

## WORK ORDER\_Rev1

**Customer:**  
City of Smyrna  
Attention: Mayor Derek Norton  
2800 King Street  
Smyrna, GA 30080

**GPC:**  
Georgia Power Company  
Attention: Latanza Adjei  
241 Ralph McGill Blvd.  
Atlanta, Georgia 30308

This “**Work Order**” (hereinafter referred to as the “Work Order”) is issued pursuant to and under the referenced MSA-2024-01 Master Agreement for Energy Related Services (“MSA”), between Customer and GPC. The Services shall be governed by and subject to the terms and conditions in the Agreement, except to the extent expressly amended herein. GPC agrees to perform and provide Customer with Services described below in accordance with the terms and conditions contained in the MSA, its Exhibits, the Exhibits to this Work Order identified below as included, and any supplemental provisions set forth in this Work Order. A capitalized term which appears in this Work Order or any of its Exhibits shall have the same meaning as assigned to it in the MSA.

### DESCRIPTION OF SERVICES

**OPTIONS:**

- Scope of Services (EXHIBIT A)**
- CONSTRUCTION FORECAST SCHEDULE (EXHIBIT B)**
- COMPENSATION PAYMENT SCHEDULE (EXHIBIT C)**
- CERTIFICATE OF FINAL ACCEPTANCE (EXHIBIT D)**
- TERMINATION PAYMENT SCHEDULE (EXHIBIT G)**

### AGREED VALUE OF SERVICES TO BE PROVIDED

Payments to GPC for Services provided will be made in the form of monthly Energy Services fee, as described in the MSA-2024-01 and in the attached Exhibits. To calculate the early Termination Fee Payments, set out in the attached Exhibit G, the parties have agreed that the reasonable value of the Services provided by GPC is \$10,194,596.00 contingent upon execution of Work Order #2024-01\_Rev1 on or before July 16, 2024.

### SUPPLEMENTAL PROVISIONS

1. To secure financing for these Services, Georgia Power may assign this Work Order to financial institution and grant that financial institution a security interest in the materials and equipment which form the basis of the Services to be provided. Any such assignment or security interest will be subject to the rights and interests of the Customer as set out in the MSA.
2. The parties anticipate that this Work Order will terminate at the end of the calendar year, but that it will be continuously renewed thereafter for one-year terms and for a total of one hundred and twenty (120) months following the Final Retrofit Acceptance date established for these services and described in the MSA. If this Work Order is not continuously renewed for a total of one hundred and twenty (120) months from the Final Retrofit Acceptance date,

then to compensate GPC for its investment, GPC will be paid an early termination payment in accordance with the schedule in Exhibit G Termination Payment Schedule. By way of example, if the Final Retrofit Acceptance date for these Services is August 1, 2026, and the Work Order is not renewed by December 31, 2026, then the early termination payment to GPC would be either the amount reflected for Month 4 in Exhibit G, if the non-renewal occurs before the Month 4 Energy Service payment is made, or the amount associated with Month 5 in Exhibit G, if the non-renewal occurs after the Month 4 Energy Services payment is made to GPC.

3. If the Work Order is renewed for consecutive terms for a total of one hundred and twenty (120) months following the Final Retrofit Acceptance date, or upon the payment to GPC by Customer of all amounts due under the MSA and this Work Order, then title to all materials and equipment furnished as part of the Services will pass to the Customer without payment of any additional fee.

**AGREED TO BY:**  
**CITY OF SMYRNA**  
**("Customer")**

**ACCEPTED BY:**  
**GEORGA POWER COMPANY**  
**("GPC")**

By: \_\_\_\_\_  
(Signature)

By: \_\_\_\_\_  
(Signature)

Derek Norton  
(Name typed or printed)

Latanza Adjei  
(Name typed or printed)

Title: Mayor

Title: SVP, Customer Experience

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**SCOPE OF SERVICES:**

GPC will provide the scope of services as described herein for **ECM1 HVAC Systems Upgrades** with GPS ionization and Duct Cleaning Citywide for City Hall, Community Center, Public Library, Brawner Hall, Police Station, Jail, Public Works, Wolfe Recreation Center, Fire Station #1, Fire Station #2, Fire Station #3, Fire Station #4, Fire Station #5, Recycling Center, and HVAC retrofits for Brinkley Park, Chuck Camp Park, Cobb Park, Tolleson Park and Ward Park; **ECM2 Duct Cleaning, Commissioning & Final TAB** including interior ductwork cleaning, commissioning (HVAC systems startup & final checkout), TAB (Test, Adjust, and Balance) of HVAC systems Citywide for City Hall, Community Center, Public Library, Brawner Hall, Police Station, Jail, Public Works, Wolfe Recreation Center, Fire Station #1, Fire Station #2, Fire Station #3, Fire Station #4, Fire Station #5 and Recycling Center. **ECM3 Interior LED Lighting Upgrades** Citywide for Community Center, Public Library, Brawner Hall, Police Station, Jail, Public Works, Wolfe Recreation Center, Fire Station #1, Fire Station #3, Fire Station #4, Fire Station #5, and Recycling Center. **ECM4 MCC & Transformers for Community Center, Generator with ATS (Automatic Transfer Switches)** for Police Station/Jail, Public Works, Fire Station #1, Fire Station #2, Fire Station #3, Fire Station #4, and Fire Station #5 as listed in the ECM (Energy Conservation Measure) tables below including the specific scope of work for each facility as outlined below.

The scope includes installation, supervision, labor, materials, tools, construction equipment (i.e., crane, boom trucks, man lifts, equipment lull, etc.), material demolition, legal disposal of material, and recycling of equipment.

Pull permits as needed for the replacement and retrofit systems. Reclaim all refrigerant in accordance with EPA guidelines. Furnish all trucking and freight for the removal, replacement and to haul the old units off to be recycled. Provide a dumpster throughout the course of the demolition work.

Perform project cleanup and review completed items with City of Smyrna personnel. Complete systems start-up, commissioning, check-out, and conduct project close-out tasks for each new system installed.

Provide close-out documents and O&M (Operations & Maintenance) manuals. Furnish training for City of Smyrna personnel regarding new systems, updated controls operations and O&M procedures as needed.

Provide items required for the execution and completion of the ECMs as listed in the following table:

Energy Conservation Measures	ECMs General Descriptions Table
ECM1 HVAC Systems Upgrades	Upgrade/Retrofit HVAC Systems for Citywide Facilities Listed Below
ECM2 Duct Cleaning and Final TAB	HVAC Duct Cleaning & Final TAB for Citywide Facilities Listed Below
ECM3 Interior Lighting LED Upgrades	LEDs Lighting Upgrades for Citywide Facilities Listed Below
ECM4 MCC, Generators & ATS	MCC at Community Center, Generators/ATS PS, PW & Fire Stations

ECMs implemented at a specific facility impacted by the measure(s) will be outlined in an ECM General Description Table followed by an ECM High-Level Summary Table and then the Scope of Services will be provided for each ECM at each facility as indicated below.

Energy Conservation Measure	ECM General Description Table
ECM1 HVAC Systems Upgrades	Retrofit HVAC Systems for Citywide Facilities as Listed Below

### **ECM1 HVAC Systems Upgrades – Scope of Services for Facilities Listed**

Facility	ECM1 High-Level Summary Table
City Hall Hot Water System	Hot Water Variable Flow Pumping, Valves, Pump, VFD, GPS & SP ERU
Community Center	Replace 10-WSHPs, 9-Pumps, 2-Boilers, 3-Splits, 12-EFs, and add GPS
Public Library	Replace 6-WSHPs, 8-EFs add Variable Flow Pumping for CC and add GPS
Brawner Hall	Replace CH1, B1, CP-1, 2, add VFDs, replace 6-CHW valves add VFP, GPS
Police Station/Jail	Replace 4-RTUs, 2-ERUs, 1-Split, steel modifications, controls, and GPS
Public Works	Replace 5-Splits, GPS for 1-RTU, 8-Split Systems, new Wi-Fi Thermostats
Wolfe Recreation Center	Replace 6-Splits, add GPS for 6-Splits, & 1-ERU & update CMS drawings
Fire Station #1	Modify RA Duct, replace water heater, add GPS 2-AHUs, & CMS drawings
Fire Station #2	Add GPS (Global Plasma Solutions) Ionization for 2-AHUs and 1-RTU
Fire Station #3	Replace 3-Splits, 3-thermostats and add GPS ionization for 3-FCUs
Fire Station #4	Replace 1-Split, 1-thermostat and add GPS ionization for 2-FCUs
Fire Station #5	Replace 4-Splits, 4-thermostats and add GPS ionization for 4-FCUs
Recycling Center	Replace 1-Split, 1-thermostat and replace UHs with IR tube type heaters
Brinkley Park	Replace 6-Split Systems and 6-Thermostats
Chuck Camp Park	Replace 2-Split Systems and 2-Thermostats
Cobb Park	Replace 4-Split Systems and 4-Thermostats
Tolleson Park	Replace 1-Split, 2-Furnaces, 3-New Splits (Press Box, Men/Women RRs)
Ward Park	Replace 1-Wall Pack Packaged System and 1-Thermostat

### **ECM1 HVAC Systems Upgrades – City Hall Scope of Services**

**Provide Hot Water Variable Flow Pumping (VFP), Valves, Pump, VFD, GPS and ERU Surge Protection.**

1. Demo the existing hot water pump, motor starter, and 5-3W (Way) control valves.
2. Furnish and install a new 7.5 HP replacement hot water pump and motor.
3. Furnish and install a new VFD (Variable Frequency Drive) to replace the existing starter.
4. Re-pipe the new HW (Hot Water) pump to the existing manual shutoff valves.
5. Reconnect the existing power wiring to the new VFD to control new pump.
6. Install DP (Differential Pressure) sensor for variable flow pumping to control pump VFD.
7. Replace 5-existing 3W HW control valves with 4-new 2W and 1-new 3-W HW control valves.
8. Reinsulate the disturbed insulation on the new pump and valves.
9. Drain and flush the HW system with a cleaning detergent.
10. Disconnect and reconnect the controls to the HW valves.
11. Provide new variable speed pumping sequence of operation for new pump and valves.
12. Provide GPS Ionization system for AHU1, AHU2, AHU3, AHU4 & AHU5 sized for AHU CFM.
13. An GPS ionization unit will not be installed for ERU. This system supplies 100% outside air to the split systems therefore, there is no benefit from ionization for the ERU.
14. Provide SP (Surge Protector) for new ERU (Energy Recovery Unit).
15. Update controls and controls as-built drawings to include these modifications.
16. Final TAB will be performed after completion of ECM2 Duct Cleaning as indicated below.

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## **ECM1 HVAC Systems Upgrades – Community Center Scope of Services**

### **Replace WSHPs, Splits, Boilers, Pumps, add Variable Flow Pumping, Pump VFDs, CT Fan VFDs, and GPS.**

1. Disconnect and demo the existing 10-WSHPs, 9-Pumps, 2-Boilers, 3-Split systems, and 12-Exhaust Fans as described below.
2. Repair ceiling grid where the 3-ceiling mounted units were removed from the Magnolia room.
3. It was agreed to abandon the packaged roof mounted Trane make-up air unit serving the kitchen since the cost to replace the packaged unit is prohibitive because the kitchen is not used often enough and is not being operated as originally designed.
4. Furnish and install the following equipment:
  - a. (10) New WSHPs, replace HP-9, HP-10, HP-12, HP-13, HP-14, HP-15, HP-15A, HP-16, HP-17, & HP-18. Note, HP-11 is new and will not be replaced. However, HP-11 will receive a new solenoid control valve like the (10) new WSHPs being replaced.
  - b. (9) New Pumps, replace Loop Water Pumps (LP-1, LP-2, LP-3), Primary Loop Pumps (P-4, P-5, P-6) and Boiler Pumps (P-1, P-2, P-3).
  - c. (2) New Condensing Boilers, replace 2-natural draft boilers (B-1, B-2).
  - d. (3) New Split Systems, replace (3) ceiling mounted Fan Coil Units (FCU-1, 2, 3) and (3) roof mounted Condensing Units (CU-1, 2, 3) serving the Magnolia meeting room. Disconnect, reconnect, and reuse the 3-existing thermostats to control the 3-new split systems as currently operated.
  - e. (12) New Exhaust Fans, replace EF-11, EF-12, EF-13, EF-14, EF-15, EF-16, EF-17, EF-18, EF-19, EF-20, EF-2, and EF-22.
  - f. The Goodman split system in Kitchen storage room is newer and will not be replaced.
  - g. The Trane roof mounted make-up unit for Kitchen was abandoned and will not be replaced because the Kitchen is rarely used and cost prohibitive to replace.
  - h. The 2-Evapco Cooling Towers (CT) are newer and will not be replaced. VFDs however will be added to the 2-CT fan motors for variable speed fan operation.
5. Replace all 11-WSHP hose kits with new hose kits having shutoff valves, solenoid control valve and balancing valves on each WSHP. The new solenoid control valves for the 11-WSHPs will be used for providing variable flow control for the Community Center WSHP loop pump. This work will be done on a weekend after draining the system.
6. Replace the MPVs (multi-purpose valves) and suction diffusers on the 3-new loop pumps (LP-1, LP-2, LP-3) and 3-new primary pumps (P-4, P5, P6).
7. Furnish and install new ductwork transitions to accommodate the newly installed units.
8. Furnish and install new refrigerant piping for the 3-replacement split systems.
9. Tie-in the existing CW piping to the newly installed WSHPs. Extend as needed.
10. Tie-in the existing condensate piping to the newly installed WSHPs. Extend as needed.
11. Install new flue rated for the condensing boiler application. Open the existing chimney and close back after the installation is completed, if needed.
12. Tie-in the existing HW piping to the new boilers (B-1, B-2) and boiler pumps (P-1, P-2, P-3).
13. Install all new sensors as needed for the boiler operation.
14. Insulate all newly installed piping on the new boilers.
15. Flush piping system with detergent to help clean the interior piping and interior of the coils.
16. Replace breakers/install fused disconnects and pull new wire as needed to accommodate the new WSHP amp draws as needed.
17. Disconnect 12-existing EFs (Exhaust Fans) from ductwork, power, controls, demo EFs, furnish and install 12-new EFs reconnect to ductwork, power, and existing controls.

18. Disconnect the Distech controls a the existing 10-WSHPs, reconnect controls to the 10-new WSHPs and check-out the controls system for proper operation. Provide controls points for the 11-new solenoid valves to be added to the 10-new WSHP and 1-existing WSHP.
19. Provide the necessary new Distech controls for the CT Fan VFDs, the variable flow pumping sequence of operation, the pump VFDs, the differential pressure sensor and controls points as needed to perform the new sequences of operation for variable flow.
20. Update the controls sequences, devices and modify the as-built drawings to reflect the changes.
21. Furnish and install GPS ionization for all 11-WSHPs sized for the CFM of the units.
22. Commissioning and final TAB will be completed after ECM2 Duct Cleaning is complete.
23. Carbon monoxide detectors for the boilers and interlock with the existing FAS (Fire Alarm System) is excluded and is to be provided by the FAS contractor.

## **ECM1 HVAC Systems Upgrades – Public Library Scope of Services**

### **Replace 6-WSHPs, 8-EFs, Maintain Constant Flow Pumping and add GPS.**

1. Remove all ceiling grid under the (4) existing WSHPs to facilitate the changeout. Replace the grid and tile upon completion.
  2. Remove all hard ceiling under the (2) Men’s bathroom units. Replace the ceiling and paint to match upon completion.
  3. Remove the duct and any conduits conflicting with the path for the replacement men’s bathroom units. Reinstall upon completion.
  4. Disconnect and demo the existing 6-WSHPs (HP-1, 2, 5, 6, 7, & 8).
  5. Furnish and install the following equipment:
    - a. (6) New WSHPs, replace HP-1, HP-2, HP-5, HP-6, HP-7, & HP-8. Note that HP-3 & HP-4 are new and will not be replaced. However, HP-3 & HP-4 will receive a new solenoid control valve like the (6) new WSHPs being replaced.
    - b. (8) Exhaust Fans, replace EF-A, EF-B, EF-C, EF-D, EF-E, EF-F, EF-G & EF-H.
  6. Replace all 8-WSHP hose kits with new hose kits having shutoff valves, and 3W control valves and balancing valves on each WSHP. The 3W valves for the 8-WSHPs will be used as by-pass flow control system for the Library WSHP loop pumps. This work will be done on a weekend.
  7. Furnish and install GPS ionization for all 8-WSHPs sized for the CFM of the units.
  8. Furnish and install new ductwork transitions to accommodate the newly installed units.
  9. Tie-in the existing CW piping to the newly installed WSHPs. Extend as needed.
  10. Tie-in the existing condensate piping to the newly installed WSHPs. Extend as needed.
  11. Provide the necessary new Distech controls for the variable flow pumping sequence of operation, the differential pressure sensor and controls points as needed to perform the new sequences of operation for variable flow.
  12. Update the controls sequences, devices and modify the as-built drawings to reflect the changes.
  13. Replace breakers/install fused disconnects and pull new wire as needed to accommodate the new WSHP amp draws as needed.
  14. Disconnect 8-existing EFs (Exhaust Fans) from ductwork, power, controls, demo EFs, furnish and install 8-new EFs reconnect to ductwork, power, and existing controls.
  15. Demo 2-existing EFs serving existing storage closets and cap existing ductwork.
  16. Furnish new access doors in sheetrock ceiling for future maintenance needs.
  17. Disconnect and reconnect the Distech controls for the loop water valves for each WSHP.
  18. Flush piping system with detergent to help clean the interior piping and interior of the coils.
  19. Update the controls sequences, devices and modify the as-built drawings to reflect the changes.
  20. Provide close-out documents and O&M (Operations & Maintenance) manuals.
  21. Commissioning and final TAB will be completed after ECM2 Duct Cleaning is complete.
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## **ECM1 HVAC Systems Upgrades – Brawner Hall Scope of Services**

