



**Section B: Community Solar Energy Project Description**

Project Name: \_\_\_\_\_

\*This name will be used to reference the project in correspondence with the Applicant.

**I. Applicant Contact Information**

Applicant Company/Entity Name: \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Applicant Mailing Address: \_\_\_\_\_

Municipality: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

- Applicant is:
- Community Solar Project Owner
  - Community Solar Developer/Facility Installer
  - Property/Site Owner
  - Subscriber Organization
  - Agent (if agent, what role is represented) \_\_\_\_\_

**II. Community Solar Project Owner**

Project Owner Company/Entity Name (complete if known): \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Municipality: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**III. Community Solar Developer**

*This section, "Community Solar Developer," is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. In all other cases, this section is required.*

Developer Company Name (optional, complete if applicable): \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Municipality: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

The proposed community solar project will be primarily built by:

- the Developer
- a contracted engineering, procurement and construction ("EPC") company



If the proposed community solar project will be primarily built by a contracted EPC company, complete the following (optional, complete if known):

*If the EPC company information is left blank and the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program, the Applicant must inform the Board of the information below once the EPC company becomes known.*

EPC Company Name (optional, complete if applicable): \_\_\_\_\_  
 First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_  
 Daytime Phone: \_\_\_\_\_ Email: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 Municipality: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**IV. Property/Site Owner Information**

Property Owner Company/Entity Name: \_\_\_\_\_  
 First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_  
 Daytime Phone: \_\_\_\_\_ Email: \_\_\_\_\_  
 Applicant Mailing Address: \_\_\_\_\_  
 Municipality: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**V. Community Solar Subscriber Organization (optional, complete if known)**

*If this section, "Community Solar Subscriber Organization," is left blank and the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program, the Applicant must inform the Board of the information below once the Subscriber Organization becomes known.*

Subscriber Organization Company/Entity Name (optional, complete if applicable): \_\_\_\_\_  
 First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_  
 Daytime Phone: \_\_\_\_\_ Email: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 Municipality: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**VI. Proposed Community Solar Facility Characteristics**

Community Solar Facility Size (as denominated on the PV panels): \_\_\_\_\_ MWdc  
 \*Any application for a system larger than 5 MWdc will be automatically eliminated. If awarded, projects will be held to the MWdc size indicated in this Application.

Community Solar Facility Location (Address): \_\_\_\_\_  
 Municipality: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Name of Property (optional, complete if applicable): \_\_\_\_\_

Property Block and Lot Number(s): \_\_\_\_\_

Community Solar Site Coordinates: \_\_\_\_\_ Longitude \_\_\_\_\_ Latitude

Total Acreage of Property Block and Lots: \_\_\_\_\_ acres

Total Acreage of Community Solar Facility: \_\_\_\_\_ acres

Attach a delineated map of the portion of the property on which the community solar facility will be located in PDF format. The map must be provided in color. Note: Applications may be required upon request to submit a copy of the delineated map as a design plan in drawing file format (.dwg) or as a shapefile (.shp), in order to facilitate integration with Geographic Information System (GIS) software.

EDC electric service territory in which the proposed community solar facility is located: *(select one)*

- Atlantic City Electric                       Jersey Central Power & Light  
 Public Service Electric & Gas               Rockland Electric Co.

Estimated time from Application selection to project completion\* *(The Applicant should provide a good faith estimate of the date of project completion; however, this data is being collected for informational purposes only.)*: \_\_\_\_\_ (month) \_\_\_\_\_ (year)

\*Project completion is defined pursuant to the definition at N.J.A.C. 14:8-9.3 as being fully operational, up to and including having subscribers receive bill credits for their subscription to the project. Projects must be fully operational within 12 months of receiving conditional approval by the Board (subject to change according to the proposed rule amendment described in the Terms and Conditions).

The proposed community solar facility is an existing project\* .....  Yes  No

If "Yes," the Application will not be considered by the Board. See section B. XIII. for special provisions for projects having received a subsection (t) conditional certification from the Board prior to February 19, 2019.

\*An existing project is defined in N.J.A.C. 14:8-9.2 as a solar project having begun operation and/or been approved by the Board for connection to the distribution system prior to February 19, 2019.

**VII. Community Solar Facility Siting**

1. The proposed community solar project has site control\* .....  Yes  No

If "Yes," attach proof of site control.

If "No," the Application will be deemed incomplete.

\*Site control is defined as property ownership or option to purchase, signed lease or option to lease, or signed contract for use as a community solar site or option to contract for use as a community solar site. The site control must be specific to the project in this Application, and may not be contingent on the approval of another Application submitted in PY2.



2. The proposed community solar facility is located, in part or in whole, on preserved farmland\* .....  Yes  No

If “Yes,” the Application will not be considered by the Board.

\*Preserved farmland is defined in N.J.A.C. 14:8-9.2 as land from which a permanent development easement was conveyed and a deed of easement was recorded with the county clerk’s office pursuant to N.J.S.A. 4:1C-11 et seq.; land subject to a farmland preservation program agreement recorded with the county clerk’s office pursuant to N.J.S.A. 4:1C-24; land from which development potential has been transferred pursuant to N.J.S.A. 40:55D-113 et seq. or N.J.S.A. 40:55D-137 et seq.; or land conveyed or dedicated by agricultural restriction pursuant to N.J.S.A. 40:55D-39.1.

3. The proposed community solar facility is located, in part or in whole, on Green Acres preserved open space\* or on land owned by the New Jersey Department of Environmental Protection (NJDEP) .....  Yes  No

If “Yes,” the Applicant must attach special authorization from NJDEP for the site to host a community solar facility. The Board will not consider Applications for projects located, in part or in whole, on Green Acres preserved open space or on land owned by NJDEP, unless the Applicant has received special authorization from NJDEP and includes proof of such special authorization in the Application package.

\*Green Acres preserved open space is defined in N.J.A.C. 14:8-9.2 as land classified as either “funded parkland” or “unfunded parkland” under N.J.A.C. 7:36, or land purchased by the State with “Green Acres funding” (as defined at N.J.A.C. 7:36).

4. The proposed community solar facility is located, in part or in whole, on (check all that apply):

- a landfill (see question 7 below)
- a brownfield (see question 8 below)
- an area of historic fill (see question 9 below)
- a rooftop (see question 10 below)
- a canopy over a parking lot or parking deck
- a canopy over another type of impervious surface (e.g. walkway)
- a water reservoir or other water body (“floating solar”) (see question 11 below)
- a former sand or gravel pit or former mine
- farmland\* (see definition below)
- other (see question 5 below): \_\_\_\_\_

\*Farmland is defined as land that has been actively devoted to agricultural or horticultural use and that is/has been valued, assessed, and taxed pursuant to the “Farmland Assessment Act of 1964,” P.L. 1964, c.48 (C. 54:4-23.1 et seq.) at any time within the ten year period prior to the date of submission of the Application.

5. If you answered “other” to question 4 above, describe the proposed site and explain why it is appropriate for siting a community solar facility:



6. The proposed community solar facility is located, in part or in whole, on land located in:

- the New Jersey Highlands Planning Area or Preservation Area
- the New Jersey Pinelands

If the project is a ground mounted project (i.e. not rooftop or canopy), and answered “Yes” to either of the options above, include a letter or other determination from the New Jersey Highlands Council or the New Jersey Pinelands Commission, as relevant, stating that the proposed project is consistent with land use priorities in the area.

7. If the proposed community solar facility is located, in part or in whole, on a landfill, provide the name of the landfill, as identified in NJDEP’s database of New Jersey landfills, available at [www.nj.gov/dep/dshw/lrm/landfill.htm](http://www.nj.gov/dep/dshw/lrm/landfill.htm): \_\_\_\_\_

8. If the proposed community solar facility is located, in part or in whole, on a brownfield, has a final remediation document been issued for the property? .....  Yes  No  
 If “Yes,” attach a copy of the Response Action Outcome (“RAO”) issued by a Licensed Site Remediation Professional (“LSRP”) or the No Further Action (“NFA”) letter issued by NJDEP.

9. If the proposed community solar facility is located, in part or in whole, on an area of historic fill, have the remedial investigation requirements pursuant to the Technical Requirements for Site Remediation, N.J.A.C. 7:26E-4.7 been implemented? .....  Yes  No  
 Has the remediation of the historic fill been completed pursuant to the Technical Requirements for Site Remediation, N.J.A.C. 7:26E-5.4? .....  Yes  No  
 If the remediation of the historic fill has been completed, attach a copy of the Response Action Outcome (“RAO”) issued by a Licensed Site Remediation Professional (“LSRP”) or the No Further Action (“NFA”) letter issued by NJDEP.

10. If the proposed community solar facility is located, in part or in whole, on a rooftop, has the Applicant verified that the roof is structurally able to support a solar system? .....  Yes  No  
 If “Yes,” attach substantiating evidence.  
 If “No,” the application will not be considered by the Board.

11. If the proposed community solar facility is located, in part or in whole, on a water reservoir or other water body (“floating solar”), is the facility located at a water treatment plant or sand and gravel pit that has little to no established floral and faunal resources?  
 .....  Yes  No



If “Yes,” provide supporting details and attach substantiating evidence if needed.

\*All proposed floating solar projects are required to meet with NJDEP’s OPPN prior to submitting an Application. Applicants are responsible for contacting NJDEP with sufficient advance notice to ensure that a meeting will occur prior to the deadline to submit an Application. Please see section VIII Permits, Question 2 for more information.

12. The proposed community solar facility is located on the property of an affordable housing building or complex .....  Yes  No

13. The proposed community solar facility is located on an area designated in need of redevelopment .....  Yes  No

If “Yes,” attach proof of the designation of the area as being in need of redevelopment from a municipal, county, or state entity.

14. The proposed community solar facility is located in an Economic Opportunity Zone, as defined by the New Jersey Department of Community Affairs (“DCA”) .....  Yes  No

If “Yes,” attach proof that the facility is located in an Economic Opportunity Zone.

\*More information about Economic Opportunity Zones are available at the following link:  
[https://www.state.nj.us/dca/divisions/lps/opp\\_zones.html](https://www.state.nj.us/dca/divisions/lps/opp_zones.html).

15. The proposed community solar facility is located on land or a building that is preserved by a municipal, county, state, or federal entity .....  Yes  No

If “Yes,” attach proof of the designation of the site as “preserved” from a municipal, county, or state entity, and evidence that such designation would not conflict with the proposed solar facility.

