Electric Service Connection Process

WBC Joint Utility Seminar 2019

Presented by: Nabil Benwahoud
May 30, 2019
Program Agenda

- Typical process for a new large commercial service connection within Pepco:
  - On-line application process for new and upgraded electric service connections
  - Developer’s Manual and Standards availability on Pepco’s website
  - Approved Switchgear List
  - Typical Design & Construction Duration

- Pepco Service Transformer/Vault Options

- Option for Customer to Build Pepco Structural Facilities in Public Space
Typical Process for a New Commercial Service Connection Project

I. Initiation
II. Design
III. Pre-Construction Inspections
IV. Construction
Typical Process for a New Commercial Service Connection Project

1. **Initiation:**
   - Customer submits on-line Application for Electric Service Form

Or Visit
WWW.PEPCO.COM
My Account
Construction and Remodeling Builders and Inspectors Service Requests Electric Service Application

Login or First Time User
Typical Process for a New Commercial Service Connection Project - Initiation - Application Sample Page 1

LOGIN

Please login to complete your request.

Username

CONTINUE

DON'T HAVE AN ACCOUNT?

SIGN UP NOW

Sign In Help?

Forgot Username?

Forgot Password?
Typical Process for a New Commercial Service Connection Project - Initiation - Application Sample
Typical Process for a New Commercial Service Connection Project - Initiation - Application Sample

NEW OR UPGRADE SERVICE

Form Id: 207093

Please Note: Your account session will time out after 30 minutes of inactivity.

APPLICANT INFORMATION

Please Note: Required fields are marked with *

Applicant Name *
JANE DOE

Applicant Type *
ELECTRICIAN

Street No. Street Name *
1996 EASTERN

Street Type
Avenue

City *
WASHINGTON

State *
DC

Zip (xxxxxx or xxxx-xxxx)
20019
Typical Process for a New Commercial Service Connection Project - Initiation - Application Sample

**PRIMARY SITE USE**

- Residential
- Sub-Division
- Commercial / Multi-Use
- Industrial
- Other

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Total Conditioned Sq. Footage</th>
<th>Number of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restaurant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehouse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apartment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>
## Typical Process for a New Commercial Service Connection Project - Initiation - Application Sample

### LOAD INFORMATION

**Note:** All fields are required and must contain a numerical value. Please enter "0" if a field is not applicable.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Field</th>
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<tbody>
<tr>
<td>Lighting (kW) *</td>
<td></td>
</tr>
<tr>
<td>Electric Heating Pump (tons) *</td>
<td></td>
</tr>
<tr>
<td>Water Heating (kW) *</td>
<td></td>
</tr>
<tr>
<td>Number of Elevators *</td>
<td></td>
</tr>
<tr>
<td>Total Motors (HP) *</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous (kW) *</td>
<td></td>
</tr>
<tr>
<td>Air Conditioning (tons) *</td>
<td></td>
</tr>
<tr>
<td>Electric Resistance Heating (kW) *</td>
<td></td>
</tr>
<tr>
<td>Back-up Resistance Heating (kW) *</td>
<td></td>
</tr>
<tr>
<td>Elevators (Total kW) *</td>
<td></td>
</tr>
<tr>
<td>Largest Motor (HP) *</td>
<td></td>
</tr>
</tbody>
</table>
Typical Process for a New Commercial Service Connection Project - Initiation - Application Sample

Return completed application to Pepco at:

**District of Columbia**
Pepco
3400 Benning Road NE
Mailstop: 2B59FF
Washington, DC 20019
Phone: (202) 331-6237
Fax: (202) 388-2721

**Maryland – Montgomery County**
Pepco
Rockville Service Center
201 West Gude Drive
Mailstop: 2RCK22
Rockville, MD 20850
Phone: (301) 670-8700
Fax: (301) 670-8718