### **Replace CH1, B1, CP-1,2, 13-PIUs, 7-CHW Valves, add CHW Variable Flow Pumping, and GPS.**

1. Disconnect and demo the existing air-cooled chiller and boiler.
2. Furnish and install the following replacement equipment:
  - a. Air Cooled Chiller (CH-1)
  - b. Hot Water Heating Boiler (B-1)
3. Furnish and install the following replacement equipment:
4. Furnish and install all piping as necessary for new equipment and insulate all newly installed piping for chiller, CHW pumps and boiler along with (7) HW and (7) CHW valves.
5. Heat tracing to any extended piping for freeze protection.
6. Disconnect the high voltage wiring on the pumps and motor starters.
7. Demo and remove the existing chilled water pumps and starters.
8. Furnish and install the following equipment:
  - a. (2) CHW pumps to match the existing capacity with inverter duty rated motors.
  - b. (2) VFDs for new CHW pumps in place of the demolished motor starters.
9. Replace (1) 3-way and (6) 2-way chilled water control valves for 7-AHUs.
10. Replace (7) 3-way hot water control valves with (7) new 3-way control valves for 7-AHUs.
11. Furnish and install GPS ionization for all the 7-AHUs sized for the CFM of the units.
12. Disconnect 23-existing PIUs from the ductwork, power, and controls.
13. Demo 23-PIUs and the associated ductwork insulation and transitions.
14. Furnish and install 23-new PIUs to match existing including new duct heaters.
15. Furnish and install duct transitions for the new PIUs to be tied into existing ductwork.
16. Insulate all newly installed ductwork transitions from primary air duct to PIU discharge.
17. Reconnect the existing 23-PIU Distech controllers and reconnect power.
18. Remove, store, reinstall and startup Distech controllers for 14-valves and 23-PIUs.
19. Provide the necessary new Distech controls for the variable flow pumping sequence of operation, the differential pressure sensor and controls points as needed to perform the new sequences of operation for variable flow.
20. Update the controls sequences, devices and modify the as-built drawings to reflect the changes.
21. Flush piping system with detergent to help clean the interior piping and interior of the coils.
22. Provide all high voltage electrical for new installation.
23. Disconnect the existing exhaust fans from the duct and power.
24. Demo 2-exhaust fans and the associated transitions per the scope of work.
25. Furnish and install 2-new exhaust fans per the scope of work.
26. Furnish new access doors in sheetrock ceilings for future maintenance needs.
27. Reconnect the existing power and controls to new EFs.
28. Commissioning and final TAB will be completed after ECM2 Duct Cleaning is complete.
29. Carbon monoxide detectors for the boilers and interlock with the existing FAS (Fire Alarm System) is excluded and is to be provided by the FAS contractor.

## **ECM1 HVAC Systems Upgrades – Police Station/Jail Scope of Services**

### **Replace 4-RTUs, 2-ERUs, 1-Split, Furnish Steel Modifications, Roofing, Controls Changes, and GPS.**

1. Disconnect the (2) existing RTUs w/ERU (ERU-P1A/P1B) sections from the existing electrical, controls, curbs/duct, and condensate.
2. Furnish an adapter curb for the ERU to incorporate the horizontal discharge requirement.
3. Furnish and install a curb rail for the condenser section of the ERU.
4. Furnish and install the following ERU equipment and scope:

- a. 1-New ERU to replace 2-existing (ERU-P1A/P1B)
  - b. Install new disconnect, wiring, and conduit as needed for the new ERU.
  - c. Replace the existing, rusted ductwork on the roof.
  - d. Provide structural engineering evaluation to modify structure.
  - e. Furnish structural modifications (steel, supports, welding, etc.).
  - f. Provide necessary roofing modification for the new curb rail for the new ERU.
  - g. Install new condensate piping for the new ERU.
  - h. Install new gas piping for the new ERU from the existing main.
  - i. Startup newly installed ERUs per manufacturer's recommendations.
  - j. Complete the project and close-out. Provide all ERU O&M documentation.
5. Reconnect the new ERU to the existing power feed.
  6. Provide the necessary new Distech controls for the new ERU sequence of operation and controls points as needed to perform the new sequences of operation.
  7. Furnish and install the following 4-RTUs and 1-FCU equipment and scope:
    - a. Reclaim all refrigerant in accordance with EPA guidelines.
    - b. Disconnect 4-RTUs from the existing electrical, controls, curbs/duct, and condensate.
    - c. Furnish a crane for the equipment replacement. The units will be replaced on a weekend.
    - d. Furnish an adapter curb for the unit that is embedded in the stucco wall to gain the necessary clearance.
    - e. Temporarily remove a portion of the cage in the evidence room to replace the indoor split system.
    - f. Furnish and install 4-RTUs (RTU-P1, P5, P6, P7)
    - g. Furnish and install 1-FCU split system (FCU-P1A)
    - h. Replace electrical disconnects/whips if in poor condition.
    - i. Extend the electrical to the new tie-in points.
    - j. Reconnect the controls and curbs/duct (any new controls work by CMS)
    - k. Install new condensate piping for the new RTUs.
    - l. Repair the stucco wall for a like-new appearance for RTU-P7. Paint to finish.
  8. Reconnect the existing power and controls to new HVAC units.
  9. Furnish and install GPS ionization for all 10-RTUs and 2-FCUs sized for the CFM of the units.
  10. Update the controls sequences, devices and modify the as-built drawings to reflect the changes.
  11. Commissioning and final TAB will be completed after ECM2 Duct Cleaning below.

## **ECM1 HVAC Systems Upgrades – Public Works Scope of Services**

### **Replace 5-of-8-Splits, add GPS for 1-Packaged Unit, 8-Split Systems, and provide new Wi-Fi Thermostats.**

1. Remove/replace lay-in ceilings as needed. No accommodation has been made for sheetrock removal/replacement.
2. Disconnect the 5-splits from the existing electrical, controls, duct, and condensate.
3. Demo and remove the existing 5-split systems to be replaced along with line sets.
4. Furnish and install the following equipment:
  - a. (1) 2-ton ducted split system with furnace
  - b. (2) 3-ton ducted split systems with furnaces
  - c. (2) 3.5-ton ducted split systems with furnaces
5. Furnish and install new line sets as needed.
6. Furnish and install new duct transitions to tie-in to the existing ductwork.
7. Tie-in the new furnaces to the existing flue venting with extension as needed.
8. Tie-in the new furnaces to the existing gas piping with extension as needed.

9. Reconnect the electrical and replace disconnects and extend with new whips if required.
10. Charge the newly installed systems with refrigerant.
11. Reconnect the existing power feeds.
12. Replace the existing thermostats with new Distech programmable Wi-Fi thermostats.
13. Provide controls sequence of operations programming and as-built drawing.
14. Commissioning and final TAB will be completed after ECM2 Duct Cleaning below.

### **ECM1 HVAC Systems Upgrades – Wolfe Recreation Center Scope of Services**

#### **Replace 6-Splits, add GPS for 6-Splits and 1-Pool Pack Unit, and Update Controls Drawings.**

1. Remove/replace lay-in ceilings as needed. No accommodation has been made for sheetrock removal/replacement.
2. Disconnect the 6-splits from the existing electrical, controls, duct, and condensate.
3. Demo and remove the existing 6-split systems to be replaced along with line sets.
4. Furnish and install the following equipment:
  - a. (1) 2-ton ducted split system with electric heat
  - b. (2) 3-ton ducted split system with electric heat
  - c. (1) 4-ton ducted split system with electric heat
  - d. (1) 5-ton ducted split system with electric heat
  - e. (1) 5-ton ducted split system with furnace
5. Furnish and install new line sets as needed.
6. Furnish and install new duct transitions to tie-in to the existing ductwork.
7. Tie-in the new furnaces to the existing flue venting with extension as needed.
8. Tie-in the new furnaces to the existing gas piping with extension as needed.
9. Reconnect the electrical and replace disconnects and extend with new whips if required.
10. Charge the newly installed systems with refrigerant.
11. Reconnect the existing power and reconnect the existing controls that were removed.
12. Furnish and install GPS ionization for 6-FCUs and 1-Pool Pack sized for the CFM of the units.
13. Provide controls sequence of operations programming and updated controls as-built drawing.
14. Commissioning and final TAB will be completed after ECM2 Duct Cleaning below.

### **ECM1 HVAC Systems Upgrades – Fire Station #1 Scope of Services**

#### **Modify RA Ductwork, Replace WH with New Tankless WH, add GPS for 2-AHUs, and CMS drawings.**

1. Disconnect the existing water heater for demo.
2. Furnish and install (1) new hot water heater sized to match the existing.
3. Furnish and install piping modifications as needed for the replacement.
4. Furnish and install electrical modifications as needed for the replacement.
5. Modify the gas line as needed for the new water heater.
6. Install a new relief valve in the piping if not furnished from the factory.
7. Replace the existing flue piping as needed.
8. Includes a provision for wall opening/repair for the new flue piping.
9. Insulate the newly installed piping.
10. Program the controls for the new water heater.
11. Demo and remove the existing return air up to the 16"x36" elbow.
12. Run new ductwork at the full 16"x36" return air size.
13. Reinsulate the newly installed ductwork to match the existing.
14. Includes a provision for enlarging the wall opening if needed.
15. Cut/cap bypass ductwork to mixing box plenum.

16. Reconnect the existing power and reconnect the existing controls that were removed.
17. Updated controls as-built drawing to reflect the changes.
18. Commissioning and final TAB will be completed after ECM2 Duct Cleaning below.

### **ECM1 HVAC Systems Upgrades – Fire Station #2 Scope of Services**

#### **Add GPS (Global Plasma Solutions) Ionization for 2-AHUs and 1-RTU (Roof Top Unit).**

1. Furnish and install GPS ionization for 2-AHUs (AHU-A, AHU-B) and 1-Packaged RTU (RTU-1) sized for the CFM of the units.

### **ECM1 HVAC Systems Upgrades – Fire Station #3 Scope of Services**

#### **Replace 3-Split Systems, 3-thermostats and add GPS ionization for 3-FCUs.**

1. Disconnect the 3-existing split systems from the existing power, controls, refrigerant piping, and ductwork.
2. Remove/replace lay-in ceilings as needed. No accommodation has been made for sheetrock removal/replacement.
3. Demo and remove the existing 3-split systems (GF-1, GF-2, GF-3) to be replaced along with the existing line sets.
4. Furnish and install the following equipment:
  - a. (3) New 5-ton ducted split systems with furnaces, replace GF-1, GF-2, GF-3
5. Furnish and install new line sets.
6. Furnish and install new duct transitions to tie-in to the existing ductwork.
7. Tie-in the new furnaces to the existing flue venting with extension as needed.
8. Tie-in the new furnaces to the existing gas piping with extension as needed.
9. Reconnect the electrical. Replace disconnects as needed and extend with new whips if required.
10. Charge the newly installed system with refrigerant.
11. Replace 3-thermostats matched to be used with the new units.
12. Furnish and install GPS ionization for 3-AHUs (GF-1, GF-2, GF-3) sized for the CFM of the units.
13. Commissioning and final TAB will be completed after ECM2 Duct Cleaning below.

### **ECM1 HVAC Systems Upgrades – Fire Station #4 Scope of Services**

#### **Replace 1-of-2-Split Systems, 1-thermostat and add GPS ionization for 2-FCUs.**

1. Disconnect the existing split systems from the existing power, controls, refrigerant piping, and ductwork.
2. Remove/replace lay-in ceilings as needed. No accommodation has been made for sheetrock removal/replacement.
3. Includes a provision for a boom truck for removal/replacement of condenser.
4. Includes a provision for a scissor lift if needed for high ceilings.
5. Demo and remove the existing (1) split systems to be replaced along with the existing line sets.
6. Furnish and install the following equipment:
  - a. (1) 3-ton ducted split system with furnace (AHU-2)
7. Furnish and install new line set.
8. Furnish and install new duct transitions to tie-in to the existing ductwork.
9. Tie-in the new furnaces to the existing flue venting with extension as needed.
10. Tie-in the new furnaces to the existing gas piping with extension as needed.
11. Reconnect the electrical. Replace disconnects as needed and extend with new whips if required.
12. Charge the newly installed system with refrigerant.

13. Furnish and install GPS ionization for 2-AHUs (AHU-1, AHU-2) sized for the CFM of the units.
14. Commissioning and final TAB will be completed after ECM2 Duct Cleaning below.

### **ECM1 HVAC Systems Upgrades – Fire Station #5 Scope of Services**

#### **Replace 4-Split Systems, 4-thermostats and add GPS ionization for 4-FCUs.**

1. Disconnect the existing split systems from the existing power, controls, refrigerant piping, and ductwork.
2. Remove/replace lay-in ceilings as needed. No accommodation has been made for sheetrock removal/replacement.
3. Includes a provision for a boom truck for removal/replacement of condenser.
4. Includes a provision for a scissor lift if needed for high ceilings.
5. Demo and remove the existing (4) split systems to be replaced along with the existing line sets.
6. Furnish and install the following equipment:
  - a. (1) 3-ton ducted split system with electric heat (AHU-1)
  - b. (1) 4-ton ducted split system with electric heat (AHU-2)
  - c. (1) 5-ton ducted split system with electric heat (AHU-3)
  - d. (1) 2-ton mini split (AHU-4)
7. Furnish and install new line sets.
8. Furnish and install new duct transitions to tie-in to the existing ductwork.
9. Tie-in the new furnaces to the existing flue venting with extension as needed.
10. Tie-in the new furnaces to the existing gas piping with extension as needed.
11. Reconnect the electrical. Replace disconnects as needed and extend with new whips if required.
12. Charge the newly installed system with refrigerant.
13. Startup all newly installed systems.
14. Furnish GPS ionization for 3-AHUs (AHU-1, AHU-2, AHU-3) sized for the CFM of the units.
15. Commissioning and final TAB will be completed after ECM2 Duct Cleaning below.

### **ECM1 HVAC Systems Upgrades – Recycling Center Scope of Services**

#### **Replace 1-Split System, 1-Thermostat and Replace Unit Heaters with IR Tube Type Heaters.**

1. Demo the existing split system.
2. Furnish and install the following equipment.
  - a. (1) 3-ton Split System with Furnace
3. Install all new refrigerant piping as needed.
4. Tie-in the new system to the refrigerant piping and charge with refrigerant.
5. Install new thermostat for control of the indoor unit and program.
6. Install new ductwork transitions for the split system to tie-in to the existing duct.
7. Furnish and install condensate piping and tie-in to the existing drain system.
8. Reinsulate the transitions with duct wrap.
9. Tie-in to the existing electrical.
10. Disconnect the high voltage wiring, gas, flue, and controls on the existing unit heaters.
11. Demo and remove the existing unit heaters.
12. Furnish and install replacement infrared tube-style unit heaters to match the capacity of the existing.
13. Reconnect the high voltage wiring, gas, flue, and controls on the existing unit heaters.
14. Extend the power wiring on the heater that does not match the configuration of the existing heater layout.

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## **ECM1 HVAC Systems Upgrades – Brinkley Park Scope of Services**

### **Replace 6-Split Systems and 6-thermostats.**

1. Disconnect the existing equipment from the electrical, controls, duct, and piping.
2. Open the hard ceiling at the press box to remove the existing split systems. Cover and repaint after the replacements have been completed.
3. Demo the existing equipment and haul off to be recycled.
4. Furnish and install the (6) HP Split Systems as follows:
  - a. (1) 2-ton ducted HP split system (HP-1/FCU-1)
  - b. (2) 2.5-ton ducted HP splits systems (HP-5/FCU-2; HP-6/FCU-6)
  - c. (3) 3-ton ducted HP split systems (HP-2/FCU-2; HP-3/FCU-3; HP-4/FCU-4)
5. Install all new refrigerant piping as needed.
6. Tie-in the new system to the refrigerant piping and charge with refrigerant.
7. Install new thermostat for control of the indoor units and program.
8. Install new ductwork transitions for the split systems to tie-in to the existing duct.
9. Furnish and install condensate piping and tie-in to the existing drain system.
10. Reinsulate the transitions with duct wrap.
11. Tie-in to the existing electrical. Replace worn disconnects/whips on the equipment as needed.

## **ECM1 HVAC Systems Upgrades – Chuck Camp Park Scope of Services**

### **Replace 2-Split Systems and 2-thermostats.**

1. Disconnect the existing equipment from the electrical, controls, duct, and piping.
2. Demo the existing equipment and haul off to be recycled.
3. Furnish and install the (2) HP Split Systems as follows:
  - a. (1) 2.5-ton ducted HP splits system (HP-1/FCU-1)
  - b. (1) 5-ton ducted HP split system (HP-2/FCU-2)
4. Install all new refrigerant piping as needed.
5. Tie-in the new system to the refrigerant piping and charge with refrigerant.
6. Install new thermostat for control of the indoor units and program.
7. Install new ductwork transitions for the split systems to tie-in to the existing duct.
8. Furnish and install condensate piping and tie-in to the existing drain system.
9. Reinsulate the transitions with duct wrap.
10. Tie-in to the existing electrical. Replace worn disconnects/whips on the equipment as needed.

## **ECM1 HVAC Systems Upgrades – Cobb Park Scope of Services**

### **Replace 4-Split Systems and 4-thermostats.**

1. Disconnect the existing equipment from the electrical, controls, duct, and piping.
2. Demo the existing equipment and haul off to be recycled.
3. Furnish and install the (4) HP Split Systems as follows:
  - a. (1) 1.5-ton HP split system (HP-1/FCU-1)
  - b. (1) 2-ton ducted HP splits system (HP-2/FCU-2)
  - c. (2) 2.5-ton ducted HP split system (HP-3/FCU-3; HP-4/FCU-4)
4. Install all new refrigerant piping as needed.
5. Tie-in the new system to the refrigerant piping and charge with refrigerant.
6. Install new thermostat for control of the indoor units and program.
7. Install new ductwork transitions for the split systems to tie-in to the existing duct.
8. Furnish and install condensate piping and tie-in to the existing drain system.