16. The proposed community solar facility is located, in part or in whole, on land that includes trees .....  Yes  No

Construction of the proposed community solar facility will require cutting down one or more trees .....  Yes  No

If “Yes,” estimated number of trees required to be cut for construction: \_\_\_\_\_

If “Yes,” estimated number of acres of trees that required to be cut for construction:  
 \_\_\_\_\_

17. Are there any use restrictions at the site? .....  Yes  No

If “Yes,” explain the use restriction below and provide documentation that the proposed community solar project is not prohibited.



Will the use restriction(s) be required to be modified by variance or other means?  
 .....  Yes  No

If “Yes,” explain the modification below.

18. The proposed community solar facility has been specifically designed or planned to preserve or enhance the site (e.g. landscaping, site and enhancements, pollination support, etc.) This represents site improvements beyond required basic site improvements .....  Yes  No  
 If “Yes,” explain below, and provide any substantiating documentation in an attachment. Explain how the proposed site enhancements will be made and maintained for the life of the project. If implementing pollination support, explain what type of pollination support, how this support is expected to help local ecosystems, and whether the proposed pollination support has received certifications or other verification.



19. This question is for informational purposes only, and will not impact the Application’s score. The Board is interested in learning more about ways in which “dual use” projects may be implemented in the Pilot Program:

The proposed community solar facility is a “dual use” project: i.e. the project site will remain in active agricultural production throughout the life of the project (e.g. crop production under or between the panels, livestock grazing).....  Yes  No

\*Wildflower planting or other pollination support is not considered dual use for purposes of this question (pollination support is question 18).

If “Yes,” explain what agricultural production will be maintained on the site and will be consistent with the presence of a solar system. Provide any substantiating documentation in an attachment.



VIII. Permits

1. The Applicant has completed the NJDEP Permit Readiness Checklist, and will submit it as an attachment to this Application.....  Yes  No  
 If “No,” the Application will be deemed incomplete. This requirement only applies to ground mounted and floating solar projects. Community solar projects located on a rooftop, parking lot, or parking structure are exempt from this requirement.

\*Applicants are not required to submit the Permit Readiness Checklist to NJDEP prior to submitting an Application to the Board, except in the case of floating solar projects.

2. The Applicant has met with NJDEP’s OPPN .....  Yes  No  
 If “Yes,” attach meeting notes or relevant correspondence with NJDEP’s OPPN.

\* If the Applicant met with OPPN or received comments from OPPN (formerly PCER) for this project as part of the Program Year 1 Application process, and if the details of the project and the site characteristics have remained the same, those comments remain valid. Please include those comments or meeting notes as an attachment to the Application.

\*A meeting with NJDEP’s OPPN is not required prior to submitting an Application. Exception: all floating solar projects are required to meet with NJDEP’s OPPN prior to submitting an Application. Applicants with a floating solar project are responsible for contacting NJDEP with sufficient advance notice to ensure that a meeting will occur prior to the deadline to submit an Application.

3. The Applicant has received all non-ministerial permits\* for this project (optional) .....  Yes  No

\*Receiving all non-ministerial permits is not required prior to submitting an Application.

\*A non-ministerial permit is one in which one or more officials consider various factors and exercise some discretion in deciding whether to issue or deny a permit. This is in contrast to a ministerial permit, for which approval is contingent upon the project meeting pre-determined and established standards. Examples of non-ministerial permits include: local planning board authorization, use variances, Pinelands or Highlands Commission approvals, etc. Examples of ministerial permits include building permits and electrical permits.

4. Please list all permits, approvals, or other authorizations that will be needed for the construction and operation of the proposed community solar facility pursuant to local, state and federal laws and regulations. Include permits that have already been received, have been applied for, and that will need to be applied for. These include:
  - a. Permits, approvals, or other authorizations from NJDEP (i.e. Land Use, Air Quality, New Jersey Pollutant Discharge Elimination System “NJPDES”, etc.) for the property.
  - b. Permits, approvals, or other authorizations from NJDEP (i.e. Land Use, Air Quality, NJPDES, etc.) directly related to the installation and operation of a solar facility on this property.





- c. Permits, approvals, or other authorizations other than those from NJDEP for the development, construction, or operation of the community solar facility (including local zoning and other local and state permits)

An Application that does not list all permits, approvals, or other authorizations that will be needed for the construction and operation of the proposed community solar facility will be deemed incomplete.

If a permit has been received, attach a copy of the permit.

Permit Name & Description	Permitting Agency/Entity	Date Permit Applied for ( <i>if applicable</i> ) / Date Permit Received ( <i>if applicable</i> )

5. The Applicant has consulted the hosting capacity map of the relevant EDC via the EDC’s website (links are available on the NJCEP website) and determined that, based on the capacity hosting map as published at the date of submission of the Application, there is sufficient capacity available at the proposed location to build the proposed community solar facility .....  Yes  No

If “Yes,” include a screenshot of the capacity hosting map at the proposed location, showing the available capacity.

If the hosting capacity map shows insufficient capacity, the Application will not be considered by the Board, unless the Applicant provides: 1) a letter from the relevant EDC indicating that the hosting capacity map is incorrect in that location, or 2) an assessment from the relevant EDC of the cost of the interconnection upgrade that would be required to enable the interconnection of the proposed system, and a commitment from the Applicant to pay those upgrade costs if the project were to be selected by the Board.

Exception: Projects located in PSE&G service territory for which the hosting capacity map shows insufficient capacity available at the planned location may be eligible for a waiver of this requirement. If this application is seeking to exercise this waiver, please check “Yes” below and attach the waiver requirements as described in the Board’s Order: <https://www.njcleanenergy.com/files/file/CommunitySolar/FY21/8E%20-%20ORDER%20PSEG%20Interconnection.pdf>.

This project is exercising the PSE&G hosting capacity map waiver: .....  Yes  No



6. The Applicant has conducted an interconnection study for the proposed system *(optional)* .....  Yes  No  
 If “Yes,” include the interconnection study received from the EDC.

**IX. Community Solar Subscriptions and Subscribers**

1. Estimated or Anticipated Number of Subscribers *(please provide a good faith estimate or range)*:  
 \_\_\_\_\_

2. Estimated or Anticipated Breakdown of Subscribers *(please provide a good faith estimate or range of the kWh of project allocated to each category)*:  
 Residential: \_\_\_\_\_ Commercial: \_\_\_\_\_  
 Industrial: \_\_\_\_\_ Other: \_\_\_\_\_  
 (define “other”: \_\_\_\_\_)

3. The proposed community solar project is an LMI project\* .....  Yes  No  
 \*An LMI project is defined pursuant to N.J.A.C. 14:8-9 as a community solar project in which a minimum 51 percent of project capacity is subscribed by LMI subscribers.

4. The proposed community solar project has a clear plan for effective and respectful customer engagement process. ....  Yes  No  
 If “Yes,” attach evidence of experience on projects serving LMI communities or partnerships with organizations that have experience serving LMI communities.

5. The proposed community solar project will allocate at least 51% of project capacity to residential customers .....  Yes  No

6. An affordable housing provider is seeking to qualify as an LMI subscriber for the purposes of the community solar project .....  Yes  No  
 If “Yes,” estimated or anticipated percentage of the project capacity for the affordable housing provider’s subscription *(provide an estimate or range)*: \_\_\_\_\_

If “Yes,” what specific, substantial, identifiable, and quantifiable long-term benefits from the community solar subscription are being passed through to their residents/tenants?



Additionally, the affordable housing provider must attach a signed affidavit that the specific, substantial, identifiable, and quantifiable long-term benefits from the community solar subscription will be passed through to their residents/tenants.

If “No,” please be aware that, if, at any time during the operating life of the community solar project an affordable housing provider wishes to subscribe to the community solar project as an LMI subscriber, it must submit a signed affidavit that the specific, substantial, identifiable, and quantifiable benefits from the community solar subscription will be passed through to its residents/tenants.

7. This project uses an anchor subscriber (*optional*) .....  Yes  No  
 If “Yes,” name of the anchor subscriber (*optional*): \_\_\_\_\_  
 Estimated or anticipated percentage or range of the project capacity for the anchor subscriber’s subscription: \_\_\_\_\_

8. Is there any expectation that the account holder of a master meter will subscribe to the community solar project on behalf of its tenants? .....  Yes  No  
 If “Yes,” what specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription are being passed through to the tenants?



Additionally, the account holder of the master meter must attach a signed affidavit that the specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription will be passed through to the tenants.

If “No,” please be aware that, if, at any time during the operating life of the community solar project the account holder of a master meter wishes to subscribe to the community solar project on behalf of its tenants, it must submit to the Board a signed affidavit that the specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription will be passed through to its tenants.

9. The geographic restriction for distance between project site and subscribers is: (*select one*)  
 No geographic restriction: whole EDC service territory  
 Same county OR same county and adjacent counties  
 Same municipality OR same municipality and adjacent municipalities

Note: The geographic restriction selected here will apply for the lifetime of the project, barring special dispensation from the Board, pursuant to N.J.A.C. 14:8-9.5(a).



10. Product Offering for LMI subscribers: *(The Applicant must also complete and attach one or more product offering form(s) found in Appendix A. See Appendix A for exemptions.)*

The subscription proposed offers guaranteed or fixed savings to subscribers .....  Yes  No

If "Yes," the guaranteed or fixed savings are offered as:

- A percentage saving on the customer's annual electric utility bill
- A percentage saving on the customer's community solar bill credit
- Other: \_\_\_\_\_

If "Yes," the proposed savings represent:

- 0% - 5% of the customer's annual electric utility bill or bill credit
- 5% - 10% of the customer's annual electric utility bill or bill credit
- 10% - 20% of the customer's annual electric utility bill or bill credit
- over 20% of the customer's annual electric utility bill or bill credit

The subscription proposed offers subscribers ownership or a pathway to ownership of a share of the community solar facility .....  Yes  No

If "Yes," include proof of a pathway to ownership of a share of the community solar facility offered to the subscribers in Appendix A.

