



**BOROUGH OF AMBLER  
COMMITTEE MEETING AGENDA  
December 2, 2025  
7:00 p.m.**

*All matters that are deliberated could result in  
a vote to take official action.*

- I. PRESENTATION – REQUEST FOR QUALIFICATIONS (RFQ’S) – PROF. CONSULTANTS**
- II. CONFIRMED APPOINTMENTS:**  
a. PROPOSED ORDINANCE AMENDMENTS – BT AMBLER, LLC
- III. MAYORAL PROCLAMATION – AMBLER ROTARY 100<sup>TH</sup> YEAR ANNIVERSARY**
- IV. MINUTES FOR REVIEW:**  
a. NOVEMBER 18, 2025 COUNCIL MEETING
- V. COMMITTEE REPORTS (WITH PUBLIC COMMENT ON AGENDA ITEMS ONLY):**  
a. FINANCE & PLANNING  
b. PUBLIC UTILITIES  
c. PUBLIC SAFETY  
d. PARKS & RECREATION  
e. SALARY & PERSONNEL
- VI. OPEN PUBLIC COMMENT PERIOD.**

AMBLER BOROUGH, MONTGOMERY COUNTY, PA  
ORDINANCE NO. 1140

AN ORDINANCE OF THE BOROUGH OF AMBLER AMENDING CHAPTER 27, PART 27 OF THE BOROUGH CODIFIED ORDINANCES, "REDEVELOPMENT OVERLAY DISTRICT" BY REPLACING THE EXISTING LANGUAGE WITH NEW LANGUAGE THAT INCLUDES CHANGES TO PERMITTED USES, ARCHITECTURAL STANDARDS, DIMENSIONAL STANDARDS, PARKING REQUIREMENTS, SIDEWALKS AND STREETScape REQUIREMENTS, AND IMPOSES AN ACTIVE STOREFRONT REQUIREMENT; INCLUDING SEVERANCE AND REPEALER CLAUSES AND AN EFFECTIVE DATE

Ambler Borough Council, having received important and worthwhile input from the Montgomery County Planning Commission and SEPTA, owner of a significant parcel within the RO Overlay zoning district, and wishing to keep the overlay district vibrant and useful for the parcels that meet its criteria, hereby amend Chapter 27 of the Borough zoning ordinance, Part 27, Redevelopment Overlay, as follow. The existing language at Chapter 27, Part 27 Is deleted in its entirety and is replaced with the following language:

**§27-2701. Statement of Intent.**

It is the intent of this District to:

- A. Encourage new development and uses that can stimulate economic revitalization.
- B. Reestablish the rail corridor as a primary location for employment opportunities within the Borough.
- C. Provide for expanded uses and flexible standards, recognizing the uniqueness of the corridor area, and the need for affordable housing in the community.
- D. Provide for additional review procedures at the initial stage of conceptual development to ensure the proposal meets the intent and purpose of the RO district.
- E. Preserve the historical character of the structures in the rail corridor and their relationship to the rest of the Borough.
- F. Promote a sense of connectivity and cohesion between a development/redevelopment project and the Butler Avenue downtown corridor through the continuation of a streetscaping treatment and adherence to architectural design principles that promote the seamless integration of development/redevelopment with the established character of the corridor.
- G. Encourage the use of the passenger rail line to minimize vehicular traffic within the corridor.
- H. Ensure that pedestrian connections to the Borough Commercial District, public transportation, naturalized trails and open space areas are included in all development plans.

I. Ensure consistency and integration of site improvements, access and parking, landscape and lighting, complimentary land uses and architectural treatments to result in a redevelopment area meeting the intent of this District.

J. Encourage preservation and reuse of existing structures where they may have historical significance in the Borough's past as an industrial center for the region.

### §27-2702. Definitions.

The following words and terms, when used in this Part, shall have the following meanings, unless the context clearly indicates otherwise, and shall supersede any other definition within this Chapter in regards to this subject:

**BUILDING FRONTAGE** - The length of a building facade measured in a single straight parallel line with the abutting street(s).

**BUILDING STEPBACK** -- A setback or horizontal offset in the facade of the building above the lower levels.

**FACADE ARTICULATION** - The visible expression of architectural or landscape elements through form, structure, or materials that break up the scale of buildings and spaces to achieve human scale.

**CHILD DAY CARE CENTER** — a facility in which care is provided for seven or more children at any one time in a facility not located in a family residence.

**COMMUNICATIONS DEVICE** — a tower or satellite antenna facility, roof mounted, that includes, but is not limited to, radio and television communication, microwave communication, telephone communication and similar wireless communication devices. This term shall not include radio transmission facilities for use by ham radio operators or two-way local radio facilities. The device must be associated with and supportive of a principal use contained within the building on which the device is located.

**FACADE** — the principal vertical surface of a building, which is set along a frontage line.

**GROSS TRACT AREA** — the total measurement of a land area prior to any deductions.

**MULTI-USE FACILITY** — a building or group of buildings, which houses more than one principal use that are owned and operated independently of each other or as an accessory use to a principal use.

**PARKING GARAGE/STRUCTURE** — a building designed and used for the storage of automotive vehicles operated as either a business enterprise with a service charge or fee, or in conjunction with a primary use for the parking of privately owned vehicles.

**PUBLIC AMENITY** — a feature that increases the attractiveness or value of a project, specifically central plazas, parkland, courtyards and public parking. The features should be designed so as to be complimentary to the physical and visual character of the Borough. Features should incorporate appropriate scale, design, materials and lighting.

RESTAURANT, WITH BUSINESS MEETING PLACE — an establishment that serves food and beverages primarily to persons seated within the building and which specializes in business meeting space, with centralized meeting table and group communications and audio/visual facilities to support business meeting functions. Additionally, the establishment may provide additional table dining facilities within the building. These establishments may also provide outdoor dining table facilities immediately adjacent to the building containing the proposed restaurant.

STREETSCAPE -- The area that is between the buildings on either side of a street, including the public or private street right-of-way, which defines its character. The elements of a streetscape include building frontage/facade, landscaping, sidewalks, street paving, street furniture, signage, architectural elements such as awnings, and street lighting.

TRANSIT-ORIENTED DEVELOPMENT EFFECTIVE TRACT AREA-The aggregate Net Lot Area of the parcels involved in a Transit-Oriented Development including any land subdivided off an adjoining parcel and merged in ownership with the proposed Transit-Oriented Development or land immediately adjacent to the Transit-Oriented Development Parcel on which the Transit-Oriented Development Applicant benefits from a recorded, perpetual, irrevocable easement of use and access as permitted by the borough.

TRANSPORTATION IMPACT STUDY (TIS)— an assessment of present and future transportation system conditions, conducted in accordance with §27-2705.C., Transportation Impact Study.

VERGE - a strip separating a sidewalk from the curb consisting of grass, landscaping, street furniture, or decorative paving.

### §27-2703. Use Regulations.

Where the Redevelopment Overlay zone has been imposed, the land use regulations and development standards of the underlying zones shall remain in full force except as expressly set forth in this Chapter to the contrary. Additionally, the Redevelopment Overlay District provides for the following additional uses, which are permitted either by right or by condition use in the specified underlying zones:

A. Parking Garage/Structure. Permitted by right in all of the underlying zones within the Redevelopment Overlay District. Multi-level parking garage may be constructed as a principal use or in combination with other permitted uses on any lot of a size and configuration, which shall meet the standards in this Section provided, however, that when a parking garage is constructed as part of a TOD Transit-Oriented Development, the dimensional standards set forth at Section 27-2703.E(4)(b) shall apply to the parking garage.

#### (1) Dimensional Regulations.

- (a) Height Maximum four garage levels above ground. Below ground levels may be approved with adequate safety and security provisions.
- (b) Parking Spaces. Nine feet by 18 feet.
- (c) Drives. One-way - 20 feet; two-way - 22 feet.
- (d) Setbacks. Joint use with other permitted uses in separate structure, 10 feet.
  - 1) Principal Use. Property lines -10 feet.
  - 2) Principal Use. Street right-of-way -15 feet.

## (2) Development Standards,

- (a) Multi-level parking garages may be developed as a shared parking and/or multi-use facility with documentation of shared use agreement. Such structures are permitted attached to another structure containing one or more allowed principal uses when said uses utilize the parking garage to meet the parking requirements of the use(s).
- (b) Multi-level parking garages may be permitted in combination with other permitted uses.
- (c) Parking garages that front on either Main Street or Butler Avenue shall be required to have active nonresidential uses at a minimum depth of 40 feet throughout the building frontage on the ground floor. Entrances to ground level nonresidential uses shall be located on the front facade.
- (d) Garages shall include adequate lighting on all levels, but shall limit light spill to adjacent properties and uses. Protection and shielding of adjacent residential uses shall be a priority.
- (e) Garage structures shall be landscaped, including buffers, as required for all uses in the RO District. Emphasis shall be placed on larger evergreen and deciduous trees to soften and buffer the upper levels of multi-level garage structures.

## B. Child Day Care Center. Permitted by conditional use in the underlying OC Office Campus District.

- (1) Dimensional Regulations. The dimensional standards of Part 16 apply, except if otherwise noted in this Section or herein.

- (a) Location. Child day care centers shall only be located within a multi-use building complex. The center does not have to be operated as an accessory use but may be operated independently of any other use in the building as a principal use.

## (2) Conditional Use Standards.

- (a) General Standards. The provisions of this Section pertain to day care service for children by care givers in child day care centers, subject to Pennsylvania Code, Title 55, Public Welfare Chapter 3270, Child Day Care Centers (9/16/2000). Day care service for children shall include out-of-home child day care service for part of a 24 hours day for children under 16 years of age by care givers, excluding care given by relatives.

- 1) Registration and Licensing. Child Day Care Centers as defined in this Section, must hold an approved and currently valid Department of Public Welfare (DPW) license. In addition, all child day care centers must comply with all current DPW regulations, including those standards governing adequate indoor space, accessible outdoor play space and any applicable State or local building and fire safety codes.

- 2) Inspection. The operator of a child day care center will allow appropriate representatives of the Borough to enter the property at reasonable times to inspect such use for compliance with the requirements of this Section and all other applicable Borough and State ordinances.

3) General Safety. Operators of child day care centers shall comply with the provisions of the Pennsylvania Code, Title 55, Public Welfare, Chapter 3270, Child Day Care Centers as it pertains to the health and safety of the children attending the center.

4) Hours of Outside Play. Outside play shall be limited to the hours between 8:00 a.m. and sunset, as defined by the National Weather Service.

5) Outdoor Play Area. An outdoor play area, are required by DPW regulations, shall be provided for any proposed child day care center.

i) Onsite Outdoor Play Area. An onsite outdoor structured play area or areas of high outdoor activity shall be located in yard areas that provide adequate separation, safety and protection from adjoining uses properties and roadways. Whenever possible, the onsite outdoor play area shall not be located adjacent to a public street or private drive or accessway. The outdoor play area should be located immediately adjacent to the child day care center.

ii) Offsite Outdoor Play Area. In accordance with DPW standards, a child day care center may utilize offsite play areas in lieu of or as a supplement to an onsite play area. These standards permit the use of offsite play area, which are located within 1/2 mile distance of the facility, measured from the property line of the facility. When the use of an offsite play area is proposed, the applicant shall inform the Borough about the means of transportation that will be used to access the offsite play area. For reasons of safety, when children will be walked to an offsite play area, the route to the offsite play area shall not involve the crossing of arterial or major collector streets. Pedestrian access on sidewalks or improved walkways shall be required.

6) Transportation Impact Study. For any proposed child day care center, a Transportation Impact Study shall be required in accordance with §27- 2705.C.

(b) Development Standards. The following standards shall apply to all proposed day care centers;

1) Onsite Parking for Employees and Clients. A minimum of one onsite parking space for every five children shall be provided, plus an additional one space per employee.

2) Drop-Off Area Location and Design. Whenever possible, the drop-off area shall be located immediately adjacent to the facility. The drop-off area should be designed in such a way that pedestrians do not cross vehicular traffic lanes in any parking area or driveway. The drop-off area may be designed either as a part of the onsite parking area or the required drop-off spaces may be designed as a part of the driveway providing direct access to the day care facility. No parking is permitted

in the drop-off area and the drop-off areas shall not interfere with other traffic patterns. When the drop-off area is incorporated into a driveway, the drop-off spaces shall be located within a vehicle turnout area 12 feet in width exclusive of the driveway through traffic land(s). The dropoff area shall be covered, the covering of which shall not be subject to setbacks.

3) Landscaping. Landscaping shall be provided in compliance with applicable Sections of the Borough's landscape planting requirements in order to create a vegetative buffer from adjacent uses, as well as to create an aesthetically pleasing environment.

i) Buffer standards for lots on which a proposed day care center is located:

a) Vegetative Buffers. A vegetative screen buffer may be required when deemed necessary by the Borough Council to meet the intent and goals of this Part. Criteria to be considered will include, but not be limited to, the nature and type of adjacent uses, lot size of the subject property, as well as the adjacent properties and the distance to adjacent buildings. The following standards shall apply to buffers when required by the Borough:

b) Buffers shall contain combinations of evergreen and deciduous vegetation. The planted buffer shall be a minimum of six feet in width and six feet in height at the time of installation. Earthen berms may be provided in combination with vegetative material. Earthen berms shall not exceed four feet in height nor exceed a maximum slope of 3:1.

c) . Continued maintenance of vegetative buffers is

required and shall be the responsibility of the operator of the facility.

d) Opaque fences or walls used to meet the following requirement for fencing of outdoor play areas may be used in place of part of the required vegetative buffer material at the approval of the Borough Council.

ii) Landscaping in Outdoor Activity Areas. Existing or proposed planting material shall be suitable in and around areas used by children. No thorny, poisonous or other hazardous plants shall ' be allowed in areas used by children. In open areas, emphasis shall be given to providing shade to selected sections of the outdoor activity areas.

4) Fencing of Outdoor Play Area. In order to physically contain the activity of children in the outside play area, a minimum of four feet high fence shall be erected along the perimeter of the outside play area. When applicable, the fence may be located along property lines, but will not be exclusive of the required vegetative buffers. Natural barriers such as hedgerows, dense vegetation, etc., may be substituted for fencing if it can be demonstrated that such barriers can effectively contain the activity of the children.

5) Play Equipment Setback. Play equipment in designated onsite play areas shall be located at least 10 feet from an abutting property line.

6) Entrance/Exit Accessibility. When located in a multi-use building complex, day care center entrances/exits shall provide direct access to the child day care center. Waking through other significant portions of the building is not permitted.

7) Soundproofing. When co-located in any building employing noisy operations, the Borough Council may require sound-proofing of the child day care center to protect the children.

C. Restaurant With Business Meeting Space. Permitted by conditional use in the underlying OC Office Campus District and RSC Retail and Service Commercial District.

(1) Dimensional Requirements. The dimensional standards of Part 16 apply, except if otherwise stated.

(2) Conditional Use Standards.

(a) For the consumption of food and beverages without drive-in service. Service shall be limited to table and/or sit-down counter facilities only.

(b) Restaurants may be developed as stand-alone uses or as part of a multiuse building.

(c) Restaurants shall have space, exclusive of any main dining areas, which can be used for the sole purpose of business meeting space. The space shall have a minimum capacity of 10 people and a maximum capacity of 30 people.

(d) The use shall have direct access onto a driveway or public street.

(e) Additional buffers:

1) Front Yard:

i) Minimum width, 15 feet.

ii) Minimum landscape details:

a) For each 30 feet of frontage on a public right of-way, one 3 1/2 inch caliper deciduous tree shall be planted.

b) Parking areas shall be screened from the street by a four foot high evergreen hedge.

2) Side and rear yard:

i) Minimum width, 15 feet.

ii) Minimum Landscape Details. An evergreen planting screen shall be used to provide an adequate visual barrier. The plant material used shall be a minimum height of four feet at the time

of planting and shall be planted in a staggered arrangement in order to provide an immediate effect.

(f) Outdoor Seating. A restaurant may provide outdoor seating, provided pedestrian circulation and building access is not impaired and the following standards are met:

- 1) Removable enclosures, such as planters, shall be used to define the area.
- 2) The outdoor area must be physically separated from public or parking areas by a railing, fence, deck, planting boxes or a combination thereof.
- 3) The outdoor area must not infringe on any public sidewalk, parking area or right-of-way
- 4) The outdoor area cannot infringe or encroach on the minimum number of required parking spaces or further reduce available parking.
- 5) Tables, chairs and related furniture must be removable and indoor storage provided for extended periods of nonuse (e.g., winter months).
- 6) Extended awnings, canopies or umbrellas may be used to provide cover and shade.
- 7) Additional trash receptacle shall be provided and maintained.
- 8) No additional signage beyond what is allowed for the use is permitted.

(g) Service. Areas for loading and unloading of delivery trucks and other vehicles and for the servicing of refuse collection, fuel and other services shall be provided and shall be adequate in size. A schedule for periodic disposal of solid waste material shall be required. All solid waste material shall be stored in covered containers. No solid waste shall be stored closer than within five feet of any property line. Provided, however, that no solid waste storage is to be closer than 30 feet to any outdoor principal use. Loading and refuse collection areas shall be shielded from the direct view of any adjacent property by walls, plantings or a combination thereof which measure a minimum of six feet in height. Such shielding shall be maintained at all times.

D. Communication Device. Permitted by conditional use in the underlying OC Office Campus District, C Commercial District, I Industrial District, and RSC Retail and Service Commercial District.

(1) Dimensional Regulations. The height of communications devices shall not exceed 10 feet in height above the actual building height of the building on which the communication devices are proposed. These devices must be screened from public view.

(2) Conditional Use Regulations.

- (a) Communication devices shall be limited to those associated with and supportive of a principal permitted use contained within the building. It shall be located with other rooftop utilities as specified in §2703 P.S.
- (b) Any applicant proposing communications devices to be mounted on a building or other structure shall submit evidence from a Pennsylvania registered professional engineer certifying that the proposed installation will not exceed the structural capacity of the building or other structure, considering wind and other loads associated with the communications devices location.

- (c) Any applicant proposing communications devices to be mounted on a building or other structure shall submit detailed construction and elevation drawings indicating how the communications devices are to be mounted on the structure.
- (d) Communications devices shall comply with all applicable standards established by the Federal Communications Commission (FCC).
- (e) Communications devices shall not cause radio frequency interference with other communications facilities located in the Borough or other radiodependent devices,
- (f) The owner or operator of communications devices shall be licensed, if applicable, by the Federal Communications Commission (FCC) to operate these communications devices.

E. TOD Transit-Oriented Development.

(1) Intent. The intent of the Borough in permitting development pursuant to this section is as follows:

- (a) To provide for an intensity and type of land use that is compatible with and supportive of the use of public transportation;
- (b) To recognize that, by having land use patterns that encourage use of public transit opportunities, traffic in the community can be reduced and travel choices for residents can be expanded;
- (c) To encourage redevelopment of obsolete properties whose prior or present uses adversely impair the property or surrounding properties;
- (d) To provide for flexibility in lot sizes, setbacks, and other area and bulk requirements so that imaginative and innovative designs can be developed;
- (e) To provide a mix of residential and commercial land uses that are consistent in character and to promote mixed-use development that is consistent in character between its residential and nonresidential components;
- (f) To encourage the provision of an accessible pedestrian environment and to promote a pedestrian orientation of buildings and streets;
- (g) To encourage development that has open and recreational spaces as focal points;
- (h) To foster well-designed vibrant public and private gathering spaces that create a sense of place and encourage social interaction; and
- (i) To encourage the provision of additional amenities that benefit the public health, safety, and welfare, such as moderate-income housing, adequate open space, efficient roadways, safe bicycle and pedestrian connections, stormwater management, and green building practices,

(2) Definitions.

**ARTISANAL MANUFACTURING** - The on-site production, display, and sale of hand-fabricated or hand-manufactured parts and custom or craft consumer goods based on the skill and knowledge of the artisan and the use of hand tools or small-scale, light mechanical equipment. This involves activities such as small bakeries, candy or soap making, coffee roasters, breweries, distilleries, or the custom production of artisan products such as apparel, cabinetry, glass working, jewelry making, metal working, pottery, sculpture, wood working, and leather working

**BUILD-TO LINE** - A line established within a given lot, which is a certain distance from the curb line, along which the building shall be built

**FRONTAGE OCCUPATION** - The percentage of the street frontage that is occupied by a building.

**GREEN ROOF** - An engineered, multilayered roofing system sustaining the growth of plants on a rooftop while protecting the integrity of the underlying structure. The components of a green roof generally consist of, but may not be limited to, a waterproofing membrane, root barrier, drainage layer, retention layer, filter fabric, growing medium, and plants.

**LEED** - Leadership in Energy and Environmental Design, a certification system maintained by the U.S. Green Building Council, Inc. (GBCI). To achieve LEED certification, a project earns points by adhering to prerequisites and credits that address carbon, energy, water, waste, transportation, materials, health and indoor environmental quality. Projects go through a verification and review process by GBCI and are awarded points that correspond to a level of LEED certification: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points) and Platinum (80+ points).

**MULTIFAMILY RESIDENTIAL DEVELOPMENT**- A residential building containing at least three permanent dwelling units in a variety of combinations, including side-by-side, over and under, or back-to-back with another dwelling unit.

(3) **TRANSIT-ORIENTED DEVELOPMENT (TOD)** — Dense residential and commercial development near transit that is meant to increase the use of public transit and alternative modes of transportation. Transit-oriented development capitalizes on public transit access by transforming underutilized spaces into walkable and sustainable communities, with a mix of land uses, a vibrant public realm, and excellent connectivity to transit amenities. Use Regulations.

(a) **Conditional Use Approval Required.**

- 1) A TOD shall be permitted within the RO Redevelopment Overlay District when authorized as a conditional use by Borough Council.
- 2) In passing upon a conditional use application, Borough Council shall render a decision in accordance with the general conditional use criteria set forth in Part 4 of this Chapter, in addition to the specific criteria set forth in this Part.
- 3) In accordance with 5603(c)(2) of the Pennsylvania Municipalities Planning Code, the Borough may attach reasonable conditions and safeguards, in addition to those expressly set forth in the Borough ordinances, as it may deem necessary to implement the purposes of the Municipalities Planning Code and the Borough ordinances.

(b) **Residential Use Required.** A TOD shall provide a residential use in the form of multifamily residential development. The following standards shall apply:

- 1) Any building with a frontage on Butler Avenue or Main Street may only establish a residential use behind or above the required nonresidential component, in accordance with § 27-2703.E.3.(c)1 .
- 2) Any building or portion thereof that does not have a frontage on Butler Avenue or Main Street may include a residential use on the ground floor, provided that such complies with § 27-2703.E.3.(c)1. and provided that architectural elements that provide visual interest are provided along any façade abutting a public right-of-way. Examples of architectural treatments to comply with this requirement include: front stoops, porches, awnings, balconies, recessed entranceways, courtyards, trellises with plantings, or other similar architectural features.
- 3) The maximum residential density throughout a TOD shall be 50 dwelling units per acre of Transit-Oriented Development Effective Tract Area, as defined in this Chapter. See §2704, Development Bonus, for optional residential density bonus provisions, however, that in no case shall the residential density throughout a TOD be greater than 75 dwelling units per acre of the Transit-Oriented Development Effective Tract Area, as defined in this Chapter.
- 4) Minimum dwelling unit size: each dwelling unit shall have a minimum of 600 square feet, plus an additional 100 square feet per additional bedroom.

(c) **Nonresidential Use.**

- 1) Any building with a frontage on Butler Avenue or Main Street shall provide a ground floor nonresidential use, which shall occupy a minimum depth of 40 feet throughout the building's frontage on Butler Avenue and Main Street. Nothing herein shall be construed to limit the location of nonresidential use in upper stories of a mixed-use building.
- 2) Permitted nonresidential use may be any of the following uses or a combination thereof:
  - a) Retail establishment for the sale of dry goods, variety and general merchandise, clothing, food, drugs, plants, furnishings or other household supplies, sale and repair of jewelry, watches, clocks, optical goods or musical, professional or scientific instruments.
  - b) Business or professional office or studio, bank or other financial institution, municipal use excluding dump, telephone central office, telegraph or other public utility office, passenger station for public transportation.
  - c) Restaurant, bar, tearoom, retail baker, confectionery or ice cream shops or places serving food or beverages, including:
    - a. outdoor dining; and
    - b. pedestrian takeout window.
  - d) Personal service shop, including tailor, barber, beauty salon, shoe repair, dressmaking or other similar service.
  - e) Indoor recreation or cultural facility, such as a bowling alley, theater, fitness center, or dance studio.
  - f) Hotel or motel.
  - g) Business services establishments, including copy centers, retail printing and duplication services, computer rental and copying centers, mailbox rental and shipping, cartage, express, and parcel delivery services.
  - h) Artisanal manufacturing.
- (d) Accessory Uses. Accessory uses that are subordinate to and used for purposes customarily incidental to those uses provided within the TOD shall be permissible.
- (e) Parking Lot, in accordance with §27-2804, and/or Parking Garage/Structure, in accordance with §27-2703.A, may be constructed as part of a TOD when in compliance with the following:
  - 1) Provision of a parking garage/structure internal to a building shall only be permissible when in compliance with § 27-2703.E.3.(c)1..
  - (f) 2) Provision of a parking garage/structure internal to a building shall be permissible only in the event the façade located between the internal parking area and the public right-of-way is consistent with the overall building aesthetic. Such design may be achieved by mimicking a traditional storefront design or through the use of interchangeable public art displays that engage with pedestrians.
- Prohibited Uses. The following uses, as well as any use not specifically permitted, are specifically prohibited within a TOD Development:
  - 1) Drive-through windows or facilities;
  - 2) Automobile or other vehicle sale, service, or repair establishments;
  - 3) Gasoline service station;
  - 4) Self-service storage facilities; and
  - 5) Sexually oriented businesses (see §27-411)
  - 6) Any use prohibited in the Industrial District (see §27-1502.3.)
- (4) Conditional Use Standards. The following conditional use standards are in addition to the general conditional use criteria set forth in Part 4 of this Chapter:
  - (a) General:
    - 1) A tract proposed for TOD must be zoned "OC," "RSC," or "I," and must be located within 800 feet of an active or proposed commuter rail station. The 800-foot requirement (for proximity to a commuter rail station) shall be measured from the nearest property line of the TOD to the nearest edge of the passenger platform of the commuter rail station.
    - 2) Water and sewer. All Transit-Oriented Developments shall be serviced by public water and public sewer.
    - 3) The lot to be developed shall be in one ownership or shall be the subject of an application filed jointly by the owners of each lot under consideration.