9. Reinsulate the transitions with duct wrap.
10. Tie-in to the existing electrical. Replace worn disconnects/whips on the equipment as needed.

### **ECM1 HVAC Systems Upgrades – Tolleson Park Scope of Services**

**Replace 1-Split System, 2-Furnaces, Provide 3-New Splits for Press Box, Men’s, & Women’s Restrooms.**

1. Disconnect the existing equipment from the electrical, controls, duct, and piping.
2. Demo the existing equipment and haul off to be recycled.
3. Furnish and install the (1) Twinned Split System as follows:
  - a. (1) 7.5-ton Twinned Split System with 2-Furnaces (GF-1, GF-2/CU-1).
4. Install all new refrigerant piping.
5. Tie-in the new equipment to the exiting ductwork/piping. Extend as needed and furnish transitions as required.
6. Tie-in to the existing electrical. Replace worn disconnects/whips on the equipment as needed.
7. Tie-in to the existing flue venting.
8. Tie-in to the existing intake air ducts. Furnish transitions as needed.
9. Insulate all newly installed piping and ductwork.
10. Add 3-New HPs for the Press Box, Men’s, and Women’s’ Restrooms as follows:
  - a. (3) New HP Split Systems sized for the existing load
11. Pour concrete pads for the new condensers.
12. Install fencing around new condensers matching the other existing fencing.
13. Furnish and install new refrigerant piping for the new split systems.
14. Core holes in the exterior walls for new refrigerant piping.
15. Install line set covers for the newly installed line sets.
16. Run all condensate piping to the exterior.
17. Furnish and install a new electrical panel with more breaker space.
18. Reconnect all conduit/wire and provide new thermostats to control units.
19. Furnish and install new circuits, breakers, and disconnects for the new split systems.

### **ECM1 HVAC Systems Upgrades – Ward Park Scope of Services**

**Replace 1-Wall Pack Packaged System and 1-Thermostat.**

1. Disconnect the existing equipment from the electrical, controls, duct, and piping.
2. Demo the existing equipment and haul off to be recycled.
3. Furnish and install the (1) HP Split System as follows:
  - a. (1) 3-ton Wall Pack (WP-1).
4. Install new thermostat for control of the WP-1 and program.
5. Furnish and install condensate piping and tie-in to the existing drain system.
6. Tie-in to the existing electrical. Replace worn disconnects/whips on the equipment.

Energy Conservation Measure	ECM General Description Table
ECM2 Duct Cleaning and Final TAB	HVAC Systems Duct Cleaning and Final TAB for Facilities Listed Below

### **ECM2 Duct Cleaning and HVAC Final TAB – Scope of Services for Facilities Listed**

Facility	ECM2 High-Level Summary Table
City Hall Building	Clean Duct, 5-AHUs, Coils, Pans, 11-EFs, Air Distribution and Final HVAC TAB
Community Center Building	Clean Duct, 1-AHU, Coils, Pans, 11-WSHPs, 12-EFs and Final HVAC TAB

**City of Smyrna Green Energy Projects**

Public Library Building	Clean Duct, 1-AHU, Coils, Pans, 8-WSHPs, 2-VAVd, EFs, and Final HVAC TAB
Brawner Hall Building	Clean Duct, 7-AHUs, 23-PIUs, 4-EFs, 1-CH, 1-B, 4-Pumps and Final HVAC TAB
Police Station/Jail Buildings	Clean Duct, 2-ERUs, 10-RTUs, 2-FCUs, 7-EFs and Final HVAC TAB
Public Works Building	Clean Duct, 8-FCUs splits, 1-RTU, 4-EFs, Air Distribution and Final HVAC TAB
Wolfe Recreation Center	Clean Duct, 6-FCUs, 1-Packaged Unit, Air Distribution and Final HVAC TAB
Fire Station #1 Building	Clean Duct, 2-AHUs, Coils, Pans, 1-PIU, and 7-VAVs and Final HVAC TAB
Fire Station #2 Building	Clean Duct, 2-AHUs, Coils, Pans, 1-RTU, Coils, Pans, and Final HVAC TAB
Fire Station #3 Building	Clean Duct, 3-AHUs, Coils, Pans, Air Distribution and Final HVAC TAB
Fire Station #4 Building	Clean Duct, 2-AHUs, Coils, Pans, Air Distribution and Final HVAC TAB
Fire Station #5 Building	Clean Duct, 3-AHU, Coils, Pans, 7-EFs, Air Distribution and Final HVAC TAB

**ECM2 HVAC Duct Cleaning and Final TAB - City Hall Scope of Services**

**Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans of the 5-AHUs (Air Handler Units) and 2-VAV units and 11- EFs providing air distribution for the building.
2. Clean all supply and return ductwork, VAVs, PIUs, all plenums, turning vanes, grilles, registers, dampers, and diffusers supplying the building.
3. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at City Hall.
4. Provide final TAB and report for air distribution systems and hot water hydronic systems.

**ECM2 HVAC Duct Cleaning and Final TAB – Community Center Scope**

**Clean Ductwork, WSHPs, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, and drain pans for 1-AHU, 11-WSHPs, and 12-EFs.
2. Clean all supply and return ductwork, plenums, risers, trunk lines, grilles, and registers associated with AHUs and WSHPs.
3. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at the Community Center.
4. Provide necessary lifts for access to elevated ceilings/grilles/registers/diffusers.
5. Provide final TAB and report for air distribution and water hydronic systems.

**ECM2 HVAC Duct Cleaning and Final TAB – Public Library Scope**

**Clean Ductwork, WSHPs, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, and drain pans for 8-WSHP (Water Source Heat Pumps) and 2-VAV (Variable Air Volume) units serving the Public Library.
2. Clean all supply and return ductwork, plenums, risers, trunk lines, grilles, and registers associated with HPs, VAVs and EFs serving the Public Library.
3. Furnish man lifts and floor protection as necessary to reach high areas.
4. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at the Public Library.
5. Test, Adjust, Balance all airside and waterside equipment and devices (WSHPs, Exhaust Fans, VAVs, Diffusers, Grilles, Registers, etc.) for Public Library.
6. Provide final TAB report for air distribution systems and hydronic systems.

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## **ECM2 HVAC Duct Cleaning and Final TAB – Brawner Hall Scope**

### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, and drain pans for 7-AHUs, 23-PIUs and 4-EFs serving Brawner Hall.
2. Clean all supply and return ductwork, plenums, risers, trunk lines, grilles, and registers associated with AHUs, PIUs and EFs serving Brawner Hall.
3. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at Brawner Hall.
4. Test, Adjust, Balance all airside and waterside equipment and devices including 7-AHUs (AHU-1 thru AHU-7), 23-PIUs (PIU-1 thru PIU-23), 4-EFs (EF-1, 2, 3 & 4), 1-Chiller (CH-1), 2-CHW Pumps (P-1, P-2), 1-Boiler (B-1), 4-HW Pumps (HP-1, HP-2, CP-1, CP-2), Diffusers, Grilles, Registers, etc. for Brawner Hall.
5. Provide necessary lifts for access to elevated ceilings/grilles/registers/diffusers.
6. Provide final TAB report for air distribution systems and water hydronic systems.

## **ECM2 HVAC Duct Cleaning and Final TAB – Police Station & Jail Scope**

### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 1-ERU (ERU-P1A/P1B), 7-RTUs (RTU-P1, P2, P3, P4, P5, P6, P7); 1-FCU (FCU-P1A) split system and 3-EFs (EF-P1, P2, P3) serving the POLICE side of the Smyrna Public Safety Building.
2. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 1-ERU (ERU-J1A/J1B), 3-RTUs (RTU-P1, P2, P3), 1-FCU (FCU-J) split system and 4-EFs (KEF-J1, J2, SEF-J1, EF-J1) serving the JAIL side of the Smyrna Public Safety Building.
3. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at the Public Safety building.
4. Test, Adjust, Balance all airside equipment and devices including 1-ERU (ERU-P1A/P1B), 7-RTUs (RTU-P1, P2, P3, P4, P5, P6, P7); 1-FCU (FCU-P1A) split system and 3-EFs (EF-P1, P2, P3) serving the POLICE side of the Public Safety Building.
5. Test, Adjust, Balance all airside equipment and devices including 1-1-ERU (ERU-J1A/J1B), 3-RTUs (RTU-P1, P2, P3), 1-FCU (FCU-J) split system and 4-EFs (KEF-J1, J2, SEF-J1, EF-J1) serving the JAIL side of the Public Safety Building.
6. Provide necessary lifts for access to elevated ceilings/grilles/registers/diffusers.
7. Provide final TAB report for air distribution systems.

## **ECM2 HVAC Duct Cleaning and Final TAB – Public Works Scope**

### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, risers, trunk lines, vents, grilles, and diffusers associated with 8-FCUs (AHU-1 thru AHU-8), 1-RTU (RTU-1 serving shop) and 4-EFs serving the Public Works building.
2. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at the Public Works building.
3. Test, Adjust, Balance all airside equipment and devices associated with 8-FCUs splits, 1-RTU and 4-EFs including vents, grilles, registers, and diffusers.
4. Provide necessary lifts for access to elevated ceilings/grilles/registers/diffusers.

5. Provide final TAB and report for air distribution systems.

### **ECM2 HVAC Duct Cleaning and Final TAB – Wolfe Recreation Center Scope**

#### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 6-AHUs serving the Wolfe Recreation Center.
2. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 1-AHU serving the pool at the Wolfe Adult Recreation Center.
3. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at Wolfe Recreation Center.
4. Test, Adjust, Balance all airside equipment and devices associated with 6-FCUs splits, and 1-Packaged Unit (Pool Pack) including vents, grilles, registers, and diffusers.
5. Provide final TAB and report for air distribution systems.

### **ECM2 HVAC Duct Cleaning and Final TAB – Fire Station #1 Scope of Services**

#### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 2-AHUs, 1-PIU and 7-VAVs serving Fire Station #1.
2. Furnish man lifts and floor protection as necessary to reach high areas.
3. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at Fire Station #1.
4. Test, Adjust, Balance all airside equipment and devices associated with 2-AHUs (AHU-1, AHU-2), 1-PIU (PIU-1) and 7-VAVs (VAV-1 thru VAV-7) including vents, grilles, registers, and diffusers.
5. Provide final TAB and report for air distribution systems.

### **ECM2 HVAC Duct Cleaning and Final TAB – Fire Station #2 Scope of Services**

#### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 2-AHUs (AHU-1, AHU-2), and 1-RTU (RTU-1) serving Fire Station #2.
2. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at Fire Station #2.
3. Test, Adjust, Balance all airside equipment and devices associated with 2-AHUs (AHU-1, AHU-2), and 1-RTU (RTU-1) including vents, grilles, registers, and diffusers.
4. Provide final TAB report for air distribution systems.

### **ECM2 HVAC Duct Cleaning and Final TAB – Fire Station #3 Scope of Services**

#### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 3-AHUs (GF-1, GF-2, GF-3) serving Fire Station #3.
2. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at Fire Station #3.
3. Test, Adjust, Balance all airside equipment and devices associated with 3-AHUs (GF-1, GF-2, GF-3) including vents, grilles, registers, and diffusers.
4. Provide final TAB report for air distribution systems.

## **ECM2 HVAC Duct Cleaning and Final TAB – Fire Station #4 Scope of Services**

### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 2-AHUs (AHU-1, AHU-2) serving Fire Station #4.
2. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at Fire Station #4.
3. Test, Adjust, Balance all airside equipment and devices associated with 2-AHUs (AHU-1, AHU-2) including vents, grilles, registers, and diffusers.
4. Provide final TAB report for air distribution systems.

## **ECM2 HVAC Duct Cleaning and Final TAB – Fire Station #5 Scope of Services**

### **Clean Ductwork, Fans, Coils, Drain Pans, Air Distribution and Final HVAC TAB (Test, Adjust and Balance)**

1. Clean all interior surfaces, fans, coils, drain pans, supply, and return ductwork, vents, grilles, and diffusers associated with 3-AHUs (AHU-1, AHU-2, AHU-3) serving Fire Station #5.
2. Provide a service technician for supervision and technical assistance throughout the duration of the TAB work at Fire Station #5.
3. Test, Adjust, Balance all airside equipment and devices associated with 3-AHUs (AHU-1, AHU-2, AHU-3) and 7-EFs (EF-A, B, C, D, E, F, G) including vents, grilles, registers, and diffusers.
4. Provide necessary lifts for access to elevated ceilings/grilles/registers/diffusers.
5. Provide final TAB report for air distribution systems.

<b>Energy Conservation Measure</b>	<b>ECM General Description Table</b>
ECM3 Interior LED Lighting Upgrades	LEDs Lighting Upgrades for Citywide Facilities Listed Below

## **ECM3 LED Lighting Upgrades – Scope of Services for Facilities Listed**

<b>Facility</b>	<b>ECM3 High-Level Summary Table</b>
Community Center	Tube, Can, Highbay, Retrofit Kit, Canopy, Bollard, Pole Acorn as Specified Below
Public Library	Recessed Can, Tube, Retrofit Kit, Canopy, Ballard, Pole, Flood as Specified Below
Brawner Hall	Tube, Retrofit Kit, Can, Decorative Pole, Canopy, Wallpack as Specified Below
Police Station & Jail	Recessed Can, Retrofit Kit, Tube, Plug In, Canopy, Wallpack as Specified Below
Public Works	Retrofit Kit, Tube, Recessed Can, Exterior Wallpack, Canopy as Specified Below
Wolfe Recreation Center	Pool Highbay, Pool Drum, Retrofit Kit, Canopy, Wallpack as Specified Below
Fire Station #1	Can, Volumetric Retrofit Kit, Tube, Exterior Wallpack as Specified Below
Fire Station #3	Tube, Semi-Circle Retrofit Kit, Can, Pole, Wallpack as Specified Below
Fire Station #4	Plug In, Tube, Can, Retrofit Kit, Wallpack, Shoe Box Pole as Specified Below
Fire Station #5	Retrofit Kit, Tube, Can, Wallpack, Canopy Recessed as Specified Below
Recycling Center	Bar Kit, Highbay LED, 2x4 Volumetric Door Kit, Cans as Specified Below

## **ECM3 LED Lighting Retrofit Scope of Work**

Remove and legally dispose of existing lighting to be replaced, retrofit, replace and/or provide material for new LED interior and exterior lighting as indicated in the table above for each facility. For specific data please refer to the line-by-line tables below for the Location, Area, Room, Quantity, Existing, Fixture

Attributes, Action, Proposed Fixture, and Quantity for each facility. Note there is no lighting scope proposed for Fire Station #2 since LEDs lights already exist at Fire Station #2.

**Clarifications**

1. Re-circuiting of any fixtures, low voltage wiring, power and/or controls wiring is not included.
2. Existing LED interior/exterior lights and LED exit signs to remain with “Do Nothing” indicated in tables.
3. Repair of any pre-existing code violations (e.g., tie off to the joists of retrofitted in place 2x4 or 2x2 fixtures) or defective lights/fixtures discovered during retrofit are not included.
4. Lamp disposal is included with all existing ballasts assumed to be non-PCB.

Below are the LED lighting line-by-line tables indicating the scope of work by Location, Area, Room, Quantity, Existing Fixture, Fixture Attributes, Action, Proposed Fixture, Quantity for each facility.