11. Product Offering for non-LMI subscribers: *(The Applicant must also complete and attach one or more product offering form(s) found in Appendix A. See Appendix A for exemptions.)*

The subscription proposed offers guaranteed or fixed savings to subscribers .....  Yes  No

If "Yes," the guaranteed or fixed savings are offered as:

- A percentage saving on the customer's annual electric utility bill
- A percentage saving on the customer's community solar bill credit
- Other: \_\_\_\_\_

If "Yes," the proposed savings represent:

- 0% - 5% of the customer's annual electric utility bill or bill credit
- 5% - 10% of the customer's annual electric utility bill or bill credit
- 10% - 20% of the customer's annual electric utility bill or bill credit
- over 20% of the customer's annual electric utility bill or bill credit

The subscription proposed offers subscribers ownership or a pathway to ownership of a share of the community solar facility .....  Yes  No

If "Yes," include proof of a pathway to ownership of a share of the community solar facility offered to the subscribers in Appendix A.



12. The list of approved community solar projects will be published on the Board’s website. Additionally, subscriber organizations have the option of indicating, on this list, that the project is currently seeking subscribers.

If this project is approved, the Board should indicate on its website that the project is currently seeking subscribers .....  Yes  No

If “Yes,” the contact information indicated on the Board’s website should read:

Company/Entity Name: \_\_\_\_\_ Contact Name: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Email: \_\_\_\_\_

\*It is the responsibility of the project’s subscriber organization to notify the Board if/when the project is no longer seeking subscribers, and request that the Board remove the above information on its website.

**X. Community Engagement**

1. The proposed community solar facility is located on land or a building owned or controlled by a government entity, including, but not limited to, a municipal, county, state, or federal entity .....  Yes  No

2. The proposed community solar project is being developed by or in partnership or collaboration\* with the municipality in which the project is located .....  Yes  No  
 If “Yes,” explain how and attach evidence of the project being developed by or in partnership or collaboration with the municipality in which the project is located.

\*Partnership or collaboration with the municipality is defined as clear and ongoing municipal involvement in the approval of the design, development, or operation of the proposed community solar project (e.g. project is located on a municipal site, municipality facilitating subscriber acquisition, municipal involvement in defining the subscription terms, etc.). Examples of evidence may include a formal partnership, a municipal request for proposals or other public bidding process, letter describing the municipality’s involvement in the project or meeting minutes. Documentation must be specific to the project described in this Application; “generic” documentation of support that applies to multiple projects submitted by the same Applicant will not be accepted.

3. The proposed community solar project is being developed by or in partnership or collaboration\* with one or more local community organization(s) and/or affordable housing providers in the area in which the project is located .....  Yes  No



If “Yes,” explain how and attach evidence of the project being developed by or in partnership or collaboration with the local community organization(s) and/or affordable housing providers.

\*Partnership or collaboration is defined as clear and ongoing involvement by the local community organization(s) and/or affordable housing providers in the approval of the design, development, or operation of the proposed community solar project (e.g. community organization owns the proposed site, community organization is facilitating subscriber acquisition or was involved in the design of the community solar product offering, etc.). Documentation must be specific to the project described in this Application; “generic” documentation of support that applies to multiple projects submitted by the same Applicant will not be accepted.

4. The proposed community solar project was developed, at least in part, with support and in consultation with the community in which the project is located\* .....  Yes  No  
 If “Yes,” please describe the consultative process below.

\*A community consultative process may include any of the following: letter of support from municipality and/or community organizations and/or local affordable housing provider demonstrating their awareness and support of the project; one or more opportunities for public intervention; and/or outreach to the municipality and/or local community organizations and/or affordable housing provider.

**XI. Project Cost**

*This section, “Project Cost,” is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. In all other cases, this section is required.*

1. Provide the following cost estimates and attach substantiating evidence in the form of an unlocked Excel spreadsheet model:

*Applicants are expected to provide a good faith estimate of costs associated with the proposed community solar project, as they are known at the time the Application is filed with the Board. This information will not be used in the evaluation of the proposed community solar project.*



Net Installed Cost (in \$)	
Net Installed Cost (in \$/Watt)	
Initial Customer Acquisition Cost (in \$/Watt)	
Annual Customer Churn Rate (in %)	
Annual Operating Expenses (in c/kWh)	
Levelized Cost of Energy ("LCOE") (in c/kWh)	

- Pursuant to N.J.A.C. 14:8-9.7(q), "community solar projects shall be eligible to apply, via a one-time election prior to the delivery of any energy from the facility, for SRECs or Class I RECs, as applicable, or to any subsequent compensations as determined by the Board pursuant to the Clean Energy Act." Consistent with the Clean Energy Act of 2018, the Board is no longer accepting applications for the SREC Registration Program ("SRP"). Projects granted conditional approval to participate in PY2 will be eligible to apply for the TI Program.

For indicative purposes only, please indicate all local, state and federal tax incentives which will be applied to if the proposed community solar project is approved for participation in the Community Solar Energy Pilot Program:



**XII. Other Benefits**

- The proposed community solar facility will be paired with storage .....  Yes  No  
 If "Yes," please describe the proposed storage facility:
  - Storage system size: \_\_\_\_\_ MW \_\_\_\_\_ MWh
  - The storage offtaker is also a subscriber to the proposed community solar facility .....  Yes  No

\*Community solar credits will only be provided to community solar generation; credits will not be provided to energy discharged to the grid from a storage facility (i.e. no "double counting").

- The proposed community solar facility will be paired with one or more EV charging stations .....  Yes  No  
 If "Yes," how many EV charging stations: \_\_\_\_\_  
 Will these charging stations be public and/or private? \_\_\_\_\_  
 Please provide additional details:



3. The proposed community solar facility will provide energy audits and/or energy efficiency improvements to subscribers.....  Yes  No

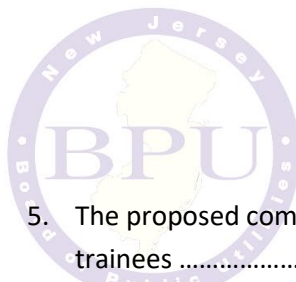
If "Yes," please provide additional details:

4. The proposed community solar project will create temporary or permanent jobs in New Jersey .....  Yes  No

If "Yes," estimated number of temporary jobs created in New Jersey: \_\_\_\_\_

If "Yes," estimated number of permanent jobs created in New Jersey: \_\_\_\_\_

If "Yes," explain what these jobs are:



5. The proposed community solar project will provide job training opportunities for local solar trainees .....  Yes  No

If "Yes," will the job training be provided through a registered apprenticeship? ....  Yes  No

If "Yes," identify the entity or entities through which job training is or will be organized (e.g. New Jersey GAINS program, partnership with local school):

**XIII. Special Authorizations and Exemptions**

1. Is the proposed community solar project co-located with another community solar facility (as defined at N.J.A.C. 14:8-9.2)? .....  Yes  No

If "Yes," please explain why the co-location can be approved by the Board, consistent with the provisions at N.J.A.C. 14:8-9





2. Does this project seek an exemption from the 10-subscriber minimum? .....  Yes  No  
 If “Yes,” please demonstrate below (and attach supporting documents as relevant):
- a. That the project is sited on the property of a multi-family building.
  - b. That the project will provide specific, identifiable, and quantifiable benefits to the households residing in said multi-family building.

3. Specific sections throughout the Application Form are identified as optional only if: 1) the Applicant is a government entity (municipal, county, or state), and 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. Is the Applicant a government entity that plans to select the developer via such bidding process? .....  Yes  No  
 If “Yes,” attach a letter describing the proposed bidding process and a copy of the request for bids (RFP, RFQ, or other bidding document) that is ready to be issued if the project is granted conditional approval by the Board. The Applicant must further commit to issuing said RFP, RFQ, or other bidding process within 90 days of the proposed project being approved by the Board for participation in the Community Solar Energy Pilot Program. The Applicant will be required to provide the information contained in those optional sections to the Board once it becomes known.

4. Has the proposed community solar project received, in part or in whole, a subsection (t) conditional certification from the Board prior to February 19, 2019? .....  Yes  No  
 If “Yes,” the project may apply to participate in the Community Solar Energy Pilot Program if it commits to withdrawing the applicable subsection (t) conditional certification immediately if it is approved by the Board for participation in the Community Solar Energy Pilot Program. Attach a signed affidavit that the Applicant will immediately withdraw the applicable subsection (t) conditional certification if the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program.

5. The Board has proposed an amendment to the Pilot Program rules, which, if approved, would allow municipally-owned community solar projects to submit an application for a project that requests an exemption from the provisions at N.J.A.C. 14:8-9.10(b)(1) mandating subscriber enrollment via affirmative consent (i.e. an opt-out community solar project). Projects that intend



to utilize opt-out subscriber enrollment if the proposed rule amendment is approved by the Board must indicate such intent below. If the Application is selected but the proposed rule amendment is not approved by the Board, the project will be required to proceed using affirmative consent (i.e. "opt-in") subscriber enrollment rules, as currently provided for in the Pilot Program rules at N.J.A.C. 14:8-9.10(b)(1).

A. This Application is for an opt-out community solar project.....  Yes  No

B. The proposed opt-out project will be owned and operated by the municipality for the duration of the project life (excluding a possible period of temporary third-party, tax-credit investor ownership to maximize the financeability of the opt-out project, subject to appropriate contractual provisions that maintain the municipality's ultimate control of the proposed opt-out project).....  Yes  No

If "Yes," the municipality name is: \_\_\_\_\_

If "No," the project will not be considered for eligibility as an opt-out community solar project.

C. The proposed opt-out project has been authorized by municipal ordinance or resolution .....  Yes  No

If "Yes," attach a copy of the municipal ordinance or resolution allowing the development, ownership, and operation an opt-out community solar project, contingent on the proposed rules being approved by the Board.

If "No," the project will not be considered for eligibility as an opt-out community solar project.

D. The proposed opt-out project will allocate all project capacity to LMI subscribers .....  Yes  No

If "No," the project will not be considered for eligibility as an opt-out community solar project.

E. Describe the process by which the municipality will identify the customers that will be automatically enrolled in the proposed opt-out project: \_\_\_\_\_

F. The municipal applicant has reviewed the proposed rule amendment allowing for opt-out projects, and agrees to adhere to the proposed rules and any subsequent modification if they are approved by the Board. The applicant understands that any approval for the project to operate as an opt-out community solar project is contingent on the proposed rule amendment being approved by the Board. The applicant understands that, if the proposed rule amendment is not approved by the Board, the project, if approved, will be required to



adhere to the existing “opt-in” rules for subscriber enrollment (N.J.A.C. 14:8-9.10(b)(1)).  
 .....  Yes  No

Attach an affidavit that the municipal project owner will comply with all applicable rules and regulations, particularly those relating to consumer privacy and consumer protection.