- 4) A Transit-Oriented Development shall be designed to be compatible in use with the existing Borough development; and in its residential and nonresidential components in terms of architecture, building materials, massing and scale.
- 5) TOD applications shall be considered with recognition for the need to have a mix of uses in the vicinity of the rail station and Borough Council may decline such an application if, after proper consideration of the proposal, it is determined that such use, when considered cumulatively with other uses in the area of the rail station, would cause a particular use to be disproportionately represented in the train station area.

(b) Dimensional Standards.

- 1) Minimum lot area: 3 acres
- 2) Minimum lot width: 300 feet. Notwithstanding provisions to the contrary, in the case of corner lots, the lot width shall be met along one of the street frontages.
- 3) Minimum frontage occupation for buildings with street frontage on Butler Avenue or Main Street: 90%
  - a) The following elements shall be excluded from the frontage occupation calculation: gathering spaces, width of the minimum side setbacks, and one vehicular driveway per street frontage.
- 4) Maximum impervious coverage: 80%. The impervious coverage may be increased up to a maximum of 85% only in the event that any increase over 80% shall require mitigation by providing a green roof at a 2:1 ratio of green roof square footage to impervious coverage square footage.
- 5) Build-To Line: 15 feet
  - a) The build-to line may be increased by up to 15 feet, for a maximum build-to line of 30 feet, for all or part of the building frontage length, provided the additional setback area is used for additional sidewalk width, streetscaping, outdoor dining areas, or additional landscaping between the building and the sidewalk.
  - b) Permitted encroachments.
    - i) The following architectural features may extend up to three (3) feet beyond the build-to line: awnings or overhangs, bay or oriel windows, upper floor balconies, loggias, pergolas, and similar architectural elements.
    - ii) A gathering space, pursuant to §27-2703.E.(4)(f), may extend the full depth of a lot, provided that it does not occupy more than 25% of the property's street frontage.
- 6) Minimum Side Yard Setback: 10 feet
- 7) Minimum Rear Yard Setback: 20 feet
  - a) Rear yards adjacent to a railroad right-of-way may be reduced by 50% to a minimum setback of 10 feet.
- 8) Maximum building height:
  - a) For developments with underlying "RSC" or "I" zoning designation, the maximum height of any building shall be 65'.
  - b) For developments with underlying "OC" zoning designation, the following provisions shall apply:
    - (i) The average height of a building shall not exceed 65' and the maximum height of any portion of any building shall not exceed 80'. However, in cases where the building height exceeds 65' on portions of a building, the height of the building shall vary and have an average height of 65' measured from its lowest point to its highest; and
    - (ii) At a distance 400' or greater from the railroad right-of-way, the maximum height of a building or portion thereof shall not exceed 35'.
  - c) Building setback required. The facade of any building exceeding three (3) stories or 35 feet shall be setback an additional 12 feet along street frontages. The required building setback may be reduced to a minimum of eight feet if the front build-to line is equal to or greater than 20 feet, as provided for in subsection §27-2704.E.(4)(b)5) above.
- 9) Minimum Building Spacing:
  - a) Corner to corner: 30 feet
  - b) Face to face: 40 feet

(c) Building Design Standards.

- 1) Overall design.
  - a) All buildings within a single TOD project shall have a unified or complementary architectural character. Developments shall create focal points with respect to avenues of approach, or other buildings, and relate open space between all existing and proposed buildings.

- b) Blank walls shall not be permitted along any exterior wall facing a street, parking area, or walking area. Walls or portions of walls where windows are not provided shall have architectural treatments that are similar to the front facade, including materials, colors, and details.
  - c) When flat roofs are proposed, a parapet wall or projecting cornice shall be included on the front facade(s).
  - d) Convenient pedestrian connections shall be provided from all building entrances to parking areas, open space and recreational areas, and to the transit station intended to be served by the TOD.
- 2) Building materials.
- a) All facades of new buildings visible from a public or private street, parking area, or public gathering space shall consist of quality building materials, such as brick, stone, concrete, and glass, to create visual interest and enhance the quality of the development.
  - b) The following building materials are prohibited: exterior insulation and finishing systems (EIFS); aluminum or vinyl siding or shutters; white, tan, or painted brick; concrete block; T-III or other similar plywood siding.
- 3) Building orientation and entrances.
- a) Front facades of buildings shall be oriented toward Main Street or Butler Avenue, whichever immediately abuts the property frontage. Such entrances shall be usable and well-defined through the use of architectural features (e.g., utilizing porticos, pediments, colonnades, canopies, or overhangs).
  - b) Each facade of a building with frontage along a public or private street, parking area, or public gathering space shall feature at least one clearly-defined and highly-visible pedestrian entrance with a direct sidewalk connection to the abutting street. A building with multiple street frontages may locate a pedestrian entrance on the corner of the building where the two streets intersect to fulfill this requirement.
  - c) Storefront entrance doors shall be recessed a sufficient distance to allow doors to swing out without conflicting with pedestrian flow on the sidewalk.
- 4) Windows.
- a) The nonresidential component of a ground floor of any building along Butler Avenue and Main Street shall have a minimum transparent window area of 60%, with windows providing views of display areas or the inside of the building. Window areas shall be between 12 inches and eight feet off the ground.

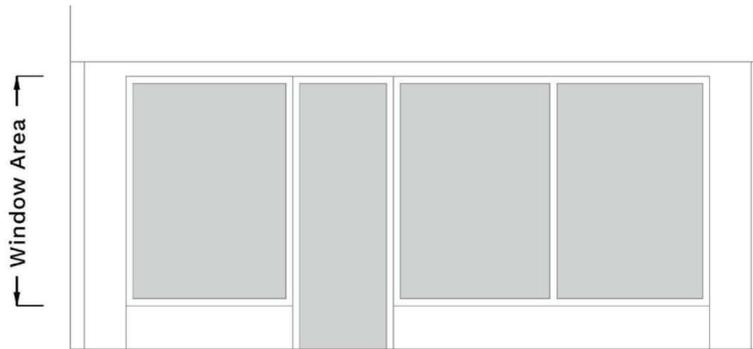


Figure 27-2703.C.1

b) For corner buildings with multiple frontages, the ground floor window transparency requirement pursuant to subsection a), above, shall wrap on to the ground floor of secondary frontages for a minimum distance equal to at least 40 feet along the secondary frontage, as measured from the corner of the primary and secondary frontages.

c) The upper floors of any building along a primary street shall have a minimum clear window area of 35%.

d) Smoked, reflective, or black glass in windows is prohibited.

5) Building Facade Elements. All buildings shall include a variety of architectural design elements to provide visual interest and to mitigate the apparent scale and mass of large buildings and facades. Any building facade along a public or private street, parking area, or public gathering space that is greater than 50 feet long shall be articulated with facade breaks of a minimum depth of three (3) feet for every 50 feet of building facade length. In addition to breaks in the facade, other architectural elements that provide facade articulation shall be utilized no less than every 50 feet on average:

- i) Masonry;
- ii) Concrete or Masonry plinth at the base of walls;
- iii) Belt courses of a different texture or color;
- iv) Projecting or decorative cornices;
- v) Quoins;
- vi) Decorative tile work;
- vii) Trellis containing planting;
- viii) Medallions;
- ix) Bay windows;
- x) Oriel windows;
- xi) Vertical articulation;
- xii) Stylized lighting fixtures;
- xiii) Porticos;
- xiv) Balconies;
- xv) Recessed entryways; and/or
- xvi) Building extensions.

(d) Street Furnishings Standards.

1) Location. Street furniture shall be located adjacent to the building facade, unless on-street parking is present, in which case street furniture may be located along the curb. Such amenities shall be maintained in perpetuity by the property owner.

2) Street Furnishings Required. At minimum, two (2) benches, one (1) bicycle rack, one (1) trash receptacle, and one (1) recycling receptacle shall be provided for every 300 feet of public street frontage. This requirement shall be exclusive of the requirements set forth in §2703-E(4)(d)3) below.

3) Additional Furnishings Required. In order to allow for flexibility and promote creative streetscaping design, the following options shall be provided based upon the scale of development described herein.

a) Building additions and new developments of 2,500 to 4,999 Gross Floor Area shall provide no less than four (4) points from either §2703-E(4)(d)4)a) or b) as set forth below. New Developments of 5,000 to 14,999 Gross Floor Area shall provide no less than one item from §2703-E(4)(d)4)a) and b), as set forth below, and shall provide no less than a cumulative total of eight (8) points.

b) New Developments of 15,000 Gross Floor Area and over, as well as any new building exceeding three (3) stories in height shall provide no less than one item from §2703-E(4)(d)4)a) and b), as set forth below, and shall provide no less than a cumulative total of twelve (12) points.

4) Street furnishing options and points. In order to allow for a flexible and adaptable streetscape design, the following options shall be allowable to fulfill the minimum requirements set forth in §2703-E(4)(d)3), above. Category A contains planting and greening elements. Category B includes street furnishings, amenities, and decorations.

a) Category A: planting and greening options.

- i) Hanging basket, one (1) point.
- ii) Window box, two (2) points,
- iii) In-ground planting area, two (2) points.
- iv) Street planter, two (2) points
- v) Roof garden or green roof, three (3) points.
- vi) Green wall, three (3) points.

b. Category B: street furnishings, amenities, and decorations.

- i) Bench, two (2) points.
- ii) Bicycle rack, two (2) points.
- iii) Trash and recycling receptacles (one of each), two (2) points.
- iv) Public art, such as a mural or sculpture, three (3) points.
- v) Public drinking fountain, three (3) points.
- vi) Public restroom, three (3) points.
- vii) Display fountain, three (3) points.
- viii) Clock tower, three (3) points.

(e) Parking Requirements.

1) Compliance with §27-2101, General Provisions, §27-2105, Handicapped Parking, and §27-2106, Off-Street Loading, shall be complied with; however, all other sections of Part 21 (§§27-2102, -2103, and -2104) shall be superseded by the regulations of this section.

2) Parking requirements by land use. Due to the anticipated use of transit by

residents and tenants of a TOD, a reduced parking requirement is appropriate. The minimum parking requirements based on land use are shown in Table 2703.1 below:

Land Use	Minimum Parking Requirement
Retail establishment for the sale of dry goods, variety and general merchandise, clothing, food, drugs, plants, furnishings or other household supplies, sale and repair of jewelry, watches, clocks, optical goods or musical, professional or scientific instruments.	One (1) parking space per 200 SF GFA on the first floor + one (1) parking space per 400 SF GFA on upper floors
Business or professional office or studio, bank or other financial institution, municipal use excluding dump, telephone central office, telegraph or other public utility office, passenger station for public transportation	One (1) parking space per 300 SF GFA
Restaurant, bar, tearoom, retail baker, confectionery or ice cream shops or places serving food or beverages.	One (1) parking space per 200 SF GFA
Personal service shop, including tailor, barber, beauty salon, shoe repair, dressmaking or other similar service.	One (1) parking space per 300 SF GFA
Indoor recreation or cultural facility, such as a bowling alley, theater, fitness center, or dance studio.	One (1) parking space per 300 SF GFA
Hotel or motel.	One (1) parking space per guest room + One (1) parking space per 800 SF of public meeting space
Business services establishments, including copy centers, retail printing and duplication services, computer rental and copying centers, mailbox rental and shipping, cartage, express, and parcel delivery services.	1/300 SF GFA
Artisanal manufacturing	One (1) parking space per 200 SF GFA on the first floor + one (1) parking space per 400 SF GFA on upper floors
Studio or One Bedroom Dwelling Unit	One parking space per dwelling unit
Two or More Bedroom Dwelling Unit	1.5 parking spaces per dwelling unit

Table 2703.1

3) Shared parking facilities. The off-street parking required for a mixed- use development may be provided in combined parking facilities, provided that the following standards are met:

a) The shared parking area(s) shall either be under common ownership or controlled by an access and parking easement agreement approved by the borough and recorded for each property affected by the shared parking.

b) The minimum number of parking spaces required shall be calculated according to the following formula:

l) Multiply the minimum parking requirement for each individual use (as set forth in Table 2703.1, above, for each use) by the appropriate percentage (as set forth in Table 2703.2, below) for each of the six designated time periods and then add the resulting sums from each vertical column. The column total

having the highest total value is the minimum shared parking space requirement for that combination of land uses.

- ii) Calculate the minimum amount of parking required for each land use as if it were a separate use.
- iii) To determine peak parking requirements, multiply the minimum parking required for each proposed land use by the corresponding percentage in the table below for each of the six time periods.
- iv) Calculate the column total for each of the six time periods.
- v) The column (time period) with the highest value shall be the minimum shared parking requirement.

Category of Use*	Monday to Friday			Saturday & Sunday		
	Sam – Bpm	6pm -12am	12am -Sam	Sam - 6pm	6pm -12am	12am -Sam
Retail establishment for the sale of dry goods, variety and general merchandise, clothing, food, drugs, plants, furnishings or other household supplies, sale and repair of jewelry, watches, clocks, optical goods or musical, professional or scientific instruments.	70%	90%	5%	100%	70%	5%
Business or professional office or studio, bank or other financial institution, municipal use excluding dump, telephone central office, telegraph or other public utility office, passenger station for public transportation.	100%	10%	5%	10%	5%	5%
Restaurant, bar, tearoom, retail baker, confectionery or ice cream shops or places serving food or beverages.	60%	100%	10%	60%	100%	20%
Personal service shop, including tailor, barber, beauty salon, shoe repair,	70%	90%	5%	100%	70%	5%

dressmaking or other similar service.						
Indoor recreation or cultural facility, such as a bowling alley, theater, fitness center, or dance studio.	40%	100%	10%	80%	100%	50%
Hotel/Motel	75%	100%	100%	75%	100%	100%
Business services establishments, including copy centers, retail printing and duplication services, computer rental and copying centers, mailbox rental and shipping, cartage, express, and parcel delivery services.	70%	90%	5%	100%	70%	5%
Artisanal manufacturing.	70%	90%	5%	100%	70%	5%
Residential use	60%	100%	100%	80%	100%	100%

\*NOTE: the most appropriate category of use shall be selected based upon the proposed use. The category of use shall fall within one of the uses permitted

- 4) Parking Study. In order to ensure that the parking provided for a TOD is adequate to meet the anticipated demand, a Parking Generation Study prepared and submitted by the applicant. The following provisions shall be met:
  - a) The Parking Generation Study shall be prepared by a qualified traffic engineer and/or transportation planner. All costs associated with the preparation of a Parking Generation Study shall be borne by the applicant. The study shall be conducted by a qualified transportation professional using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, and the ITE Parking Generation Manual, 6th Edition, as applicable.
  - b) The Borough Engineer shall be provided an opportunity to review the proposed ITE land use codes selected by the transportation professional.
  - c) The study shall address the following:
    - i) Size and type of uses or activities on site;
    - ii) Composition of tenancy on site;
    - iii) Rate of parking turnover;
    - iv) Anticipated peak traffic and parking load;
    - v) Local parking habits; and
    - vi) Availability of public transportation.

- d) The findings of the study shall be submitted for review by the Borough Engineer; however, the study shall be considered complete and accurate unless proven otherwise by substantial evidence. In the event that the Parking Generation Study reveals a parking demand that differs significantly from the parking requirements of this section, the following options are available to the applicant:
- i) If the anticipated parking demand exceeds the minimum parking requirement, the applicant shall be permitted the ability to provide up to the amount of parking spaces identified that exceed the minimum requirement.
  - ii) If the anticipated parking demand is lower than the minimum parking requirement, the applicant may have the reduced parking requirement authorized as a conditional use pursuant to §27-413, Conditional Uses.
- e) In lieu of a standalone parking generation study, the applicant may instead opt to include parking generation figures within the Transportation Impact Study required by §27-2705.C., Transportation Impact Study.
- (f) Gathering space. Any TOD lot that exceeds 150 feet in frontage along Main Street or Butler Avenue shall provide no less than 5% of the Transit-Oriented Development Effective Tract Area as a gathering space designed as a pedestrian plaza, courtyard, square, or pocket park. Furthermore, the following provisions shall be met:
- 1) The gathering space shall be integral to the development and designed as a focal point for the TOD.
  - 2) The gathering space shall be located at street level, and shall be located adjacent to the sidewalk.
  - 3) The gathering space shall be convenient and accessible by sidewalk or internal pedestrian path.
  - 4) No fence or wall shall be erected between the gathering space and the sidewalk.
  - 5) At minimum, two (2) benches, one (1) bicycle rack, one (1) trash receptacle, and one (1) recycling receptacle shall be provided for every 2,500 square feet of gathering space.
  - 6) A minimum of 30%, but no more than 70%, of the gathering space shall be permeable planting beds landscaped with a combination of trees, shrubs, perennials, grasses, and groundcovers that provide year-round visual interest and color.
  - 7) The gathering space shall provide shade by using one or more of the following elements: canopies, trellises, umbrellas, or similar elements.
  - 8) Up to 25% of the gathering space area may be used for natural features preservation or stormwater management, provided the stormwater management facilities are designed as a vegetated amenity, such as rain gardens.

9) Any paved surface within a gathering space shall be composed of high- quality, durable paving materials, such as unit pavers, paving stones, or concrete. The use of permeable paving is encouraged. A minimum of one (1) shade tree shall be provided per 250 square feet of paved surface within a public gathering space.

10) The public gathering space shall be entirely open to the air and no portion of a building, other than a balcony, shall project over the public gathering space.

11) No parking, loading, or vehicular access shall occur within a gathering space (excepting emergency vehicular access).

12) Any other landscaping feature specifically required by this chapter shall not be included in the calculation of this requirement.

13) An operations and maintenance plan, ensuring that all landscaping and manmade items are maintained in perpetuity and are replaced if they can no longer be feasibly maintained, shall be submitted to the borough for review and approval.

(g) Application for Approval.

1) TOD shall be permissible as a conditional use in the Redevelopment Overlay District only, and application shall be made for such approval in accordance with the provisions of this subsection.

2) Such applications shall be accompanied by a conditional use plan showing the relationship among the various components of the development. The conditional use shall be prepared at a scale appropriate to the size of the property and in sufficient detail to demonstrate that the plan complies with the requirements of this chapter. The conditional use plan shall be conceptual in nature and shall not be required to meet the provisions of a preliminary subdivision or land development plan. The applicant shall have the option, however, of submitting preliminary subdivision or land development plans concurrent with the conditional use application. The conditional use plan shall include the following elements:

i) An existing features plan shall be submitted which shall indicate the tract size, out bounds of the tract, topography, wetlands, woodlands, floodplains, recorded easements and rights-of-way and any other significant physical or man-made feature existing on the tract.

ii) A general land use plan, indicating the tract area and the general locations of the land uses included, shall be submitted. The total number and type of dwelling units and the amount of nonresidential square footage shall be provided. The residential density and the overall tract intensity (building and impervious coverage) shall be provided. The plan shall indicate the location of proposed uses within the development; the location and amount of common open

space, along with any proposed recreational facilities, such as but not limited to pedestrian pathways, community greens, community centers, etc.

iii) Conceptual architectural renderings, showing the general design, scale and materials of proposed buildings within the TOD.

iv) Photo simulations depicting the massing of the proposed building(s) from at least three locations near the development site shall be provided. The provided photo simulations shall reflect the location and envelope of any proposed building, but need not reflect the conceptual architectural renderings as provided for in the immediately preceding subsection.

v) A conceptual utility plan shall be included which shall indicate the proposed location of sanitary sewer and water lines, along with a narrative indicating the feasibility of such facilities. The plan shall also show the approximate areas needed for stormwater management.

vi) As required under Subsection 27-2703E(4)(k) above, a traffic study shall be submitted which analyzes the likely impacts of the proposed development and makes traffic improvement recommendations in accordance with standard traffic engineering procedures.

(h) Decision on conditional use request. In allowing a conditional use, Borough Council may attach reasonable conditions and safeguards as may be deemed necessary to implement the purposes of this chapter and ensure the protection of adjacent uses and streets from adverse impacts that may be determined from credible testimony.

#### §27-2704. Development Bonus.

When a Transit-Oriented Development provides for public benefits as defined herein, a residential density bonus of 15 additional dwelling units per acre (up to a total of 75 dwelling units per acre) shall be granted, by right, to the applicant in accordance with the provisions of this section:

- A. A development shall qualify for the bonus if one of the following options are provided.
- a. The development receives LEED Gold certification.
    - i. The applicant shall designate a project administrator that shall be the sole point-of-contact for the borough throughout the LEED certification process. The individual shall be qualified for the role, either being a LEED certified professional or a design professional having a proven track record of successfully navigating the LEED certification process. The contact information and qualifications of the assigned individual shall be provided to the borough at the time of application.
    - ii. The applicant shall provide a complete BD+C: New Construction and Major Renovation checklist to the Borough Engineer. The development shall qualify for gold certification and, as such, shall score a minimum of 60 points on the BD+C: New Construction and Major Renovation checklist, Version 4. Furthermore, the

applicant shall submit documentation that provides evidence that supports the checklist findings to the Borough Engineer.

iii. Proof of compliance required.

1. The applicant shall successfully submit for precertification from USGBC, or
2. The applicant shall undertake a "split review" whereby the design credits and prerequisites are reviewed and approved by USGBC in an initial phase of review, while the construction credits are reviewed in a second phase of review.
3. Any approvals and correspondence shall be submitted to the borough for review.

b. The development provides a direct pedestrian connection across the SEPTA railroad tracks, which directly connects the northbound and southbound train station platforms. Any such connection must provide for more direct and efficient movement between the two platforms than existing conditions, which necessitate walking up to and along Butler Avenue.

B. Alternatively, a development shall qualify for the bonus if three (3) of the following five (5) options are provided for as part of the TOD.

a. The development generates no less than 10% of their anticipated energy use through on-site renewable energy generation.

- i. The development shall generate at least 10% of their anticipated energy use through building-integrated solar energy generation and/or geothermal energy generation facilities.
- ii. The applicant shall provide specifications and other supporting documentation to the Borough Engineer for review.
- iii. The applicant shall submit an annual report to the borough that describes the energy generation and energy use of the development.

b. No less than 10% of all dwelling units are provided as income-restricted dwelling units.

- i. Price and income guidelines for income-restricted dwelling units shall meet the rent and income limits defined by the Pennsylvania Housing Finance Agency (PHFA) for agency financed properties for Montgomery County in a given year.
- ii. A mix of income limitations shall be provided for, ranging from 20% to 60% of the area median income. No more than 50% of income-restricted units shall allocated to any one income limitation (60%, 50%, 40%, 30%, or 20%).
- iii. The income-restricted dwelling units shall remain income-restricted in perpetuity with a covenant that runs with the land.
- iv. The applicant shall designate the property manager or another permanent staff member as the sole point-of-contact for the borough to contact for all matters related to income-restricted dwelling units. The contact information and qualifications of the assigned individual shall be provided to the borough at the time of application.
- v. The applicant shall submit an annual report to the borough that demonstrates the continued occupancy of the units by qualified individuals, as defined herein. Personal information of tenants may be redacted as necessary.

- c. The development provides free-use public parking spaces to support visitors of Ambler in an amount equal to at least 10% of their nonresidential parking requirement.
- i. Public parking areas shall be owned, operated, and maintained by the property owner.
  - ii. Public parking spaces may be one and the same as those allocated to a nonresidential parking requirement, provided that the parking spaces are available between the close of business on Friday through Sunday evening.
  - iii. Public parking shall be clearly delineated through pavement markings and/or signage.
  - iv. Public parking shall be located near the train station, commercial land uses, or public gathering spaces, where applicable.
  - v. Wayfinding signage between the public right-of-way and the public parking spaces shall be provided.
  - vi. Reasonable parking restrictions, such as metering and limiting overnight parking, shall be permissible provided that the borough is made aware of changes no less than seven (7) days in advance of enforcement. All enforcement shall be the sole responsibility of the property owner.
- d. The development provides an expanded gathering space. The development shall provide no less than 10% of TOD effective tract area as a contiguous public gathering space meeting the standards of §27-2703.E.(4)(f) and measuring at least 1,500 square feet in area.
- e. The development provides all required off-street parking within a parking structure(s) meeting the standards of §27-2703.A and §27-2703.E.(3)(e), and which is integrated/attached to the mixed-use TOD building.