## Community Center LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Community Center	Halfway	Lobby (42)	42	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	42
Community Center	Halfway	Lobby	16	CFL-CF32W-2	Wall Sconce-Plug-in 4 Pin Horizontal-Wall	Retrofit	Retrofit Kit - 15W Rectange 2x 14in x 1 (Max Output)	16
Community Center	Halfway	Lobby	4	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 8.5W LED Kit Espen	4
Community Center	Halfway	Lobby	8	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	8
Community Center	Exits	Exits	8	EXIT-LED SW-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	8
Community Center	Halfway	Halfway by gym	6	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	6
Community Center	Gym	Gym //36ch//27mh remote ball	16	MH-MH400-1	Highbay-Mogul-"Pendant"	Replace	Highbay - LED 191W Eaton Steeler / FL	16
Community Center	Gym	Gym //14ch remote ballasts	10	MH-MH100-1	Decorative-Medium-Frosted-Pendant	Replace	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	10
Community Center	Support Other	Storage gym	8	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	8
Community Center	Mechanical / Electrical	Electrical gym	4	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	4
Community Center	Exits	Exits	4	EXIT-LED SW-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	4
Community Center	Halfway	Halfway by gym //34ch	1	INCAN-I40-3	Decorative-Candelabra-Pendant	Relamp	Screw In - Candelabra 6W x 3	1
Community Center	Halfway	Stairwell	3	F-32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	3
Community Center	Open RR	WRR MRR by gym	36	LED-L12-1	6-in Can-None-Recessed	Do Nothing	Do Nothing	36
Community Center	Open Office	Conference by gym	17	LED-L12-1	6-in Can-None-Recessed	Do Nothing	Do Nothing	17
Community Center	Open Office	Conference by gym	1	LED-L20-1	Troffer-2x2-Frosted-Recessed	Do Nothing	Do Nothing	1
Community Center	Open Office	Office lobby (2)	5	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	5
Community Center	Support Other	Halfway office lobby	3	F-32T8-2	Troffer AH-2x2-Parabolic-Recessed	Do Nothing	Do Nothing	3
Community Center	Halfway	Halfway office lobby	23	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	23
Community Center	Open RR	RRs offices (2)	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Community Center	Halfway	Halfway office lobby //plaster	1	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	1
Community Center	Open Office	Office	7	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	7
Community Center	Open Office	Brake room	3	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	3
Community Center	Mechanical / Electrical	Electrical by break rm	4	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	4
Community Center	Open Office	Office	1	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Community Center	Open Office	Office	2	F-32T8-2	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Community Center	Support Other	Range closet	1	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Community Center	Open Office	Office	9	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	9
Community Center	Open Office	Office (5)	10	F-32T8-2	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	10
Community Center	Mechanical / Electrical	Mechanical //roof access	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Exits	Exits	5	EXIT-LED SW-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	5
Community Center	Open Office	Office Recreation	32	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	32
Community Center	Mechanical / Electrical	Mechanical by recreation	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Open RR	RR recreation	1	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Community Center	Open Office	Office Azalia	7	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	7
Community Center	Open Office	Office Jonquil	9	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	9
Community Center	Open Office	Office Jonquil	3	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 8.5W LED Kit Espen	3
Community Center	Open Office	Office Jonquil	4	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	4
Community Center	Halfway	Halfway by elevator	9	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed-BBU	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT BBU	9
Community Center	Exits	Exits	7	EXIT-LED SW-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	7
Community Center	Halfway	Halfway //34ch	1	INCAN-I60-3	Decorative-Medium-Pendant	Relamp	Screw In - A19 9.5W x 3	1
Community Center	Halfway	Halfway by magnolia	5	INCAN-I60-3	Decorative-Medium-Pendant	Relamp	Screw In - A19 9.5W x 3	5
Community Center	Halfway	Halfway by magnolia	5	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	5
Community Center	Halfway	Halfway by magnolia	5	CFL-CF32W-2	10-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 9.5in - 23.5W LED Kit Espen w/ Goo Ring	5
Community Center	Halfway	Halfway by magnolia	1	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Community Center	Gym	Gym racquet ball //20 scaffold	8	UFL-F40BIAX-5	Troffer-2x2-Plaster-Recessed	Do Nothing	Do Nothing	8
Community Center	Gym	Gym racket ball //20 scaffold	8	UFL-F40BIAX-5	Troffer-2x2-Plaster-Recessed	Do Nothing	Do Nothing	8
Community Center	Gym	Gym racket ball //20 scaffold	8	UFL-F40BIAX-5	Troffer-2x2-Plaster-Recessed	Do Nothing	Do Nothing	8
Community Center	Mechanical / Electrical	Electrical by racket ball	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Support Other	Janitor by racket ball	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Mechanical / Electrical	Electrical by racket ball	2	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	2
Community Center	Open RR	WRR MRR by racket ball	16	LED-L12-1	6-in Can-None-Recessed	Do Nothing	Do Nothing	16
Community Center	Open RR	WRR MRR by racket ball	3	LED-L12-1	Wall Sconce-None-Wall	Do Nothing	Do Nothing	3
Community Center	Open Office	Office Dogwood	19	LED-L12-1	8-in Can-None-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	19
Community Center	Open Office	Office Dogwood	4	LED-L12-1	Wall Sconce-Candelabra-Wall	Do Nothing	Do Nothing	4
Community Center	Open Office	Office Magnolia	35	LED-L12-1	8-in Can-None-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	35
Community Center	Open Office	Office Magnolia	3	INCAN-I60-3	Decorative-Medium-Pendant	Relamp	Screw In - A19 9.5W x 3	3
Community Center	Exits	Exits	2	EXIT-LED SW-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	2
Community Center	Open Office	Office Magnolia	2	LED-L12-1	6-in Can-None-Recessed	Do Nothing	Do Nothing	2
Community Center	Support Other	Storage by magnolia	2	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	2
Community Center	Halfway	Halfway by magnolia	2	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Community Center	Kitchen	Kitchen	24	F-32T8-2	Vapor Tight-4'-Clear-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	24
Community Center	Kitchen	Kitchen	4	INCAN-I60-1	Jelly Jar-Medium-Clear-Surface	Relamp	Screw In - A19 9.5W x 1	4
Community Center	Kitchen	Kitchen	1	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Community Center	Gym	Gym //40ch//30mh remote ball	14	MH-MH400-1	Highbay-Mogul-"Pendant"	Replace	Highbay - LED 191W Eaton Steeler / FL	14
Community Center	Gym	Gym //35ch remote ballasts	12	MH-MH100-1	Decorative-Medium-Frosted-Pendant	Replace	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	12
Community Center	Gym	Gym //54ch//43mh remote ball	7	MH-MH400-1	Highbay-Mogul-"Pendant"	Replace	Highbay - LED 191W Eaton Steeler / FL	7
Community Center	Support Other	Storage gym	4	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Community Center	Support Other	Storage gym	3	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	3
Community Center	Halfway	Halfway gym	10	CFL-CF32W-1	4-in Can-Plug-in 4 Pin Vertical-Clear-Recessed	Retrofit	Rec Can 4in - 6W LED Kit Espen	10
Community Center	Support Other	Storage gym	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Support Other	Storage gym	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Gym	Gym //80ch//21mh remote ball	2	MH-MH400-1	Highbay-Mogul-"Pendant"	Replace	Highbay - LED 191W RH w/ All Mounting Hardware	2
Community Center	Gym	Storage //lin/mable	16	HAL-H50-1	Track-Medium-FAR38-Track	Relamp	Screw In - PAR38 14W Dimmable Sylvania	16
Community Center	Mechanical / Electrical	Basement boiler	9	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	9
Community Center	Mechanical / Electrical	Main mech room	9	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	9
Community Center	Open Office	Office Sunflower (2)	4	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Community Center	Open Office	Office Sunflower	6	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	6
Community Center	Halfway	Stairwell	3	F-32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	3
Community Center	Open RR	RRs by elevator // (2) square	17	LED-L12-1	6-in Can-None-Recessed	Do Nothing	Do Nothing	17
Community Center	Mechanical / Electrical	Mechanical by sunflower	1	LED-L12-1	6-in Can-None-Recessed	Do Nothing	Do Nothing	1
Community Center	Open Office	Office Tulip	10	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	10
Community Center	Open Office	Office Tulip	3	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	3
Community Center	Open Office	Office Tulip	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Open Office	Office Lily	4	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Community Center	Open Office	Office Orchid	6	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	6
Community Center	Open Office	Office Orchid	1	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	1
Community Center	Open Office	Office Orchid	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Support Other	Janitor by Orchid	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Halfway	Halfway 2nd fl gym	2	F-32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	2
Community Center	Gym	Gym dance studio	24	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	24
Community Center	Gym	Gym dance studio	1	F-32T8-2	Strip-4'-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	1
Community Center	Gym	Gym dance studio	1	F-32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Community Center	Halfway	Halfway 2nd fl gym	1	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Community Center	Halfway	Stairwell	2	F-32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT 8 9W LED Tube x 2 Type B Keystone	2
Community Center	Halfway	Stairwell	1	F-32T8-2	Vanity-3'-Prismatic-Surface	Retrofit	3FT 8 12W LED Tube x 2 / Type B Flicker Free	1
Community Center	Halfway	Halfway 2nd fl	16	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	16
Community Center	Halfway	Halfway 2nd fl	2	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	2
Community Center	Exits	Exits	12	EXIT-LED SW-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	12
Community Center	Halfway	Stairwell //22	4	MH-MH175-1	8-in Can-Mogul-Recessed	Do Nothing	Rec Can 8in - 12W LED Kit Espen	4
Community Center	Exits	Exits	8	EXIT-LED SW-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	8
Community Center	Exterior	Canopy back //10	9	HPS-HPS100-1	8-in Can-Medium-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	9
Community Center	Exterior	Bollards back	15	HPS-HPS100-1	Bollard-Medium-Ground	Retrofit	Screw In - 16W Bollard Relamp	15
Community Center	Exterior	Pole decorative //20	15	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	15
Community Center	Exterior	Wall //10	1	LED-L100-1	Wallpack WGH-Mogul-Prismatic-Surface	Do Nothing	Do Nothing	1
Community Center	Exterior	Canopy front //10	22	HPS-HPS100-1	8-in Can-Medium-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	22
Community Center	Exterior	Canopy front //10	2	HPS-HPS100-1	8-in Can-Medium-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	2
Community Center	Exterior	Bollards front	8	HPS-HPS100-1	Bollard-Medium-Ground	Retrofit	Screw In - 16W Bollard Relamp	8
Community Center	Exterior	Pole decorative //20	15	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	15
Community Center	Exterior	Pole decorative //20	15	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	15
Community Center	Exterior	Pole decorative //20	15	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	15
Community Center	Exterior	Pole decorative //20	15	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	15

## Public Library LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Public Library	Open Office	Office technical service	16	MH-MH175-1	8-in Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	16
Public Library	Open Office	Office	1	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	1
Public Library	Mechanical / Electrical	IT rm	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Mechanical / Electrical	Mechanical	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Open Office	Office	3	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	3
Public Library	Library	Library (28)	28	F-F32T8-2	Troffer AH-1X4-Parabolic-Recessed-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	28
Public Library	Exits	Exits	11	EXIT-LED 5W-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	11
Public Library	Library	Library	3	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	3
Public Library	Support Other	Storage	1	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Public Library	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Open RR	RR	1	F-F32T8-2	Troffer-1X4-Plaster-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Open Office	Office children section	2	F-F32T8-2	Troffer AH-1X4-Parabolic-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Public Library	Library	Library	19	MH-MH250-1	Decorative-Medium-Clear-Pendant-*	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	19
Public Library	Library	Library	8	LED-L12-1	Chandelier-Frosted-Pendant	Do Nothing	Do Nothing	8
Public Library	Library	Library	6	MH-MH175-1	8-in Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	6
Public Library	Library	Library	2	UPL-FU32T8U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Public Library	Library	Library	4	INCAN-1100-1	Decorative-Medium-Frosted-Pole	Relamp	Screw In - A19 9.5W x 4	4
Public Library	Open RR	Library (39)	38	F-F32T8-2	Troffer AH-1X4-Parabolic-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	38
Public Library	Open Office	Office break rm	9	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	9
Public Library	Open RR	RR /lens broken	2	F-F32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Public Library	Mechanical / Electrical	Electrical	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Open Office	Office technical service	17	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	17
Public Library	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	2
Public Library	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Hallway	Library hallway	6	INCAN-160-2	Decorative-Medium-Frosted-Wall	Retrofit	Screw In - A19 9.5W x 4	6
Public Library	Hallway	Library hallway	2	F-F25T8-2	Indirect-3'-Eggcrate-Surface	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	2
Public Library	Open RR	RR (2)	3	F-F25T8-2	Cove-3'-Eggcrate-Recessed	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	3
Public Library	Open RR	RR (2)	2	F-F32T8-2	Indirect-4'-Eggcrate-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Public Library	Open RR	RR (2)	2	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	2
Public Library	Library	Library //24ch scaffolding 11x	4	QL-QL300-1	Uplight-edit-Clear-Wall-*	Replace	Keystone 60w LED Cutoff Wallpack	4
Public Library	Library	Library //44ch scaffolding	1	LED-L100-1	Decorative-Frosted-Pendant	Do Nothing	Do Nothing	1
Public Library	Library	Library 2nd fl (62)	47	F-F32T8-2	Troffer AH-1X4-Parabolic-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	47
Public Library	Library	Library 2nd fl	2	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	2
Public Library	Library	Library 2nd fl	24	LED-L100-1	Decorative-Frosted-Pendant	Do Nothing	Do Nothing	24
Public Library	Library	Library 2nd fl	4	LED-L100-1	Decorative-Frosted-Pendant	Do Nothing	Do Nothing	4
Public Library	Library	Library 2nd fl	10	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	10
Public Library	Exits	Exits	15	EXIT-LED 5W-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	15
Public Library	Library	Library 2nd fl	17	LED-L16-1	Flood-Medium-*,Surface-*	Do Nothing	Do Nothing	17
Public Library	Open Office	Offices 2nd fl (2)	2	UPL-FU32T8U6-2	Troffer AH-2x2-Plaster-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Public Library	Hallway	Stairwell	2	F-F32T8-2	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Public Library	Hallway	Stairwell	2	F-F32T8-2	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Public Library	Support Other	Janitor	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Library	Library 2nd fl (62)	15	F-F32T8-2	Troffer AH-1X4-Parabolic-Recessed-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	15
Public Library	Library	Library (28)	13	F-F32T8-2	Troffer AH-1X4-Parabolic-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	13
Public Library	Support Other	Storage 2nd fl	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Support Other	Storage 2nd fl	1	F-F32T8-2	Troffer-2X4-Plaster-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Public Library	Open Office	Conference 2nd fl //dimmbale	6	LED-L12-1	6-in Can-Recessed	Do Nothing	Do Nothing	6
Public Library	Open Office	Conference 2nd fl //dimmbale	6	F-F32T8-2	Cove-4'-Parabolic-Recessed	Do Nothing	Do Nothing	6
Public Library	Library	Library 2nd fl	4	LED-L12-1	Wall Sconce-Frosted-Wall	Do Nothing	Do Nothing	4
Public Library	Library	Library 2nd fl	4	CFL-CF32W-2	Up Light-Plug-in 4 Pin Horizontal-Clear-Wall	Do Nothing	Do Nothing	4
Public Library	Open Office	Offices 2nd fl (2)	2	LED-L12-1	Chandelier-Frosted-Pendant	Do Nothing	Do Nothing	2
Public Library	Open RR	RR (2)	4	F-F25T8-2	Cove-3'-Eggcrate-Recessed	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	4
Public Library	Open RR	RR (2)	2	F-F32T8-2	Cove-4'-Parabolic-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Public Library	Open RR	RR (2)	2	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	2
Public Library	Open RR	RR (2)	4	F-F25T8-2	Cove-3'-Eggcrate-Recessed	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	4
Public Library	Mechanical / Electrical	Electrical	4	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Public Library	Mechanical / Electrical	Riser Room EST	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Public Library	Exterior	Wall //14	16	INCAN-160-1	Decorative-Medium-Frosted-Wall	Relamp	Screw In - 16W Bollard Relamp	16
Public Library	Exterior	Canopy //14	2	INCAN-140-3	Decorative-Candelabra-Frosted-Pendant	Relamp	Screw In - Candelabra 6W x 3	2
Public Library	Exterior	Bollards	7	HPS-HPS100-1	Bollard-Medium-Frosted-Ground	Retrofit	Screw In - 16W Bollard Relamp	7
Public Library	Exterior	Pole decorative //20	5	MH-MH250-1	Acorn-Mogul-Frosted-Pole-*	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	5
Public Library	Exterior	Bollards	7	HPS-HPS100-1	Bollard-Medium-Frosted-Ground	Retrofit	Screw In - 16W Bollard Relamp	7
Public Library	Exterior	Pole decorative //20	6	MH-MH250-1	Acorn-Mogul-Frosted-Pole-*	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	6
Public Library	Exterior	Ground	2	MH-MH400-1	Flood-Mogul-Clear-Trunnon-*	Replace	Flood - 100W FLED Keystone	2

