City's pledge of its full faith and credit and unlimited taxing power.

Pay-As-You-Go. An issuer elects to finance a project with existing cash flow as opposed to issuing debt obligations.

Present Value. The current value of a future cash flow.

Private Placement. The original placement of an issue with one or more investors as opposed to being publicly offered or sold.

Rebate. A requirement imposed by Tax Reform Act of 1986 whereby the issuer of tax-exempt bonds must pay the IRS an amount equal to its profit earned from investment of tax-exempt bond proceeds at rates exceeding the tax-exempt borrowing rate. The tax-exempt borrowing rate (or "bond yield") is calculated pursuant to the IRS code together with all income earned on the accumulated profit pending payment.

Refunding. A transaction in which the City refinances an outstanding issue by issuing new (refunding) bonds and using the proceeds to immediately retire the old (refunded) bonds.

Revenue Bonds. Bonds issued by the City secured by a specific revenue pledge of rates, rents or fees.

General Fund -Supported Debt. Debt that is expected to be repaid from the general fund tax revenues of the City. This includes general obligation bonds, appropriation-supplied bonds, capital leases and in certain circumstances moral obligation bonds. For the purpose of this Debt Management Policy, net tax-supported debt includes general obligation debt for the City and School Board, certain bonded capital leases, and any moral obligation bonds for which the City has deposited funds to a debt service reserve fund as requested to replenish such reserve fund.

Underwriter. A dealer that purchases new issues of municipal securities from the Issuer and resells them to investors.

Underwriter's Discount. The difference between the price at which bonds are bought by the Underwriter from the Issuer and the price at which they are reoffered to investors.



Manuel Enriquez <menriquez@accessduarte.com>

Sun, Sep 8, 2019 at 9:43 PM

To: Doug Edwards <revdougward@yaho.com>

Cc: Pam Romero <promero@accessduarte.com>, Anne Wilkins <quiltinfool94@yahoo.com>, Barbie Bylsma-Houghton <lifeguardbarbie@gmail.com>, Elisabeth Dugan <elisabethdugan@gmail.com>, Jim Dinsmore <easyrun2@yahoo.com>, Kirsten Nielsen <kirsten.nielsen@verizon.net>, Ted Rudolph <gotedrudolph@gmail.com>, Marla Akana <makana@accessduarte.com>

Hi Doug,

Thank you for notifying the commission of your departure. On behalf of the City of Duarte, we appreciate the contributions you've made and thank you for your volunteer service.

Best regards,

Manuel

On Thu, Sep 5, 2019 at 6:32 PM Doug Edwards <revdougward@yaho.com> wrote:

Dear Colleagues

I shall be resigning from the DUSD Board of Education effective September 20th. The Board shall appoint a member to this Commission

Continue your great service to Duarte's residents, businesses and visitors

In Faith

The Rev Doug Edwards

Sent from my iPhone



NOTICE: This communication with its contents may contain confidential and/or legally privileged information. It is solely for the use of the intended recipient(s). If you are not the intended recipient, you are unauthorized to intercept, review, use or disclose this correspondence.

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Manuel Enriquez

Director, Parks and Recreation

City of Duarte

accessduarte.com

MEMORANDUM

TO: Mayor and Councilmembers

FROM: Darrell J. George, City Manager

DATE: September 18, 2019

SUBJECT: Conference Attendance – City Council Meeting of September 24, 2019

Monrovia Duarte Black Alumni Association
27th Annual Scholarship Gala
November 9, 2019 – 6:00 p.m.
Double Tree Hotel, Monrovia

Tickets: \$75 each or \$70 each if purchasing more than one ticket



Byron J. Hurst
President

Monrovia-Duarte Black Alumni Association

Post Office Box 1638 • Monrovia, California 91017 • Phone (951) 202-0042

RECEIVED

SEP 10 2019

CITY OF DUARTE

August 3, 2019

To whom it may concern,

The Monrovia Duarte Black Alumni Association (MDBAA) Organization has been in existence since 1992. We are a non-profit organization whose focus is on the education of the youth in the Monrovia and Duarte Communities. MDBAA members are committed reinvest in the youth of their alma maters Monrovia and Duarte High Schools. We sponsor various events throughout the year that provide educational opportunities, foster community and raise funds for scholarships.