### §27-2705. General Regulations.

The following regulations apply to all development in the Redevelopment Overlay District:

- A. Utilities. All buildings shall be served by a public sanitary sewage disposal system and public water supply or any available public utilities. All utility lines and services shall be placed underground.
- B. Stormwater Facilities. Stormwater facilities and supporting calculations must be provided in accordance with the Ambler Borough Subdivision and Land Development Ordinance [Chapter 22], Recognizing the intent of the Borough to encourage redevelopment and reuse and the need to protect the health, safety and welfare of property owners, employees and residents, the Borough may apply some flexibility in addressing stormwater and related issues. Developers are encouraged to utilize innovative stormwater control techniques such as porous pavements. Applicants and or landowners may challenge the official floodplain delineation in accordance with the procedures required by the Federal Emergency Management Agency, Federal Insurance Administration.
- C. Transportation Impact Study. A transportation impact study shall be completed for all development within the RO District in accordance with the provisions of this section, which shall supersede §22-310, Traffic Impact Study, of the Borough of Ambler Subdivision and Land Development Ordinance.

(1) Intent. A transportation impact study (TIS) is intended to enable Ambler Borough to assess the transportation impacts of a proposed development or redevelopment with the RO

Redevelopment Overlay. Specifically, its purpose is to:

- (a) Ensure a safe and efficient transportation network for all users, including drivers, pedestrians, bicyclists, and transit users.
- (b) Identify any transportation problems that may be created in the existing transportation system as a result of the proposed development.
- (c) Identify solutions to potential problems and to present mitigation improvements to be incorporated into the proposal or into the transportation systems within the study area.
- (d) Assist in the protection of air quality and the conservation of energy and to encourage the use of alternative transportation modes where available.
- (e) Ensure that TIS submissions to the Municipality are consistent with the PennDOT Publication 282, Appendix A, "Policies and Procedures for Transportation Impact Studies," (July 2017).

(2) Preparation of study. The transportation impact study shall be prepared by a qualified traffic engineer and/or transportation planner in accordance with PennDOT Publication 46, Traffic Engineering Manual. All costs associated with the preparation of a TIS shall be borne by the applicant. The procedures and standards for the transportation impact study are set forth below. The applicant may provide funds to the Borough to enable the Borough to hire a traffic engineer of its choice to conduct the study, if this procedure is deemed appropriate and approved by the Borough.

(3) Coordination. Coordination with PennDOT or county highway occupancy permit (HOP) managers shall occur as appropriate. A TIS prepared in accordance with the guidelines of PennDOT as part of an application for a state HOP should be submitted to the Borough in fulfillment of the requirement for a TIS by Ambler Borough.

(4) Vehicle Trip generation. The anticipated number of peak hour trips and trips per day shall be determined using the Institute of Transportation Engineers (ITE) "Trip Generation Manual," 11<sup>th</sup> Edition. The proposed use or development shall be identified using the appropriate ITE land use code. The appropriate ITE land use code shall be agreed upon by the applicant and the Borough.

(5) Municipal scoping meeting. A municipal scoping meeting may be required to ensure that the parameters used in the TIS accurately reflect municipal conditions and expectations. The applicant should confirm the need for a municipal scoping meeting prior to submission. The municipal scoping meeting will address the number and locations of proposed access points, project schedule and phasing, intersections to be included in the analysis, specific ITE trip generation land use codes, pass-by volumes, modal splits, any trip adjustments to be used, and other area developments and programmed roadway improvements to be included in the future conditions analysis as well as potential opportunities to implement transportation demand management (TDM) activities. Agreement on all scoping parameters shall be obtained prior to initiation of the TIS. The municipal scoping meeting may be held in conjunction with the PennDOT or county scoping meeting.

(6) If a municipal scoping meeting is not held, the applicant shall include in the study report, at minimum, the three intersections of a local street with Butler Avenue that are closest to the proposed development.

(7) General requirements and standards. A Transportation Impact Study shall contain the following information:

- (a) General site description. The site description shall include the size, location, proposed land uses, construction staging and completion date of the proposed subdivision or land development, if the development is residential, types of dwelling units and number of bedrooms shall also be included. A brief description of other major existing and proposed developments within the study area shall be provided. The general site description shall also include probable socioeconomic characteristics of potential site users to the extent that they may affect the transportation needs of the site (i.e., number of senior citizens).
- (b) Transportation facilities description. The description shall contain a full documentation of all aspects of the proposed internal and proposed and existing external transportation system. This description shall include proposed internal vehicular, bicycle, and pedestrian circulation; all proposed ingress and egress locations; all internal roadway widths and rights-of-way; roadway classifications; parking conditions; traffic channelization, traffic control and traffic calming devices; and any traffic signals or other intersection control devices at all intersections within or adjacent to the site. Data provided in the report should adequately document the following:
1. Traffic volume counts.
  2. Land use context (in study area).
  3. Sight distance and site access.
  4. Photographs.
  5. Pedestrian, bike, and transit facilities.
- (c) Existing conditions scenario. Full documentation shall be provided to adequately describe and evaluate traffic conditions throughout the study area including, but not limited to, peak hourly volume, intersection turning movement counts, capacity and level of service analysis, and the past five years of crash analysis. Complete traffic counts encompassing and documenting the peak traffic and peak development generated hours shall be required for the three intersections of a local street with Butler Avenue that are closest to the proposed development.
- (d) Background traffic. Projections of traffic volumes at the project opening year and design horizon shall be made by applying a growth factor to existing base traffic volumes. Planned and permitted developments that will impact the study area shall be evaluated for addition to future traffic volume. Existing traffic counts to be used for traffic volume projections should not be older than three years from the current year of the study, unless approved by the Borough Engineer.
- (e) Traffic characteristics of the proposed development. The following characteristics of traffic generated by a proposed development shall be estimated based upon reasonable sources as agreed upon the by Ambler Borough and the applicant.

1. Trip generation - total volume of traffic arriving at and departing from a site. This shall include projected vehicular, pedestrian, and bicycle volumes, as well as transit ridership.
  2. Modal split - the form or type of transportation used to reach or depart from a site.
  3. Trip distribution - the arrival and departure pattern of traffic at a site.
  4. Traffic assignment - typical routes used to arrive at or depart from a site.
- (f) Future analysis. Future traffic volumes for the study area at the project opening year and design horizon year shall be projected in at least two scenarios: with and without the proposed development.
- (g) Level of service requirements. The TIS shall compare the operating LOS and delay for the design horizon year both with and without the development. An evaluation comparing the without development and with development scenarios shall be used to determine if the overall LOS has dropped. The impact of development on the level of service at all intersections within the study area shall be evaluated. This shall include the three intersections of a local street with Butler Avenue that are closest to the proposed development. Level of service below "C" shall be considered deficient and a mitigation analysis shall be performed.
- (h) Mitigation analysis. If level of service requirements are not realized, the study shall outline mitigation measures and demonstrate any changes to the level of service achieved by these measures. Any alternatives or suggested phasing of improvements shall be described. The mitigation measures may include recommendations such as roadway widening, changes in striping, turning lanes, deceleration lanes/tapers, changes to signalization, use of access management techniques, or a reduction in the proposed intensity of the use. The responsibility and timing of all recommended roadway improvements shall be described within the transportation impact study.
- (i) Street improvements. The study shall include recommendations for street improvements bordering the site that will be used to accommodate the traffic generated by the proposed subdivision or land development; and cost estimates for the associated recommendations. In any location where signalization is considered, so too shall the addition of a roundabout or miniroundabout be considered and studied.
- (j) Multiple phases. If the proposed subdivision or land development will occur in multiple phases, then calculations for the completion of each phase shall be provided in the study.
- (8) Time of submission. The transportation impact study shall be submitted to the Borough with the preliminary plan submission. Revisions to preliminary plans may constitute the need for re-submission of the transportation impact study for the revised conditions. An application which requires a TIS shall not be considered complete until the TIS is submitted.
- (9) Implementation. Borough Council shall review the transportation impact study to analyze its adequacy in solving any traffic problems that will occur due to the land development or subdivision. Borough Council may determine that certain improvements on and/or adjacent to the site, including those related to access or egress, are necessary requirements for land development or subdivision plan approval and may attach these as conditions to the approval. If Borough Council determines that such additional improvements are necessary, the developer

shall have the opportunity to submit alternative improvement designs to obtain plan approval.

(10) Emergency response organizations. The Borough shall submit all land development plans to the fire department, police department, and any other emergency response organization having jurisdiction within the area of the proposed development for review and comment. If requested by any emergency response organization, Borough Council may require the developer of a land development to provide emergency signal preemption for any traffic signals located within or immediately adjacent to the development.

D. Access. Each development shall have physical access to a public street. Developers are encouraged to share access points and/or driveways.

E. Streets. Streets proposed for dedication within the development shall be interconnected with each other and with streets on abutting properties and approved by Borough Council.

F. Ownership and Maintenance of Common Open Space and Facilities. Ownership and maintenance of common open space and other common facilities shall be provided for in accordance with the regulations of §27-402 of this Chapter. All open space shall be permanently deed restricted from future subdivision and development.

G. Solid Waste. All solid waste facilities shall be located no closer than five feet from any property line and a site element screen shall be provided in accordance with the landscape planting requirements of the Borough Subdivision and Land Development Ordinance [Chapter 22],

H. Signs. All signs shall meet the requirements of Part 20.

I. Lighting Facilities.

(1) All nonpublic sidewalk, walkway, parking and building lighting fixtures shall be of a style and design that is either consistent with or complementary to those utilized throughout the Redevelopment Overlay.

(2) Lamp posts for all existing and proposed streets shall match existing lamp posts utilized throughout the Redevelopment Overlay District. The specifications for existing lamp posts may be requested from the Borough Engineer.

(3) Strict adherence to §27-412, Lighting Criteria Applicable to All Zoning Districts, is required.

J. Landscaping. Landscaping requirements in the RO District shall meet all provisions of the Borough's Subdivision and Land Development Ordinance [Chapter 22], except as modified or supplemented below:

(1) General standards.

(a) All areas of the site not devoted to buildings, parking, roadways, pedestrian pathways, and public gathering spaces or plazas shall be landscaped with trees, shrubs, ornamental plants and grasses, or other appropriate groundcover.

(b) All landscaping shall be guaranteed for a period of ten (10) years and any dead, diseased, or dying plant materials shall be replaced no later than the next planting season.

(c) Plant species shall be selected from §100.6, Recommended Plant Material List, where applicable.

(2) Street trees. Street trees shall be provided in accordance with §100.3, Street Trees.

(3) Foundation plantings.

(a) Foundation plantings shall be provided between a sidewalk and any building facade.

(b) Foundation plantings shall include a mix of shrubs, perennials, and ornamental grasses, and may be located either within an in-ground planting bed or within a permanent architectural planter.

(c) Notwithstanding the above, foundation plantings shall not be required where the sidewalk is extended to the build-to line and directly abuts the facade of a building.

(4) Planting buffer. All mixed-use or nonresidential developments shall provide a permanent landscaped planting area of at least 10 feet in depth (inclusive of curb, but not sidewalk, of up to one foot in width) along all property lines adjacent to a residentially zoned property. The buffer shall meet the requirements of §100.4. Buffers and Screens.

K. Pedestrian Design Standards. Public and private pedestrian access and circulation shall be included in all development proposals. Pedestrian access links shall be provided for all uses as specified on the Redevelopment Area Plan for access to open space areas and principal destinations such as the Ambler Borough Main Street Corridor, the SEPTA train station and the Wissahickon Conservation Corridor. The following standards shall apply throughout the RO:

(1) Sidewalks within an unimpeded pedestrian pathway width of at least eight (8) feet shall be required along all existing and proposed streets and driveways within the RO.

(2) Paved pedestrian walkways, sidewalks, trails or equivalent with a minimum width of five (5) feet shall connect road frontage sidewalks to building entries, parking area(s) and other significant destination areas (i.e., passenger rail station, major open space areas and/or historically or culturally important sites).

(3) Sidewalks shall connect to existing sidewalks on abutting tracts and other nearby pedestrian destination points and transit stops. Unpaved walking trails may be substituted for paved sidewalks in cases where the developer has proven that such trails would be more appropriate to the development's surroundings (i.e., along a watercourse, connection to an existing trail network, etc.),

(4) All pedestrian amenities shall be designed in accordance with the standards of the Americans with Disabilities Act.

(5) Walkways between office buildings, retail establishments and housing areas shall facilitate "walkability." Direct pedestrian connections to public transit stops, the Downtown Commercial District and adjacent properties shall be accommodated within the overall land use plan.

(6) Sidewalks and pedestrian access links shall be constructed of a hard, durable, all-weather surface. Alternative paving materials, such as high density concrete pavers,

may be utilized but must be of a color and texture matching that existing elsewhere in the Borough's Main Street and/or development areas and must be approved by the Borough.

(7) For frontages on Main Street and Butler Avenue, a four (4) foot wide verge shall be provided between the sidewalk and curblin which may be either landscaped or hardscaped. For frontages other than Main Street and Butler Avenue, a two (2) foot wide verge shall be provided between the sidewalk and curblin which may be either landscaped or hardscaped.

(8) Crosswalks. Crosswalks shall be clearly delineated at all intersections and marked to the width of the largest contributing sidewalk or internal pedestrian pathway. In no case shall the width of the crosswalk be less than five (5) feet. Furthermore, pedestrian signalization shall be provided at intersections where traffic signals exist.

L. Bus stops.

(a) The developer shall coordinate with SEPTA, or any other public transit provider, on providing or improving existing bus stops when a public bus transit route operates or has a stop located on a public or private street frontage directly abutting a development within the RO.

(b) The developer shall coordinate with SEPTA on the stop design. The

appropriate transit stop improvements and shelter shall be provided meeting the most recent SEPTA Bus Stop Design Guidelines. Transit stops shall include, at a minimum, a shelter or enclosure, seating, and schedule information.

(c) The developer shall sign a perpetual maintenance agreement with Ambler Borough demonstrating that the applicant is responsible for the maintenance of the bus shelter and associated amenities.

M. Application and Review of Development Proposals,

(1) For all proposed developments in the RO District, a tentative conceptual sketch plan shall be submitted to the Borough Planning Commission, as defined in §22-302 of the Ambler Borough Subdivision and Land Development Ordinance [Chapter 22] with the following Information also to be shown:

(a) A conceptual site plan showing the location of all existing and proposed buildings, drives, roadways, proposed traffic patterns, parking lots and garages, pedestrian walkways and plazas and other constructed features on the lot, plus all designated open space and open space/recreational facilities, and all water, floodway/floodplains and topographic features. Surrounding existing features may be indicated with aerial photographic information, which can be obtained from the Borough.

(b) Conceptual architectural plans for any proposed buildings or modifications to existing buildings shall be submitted in adequate detail to indicate building setback, footprint dimensions, building heights, building mass, entrances, loading/unloading areas and a schematic layout of building uses.

(c) A preliminary landscape plan meeting the requirements of §100.7.1 of the Ambler Borough Subdivision and Land Development Ordinance [Chapter 22],

(d) Schematic layout of utilities and stormwater facilities.

(e) Any other pertinent data or evidence that Borough Council may require.

N. Building Design Standards and Guidelines. The following architectural design criteria shall be complied with in all development in the RO District, and thus provide a basis for the encouragement of innovative and sound design and development practices and ensure consistency of improvements and architectural elements throughout the development area. The following criteria shall be met at preliminary and/or final plan submission.

(1) Preliminary architectural elevations shall be submitted with any conditional use application or land development application, whichever occurs first. A registered architect shall prepare such elevations. Such elevation shall illustrate the general design, character and materials for sides of buildings visible from public streets, the passenger rail line and open space lands available for public use.

(2) The details of the architectural designs may be modified after conditional use approval and/or preliminary land development approval, provided the overall designs and types of materials conform to the approved plans.

(3) The architectural designs of all buildings shall provide a variety of rooflines and treatments, when viewed from public streets, the passenger rail line and public open space. Buildings shall not have the appearance of a single monolithic structure. Instead, large buildings shall have the appearance of connected smaller buildings. Building walls shall not have unbroken single appearance for more than 50 feet on the average in horizontal length. Instead, variations in materials, colors, textures, overhangs, building recesses of at least 20 feet, display windows

and/or entrance ways shall be used to provide visual interest.

(4) The architectural design of a building's vertical height shall be broken with variations in materials, colors, textures, setbacks, fenestration and architectural detailing. All buildings within a development project shall have a unified or complementary architectural character.

Developments shall create focal points with respect to avenues of approach, or other buildings, and relate open space between all existing and proposed buildings.

(5) Screening of certain features.

(a) Rooftop equipment or features. Rooftop HVAC systems, elevator equipment, or any other mechanical or utilitarian protuberances shall be screened from view from adjacent buildings and from ground level using similar building materials and in a manner that is consistent with the architectural design of the building.

(b) Loading docks. Loading docks shall be incorporated into the overall site design. These areas shall be located and screened so that the visual and acoustic impact of these functions are fully contained and out of view of adjacent properties and public streets.

(c) Refuse collection facilities. Refuse collection areas shall be located with buildings wherever feasible; however, where indoor refuse collection and storage is not feasible, the refuse collection area shall be located to the rear of the building. All exterior refuse collection areas shall be screened from neighboring properties, public and private streets, parking areas, and public gathering spaces through a combination of low walls, fencing, or hedges.

(6) Applicants are encouraged to use color schemes that contribute to the overall character of the Borough. However, companies will not be required to abandon their legally protected trademarks, logos, color schemes and trim colors provided they are appropriately integrated into an aesthetically pleasing overall design.

(7) A coordinated design scheme shall be presented that will promote attractive sign designs among tenants. A detailed design shall be presented for freestanding signs for the development during the subdivision/land development process

0. Demolition of Existing Structures. Demolition of existing structures shall require a demolition permit from the Borough. Proposed demolition of existing structures in the RO District must be included in all conceptual sketch plan submittals.

#### 5.27-2706. Miscellaneous

A. To the extent of any inconsistency between this ordinance and any earlier-adopted ordinance, the inconsistent language in the earlier ordinance is repealed to the extent of such inconsistency.

B. In the event that a court of competent jurisdiction invalidates any portion of this ordinance, then to the extent possible, the invalid portion shall be severed from the remainder, which shall remain in full force and effect.

C. This ordinance is effective on the earliest effective date recognized by section 3301.3(b) of the Pennsylvania Borough Code.



## **AMBLER BOROUGH COUNCIL MEETING**

### **Minutes**

**November 18, 2025**

**7:00 PM**

#### **I. CALL TO ORDER**

President Glynnis Siskind called the Ambler Borough Council meeting of November 18, 2025, to order at 7:00 p.m.

#### **II. PLEDGE OF ALLEGIANCE**

President Siskind led the pledge of allegiance.

#### **III. ROLL CALL**

Present at the meeting were: Ms. Siskind, Ms. Sheedy, Ms. Henderson, Ms. Roecker Coates, Ms. Iovine, Mr. Orehek, Mr. Hui, Mr. Brubaker, and Ms. Pavlovic, Police Chief Jeff Borkowski, Borough Manager Kyle Detweiler, and Solicitor Bresnan, Mayor Sorg was absent

#### **IV. CITIZENS' COMMENTS-**

There were no citizens' comments.

Al DeGennaro from J.P. Mascaro introduced himself and offered his service with any questions regarding the trash contract.

#### **V. MINUTES OF PREVIOUS MEETING**

The Minutes of the October 21<sup>st</sup> Council Meeting were approved **9-AYE**.

#### **VI. CONFIRMED APPOINTMENTS – None**

#### **VII. FINANCE DIRECTOR'S REPORT**

A written report was submitted for the record.

A budget workshop was held at 6:00PM this evening.

#### **VIII. POLICE DEPARTMENT REPORT**

A written report was submitted for the record.

## **IX. FIRE DEPARTMENT REPORT**

A written report was submitted for the record.

Ms. Iovine asked and update regarding her question from page 64 of last week's report as to why Wednesday's at 4PM is the highest call time.

Mr. Detweiler answered that a meeting is scheduled for next week and he will address the question.

## **X. EMS REPORT**

A written report was submitted for the record.

## **XI. INTER-DEPARTMENT REPORTS**

### **A. Public Works Department**

A written report was submitted for the record.

Ms. Iovine asked for an update on the non-functional lights along South Main St.

Mr. Pagano responded that public works is currently working with the company who damaged the electrical box, and he would update council accordingly.

### **B. Water & Highway Department Reports**

A written report was submitted for the record.

### **C. Wastewater Treatment Plant Report**

A written report was submitted for the record.

### **D. Code Enforcement Report.**

A written report was submitted for the record.

### **E. Manager's Report- Kyle Detweiler**

A written report was submitted for the record.

## **XIII PROFESSIONAL CONSULTANTS' REPORTS**

### **A. Engineer's Report**

A written report was submitted for the record.

### **B. Wastewater Treatment Plant Engineer's Report**

A written report was submitted for the record.

### **C. Solicitor's Report**

## **COUNCIL COMMITTEE REPORTS:**

### **A. Finance & Planning Committee – Elizabeth Iovine, Chair**

1. Motion to authorize the notice of intent to award - Collection, Transportation & Disposal of Solid waste and recycling bids to J.P. Mascaro. **Carried 9-AYE.**

Mr. Bresnan advised that there be clarity on which bid was accepted.

Council asked for Clarification on some details regarding the trash bid.

The Gentleman from White Tail asked for clarity on why they did not win the bid.

Mr. Bresnan clarified.

Mr. Gennaro said some words on the relationship between the Borough and J. P Mascaro. He offered clarity regarding the services J.P. Mascaro provides to the Borough.

Discussion ensued.

2. Ms. Iovine asked Mr. Detweiler if the Budget was ready to go to be advertised.  
Mr. Detweiler said we are ready to advertise. Motion to advertise the proposed 2026 Borough Budget. **Carried 9-AYE.**
3. Motion to authorize payment of all bills as presented for October 2025 in the amount of \$1,430,269.69. **Carried 9-AYE.**

Ms. Iovine offered that they are included in the packet.

Ms. Siskind made a motion to accept the report. **Carried 9-AYE.**

### **B. Public Safety – Nancy Roecker Coates, Chair**

Ms. Roecker Coates mentioned that a meeting is scheduled Monday with leadership from the fire company.

### **C. Public Utilities – Lou Orehek, Chair**

1. Motion to proceed with the Constellation Energy supply agreement. **Carried 9-AYE.**

Mr. Orehek clarified that the cost for a kilowatt hour is \$.08058.

Ms. Siskind made a motion to accept the report. **Carried 8-AYE.**

#### **D. Parks and Recreation – Jennifer Hederson, Chair**

Ms. Henderson thanked everyone who came to the Community Garden’s Fall clean up.

Ms. Roecker Coates thanked the E.A.C..for their tree planting efforts the prior weekend.

#### **E. Salary and Personnel – Karen Sheedy, Chair**

There was an executive session held earlier thin the evening regarding a personnel issue.

1. Motion to advertise the 2026 calendar. **Carried 9-AYE.**
2. Motion to award a conditional offer of employment for the Water System II Operator position. **Carried 9-AYE.**
3. Volunteer expirations were noted.

Ms. Siskind made a motion to accept the report. **Carried 9-AYE.**

#### **XIV. Other Business**

Mr. Detweiler explained that the Borough is a collection site for a toy drive benefiting the Prothonotaries office, as they have a need for toys and crafts to occupy children who are in the office for many hours with their parent/s.

Ms. Sheedy clarified that the child could be with a mother or father.

#### **Public Comment:**

Anna Lee Lapinski 136 Rosemary Ave. wants to be included on a tour of the Mascaro Trash facility when it occurs.

She asked if the Borough was planning anything for the 250<sup>th</sup> anniversary – America 250. Ms. Wahl Kunzier replied that yes, we are actively planning with our partners.

She cautioned against the height of the development being planned by the developer B.E.T. at the Hatch site on Maple Ave.

Ms. Siskind made the motion to Adjourn the meeting at 7:35. **Carried 9-AYE**

#### **A. ADJOURNMENT**

## **Finance & Planning Committee**

The previous Committee meeting was held on November 5, 2025, at 7:00pm. Committee Members: – Elizabeth Iovine - Chair, Karen Sheedy and Redmond Brubaker.

**The Committee will not consider any recommendations at this time.**

**The following business will be discussed:**

1. Audit correspondence was received from the DVRPC's MORE Program. **(Enclosed)**.

### **Items For Consideration:**

Not Applicable.