## Brawner Hall LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Brawner Hall	Open RR	RRs B05-B02 //ms	7	F-F32T8-2	Wrap-4-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	7
Brawner Hall	Open RR	RRs B05-B02 //ms miss	1	F-F17T8-2	Vanity-2' Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	1
Brawner Hall	Mechanical / Electrical	Boiler basement	10	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	10
Brawner Hall	Mechanical / Electrical	Boiler basement	2	F-F32T8-2	Strip-4-Surface-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	2
Brawner Hall	Mechanical / Electrical	Boiler basement	10	CFL-CF13W-2	Jelly Jar-Plug-in 2 Pin Vertical-Clear-Surface	Retrofit	Plug In - 6W PLV 2 Pin Direct Wire x 1 Bypass	10
Brawner Hall	Open Office	Offices basement //ms	15	F-F32T8-2	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	15
Brawner Hall	Open Office	Offices basement //ms	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Brawner Hall	Exits	Exits	1	EXIT-LED 5W-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	1
Brawner Hall	Support Other	Storage basement //ms	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Brawner Hall	Stairwell	Stairwell	2	CFL-CF32W-2	Wall Sconce-Plug-in 4 Pin Vertical-Frosted-Wall-BBU	Replace	Wallpack - 25W Adjustable Cutoff Keystone BBU	2
Brawner Hall	Open Office	Offices 1st fl//ms	4	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	4
Brawner Hall	Open Office	Offices 1st fl//ms	4	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	4
Brawner Hall	Open Office	Offices 1st fl//ms	4	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	4
Brawner Hall	Open Office	Offices 1st fl//ms	4	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	4
Brawner Hall	Open Office	Offices 1st fl//ms	4	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	4
Brawner Hall	Hallway	Stairwell	2	CFL-CF32W-2	Wall Sconce-Plug-in 4 Pin Vertical-Frosted-Wall-BBU	Replace	Wallpack - 25W Adjustable Cutoff Keystone BBU	2
Brawner Hall	Mechanical / Electrical	Mechanical 1st fl //ms	2	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Brawner Hall	Hallway	Hallway 1st fl	4	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	4
Brawner Hall	Hallway	Hallway 1st fl	3	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface-BBU	Replace	Retrofit Kit - 22W Round 9in BBU	3
Brawner Hall	Open RR	RR 1st fl	1	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	1
Brawner Hall	Open RR	RR 1st fl //ms	1	F-F17T8-2	Vanity-2' Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	1
Brawner Hall	Open RR	RR 1st fl	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Brawner Hall	Open Office	Break 1st fl	2	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	2
Brawner Hall	Hallway	Hallway 1st fl	14	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	14
Brawner Hall	Hallway	Hallway 1st fl	5	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	5
Brawner Hall	Exits	Exits	9	EXIT-LED 5W-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	9
Brawner Hall	Hallway	Hallway 1st fl //12 volts	13	HAL-H45-1	6-in Can-2 Pin-Recessed	Retrofit	Rec Can 5/6in - 9W Phase Dimmable Sylvania w/ GooF	13
Brawner Hall	Hallway	Hallway 1st fl	1	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed-BBU	Retrofit	Rec Can 8in - 8.5W LED Kit Espen / EMG Driver	1
Brawner Hall	Hallway	Hallway 1st fl	2	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	2
Brawner Hall	Hallway	Hallway 1st fl	1	NCAN-H60-6	Decorative-Medium-Clear-Pendant	Retrofit	Screw In - A19 9.5W x 6	1
Brawner Hall	Open Office	Offices 118 fl//ms	12	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	12
Brawner Hall	Open Office	Offices 118 fl//12 volt	5	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	5
Brawner Hall	Open Office	Offices 103 //ms	6	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	6
Brawner Hall	Open Office	Offices 103 //ms	3	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	3
Brawner Hall	Support Other	Storage 1st fl //ms	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Brawner Hall	Open Office	Offices 101 //ms dimmers	12	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	12
Brawner Hall	Open Office	Offices 101 //12 volt dimmer	5	HAL-H45-1	6-in Can-2 Pin-Recessed	Retrofit	Rec Can 5/6in - 9W Phase Dimmable Sylvania w/ GooF	5
Brawner Hall	Open RR	RRs 1st fl //ms(2)	6	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	6
Brawner Hall	Open RR	RRs 1st fl //ms(2)	2	F-F32T8-2	Vapor Tight-4-Clear-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Brawner Hall	Open Office	Offices 128 //ms	3	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	3
Brawner Hall	Open Office	Offices 128 //ms	2	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	2
Brawner Hall	Mechanical / Electrical	Electr 122 //ms	1	F-F32T8-2	Wrap-4-Prismatic-Surface-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	1
Brawner Hall	Open Office	Offices 127 //ms	4	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	4
Brawner Hall	Open Office	Offices 123 //dimmmable	38	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	38
Brawner Hall	Open Office	Offices 123 //dimmmable 12 vol	10	HAL-H45-1	6-in Can-2 Pin-Recessed	Retrofit	Rec Can 5/6in - 9W Phase Dimmable Sylvania w/ GooF	10
Brawner Hall	Open Office	Offices 123	5	NCAN-H40-3	Decorative-Candelabra-Pendant	Retrofit	Screw In - Candelabra 6W x 3	5
Brawner Hall	Support Other	Storage 124 1st fl //ms	6	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	6
Brawner Hall	Open Office	Offices 126 //ms	4	F-F32T8-2	Troffer-2x4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W Volumetric DKIT	4
Brawner Hall	Hallway	Stairwell	2	F-F32T8-2	Wrap-4-Prismatic-Surface-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	2
Brawner Hall	Hallway	Stairwell //18ch	1	F-F32T8-2	Wrap-4-Prismatic-Surface-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	1
Brawner Hall	Open Office	Office FIRE MASHALLS //ms /	22	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	22
Brawner Hall	Open Office	Office FIRE MASHALLS //ms	6	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	6
Brawner Hall	Open Office	Office FIRE MASHALLS //ms	3	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	3
Brawner Hall	Hallway	Hallway FIRE MASHALLS //ms	4	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	4
Brawner Hall	Hallway	Hallway FIRE MASHALLS //ms	3	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface-BBU	Replace	Retrofit Kit - 22W Round 9in BBU	3
Brawner Hall	Hallway	Hallway FIRE MASHALLS //ms	6	HAL-H45-1	6-in Can-2 Pin-Recessed	Retrofit	Rec Can 5/6in - 9W Phase Dimmable Sylvania w/ GooF	6
Brawner Hall	Support Other	Attic	1	F-F32T8-2	Wrap-4-Prismatic-Surface-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	1
Brawner Hall	Support Other	Attic	15	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	15
Brawner Hall	Hallway	Hallway 2nd fl //ms	6	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	6
Brawner Hall	Hallway	Hallway 2nd fl //ms	4	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface-BBU	Replace	Retrofit Kit - 22W Round 9in BBU	4
Brawner Hall	Hallway	Hallway 2nd fl //ms 12 volt	4	HAL-H45-1	6-in Can-2 Pin-Recessed	Retrofit	Rec Can 5/6in - 9W Phase Dimmable Sylvania w/ GooF	4
Brawner Hall	Exits	Exits	3	EXIT-LED 5W-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	3
Brawner Hall	Hallway	Hallway 2nd fl //ms	4	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	4
Brawner Hall	Mechanical / Electrical	Electr 2nd fl //ms	1	F-F32T8-2	Strip-4-Surface-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	1
Brawner Hall	Open Office	Offices 235 //ms	4	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	4
Brawner Hall	Open RR	RRs 2nd fl //ms(2)	6	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	6
Brawner Hall	Open RR	RRs 2nd fl //ms(2)	2	F-F32T8-2	Vanity-4' Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Brawner Hall	Hallway	Hallway 2nd fl //ms	9	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	9
Brawner Hall	Hallway	Hallway 2nd fl //ms	8	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface-BBU	Replace	Retrofit Kit - 22W Round 9in BBU	8
Brawner Hall	Hallway	Hallway 2nd fl //ms 12 volt	8	HAL-H45-1	6-in Can-2 Pin-Recessed	Retrofit	Rec Can 5/6in - 9W Phase Dimmable Sylvania w/ GooF	8
Brawner Hall	Open Office	Offices 2nd fl //ms (12)	48	F-F32T8-3	Indirect-4-Surface	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	48
Brawner Hall	Open RR	RRs 2nd fl //ms(2)	1	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	1
Brawner Hall	Open RR	RRs 2nd fl //ms(2)	1	F-F17T8-2	Vanity-2' Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	1
Brawner Hall	Open RR	RRs 2nd fl //ms(2)	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Brawner Hall	Hallway	Stairwell /scalfolding	2	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface-BBU	Replace	Retrofit Kit - 22W Round 9in BBU	2
Brawner Hall	Hallway	Stairwell	1	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	1
Brawner Hall	Open Office	Offices 2nd fl //ms (3)	18	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	18
Brawner Hall	Open Office	Offices 2nd fl //ms (3)	4	CFL-CF42W-2	Drum-Plug-in 4 Pin Horizontal-Surface	Replace	Retrofit Kit - 22W Round 9in	4
Brawner Hall	Exits	Exits	11	EXIT-LED 5W-2	BBU-WHITE-GREEN-WALL	Do Nothing	Do Nothing	11
Brawner Hall	Hallway	Stairwell	2	CFL-CF32W-2	Wall Sconce-Plug-in 4 Pin Vertical-Frosted-Wall-BBU	Replace	Wallpack - 25W Adjustable Cutoff Keystone BBU	2
Brawner Hall	Support Other	Attic	15	F-F32T8-2	Strip-4-Surface-BBU	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone / BBU	15
Brawner Hall	Exterior	Canopy back //10	2	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	2
Brawner Hall	Exterior	Pole decorative //20	6	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	6
Brawner Hall	Exterior	Wall //10	8	CFL-CF42W-1	Wallpack-Plug-in 4 Pin Vertical-Vault	Replace	Plug In - 6W PLV 2 Pin Direct Wire x 1 Bypass	8
Brawner Hall	Exterior	Canopy front //24 ch	6	MH-MH175-1	10-in Can-Mogul-Recessed	Retrofit	Rec Can 9.5in - 23.5W LED Kit Espen w/ GooF Ring	6
Brawner Hall	Exterior	Flood front	1	MH-MH175-1	Flood-Mogul-Clear-Trunnon	Replace	Flood - 100W FLED Keystone	1
Brawner Hall	Exterior	Flood front // Flag pole	1	MH-MH175-1	Flood-Mogul-Clear-Ground Knuckle	Replace	Flood - 35W FLED Keystone w/Surface Mount Box	1
Brawner Hall	Exterior	Bollards further away	54	HPS-HPS100-1	Bollard-Medium-Ground	Retrofit	Screw In - 16W Bollard Relamp	54
Brawner Hall	Exterior	Bollards middle	6	HPS-HPS100-1	Bollard-Medium-Ground	Retrofit	Screw In - 16W Bollard Relamp	6
Brawner Hall	Exterior	Bollards closer	16	HPS-HPS100-1	Bollard-Medium-Ground	Retrofit	Screw In - 16W Bollard Relamp	16
Brawner Hall	Exterior	Pole decorative //20	6	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	6
Brawner Hall	Exterior	Canopy back //10	4	CFL-CF32W-2	8-in Can-Plug-in 4 Pin Horizontal-Recessed-BBU	Retrofit	Rec Can 8in - 12W LED Kit Espen / EMG Driver	4

## Police Station and Jail LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Police Station/Jail	Hallway	Lobby /#36h	9	MH-MH175-1	8-In Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	9
Police Station/Jail	Hallway	Lobby	6	QUARTZ-0360-1	Decorative-Double End-Clear-Wall	Do Nothing	Do Nothing	6
Police Station/Jail	Exits	Exits	3	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	3
Police Station/Jail	Hallway	Lobby	3	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	3
Police Station/Jail	Mechanical / Electrical	Elevator rm	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Support Other	Janitor	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Open RR	RRs (2)	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Police Station/Jail	Hallway	Hallway records (26)	26	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	26
Police Station/Jail	Hallway	Hallway records	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Police Station/Jail	Open Office	Offices records (110ft) (24)	24	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	24
Police Station/Jail	Hallway	Hallway records	6	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	6
Police Station/Jail	Exits	Exits	8	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	8
Police Station/Jail	Hallway	Stairwell /#23 scaffolding	3	MH-MH175-1	8-In Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	3
Police Station/Jail	Hallway	Stairwell	3	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	3
Police Station/Jail	Hallway	Stairwell /#23 scaffolding	3	MH-MH175-1	8-In Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	3
Police Station/Jail	Hallway	Stairwell	3	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	3
Police Station/Jail	Open RR	RRs (2)	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Police Station/Jail	Mechanical / Electrical	Electrical records	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Open Office	Offices LAB records EST	8	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	8
Police Station/Jail	Locker Room	W Locker	5	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	5
Police Station/Jail	Locker Room	W Locker	7	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	7
Police Station/Jail	Gym	Gym small	9	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	9
Police Station/Jail	Locker Room	M Locker	6	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	6
Police Station/Jail	Locker Room	M Locker	9	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	9
Police Station/Jail	Exits	Exits	7	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	7
Police Station/Jail	Open Office	Offices records (260ft) (34)	34	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	34
Police Station/Jail	Open Office	Offices records (260ft) (14)	14	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	14
Police Station/Jail	Open Office	Offices cubicles 2nd fl (33)	33	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	33
Police Station/Jail	Open Office	Offices cubicles 2nd fl (5)	5	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	5
Police Station/Jail	Hallway	Hallway	3	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	3
Police Station/Jail	Exits	Exits	4	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	4
Police Station/Jail	Open Office	Offices 2nd fl (18)	18	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	18
Police Station/Jail	Open Office	Offices 2nd fl	2	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	2
Police Station/Jail	Open Office	Offices 2nd fl	3	HAL-H50-1	4-In Can-MR16-Recessed	Relamp	Plug In - MR16 6W Bi-pin x 1	3
Police Station/Jail	Open Office	Offices 2nd fl	4	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Police Station/Jail	Open Office	Offices 2nd fl	2	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Police Station/Jail	Open Office	Conference	2	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Police Station/Jail	Open Office	Conference	4	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Police Station/Jail	Open Office	Lab 2nd fl EST	2	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Police Station/Jail	Open Office	Conference (3)	3	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	3
Police Station/Jail	Hallway	Hallway 2nd fl (17)	17	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	17
Police Station/Jail	Hallway	Hallway 2nd fl	2	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	2
Police Station/Jail	Exits	Exits	4	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	4
Police Station/Jail	Open Office	Offices 2nd fl (26)	26	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	26
Police Station/Jail	Open Office	Offices 2nd fl	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Police Station/Jail	Open Office	Offices 2nd fl /dimmable line	8	HAL-H50-1	4-In Can-MR16-Recessed	Relamp	Plug In - MR16 6W Bi-pin x 1	8
Police Station/Jail	Hallway	Hallway 2nd fl	5	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	5
Police Station/Jail	Mechanical / Electrical	Electrical 2nd fl	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Hallway	Lobby 2nd fl	7	CFL-CF32W-2	8-In Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	7
Police Station/Jail	Open RR	RRs (2)	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Police Station/Jail	Open RR	RRs (2)	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Police Station/Jail	Support Other	Janitor /roof access	1	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Open RR	RRs (2)	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Police Station/Jail	Support Other	Storage 2nd fl	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Police Station/Jail	Exits	Exits	4	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	4
Police Station/Jail	Open Office	Office 911 // add controls	6	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	6
Police Station/Jail	Open Office	Office 911 // add controls	2	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Police Station/Jail	Open Office	Office Network	4	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Police Station/Jail	Open Office	Offices jail	6	F-F32T8-2	Troffer-2X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	6
Police Station/Jail	Open RR	RR jail	2	F-F17T8-2	Vanity-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	2
Police Station/Jail	Open RR	RR jail	2	CFL-CF32W-1	Drum-Plug-in 4 Pin Vertical-Surface*	Relamp	Plug In - 6W PLV 2 Pin Direct Wire x 1 Bypass	2
Police Station/Jail	Open Office	Offices jail	4	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	4
Police Station/Jail	Open Office	Offices jail	6	LED-L12-1	4-In Can-Recessed	Do Nothing	Do Nothing	6
Police Station/Jail	Open Office	Offices jail special screws	2	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	2
Police Station/Jail	Open Office	Offices jail special screws	4	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	4
Police Station/Jail	Exits	Exits	4	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	4
Police Station/Jail	Open Office	Offices jail special screws	1	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Kitchen	Kitchen jail special screws	13	F-F32T8-2	Troffer-1X4-Plaster-Surface	Relamp	4FT 8W LED Tube x 2 Type B Keystone	13
Police Station/Jail	Kitchen	Kitchen jail special screws	2	INCAN-160-1	Jelly Jar-Medium-Clear-Surface	Relamp	Screw In - A19 9.5W x 1	2
Police Station/Jail	Exits	Exits	3	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	3
Police Station/Jail	Kitchen	Kitchen freezers jail	2	INCAN-160-1	Jelly Jar-Medium-Clear-Surface	Relamp	Screw In - A19 9.5W x 1	2
Police Station/Jail	Kitchen	Kitchen freezers jail	2	F-F48T120H-2	Vapor Tight-4-Clear-Surface	Do Nothing	Do Nothing	2
Police Station/Jail	Open Office	Control office jail	4	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Police Station/Jail	Open Office	Control office jail /dimmable	6	HAL-H50-1	4-In Can-MR16-Recessed	Relamp	Plug In - MR16 6W Bi-pin x 1	6
Police Station/Jail	Open Office	Offices jail special screws	11	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	11
Police Station/Jail	Open Office	Offices jail special screws	2	F-F32T8-2	Troffer-2X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	2
Police Station/Jail	Hallway	1 Hallway Cell area special sc	4	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	4
Police Station/Jail	Rest-room	1 Cell area special screws	6	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	6
Police Station/Jail	Rest-room	1 Cell area special screws	3	F-F17T8-2	Corner-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	3
Police Station/Jail	Support Other	1 Storages	4	INCAN-160-1	Medium-Surface	Relamp	Screw In - A19 9.5W x 1	4
Police Station/Jail	Rest-room	1 Cell area special screws	5	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	5
Police Station/Jail	Rest-room	1 Cell area special screws	8	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	8
Police Station/Jail	Rest-room	1 Cell area special screws	3	F-F17T8-2	Corner-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	3
Police Station/Jail	Gym	Court yard	3	MH-MH175-1	Wallpack LNC-Mogul-Prismatic-Wall	Replace	Wallpack - 40W WALLPACN5B	3
Police Station/Jail	Open Office	Offices jail special screws	2	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	2
Police Station/Jail	Rest-room	1 Cell area special screws	2	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	2
Police Station/Jail	Open Office	Offices jail special screws	1	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Open Office	Offices jail special screws	3	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	3
Police Station/Jail	Rest-room	1 Cell area special screws	3	F-F17T8-2	Corner-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	3
Police Station/Jail	Hallway	1 Hallway Cell area special sc	12	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	12
Police Station/Jail	Support Other	1 Storages	8	INCAN-160-1	Medium-Surface	Relamp	Screw In - A19 9.5W x 1	8
Police Station/Jail	Rest-room	1 Cell area special screws	9	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	9
Police Station/Jail	Rest-room	1 Cell area special screws	1	F-F17T8-2	Corner-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	1
Police Station/Jail	Rest-room	1 Cell area special screws	9	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	9
Police Station/Jail	Rest-room	1 Cell area special screws	1	F-F17T8-2	Corner-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	1
Police Station/Jail	Rest-room	1 Cell area special screws	9	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	9
Police Station/Jail	Rest-room	1 Cell area special screws	1	F-F17T8-2	Corner-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	1
Police Station/Jail	Rest-room	1 Cell area special screws	9	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	9
Police Station/Jail	Rest-room	1 Cell area special screws	1	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Rest-room	1 Cell area special screws	18	F-F32T8-2	Corner-4-Prismatic-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	18
Police Station/Jail	Rest-room	1 Cell area special screws	2	F-F17T8-2	Corner-2-Prismatic-Surface	Retrofit	2FT 7W LED Tube x 2 Type B Flicker Free	2
Police Station/Jail	Garage	Pick up area	4	MH-MH175-1	Wallpack WGH-Mogul-Prismatic-Wall	Replace	Wallpack - 40W WALLPACN5B	4
Police Station/Jail	Garage	Pick up area	1	F-F32T8-2	Troffer-1X4-Plaster-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	1
Police Station/Jail	Mechanical / Electrical	Storage shed by pick up jail	2	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	2
Police Station/Jail	Support Other	Storage shed by pick up jail	15	F-F32T8-2	Strip-4-Surface	Retrofit	4FT 8W LED Tube x 2 Type B Keystone	15
Police Station/Jail	Exterior	Canopy front /#10	14	MH-MH175-1	8-In Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	14
Police Station/Jail	Exterior	Wall storage shed /#10	6	MH-MH175-1	Wallpack NRG-Medium-Clear-Wall	Replace	Wallpack - 20W Sconce Keystone	6
Police Station/Jail	Exterior	Wall back /#10	7	MH-MH175-1	Wallpack WGH-Mogul-Prismatic-Wall	Replace	Wallpack - 40W WALLPACN5B	7
Police Station/Jail	Exterior	Canopy back /#10	2	MH-MH175-1	8-In Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	2
Police Station/Jail	Exterior	Canopy /#24.60 ch Very Diffic	40	MH-MH175-1	8-In Can-Medium-Recessed	Retrofit	Rec Can Bin - 12W LED Kit Espen	40
Police Station/Jail	Exterior	GP Pole Decorative	5	MH-MH175-1	Acorn-Mogul-Frosted-Pole	Do Nothing	Do Nothing	5
Police Station/Jail	Exterior	Wall front /#10	7	MH-MH175-1	Wallpack WGH-Mogul-Prismatic-Wall	Replace	Wallpack - 40W WALLPACN5B	7