**Section C: Certifications**

*Instructions: Original signatures on all certifications are required. All certifications in this section must be notarized; instructions on how to submit certifications will be provided as part of the online application process. Certifications must be dated after October 3, 2020: PY1 certifications may not be reused in PY2.*

**Applicant Certification**

The undersigned warrants, certifies, and represents that:

- 1) I, Charles Hughes (name) am the Business Administrator (title) of the Applicant Pittsgrove Township (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the Transition Incentive Program, if applicable; and
- 5) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 6) I acknowledge that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: [Handwritten Signature] Date: 2/3/2021

Print Name: CHARLES HUGHES  
 Title: BUSINESS ADMINISTRATOR Company: PITTSGROVE TWP

Signed and sworn to before me on this 3<sup>rd</sup> day of February, 2021

Signature EILEEN O'HARA

Name **EILEEN O'HARA**  
**NOTARY PUBLIC**  
**STATE OF NEW JERSEY**  
 MY COMMISSION EXPIRES MARCH 27, 2022  
 New Jersey Board of Public Utilities



**Project Owner Certification**

The undersigned warrants, certifies, and represents that:

- 1) I, Charles Hughes (name) am the Business Administrator (title) of the Project Owner Pittsgrove Township (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the Transition Incentive Program, if applicable; and
- 5) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 6) I acknowledge that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: *CH* Date: 2/3/2021

Print Name: CHARLES HUGHES  
Title: BUSINESS ADMINISTRATOR Company: PITTS GROVE TWP

Signed and sworn to before me on this 3rd day of February, 2021

*Eileen O'Hara*  
Signature

Name **EILEEN O'HARA**  
**NOTARY PUBLIC**  
**STATE OF NEW JERSEY**  
**MY COMMISSION EXPIRES MARCH 27, 2022**



Project Owner Certification

The undersigned warrants, certifies, and represents that:

- 1) I, Susan Brodie (name) am the COO (title) of the Project Owner HESP Solar LLC (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the Transition Incentive Program, if applicable; and
- 5) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 6) I acknowledge that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: [Handwritten Signature] Date: 1/27/21

Print Name: Susan Brodie  
 Title: COO Company: HESP Solar LLC

Signed and sworn to before me on this 28<sup>th</sup> day of January, 2021

Signature [Handwritten Signature]  
 Name \_\_\_\_\_

ARTHUR GRUEN  
 Notary Public, State of New York  
 No. 01GR6175212  
 Qualified in Rockland County  
 Commission Expires Oct. 9, 2023



Project Developer Certification

This Certification "Project Developer / Installer" is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process. In all other cases, this Certification is required.

The undersigned warrants, certifies, and represents that:

- 1) I, Susan Brodie (name) am the COO (title) of the Project Developer HESP Solar LLC (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the Transition Incentive Program, if applicable; and
5) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
6) I acknowledge that submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.

Signature: [Handwritten Signature] Date: 1/27/21

Print Name: Susan Brodie Company: HESP Solar LLC
Title: COO

Signed and sworn to before me on this 28th day of January, 2021

Signature [Handwritten Signature]
Name

ARTHUR GRUEN
Notary Public, State of New York
No. 01GR6175212
Qualified in Rockland County
Commission Expires Oct. 9, 2023

Property Owner Certification

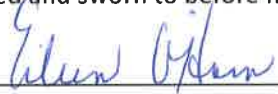
The undersigned warrants, certifies, and represents that:

- 1) I, Charles Hughes (name) am the Business Administrator (title) of the Property Pittsgrove Township (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package pertaining to siting and location of the proposed community solar project has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) My organization or I understand that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 4) I acknowledge that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature:  Date: 2/3/2021

Print Name: CHARLES HUGHES  
 Title: BUSINESS ADMINISTRATOR Company: PITTS GROVE TWP.

Signed and sworn to before me on this 3rd day of February, 2021

  
 Signature

Name **EILEEN O'HARA**  
**NOTARY PUBLIC**  
**STATE OF NEW JERSEY**  
**MY COMMISSION EXPIRES MARCH 27, 2022**





Subscriber Organization Certification (optional, complete if known)

The undersigned warrants, certifies, and represents that:

- 1) I, Charles Hughes (name) am the Business Administrator (title) of the Subscriber Organization Pittsgrove Township (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) My organization understands that information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that any claimed sensitive and trade secret information should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
- 5) I acknowledge that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, I am subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: [Signature] Date: 2/3/2021

Print Name: CHARLES HUGHES

Title: BUSINESS ADMINISTRATOR Company: PITTSBROVE TWP.

Signed and sworn to before me on this 3<sup>rd</sup> day of February, 2021

[Signature]

Signature

EILEEN O'HARA
NOTARY PUBLIC
STATE OF NEW JERSEY
MY COMMISSION EXPIRES MARCH 27, 2022

Name



**Section D: Appendix**

**Appendix A: Product Offering Questionnaire**

Complete the following Product Offering Questionnaire. If there are multiple different product offerings for the proposed community solar project, please complete and attach one Product Offering Questionnaire per product offering. Variations in any product offering require a separate Product Offering Questionnaire. Applicants are expected to provide a good faith description of the product offerings developed for the proposed community solar project, as they are known at the time the Application is filed with the Board. If the proposed project is approved by the Board, the Applicant must notify the Board and receive approval from the Board for any modification or addition to a Product Offering Questionnaire.

Exception: This "Product Offering Questionnaire" is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process.

This Questionnaire is Product Offering number \_\_\_\_\_ of \_\_\_\_\_ (total number of product offerings).

This Product Offering applies to:

- LMI subscribers
- non-LMI subscribers
- both LMI and non-LMI subscribers

1. Community Solar Subscription Type (examples: kilowatt hours per year, kilowatt size, percentage of community solar facility's nameplate capacity, percentage of subscriber's historical usage, percentage of subscriber's actual usage): \_\_\_\_\_
  
2. Community Solar Subscription Price: (check all that apply)
  - Fixed price per month
  - Variable price per month, variation based on: \_\_\_\_\_
  - The subscription price has an escalator of \_\_\_\_\_ % every \_\_\_\_\_ (interval)
  
3. Contract term (length): \_\_\_\_\_ months, or \_\_\_\_\_ years OR  month-to-month
  
4. Fees
  - Sign-up fee: \_\_\_\_\_
  - Early Termination or Cancellation fees: \_\_\_\_\_
  - Other fee(s) and frequency: \_\_\_\_\_
  
5. Does the subscription guarantee or offer fixed savings or specific, quantifiable economic benefits to the subscriber? .....  Yes  No



If "Yes," the savings are guaranteed or fixed:

- As a percentage of monthly utility bill
- As a fixed guaranteed savings compared to average historic bill
- As a fixed percentage of bill credits
- Other: \_\_\_\_\_

6. Special conditions or considerations:



**Appendix B: Required Attachments Checklist**

*Note that this list is for indicative purposes only. Additional attachments may be required, and as identified throughout this Application Form. Please review the Application Form in its entirety, and attach attachments as required. The page numbers reference the pages from the [Application Form](#) as it was originally approved by the Board, not as they may appear in this fillable PDF.*

<b>Required Attachments</b> Attachments marked with an asterisk (*) are only required if the project meets the specified criteria. All others are required for all Applications.	<b>Reference Page Number</b>	<b>Attached?</b>
Delineated map of the portion of the property on which the community solar facility will be located (in color).	p. 10	<input type="checkbox"/> Yes <input type="checkbox"/> No
Proof of site control.	p. 10	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If the proposed project is located, in part or in whole on a rooftop: substantiating evidence that the roof is structurally able to support a solar system.	p. 12	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If the proposed project is located on an area designated in need of redevelopment: proof of the designation of the area as being in need of redevelopment from a municipal, county, or state entity.	p. 13	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If the proposed project is located in an Economic Opportunity Zone ("EOZ"), as defined by DCA: proof that the facility is located in an EOZ.	p. 13	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If the proposed project is located on land or a building that is preserved by a municipal, county, or federal entity: proof of the designation of the site as "preserved" and that the designation would not conflict with the proposed solar facility.	p. 13	<input type="checkbox"/> Yes <input type="checkbox"/> No
Copy of the completed Permit Readiness Checklist.	p. 14	<input type="checkbox"/> Yes <input type="checkbox"/> No
A screenshot of the EDC capacity hosting map at the proposed location, showing the available capacity (in color).	p. 16	<input type="checkbox"/> Yes <input type="checkbox"/> No
Substantiating evidence of project cost in the form of charts and/or spreadsheet models.	p. 20	<input type="checkbox"/> Yes <input type="checkbox"/> No
Product Offering Questionnaire(s) in Appendix A.	p. 30 – 31	<input type="checkbox"/> Yes <input type="checkbox"/> No
Certifications in Section C.	p. 25 – 29	<input type="checkbox"/> Yes <input type="checkbox"/> No

<b>Optional Attachments</b> Attachments marked with an asterisk (*) only apply if the project meets the specified criteria.	<b>Reference Page Number</b>	<b>Attached?</b>
(*) If the project is located, in part or in whole, on a brownfield: copy of the Response Action Outcome (issued by the LSRP) or the No Further Action letter (issued by DEP).	p. 12	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If the project is located, in part or in whole, on an area of historic fill: copy of the Response Action Outcome (issued by the LSRP) or the No Further Action letter (issued by DEP).	p. 12	<input type="checkbox"/> Yes <input type="checkbox"/> No
Substantiating evidence that the proposed community solar facility has been specifically designed or planned to preserve or enhance the site (e.g. landscaping, site and enhancements, pollination support, etc.).	p. 14	<input type="checkbox"/> Yes <input type="checkbox"/> No