# ASHRAE Level II Energy Audit

Ambler Borough Hall  
Ambler, Pennsylvania 19002



## ASHRAE Level II Energy Audit

Prepared for:           Borough of Ambler  
                              Borough Hall  
                              131 Rosemary Avenue  
                              Ambler, Pennsylvania 19002

November 18, 2025

Prepared by:           Spotts, Stevens and McCoy

---

Ben Pressman, PE

© 2025 Spotts, Stevens and McCoy

SSM File 110637.0001

---

## Table of Contents

---

Table of Contents .....	3
Executive Summary .....	4
Introduction .....	5
Building Description .....	5
Utility Analysis.....	6
Electricity .....	7
Natural Gas .....	7
CO <sub>2</sub> Emissions .....	8
Analysis of Energy End-Uses.....	9
Energy Conservation Measures (ECMs) .....	11
Lighting and Internal Loads .....	11
Heating, Ventilation, and Air Conditioning (HVAC).....	13
Energy Conservation Measure (ECM) Summary.....	15
Renewable Energy Opportunities.....	16
Appendix A: Technical References.....	20

---

## Executive Summary

---

The Borough of Ambler contracted with Spotts, Stevens & McCoy (SSM) under the Delaware Valley Regional Planning Commission (DVRPC) to conduct an ASHRAE Level II energy audit of Ambler Borough Hall at 131 Rosemary Avenue. This audit, required for eligibility under the PA DEP MORE Grant Program, aims to identify opportunities for improving energy performance. SSM performed an onsite survey of the existing building systems and operations on March 5, 2025, analyzed historical utility data, developed calculations to estimate the energy used by each building system, and generated recommendations to improve energy performance through operational and capital measures.

For the most recent available 12 months of utility data (April 2024 through March 2025), total energy costs for the facility were about \$76,600. Electricity accounted for 67% of energy costs and 36% of total energy use, with natural gas accounting for the remaining 33% of energy costs and 64% of total energy use. The energy and cost intensities for the building were 118 kBtu/ft<sup>2</sup> and \$2.19/ft<sup>2</sup>, respectively, substantially higher than similar facilities according to ENERGY STAR's Target Finder tool.

While the building appeared to be performing well during SSM's site visit, several opportunities to reduce the energy footprint of building operations and strategically plan for equipment replacement are outlined in these Energy Conservation Measures (ECMs) and renewable energy opportunities:

- Lighting and Internal Loads
  - Lighting and plug load curtailment plan
  - Implement daylighting controls where applicable
  - Upgrade to ENERGY STAR office equipment and appliances
- HVAC
  - Optimize Building Automation System (BAS) controls
  - Time-of-replacement strategies for major HVAC equipment
- Renewable Energy
  - Rooftop & carport solar photovoltaics

In total, the ECMs listed above (including the heat pump time-of-replacement plan) could reduce utility expenses by nearly 21%—up to 85% including solar—avoid about 65 tons of greenhouse gas emissions, improve comfort and productivity, and enhance the reliability and maintenance of the mechanical systems.

Table 1 summarizes these recommendations with the projected savings and estimated implementation cost for each measure. Project cost estimates include the full cost of the measure, although where applicable the payback considers the premium cost of selecting high efficiency equipment over standard equipment.

Table 1: ECM summary

#	ENERGY CONSERVATION MEASURES (ECMs)	SAVINGS						PROJECT COST & ROI					
		Electricity	Natural Gas	Total Energy	Utility Cost	GHG Emissions	% Energy Savings	% Cost Savings	Est. Total Cost	Est. Premium	Est. Incentive	Premium Payback	Simple Payback
		[kWh/yr]	[MBTU/yr]	[MBtu/yr]	[\$/yr]	[tons/yr]	[%]	[%]	[\$]	[\$]	[\$]	[yrs]	[yrs]
-	Utility Data (2024-25)	433,636	2,634	4,113	\$ 76,609	294	-	-	\$ -	\$ -	\$ -	-	-
<b>LIGHTING &amp; INTERNAL LOADS</b>													
1	Lighting & Plug Load	6,208	-	21	\$ 735	2	0.5%	1.0%	\$ -	\$ -	\$ -	-	-
2	Daylighting Controls	5,780	-	20	\$ 684	2	0.5%	0.9%	\$ 1,500	\$ -	\$ 578	-	1.3
3	ENERGY STAR Appliances	8,847	-	30	\$ 1,047	3	0.7%	1.4%	\$ -	\$ -	\$ -	-	-
	<b>Subtotal</b>	<b>20,834</b>	<b>-</b>	<b>71</b>	<b>\$ 2,466</b>	<b>7</b>	<b>1.7%</b>	<b>3.2%</b>	<b>\$ 1,500</b>	<b>\$ -</b>	<b>\$ 578</b>	<b>-</b>	<b>0.4</b>
<b>HVAC</b>													
4	BAS Best Practices	14,189	122	171	\$ 2,855	12	4.2%	3.7%	\$ -	\$ -	\$ -	-	-
5a	TOR: New Chiller/Boiler	84,311	325	613	\$ 13,103	46	15.0%	17.0%	\$ 525,000	\$ 87,500	\$ 3,400	6.4	> 25
5b	TOR: Heat Pumps	(97,595)	2,327	1,994	\$ 10,780	105	48.8%	14.0%	\$ 700,000	\$ 262,500	\$ 9,240	23.5	> 25
	<b>Subtotal (excl. ECM-05b)</b>	<b>98,500</b>	<b>448</b>	<b>784</b>	<b>\$ 15,958</b>	<b>58</b>	<b>19.2%</b>	<b>20.7%</b>	<b>\$ 525,000</b>	<b>\$ 87,500</b>	<b>\$ 3,400</b>	<b>5.3</b>	<b>&gt; 25</b>
	<b>Total - ECMs</b>	<b>119,334</b>	<b>448</b>	<b>855</b>	<b>\$ 18,425</b>	<b>65</b>	<b>20.9%</b>	<b>23.9%</b>	<b>\$ 526,500</b>	<b>\$ 87,500</b>	<b>\$ 3,978</b>	<b>4.5</b>	<b>&gt; 25</b>
<b>Renewable Energy - Solar</b>													
1a	Roof - Chiller	430.3	-	430.3	11,196	41	10.5%	14.6%	\$ 200,000	\$ -	\$ 66,000	-	9.3
1b	Roof - Heat Pumps	595.4	-	595.4	15,493	56	14.5%	20.2%	\$ 270,000	\$ -	\$ 89,100	-	9.1

## Introduction

On behalf of Ambler Borough and DVRPC, Spotts, Stevens and McCoy (SSM) performed an energy assessment for the Borough Hall in Ambler, PA on March 5, 2025. SSM surveyed all energy-consuming systems in the facility including building envelope, lighting and internal loads, HVAC, and plumbing with support from the building maintenance staff. The objective of the energy assessment was to identify operational, behavioral, and capital Energy Conservation Measures (ECMs) to reduce energy use, operating costs, and environmental impacts from building operations.

## Building Description

The Ambler Borough Hall (131 Rosemary Avenue) is a multipurpose facility of approximately 35,000 square feet comprising administration offices, police, a community gymnasium, and school classrooms. The original construction date is 1966, with substantial renovations around 2009. The administrative offices are open 8am to 4pm Monday through Friday, with the police operating continuously.

The building envelope (roof, walls, doors/windows) are generally in good condition, although the thermal performance of fenestration and insulation is likely far below the current energy code due to the building's age. The ballasted flat roofs show signs of wear and vegetative growth suggesting moisture buildup, and may be nearing time-of-replacement. When replacement occurs, make sure to replace wet or damaged insulation and increase insulation levels to meet or exceed the current energy code. Much of the roof space may also be applicable for solar photovoltaic panels, and solar-readiness should be considered during roof replacement.

Lighting throughout most of the building is LED, including high-bay fixtures in the gymnasium and recessed troffers or suspended fixtures in the office and police areas. Most spaces have ceiling-mounted automatic lighting controls.

HVAC systems include eight (8) Carrier hydronic air handlers and a central plant comprising a 108-ton air-cooled chiller and two (2) 1,200 kBtu/hr conventional gas-fired hot water boilers (80% thermal efficiency). All major equipment is from 2002 and is approaching or has exceeded its expected service life. The 100-gallon gas-fired storage water heater is from 2021 with roughly six years of remaining life and is rated at 80% thermal efficiency. A Building Automation System (BAS) controls all HVAC systems, schedules, and setpoints.

## Utility Analysis

Table 2 shows electricity and natural gas consumption at Ambler Borough Hall over the most recent 24 months of data (April 2023 through March 2025). For the most recent 12 months, the facility spent about \$76,600 on energy utilities, with electricity accounting for 67% of energy costs and 36% of the total energy use, with natural gas accounting for the remaining 33% of energy costs and 64% of total energy use. While this highlights the current low cost of natural gas, PES recommends maintaining a long-term approach to energy sustainability that favors electrification over gas combustion.

Table 2: Annual utility summary

Start Date	End Date	Electricity				Natural Gas				Total Energy			
		[kWh]	[\$]	[\$/kWh]	[tons CO2]	[MBtu]	[\$]	[\$/MBtu]	[tons CO2]	[MBtu]	[\$]	kBtu/sf	\$/sf
4/1/2023	4/1/2024	406,826	\$ 44,411	\$ 0.109	131.3	2,428	\$ 21,848	\$ 9.00	142.0	3,816	\$ 66,259	109.0	\$ 1.89
4/1/2024	4/1/2025	433,636	\$ 51,335	\$ 0.118	140.0	2,634	\$ 25,274	\$ 9.60	154.1	4,113	\$ 76,609	117.5	\$ 2.19
<b>AVERAGE</b>		<b>420,231</b>	<b>\$ 47,873</b>	<b>\$ 0.114</b>	<b>135.7</b>	<b>2,531</b>	<b>\$ 23,561</b>	<b>\$ 9.30</b>	<b>148.0</b>	<b>3,965</b>	<b>\$ 71,434</b>	<b>113.3</b>	<b>\$ 2.04</b>

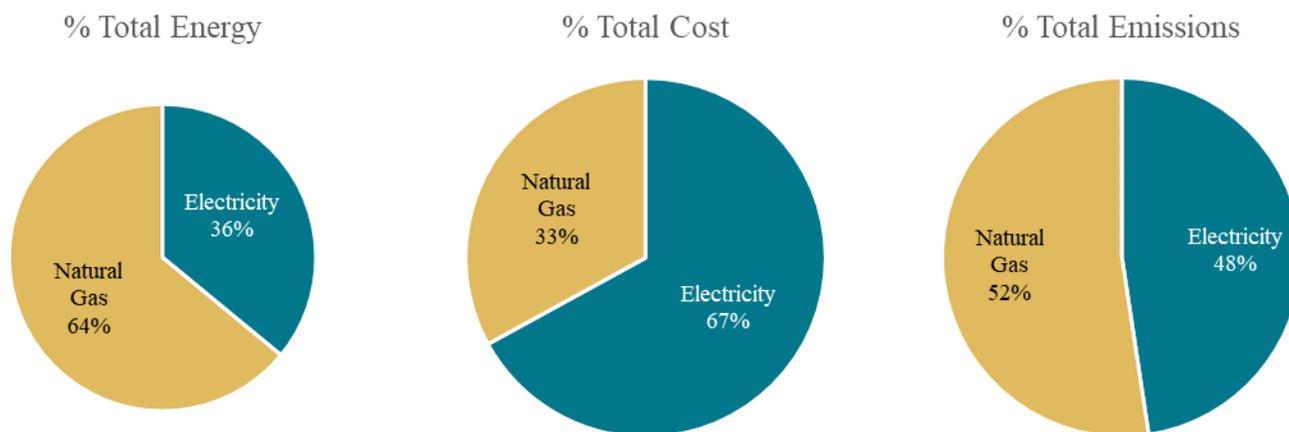


Figure 1: Percent of total energy [MBtu] (left), cost [\$] (middle), and emissions [tons CO<sub>2</sub>e] (right)

### Electricity

Electricity usage at the admin building shows relatively consistent year-to-year usage, with a weather-independent “base load” (e.g. lights, computers, etc.) of about 20,000 kWh/month and a summer peak of 40-60,000 kWh/month due mostly to air conditioning.

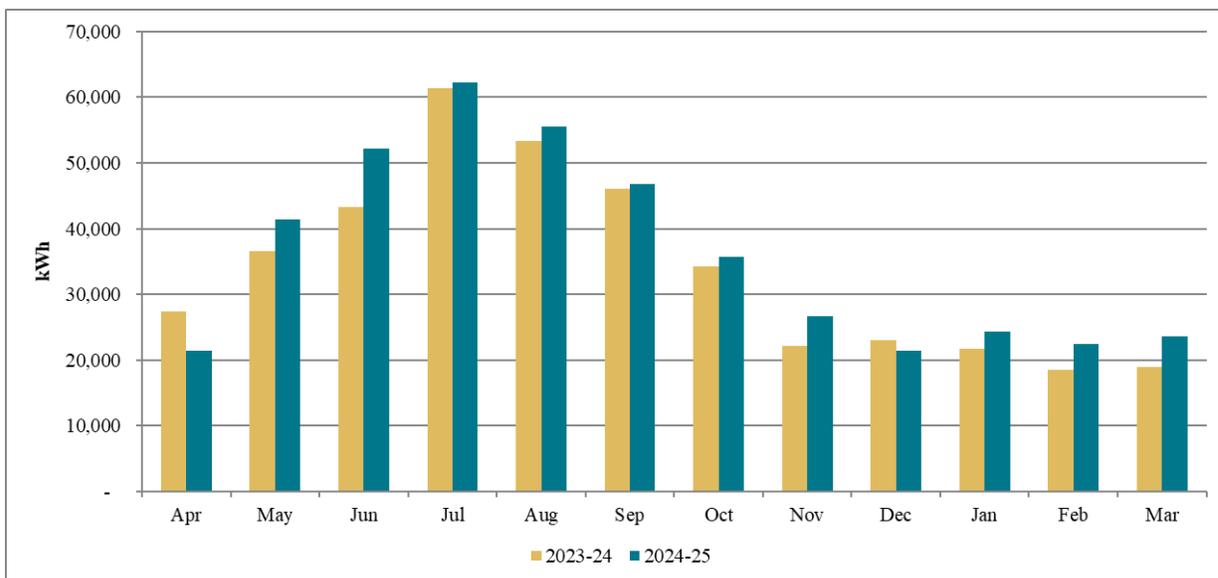


Figure 2: Monthly electricity consumption

### Natural Gas

Natural gas is used for space heat and domestic hot water, and the monthly trend is typical of buildings with gas heat, showing a substantial peak in the winter and reduced but substantial summer usage due to both domestic water heating and summer reheat at the VAV boxes due to over-ventilation and VAV minimum damper position setpoints that are higher than necessary.

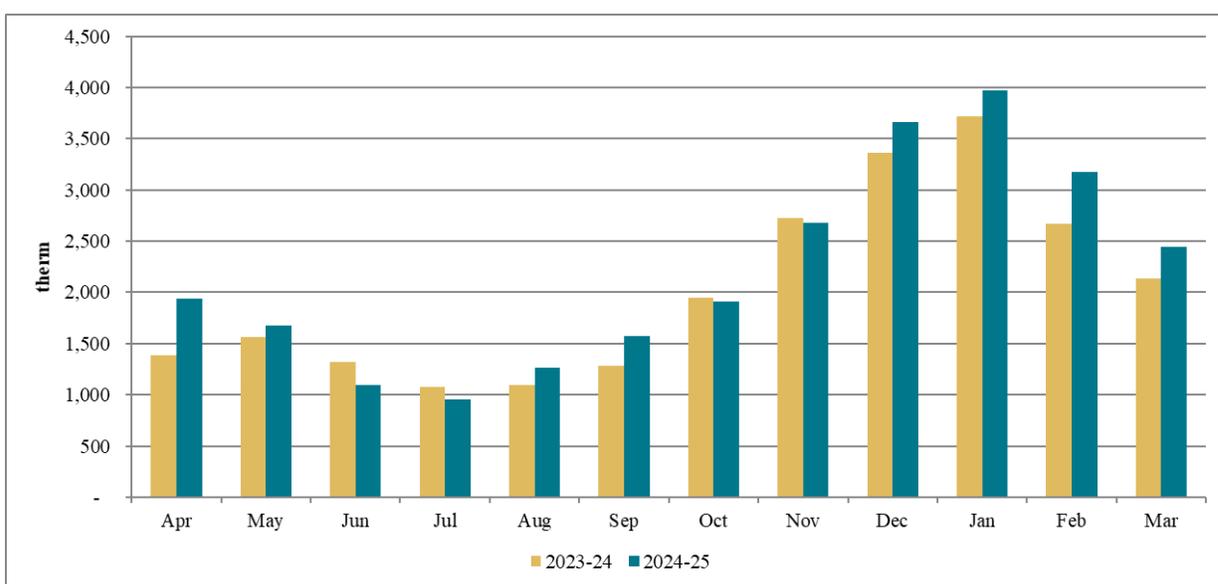


Figure 3: Monthly natural gas consumption

## CO<sub>2</sub> Emissions

Electricity consumed on site releases carbon dioxide at the power plant, along with other pollutants and greenhouse gases such as nitrous oxide, sulfur oxides, mercury, and lead. Natural gas also releases carbon dioxide along with other pollutants, nearly all of which are emitted on-site. Any reduction in energy consumption will reduce these pollutants, lower the carbon footprint from building operations, and conserve natural resources.

Tracking CO<sub>2</sub> emissions and other air pollutants can help the facility assess its carbon footprint and promote environmental stewardship among the occupants. Annual energy consumption at Ambler Borough Hall produces on average approximately 148 tons of CO<sub>2</sub>. This is the annual emissions equivalent of about 31 passenger cars or the amount of carbon sequestered annually by 135 acres of forest (www.epa.gov).

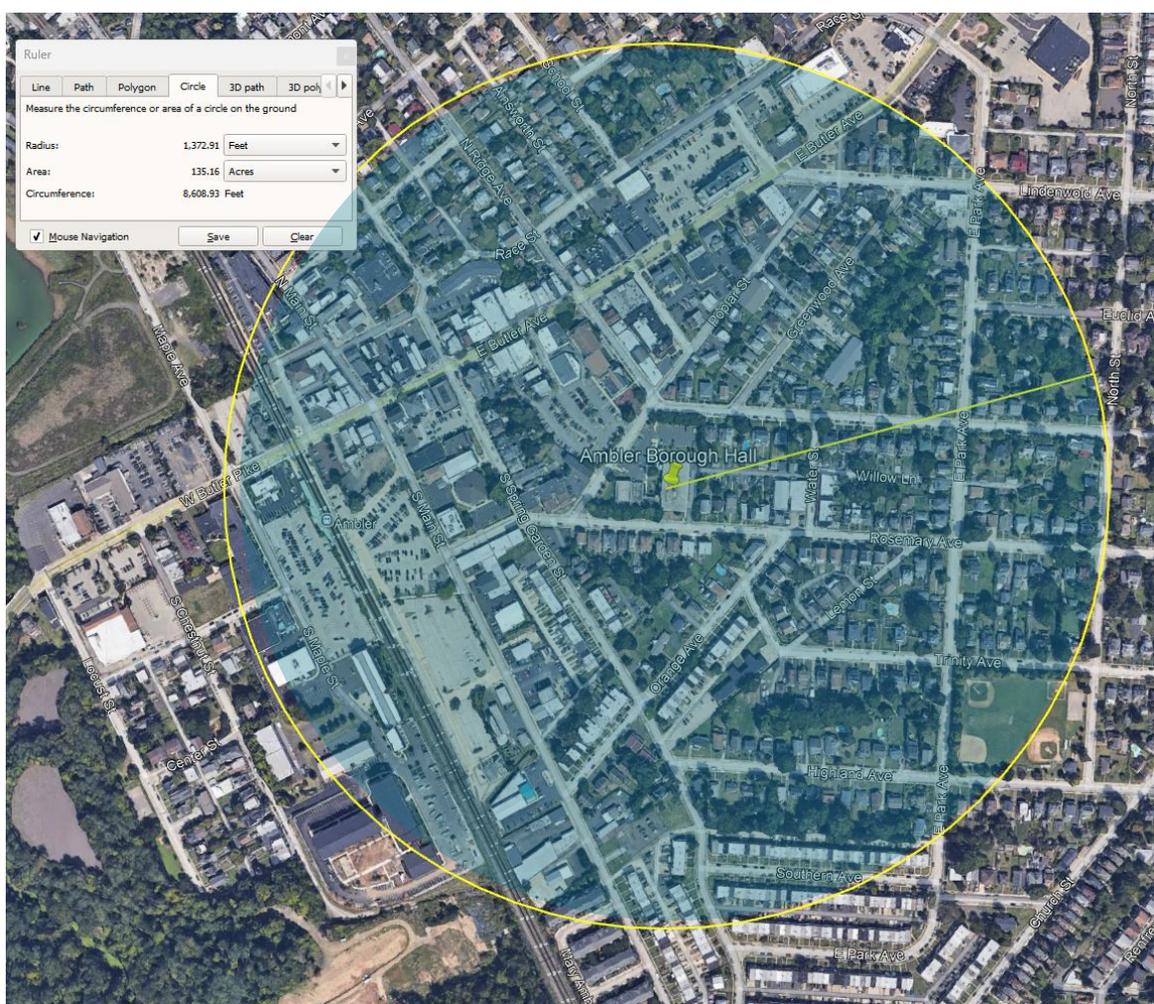


Figure 4: Acres of forest required to offset annual building emissions

## Analysis of Energy End-Uses

SSM developed a spreadsheet-based energy breakdown of the admin building's systems created from site visit observations, utility bill analysis, and equipment ratings. The analysis calibrates the energy consumption of each end-use to actual utility bills and forms the basis for calculating energy savings from the recommendations.

Figure 5 shows the breakdown of energy end-uses by total energy (left) and cost (right). Gas space heating accounts for 60% of the building's total energy use, suggesting major opportunities for improvement. This is followed by space cooling at 18% (but 34% of total cost) and also indicates room for improvement. Other end-uses such as lighting, receptacle loads, fans/pumps, and domestic hot water are significantly smaller loads that can be further improved but may be lower priority.

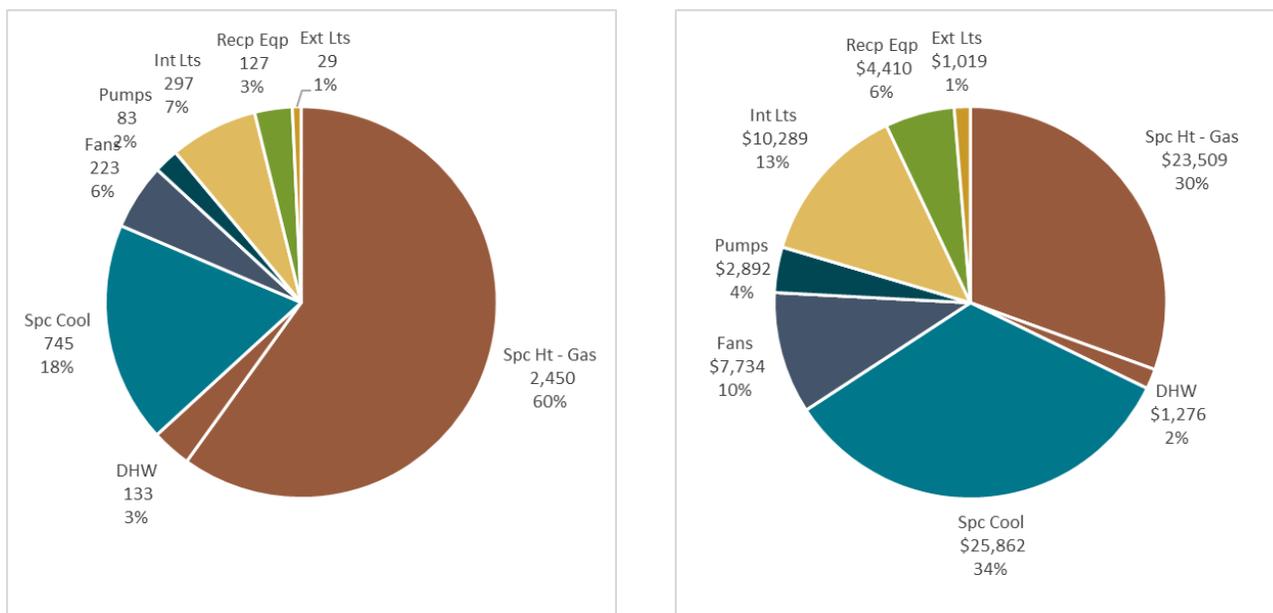


Figure 5: Whole-building energy end-uses by total energy (MBtu, left) and cost (\$, right)

Further calibration was achieved by plotting the estimated energy use of each system on a monthly basis normalized to weather data. The charts on the following page show the estimated monthly electricity and natural gas consumption for each system compared with the actual utility data.