City of Smyrna Green Energy Projects

## Public Works LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Public Works	Hallway	Hallway public works	11	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	11
Public Works	Open Office	Office public works (8)	40	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	40
Public Works	Hallway	Hallway public works	10	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	10
Public Works	Exits	Exits	3	EXIT-LED SW-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	3
Public Works	Open RR	RRs (2)	2	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Public Works	Hallway	Hallway public works	2	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Public Works	Support Other	Storage public works	1	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Public Works	Support Other	Storage public works	1	INCAN-60-1	Medium-Surface	Relamp	Screw In - A19 9.5W x 1	1
Public Works	Open Office	Office public works (8)	29	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	29
Public Works	Hallway	Hallway public works	5	F-F32T8-4	Troffer AH-2X4-Parabolic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	5
Public Works	Open RR	RRs (2)	1	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Public Works	Open Office	Break room	11	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	11
Public Works	Exits	Exits	5	EXIT-LED SW-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	5
Public Works	Open RR	RR	10	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	10
Public Works	Open RR	RR	1	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Public Works	Open RR	RR	1	INCAN-60-1	Medium-Surface	Relamp	Screw In - A19 9.5W x 1	1
Public Works	Open RR	RR	1	INCAN-60-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Public Works	Open Office	Break room	11	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	11
Public Works	Exits	Exits	6	EXIT-LED SW-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	6
Public Works	Garage	Warehouse //20ch	19	LIN-LED-L15T8LED-6	Highbay-8'-Pendant	Do Nothing	Do Nothing	19
Public Works	Garage	Warehouse //lens missing	3	LIN-LED-L15T8LED-4	Wrap-4'-Prismatic-Surface	Do Nothing	Do Nothing	3
Public Works	Garage	Warehouse	5	LIN-LED-L15T8LED-2	Strip-4'-Surface	Do Nothing	Do Nothing	5
Public Works	Open Office	Office Warehouse	2	LIN-LED-L15T8LED-4	Wrap-4'-Prismatic-Surface	Do Nothing	Do Nothing	2
Public Works	Open Office	Warehouse upstairs	4	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Public Works	Open Office	Warehouse upstairs	4	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	4
Public Works	Open RR	RR upstairs	2	INCAN-60-1	Fan-Medium-Frosted-Recessed	Relamp	Screw In - A19 15W x 1	2
Public Works	Garage	Machine shop //20ch	32	LIN-LED-L15T8LED-6	Highbay-8'-Pendant	Do Nothing	Do Nothing	32
Public Works	Garage	Machine shop work area	9	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	9
Public Works	Exits	Exits	7	EXIT-LED SW-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	7
Public Works	Garage	Machine shop work area	7	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	7
Public Works	Support Other	Storages //broken lens	4	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	4
Public Works	Support Other	Storages //broken lens	1	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	1
Public Works	Support Other	Storages //broken lens	2	F-F32T8-2	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	3
Public Works	Open RR	RR upstairs	2	F-F17T8-2	Wrap-2'-Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	2
Public Works	Support Other	Storages //broken lens	4	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	4
Public Works	Support Other	Storages //broken lens	4	F-F54T5HO-2	Vapor Tight-4'-Clear-Cable	Replace	Vapor Tight 4FT - 25W LXM	4
Public Works	Open Office	Shop upstairs	5	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	5
Public Works	Open Office	Shop upstairs	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Public Works	Garage	Machine shop //20ch	3	MH-MH400-	Highbay-Mogul-Pendant	Replace	Highbay - LED 100W RH w/ All Mounting Hardware	3
Public Works	Garage	Shop	6	LIN-LED-L30T8LED-2	Strip-8'-Surface	Do Nothing	Do Nothing	6
Public Works	Garage	Shop	2	LIN-LED-L15T8LED-4	Strip-8'-Surface	Do Nothing	Do Nothing	2
Public Works	Exterior	Wall //12	4	LED-L50-1	Wallpack-Prismatic-Wall	Do Nothing	Do Nothing	4
Public Works	Exterior	Wall //19	4	LED-L50-1	Wallpack-Prismatic-Wall	Do Nothing	Do Nothing	4
Public Works	Exterior	Wall //12	3	LED-L50-1	Wallpack-Prismatic-Wall	Do Nothing	Do Nothing	3
Public Works	Exterior	Canopy //19	12	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	12
Public Works	Exterior	Canopy //19	4	F-F54T5HO-3	Vapor Tight-4'-Clear-Cable	Replace	4FT T5HO 25W Direct Wire LED Tube x 3	4
Public Works	Exterior	Canopy //19	3	F-F54T5HO-2	Vapor Tight-4'-Clear-Cable	Replace	4FT T5HO 25W Direct Wire LED Tube x 2	3
Public Works	Exterior	Canopy //19	18	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	18
Public Works	Exterior	Wall //19	3	LED-L50-1	Wallpack-Prismatic-Wall	Do Nothing	Do Nothing	3
Public Works	Exterior	Wall //19	4	MH-MH175-1	Wallpack WGH-Mogul-Prismatic-Wall	Replace	Wallpack - 40W WALPAK5B	4
Public Works	Exterior	Canopy //19	1	MH-MH175-1	Flood-Medium-Clear-Ground Knuckle	Replace	Flood - 35W FLED Keystone w/Surface Mount Box	1
Public Works	Exterior	Canopy //19	1	MH-MH175-1	Flood-Medium-Clear-Ground Knuckle	Replace	Flood - 35W FLED Keystone w/Surface Mount Box	1
Public Works	Exterior	Canopy //19	2	HAL-H50-1	Flood-Medium-PAR38	Relamp	Screw In - PAR38 14W Dimmable Sylvania	2

## Wolfe Recreation Center LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Wolfe Recreation Center	Gym	Swimming pool //16	12	MH-MH400-1	Highbay-Mogul-Pendant	Replace	Highbay - LED 100W RH w/ All Mounting Hardware	12
Wolfe Recreation Center	Gym	Swimming pool //16	6	LED-L20-1	LED-L20-1	Do Nothing	Do Nothing	6
Wolfe Recreation Center	Gym	Swimming pool	2	INCAN-60-2	Drum-Medium-Frosted-Surface	Relamp	Drum Round 120v Satco	2
Wolfe Recreation Center	Exits	Exits	5	EXIT-LED SW-2	FROG EYES-WHITE-RED-WALL	Do Nothing	Do Nothing	5
Wolfe Recreation Center	Gym	Swimming pool	2	INCAN-60-2	Drum-Medium-Frosted-Surface	Relamp	Drum Round 120v Satco	2
Wolfe Recreation Center	Hallway	Hallway Swimming pool	2	F-F32T8-2	Troffer-2X4-Prismatic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	2
Wolfe Recreation Center	Hallway	Hallway Swimming pool	2	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Wolfe Recreation Center	Mechanical / Electrical	Mechanical	1	F-F32T8-1	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 1 Type B Keystone	1
Wolfe Recreation Center	Mechanical / Electrical	Mechanical	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Wolfe Recreation Center	Open RR	MRR WRR	12	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	12
Wolfe Recreation Center	Open RR	MRR WRR	3	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed-BBU	Retrofit	Rec Can 6in - 8.5W LED Kit Espen / EMG Driver	3
Wolfe Recreation Center	Open RR	MRR WRR	15	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	15
Wolfe Recreation Center	Open RR	MRR WRR	3	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed-BBU	Retrofit	Rec Can 6in - 8.5W LED Kit Espen / EMG Driver	3
Wolfe Recreation Center	Hallway	Hallway Swimming pool	3	F-F32T8-2	Troffer-2X4-Prismatic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	3
Wolfe Recreation Center	Hallway	Hallway Swimming pool	1	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Wolfe Recreation Center	Open Office	Office	2	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Wolfe Recreation Center	Open Office	Office	2	F-F32T8-3	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Wolfe Recreation Center	Mechanical / Electrical	Riser	1	F-F32T8-2	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Wolfe Recreation Center	Hallway	Hallway	7	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	7
Wolfe Recreation Center	Hallway	Hallway	7	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed-BBU	Retrofit	Rec Can 6in - 8.5W LED Kit Espen / EMG Driver	7
Wolfe Recreation Center	Hallway	Hallway	20	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	20
Wolfe Recreation Center	Hallway	Hallway cove	12	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	12
Wolfe Recreation Center	Open Office	Office	12	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	12
Wolfe Recreation Center	Mechanical / Electrical	Mechanical	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Wolfe Recreation Center	Open Office	Office	1	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Wolfe Recreation Center	Open Office	Office	2	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Wolfe Recreation Center	Open Office	Office	2	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Wolfe Recreation Center	Mechanical / Electrical	Electrical	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Wolfe Recreation Center	Open RR	MRR WRR	5	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	5
Wolfe Recreation Center	Open RR	MRR WRR	5	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	5
Wolfe Recreation Center	Support Other	Janitor RR	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Wolfe Recreation Center	Exits	Exits	5	EXIT-LED SW-2	FROG EYES-WHITE-RED-WALL	Do Nothing	Do Nothing	5
Wolfe Recreation Center	Open Office	Break rm	16	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	16
Wolfe Recreation Center	Exits	Exits	1	EXIT-LED SW-2	FROG EYES-WHITE-RED-WALL	Do Nothing	Do Nothing	1
Wolfe Recreation Center	Open Office	Office kitchen	2	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Wolfe Recreation Center	Open Office	Office kitchen	2	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Wolfe Recreation Center	Mechanical / Electrical	Electrical	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Wolfe Recreation Center	Gym	Gym dance class	11	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	11
Wolfe Recreation Center	Mechanical / Electrical	Electrical	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Wolfe Recreation Center	Gym	Gym class	15	F-F32T8-3	Troffer AH-2X4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	15
Wolfe Recreation Center	Exterior	Wall //10	2	CFL-CF32W-2	Decorative-Plug-in 4 Pin Vertical-Frosted-Wall	Retrofit	Retrofit Kit - 15W Rectangle 2 x 14in x 1 (Max Output)	2
Wolfe Recreation Center	Exterior	GP Pole decorative	7	LED-L100-1	Acorn-Medium-Frosted-Pole	Do Nothing	Do Nothing	7
Wolfe Recreation Center	Exterior	Ground	5	MH-MH175-1	Flood-Mogul-Clear-Trunnion	Replace	Flood - 100W FLED Keystone	5
Wolfe Recreation Center	Exterior	Canopy //12x12inch	5	MH-MH175-1	Square Can-Mogul-Prismatic-Recessed	Relamp	Canopy 3A - 20W 10in Square	5
Wolfe Recreation Center	Exterior	Wall //10	4	HAL-H50-2	Medium-PAR38	Relamp	Screw In - PAR38 14W Dimmable Sylvania x 2	4
Wolfe Recreation Center	Exterior	Pole decorative	2	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	2
Wolfe Recreation Center	Exterior	Pole decorative	2	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	2
Wolfe Recreation Center	Exterior	Pole decorative // lens broken	2	MH-MH250-1	Acorn-Mogul-Frosted-Pole	Retrofit	Screw In - 45W Keystone LED Lamp Medium / mogul adapt	2
Wolfe Recreation Center	Exterior	Shed //14ch	3	MH-MH250-1	Highbay-Mogul-Pendant	Replace	Highbay - LED 100W RH w/ All Mounting Hardware	3
Wolfe Recreation Center	Exterior	Pole //25 could be 480v	3	MH-MH1000-1	Flood-Mogul-Clear-Trunnion	Replace	Flood - 100W FLED Keystone	3
Wolfe Recreation Center	Exterior	Wall //10	2	HAL-H50-2	Medium-PAR38	Relamp	Screw In - PAR38 14W Dimmable Sylvania x 2	2
Wolfe Recreation Center	Exterior	Wall //10	4	MH-MH175-1	Wallpack LNC-Mogul-Prismatic-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	4
Wolfe Recreation Center	Exterior	Canopy //12x12inch	3	MH-MH175-1	Square Can-Mogul-Prismatic-Recessed	Replace	Canopy 3A - 20W 10in Square	3
Wolfe Recreation Center	Exterior	Wall //10	6	CFL-CF32W-2	Decorative-Plug-in 4 Pin Vertical-Frosted-Wall	Retrofit	Retrofit Kit - 15W Rectangle 2 x 14in x 1 (Max Output)	6

## Fire Station #1 Headquarters LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Fire Station #1-HDQTS	Hallway	Foyer	10	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	10
Fire Station #1-HDQTS	Exits	Exits	1	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	1
Fire Station #1-HDQTS	Open Office	Conference /dimmmable line v	21	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 5/6in - 9W Phase Dimmmable Sylvania w/ Goof	21
Fire Station #1-HDQTS	Open RR	RR	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Fire Station #1-HDQTS	Open RR	RR	1	F-F32T8-2	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Open RR	RR	2	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Fire Station #1-HDQTS	Open RR	RR	1	F-F25T8-2	Indirect-3'-Eggcrate-Surface	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	1
Fire Station #1-HDQTS	Open Office	Office	4	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	4
Fire Station #1-HDQTS	Hallway	Hallway	2	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #1-HDQTS	Hallway	Hallway	4	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	4
Fire Station #1-HDQTS	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #1-HDQTS	Open Office	Office	6	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	6
Fire Station #1-HDQTS	Open Office	Office	2	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	2
Fire Station #1-HDQTS	Open RR	RR	2	INCAN-160-1	Vanity-Medium-Frosted-Wall	Relamp	Screw In - A19 9.5W x 1	2
Fire Station #1-HDQTS	Open RR	RR	1	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Fire Station #1-HDQTS	Open RR	RR	1	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Fire Station #1-HDQTS	Open Office	Office	6	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	6
Fire Station #1-HDQTS	Open Office	Office	6	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	6
Fire Station #1-HDQTS	Hallway	Hallway	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Open Office	Office /broken switch	6	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	6
Fire Station #1-HDQTS	Open Office	Office	4	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	4
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Mechanical / Electrical	Electrical	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Hallway	Hallway	1	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Fire Station #1-HDQTS	Hallway	Hallway	1	UFL-F40BIA-X-2	Up Light-4'-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	1
Fire Station #1-HDQTS	Hallway	Stairwell //lens missing	3	F-F32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	3
Fire Station #1-HDQTS	Hallway	Stairwell //lens missing	3	F-F32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	3
Fire Station #1-HDQTS	Garage	Bay area #24	10	LED-L100-1	Highbay-4'-Pendant	Do Nothing	Do Nothing	10
Fire Station #1-HDQTS	Garage	Bay area #24	3	LED-L20-1	Vanity-4'-Surface	Do Nothing	Do Nothing	3
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #1-HDQTS	Support Other	Storage	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #1-HDQTS	Exits	Exits	4	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	4
Fire Station #1-HDQTS	Hallway	Hallway	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #1-HDQTS	Mechanical / Electrical	Electrical	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #1-HDQTS	Hallway	Hallway	7	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	7
Fire Station #1-HDQTS	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #1-HDQTS	Open Office	Office	4	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	4
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Open Office	Office	2	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	2
Fire Station #1-HDQTS	Open Office	Office	2	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Fire Station #1-HDQTS	Open Office	Office	4	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Fire Station #1-HDQTS	Open Office	Office	4	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Fire Station #1-HDQTS	Open Office	Office	4	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Fire Station #1-HDQTS	Hallway	Hallway 2nd fl	9	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	9
Fire Station #1-HDQTS	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #1-HDQTS	Rest-room	Sleeping quarters (4)	8	F-F25T8-2	Vanity-3'-Prismatic-Surface	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	8
Fire Station #1-HDQTS	Rest-room	Sleeping quarters (4)	4	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	4
Fire Station #1-HDQTS	Support Other	Storage 2nd fl	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Support Other	Storage 2nd fl	1	F-F32T8-2	Vapor Tight-4'-Clear-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #1-HDQTS	Hallway	Hallway 2nd fl	1	UFL-FU32T8/U6-2	Troffer AH-2x2-Parabolic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Fire Station #1-HDQTS	Open Office	Offices 2nd fl (3)	6	F-F32T8-3	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	6
Fire Station #1-HDQTS	Gym	Gym 2nd fl	4	F-F32T8-2	Troffer-2x4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Fire Station #1-HDQTS	Support Other	Storage 2nd fl	1	F-F32T8-2	Troffer-2x4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Fire Station #1-HDQTS	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #1-HDQTS	Hallway	Hallway 2nd fl	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #1-HDQTS	Open Office	Break area 2nd fl	4	HAL-H50-2	*-Medium-4'PAR-3'-*	Relamp	Screw In - PAR38 14W Dimmable Sylvania x 2	4
Fire Station #1-HDQTS	Open Office	Break area 2nd fl	4	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	4
Fire Station #1-HDQTS	Open Office	Break area 2nd fl	4	F-F32T8-2	Direct/Indirect-4'-Pendant	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	4
Fire Station #1-HDQTS	Open Office	Break area 2nd fl	4	F-F32T8-3	Troffer-2x4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	4
Fire Station #1-HDQTS	Open Office	Break area 2nd fl	2	INCAN-160-1	Jelly Jar-Medium-Clear-Surface	Relamp	Screw In - A19 9.5W x 1	2
Fire Station #1-HDQTS	Hallway	Hallway 2nd fl	6	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	6
Fire Station #1-HDQTS	Open RR	RR	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #1-HDQTS	Open RR	RR	1	F-F32T8-3	Troffer-2x4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Fire Station #1-HDQTS	Open RR	RR	1	F-F25T8-2	Strip-3'-Surface	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	1
Fire Station #1-HDQTS	Rest-room	Sleeping quarters (4)	8	F-F25T8-2	Vanity-3'-Prismatic-Surface	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	8
Fire Station #1-HDQTS	Rest-room	Sleeping quarters (4)	4	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	4
Fire Station #1-HDQTS	Support Other	Storage 2nd fl	1	F-F32T8-2	Troffer-2x4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Fire Station #1-HDQTS	Open RR	RR	4	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	4
Fire Station #1-HDQTS	Open RR	RR	2	F-F32T8-3	Troffer-2x4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Fire Station #1-HDQTS	Open RR	RR	2	F-F25T8-2	Strip-3'-Surface	Retrofit	3FT T8 12W LED Tube x 2 / Type B Flicker Free	2
Fire Station #1-HDQTS	Open Office	Laundry 2nd fl	2	F-F32T8-4	Troffer AH-2x4-Parabolic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Fire Station #1-HDQTS	Mechanical / Electrical	Electrical 2nd fl	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #1-HDQTS	Exterior	Wall #10	4	MH-MH175-1	Wallpack LNC-Mogul-Prismatic-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	4
Fire Station #1-HDQTS	Exterior	Wall #10	9	MH-MH175-1	Wallpack LNC-Mogul-Prismatic-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	9
Fire Station #1-HDQTS	Exterior	Wall #10	4	MH-MH175-1	Wallpack LNC-Mogul-Prismatic-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	4
Fire Station #1-HDQTS	Exterior	Ground flag poles	3	LED-L12-1	Flood-Ground	Do Nothing	Do Nothing	3
Fire Station #1-HDQTS	Exterior	GP Pole decorative	12	LED-L100-1	Acorn-Medium-Frosted-Pole	Do Nothing	Do Nothing	12
Fire Station #1-HDQTS	Exterior	Canopy #10	3	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	3
Fire Station #1-HDQTS	Exterior	Bollards	8	HPS-HPS100-1	Bollard-Medium-Frosted-Ground-*	Retrofit	Screw In - 16W Bollard Relamp	8