<p>Proof of a meeting with NJDEP Office of Permitting and Project Navigation (“OPPN”), if applicable.          (*) Proof of a meeting with OPPN is optional, except for projects that are in part or in whole a floating solar project.          (*) If the Applicant met with OPPN (formerly PCER) during PY1, and there have been no changes to the project or site characteristics, include any comments received from OPPN on the PY1 Application.</p>	p. 14	<input type="checkbox"/> Yes <input type="checkbox"/> No
Permits received for this site or project.	p. 15	<input type="checkbox"/> Yes <input type="checkbox"/> No
Evidence of experience on projects serving LMI communities or partnerships with organizations that have experience serving LMI communities	p.16	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If an affordable housing provider is seeking to qualify as an LMI subscriber for purposes of the community solar project: signed affidavit from the affordable housing provider that the specific, substantial, identifiable, and quantifiable long-term benefits from the community solar subscription will be passed through to their residents/tenants.	p. 17	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If the account holder of a master meter will subscribe on behalf of its tenants: signed affidavit from the account holder that the specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription will be passed through to the tenants	p. 17	<input type="checkbox"/> Yes <input type="checkbox"/> No
Evidence that the proposed project is being developed by or in partnership and collaboration with the municipality in which the project is located.	p. 19	<input type="checkbox"/> Yes <input type="checkbox"/> No
Evidence that the proposed project is being developed in partnership or collaboration with one or more local community organization(s) and/or affordable housing providers in the area in which the project is located.	p. 19 – 20	<input type="checkbox"/> Yes <input type="checkbox"/> No
Evidence that the proposed project is being developed with support and in consultation with the community in which the project is located.	p. 20	<input type="checkbox"/> Yes <input type="checkbox"/> No
(*) If the project is seeking an exemption from the 10-subscriber minimum rule: supporting documents if needed.	p. 22	<input type="checkbox"/> Yes <input type="checkbox"/> No

Required Attachments for Exemptions	Reference Page Number	Attached?
<p>If the Applicant is a government entity (municipal, county, or state), and the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process:</p> <p>⇒ Attach a letter from the Applicant describing the bidding process and a copy of the request for bids (RFP, RFQ, or other bidding document) that is ready to be issued if project is granted conditional approval by the Board.</p>	p. 22	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>If the proposed community solar project is located, in part or in whole, on Green Acres preserved open space or on land owned by NJDEP.</p> <p>⇒ Attach special authorization from NJDEP for the site to host a community solar facility.</p>	p. 11	<input type="checkbox"/> Yes <input type="checkbox"/> No



<p>If the proposed community solar project has received, in part or in whole, a subsection (t) conditional certification from the Board prior to February 19, 2019.</p> <p>⇒ Attach a signed affidavit that the Applicant will immediately withdraw the applicable subsection (t) conditional certification if the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program.</p>	p. 22	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>If the proposed community solar project plans to operate as a municipal opt-out project, contingent on the Board's approval the relevant proposed rules.</p> <p>⇒ Attach a copy of the municipal ordinance or resolution allowing the development, ownership, and operation an opt-out community solar project, contingent on the proposed rules being approved by the Board</p> <p>⇒ Attach an affidavit that the municipal project owner will comply with all applicable rules and regulations, particularly those relating to consumer privacy and consumer protection.</p>	p. 23  p. 24	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No





**Appendix C: Evaluation Criteria**

The Evaluation Criteria chart below lists the various categories that the Board will consider in evaluating project Applications. Projects must score a minimum of 50 points total in order to be considered for participation in the Community Solar Energy Pilot Program. Projects that score above 50 points will be awarded program capacity in order, starting with the highest-scoring project and proceeding to the lowest-scoring project, until the capacity for each EDC territory is filled. The last project to be selected by the Board will be granted conditional approval for its full capacity.

Evaluation Criteria	Max. Points (total possible points: 100)
<b>Low- and Moderate-Income and Environmental Justice Inclusion</b> Higher preference: LMI project	25
<b>Siting</b> Higher preference, e.g.: landfills, brownfields, areas of historic fill, rooftops, parking lots, parking decks, canopies over impervious surfaces (e.g. walkway), former sand and gravel pits, floating solar on water bodies at sand and gravel pits that have little to no established floral and faunal resources (*) Medium preference, e.g.: floating solar on water bodies at water treatment plants that have little to no established floral and faunal resources (*) No Points, e.g.: preserved lands, wetlands, forested areas, farmland Bonus points for site enhancements, e.g. landscaping, land enhancement, pollination support (**) Bonus points if project is located in a redevelopment area or an economic opportunity zone (**) *Note: Applicants with a floating solar project must meet with DEP prior to submitting an Application, and take special notice of DEP's siting guidelines. <i>The siting criteria for floating solar located at sand and gravel pits that have little to no established floral and faunal resources has been moved from "medium preference" to "higher preference" per a Board Order dated January 7, 2021.</i> **Note: bonus points will only be available for projects in the "higher" or "medium" preference siting categories. Projects in the "No Points" siting categories are not eligible for bonus points.	20 Max. possible bonus points: 3 Max. possible bonus points: 2



<p><b>Community and Environmental Justice Engagement</b>          Higher preference: formal agreement, ongoing collaboration or effective partnership with municipality and/or local community organizations and/or affordable housing provider (per Section X, Questions 1, 2, and 3)          Medium preference: consultation with municipality and/or local community organization(s) and/or or affordable housing provider (per Section X, Question 4)          No Points: no collaboration or collaboration has not been proven</p>	15
<p><b>Product Offering</b>          Higher preference: guaranteed savings &gt;20%, flexible terms*          Medium preference: guaranteed savings &gt;10%, flexible terms*          Low preference: guaranteed savings &gt;5%          No Points: no guaranteed savings, no flexible terms*           *Flexible terms may include: no cancellation fee, short-term contract</p>	15
<p><b>Other Benefits</b>          Higher preference: Provides jobs and/or job training and/or demonstrates co-benefits (e.g. paired with storage, EV charging station, energy audits, energy efficiency)</p>	10
<p><b>Geographic Limit within EDC service territory</b>          Higher preference: municipality/adjacent municipality          Medium preference: county/adjacent county          No Points: any geographic location within the EDC service territory</p>	5
<p><b>Project Maturity</b>          Higher preference: project has received all non-ministerial permits; project has completed an interconnection study</p>	5



# Table of Contents: Attachments 1- 13

Introduction and Executive Summary

- 1) Delineated Map of The Portion of The Property on Which the Community Solar Facility Will Be Located
- 2) Proof of Site Control – Lease Agreement
- 3) Copy of The Completed Permit Readiness Checklist and DEP permit package
- 4) Copy of communication with DEP OPPN
- 5) A Screenshot of The EDC Capacity Hosting Map at The Proposed Location
- 6) Substantiating Evidence of Project Cost in The Form of Charts and/or Spreadsheet Models
- 7) Evidence of project property location within a redevelopment area – Redevelopment Plan Attached to Lease Agreement
- 8) Landfill Closure Plan – Lease Agreement Attachment and in DEP permit package
- 9) Proof of Project Maturity
- 10) Evidence That the Proposed Project Is Being Developed by Or in Partnership and Collaboration with The Municipality in Which the Project Is Located – Resolution by Township Committee
- 11) Evidence That the Proposed Project Is Being Developed with Support and In Consultation with The Community in Which the Project Is Located
- 12) Evidence That the Proposed Project Is Being Designed for land enhancement – HESP proposal, technical and O&M sections
- 13) Other Benefits

## Introduction – Pittsgrove Township Community Solar Project

Pittsgrove Township (“Pittsgrove” or the “Township”) appreciates the opportunity to present this application to the Board of Public Utilities (“BPU”) in response to the Year 2 Community Solar Energy Pilot Program solicitation. The Pittsgrove Township Community Solar Project (“Project”) will provide a range of important benefits to our low- and moderate-income (“LMI”) residents. The solar arrays will be located on the closed, Pittsgrove Township Landfill and provide lease revenue to the municipality and savings from clean, solar energy to the most economically vulnerable residents of the Township.

The Project offers several innovative and unique design attributes including:

- The Project will directly support and foster Governor Murphy’s strong environmental justice policy by far exceeding the BPU’s 51% participation rule for qualifying as an LMI Community Solar Project. **The Project will serve 100% LMI customers.**
- The Project is demonstrating the Pittsgrove Township Committee’s commitment to the environment and the community it represents by using a program structure that is “customer-centric”. Pittsgrove will provide a host of outreach, management, contractual, technical, and economic services and customer protections. This approach stands in contrast to the “solar vendor-centric” approach used by most community solar projects. Through this approach, the subscribers will be able to interact with the Township rather than a private sector special purpose entity. The benefit is the Township’s engagement with and responsibility to the subscribers extends beyond just the community solar project and this relationship will ensure the subscribers are receiving the maximum benefit possible, rather than the developer receiving the most profit possible. These benefits are derived from: a) the unique position municipal government has to communicate, connect, and commit to its residents; and b) the innovative agreement that will ensure a simple, predictable energy cost for the subscribers and greater certainty for project economics. By taking on responsibility for owning and leading the Project and facilitating all of its elements in an open, transparent, and rigorous municipally-based process, Pittsgrove assures that participating customers are well-served and their interests are fully represented and protected.
- Pittsgrove’s Community Solar Program will serve the rural, low and moderate income, individually metered residents of Pittsgrove by targeting residents of mobile home parks, senior homeowners, and residents already enrolled in municipal or school assistance programs. Subscriber acquisition will occur through direct outreach to homeowners and a certification process. There will be public meetings, mailings, and access to the program website posted on the Township website. Residents will verify their eligibility either by providing proof of acceptance to other LMI assistance programs, proof of residence within an eligible LMI census tract, or self-certification of income. Pittsgrove is proposing an all-inclusive system to comprehensively reach LMI residents - one that does not discriminate based on their particular housing situation.

- Pittsgrove, as the project lead, has established “peer to peer” relationships with institutions and groups in the community that foster trust. This role is a natural extension of Pittsgrove’s established leadership and activity with respect to sustainability programs and proven track record in cultivating community-centric projects.

Pittsgrove is committed to addressing economic and environmental justice through innovative sustainability efforts such as Community Solar. As rural community, Pittsgrove is particularly vulnerable to the effects of economic changes and the impacts of climate change. Low-income residents and communities in rural areas often bear the brunt of economic changes. The Township would like to provide the most amount of benefit possible to the from the solar project. With our approval, the Township will receive an increased lease payment for use of the landfill and be able to extend savings to residents most in need.

Pittsgrove is proposing this approach which has great potential to unlock increased access to LMI customers in a way that will yield lower risk and more savings for LMI customers.

As described in the Executive Summary and in the body of the Application, this Application meets or exceeds the “highest level of point scoring” for each of the BPU’s evaluation criteria in every category. The project is located on a preferred site, a municipally owned, closed landfill. The application goes above and beyond the 51% LMI requirement, including 100% LMI participation.

The Pittsgrove Township Landfill Solar Project is a mature project. The Township ran an RFP process in 2019 to select a solar developer. Since then, the Township has entered into a lease agreement with the developer. Currently, the Township and HESP Solar are finalizing the redevelopment agreement.