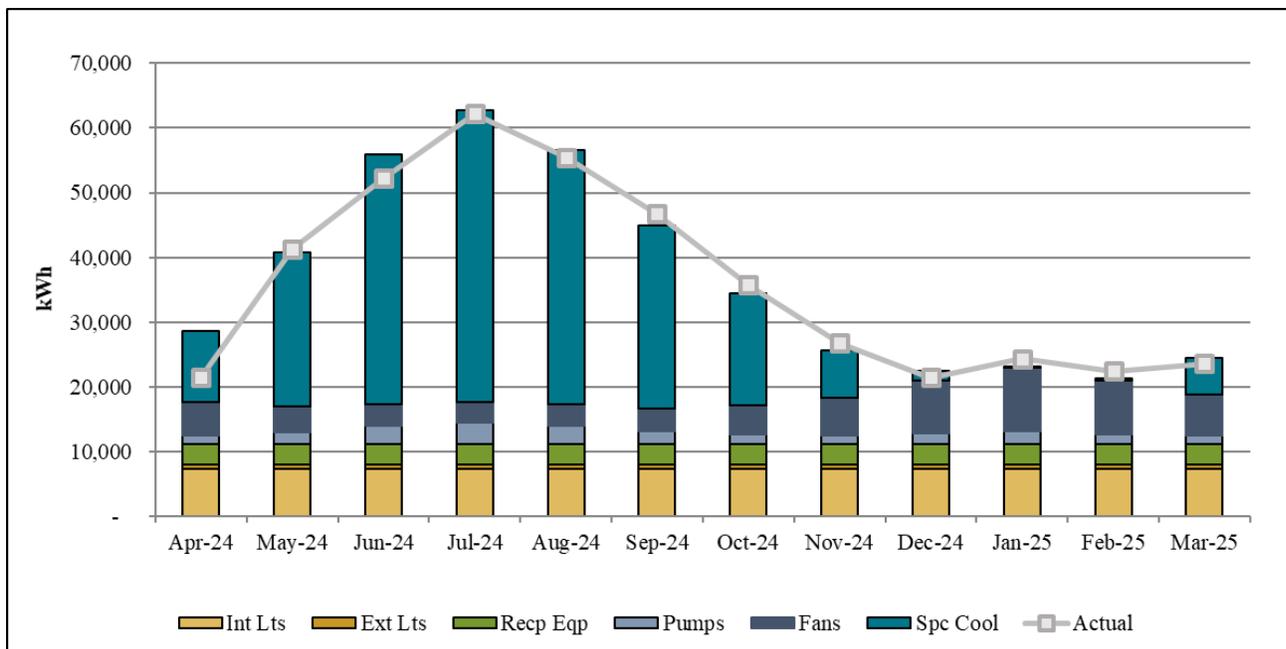


Figure 6: Monthly electricity use by system (modeled vs. actual)

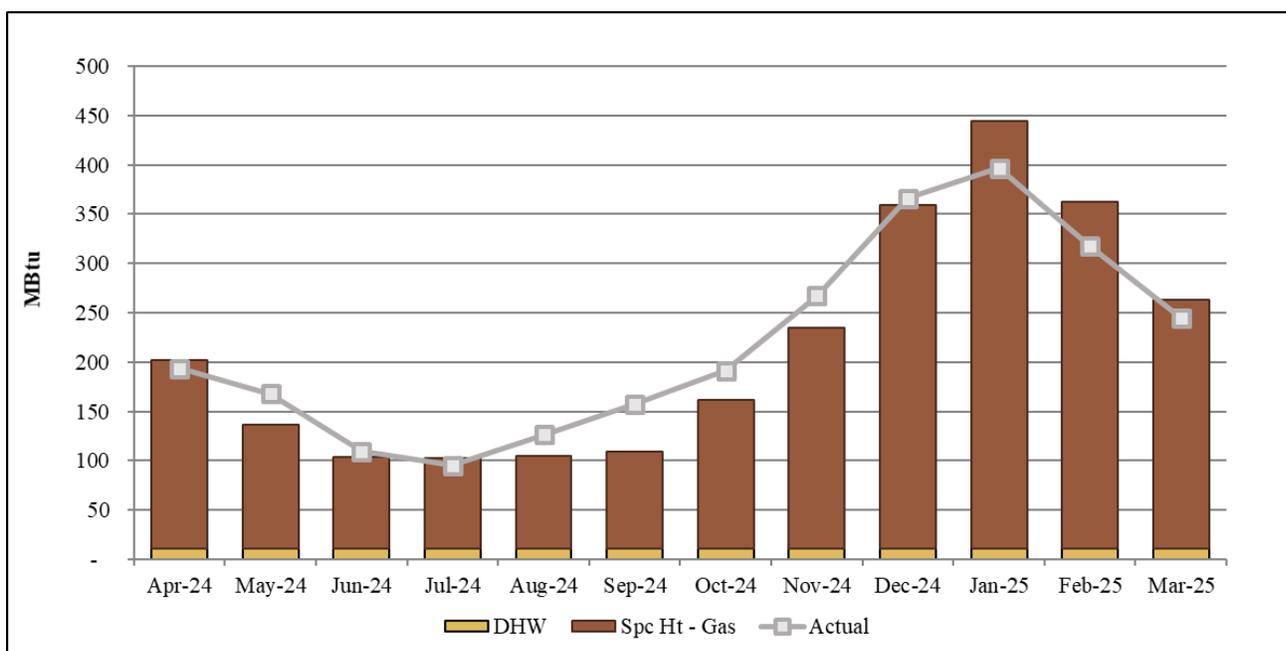


Figure 7: Monthly natural gas use by system (modeled vs. actual)

## Energy Conservation Measures (ECMs)

The following section describes SSM’s recommended measures for improving energy performance, operational efficiency, and comfort while also preserving the longevity of the building. Measures are presented by category as applicable (e.g. building envelope, lighting and internal loads, HVAC, plumbing) and in rough order of priority, with estimated total project costs, premium costs where applicable, and simple payback period. Premium costs are calculated as the difference between the recommended high efficiency measure and a code-compliant baseline alternative, for example ENERGY STAR-rated HVAC equipment versus standard efficiency units.

### Lighting and Internal Loads

#### ECM-01: Lighting & Plug Load Curtailment

***Implement a curtailment program to conserve energy from plug load equipment and interior lighting.***

Existing Conditions	<p>Ceiling-mounted vacancy sensors control the majority of interior lighting and should turn off automatically when unoccupied, although SSM noted that some areas had lights on regardless of occupancy.</p> <p>Televisions, computers, monitors, projectors, printers, and other plug loads may enter standby mode, but still consume energy unless fully shut down or physically disconnected.</p>																																
ECM Details	<p>Energy conservation starts with behavioral adjustments, such as making sure lights and equipment are turned off when leaving a room or leaving for the day. A simple curtailment policy can reinforce energy conservation goals and generate buy-in from staff and volunteers. In SSM’s experience, these behavioral changes can reduce annual lighting and equipment energy consumption by 5% or more.</p> <p>The curtailment program is an engagement effort with staff and volunteers to develop behavioral practices to turn off plug load equipment (computers, printers, microwaves, etc.) when spaces are unoccupied and invest in minor equipment to support these practices like power strips and timers. The implementation of the curtailment program should include training sessions to all staff and volunteers. These sessions will highlight reasons to save energy, provide background on energy use in the building, and offer best practices to reduce unnecessary energy use. A written energy management policy is recommended to formalize the commitment by all involved to conserve energy and implement the best practices.</p>																																
Potential Energy Savings	<table border="1"> <thead> <tr> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>6,208</td> <td>-</td> <td>\$ 735</td> <td>2.0</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>-</td> </tr> </tbody> </table>	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	6,208	-	\$ 735	2.0	\$ -	\$ -	\$ -	-
SAVINGS				PROJECT COST & ROI																													
Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																										
[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																										
6,208	-	\$ 735	2.0	\$ -	\$ -	\$ -	-																										

**ECM-02: Daylighting Controls***Install automatic daylighting controls where applicable.*

Existing Conditions	Skylights in the lobby and corridor give ample daylight and lighting in the area should be controlled to account for daylight.																																
ECM Details	<p>Consider automatic dimming controls to take advantage of daylight in the lobby and corridor and automatically reduce lighting levels when daylight is sufficient. Daylighting controls can be independent and deployed as necessary, or centrally-controlled and managed. Estimated energy savings from daylight dimming are around 25-30% per circuit controlled.</p> <p>For PECO rebate information, see: <a href="https://www.peco.com/ways-to-save/for-your-business/incentives">https://www.peco.com/ways-to-save/for-your-business/incentives</a></p>																																
Potential Energy Savings	<table border="1"> <thead> <tr> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>5,780</td> <td>-</td> <td>\$ 684</td> <td>1.9</td> <td>\$ 1,500</td> <td>\$ -</td> <td>\$ 578</td> <td>1.3</td> </tr> </tbody> </table>	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	5,780	-	\$ 684	1.9	\$ 1,500	\$ -	\$ 578	1.3
SAVINGS				PROJECT COST & ROI																													
Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																										
[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																										
5,780	-	\$ 684	1.9	\$ 1,500	\$ -	\$ 578	1.3																										

**ECM-03: ENERGY STAR Office and Receptacle Equipment***Select ENERGY STAR-certified office equipment and appliances when possible.*

ECM Details	Look for the ENERGY STAR label when replacing office equipment, televisions, and other appliances. ENERGY STAR-rated equipment uses about 25% less energy on average than conventional devices with little or no cost premium, and often include special energy saving features for standby and shut-down modes. This equipment can be purchased individually, as existing equipment reaches the end of its service life, or as a facility-wide effort through a bulk purchase.																																
Potential Energy Savings	<table border="1"> <thead> <tr> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>8,847</td> <td>-</td> <td>\$ 1,047</td> <td>2.9</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>-</td> </tr> </tbody> </table>	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	8,847	-	\$ 1,047	2.9	\$ -	\$ -	\$ -	-
SAVINGS				PROJECT COST & ROI																													
Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																										
[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																										
8,847	-	\$ 1,047	2.9	\$ -	\$ -	\$ -	-																										

## Heating, Ventilation, and Air Conditioning (HVAC)

The ECMs in this section include operational and light capital measures to be implemented as soon as possible, as well as larger capital measures to be included in future planning.

### ECM-04: Optimize BAS Settings

#### *Balance comfort and energy conservation with temperature setbacks.*

ECM Details	<p>There are certain “best practices” for HVAC control systems that can generally ensure occupant comfort while conserving energy. Some or all of the following recommendations may be applicable to this facility:</p> <ul style="list-style-type: none"> <li>• Schedules and setpoints: Occupancy, fan, and VAV schedules should generally follow the facility’s 8am-4pm M-F schedule, with special events programmed as necessary and with vigilance to avoid persistent schedule overrides.             <ul style="list-style-type: none"> <li>○ AHUs-1/5/8 appear to have weekly schedules in place, but PES was unable to review them. AHUs-2/3/4/6/7 have no schedule in place and should likely have weekly occupancy schedules implemented.</li> <li>○ Most VAVs and reheat coils appear to follow weekly schedules, but PES was unable to review them.</li> </ul> </li> <li>• Reduce VAV minimum airflow setpoints to about 10%. Most VAVs currently have minimum airflow setpoints of 50-60%, meaning these zones will continue cooling with 50-60% of design airflow even when the space is satisfied, requiring wasteful hot water reheat during the summer.</li> <li>• Use temperature and pressure reset control sequences whenever possible, automatically varying control setpoints as heating and cooling demands vary and allowing equipment to run as efficiently as possible when demands are not at peak.             <ul style="list-style-type: none"> <li>○ Temperature reset appears to be already implemented for the hot water system. The chilled water system was generating 40°F water during the site visit rather than 45°F as designed, which suggests an opportunity for reset control. If chilled water setpoints have been reset down for dehumidification, it is recommended to directly address the sources of humidity (often over-ventilation) rather than reducing chilled water temperatures. Both temperature and pressure reset may be applicable for variable-speed fans and pumps.</li> </ul> </li> <li>• Implement economizer and DCV sequences to take advantage of free cooling when weather conditions are favorable (e.g. outside air enthalpy lower than return air enthalpy) and reduce ventilation conditioning demands when spaces are lightly occupied.</li> <li>• Use optimal start/stop routines to reduce pre- and post-occupancy HVAC runtimes.</li> <li>• Periodically inspect all sensor outputs for accuracy, calibration, and communication performance. Many sensors were observed to be incorrect including CO2, water flow, airflow, damper position, relative humidity, etc.</li> </ul>
-------------	--

	<ul style="list-style-type: none"> <li>○ For example, AHU-1’s outside air temperature sensor (serving Gym) and AHU-8’s mixed air temperature sensor (serving Multipurpose Room 182) were reading 250°F which is clearly inaccurate and indicates sensor errors.</li> </ul>																																
Potential Energy Savings	<table border="1"> <thead> <tr> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>14,189</td> <td>122</td> <td>\$ 2,855</td> <td>11.7</td> <td>\$ -</td> <td>\$ -</td> <td>\$ -</td> <td>-</td> </tr> </tbody> </table>	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	14,189	122	\$ 2,855	11.7	\$ -	\$ -	\$ -	-
SAVINGS				PROJECT COST & ROI																													
Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																										
[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																										
14,189	122	\$ 2,855	11.7	\$ -	\$ -	\$ -	-																										

**ECM-05: HVAC Time-of-Replacement Strategy**

*Weigh the energy savings of electrification vs. the cost savings of high efficiency gas-fired systems.*

Existing Conditions	The existing boiler and chiller are 23 years old and approaching the end of their typical service lives, although good maintenance practices could likely extend their service by 5-10 years. Regardless, planning should begin for their eventual replacement, and whether to choose in-kind replacements with modern efficiencies or move to an all-electric heat pump system to maximize energy savings.																																											
ECM Details	<ul style="list-style-type: none"> <li>● Option 1: In-kind replacement             <ul style="list-style-type: none"> <li>○ Modern high-efficiency boilers and air-cooled chillers feature many energy-saving technologies that can provide a favorable premium payback compared to conventional boiler/chiller replacements. At this facility, an in-kind replacement is likely the most cost-effective solution.</li> </ul> </li> <li>● Option 2: Heat pumps             <ul style="list-style-type: none"> <li>○ Electric heat pumps can provide both heating and cooling at much higher efficiency than other equipment and typically reduce HVAC energy use by 30-40%, and the electrification of heating systems goes in hand with renewable energy strategies such as solar.</li> <li>○ The existing hydronic systems at this facility make the conversion to heat pumps more difficult, as the more common air-source heat pumps would require replacement of the AHU coils with refrigerant coils, and water-to-water heat pumps would still require a boiler/tower plant, geothermal borefield, or air-to-water heat pump for heat addition/rejection.</li> <li>○ At time-of-replacement, heat pump solutions should be thoroughly considered and vetted to maximize energy efficiency and eliminate on-site fossil-fuel consumption.</li> </ul> </li> </ul>																																											
Potential Energy Savings	<table border="1"> <thead> <tr> <th rowspan="3"></th> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>TOR: New Chiller/Boiler</td> <td>84,311</td> <td>325</td> <td>\$ 13,103</td> <td>46.2</td> <td>\$ 525,000</td> <td>\$ 87,500</td> <td>\$ 3,400</td> <td>&gt; 25</td> </tr> <tr> <td>TOR: Heat Pumps</td> <td>(97,595)</td> <td>2,327</td> <td>\$ 10,780</td> <td>104.6</td> <td>\$ 700,000</td> <td>\$ 262,500</td> <td>\$ 9,240</td> <td>&gt; 25</td> </tr> </tbody> </table>		SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	TOR: New Chiller/Boiler	84,311	325	\$ 13,103	46.2	\$ 525,000	\$ 87,500	\$ 3,400	> 25	TOR: Heat Pumps	(97,595)	2,327	\$ 10,780	104.6	\$ 700,000	\$ 262,500	\$ 9,240	> 25
	SAVINGS				PROJECT COST & ROI																																							
	Electricity		Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																																			
	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																																				
TOR: New Chiller/Boiler	84,311	325	\$ 13,103	46.2	\$ 525,000	\$ 87,500	\$ 3,400	> 25																																				
TOR: Heat Pumps	(97,595)	2,327	\$ 10,780	104.6	\$ 700,000	\$ 262,500	\$ 9,240	> 25																																				

## Energy Conservation Measure (ECM) Summary

The following table summarizes the ECMs described above, showing the potential energy and cost savings for each measure as well as roughly estimated project costs based on commercial estimating guides, retail pricing, and SSM's previous experience. The ECMs are presented as incremental measure savings, where the savings for each measure is based on the results from the previous measure to show the interactive effect of selecting multiple measures. Project cost estimates include the full cost of the measure, which can make the simple payback appear very long, although where applicable the payback considers only the premium cost of selecting high efficiency equipment over standard equipment.

Table 3: ECM summary

#	ENERGY CONSERVATION MEASURES (ECMs)	SAVINGS						PROJECT COST & ROI					
		Electricity	Natural Gas	Total Energy	Utility Cost	GHG Emissions	% Energy Savings	% Cost Savings	Est. Total Cost	Est. Premium	Est. Incentive	Premium Payback	Simple Payback
		[kWh/yr]	[MBTU/yr]	[MBtu/yr]	[\$/yr]	[tons/yr]	[%]	[%]	[\$]	[\$]	[\$]	[yrs]	[yrs]
-	Utility Data (2024-25)	433,636	2,634	4,113	\$ 76,609	294.0	-	-	\$ -	\$ -	\$ -	-	-
<b>LIGHTING &amp; INTERNAL LOADS</b>													
1	Lighting & Plug Load Curtailment	6,208	-	21	\$ 735	2.0	0.5%	1.0%	\$ -	\$ -	\$ -	-	-
2	Daylighting Controls	5,780	-	20	\$ 684	1.9	0.5%	0.9%	\$ 1,500	\$ -	\$ 578	-	1.3
3	ENERGY STAR Appliances	8,847	-	30	\$ 1,047	2.9	0.7%	1.4%	\$ -	\$ -	\$ -	-	-
	<b>Subtotal</b>	<b>20,834</b>	<b>-</b>	<b>71</b>	<b>\$ 2,466</b>	<b>6.7</b>	<b>1.7%</b>	<b>3.2%</b>	<b>\$ 1,500</b>	<b>\$ -</b>	<b>\$ 578</b>	<b>-</b>	<b>0.4</b>
<b>HVAC</b>													
4	BAS Best Practices	14,189	122	171	\$ 2,855	11.7	4.2%	3.7%	\$ -	\$ -	\$ -	-	-
5a	TOR: New Chiller/Boiler	84,311	325	613	\$ 13,103	46.2	15.0%	17.0%	\$ 525,000	\$ 87,500	\$ 3,400	6.4	> 25
5b	TOR: Heat Pumps	(97,595)	2,327	1,994	\$ 10,780	104.6	48.8%	14.0%	\$ 700,000	\$ 262,500	\$ 9,240	23.5	> 25
	<b>Subtotal (excl. ECM-05b)</b>	<b>98,500</b>	<b>448</b>	<b>784</b>	<b>\$ 15,958</b>	<b>58.0</b>	<b>19.2%</b>	<b>20.7%</b>	<b>\$ 525,000</b>	<b>\$ 87,500</b>	<b>FALSE</b>	<b>5.5</b>	<b>&gt; 25</b>
	<b>Grand Total</b>	<b>119,334</b>	<b>448</b>	<b>855</b>	<b>\$ 18,425</b>	<b>64.7</b>	<b>20.9%</b>	<b>23.9%</b>	<b>\$ 526,500</b>	<b>\$ 87,500</b>	<b>\$ 578</b>	<b>4.7</b>	<b>&gt; 25</b>

---

## Renewable Energy Opportunities

---

The energy conservation measures described above could reduce electricity consumption by about 23%. However, ECMs do not directly address electricity sourcing, reliant still on utility grid-produced power which in Pennsylvania is about 65% sourced from coal and natural gas, and about 3% from renewable energy sources such as wind, solar, and hydroelectric. This facility has the opportunity to produce over half the majority of electricity consumption on-site with renewable solar photovoltaic (PV) energy, while hedging variable future utility prices.

The building's roof is primarily a flat ballast roof of varying elevations with relatively little equipment and some skylights. The skylights were reported and observed to have some issues with leaking and the roof is of unknown age—if a roof replacement is required, consider removing skylights and cluster equipment together in the northern portion of the roof to maximize available solar area, use a light or white roof covering, and increase insulation to meet or exceed current code. Installing a rooftop solar array in conjunction with, following a roof replacement is recommended to maximize the life of both systems and ensure continuity of the roof warranty.

The flat roof would likely use a ballasted (non-penetrating) racking system. A structural analysis of the roof is recommended to ensure viability, though only about 5 pounds per square foot is required by the entire system. Conceptual layouts of rooftop PV systems are shown in Figure 8 given the existing equipment and in Figure 9 should major equipment and skylights be modified.

Alternatively, the parking lot has areas well-oriented for carport-type elevated structures. These maximize the use of the area and provide visibility to the commitment Ambler is making to renewable energy. Carport potential is conceptualized in Figure 10.

SSM prepared a high-level solar analysis for the feasible areas using HelioScope modeling. Table 4 summarizes the expected generation and its impact to the building's energy consumption, based on the existing use as well as the calculated ECM savings, and projected costs and savings.

Included in the conservative savings associated with electricity use offset by the array's production in Table 6 are: a one-time PECO rebate of \$0.10/kWh produced in the first year, currently available through at least April 2026; a 30% Federal Investment Tax Credit (ITC), which is currently available as a direct/elective pay to non-tax-paying entities, but may be subject to changing federal policies; and estimated annual Solar Renewable Energy Credit (SREC) revenue which is market-variable but currently estimated at about \$0.03/kWh for the life of the system.

For more information:

PECO Solar Incentive – <https://www.peco.com/smart-energy/my-green-power-connection/solar-for-home-business/solar-incentives-credits>

Investment Tax Credit – <https://www.energy.gov/eere/solar/articles/federal-solar-tax-credit-resources> & <https://seia.org/solar-investment-tax-credit/>

Solar Renewable Energy Credits – <https://extension.psu.edu/solar-energy-credits-in-pennsylvania>

Table 4: Solar photovoltaic opportunities

	Solar PV	Capacity [kW DC]	Production [kWh/yr]	% Existing Electric Use	% Post-ECM Electric Use	Utility Cost Savings [\$/yr]	% Cost Savings	GHG Savings [ton/yr]	% GHG Savings
1a	Roof - Chiller	96	126,100	29.1%	25% - 40%	\$ 11,196	14.6%	41	13.8%
1b	Roof - Heat Pumps	131	174,500	40.2%	35% - 56%	\$ 15,493	20.2%	56	19.2%
2	Carports	113	140,800	32.5%	28% - 45%	\$ 12,501	16.3%	45	15.5%
<b>Total - Solar PV (incl. PV-1a + 2)</b>		<b>208</b>	<b>266,900</b>	<b>61.5%</b>	<b>54% - 85%</b>	<b>\$ 23,697</b>	<b>30.9%</b>	<b>86</b>	<b>29.3%</b>

	Solar PV	Est. Total Cost [\$]	Est. Incentive (30% ITC) [\$]	Est. Incentive (PECO) [\$]	Est. Annual SREC Revenue [\$/yr]	Simple Payback [yrs]
1a	Roof - Chiller	\$ 200,000	\$ 60,000	\$ 6,000	\$ 3,783	9.3
1b	Roof - Heat Pumps	\$ 270,000	\$ 81,000	\$ 8,100	\$ 5,235	9.1
2	Carports	\$ 340,000	\$ 102,000	\$ 10,200	\$ 4,224	14.2
<b>Total - Solar PV (incl. PV-1a + 2)</b>		<b>\$ 540,000</b>	<b>\$ 162,000</b>	<b>\$ 16,200</b>	<b>\$ 8,007</b>	<b>11.9</b>



Figure 8: (1a) Conceptual rooftop PV solar panel layout – with existing equipment



Figure 9: (1b) Conceptual rooftop PV solar panel layout – maximized considering equipment changes & consolidation



Figure 10: (2) Conceptual carport PV solar panel layout

The Ambler Borough Hall has a 208/120V, 3-phase, 4-wire electrical service. The building is fed from a 300 kVA transformer and is backed up by a 250kW natural gas generator. The 1200A main distribution panelboard currently has nine 3-pole circuit breakers feeding equipment and one 3-pole spare circuit breaker, with the ability to add two new circuit breakers up to 250A.

Since the building has a full house generator the point of interconnection will need to be ahead of the generator; the main distribution panelboard would not be an option for the point of interconnection. The best option would be to perform a tap in the transition section between the 300kVA transformer and the 1200A transfer switch.

The solar array consists of a 120kW rooftop and a 105kW carport for a total of 225kW AC. The total power for this array would be approximately 625A, requiring a new 800A fused disconnect and a new 800A panelboard to feed the new inverters. The utility will require a lockable disconnect switch with a viewing window to be located on the exterior of the building that they can access. The panelboard would feed the 5-10 inverters required for an array of this size.