## Fire Station #3 LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Fire Station #3	Open Office	Office Training	7	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	7
Fire Station #3	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #3	Open Office	Office Training	2	CFL-CF32W-2	Wall Sconce-Plug-in 4 Pin Vertical-Frosted-Wall	Retrofit	Retrofit Kit - 10W Semi-Circ. Bin	2
Fire Station #3	Open RR	RRs	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #3	Open RR	RRs	2	F-F17T8-2	Vanity-2'-Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	2
Fire Station #3	Mechanical / Electrical	Boiler rooms	2	MH-MH70-1	Wallpack NRG-Medium-Prismatic-Surface	Replace	Wallpack - 20W Sconce Keystone	2
Fire Station #3	Open Office	Office Training	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #3	Mechanical / Electrical	Utility 2 rooms exterior	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #3	Garage	Track bay area	21	LIN-LED-L10T8LED-2	Vapor Tight-8'-Surface	Do Nothing	Do Nothing	21
Fire Station #3	Mechanical / Electrical	Riser //lens missing	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #3	Support Other	Storage //lens missing	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #3	Open Office	Laundry	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #3	Gym	Weight rm	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #3	Open RR	RRs	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #3	Open RR	RRs	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #3	Open RR	RRs	1	F-F32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #3	Open RR	RRs	1	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Fire Station #3	Open RR	RRs //broken lens	1	F-F17T8-2	Vanity-2'-Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	1
Fire Station #3	Rest-room	Sleeping quarters	6	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	6
Fire Station #3	Hallway	Hallway	8	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	8
Fire Station #3	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #3	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #3	Open Office	Break rm	6	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	6
Fire Station #3	Open Office	Break rm	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #3	Mechanical / Electrical	Boiler rooms	1	CFL-CF32W-1	Decorative-Plug-in 4 Pin Vertical-Pendant	Relamp	Plug In - 6W PLV 2 Pin Direct Wire x 1 Bypass	1
Fire Station #3	Hallway	Hallway	1	MH-MH70-1	Wallpack NRG-Medium-Prismatic-Surface	Replace	Wallpack - 20W Sconce Keystone	1
Fire Station #3	Hallway	Hallway	1	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Fire Station #3	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #3	Exterior	Pole //30	3	MH-MH400-1	Flood-Mogul-Clear-Trunnion	Replace	Flood - 100W LED Keystone	3
Fire Station #3	Exterior	Wall //10	2	MH-MH175-1	Wallpack WGH-Mogul-Prismatic-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	2
Fire Station #3	Exterior	Canopy //10	2	MH-MH175-1	8-in Can-Medium-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	2
Fire Station #3	Exterior	Wall //10 add plates	2	MH-MH175-1	Wallpack WGH-Mogul-Prismatic-Wall	Replace	Wallpack - 40W WALPAKNSB	2
Fire Station #3	Exterior	GP Pole //30	1	HPS-HPS250-1	Cobra Head-Mogul-Frosted-Pole*	Do Nothing	Do Nothing	1

## Fire Station #4 LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Fire Station #4	Mechanical / Electrical	Electrical exterior	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #4	Mechanical / Electrical	Electrical exterior	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #4	Hallway	Hallway	5	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 12W LED Kit Espen	5
Fire Station #4	Hallway	Hallway	1	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	1
Fire Station #4	Hallway	Hallway	2	INCAN-160-1	Decorative-Medium-Wall	Relamp	Screw In - A19 9.5W x 1	2
Fire Station #4	Hallway	Hallway	3	HAL-H50-1	Track-Mogul-Track	Relamp	Plug In - MR16 6W Bi-pin x 1	3
Fire Station #4	Open Office	Office	2	F-F32T8-4	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	2
Fire Station #4	Open RR	RRs	2	F-F17T8-2	Vanity-2'-Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	2
Fire Station #4	Open RR	RRs	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 12W LED Kit Espen	2
Fire Station #4	Support Other	Storage	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #4	Support Other	Storage	2	INCAN-160-1	Medium-Surface	Relamp	Screw In - A19 9.5W x 1	2
Fire Station #4	Support Other	Storage	4	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	4
Fire Station #4	Open Office	Office	3	F-F32T8-4	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	3
Fire Station #4	Garage	Track bay area //20	21	LIN-LED-L15T8LED-4	Vapor Tight-8'-Surface	Do Nothing	Do Nothing	21
Fire Station #4	Support Other	Storage //lens missing	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #4	Support Other	Storage	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #4	Hallway	Hallway //dimmers line volt	10	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 5/8in - 9W Phase Dimmable SYLVANIA w/ GooF	10
Fire Station #4	Support Other	Janitor	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #4	Open RR	RRs //broken lens	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #4	Gym	Weight rm	2	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	2
Fire Station #4	Open RR	RRs	1	F-F32T8-2	Vanity-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #4	Open RR	RRs	1	F-F32T8-2	Troffer-2X4-Plaster-Recessed	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #4	Open RR	RRs	3	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	3
Fire Station #4	Open RR	RRs	1	F-F17T8-2	Vanity-2'-Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	1
Fire Station #4	Open Office	Offices	2	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #4	Exits	Exits	8	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	8
Fire Station #4	Rest-room	Sleeping quarters	5	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-BBU	Retrofit	2x4 Retrofit - Cooper 28.6W, Volumetric DKIT BBU	5
Fire Station #4	Rest-room	Sleeping quarters	1	F-F32T8-4	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 4 Type B Keystone	1
Fire Station #4	Open Office	Break rm	10	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	10
Fire Station #4	Open Office	Break rm	1	INCAN-160-1	Decorative-Medium-Pendant	Relamp	Screw In - A19 9.5W x 1	1
Fire Station #4	Support Other	Office	1	INCAN-160-1	Troffer-2X4-Prismatic-Recessed	Relamp	Screw In - A19 9.5W x 1	1
Fire Station #4	Open Office	Offices	1	F-F32T8-4	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Fire Station #4	Hallway	Hallway	1	INCAN-160-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Fire Station #4	Open Office	Laundry	1	INCAN-160-1	Medium-Surface	Relamp	Screw In - A19 9.5W x 1	1
Fire Station #4	Exterior	Canopy //10	2	MH-MH175-1	8-in Can-Medium-Recessed	Retrofit	Rec Can 8in - 12W LED Kit Espen	2
Fire Station #4	Exterior	Wall //10	2	MH-MH175-1	Wallpack WGH-Mogul-Prismatic-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	2
Fire Station #4	Exterior	Pole //30	4	MH-MH400-1	Shoe Box-Mogul-Clear-Pole	Replace	Site Lighting - Keystone Adjustable 100W	4
Fire Station #4	Exterior	Wall //20 requires the plates	2	MH-MH175-1	Wallpack LNC-Mogul-Prismatic-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	2

## Fire Station #5 LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Fire Station #5	Mechanical / Electrical	Electrical exterior	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #5	Mechanical / Electrical	Electrical exterior	1	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #5	Garage	Track bay area //24	42	LIN-LED-L15T8LED-2	Vapor Tight-4'-Surface	Do Nothing	Do Nothing	42
Fire Station #5	Exits	Exits	5	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	5
Fire Station #5	Support Other	Storage	3	F-F32T8-1	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 1 Type B Keystone	3
Fire Station #5	Garage	Track bay area	1	F-F32T8-2	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #5	Support Other	Storage	2	F-F32T8-1	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 1 Type B Keystone	2
Fire Station #5	Open Office	Office	1	F-F32T8-1	Troffer-2X4-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 1 Type B Keystone	1
Fire Station #5	Open Office	Break rm	7	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	7
Fire Station #5	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Fire Station #5	Open Office	Break rm	1	F-F32T8-2	Troffer-2X4-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #5	Open Office	Break rm	1	F-F17T8-4	Wrap-2'-Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 4 / Type B Flicker Free	1
Fire Station #5	Support Other	Storage	1	F-F32T8-1	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 1 Type B Keystone	1
Fire Station #5	Rest-room	Sleeping quarters	6	F-F32T8-2	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	6
Fire Station #5	Rest-room	Sleeping quarters//fixture swit	12	F-F17T8-2	Vanity-2'-Prismatic-Surface	Retrofit	2FT T8 7W LED Tube x 2 / Type B Flicker Free	12
Fire Station #5	Hallway	Hallway	9	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	9
Fire Station #5	Open Office	Office	4	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	4
Fire Station #5	Open RR	RR	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #5	Open RR	RR	2	F-F32T8-2	Troffer-2X4-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #5	Gym	Weight rm	2	F-F32T8-2	Troffer-2X4-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #5	Open Office	Office	1	F-F32T8-1	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 1 Type B Keystone	1
Fire Station #5	Open RR	RR	1	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Fire Station #5	Open Office	Office	6	F-F32T8-3	Direct/Indirect-4'-Pendant*	Retrofit	4FT T8 9W LED Tube x 3 Type B Keystone	6
Fire Station #5	Hallway	Hallway	1	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	1
Fire Station #5	Hallway	Hallway	1	F-F32T8-2	Troffer-2X4-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #5	Hallway	Hallway	1	F-F32T8-2	Wrap-4'-Prismatic-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	1
Fire Station #5	Exits	Exits	3	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	3
Fire Station #5	Open RR	RR (2)	2	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	2
Fire Station #5	Mechanical / Electrical	Electrical by training EST	2	F-F32T8-2	Strip-4'-Surface	Retrofit	4FT T8 9W LED Tube x 2 Type B Keystone	2
Fire Station #5	Exterior	Pole //20	5	LED-L100-1	Shoe Box-Pole	Do Nothing	Do Nothing	5
Fire Station #5	Exterior	Wall //10	14	CFL-CF42W-2	Wallpack LNC-Plug-in 4 Pin Horizontal-Clear-Wall	Replace	Wallpack - 25W Adjustable Cutoff Keystone	14
Fire Station #5	Exterior	Canopy //10	4	CFL-CF32W-2	6-in Can-Plug-in 4 Pin Horizontal-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	4

## Recycling Education Center LED Lighting Line-by-Line

Location	Area	Room	Qty	Existing Fixture	Fixture Attributes	Action	Proposed Fixture	Qty
Recycling Edu Center	Garage	Warehouse //20	10	F-F96T12/ES-2	Strip-8'-Surface	Retrofit	Retrofit Kit 8ft - 4ft Espen Bar Kit x 2	10
Recycling Edu Center	Garage	Warehouse //20	3	MH-MH400-1	Highbay-Mogul-Surface	Replace	Highbay - LED 100W RH w/ All Mounting Hardware	3
Recycling Edu Center	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Recycling Edu Center	Open Office	Office	4	LED-L20-1	Troffer-2x2-Recessed	Do Nothing	Do Nothing	4
Recycling Edu Center	Open RR	RR	1	LED-L20-1	Troffer-2x2-Recessed	Do Nothing	Do Nothing	1
Recycling Edu Center	Hallway	Hallway	6	INCAN-H60-1	6-in Can-Medium-Recessed	Retrofit	Rec Can 6in - 8.5W LED Kit Espen	6
Recycling Edu Center	Exits	Exits	2	EXIT-LED 5W-2	BBU-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Recycling Edu Center	Open RR	RR	1	F-F32T8-4	Troffer-2X4-Prismatic-Recessed	Retrofit	2x4 Retrofit - Cooper 25W, Volumetric DKIT	1
Recycling Edu Center	Open Office	Office (6)	34	LED-L20-1	Troffer-2x2-Recessed	Do Nothing	Do Nothing	34
Recycling Edu Center	Hallway	Hallway	2	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	2
Recycling Edu Center	Exits	Exits	2	EXIT-LED 5W-2	FROG EYES-WHITE-RED-WALL	Do Nothing	Do Nothing	2
Recycling Edu Center	Support Other	Janitor	1	UFL-FU32T8/U6-2	Troffer-2x2-Prismatic-Recessed	Retrofit	2x2 Retrofit - Cooper 15W, Volumetric DKIT	1
Recycling Edu Center	Open RR	RR	1	QUARTZ-Q100-2	Vanity-Plug-in 2 Pin-Frosted-Wall	Do Nothing	Do Nothing	1
Recycling Edu Center	Exterior	Canopy //20	6	LED-L50-1	Highbay-Frosted-Surface	Do Nothing	Do Nothing	6
Recycling Edu Center	Exterior	Canopy //20	5	LED-L50-1	Shoe Box-Clear-Wall	Do Nothing	Do Nothing	5
Recycling Edu Center	Exterior	Canopy //10	1	LED-L20-1	Drum-Frosted-Surface	Do Nothing	Do Nothing	1

Energy Conservation Measure	ECM General Description Table
ECM4 MCC, Generators & ATS	MCC at Community Center and Generators/ATS PS, PW & Fire Stations

\*MCC (Motor Control Center); ATS (Automatic Transfer Switch); PS (Police Station); & PW (Public Works)

### ECM4 MCC, Generators and ATS - Scope of Services for Facilities Listed

Facility	ECM4 High-Level Summary Table
Community Center Building	Replace MCB Panelboard, MCC Switchboard and Electrical Transformers
Police Station/Jail Facility	Upgrade Generator to 600kW with ATS Panelboard Public Safety Facility
Public Works Building	Replace Existing with New 125kW Generator and ATS Panelboard
Fire Station #1 Building	Replace Existing with New 300kW Generator and ATS Panelboard
Fire Station #2 Building	Reuse Existing Generator, modify CT and ATS with scope indicated below
Fire Station #3 Building	Replace Existing 25kW with New 80kW Generator and ATS Panelboard
Fire Station #4 Building	Replace Existing 22kW with New 80kW Generator and ATS Panelboard
Fire Station #5 Building	Replace Existing 25kW with New 80kW Generator and ATS Panelboard

### Clarifications

- Reuse existing feeders, conduit and conductors unless specifically stated below to be replaced.
- New natural gas meters and gas piping to be provided by utility provider and is excluded.
- The existing generators to be removed will be given to Smyrna for their use.