The Township has met with Atlantic City Electric and discussed interconnecting the project. As is illustrated on the Hosting Capacity Map, the local circuit currently has the capacity to accept the system and ACE has confirmed this in our discussions.

The Pittsgrove Township Community Solar Project provides an optimal confluence of benefits to the taxpayers and residents of Pittsgrove. The project meets all the goals of the Community Solar Pilot Program and demonstrates progress towards the State’s renewable energy goals.

## Executive Summary

Pittsgrove’s application unambiguously fully satisfies all the Evaluation Criteria within BPU’s application at its highest point levels. Specifically:

### **1. Low- and Moderate-Income and Environmental Justice**

The application fully and exceedingly satisfies the “Low- and Moderate-Income and Environmental Justice Inclusion” criterion, going above and beyond by guaranteeing exclusive participation by LMI customers.

## **2. Siting**

With regards to the “Siting” criterion, the Project is located on a closed landfill in Pittsgrove, owned by the municipality, one of the "higher preference" sites provided for in the Evaluation Criteria. The Project also receives bonus points under the BPU evaluation criteria for being located in a Redevelopment Area.

## **3. Community and Environmental Justice Engagement**

The Project contains the highest level of “Community and Environmental Justice Engagement” because it is designed, owned, and managed by the community itself – the Township of Pittsgrove and its elected representatives. It couples this approach with extensive engagement with the public at large and particularly with LMI customers who will be the only customers in the Project. This Project will be a highly collaborative effort that brings the community together through proactive communication and outreach.

## **4. Product Offering**

The Project fully satisfies the “Product Offering” criterion by guaranteeing 20% savings, and including flexible terms including no cancellation fees and the opportunity for customers to leave the program at any time.

## **5. Other Benefits**

In the “Other Benefits” category, the Project fulfills multiple criteria for a full 10 point score under the BPU evaluation criteria. The Township’s co-applicant, HESP Solar, will be providing public education and job training in Pittsgrove during the construction of the Project through the Township and schools. Each member of the subscriber group will receive a LED lamp upon enrollment.

## **6. Geographic Limit within EDC service territory**

The solar site is in Pittsgrove and will service Pittsgrove residents or adjacent municipalities within the same EDC territory (ACE).

## **7. Project Maturity**

The Project is highly mature. HESP Solar will internally finance the solar facility and has the financial capacity do so. The Township owns the landfill and has already entered into a lease agreement with HESP Solar. HESP Solar has a strong track record of successfully completing solar projects on public property. The Township has reviewed the ACE Hosting Capacity Map and has found that the project location and general area of the point of interconnection are colored green, meaning they have the capacity available to accept the interconnection of this project. Hosting Capacity Map, attached. ACE will not process interconnection applications for Community Solar Year 2 projects until there are approvals from the BPU.

HESP Solar is ready with designs and completed applications for the first opportunity to submit

for ACE interconnection approval. HESP Solar has prepared and submitted applications for permits and approvals from NJDEP while we wait for approval from this Community Solar Program.

Upon award of participation in the Community Solar Pilot Program, Pittsgrove is fully staffed and resourced to expeditiously implement the Project, which can be operational within 12 months of BPU award. We are excited about delivering benefits to LMI residents and - due to our unwavering commitment described above – are dedicated to ensuring long term success. Unlike third parties, Pittsgrove is fully committed and incented to provide the best pricing and services to its residents on a continuous basis. This will result in a Project that not only provides significant economic benefits but will also improve the health and wellness of our community for many years to come.

We look forward to helping make New Jersey a leader in Community Solar for LMI customers. We are available to answer any questions you may have.

# **Attachment 1**

Delineated Map of The Portion of The Property on Which the  
Community Solar Facility Will Be Located

Copyright - 2019 - All Rights Reserved. All documents prepared by Kupper Engineering Inc. as well as all information depicted on documents are instruments of service with respect to the project for which they were specifically designed and for the listed applicant. Such documents and information are not intended or represented to be suitable for reuse by the listed applicant or others on extensions or modification of the project or on any project. Any reproduction or reuse of these documents and information without the written consent of Kupper Engineering, Inc. is prohibited. Kupper Engineering, Inc. shall have no liability or responsibility for any unauthorized use, reproduction or reuse of said documents and/or information and the listed applicant and/or owner shall indemnify and hold harmless Kupper Engineering, Inc. from any and all claims, damages, losses and expenses arising out of or resulting from the said unauthorized reproduction, misuse, or misappropriation of said documents and/or information.



**SHEET NOTES:**

- HANDHOLE LOCATIONS ARE APPROXIMATE. PROVIDE ADDITIONAL HANDHOLES IF REQUIRED.
- EXACT POLE SPACING AND LOCATION TO BE COORDINATED BY CIVIL AND SURVEYOR DRAWINGS.
- ANY EXISTING CURB, MACADAM, EXISTING STORM SEWER, CONCRETE PAD OR VEGETATION DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONDUIT ROUTING LAYOUTS ARE GENERIC AND DO NOT REPRESENT ALL CONDUITS REQUIRED IN SCOPE OF WORK. MAJOR CONDUIT ROUTES ARE SHOWN TO PROVIDE COORDINATION BETWEEN TRADES AND TO LOCATE CONDUIT ENTRANCE POINTS. IN GENERAL, THESE ENTRANCE POINTS TO EQUIPMENT SHALL BE FOLLOWED TO PREVENT SHEARING OF CONDUITS FROM PAD SETTLEMENTS. COORDINATE LAYOUT OF CONDUITS AND EXACT BURIAL DEPTHS WITH SHOP DRAWINGS. BURIAL DEPTHS AND SPACING IN ACCORDANCE WITH THE NEC.
- DRAWINGS DO NOT REPRESENT EXACT END LOCATION OF WIRING AND CONDUIT. WIRING AND CONDUIT SHALL BE PROVIDED AS REQUIRED TO EXTEND TO THE FINAL TERMINAL BLOCK DESTINATIONS. E.C. SHALL COORDINATE WITH EACH MANUFACTURER'S SHOP DRAWINGS.
- COORDINATE CONDUIT ENTRY LOCATION WITH EQUIPMENT MANUFACTURER.
- E.C. SHALL COORDINATE WITH CIVIL DRAWINGS FOR EXACT LOCATION OF HORIZONTAL DIRECTIONAL DRILL (JACKING PITS), AND UNDERGROUND DUCTBANK IN FIELD.
- POLE LINE SHALL MEET ALL OF ACE REQUIREMENTS.
- SPLICE LOCATIONS SHALL BE PROVIDED.

**SYSTEM SPECS**

DC SYSTEM SIZE	2249.8 KW
AC SYSTEM SIZE	1500 KW
MODULE MODEL	SPR-X21-470-COM
MODULE RATING	470W
TOTAL MODULE QUANTITY	4787
INVERTER MODEL	CHINT CPS SCA100KTL-DO/US-600
MODULES PER STRING	14
TOTAL ACREAGE	(+/-)9.5 ACRES
ACRES/ MW	4.22 ACRES/ MW
TILT ANGLE	15°
AZIMUTH	180°
RACKING	FIXED TILT

**1 ELECTRICAL SITE PLAN**  
 SCALE: 1" = 100'  
 GPS COORDINATES: 39.53833; -75.15444  
 DRAWING NORTH



SCOTT T. KUPPER  
 NJ PROFESSIONAL ENGINEER  
 NJ PE No. 24GE04161600 / NJ COA No. 24GA28110700



**PITTSBURGH LANDFILL**  
**3.36MW DC / 2.7MW AC**

TIVERSTOCK DRIVE,  
 PITTSBURGH TOWNSHIP  
 SALEM COUNTY, NJ

Rev. #	description	date	By	Chk	Dwg
A	ISSUE FOR IX APPLICATION	07/28/2021			
Project No.		Scale			
102-20		As Noted			

**ELECTRICAL SITE PLAN**

**E0.50**

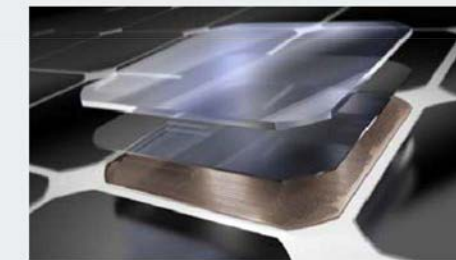


SunPower® X-Series Commercial Solar Panels | X21-470-COM

**More than 21% Efficiency**  
Captures more sunlight and generates more power than conventional panels.

**Maximum Performance**  
Delivers excellent performance in real-world conditions, such as high temperatures, clouds and low light.<sup>1</sup>

**Utility Grade**  
Optimized to maximize returns, the X-Series panel is a bankable solution for large-scale power plants.



Maxeon® Solar Cells: Fundamentally better. Engineered for performance, designed for reliability.

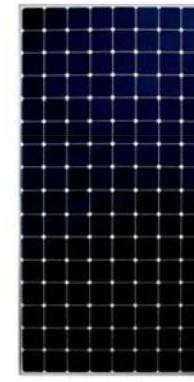
**Engineered for Peace of Mind**  
Designed to deliver consistent, trouble-free energy over a very long lifetime.<sup>2</sup>

**Designed for Reliability**  
The SunPower Maxeon solar cell is the only cell built on a solid metal foundation. Virtually impervious to the corrosion and cracking that degrade conventional panels.