Appendix A: Technical References

Table 5. Utility data

		Electricity					Natural Gas					CO2			Totals and Metrics			
Start Date	End Date	Days in Billing Period	Total Usage [kWh]	% Annual Usage	Total Cost [\$]	Electric Rate [\$/kWh]	Total Usage [ccf]	% Annual Usage	Total Cost [\$]	Gas Rate [\$/ccf]	Electrical CO2 Emissions [lbs]	Gas CO2 Emissions [lbs]	Total CO2 Emissions [lbs]	Total Energy Consumed [kBtu]	Total Cost of Energy [\$]	Energy Use Intensity [kBtu/sf]	Cost Intensity [\$/sf]	
4/1/2023	5/1/2023	30	27,445	7%	\$ 3,231	\$ 0.118	1,347	6%	\$ 1,520	\$ 1.128	17,718	16,169	33,888	231,868	\$ 4,751	6.6	\$ 0.14	
5/1/2023	6/1/2023	31	36,571	9%	\$ 3,778	\$ 0.103	1,523	6%	\$ 1,611	\$ 1.058	23,610	18,283	41,894	281,078	\$ 5,389	8.0	\$ 0.15	
6/1/2023	7/1/2023	30	43,295	11%	\$ 4,773	\$ 0.110	1,289	5%	\$ 1,454	\$ 1.128	27,951	15,465	43,416	279,927	\$ 6,227	8.0	\$ 0.18	
7/1/2023	8/1/2023	31	61,306	15%	\$ 6,138	\$ 0.100	1,049	4%	\$ 1,054	\$ 1.005	39,579	12,584	52,163	316,755	\$ 7,191	9.1	\$ 0.21	
8/1/2023	9/1/2023	31	53,416	13%	\$ 5,348	\$ 0.100	1,064	4%	\$ 1,037	\$ 0.975	34,485	12,770	47,255	291,421	\$ 6,386	8.3	\$ 0.18	
9/1/2023	10/1/2023	30	46,041	11%	\$ 5,298	\$ 0.115	1,251	5%	\$ 1,392	\$ 1.112	29,724	15,020	44,744	285,490	\$ 6,689	8.2	\$ 0.19	
10/1/2023	11/1/2023	31	34,263	8%	\$ 3,760	\$ 0.110	1,898	8%	\$ 1,807	\$ 0.952	22,120	22,783	44,903	311,670	\$ 5,567	8.9	\$ 0.16	
11/1/2023	12/1/2023	30	22,191	5%	\$ 2,713	\$ 0.122	2,655	11%	\$ 2,737	\$ 1.031	14,327	31,869	46,196	348,154	\$ 5,451	9.9	\$ 0.16	
12/1/2023	1/1/2024	31	23,012	6%	\$ 2,619	\$ 0.114	3,277	14%	\$ 3,030	\$ 0.924	14,857	39,336	54,192	414,785	\$ 5,649	11.9	\$ 0.16	
1/1/2024	2/1/2024	31	21,793	5%	\$ 2,152	\$ 0.099	3,626	15%	\$ 2,810	\$ 0.775	14,070	43,514	57,584	446,345	\$ 4,962	12.8	\$ 0.14	
2/1/2024	3/1/2024	29	18,512	5%	\$ 2,466	\$ 0.133	2,601	11%	\$ 1,310	\$ 0.504	11,951	31,214	43,165	330,000	\$ 3,776	9.4	\$ 0.11	
3/1/2024	4/1/2024	31	18,981	5%	\$ 2,134	\$ 0.112	2,082	9%	\$ 2,086	\$ 1.002	12,254	24,983	37,237	278,337	\$ 4,220	8.0	\$ 0.12	
<b>TOTAL</b>		<b>366</b>	<b>406,826</b>	<b>100%</b>	<b>\$ 44,411</b>	<b>\$ 0.109</b>	<b>23,662</b>	<b>100%</b>	<b>\$ 21,848</b>	<b>\$ 0.923</b>	<b>262,647</b>	<b>283,991</b>	<b>546,637</b>	<b>3,815,830</b>	<b>\$ 66,259</b>	<b>109.0</b>	<b>\$ 1.89</b>	

		Electricity					Natural Gas					CO2			Totals and Metrics			
Start Date	End Date	Days in Billing Period	Total Usage [kWh]	% Annual Usage	Total Cost [\$]	Electric Rate [\$/kWh]	Total Usage [ccf]	% Annual Usage	Total Cost [\$]	Gas Rate [\$/ccf]	Electrical CO2 Emissions [lbs]	Gas CO2 Emissions [lbs]	Total CO2 Emissions [lbs]	Total Energy Consumed [kBtu]	Total Cost of Energy [\$]	Energy Use Intensity [kBtu/sf]	Cost Intensity [\$/sf]	
4/1/2024	5/1/2024	30	21,466	5%	\$ 3,423	\$ 0.159	1,887	7%	\$ 1,427	\$ 0.756	13,859	22,647	36,506	266,845	\$ 4,849	7.6	\$ 0.14	
5/1/2024	6/1/2024	31	41,349	10%	\$ 5,451	\$ 0.132	1,634	6%	\$ 1,414	\$ 0.866	26,695	19,606	46,301	308,687	\$ 6,865	8.8	\$ 0.20	
6/1/2024	7/1/2024	30	52,207	12%	\$ 6,407	\$ 0.123	1,065	4%	\$ 1,041	\$ 0.977	33,705	12,782	46,487	287,401	\$ 7,447	8.2	\$ 0.21	
7/1/2024	8/1/2024	31	62,236	14%	\$ 6,632	\$ 0.107	930	4%	\$ 811	\$ 0.872	40,180	11,163	51,342	307,777	\$ 7,443	8.8	\$ 0.21	
8/1/2024	9/1/2024	31	55,480	13%	\$ 5,911	\$ 0.107	1,231	5%	\$ 1,192	\$ 0.969	35,818	14,773	50,590	315,583	\$ 7,103	9.0	\$ 0.20	
9/1/2024	10/1/2024	30	46,755	11%	\$ 5,021	\$ 0.107	1,537	6%	\$ 1,456	\$ 0.947	30,185	18,444	48,629	317,200	\$ 6,477	9.1	\$ 0.19	
10/1/2024	11/1/2024	31	35,719	8%	\$ 4,090	\$ 0.115	1,862	7%	\$ 1,858	\$ 0.998	23,060	22,350	45,411	312,940	\$ 5,949	8.9	\$ 0.17	
11/1/2024	12/1/2024	30	26,713	6%	\$ 3,285	\$ 0.123	2,607	10%	\$ 2,604	\$ 0.999	17,246	31,288	48,534	358,615	\$ 5,889	10.2	\$ 0.17	
12/1/2024	1/1/2025	31	21,409	5%	\$ 2,666	\$ 0.125	3,569	14%	\$ 3,637	\$ 1.019	13,822	42,834	56,656	439,221	\$ 6,303	12.5	\$ 0.18	
1/1/2025	2/1/2025	31	24,306	6%	\$ 2,783	\$ 0.115	3,869	15%	\$ 3,829	\$ 0.990	15,692	46,431	62,124	479,860	\$ 6,612	13.7	\$ 0.19	
2/1/2025	3/1/2025	28	22,407	5%	\$ 2,790	\$ 0.125	3,095	12%	\$ 3,477	\$ 1.123	14,466	37,148	51,614	394,015	\$ 6,267	11.3	\$ 0.18	
3/1/2025	4/1/2025	31	23,588	5%	\$ 2,876	\$ 0.122	2,387	9%	\$ 2,528	\$ 1.059	15,229	28,643	43,871	325,339	\$ 5,404	9.3	\$ 0.15	
<b>TOTAL</b>		<b>365</b>	<b>433,636</b>	<b>100%</b>	<b>\$ 51,335</b>	<b>\$ 0.118</b>	<b>25,672</b>	<b>100%</b>	<b>\$ 25,274</b>	<b>\$ 0.985</b>	<b>279,955</b>	<b>308,109</b>	<b>588,064</b>	<b>4,113,484</b>	<b>\$ 76,609</b>	<b>117.5</b>	<b>\$ 2.19</b>	





Spotts, Stevens and McCoy

@ssmgroup.com

READING

1047 North Park Road, PO Box 6307 – Reading PA 19610-0307

P: 610-621-2000 F: 610-621-2001

LEHIGH VALLEY

Roma Corporate Center

1605 North Cedar Crest Boulevard, Suite 509 – Allentown PA 18104

P: 610-849-9700 F: 610-621-2001

LANCASTER

701 Creekside Lane – Lititz PA 17543

P: 717-568-2678 F: 610-621-2001

WEST CHESTER

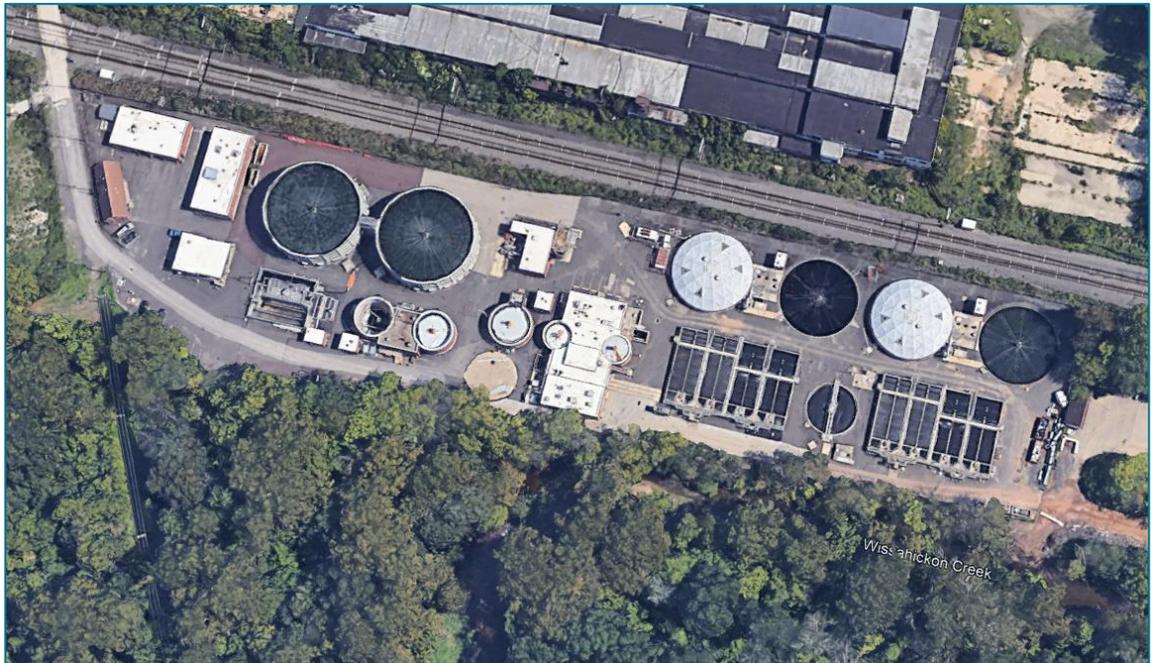
101 East Evans Street, Suite 2 – West Chester PA 19380

P: 610-621-2000 F: 610-621-2001



# ASHRAE Level II Energy Audit

Ambler WWTP  
Ambler, Pennsylvania 19002



## ASHRAE Level II Energy Audit

Prepared for: Borough of Ambler  
WWTP  
505 Church Street  
Ambler, Pennsylvania 19002

November 18, 2025

Prepared by: Spotts, Stevens and McCoy

---

Ben Pressman, PE

© 2025 Spotts, Stevens and McCoy

SSM File 110637.0001

---

## Table of Contents

---

Table of Contents .....	3
Executive Summary .....	4
Introduction .....	5
Building Description .....	5
Utility Analysis.....	6
Electricity .....	7
Natural Gas .....	7
CO <sub>2</sub> Emissions .....	8
Energy Conservation Measures (ECMs) .....	9
Lighting and Internal Loads .....	9
HVAC & Plumbing.....	10
Process Equipment.....	11
Energy Conservation Measure (ECM) Summary.....	13
Renewable Energy Opportunities.....	14
Appendix A: Technical References.....	17

---

## Executive Summary

---

The Borough of Ambler contracted with Spotts, Stevens & McCoy (SSM) under the Delaware Valley Regional Planning Commission (DVRPC) to conduct an ASHRAE Level II energy audit of the Ambler Wastewater Treatment Plant (WWTP) at 505 Church Street. This audit, required for eligibility under the PA DEP MORE Grant Program, aims to identify opportunities for improving energy performance. SSM performed an onsite survey of the existing buildings and treatment systems and operations on March 5, 2025, analyzed historical utility data, developed calculations to estimate the energy used by each system, and generated recommendations to improve energy performance through operational and capital measures.

For the most recent available 12 months of utility data (April 2024 through March 2025), total energy costs for the facility were about \$374,000. Electricity accounted for 96% of energy costs and 91% of total energy use, with natural gas accounting for the remaining 4% of energy costs and 9% of total energy use. ENERGY STAR's Target Finder tool indicates the WWTP has an ENERGY STAR score of 16 (out of 100), substantially lower than similar facilities and suggesting room to improve energy performance.

While the plant appeared to be performing well during SSM's site visit, several opportunities to reduce the energy footprint of the facility and strategically plan for equipment replacement are outlined in these Energy Conservation Measures (ECMs) and renewable energy opportunities:

- Lighting and Internal Loads
  - Automatic lighting controls where applicable
  - Convert remaining non-LED lighting to LED
- HVAC & Plumbing
  - Upgrade HVAC Controls
  - Time-of-replacement strategies for major HVAC equipment and water heaters
- Process Equipment
  - Replace old motors and VFDs
  - Optimize blower controls
- Renewable Energy
  - Rooftop and canopy solar photovoltaics

In total, the ECMs listed above (including the heat pump time-of-replacement plan) could reduce utility expenses by over 17%—up to 70% including solar—avoid about 197 tons of greenhouse gas emissions, improve comfort and productivity, and enhance the reliability and maintenance of the mechanical and process equipment.

Table 1 summarizes these recommendations with the projected savings and estimated implementation cost for each measure. Project cost estimates include the full cost of the measure, although where applicable the payback considers the premium cost of selecting high efficiency equipment over standard equipment.

Table 1: ECM summary

#	ENERGY CONSERVATION MEASURES (ECMs)	SAVINGS						PROJECT COST & ROI					
		Electricity	Natural Gas	Total Energy	Utility Cost	GHG Emissions	% Energy Savings	% Cost Savings	Est. Total Cost	Est. Premium	Est. Incentive	Premium Payback	Simple Payback
		[kWh/yr]	[MBTU/yr]	[MBtu/yr]	[\$/yr]	[tons/yr]	[%]	[%]	[\$]	[\$]	[\$]	[yrs]	[yrs]
-	Utility Data (2024-25)	3,992,245	1,329	14,951	\$ 374,247	1,366	-	-	\$ -	\$ -	\$ -	-	-
<b>LIGHTING &amp; INTERNAL LOADS</b>													
1	Automatic Lighting Controls	15,112	-	52	\$ 1,359	5	0.3%	0.4%	\$ 2,400	\$ -	\$ 1,511	-	0.7
2	Remaining LED Lighting	26,236	-	90	\$ 2,359	8	0.6%	0.6%	\$ 4,800	\$ -	\$ 600	-	1.8
	<b>Subtotal</b>	<b>41,347</b>	<b>-</b>	<b>141</b>	<b>\$ 3,718</b>	<b>13</b>	<b>0.9%</b>	<b>1.0%</b>	<b>\$ 7,200</b>	<b>\$ -</b>	<b>\$ 2,111</b>	<b>-</b>	<b>1.4</b>
<b>HVAC &amp; Plumbing</b>													
3	Upgrade HVAC Controls	7,252	66	90	\$ 1,406	6	0.6%	0.4%	\$ 1,000	\$ -	\$ -	-	0.7
4a	HVAC TOR: In-Kind Replacements	7,342	197	222	\$ 2,921	14	1.5%	0.8%	\$ 24,800	\$ 6,000	\$ 180	2.0	8.4
4b	HVAC TOR: Heat Pumps	(87,960)	1,249	949	\$ 6,406	45	6.3%	1.7%	\$ 25,900	\$ 7,100	\$ 338	1.1	4.0
5	DHW TOR: Hybrid Heat Pump	4,120	-	14	\$ 370	1	0.1%	0.1%	\$ 2,000	\$ 500	\$ -	1.3	5.4
	<b>Subtotal (excl. ECM-04a)</b>	<b>(76,589)</b>	<b>1,314</b>	<b>1,053</b>	<b>\$ 8,182</b>	<b>52</b>	<b>7.0%</b>	<b>2.2%</b>	<b>\$ 28,900</b>	<b>\$ 7,600</b>	<b>\$ 338</b>	<b>0.9</b>	<b>3.5</b>
<b>Process Equipment</b>													
6	Replace Old Motors & VFDs	181,332	-	619	\$ 16,307	59	4.1%	4.3%	\$ -	\$ -	TBD	-	-
7	Optimize Blower Controls	226,665	-	773	\$ 20,383	73	5.2%	5.4%	\$ 90,000	\$ -	\$ 11,600	-	3.8
	<b>Subtotal</b>	<b>407,997</b>	<b>-</b>	<b>1,392</b>	<b>\$ 36,690</b>	<b>132</b>	<b>9.3%</b>	<b>9.8%</b>	<b>\$ 90,000</b>	<b>\$ -</b>	<b>\$ 11,600</b>	<b>-</b>	<b>2.1</b>
	<b>Total - ECMs</b>	<b>372,756</b>	<b>1,314</b>	<b>2,586</b>	<b>\$ 48,590</b>	<b>197</b>	<b>17.2%</b>	<b>12.9%</b>	<b>\$ 126,100</b>	<b>\$ 7,600</b>	<b>\$ 14,049</b>	<b>-</b>	<b>2.3</b>
<b>Renewable Energy - Solar</b>													
1	Roofs	410.5	-	410.5	8,114	39	2.7%	2.2%	\$ 220,000	\$ -	\$ 72,600	-	13.1
2	Clarifiers	1,745.2	-	1,745.2	34,498	165	11.7%	9.2%	\$ 1,080,000	\$ -	\$ 356,400	-	15.2
	<b>Total - Solar PV</b>	<b>2,156</b>	<b>-</b>	<b>2,156</b>	<b>\$ 42,612</b>	<b>204</b>	<b>14.4%</b>	<b>11.4%</b>	<b>\$1,300,000</b>	<b>\$ -</b>	<b>\$ 429,000</b>	<b>-</b>	<b>20.4</b>

## Introduction

On behalf of Ambler Borough and DVRPC, Spotts, Stevens and McCoy (SSM) performed an energy assessment for the WWTP in Ambler, PA on March 5, 2025. SSM surveyed all energy-consuming systems at the site, including both building systems and process equipment, with support from the plant management staff. The objective of the energy assessment was to identify operational, behavioral, and capital Energy Conservation Measures (ECMs) to reduce energy use, operating costs, and environmental impacts from plant operations.

## Building Description

Per the Borough's website: "The 6.5 MGD (million gallons per day) Borough of Ambler Wastewater Treatment Plant uses trickling filters to treat wastewater from residents in the Borough of Ambler and the Townships of Upper Dublin, Lower Gwynedd, Whitmarsh, and Whitpain. The original plant was designed in 1960 for an average daily flow of 1.5 MGD, then expanded to 3.25 MGD in 1968. An upgrade and expansion for an average daily flow of 6.5 MGD was constructed in the early 1980s. Final treated effluent is discharged to the Wissahickon Creek.

Numerous process improvements have been constructed over the past 30 years, including additional pipes, pumps and valves to treat more wastewater from high flows during storm events as well as upgrades to reduce the quantity of nutrients and chemicals discharged to the creek. Preliminary treatment to remove grit and screenings (rags, flushable wipes, etc.) became operational around 1995. These units help prevent clogging of pumps and pipes. Gas chlorine was used to disinfect the effluent, with sulfur dioxide added to reduce the chlorine discharged to the creek. In 1999, these two chemicals were replaced with an ultra-violet (UV) light disinfection system. In 2000, forced air ventilation was installed at the trickling filters to improve treatment

performance and to reduce odors. In 2002, Dissolved Air Flotation was installed for final clarification and to remove phosphorus from the wastewater.”

The envelopes of the various buildings on-site (roof, walls, doors/windows) are generally in fair condition, although the office roof has reached end-of-life. When replacement occurs, replace wet or damaged insulation and increase insulation levels to meet or exceed the current energy code.

Lighting throughout most of the plant is LED, although fluorescent fixtures remain in the maintenance garage and some HID fixtures remain in the pump stations and dry well. Most spaces have manual lighting controls.

HVAC systems include a gas/DX split system and electric baseboards in the office, a packaged rooftop unit serving the personnel building, a condensing gas-fired hot water boiler serving unit heaters in most of the process buildings, various small electric unit heaters, and a gas-fired makeup air unit in building PS2. The office units are from 1988 and have far exceeded their typical 15-year service life. Electric storage water heaters serve the office, personnel building, and other light uses around the plant, with the personnel unit reaching the end of its typical 10-year service life.

## Utility Analysis

Table 2 shows electricity and natural gas consumption at the Ambler WWTP over the most recent 24 months of data (April 2023 through March 2025). For the most recent 12 months, the facility spent about \$374,000 on energy utilities, with electricity accounting for 96% of energy costs and 91% of the total energy use, with natural gas accounting for the remaining 4% of energy costs and 9% of total energy use.

Table 2: Annual utility summary

Start Date	End Date	Electricity				Natural Gas				Total Energy				
		[kWh]	[\$]	[\$/kWh]	[tons CO2]	[MBtu]	[\$]	[\$/MBtu]	[tons CO2]	[MBtu]	[\$]	kBtu/sf	\$/sf	[tons CO2]
4/1/2023	4/1/2024	3,924,738	\$ 382,848	\$ 0.098	1,267	1,328	\$ 12,395	\$ 9.33	78	14,719	\$ 395,243	762.7	\$ 20.48	1,345
4/1/2024	4/1/2025	3,992,245	\$ 359,011	\$ 0.090	1,289	1,329	\$ 15,236	\$ 11.46	78	14,951	\$ 374,247	774.6	\$ 19.39	1,366
AVERAGE		3,958,492	\$ 370,929	\$ 0.094	1,278	1,329	\$ 13,816	\$ 10.40	78	14,835	\$ 384,745	768.6	\$ 19.93	1,356

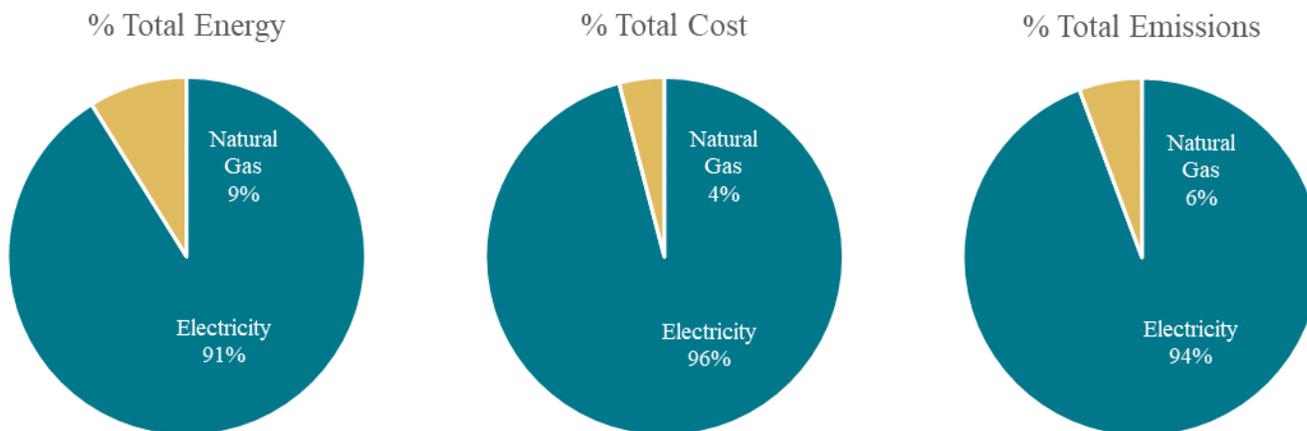


Figure 1: Percent of total energy [MBtu] (left), cost [\$] (middle), and emissions [tons CO2e] (right)

## Electricity

Electricity usage at the WWTP shows an expected high base-load of about 300,000 kWh/month due to process equipment. This increases somewhat during the winter and spring, likely corresponding to stormwater flows.

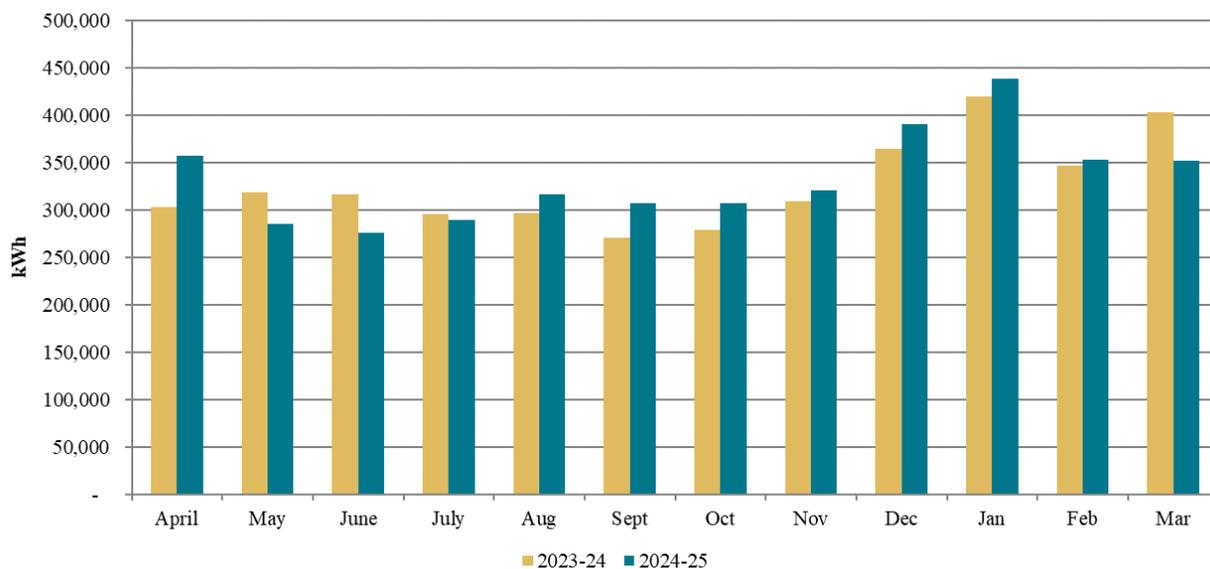


Figure 2: Monthly electricity consumption

## Natural Gas

Natural gas is used only for space heat since the plant converted from anaerobic to aerobic digestion, and the monthly trend is typical of buildings with gas heat, showing a substantial peak in the winter and nearly zero usage during the summer.