**Maryland – Prince George's County**
Pepco
Forestville Service Center
8300 Old Marlboro Pike
Mailstop: 2FVC67
Forestville, MD 20772
Phone: (301) 967-5800
Fax: (301) 967-5820

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For Office Use Only

<table>
<thead>
<tr>
<th>Form ID</th>
<th>WR Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>207050</td>
<td>4935685</td>
</tr>
</tbody>
</table>

Applicant’s Name

Date
Typical Process for a New Commercial Service Connection Project - Initiation

- Application for Electric Service must contain:
  - Project Location and Contact Information
  - Conditioned Space & Type of Use – Square Feet and/or Number of Units
  - Service Equipment Information – Type, Size & Voltage
  - Connected Load Information – Including Largest Motor
  - In-Service Date, Construction Start and Completion Date

- Some Required Information will vary with Type of Application
  - Example: Heavy up and New Service have different required information.
Typical Process for a New Commercial Service Connection Project - Initiation

- Pepco to send Response to Proposed Class of Service
  (Typically Within 4 Weeks)

  - Class of Service – e.g. 265/460V, 3 Phase, 4 Wire, 60 hertz
  - Available Fault Current and Starting Current Limitation
  - Point of Service – Pepco’s preferred service location
  - Customer owned structural facility requirements
  - Service cable to be provided and installed by Pepco
  - Specifies appropriate Pepco Standards and Conditions

- After receiving the Proposed Class of Service from Pepco, a meeting with Pepco’s design staff is highly recommended.
- Pepco request – Design consultant, Owner’s representative
Typical Process for a New Commercial Service Connection Project - Initiation

- Customer submissions
  - Structural drawings for customer-built facilities located on private property
  - Building plans (site and utility, and 2\textsuperscript{nd} basement through 2\textsuperscript{nd} floor)
  - Pepco’s approval of customer’s structural drawings will be in writing and include:
    - Required Pepco inspection information including contact information for obtaining structural facility inspections
    - List of Stock Materials available for purchase from Pepco’s approved vendors
  - Pepco design of the service connection will start when the required drawings are received and approved.
Typical Process for a New Commercial Service Connection Project - Initiation

- See Commercial Design Manual and Standard Drawings on Pepco Website: https://www.pepco.com/MyAccount/MyService/Pages/EngineeringDesignResources.aspx

### Engineering & Design Resources

#### General Terms and Conditions for Furnishing Electric Service

- District of Columbia
- Maryland

#### Design and Construction Manuals

- Click here to view the Commercial Developer Manual
- Click here to view the Requirements and Specifications for High Voltage Customer Built Facilities Manual

#### Customer Design Drawings

<table>
<thead>
<tr>
<th>Drawing Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD.001</td>
<td>DUCT LINE CONFIGURATIONS, DIMENSIONS, AND NOTES</td>
</tr>
<tr>
<td>CD.002</td>
<td>TYPICAL 3000 AMPERE SWITCHGEAR (SERVICE ENTRANCE) DRAWING TO BE PREPARED BY CUSTOMER</td>
</tr>
<tr>
<td>CD.003</td>
<td>METER INSTALLATION FOR 265/460 VOLT 200 AMPERE OR LESS</td>
</tr>
<tr>
<td>CD.004</td>
<td>DIMENSIONS &amp; MOUNTING FOR NEUTRAL BUS IN TROUGH FOR MULTIPLE METERING</td>
</tr>
<tr>
<td>CD.005</td>
<td>CLEARANCES FOR CABLE TERMINATIONS IN MULTI-METER BANKS</td>
</tr>
<tr>
<td>CD.006</td>
<td>PAD MOUNT TRANSFORMER MAXIMUM Dimensions, GUIDE FOR LOCATING Transformer AND PROTECTIVE SCREEN INFORMATION</td>
</tr>
<tr>
<td>CD.007</td>
<td>CONDUIT BENDS UNDER PAD</td>
</tr>
<tr>
<td>CD.008</td>
<td>INSTALLATION OF SPLICE BOX AND DIMENSIONS</td>
</tr>
</tbody>
</table>
Typical Process for a New Commercial Service Connection Project – Design