### ECM4 MCC and Transformers - Community Center/Library Scope of Services

Replace 1200A MCB Panelboard, 300A MCC Switchboard, Transformers, add VFDs for Pumps & CT Fans

- Remove and replace the following electrical distribution equipment:
  - (1) 1200 Amp, main MCB (Main Circuit Breaker) Panelboard (Siemens I-T-E Switchboard)
    - Extend existing conductors as necessary for downstream, feeder circuits.
    - Main service conductors from utility transformer to be reused.
  - (6) Dry Type Transformers
    - Replace 5-transformers at the Community Center (TX-MR@15 kVA; TXC-C@30 kVA; TX-K@45 kVA; TXC-A@112.5 kVA; and suspended@25kVA)
    - Replace 1-transformer at the Public Library (floor mounted@75 kVA)
    - All existing conductors to be reused.
    - Reuse existing housekeeping pads.
- (1) 300 Amp MCC (Motor Control Center) Switchboard
  - To be replaced with a standard MLO (Main Lug Only) Panelboard
  - Furnish and Install motor starters for Boiler Pumps, Tower Pumps, and AHU

- c. Extend existing conductors to new panelboard.
      - i. Install applicable junction boxes and wireways.
  3. Reroute conduit and wire for 6-pump circuits for the installation of 6-new VFDs.
    - a. Provide 6-new VFDs (Variable Frequency Drives) to replace 6-pump motor starters.
    - b. Install new equipment connections and make terminations.
  4. Provided 2-VFDs to be installed in the electrical room for 2-Cooling Tower Fan motors.
  5. Reconnect the existing power and controls.
  6. Startup all newly installed electrical equipment per manufacturer's recommendations and verify operation of all systems.
  7. New Distech controls to perform the variable frequency drive operations for both the pumps and cooling tower fans is include with ECM1 HVAC Upgrades described above.
  8. There will be one weekend of downtime for the switchboard and one weekend of downtime for the MCC.

### **ECM4 Generator and ATS – Police Station/Jail Scope of Services**

#### **Replace 350kW Diesel Generator with new 600kW NG Generator to Carry Load of Public Safety Building**

1. Remove existing diesel generator, diesel tank and concrete pad.
  - a. Demo and replace existing concrete pad as needed.
  - b. Provide new concrete pad for new generator.
2. Furnish and install new NG (Natural Gas) generator, upsized to 600kW to carry entire Police Station and Jail electrical load.
  - a. Reconfigure the service entrance such that the entire building is backed up by the new NG 600kW NG generator.
  - b. Install new NG piping from NG service meter provided by others to new generator.
3. Reused the existing 600A ATS (Automatic Transfer Switch) to service the emergency life safety loads.
4. Add a new 1200A ATS service entrance rated ATS to serve the non-emergency building load like the HVAC load and other electrical load.
5. Reconnect the existing to remain MS#2 and MS#4 feeders to the new 1200A wireway.
6. Reconnect existing power and controls.
7. Startup generator and ATS per manufacturer's recommendations and verify operation.
8. Provide temporary rental generator for potential service outages while the existing
9. Startup generator/ATS per manufacturer's recommendations and verify operation of systems.

### **ECM4 Generator and ATS – Public Works Scope of Services**

#### **Replace Existing 45kW Generator with new NG 125kW Generator to Carry Load of Public Works Building**

1. Replace the concrete pad as needed.
2. Provide bollards for protection of new generator.
3. Install new NG piping for the new generator.
4. Remove and replace existing generator.
  - a. New generator to be relocated due to clearance restrictions.
  - b. Generator to be NG (Natural Gas) sized for 125kW.
5. Replace existing MCB panelboard with Service Entrance Rated ATS.
  - a. All existing service conductors to be reused.
6. Furnish and install new 400A panelboard adjacent to new ATS.
  - a. Provide breakers as required for connection to all existing equipment/panels.

- b. Migrate circuits into new panel(s) as required.
7. The following will be removed from the existing electrical room no longer required for this application:
  - a. ATS.
  - b. Double Pole, Double Pole Throw Switch.
  - c. 12 Circuit Load Center.
  - d. Existing Branch Panelboard.
8. Furnish and install new conduit and wire from new ATS to new generator location for following:
  - a. Power conductors.
  - b. Start/Stop.
  - c. Battery Charger.
  - d. Jacket Heater.
9. All new conduits will be installed above grade.
10. Dispose of existing generator.
11. The building will be without power for 2-days.
  - a. Provisions for temporary power using a rental generator for critical electronics and communications only are included.
12. Startup generator/ATS per manufacturer's recommendations and verify operation of systems.

### **ECM4 Generator and ATS – Fire Station #1 Headquarters Scope of Services**

#### **Replace Existing 500kW Generator with a new 300kW Generator and ATS**

1. Modify the concrete pad as needed.
2. Install new NG piping for new generator.
3. Remove and replace existing generator.
  - a. Extend existing conductors, as necessary.
  - b. New generator to be NG sized for 300kW.
4. Remove and replace exhaust stack as needed.
5. Replace existing ATS.
  - a. All existing conductors to be reused.
6. Reconnect existing controls.
  - a. All existing conductors to be reused.
7. Dispose of existing generator.
8. No building outage is planned for this location.
9. Building will be without backup power for 3-days.
10. Startup generator/ATS per manufacturer's recommendations and verify operation of systems.

### **ECM4 Generator and ATS – Fire Station #2 Headquarters Scope of Services**

#### **Reuse Existing 100kW Generator, Relocate CTs and Meter, and Install New 800A SE ATS**

1. Remove and replace exterior disconnect.
  - a. Furnish and install new 800A SE (Service Entrance) ATS.
  - b. Relocate CTs to utility transformer and install CT meter adjacent to transformer.
  - c. Install pedestal and CT meter. Meter enclosure, CT, and meter wiring to be provided by utility company.
  - d. Reuse all feeder conductors to existing 800 Amp main panelboard.
2. Remove existing 400 Amp ATS and extend conductors to new 800 Amp SE ATS.
3. Existing generator and generator breakers to remain.
4. Main building panel will be without power for 16+ hours.
  - a. Utilize the existing generator and ATS for temporary power during the new SE ATS

- installation.
- b. There will be a required outage of the Standby ATS up to 8 hours to do the final cutover and tie-in.
- c. Local temporary power provisions are included by:
  - Utilizing extension cords and circuits from existing LS ATS.
- 5. Startup generator/ATS per manufacturer's recommendations and verify operation of systems.

### **ECM4 Generator and ATS – Fire Station #3 Scope of Services**

#### **Replace Existing 25kW Generator with a new 80kW Generator and ATS (Automatic Transfer Switch)**

1. Modify the concrete pads as needed.
2. Install new gas piping for the generator.
3. Remove and replace existing generator.
  - a. New generator to be Natural Gas, sized 80kW
4. Relocate existing 400-amp meter socket.
  - a. Mount meter socket in yard on existing conduit and wires.
    - Provide new stand and supports as applicable.
  - b. Replace with 400 Amp Service Entrance Rated ATS.
  - c. Make connections using existing conductors.
  - d. All existing conductors to be reused.
  - e. Connect to existing panelboard.
    - This will require an 8–12-hour power outage.
5. Install new conduit and wire from ATS to generator for
  - a. Power conductors.
  - b. Start/Stop.
  - c. Battery Charger.
    - Reuse existing circuitry.
  - d. Jacket Heater.
    - Reuse existing circuitry.
  - e. All conduits to surface mounted above grade.
6. Remove existing ATS in closet and connect existing panel to existing wiring as required.
7. Dispose of existing generator and ATS.
8. The building will be without power for 8-12 hours for the replacement for meter relocation and ATS installation.
  - a. Provide local temporary provisions utilizing portable generator and extension cords.
9. Replace existing 400 Amp, Main Circuit breaker in exterior electrical closet
  - a. Furnish and Install new panel and breakers to match existing quantities of existing.
  - b. An 8-12 Hour outage will be required for this.
    - Work can be combined with meter relocation.
  - c. Coordination with the Utility is included.
  - d. No additional work or code repairs are included.
10. Startup generator/ATS per manufacturer's recommendations and verify operation of systems

### **ECM4 Generator and ATS – Fire Station #4 Scope of Services**

#### **Replace Existing 22kW Generator with a new 80kW Generator and ATS (Automatic Transfer Switch)**

1. Modify the concrete pads as needed.
2. Install new natural gas piping for the new generator.
3. Remove and replace existing generator.

- a. New generator to be Natural Gas, sized 80kW.
4. Relocate existing 400-amp meter socket.
  - a. Mount meter socket in yard on existing conduit and wires.
    - Provide new stand and supports as applicable.
  - b. Replace with 400 Amp Service Entrance Rated ATS.
  - c. Make connections using existing conductors.
  - d. All existing conductors to be reused.
  - e. Connect to existing panelboard.
    - This will require an 8–12-hour power outage.
5. Install new conduit and wire from ATS to generator for
  - a. Power conductors.
  - b. Start/Stop.
  - c. Battery Charger.
    - Reuse existing circuitry.
  - d. Jacket Heater.
    - Reuse existing circuitry.
  - e. All conduits to surface mounted above grade.
6. Remove existing ATS in closet and connect existing panel to existing wiring as required.
7. Dispose of existing generator and ATS.
8. Startup generator/ATS per manufacturer's recommendations and verify operation of systems.

### **ECM4 Generator and ATS – Fire Station #5 Scope of Services**

#### **Replace Existing 25kW Generator with a new 80kW Generator and ATS (Automatic Transfer Switch)**

1. Modify the concrete pads as needed.
2. Install new gas piping for the generator.
3. Remove and Replace existing generator.
  - a. Generator to be Natural Gas, sized 80kW.
4. Excavate and locate existing feeder conductors at building exterior.
  - a. This will require removal and replacement of existing sidewalk.
  - b. Furnish and Install 400 Amp Service Entrance Rated ATS.
  - c. Intercept and reroute existing conduits into new ATS.
  - d. All existing conductors to be reused.
    - Furnish new conductors as required.
    - This will require and 8-12-hour power outage.
  - e. Connect to existing panelboard.
5. Install new conduit and wire from ATS to generator for
  - a. Power conductors.
  - b. Start/Stop.
  - c. Battery Charger
    - Reuse existing circuitry. Reroute as required.
  - d. Jacket Heater
    - Reuse existing circuitry. Reroute as required.
  - e. All conduits to surface mounted above grade.
6. Remove existing ATS (2) in closet and connect existing panel to existing wiring as required.
7. Dispose of existing generator and ATS.
8. Replace sidewalk.
9. Utilize the existing generator to power the existing ESB and LS panels during the outage.
  - a. Main building panel will be without power for 2-days
10. Startup generator/ATS per manufacturer's recommendations and verify operation of systems.

### Estimated Installation Schedule

The project schedule is based on receiving the signed Work Order 2024-01-Rev1 on or before July 16, 2024. Below is a copy of the tentative installation schedule for the HVAC and LED Lighting ECMs. A tentative schedule for the Generator and ATS work will be developed once the signed work order has been received and the electrical equipment ordered.

### Sample HVAC Project Schedule

City of Smyrna  
 Tentative HVAC Installation Schedule

Month	Facility Address	Duration	May				June				July			
			5-May	12-May	19-May	26-May	2-Jun	9-Jun	16-Jun	23-Jun	30-Jun	7-Jul	14-Jul	21-Jul
Weekly Ending	Smyrna, GA 30080													
Procurement	-													
Preconstruction Meeting	-													
Public Works	2190 Atlanta Road													
Brawner Hall	3180 Atlanta Road													
Police Station/Jail	2646 Atlanta Road													
Fire Station #3	2825 Park Road													
Fire Station #4	4595 South Cobb Dr.													
Fire Station #5	750 Cooper Lake Rd.													
Fire Station #1 HDQTS	2620 Atlanta Road													
Wolfe Rec Center	884 Church Street													
Recycling Edu Center	3475 Lake Drive													
Public Library	100 Village Green Cir													
Community Center	200 Village Green Cir													
Fire Station #2	642 Concord Road													
Ward Park	2602 Ward St SE													
Brinkley Park	1270 Hunter St													
Chuck Camp Park	2270 Benson Poole Rd													
Cobb Park	2799 Sanford Road SE													
Tolleson	3515 McCauley Road													
Punchlist and Project Closeout														

Planned	
Actual	
NIGHT WORK	
Completed	
Duct Cleaning	

### Sample LED Lighting Project Schedule

City of Smyrna  
 Tentative LED Lighting Installation Schedule

Month	Facility Address	Duration	May				June				July			
			5-May	12-May	19-May	26-May	2-Jun	9-Jun	16-Jun	23-Jun	30-Jun	7-Jul	14-Jul	21-Jul
Weekly Ending	Smyrna, GA 30080													
Procurement	-													
Preconstruction Meeting	-													
Public Works	2190 Atlanta Road	4												
Brawner Hall	3180 Atlanta Road	9												
Police Station/Jail	2646 Atlanta Road	10												
Fire Station #3	2825 Park Road	2												
Fire Station #4	4595 South Cobb Dr.	2												
Fire Station #5	750 Cooper Lake Rd.	2												
Fire Station #1 HDQTS	2620 Atlanta Road	4												
Wolfe Rec Center	884 Church Street	4												
Recycling Edu Center	3475 Lake Drive	1												
Public Library	100 Village Green Cir	6												
Community Center	200 Village Green Cir	10												
Punchlist and Project Closeout														

Planned	
Actual	
NIGHT WORK	

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## Compensation Payment Schedule

The “Monthly Service Fee” will be added as a line-item on the Georgia Power Company monthly power bill to the account number (TBD) for the City of Smyrna with premise address of 2800 King Street, Smyrna, Georgia 30080.

Georgia Power will invoice the monthly service fee amount of \$118,416.00 as a separate line item on the utility bill account number (TBD). The account number will be confirmed with the customer prior to the 1<sup>st</sup> billing cycle with payment due net 30-days for each billing cycle. The payments will continue for 120 months or advance payment in full based on Exhibit G (Termination Payment Schedule).

**CERTIFICATE OF FINAL ACCEPTANCE**

**THIS CERTIFICATE OF FINAL COMPLETION AND ACCEPTANCE** is executed this \_\_\_\_ day of \_\_\_\_\_, 202 by **City of Smyrna (“Customer”)** as to the Equipment and related installation and Energy Conservation Measures (collectively, **“Services”**) provided by **Georgia Power Company (“GPC”)** pursuant to Work Order No. 2024-01 Rev1 dated June 25, 2024 (**“Work Order”**) between GPC and Customer that was issued under Master Services Agreement (**“MSA”**) 2024-01 executed January 18, 2024 (**“Agreement”**) upon the terms and conditions set forth therein.

**1. DATE OF FINAL COMPLETION AND ACCEPTANCE:** \_\_\_\_\_

The Equipment and installation performed under the Work Order has been reviewed by both Parties and the undersigned Customer representative and found to be complete and ready for beneficial use and operation by Customer. The Date of Final Completion and Acceptance is also the date of commencement of contract payments, if applicable.

**2. COMMENCEMENT OF PAYMENT:**

Customer, having accepted the Services, agrees to settle any outstanding payment obligations within 30 days of receipt of invoice by remitting payment under the terms of the Work Order, for the balance of the Contract Price, if applicable.

**3. ACCEPTANCE OF EQUIPMENT AND SERVICES:**

Customer hereby accepts all Equipment and Services as complete, and hereby assumes full possession thereof.

BY: \_\_\_\_\_

NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

Early Termination Payment Schedule			
After Monthly Payment	Termination Fee	After Monthly Payment	Termination Fee
1	\$10,076,180	41	\$7,445,731
2	\$10,017,743	42	\$7,371,636
3	\$9,958,958	43	\$7,297,100
4	\$9,899,823	44	\$7,222,120
5	\$9,840,336	45	\$7,146,694
6	\$9,780,494	46	\$7,070,819
7	\$9,720,297	47	\$6,994,492
8	\$9,659,741	48	\$6,917,711
9	\$9,598,825	49	\$6,840,473
10	\$9,537,546	50	\$6,762,775
11	\$9,475,902	51	\$6,684,615
12	\$9,413,892	52	\$6,605,990
13	\$9,351,512	53	\$6,526,896
14	\$9,288,761	54	\$6,447,332
15	\$9,225,637	55	\$6,367,294
16	\$9,162,137	56	\$6,286,779
17	\$9,098,258	57	\$6,205,785
18	\$9,034,000	58	\$6,124,310
19	\$8,969,359	59	\$6,042,349
20	\$8,904,333	60	\$5,959,900
21	\$8,838,921	61	\$5,876,961
22	\$8,773,119	62	\$5,793,528
23	\$8,706,925	63	\$5,709,598
24	\$8,640,337	64	\$5,625,168
25	\$8,573,353	65	\$5,540,237
26	\$8,505,970	66	\$5,454,799
27	\$8,438,186	67	\$5,368,853
28	\$8,369,998	68	\$5,282,395
29	\$8,301,405	69	\$5,195,423
30	\$8,232,403	70	\$5,107,933
31	\$8,162,991	71	\$5,019,922
32	\$8,093,165	72	\$4,931,388
33	\$8,022,924	73	\$4,842,326
34	\$7,952,265	74	\$4,752,734
35	\$7,881,185	75	\$4,662,609
36	\$7,809,682	76	\$4,571,948
37	\$7,737,753	77	\$4,480,747
38	\$7,665,396	78	\$4,389,003
39	\$7,592,609	79	\$4,296,712
40	\$7,519,388	80	\$4,203,873

Early Termination Payment Schedule			
After Monthly Payment	Termination Fee	After Monthly Payment	Termination Fee
81	\$4,110,481		
82	\$4,016,533		
83	\$3,922,025		
84	\$3,826,955		
85	\$3,731,320		
86	\$3,635,115		
87	\$3,538,337		
88	\$3,440,983		
89	\$3,343,050		
90	\$3,244,534		
91	\$3,145,431		
92	\$3,045,739		
93	\$2,945,453		
94	\$2,844,570		
95	\$2,743,087		
96	\$2,640,999		
97	\$2,538,304		
98	\$2,434,998		
99	\$2,331,076		
100	\$2,226,537		
101	\$2,121,374		
102	\$2,015,586		
103	\$1,909,168		
104	\$1,802,117		
105	\$1,694,428		
106	\$1,586,099		
107	\$1,477,124		
108	\$1,367,501		
109	\$1,257,226		
110	\$1,146,294		
111	\$1,034,702		
112	\$922,445		
113	\$809,520		
114	\$695,923		
115	\$581,650		
116	\$466,697		
117	\$351,059		
118	\$234,733		
119	\$117,715		
120	\$0		