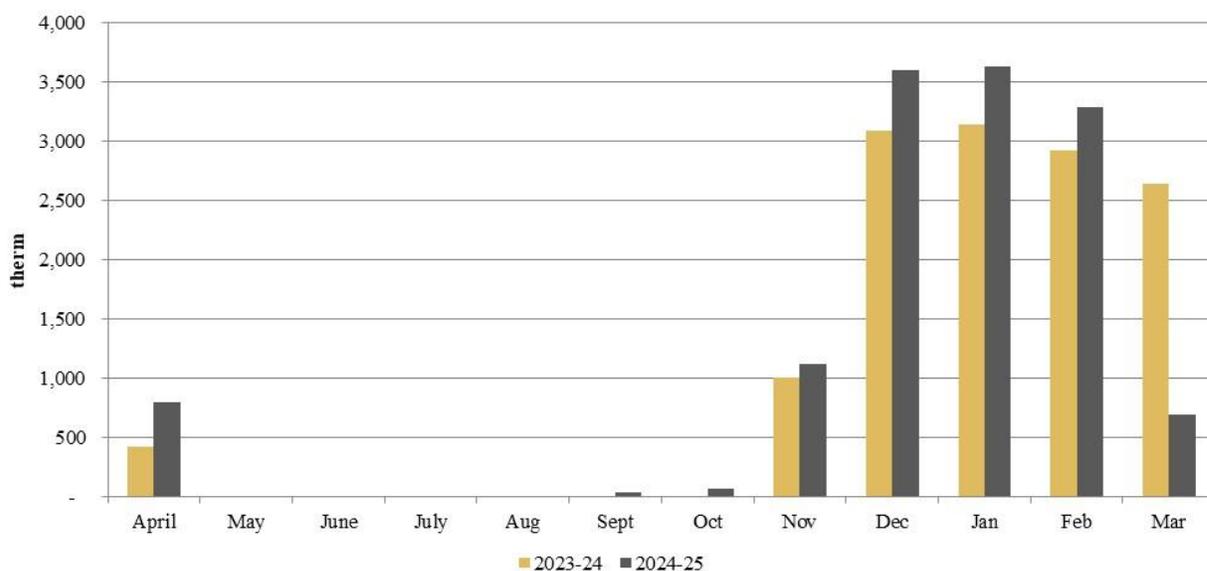


Figure 3: Monthly natural gas consumption

## CO<sub>2</sub> Emissions

Electricity consumed on site releases carbon dioxide at the power plant, along with other pollutants and greenhouse gases such as nitrous oxide, sulfur oxides, mercury, and lead. Natural gas also releases carbon dioxide along with other pollutants, nearly all of which are emitted on-site. Any reduction in energy consumption will reduce these pollutants, lower the carbon footprint from building operations, and conserve natural resources.

Tracking CO<sub>2</sub> emissions and other air pollutants can help the facility assess its carbon footprint and promote environmental stewardship among personnel. Annual energy consumption at Ambler WWTP produces on average approximately 1,356 tons of CO<sub>2</sub>. This is the annual emissions equivalent of about 287 passenger cars or the amount of carbon sequestered annually by 1,234 acres of forest (www.epa.gov).



Figure 4: Acres of forest required to offset annual plant emissions

## Energy Conservation Measures (ECMs)

The following section describes SSM's recommended measures for improving energy performance and operational efficiency. Measures are presented by category as applicable (e.g. building envelope, lighting and internal loads, HVAC, plumbing, process) and in rough order of priority, with estimated total project costs, premium costs where applicable, and simple payback period. Premium costs are calculated as the difference between the recommended high efficiency measure and a code-compliant baseline alternative, for example ENERGY STAR-rated HVAC equipment versus standard efficiency units.

### Lighting and Internal Loads

#### ECM-01: Automatic Lighting Controls

*Install automatic lighting controls where applicable.*

Existing Conditions	Most interior lighting is controlled manually throughout the plant. This inevitably leads to lights being left on when spaces are unoccupied, especially in areas where older HID lighting remains, as these fixtures can have very long strike and re-strike intervals.							
ECM Details	<p>In offices, personnel areas, and other above-ground facilities, automatic vacancy sensors or timers should be implemented to prevent lights being left on. Estimated energy savings from automatic lighting controls are typically about 25%.</p> <p>In confined spaces and below-grade areas, safety must take priority and lighting controls cannot cause personnel to be left in the dark. A behavioral energy management policy of turning lights off when leaving, with buy-in from personnel, is crucial.</p>							
Potential Energy Savings	SAVINGS				PROJECT COST & ROI			
	Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback
	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]
	15,112	-	\$ 1,359	4.9	\$ 2,400	\$ -	\$ 1,511	0.7

#### ECM-02: Remaining LED Lighting

*Complete the conversion to LED lighting throughout the plant.*

Existing Conditions	Most lighting has been replaced with energy-efficient LED lighting. An estimated 25% of lighting fixtures remain to be converted from fluorescent or HID to LED.							
ECM Details	LED technology is the current standard for lighting efficiency and can typically reduce lighting energy consumption by 50% or more versus older technologies—such as T8 and T12 fluorescents, while more than doubling service life, leading to additional savings through reduced maintenance and replacement costs.							

	PES recommends selecting LED products with integrated motion sensors that are qualified by the Design Lights Consortium or ENERGY STAR to ensure high quality and eligibility for utility rebates.							
Potential Energy Savings	SAVINGS				PROJECT COST & ROI			
	Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback
	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]
	26,236	-	\$ 2,359	8.5	\$ 4,800	\$ -	\$ 600	1.8

## HVAC & Plumbing

### ECM-03: Upgrade HVAC Controls

**Replace analog with programmable thermostats where applicable.**

ECM Details	<p>Replace any remaining analog thermostats with digital programmable thermostats, and program them to set back heating and cooling temperatures by 5°F or more during periods of light occupancy, similar to the existing programmable thermostats serving the office and personnel building.</p> <p>Unit heaters serving the process buildings should have accessible wall-mounted thermostats rather than simply the unit-integrated controls which are typically out of reach.</p> <p>All thermostats should be checked periodically (e.g. quarterly) to ensure temperature setpoints are appropriate and programming has not been overridden.</p>							
Potential Energy Savings	SAVINGS				PROJECT COST & ROI			
	Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback
	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]
	7,252	66	\$ 1,406	6.2	\$ 1,000	\$ -	\$ -	0.7

### ECM-04: HVAC Time-of-Replacement Strategy

**Replace aging HVAC systems with high efficiency heat pumps.**

Existing Conditions	The gas/DX split systems serving the office are more than 20 years past their expected service lives and should be replaced.							
ECM Details	<ul style="list-style-type: none"> <li>• Option 1: In-kind replacement <ul style="list-style-type: none"> <li>○ Modern ENERGY STAR-rated high-efficiency furnaces and condensing units feature many energy-saving technologies that can provide a favorable premium payback compared to conventional in-kind replacements.</li> </ul> </li> </ul>							

	<ul style="list-style-type: none"> <li>Option 2: Heat pumps <ul style="list-style-type: none"> <li>At this facility, however, an air-cooled heat pump will provide substantially greater energy savings for similar or even potentially lower capital cost. Electric heat pumps can provide both cooling and heating at much higher efficiency than combustion equipment and typically reduce HVAC energy use by 30-40%. Additionally, the electrification of heating systems goes in-hand with renewable energy strategies such as solar.</li> </ul> </li> </ul>																																														
Potential Energy Savings	<table border="1"> <thead> <tr> <th rowspan="3">#</th> <th rowspan="3">ENERGY CONSERVATION MEASURES (ECMs)</th> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>4a</td> <td>HVAC TOR: In-Kind Replacements</td> <td>7,342</td> <td>197</td> <td>\$ 2,921</td> <td>13.9</td> <td>\$ 24,800</td> <td>\$ 6,000</td> <td>\$ 180</td> <td>8.4</td> </tr> <tr> <td>4b</td> <td>HVAC TOR: Heat Pumps</td> <td>(87,960)</td> <td>1,249</td> <td>\$ 6,406</td> <td>44.6</td> <td>\$ 25,900</td> <td>\$ 7,100</td> <td>\$ 338</td> <td>4.0</td> </tr> </tbody> </table>	#	ENERGY CONSERVATION MEASURES (ECMs)	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	4a	HVAC TOR: In-Kind Replacements	7,342	197	\$ 2,921	13.9	\$ 24,800	\$ 6,000	\$ 180	8.4	4b	HVAC TOR: Heat Pumps	(87,960)	1,249	\$ 6,406	44.6	\$ 25,900	\$ 7,100	\$ 338	4.0
#	ENERGY CONSERVATION MEASURES (ECMs)			SAVINGS				PROJECT COST & ROI																																							
				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																																				
		[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																																						
4a	HVAC TOR: In-Kind Replacements	7,342	197	\$ 2,921	13.9	\$ 24,800	\$ 6,000	\$ 180	8.4																																						
4b	HVAC TOR: Heat Pumps	(87,960)	1,249	\$ 6,406	44.6	\$ 25,900	\$ 7,100	\$ 338	4.0																																						

### ECM-05: Plumbing Time-of-Replacement Strategy

*Replace aging electric water heaters with hybrid heat pump units.*

Existing Conditions	The six-gallon water heater in the office building is relatively new and should have at least 10 years of service life remaining. The 50-gallon water heater in the personnel building is 14 years old and has exceeded its expected service life.																																
ECM Details	At time-of-replacement, select a hybrid heat pump water heater to replace the 50-gallon unit in the personnel building. The “hybrid” designation means the water heater has both an electric resistance heating coil for periods of high demand as well as a small integrated heat pump to offset standby losses at more than three times the efficiency of the electric coil. Select an ENERGY STAR-rated unit to ensure a high standard of quality and energy performance.																																
Potential Energy Savings	<table border="1"> <thead> <tr> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>4,120</td> <td>-</td> <td>\$ 370</td> <td>1.3</td> <td>\$ 2,000</td> <td>\$ 500</td> <td>\$ -</td> <td>5.4</td> </tr> </tbody> </table>	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	4,120	-	\$ 370	1.3	\$ 2,000	\$ 500	\$ -	5.4
SAVINGS				PROJECT COST & ROI																													
Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																										
[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																										
4,120	-	\$ 370	1.3	\$ 2,000	\$ 500	\$ -	5.4																										

## Process Equipment

### ECM-06: Replace Old Motors and VFDs

*Select premium efficiency motors and update aging VFDs and associated controls.*

ECM Details	While most of the largest motors already have Variable Frequency Drives (VFDs), which allow motors to vary their speed in response to changing conditions, many of the drives are reaching end-of-life and are experiencing maintenance and performance problems. These should be updated with new VFDs, sensors, and controls as necessary.
-------------	--

	Similarly, certain motors are original to the plant and operate at much lower efficiency than modern motors. In particular, the clarifier scraper motors and sludge holding tank mixers date to the 1960s and should be updated with new premium-efficiency motors.																																
Potential Energy Savings	<table border="1"> <thead> <tr> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>181,332</td> <td>-</td> <td>\$ 16,307</td> <td>58.5</td> <td>\$ -</td> <td>\$ -</td> <td>TBD</td> <td>-</td> </tr> </tbody> </table>	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	181,332	-	\$ 16,307	58.5	\$ -	\$ -	TBD	-
SAVINGS				PROJECT COST & ROI																													
Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																										
[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																										
181,332	-	\$ 16,307	58.5	\$ -	\$ -	TBD	-																										

### ECM-07: Optimize Blower Controls

*Blowers are currently controlled manually and often over-aerate.*

Existing Conditions	The existing blowers serving the aerobic digesters are reportedly over-sized and can only be controlled manually. Operators work to maintain a balance between the tanks by modulating manual valves, but this has at times caused over-aeration, foaming, and environmental hazards.																																
ECM Details	The blowers are less than 10 years old and should have many years of useful life remaining. It is recommended they be retrofitted with VFDs to control blower speed to avoid over-aeration, and to install automatic control valves to ensure optimal airflow to each tank.																																
Potential Energy Savings	<table border="1"> <thead> <tr> <th colspan="4">SAVINGS</th> <th colspan="4">PROJECT COST &amp; ROI</th> </tr> <tr> <th>Electricity</th> <th>Natural Gas</th> <th>Utility Cost</th> <th>GHG Emissions</th> <th>Est. Total Cost</th> <th>Est. Premium</th> <th>Est. Incentive</th> <th>Simple Payback</th> </tr> <tr> <th>[kWh/yr]</th> <th>[MBTU/yr]</th> <th>[\$/yr]</th> <th>[tons/yr]</th> <th>[\$]</th> <th>[\$]</th> <th>[\$]</th> <th>[yrs]</th> </tr> </thead> <tbody> <tr> <td>226,665</td> <td>-</td> <td>\$ 20,383</td> <td>73.2</td> <td>\$ 90,000</td> <td>\$ -</td> <td>\$ 11,600</td> <td>3.8</td> </tr> </tbody> </table>	SAVINGS				PROJECT COST & ROI				Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback	[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]	226,665	-	\$ 20,383	73.2	\$ 90,000	\$ -	\$ 11,600	3.8
SAVINGS				PROJECT COST & ROI																													
Electricity	Natural Gas	Utility Cost	GHG Emissions	Est. Total Cost	Est. Premium	Est. Incentive	Simple Payback																										
[kWh/yr]	[MBTU/yr]	[\$/yr]	[tons/yr]	[\$]	[\$]	[\$]	[yrs]																										
226,665	-	\$ 20,383	73.2	\$ 90,000	\$ -	\$ 11,600	3.8																										

## Energy Conservation Measure (ECM) Summary

The following table summarizes the ECMs described above, showing the potential energy and cost savings for each measure as well as roughly estimated project costs based on commercial estimating guides, retail pricing, and SSM's previous experience. The ECMs are presented as incremental measure savings, where the savings for each measure is based on the results from the previous measure to show the interactive effect of selecting multiple measures. Project cost estimates include the full cost of the measure, which can make the simple payback appear very long, although where applicable the payback considers only the premium cost of selecting high efficiency equipment over standard equipment.

Table 3: ECM summary

#	ENERGY CONSERVATION MEASURES (ECMs)	SAVINGS							PROJECT COST & ROI				
		Electricity	Natural Gas	Total Energy	Utility Cost	GHG Emissions	% Energy Savings	% Cost Savings	Est. Total Cost	Est. Premium	Est. Incentive	Premium Payback	Simple Payback
		[kWh/yr]	[MBTU/yr]	[MBtu/yr]	[\$/yr]	[tons/yr]	[%]	[%]	[\$]	[\$]	[\$]	[yrs]	[yrs]
-	Utility Data (2024-25)	3,992,245	1,329	14,951	\$ 374,247	1,366.4	-	-	\$ -	\$ -	\$ -	-	-
-	Energy End-Use Analysis	4,009,449	1,314	14,995	\$ 375,627	1,371.1	-	-	\$ -	\$ -	\$ -	-	-
	<b>Difference</b>	<b>17,204</b>	<b>(15)</b>	<b>44</b>	<b>\$ 1,381</b>	<b>4.7</b>	<b>-</b>	<b>-</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>-</b>	<b>-</b>
	<b>% Error</b>	<b>0%</b>	<b>-1%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>-</b>	<b>-</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>-</b>	<b>-</b>
	<b>LIGHTING &amp; INTERNAL LOADS</b>												
1	Automatic Lighting Controls	15,112	-	52	\$ 1,359	4.9	0.3%	0.4%	\$ 2,400	\$ -	\$ 1,511	-	0.7
2	Remaining LED Lighting	26,236	-	90	\$ 2,359	8.5	0.6%	0.6%	\$ 4,800	\$ -	\$ 600	-	1.8
	<b>Subtotal</b>	<b>41,347</b>	<b>-</b>	<b>141</b>	<b>\$ 3,718</b>	<b>13.3</b>	<b>0.9%</b>	<b>1.0%</b>	<b>\$ 7,200</b>	<b>\$ -</b>	<b>\$ 2,111</b>	<b>-</b>	<b>1.4</b>
	<b>HVAC &amp; Plumbing</b>												
3	Upgrade HVAC Controls	7,252	66	90	\$ 1,406	6.2	0.6%	0.4%	\$ 1,000	\$ -	\$ -	-	0.7
4a	HVAC TOR: In-Kind Replacements	7,342	197	222	\$ 2,921	13.9	1.5%	0.8%	\$ 24,800	\$ 6,000	\$ 180	2.0	8.4
4b	HVAC TOR: Heat Pumps	(87,960)	1,249	949	\$ 6,406	44.6	6.3%	1.7%	\$ 25,900	\$ 7,100	\$ 338	1.1	4.0
5	DHW TOR: Hybrid Heat Pump	4,120	-	14	\$ 370	1.3	0.1%	0.1%	\$ 2,000	\$ 500	\$ -	1.3	5.4
	<b>Subtotal (excl. ECM-04a)</b>	<b>(76,589)</b>	<b>1,314</b>	<b>1,053</b>	<b>\$ 8,182</b>	<b>52.2</b>	<b>7.0%</b>	<b>2.2%</b>	<b>\$ 28,900</b>	<b>\$ 7,600</b>	<b>\$ 338</b>	<b>0.9</b>	<b>3.5</b>
	<b>Process Equipment</b>												
6	Replace Old Motors & VFDs	181,332	-	619	\$ 16,307	58.5	4.1%	4.3%	\$ -	\$ -	TBD	-	-
7	Optimize Blower Controls	226,665	-	773	\$ 20,383	73.2	5.2%	5.4%	\$ 90,000	\$ -	\$ 11,600	-	3.8
	<b>Subtotal</b>	<b>407,997</b>	<b>-</b>	<b>1,392</b>	<b>\$ 36,690</b>	<b>131.7</b>	<b>9.3%</b>	<b>9.8%</b>	<b>\$ 90,000</b>	<b>\$ -</b>	<b>\$ 11,600</b>	<b>-</b>	<b>2.1</b>
	<b>Grand Total</b>	<b>372,756</b>	<b>1,314</b>	<b>2,586</b>	<b>\$ 48,590</b>	<b>197.2</b>	<b>17.2%</b>	<b>12.9%</b>	<b>\$ 126,100</b>	<b>\$ 7,600</b>	<b>\$ 14,049</b>	<b>-</b>	<b>2.3</b>

---

## Renewable Energy Opportunities

---

The energy conservation described above could reduce electricity consumption by about 10%. However, ECMs do not directly address electricity sourcing, reliant still on utility grid-produced power which in Pennsylvania is about 65% sourced from coal and natural gas, and about 3% from renewable energy sources such as wind, solar, and hydroelectric. This facility has the opportunity to produce the some of electricity consumption on-site with renewable solar photovoltaic (PV) energy, while hedging variable future utility prices.

The site's building roofs are primarily relatively new, flat, EPDM with a variety of roof-mounted equipment; the main office is a sloped, shingled roof likely nearing end of life, and a corrugated roof covers the UV treatment area. Installing solar on the roofs would supply a small portion of the total energy use, about 3% of existing use, and each roof may have a different approach to interconnection to the electrical distribution system.

The flat roofs would likely use a ballasted (non-penetrating) racking system. The office roof and UV roof structure would require direct-attached systems. Installing a rooftop solar array in conjunction with, following a roof replacement is recommended to maximize the life of both systems and ensure continuity of the roof warranty. Structural analyses of the roof systems are recommended to ensure viability, though only about 5 pounds per square foot is required by the ballasted system, and less for the direct-attached systems. Conceptual layouts of rooftop PV systems are shown in Figure 5.

Alternatively, the area above the clarifiers has ample space for elevated structures, which would also provide shading for the tanks to help reduce algae growth. Clarifier super-structure potential is conceptualized in Figure 6. This approach would provide a better density of PV production, up to about 13% of the plant's post-ECM implementation energy consumption.

SSM prepared a high-level solar analysis for the feasible areas using HelioScope modeling. Table 4 summarizes the expected generation and its impact to site energy consumption, based on the existing use as well as the calculated ECM savings, and projected costs and savings.

Included in the conservative savings associated with electricity use offset by the array's production in Table 6 are: a one-time PECO rebate of \$0.10/kWh produced in the first year, currently available through at least April 2026; a 30% Federal Investment Tax Credit (ITC), which is currently available as a direct/elective pay to non-tax-paying entities, but may be subject to changing federal policies; and estimated annual Solar Renewable Energy Credit (SREC) revenue which is market-variable but currently estimated at about \$0.03/kWh for the life of the system.

For more information:

PECO Solar Incentive – <https://www.peco.com/smart-energy/my-green-power-connection/solar-for-home-business/solar-incentives-credits>

Investment Tax Credit – <https://www.energy.gov/eere/solar/articles/federal-solar-tax-credit-resources> & <https://seia.org/solar-investment-tax-credit/>

Solar Renewable Energy Credits – <https://extension.psu.edu/solar-energy-credits-in-pennsylvania>

Table 4: Solar photovoltaic opportunities

	Solar PV	Capacity [kW DC]	Production [kWh/yr]	% Existing Electric Use	% Post-ECM Electric Use	Utility Cost Savings [\$ /yr]	% Cost Savings	GHG Savings [ton/yr]	% GHG Savings
1	Roofs	95	120,300	3.0%	3% - 3%	\$ 8,114	2.2%	39	2.8%
2	Clarifiers	393	511,500	12.8%	14% - 15%	\$ 34,498	9.2%	165	12.1%
<b>Total - Solar PV</b>		<b>488</b>	<b>631,800</b>	<b>15.8%</b>	<b>17% - 18%</b>	<b>\$ 42,612</b>	<b>11.4%</b>	<b>204</b>	<b>14.9%</b>

	Solar PV	Est. Total Cost [\$]	Est. Incentive (30% ITC) [\$]	Est. Incentive (PECO) [\$]	Est. Annual SREC Revenue [\$ /yr]	Simple Payback [yrs]
1	Roofs	\$ 220,000	\$ 66,000	\$ 6,600	\$ 3,609	13.1
2	Clarifiers	\$ 1,080,000	\$ 324,000	\$ 32,400	\$ 15,345	15.2
<b>Total - Solar PV</b>		<b>\$ 1,300,000</b>	<b>\$ 390,000</b>	<b>\$ 39,000</b>	<b>\$ 18,954</b>	<b>14.8</b>

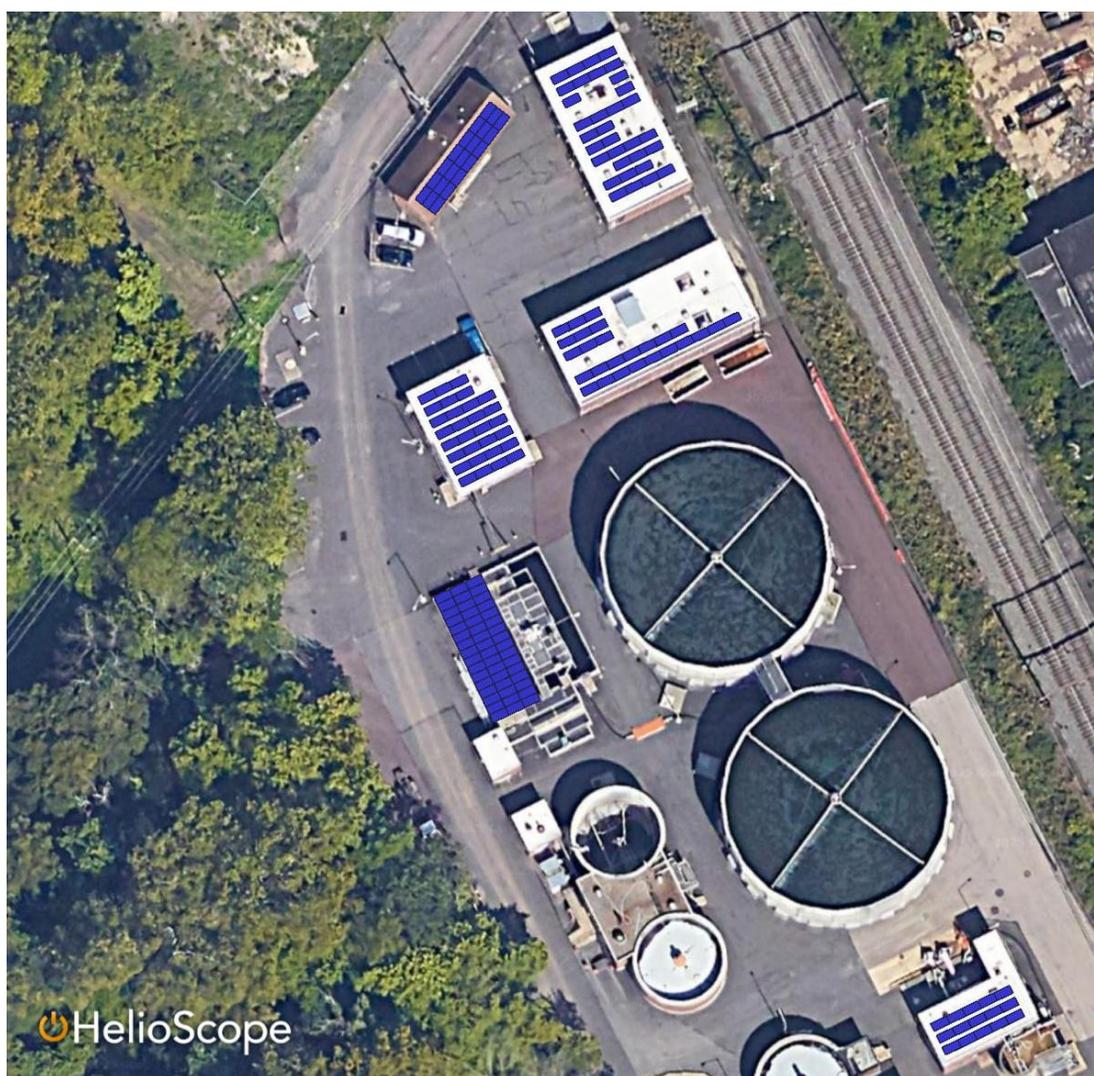


Figure 5: (1) Conceptual rooftop PV layouts for viable areas



Figure 6: (2) Conceptual PV layouts above clarifiers

It is understood from conversations with site personnel as part of the assessment that the main electrical distribution equipment may be replaced to an extent in the near future. As part of any improvements, include spare room for breakers sized for these—approx. 800A—or other future solar PV arrays to facilitate the facility being “Solar Ready”