II. **Design Phases:**

- Preliminary Engineering
- Field Investigation
- Temp service requirement - Follow the same process
- Final Engineering
  - For services over 1200 amps, the customer must submit plan and profile views of the electric room for Pepco’s review and approval.
  - Use Pepco’s pre-approved switchgear, presented on Pepco’s web-site: [https://www.pepco.com/MyAccount/MyService/Pages/ApprovedProducts.aspx](https://www.pepco.com/MyAccount/MyService/Pages/ApprovedProducts.aspx)
    For projects with multiple service terminations, the customers must submit a load breakdown per termination.
- Estimating
  - The customer is notified of the Service Connection Fee
- Permits
- Final Assembly of Construction Package

**Total Project Design Duration – Typically 4 months**
Typical Process for a New Commercial Service Connection Project – Pre-Construction Inspection

III. Pre-Construction Inspections:

Prior to scheduling Construction, the job site is inspected by Pepco to verify:

- Approved switchgear is mounted securely, including meter sockets and meter panels
- Structural facilities for electric service (i.e., manholes, conduit, transformer pads, poles, etc.) are properly installed on private property and/or in public space by agreement with Pepco
- Job site is cleared of debris and building material for Pepco access

All customer built conduit, transformer pads, manholes, and customer installed poles must be inspected by Pepco prior to any backfilling and/or pouring concrete.

Pepco requires a 48-hour notification to schedule inspection in DC, 1 week notification in Maryland.
**Typical Process for a New Commercial Service Connection Project - Construction**

**IV. Construction:**

- Pepco crews are scheduled upon:
  - Certification of customer built facilities
  - Payment of Service Connection Fee
  - Availability of appropriate permits

- Pepco construction time is dependent upon the scope of work, such as:
  - Number of transformers
  - Number of manholes
  - Distance and quantity of underground cable to be installed

  - Energizing new facilities depend on system conditions.

The new service will be energized when Pepco has received approval from the appropriate electrical inspectors’ office and the service connection fee is paid.

**Total Construction Duration – Typically 2 Months**
Pepco Service Transformer/Vault Options

Pepco provides the following transformer installation options with prior approval from Engineering:

- **Company Plan:**
  Pepco equipment in private property closest to Pepco’s available source

- **Preferred Options:**
  1. Pepco equipment in alternate location within the property
  2. Pepco equipment in non-vehicle accessible Public Space (DC Public Parking Area, Sidewalk, or Planting area) adjacent to property with natural ventilation
  3. Pepco equipment in non-vehicle accessible Public Space (DC Public Parking Area, Sidewalk, or Planting area) adjacent to property with forced ventilation thru parking garage
  4. Pepco equipment in non-vehicle accessible Public Space (DC Public Parking Area, Sidewalk, or Planting area) adjacent to property with air conditioning units

Options 1 thru 4 will be subject to additional Company vs. Customer plan in the service cost.
Example of a Grated Manhole Roof with Customer Installed Brick Pavers
Option for Customer to Build Pepco Conduit Facilities in Public Space

Customers may request to build Pepco’s service connection structural facilities in public space.

• Benefits:
  – Reduces Service Connection Fees
  – Improves Coordination of Work

• Pepco Procedure Requirements:
  – Execute formal Agreement with Pepco
  – Use approved Pepco contractor. Customer must identify contractor and obtain approval prior to executing Agreement.
  – Participate in Pre-Construction meeting 2 weeks prior to starting work.
  – Build facilities per Pepco drawing under Pepco’s permit.
  – Permanent roadway resurfacing is typically excluded
Pepco Electric Service Connection Process

Key Message:

– Typical Pepco connection process: 6 to 8 months pending scope of work and type of service

– Start early in the project life cycle to work with Pepco on planning electric service connections for large commercial projects.