The MDBAA awards annual monetary scholarships to graduating seniors attending Monrovia and Duarte High School that are going on to college. Eight (\$1,000) scholarships were awarded to in June 2019. The funding for these scholarships that assist with the continued educational pursuits of local youth is attained through fundraising and generous donations.

We would like to invite your organization to attend and consider becoming a sponsor for our upcoming fundraising event, our Annual Scholarship Gala to be held on Saturday, November 9, 2019, at the Monrovia Doubletree by Hilton. Our theme for this year's Gala is "Honoring Our Rich History and Our Bright Future". The night will include dinner, a presentation to our 2019 Honorees, and entertainment.

Your generosity will benefit well deserving Monrovia and Duarte High School seniors; allow us to provide community building and educational events as well as create an opportunity for us to highlight you as an agency that invest in our youth.

Please find enclosed an Invitation and a Sponsorship Participation Form for your consideration.

Thank you for your support. If you have any questions or need further information, feel free to contact me at: (951) 202-0042.

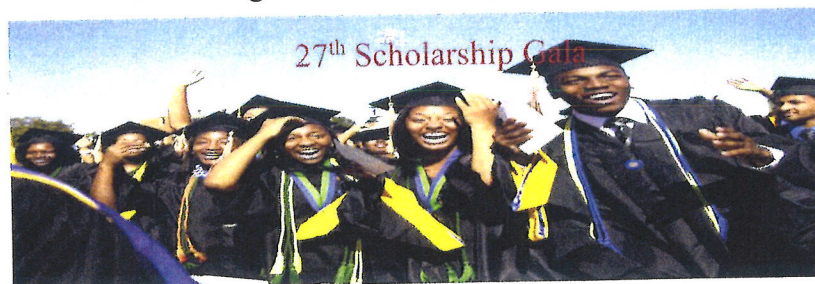
Byron J. Hurst,

Byron J. Hurst

President, Monrovia/Duarte Black Alumni Association
Scholarship Gala Chairman

Monrovia Duarte Black Alumni Assoc.

Honoring Our Rich History and Bright Future



924 W. HUNTINGTON DR.
MONROVIA, CA 91016
DOUBLE TREE HOTEL

\$75ea or \$70 two
COCKTAIL ATTIRE
REQUESTED

Duarte City Councilmember Meeting Attendance Report

Per Government Code Section 53232.3 (d): Members of a legislative body shall provide brief reports on meetings attended at the expense of the local agency at the next regular meeting of the legislative body.

City Council Agenda dated September 24, 2019

COUNCILMEMBER NAME	EVENT DESCRIPTION	DATE OF EVENT	PURPOSE/VALUE
Tzeitel Paras-Caracci	None reported as of September 19, 2019		
Sam Kang	None reported as of September 19, 2019		
John Fasana	None reported as of September 19, 2019		
Liz Reilly	Maryvale Dinner Celebration LA County Library Commission Meeting COG Energy, Environment, & Natural Resources Committee Meeting	9/12/19 9/18/19 9/18/19	Mileage Mileage Mileage
Margaret Finlay	None reported as of September 19, 2019		
Bryan Urias	None reported as of September 19, 2019		
Toney Lewis	None reported as of September 19, 2019		

Meetings attended that did not require financial support from the City.

COUNCILMEMBER NAME	EVENT DESCRIPTION	DATE OF EVENT	PURPOSE/VALUE
Tzeitel Paras-Caracci	None reported as of September 19, 2019		
Sam Kang	None reported as of September 19, 2019		
John Fasana	None reported as of September 19, 2019		
Liz Reilly	Library Declutter Workshop Elks Club Casino Night Fundraiser What's Happening in Duarte at Senior Center Foothill Family Advisory Board Meeting TALK Re: Emergency Preparedness Chamber Breakfast Re: 2020 Census	9/7/19 9/7/19 9/9/19 9/10/19 9/16/19 9/17/19	
Margaret Finlay	None reported as of September 19, 2019		
Bryan Urias	None reported as of September 19, 2019		
Toney Lewis	None reported as of September 19, 2019		