**Appendix A: Technical References**

Table 5. Utility data

		Electricity					Natural Gas					CO2			Totals and Metrics			
Start Date	End Date	Days in Billing Period	Total Usage [kWh]	% Annual Usage	Total Cost [\$]	Electric Rate [\$/kWh]	Total Usage [ccf]	% Annual Usage	Total Cost [\$]	Gas Rate [\$/ccf]	Electrical CO2 Emissions [lbs]	Gas CO2 Emissions [lbs]	Total CO2 Emissions [lbs]	Total Energy Consumed [kBtu]	Total Cost of Energy [\$]	Energy Use Intensity [kBtu/sf]	Cost Intensity [\$/sf]	
4/1/2023	5/1/2023	30	27,445	7%	\$ 3,231	\$ 0.118	1,347	6%	\$ 1,520	\$ 1.128	17,718	16,169	33,888	231,868	\$ 4,751	6.6	\$ 0.14	
5/1/2023	6/1/2023	31	36,571	9%	\$ 3,778	\$ 0.103	1,523	6%	\$ 1,611	\$ 1.058	23,610	18,283	41,894	281,078	\$ 5,389	8.0	\$ 0.15	
6/1/2023	7/1/2023	30	43,295	11%	\$ 4,773	\$ 0.110	1,289	5%	\$ 1,454	\$ 1.128	27,951	15,465	43,416	279,927	\$ 6,227	8.0	\$ 0.18	
7/1/2023	8/1/2023	31	61,306	15%	\$ 6,138	\$ 0.100	1,049	4%	\$ 1,054	\$ 1.005	39,579	12,584	52,163	316,755	\$ 7,191	9.1	\$ 0.21	
8/1/2023	9/1/2023	31	53,416	13%	\$ 5,348	\$ 0.100	1,064	4%	\$ 1,037	\$ 0.975	34,485	12,770	47,255	291,421	\$ 6,386	8.3	\$ 0.18	
9/1/2023	10/1/2023	30	46,041	11%	\$ 5,298	\$ 0.115	1,251	5%	\$ 1,392	\$ 1.112	29,724	15,020	44,744	285,490	\$ 6,689	8.2	\$ 0.19	
10/1/2023	11/1/2023	31	34,263	8%	\$ 3,760	\$ 0.110	1,898	8%	\$ 1,807	\$ 0.952	22,120	22,783	44,903	311,670	\$ 5,567	8.9	\$ 0.16	
11/1/2023	12/1/2023	30	22,191	5%	\$ 2,713	\$ 0.122	2,655	11%	\$ 2,737	\$ 1.031	14,327	31,869	46,196	348,154	\$ 5,451	9.9	\$ 0.16	
12/1/2023	1/1/2024	31	23,012	6%	\$ 2,619	\$ 0.114	3,277	14%	\$ 3,030	\$ 0.924	14,857	39,336	54,192	414,785	\$ 5,649	11.9	\$ 0.16	
1/1/2024	2/1/2024	31	21,793	5%	\$ 2,152	\$ 0.099	3,626	15%	\$ 2,810	\$ 0.775	14,070	43,514	57,584	446,345	\$ 4,962	12.8	\$ 0.14	
2/1/2024	3/1/2024	29	18,512	5%	\$ 2,466	\$ 0.133	2,601	11%	\$ 1,310	\$ 0.504	11,951	31,214	43,165	330,000	\$ 3,776	9.4	\$ 0.11	
3/1/2024	4/1/2024	31	18,981	5%	\$ 2,134	\$ 0.112	2,082	9%	\$ 2,086	\$ 1.002	12,254	24,983	37,237	278,337	\$ 4,220	8.0	\$ 0.12	
<b>TOTAL</b>		<b>366</b>	<b>406,826</b>	<b>100%</b>	<b>\$ 44,411</b>	<b>\$ 0.109</b>	<b>23,662</b>	<b>100%</b>	<b>\$ 21,848</b>	<b>\$ 0.923</b>	<b>262,647</b>	<b>283,991</b>	<b>546,637</b>	<b>3,815,830</b>	<b>\$ 66,259</b>	<b>109.0</b>	<b>\$ 1.89</b>	

		Electricity					Natural Gas					CO2			Totals and Metrics			
Start Date	End Date	Days in Billing Period	Total Usage [kWh]	% Annual Usage	Total Cost [\$]	Electric Rate [\$/kWh]	Total Usage [ccf]	% Annual Usage	Total Cost [\$]	Gas Rate [\$/ccf]	Electrical CO2 Emissions [lbs]	Gas CO2 Emissions [lbs]	Total CO2 Emissions [lbs]	Total Energy Consumed [kBtu]	Total Cost of Energy [\$]	Energy Use Intensity [kBtu/sf]	Cost Intensity [\$/sf]	
4/1/2024	5/1/2024	30	21,466	5%	\$ 3,423	\$ 0.159	1,887	7%	\$ 1,427	\$ 0.756	13,859	22,647	36,506	266,845	\$ 4,849	7.6	\$ 0.14	
5/1/2024	6/1/2024	31	41,349	10%	\$ 5,451	\$ 0.132	1,634	6%	\$ 1,414	\$ 0.866	26,695	19,606	46,301	308,687	\$ 6,865	8.8	\$ 0.20	
6/1/2024	7/1/2024	30	52,207	12%	\$ 6,407	\$ 0.123	1,065	4%	\$ 1,041	\$ 0.977	33,705	12,782	46,487	287,401	\$ 7,447	8.2	\$ 0.21	
7/1/2024	8/1/2024	31	62,236	14%	\$ 6,632	\$ 0.107	930	4%	\$ 811	\$ 0.872	40,180	11,163	51,342	307,777	\$ 7,443	8.8	\$ 0.21	
8/1/2024	9/1/2024	31	55,480	13%	\$ 5,911	\$ 0.107	1,231	5%	\$ 1,192	\$ 0.969	35,818	14,773	50,590	315,583	\$ 7,103	9.0	\$ 0.20	
9/1/2024	10/1/2024	30	46,755	11%	\$ 5,021	\$ 0.107	1,537	6%	\$ 1,456	\$ 0.947	30,185	18,444	48,629	317,200	\$ 6,477	9.1	\$ 0.19	
10/1/2024	11/1/2024	31	35,719	8%	\$ 4,090	\$ 0.115	1,862	7%	\$ 1,858	\$ 0.998	23,060	22,350	45,411	312,940	\$ 5,949	8.9	\$ 0.17	
11/1/2024	12/1/2024	30	26,713	6%	\$ 3,285	\$ 0.123	2,607	10%	\$ 2,604	\$ 0.999	17,246	31,288	48,534	358,615	\$ 5,889	10.2	\$ 0.17	
12/1/2024	1/1/2025	31	21,409	5%	\$ 2,666	\$ 0.125	3,569	14%	\$ 3,637	\$ 1.019	13,822	42,834	56,656	439,221	\$ 6,303	12.5	\$ 0.18	
1/1/2025	2/1/2025	31	24,306	6%	\$ 2,783	\$ 0.115	3,869	15%	\$ 3,829	\$ 0.990	15,692	46,431	62,124	479,860	\$ 6,612	13.7	\$ 0.19	
2/1/2025	3/1/2025	28	22,407	5%	\$ 2,790	\$ 0.125	3,095	12%	\$ 3,477	\$ 1.123	14,466	37,148	51,614	394,015	\$ 6,267	11.3	\$ 0.18	
3/1/2025	4/1/2025	31	23,588	5%	\$ 2,876	\$ 0.122	2,387	9%	\$ 2,528	\$ 1.059	15,229	28,643	43,871	325,339	\$ 5,404	9.3	\$ 0.15	
<b>TOTAL</b>		<b>365</b>	<b>433,636</b>	<b>100%</b>	<b>\$ 51,335</b>	<b>\$ 0.118</b>	<b>25,672</b>	<b>100%</b>	<b>\$ 25,274</b>	<b>\$ 0.985</b>	<b>279,955</b>	<b>308,109</b>	<b>588,064</b>	<b>4,113,484</b>	<b>\$ 76,609</b>	<b>117.5</b>	<b>\$ 2.19</b>	



Spotts, Stevens and McCoy

@ssmgroup.com

READING

1047 North Park Road, PO Box 6307 – Reading PA 19610-0307

P: 610-621-2000 F: 610-621-2001

LEHIGH VALLEY

Roma Corporate Center

1605 North Cedar Crest Boulevard, Suite 509 – Allentown PA 18104

P: 610-849-9700 F: 610-621-2001

LANCASTER

701 Creekside Lane – Lititz PA 17543

P: 717-568-2678 F: 610-621-2001

WEST CHESTER

101 East Evans Street, Suite 2 – West Chester PA 19380

P: 610-621-2000 F: 610-621-2001

**Public Safety Committee**

The previous Committee meeting was held on November 5, 2025, at 7:00pm. Committee members: Nancy Roecker Coates – Chair, Jen Henderson and Lou Orehek.

**The Committee will consider the following recommendations:**

1. Parking Kiosk Replacement Quotes with Mobile Pay Text from T2 Systems. **(Enclosed)**

**The following business will be discussed:**

Not applicable.

**Items For Consideration:**

Not applicable.



**INTEGRATED TECHNICAL SYSTEMS, INC.**  
 dba Richard N. Best Associates  
 15 TRAIL ROAD  
 LEVITTOWN, PA 19056  
 TEL: (215) 945-9240  
 FAX: (215) 945-9277

Quotation	
Price Quotation Number:	<b>14611 C1</b>
Please indicate this number when ordering	
Date:	<b>11/07/2025</b>
Reference:	<b>Parking Meter Replacement</b>

Customer/Buyer:	Officer Nick Nasabkow, Traffic Safety Officer	Terms:	See Notes
Project:	Ambler Parking Meter Replacement	Freight	Included
Company	Borough of Ambler		
Address:	131 Rosemary Avenue	Estimated Delivery:	To be scheduled
	Ambler, Pa 19003		
Tel:	215-646-1000; x 105	Email:	<a href="mailto:nnasobkow@police.ambler.pa.us">nnasobkow@police.ambler.pa.us</a>
System	Qty	Description	

**T2 COSMO Pay Station w Coin Acceptance, EMV CC ( Insert and Contactless ), Solar:**

- 5 Cosmo - Solar, Coin Acceptor, EMV Credit Card ( Insert & Contactless / Tap and Pay ) Pay Station including:

Platform - Pay Station 8 - COSMO  
 38 Button Alpha-Numeric Keypad w Display  
 Credit Card Insert Reader and Contactless / Tap and Pay ( PCI / EMV compliant )  
 Receipt Printer  
 Communications Modem, Verizon / ATT  
 Digital Connect Wireless Data SIM Card  
 Maintenance & Collections Lock Set, Standard

- 10 Coin Canisters; (one installed, one spare for replenishment )

- 10 Paper, Thermal - 2"

1	All T2 COSMO Equipment	\$	42,272.00
1	Installation / Programming / Training	\$	5,975.00
1	Shipping	\$	1,250.00
	Sub-total	\$	49,497.00

**One Time Setup Fees: ( already paid first 6 units )**

1	IRIS Profile Set Up Fee	\$	650.00
1	T2 SecurePay - Merchant Acct Setup ( for EMV )	\$	260.00
1	Training ( 4 hours on-site / remote training included )	\$	-
	Sub-total	\$	910.00

**Total: \$ 50,407.00**

**Monthly Fees:**

		Per unit / month	Extended monthly
5	T2 IRIS Cosmo Management	\$ 50.00	\$ 250.00
5	T2 Digital Connect Data Communications (ATT/Verizon)	\$ 20.00	\$ 100.00
5	T2 Secure Pay for Tap and Pay	\$ 35.00	\$ 175.00
	Monthly Fees:	\$ 105.00	\$ 525.00
12	Annual Fees:		\$ 6,300.00

**Note:** Merchant Services Provider account with FirstData / FiServ required to process credit cards

**Note:** Optional features are available: Extend-by-Phone, Coupons, Mobile Payment and more.

**Note:** Ongoing software maintenance will be required to maintain over the air updates & functionality after year 1.

**Note:** UPSafety Enforcement is a wholly-owned subsidiary of T2 Systems, Inc. and we offer a complete integration enforcement and ticketing processes.

**NOTE:**

Quoted pricing is based on current applicable tariffs import/export duties, surcharges, taxes or similar fees ("Tariffs"). In the event any governmental authority enacts or imposes new or additional Tariffs that increase the cost of goods, materials, and/or services provided under this quote, ITS reserves the right to adjust the price quoted to reflect increased costs.

**Notes:**

1. Sales tax, if applicable, not included in price.
2. Permits and fees, if applicable, not included.
3. 120 Volt AC power provided to equipment by others where required.
4. Concrete pad, conduit, and any other site preparation required is by others.
5. Workstation, printer and other office peripherals provided by others.
6. Terms; 50% Deposit, 30% On Delivery, and Remainder after 30 days.
7. One year parts and labor warranty on equipment.
8. This quotation is in accordance with ITS standard terms and conditions of sale and service.
9. Customer will enter into agreement with T2 for monitoring and reporting via IRIS enterprise platform.
10. Customer will need to make arrangements for CC processing and parking session enforcement.
11. Customer must use First Data / FiServ as processor with the Tap and Pay CC reader.
12. EMV Readers have an anti-tamper control; disassembly or violent impact may put the reader in a tampered status; if so, the reader cannot be repaired or redeployed; readers in tampered status are not eligible warranty coverage.

Prices are subject to increase to prices in effect at time of shipment when specific shipment date is later than one year from date of order. This quotation automatically expires in 90 days. All order are subject to acceptance by Richard N. Best Associates, Inc.

Authorized Signature: \_\_\_\_\_

Quotation By: *Don Vennell*  
267-966-8292

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

## T2 Systems - Confidential Quotation



For: Ambler Police Department  
 Quote ID: Q-53313  
 Date Issued: 7/24/2025  
 Expires: 2/24/2026

Bill To:  
 Ambler Police Department  
 131 Rosemary Avenue  
 Ambler, Pennsylvania 19002  
 United States

Ship To:  
 Borough of Ambler  
 131 Rosemary Avenue  
 Ambler, PA 19002  
 United States

Prepared By:  
 Jody Backes

Chief Jeffrey Borkowski  
 215-643-6444  
 chief@police.ambler.pa.us  
 EIN: 00-0000000

Prepared For:  
 Nicholas Nasobkow

## Subscriptions

Product Name	Product Code	Sales Price	Total
T2 MobilePay Base Subscription		USD 1,000.00	USD 1,000.00
Year 1	100.3212	USD 1,000.00	USD 1,000.00
\$83.33 BILLED MONTHLY (ANNUAL PRICE SHOWN) T2 MobilePay Virtual Pay Station Per Iris Profile, per month. Includes 100 system-wide transactions and 200 system-wide public messages per month. Unlimited zones can be added.			
T2 MobilePay Transaction Fee Tier 4 - Pay as you go		USD 0.00	USD 0.00
Year 1	100.3231	USD 0.00	USD 0.00
INVOICED MONTHLY BASED ON TRANSACTION VOLUME \$0.27 per transaction over the 100 subscribed total. Example: 1,000 monthly transactions processed. Billing would be 900 x \$0.27 = \$243			
T2 MobilePay Gateway		USD 0.00	USD 0.00
Year 1	100.3221	USD 0.00	USD 0.00
INVOICED MONTHLY BASED ON TRANSACTION VOLUME Gateway billed at \$0.12 per transaction using an NMI approved processor. List of approved processors attached. Example: 1,000 monthly transactions processed. Billing would be 1,000 x \$0.12 = \$120 Processing fees are incurred with your own processor. T2 is not involved with those rates.			
TOTAL:			USD 1,000.00

## Services

Product Code	Product Name	Sales Price	Total
100.3217	T2 MobilePay Implementation	USD 249.00	USD 249.00
ONE-TIME CHARGE Profile setup of T2 MobilePay. 1 Profile required per bank account.			

Product Code	Product Name	Sales Price	Total
Includes Five (5) 10x18 Dibond signs. Additional signs can be ordered at any time.			
100.0060	Remote Training - T2 Iris - up to 2 hours	USD 250.00	USD 250.00
Up to 2 hours of remote training on the T2 Iris cloud platform.			
TOTAL:			USD 499.00

## Hardware

Product Code	Product Name	Sales Price	Total
105.0640	T2 MobilePay 5 10x18 signs included with implementation - Option 2	USD 0.00	USD 0.00
TOTAL:			USD 0.00

## Other

Product Code	Product Name	Sales Price	Total
***	Comment	USD 0.00	USD 0.00
T2 MobilePay is an Iris Software add-on. Customer to provide One (1) month of notice if they would like to cancel.			
***	Comment	USD 0.00	USD 0.00
TOTAL:			USD 0.00

Year 1 Total: USD 1,499.00

Tax Amount: USD 0.00

Tax Comments: N/A

Total: USD 1,499.00

### Additional Information:

Freight Term: FOB-VEND-PP

Payment Terms:

IRIS Profile: purchasing pay stations not needed for MP

End User: Ambler Police Department

GP Customer Number: 4201

## Billing Terms

Software subscriptions are invoiced upon Activation.

Terms and Conditions for Digital Iris services are available at:  
<http://www.t2systems.com/terms-conditions>

Upon shipping, 100% of order will be invoiced, with the exceptions of (if applicable):

- Software subscriptions, as outlined above;
- Upon provision, 100% of services, training and/or installation will be invoiced.

As indicated on quote - Shipping costs are to be determined at time of shipment, are estimates only or are set amounts. Actual costs will be reflected on invoices unless set amount has been provided.

Tax rate, if applicable, will be finalized at time of invoicing.

Invoices paid via credit card will incur a 2.5% convenience fee.

Purchase orders can be forwarded to [purchaseorders@t2systems.com](mailto:purchaseorders@t2systems.com)

## Project Term and Change Management

The parties anticipate that T2's Service will begin 10 business days after the dates sales order. The parties estimate that services will be complete within 120 days from start of the project. The timeline may be extended due to availability of required Equipment and Software, availability of client or T2 personnel, changes to the project scope or functional specification. In addition to schedule changes, changes in the Project may result in additional fees such as project re-engagement and/or change orders.

In the event that the scope changes, the Customer will be notified in advance and must provide written approval (via a signed Change Order) to proceed. The new scope will not proceed until the Change Order is executed.

-----  
 Upon signature by Customer and submission to T2 Systems Inc., this Quote shall become legally binding. By signing and submitting this Quote, Customer expressly agrees and acknowledges that all products and services purchased by the Customer pursuant to this Quote shall be governed exclusively by the terms and conditions set forth in this Quote, the terms of which can be found at <https://www.t2systems.com/terms-conditions/> (the "Terms and Conditions"), subject to the terms of any applicable existing MSA or other written agreement between Customer and T2 Systems that expressly take precedence over the Terms and Conditions. By signing and submitting this Quote, Customer represents and warrants that the signatory below has the authority to bind Customer to the terms of this Quote and that Customer has had the opportunity to review the Terms and Conditions.

Quoted pricing is based on current applicable tariffs, import/export duties, surcharges, taxes or similar fees ("Tariffs"). In the event any governmental authority enacts or imposes new or additional Tariffs that increases the cost of goods, materials, and/or services provided for under this Quote, T2 reserves the right to adjust the pricing on this Quote to reflect increased costs.

Quote Number: Q-53313

PO Required?

IF "NO" IS SELECTED UNDER PO REQUIRED, CUSTOMER ACCEPTS RESPONSIBILITY TO PROCESS CONTRACT PAYMENT WITHOUT RECEIPT OF PURCHASE ORDER NUMBER.

Customer

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Print Name

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 PO #

## **Public Utilities Committee**

The previous Committee meeting was held on November 5, 2025, at 7:00pm. Committee Members: Lou Orehek - Chair, Karen Sheedy and David Hui.

**The Committee will not consider any recommendations at this time.**

**The following business will be discussed:**

1. A proposal from Arris Engineering Group, LTD for the 'Design of EPS-4 & PS-3 MCC Replacement' at the Ambler Wastewater Treatment Plant. **(Enclosed)**

### **Items For Consideration:**

Not applicable.



November 21, 2025

Mr. Jarrett Evans  
Superintendent  
Ambler Wastewater Treatment Plant  
Ambler, PA. 19002

RE: Borough of Ambler-Proposal for Ambler WWTP  
Design of EPS-4 and PS-3 MCC Replacement

Jarrett,

Thank you for the opportunity to submit this proposal for electrical engineering services.

#### **SCOPE OF WORK**

It is understood that the intent of the project is to provide Engineering Services for the development of pricing and construction plans for the replacement of the Motor Control Centers (MCC's) at each of the above referenced pump stations.

Generally, the work will include the following:

- Field collection of electrical wiring information and routing of conductors.
- Verify active loads on each of the MCC's.
- Design replacement, key interlocked circuit breaker panels, that will replace the existing MCC's.
- Dual service panels will maintain spare positions for future addition of loads.
- Elimination of capacitor banks on the existing MCC's.
- Provide combination motor starters to replace any remaining starters in the existing MCC's.

#### **FEE FOR SERVICES**

Arris Engineering's fixed fee is **Sixteen Thousand Dollars (\$ 16,000.00)** for the pricing and construction plans. This pricing does not include construction administrative services.

Additional scope items required will not be undertaken without written approval and will be billed based on the attached Rate Schedule. Reimbursable expenses are included in the above fee, except courier services and additional hard copies of prints, if required, will be invoiced at cost.



---

## SCHEDULE

Arris will initiate this project immediately and will have the design completed within two (2) weeks.

## CLARIFICATIONS

- All drawings will be submitted in AutoCAD and PDF format.
- The Pricing and Construction plan fee's do not include construction administrative costs which will be in the range of \$ 4,000.00. These costs will be quoted to the Borough at the time of project award to the contractor performing the work.

## PAYMENT

Billing will be submitted on a monthly basis for that percentage of total work completed. If work is stopped or delayed for any reason, payment will be expected for that percentage of work completed. Payment will be due within 60 days of invoice date.

Once again thank you for this opportunity to provide you with engineering services. If you have any questions, please call me at 570-825-7760 x.301.

Respectfully,

A handwritten signature in black ink that reads 'Richard Szatkowski'.

Richard Szatkowski, PE  
Principal | Arris Engineering Group, Ltd.

Attch: Rate Schedule, Reimbursable Schedule

---

Authorized Signature to Proceed

---

Date

## **Parks & Recreation Committee**

The previous Committee meeting was held on November 5, 2025, at 7:00pm. Committee Members: Jen Henderson - Chair, Nancy Roecker-Coates, David Hui and Redmond Brubaker.

### **The Committee will consider the following options:**

1. Park Signage & Branding Options. **(Enclosed)**

### **The following business will be discussed:**

Not applicable.

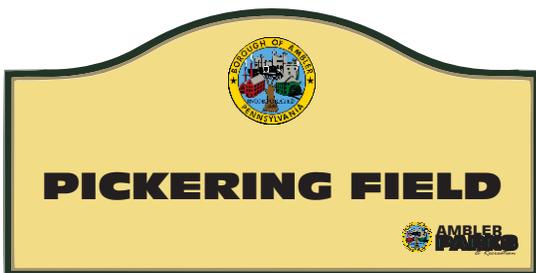
### **Items For Consideration:**

Not applicable.

A.



B



SAMPLE PARK SIGN

## **Salary & Personnel Committee**

The previous Committee meeting was held on November 5, 2025, at 7:00pm. Committee Members: Karen Sheedy– Chair, Glynnis Siskind, Jen Henderson, and Elizabeth Iovine.

**The Committee will not consider any recommendations at this time.**

**The following business will be discussed:**

Not applicable.

### **Items For Consideration:**

Not applicable.