Same excellent durability as E-Series panels. #1 Rank in Fraunhofer durability test.<sup>3</sup>

Datasheet

High Performance & Excellent Reliability

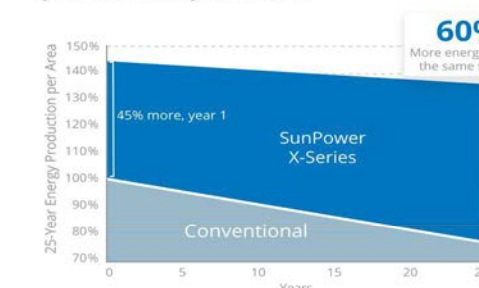


SPR-X21-470-COM



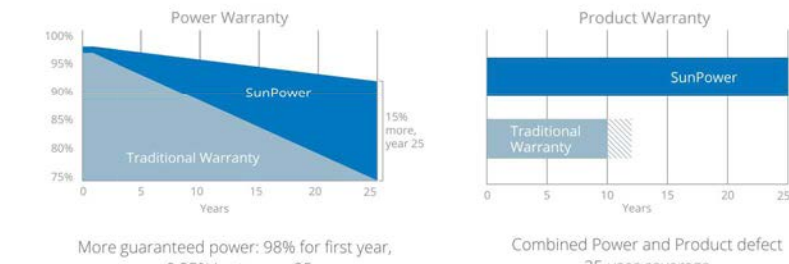
**High Efficiency**  
Generate more energy per square foot

More energy to power your operations. X-Series commercial systems convert more sunlight to electricity by producing 45% more energy in the first year. This advantage increases over time, producing 60% more energy over the first 25 years to meet your needs.<sup>4</sup>



**Best Reliability, Best Warranty**

A better warranty starts with a better product. Proven performance backs up our industry-best coverage, including out warranted 0.25% per year degradation rate.<sup>4</sup>



SUNPOWER®

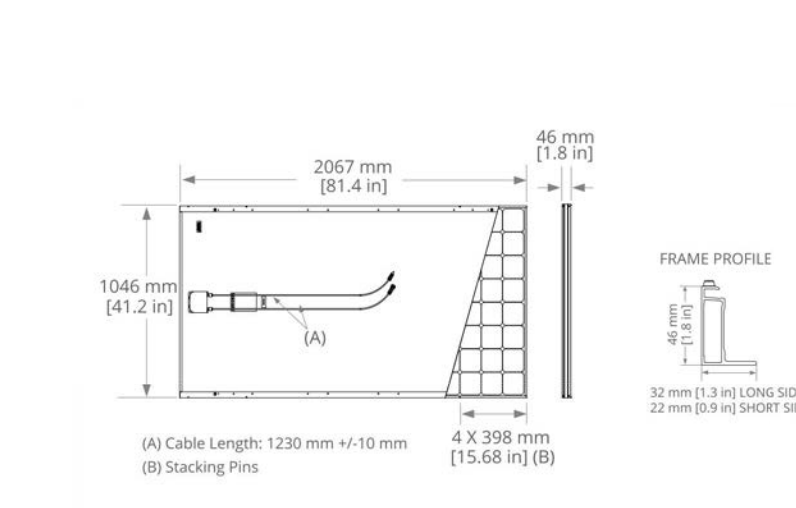


SunPower® X-Series Commercial Solar Panels | X21-470-COM

	SPR-X21-470-COM	SPR-X21-460-COM	SPR-X20-445-COM
Nominal Power (P <sub>nom</sub> ) <sup>1</sup>	470 W	460 W	445 W
Power Tolerance	+5/-0%	+5/-0%	+5/-0%
Avg. Panel Efficiency <sup>2</sup>	21.7%	21.3%	20.6%
Rated Voltage (V <sub>mpp</sub> )	77.6 V	77.3 V	76.5 V
Rated Current (I <sub>mpp</sub> )	6.06 A	5.95 A	5.82 A
Open-Circuit Voltage (V <sub>oc</sub> )	91.5 V	90.5 V	90.0 V
Short-Circuit Current (I <sub>sc</sub> )	6.45 A	6.30 A	6.21 A
Max. System Voltage	1000 V, UL 516, 1000 V, IEC		
Maximum Series Fuse	15 A		
Power Temp. Coef.	-0.29%/°C		
Voltage Temp. Coef.	-223.2 mV/°C		
Current Temp. Coef.	2.9 mA/°C		

Operating Condition And Mechanical Data	
Temperature	-40° F to +185° F (-40° C to +85° C)
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
Appearance	Class B
Solar Cells	128 Monocrystalline Maxeon Gen III
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-65, 1230 mm cables / MC4 compatible
Weight	56 lbs (25.4 kg)
Max. Load	Wind: 50 psf, 2400 Pa front & back Snow: 112 psf, 5400 Pa front

Frame: Class B, silver anodized, 4041 aluminum



Please read the safety and installation guide.

Tests And Certifications	
Standard Tests <sup>7</sup>	UL 1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Management System Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, REACH SVHC 163, PV Cycle
Sustainability	Cradle to Cradle Certified™ Silver (contributes to LEED categories) <sup>8</sup>
Ammonia Test	IEC 62716
Desert Test	10.11.09/ PVSC 2013.6744437
Salt Spray Test	IEC 61701 (Maximum Severity)
PID Test	1000V, IEC 62804, PVEL 600hr duration
Available Listings	UL, TLV, CEC

**REFERENCES:**  
 1 SunPower 300W compared to a Conventional Panel on same sized array (360W, 16% efficient, approx. 1.6m<sup>2</sup>) yields more energy per watt based on 30yr module characterization and P50m, 0.75%/yr slower degradation (Campau, Z. et al, "SunPower Module Degradation Rate," SunPower white paper, 2013).  
 2 "SunPower Module 40 Year Useful Life" SunPower white paper, May 2015. Useful life is 99 out of 100 panels operating at more than 70% of rated power.  
 3 X-Series same as E-Series. 5 of top 8 panel manufacturers tested in 2013 report, 3 additional panels in 2014. Ferrara, C., et al, "Fraunhofer IZD Durability Initiative for Solar Modules Part 2," Photovoltaics International, 2014.  
 4 See us SunPower.com/home-solar-system-warranty/ for more details.  
 5 Standard Test Conditions (1000 W/m<sup>2</sup> irradiance, AM 1.5, 25° C, NREL calibration Standard 50M5 current, LACCS HF and Voltage).  
 6 Based on average of measured power values during production.  
 7 Type 2 fire rating per UL1703:2013, Class C fire rating per UL1703:2002.  
 8 See salesperson for details.

Document # 524935 Rev B-A, TL, US

SUNPOWER®

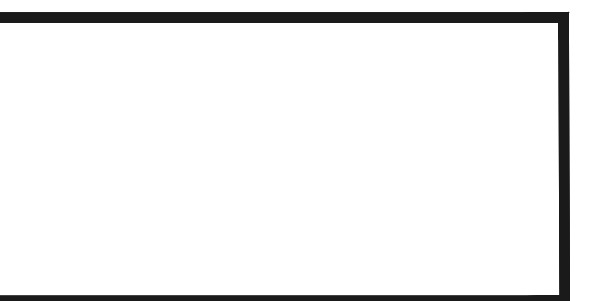
1 MODULE DATASHEET

Copyright - 2019 - All Rights Reserved. All documents prepared by Kupper Engineering Inc. as well as all information depicted on documents are instruments of service with respect to the project for which they were specifically designed and for the listed applicant. Such documents and information are not intended or represented to be suitable for reuse by the listed applicant or others on extensions or modification of the project or on any project. Any reproduction or reuse of these documents and information is prohibited without the prior written consent of Kupper Engineering, Inc. The listed applicant shall be responsible for the accuracy of the information provided herein. Kupper Engineering, Inc. shall have no liability or responsibility for any unauthorized use, reproduction or reuse of these documents and information and the listed applicant and/or owner shall indemnify and hold harmless Kupper Engineering, Inc. from any and all claims, damages, losses and expenses arising out of or resulting from the said unauthorized reproduction, misuse, or misappropriation of said documents and/or information.

SCOTT T. KUPPER  
NJ PROFESSIONAL ENGINEER  
NJ PE No. 24GE04161600 / NJ COA No. 24GA28110700

**Kupper**  
ENGINEERING, INC.  
Ambler Yards  
300 Brookside Ave.  
Bldg. #14  
Ambler, PA 19002  
Telephone 215-884-5970

**HESP**  
SOLAR



**PITTSBURGH LANDFILL**  
**3.36MW DC / 2.7MW AC**

TIVERSTOCK DRIVE,  
PITTSBURGH TOWNSHIP  
SALEM COUNTY, NJ

Rev. #	design	date	05/23/2020	By	GR	Chk	CER
A ISSUE FOR IX APPLICATION							
Project No.				Scale			
102-20				As Noted			

ELECTRICAL  
DETAILS

**E0.51**

2 OF 2 SHEETS



## **Attachment 2**

### Proof of Site Control

- Lease Agreement

## **Attachment 7**

### Evidence of Project Location is Municipal Redevelopment Area

- Lease Agreement, Appendix C - Redevelopment Plan

## **Attachment 8**

### Landfill Closure Plan

- Lease Agreement, Appendix B - Landfill Closure Plan

## SOLAR LEASE AGREEMENT

This Solar Lease Agreement, made and entered into as of this \_\_\_ day of March, 2020 (this "Lease Agreement" or "Agreement"), is by and between Pittsgrove Township, New Jersey, having an address at 989 Centerton Road Pittsgrove, New Jersey, 08318 ("Lessor") and HESP Solar LLC, having an address at 1 Paragon Drive, Suite 255, Montvale NJ 07645 ("Lessee"). Each party hereto may be referred to herein individually as a "Party" and collectively as the "Parties".

### Recitals

- A. Lessor is the owner of certain real property in Pittsgrove, New Jersey, as more particularly described in Exhibit A attached hereto (the "Site").
- B. The Site is a landfill and is subject to a Closure and Post Closure Plan approved by the New Jersey Department of Environmental Protection a copy of which is attached hereto as Exhibit B.
- C. The Site is the subject of a Redevelopment Plan, dated January 2019, which has been approved by the Township and the New Jersey Department of Community Affairs, which Redevelopment Plan and associated approvals are attached hereto as Exhibit C.
- D. Lessee designs, installs, operates and maintains equipment that produces electricity from solar energy (the "Solar Energy Equipment").
- E. Lessor has agreed through this Agreement to provide Lessee with access to and use of certain areas of the Site, as more particularly described and/or depicted in Exhibit D attached hereto (such areas, the "Lease Area") in order for Lessee to install and maintain the Solar Renewable Energy System (the "System") as identified in Exhibit E.

### Agreement

**NOW, THEREFORE**, the Parties hereto, intending to be legally bound, hereby agree as follows:

1. **PURPOSE**. As further set forth in this Agreement, Lessor and Lessee are entering into this Agreement to allow the Lessee to enter the Lease Area for the purpose of carrying out activities necessary to design, install, interconnect, operate and maintain the System, including accessing, designing, permitting, financing, installing, maintaining, repairing and replacing the System so as to provide electricity generated by the System to the electric grid, all in accordance with applicable local, state and federal law and requirements as well as in conformance with the Minimum Technical Specifications set forth in Exhibit F.

