

**Grab a clipboard and take this map along on your treasure hunt.** Focus on uncovering opportunities to save. When you find something, make notes about location; tools, materials, or expertise needed; or further research required. Feel free to add to or modify this list to suit your own needs.

Facility Name \_\_\_\_\_ Floor \_\_\_\_\_ Date \_\_\_\_\_ Team \_\_\_\_\_



## Facility Management

- Make note of your EUI and ENERGY STAR Score in Portfolio Manager.
- Ensure that facility energy management plan and operations & maintenance plan is up to date and that appropriate staff have reviewed the latest versions.
- Review building management system (BMS) and/or building automation system (BAS) code to ensure that specific commands to reduce unneeded energy consumption (e.g., on/off times) have not been overwritten.



## Lighting

- Identify where lights have been left on in unoccupied spaces (including classrooms, labs, restrooms, gymnasiums, cafeterias, libraries, athletic fields).
- Identify and assess opportunities to use automated lighting controls:
  - Occupancy/motion sensors for low-traffic areas.
  - Timers or daylight sensors to dim or turn off exterior and parking lot lights during the day.
  - Dimming controls in locations where there is natural lighting (e.g., near windows, skylights, light tubes).
- Confirm that installed lighting controls are operating as intended.
- Assess need to institute a regular cleaning plan for lamps/fixtures for maximum light output.
- Identify where reflectors can be practically added to existing lighting.
- Assess whether any areas are over-lit, compared to requirements or design levels; consider opportunities for de-lamping.
- De-energize and/or remove ballasts that are not in use.

NOTES:



- Evaluate the opportunity to upgrade to more energy-efficient lighting options:
  - Replace T12 fluorescents with T8s or T5s with electronic (rather than magnetic) ballasts; consider the use of tubular LEDs (TLEDs).
  - Upgrade incandescent and CFL applications to LED (especially for task lighting or specialty/decorative applications).
  - Use LED Exit signs in place of incandescent or CFL models.

**NOTES:**



## 3 Building Envelope

- Inspect doors and windows to identify gaps or cracks that can be repaired.
  - Note damaged or missing weather stripping.
- Note air leaks that should be sealed with caulking or other sealant.
- Inspect insulation levels and identify inadequacies to be addressed.
- Close doors to the outside and to any unheated or uncooled areas.
- Assess the opportunity to install solar film or other window coverings on east, west, or south exposures to reduce solar heat gain and heat loss.



## 4 Equipment/ Plug Loads

- Identify any equipment left on overnight (including those left in sleep/ idle or screen saver mode).
- Ensure that power management settings are activated on office equipment such as computers, monitors, printers, and copiers.
- Identify any new office equipment that will be needed soon; make plan to ensure they are ENERGY STAR certified where possible.
- Identify where power strips can be used for easy disconnect from power source. Consider the use of advanced power strips.
- Identify and discontinue the use of personal heaters and fans in classrooms or break rooms (the use of such personal devices may indicate broader hot/cold issues that should be addressed at the system level).
- Make plan to teach staff to unplug rechargeable devices once charged.





## Kitchen/Cafeteria and Food Service Equipment

- Identify worn and/or leaky door seals/gaskets on refrigerators and freezers.
- Check that refrigerator coils are clean and free of obstructions.
- Verify oven thermostat accuracy and recalibrate, if necessary.
- Establish operating procedures for cooking/baking equipment (for instance, preheating only when necessary, turning down/off equipment when not in use).
- Ensure that range hoods and exhaust fans are only running when the range is being used.
- Ensure that unused appliances are unplugged or on a power strip that is shut off.
- Check if vending machines get turned off or put in sleep mode at the end of the day. Consider installing motion/occupancy-based vending machine controls.
- Look for opportunities to replace older vending machines with new ENERGY STAR certified vending machines.
- Identify where low-flow pre-rinse spray valves can be installed.
- Identify and assess opportunities to use ENERGY STAR certified commercial food service equipment in cafeterias and ENERGY STAR certified appliances (e.g., refrigerators, dishwashers) in teachers' lounges.
- Identify and assess opportunities to install variable frequency drives (VFDs) on kitchen hoods.

NOTES:



## HVAC

- Identify and make plans to address instances of simultaneous heating and cooling.
- Ensure that thermostats and outside air temperature sensors are properly calibrated/maintained.
- Ensure that thermostats are set to appropriate temperatures based on season and local weather conditions.
- Confirm proper implementation of a temperature setback policy for heating/cooling when the building is unoccupied (including any special considerations for summer months).
- Perform testing and balancing of air and water systems.



- Ensure that space heaters are not being used in classrooms, break rooms, and other spaces.
- Ensure free airflow to and from registers; clear furniture, books, papers, or other materials.
- Ensure that electronics are located away from thermostats.
- Ensure window shades are available to block excess heat gain; make plan to educate staff about when to use them.
- Monitor make-up air ventilation; ensure the proper functioning of dampers to achieve outside air requirements.
- Ensure that HVAC system components are being maintained regularly, including:
  - Replace filters on a regular schedule.
  - Inspect and clean evaporator and condenser coils.
  - Clean fan blades and adjust belts as needed.
  - Inspect water/steam pipes and ducts for leaks and/or inadequate insulation; address as needed.
  - Evaluate furnace/boiler efficiency and clean/tune up as needed (including boiler water treatment and inspection of steam traps, as appropriate).
  - Check chiller and cooling tower components for fouling or corrosion; ensure proper water treatment is in place.
  - Check for unusual noise, vibration, and decrease in performance of compressors/motors.
- Identify and assess opportunities for installing variable frequency drives (VFDs) for fan and pump motors.

**NOTES:**





# Treasure Map FOR K-12 SCHOOLS

**ADDITIONAL NOTES:**