2. **TERM AND TERMINATION.** This Agreement shall commence on the date first set forth above and shall terminate six (6) months after the twentieth anniversary of the Commercial Operation Date (as defined in **Exhibit G**) for the System. Lessor may terminate this Lease Agreement on three (3) months written notice to Lessee if Lessee fails to honor its obligations under this Lease Agreement including Lessee's obligation to complete the System on or before the Outside Commercial Operation Date as set forth in the project schedule included in **Exhibit H** (the "Project Schedule").

3. **REMOVAL AND RESTORATION.** Lessor shall, within one-hundred and eighty (180) days prior to the expiration or earlier termination of this Agreement, remove the System and all related equipment, materials, tools and appurtenances from the Site and restore the Site to its original condition.

4. **LEASE PAYMENTS.** Lessee shall pay to Lessor the Annual Lease Payment in the amount and in accordance with the process set forth **Exhibit G**.

The Parties acknowledge that the Lessee will be required to pay certain mandatory costs and expenses imposed by the local electric utility related to the interconnection of the System to the electrical grid ("Interconnection Costs"). The Lessee has included an Interconnection Cost Budget within its System cost in the amount of two hundred thousand dollars (\$200,000). As requested by Lessor, Lessee has provided Lease Payment Adjustment Factors illustrating how Interconnection Costs in excess of the Interconnection Cost Budget could affect the Annual Lease Payment, set forth in below. For the avoidance of all doubt, the Lease Payment Adjustment Factors shall be applied as follows:

Upon becoming aware of an Interconnection Cost imposed by the local electric utility in excess of two hundred and ten thousand dollars \$210,000, (such excess amount shall be subject to verification by the Lessor's representatives, and shall be supported by appropriate documentation), and prior to undertaking the work generating said cost or paying the local electric utility the amount requested, Lessee shall first advise Lessor of same and allow Lessor's representative sufficient time to confirm and verify information presented by Lessee. The Lessor shall notify the Lessee in writing of its election to either accept or reject the Lease Payment Adjustment Factor applied by the Lessee. If the Lessor rejects the Lease Payment Adjustment Factor application, then the Lessee shall have the right to terminate this Agreement without further liability hereunder, except that Seller shall be required to satisfy its obligations under **Paragraph 3** of this Agreement. If the Lessor accepts the adjustment to the Annual Lease Payment, the Parties shall amend this Agreement to reflect the adjusted Annual Lease Payment as set forth below:

Lease Payment Adjustment Factors

Column I	Column II
Amounts in excess of Project Unforeseen Cost Budget	Resulting Decrease in Lease Payment
\$10,000-\$20,000	\$0.0001/kWh
\$20,000-\$30,000	\$0.0002/kWh
\$30,000 and above	\$0.0005/kWh

5. **MAINTENANCE PAYMENTS.** Upon completion of the System, Lessee and Lessor shall negotiate in good faith to agree upon an annual payment that Lessee shall pay Lessor in exchange for Lessor mowing the area inside the fenced perimeter of the System. Lessor shall mow the area between the months of April and October at least two times per month. In the event that Lessor and Lessee cannot agree on an annual payment amount, Lessee shall have the right to retain a firm to provide the mowing service on its behalf and/or undertake the mowing directly.

6. **PROJECT DEVELOPMENT COSTS.** Within ten (10) days of execution of this Agreement, Lessee shall pay to the Lessor the amount \$94,750, (representing 50% \$189,500) to reimburse the Lessor for half of its out-of-pocket costs associated with the procurement of, contracting with the Lessee as well as the cost associated with the observation of Lessee during design, permitting, construction and interconnection of the System. Lessee shall pay the remaining 50% payment (also in the amount of \$94,750) within ten (10) days after Lessee's receipt of the necessary utility approvals.

7. **USE.** Lessee will use the Lease Area for the erection, installation, ownership, operation, maintenance, repair, replacement and removal of the System, as well as for all other activities to be conducted by Lessee in connection therewith. Lessee will comply with all laws, ordinances, orders, rules and regulations (state, federal or local), specifically including, without limitation, all environmental and occupational, health and safety requirements relating to Lessee's use or occupancy of the Site, the Lease Area, the System and the operation thereof. Lessee shall undertake and use commercially reasonable efforts to complete the design, permitting, installation and interconnection of the System in accordance with the Project Schedule set forth in **Exhibit H.** Lessee shall ensure that all work associated with the construction and installation of the System shall be performed subject to prevailing wage or by unionized labor.

The Parties explicitly acknowledge that the Site and the Lease Area are part of a sanitary landfill that is subject to an existing Closure and Post Closure Plan approved by the New Jersey Department of Environmental Protection attached hereto as **Exhibit B** (the "Plan Approval"). Lessee shall not undertake any act

that would violate, or lead to a future violation of the Plan Approval. Further, Lessee shall cooperate with Lessor in its efforts to comply with the Plan Approval or any amendments thereto, including but not limited to, access to the Lease Area for inspection, repair or replacement of any portion of the landfill cap. If any portion of the landfill cap is damaged or degraded by Lessee, Lessee shall be responsible for the costs of any inspection of said area and the design, permitting and labor costs associated with any repair or replacement necessitated by Lessee's actions or inactions leading to the damaged or degraded landfill cap.

The Parties acknowledge that Lessee also provided the Lessor with a proposal to implement a community solar project in accordance with and pursuant to the New Jersey Board of Public Utilities ("NJBPU") Community Solar Pilot program, or a successor program if one is initiated by NJBPU (collectively the "Pilot Program"). Lessee agrees that it shall utilize its best efforts to apply for, and receive approval from the NJBPU for inclusion in, the Pilot Program, provided that the application and approval process fits within the Project Schedule set forth in Exhibit H without significantly delaying Lessor's implementation of the Project Schedule. The Parties agree to discuss the possibility of extending the Project Schedule via an amendment to this Agreement in the event the Parties conclude that doing so would provide the Lessee with the ability to apply for NJPBU approval for inclusion in the Pilot Program. In the event Lessee successfully obtains approval from the NJBPU for inclusion in the Pilot Program, then the Annual Lease Payment shall be in the amount and in accordance with the process set forth Exhibit G.

## 8. INSURANCE AND PERFORMANCE SECURITY.

(a) Insurance Coverage. At all times during the Term, Lessee and Lessor shall maintain the following insurance:

(i) Lessee's Insurance. Lessee shall maintain (A) property insurance on the System for the replacement cost thereof, (B) commercial general liability insurance with coverage of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate, and (C) employer's liability insurance with coverage of at least \$1,000,000 and (D) workers' compensation insurance as required by law, as well as such other coverages as are set forth in Exhibit I.

(ii) Lessor's Insurance. Lessor shall maintain commercial general liability insurance with coverage of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate.

(b) Policy Provisions. All insurance policies provided hereunder shall (i) contain a provision whereby the insurer agrees to give the Party not providing the insurance (A) not less than ten (10) days written notice

before the insurance is cancelled, or terminated as a result of non-payment of premiums, or (B) not less than thirty (30) days written notice before the insurance is otherwise cancelled or terminated, (ii) be written on an occurrence basis, and (iii) be maintained with companies either rated no less than A-VII as to Policy Holder's Rating in the current edition of A.M. Best's Insurance Guide or otherwise reasonably acceptable to the other party.

(c) **Certificates.** Upon the other Party's request, each Party shall deliver to the other Party certificates of insurance evidencing the above required coverage. A Party's receipt, review or acceptance of such certificate shall in no way limit or relieve the other Party of the duties and responsibilities to maintain insurance as set forth in this Agreement.

(d) **Deductibles.** Unless and to the extent that a claim is covered by an indemnity set forth in this Agreement, each Party shall be responsible for the payment of its own deductibles.

(e) **Performance Security.** Prior to initiating any work on the Site, Lessee shall provide Lessor with a Payment and Performance Bond in the amount of 100% of the cost of the design, permitting, construction and installation of the System (the "Performance Security"). The Parties acknowledge that the purpose of the Performance Security will be to ensure that all subcontractors and materialmen are properly paid and that in the event the Lessee fails to complete the construction of the System in accordance with the terms and conditions of the Agreement, the Lessor shall be entitled to call upon the Performance Security to cover the cost and expense associated with the removal of the System (or any uncompleted portion thereof) from the Site and to restore the Site to its original condition. The requirement to maintain the Performance Security shall terminate upon construction completion of the System.

## 9. REPRESENTATIONS, WARRANTIES AND CONVENANTS.

(a) **General Representations and Warranties.** Each Party represents and warrants to the other the following as of the Effective Date:

- (i) Such Party is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation; the execution, delivery and performance by such Party of this Agreement have been duly authorized by all necessary corporate, partnership or limited liability company action, as applicable, and do not and shall not violate any law; and this Agreement is valid obligation of such Party, enforceable against such Party in accordance with its terms (except as may be limited by applicable bankruptcy, insolvency, reorganization, moratorium and other similar

laws now or hereafter in effect relating to creditors' rights generally).

- (ii) Such Party has obtained all licenses, authorizations, consents and approvals required by any Governmental Authority or other third party and necessary for such Party to own its assets, carry on its business and to execute and deliver this Agreement; and such Party is in compliance with all laws that relate to this Agreement in all material respects.
- (iii) Neither the execution and delivery of this Agreement by such Party nor the performance by such Party of any of its obligations under this Agreement conflicts with or will result in a breach or default under any agreement or obligation to which such Party is a party or by which such Party is bound.

10. **INGRESS AND EGRESS.** Lessor agrees to provide and maintain all roads, driveways and walkways that are now and may be located in and around the Site necessary for proper ingress and egress to and from, and occupancy of, the Lease Area. Lessee's vehicular traffic (including, but not limited to, cars, trucks and tractor trailers) and personnel shall have access to the Lease Area at all times; provided, however, that Lessee will observe all speed limits and other rules and regulations established by Lessor with respect to such roads and driveways existing at the Site. Lessee acknowledges that the Lessor utilizes a portion of the Site, located beyond the capped area, as a convenience center for Township residents. Lessee agrees that its activities will not interfere with Lessor's continued use of the subject area for this purpose.

11. **CONSTRUCTION LAYDOWN AREA.** Lessor shall provide a site in close proximity to the Lease Area for the Lessee's storage and assemblage of materials to construct, erect and install the System. Upon completion of construction of the System, Lessee will remove all remaining materials from such laydown areas and will restore such areas as nearly as is reasonably possible to the condition in which it existed immediately prior to the commencement of such activity.

12. **PERSONAL PROPERTY.** All buildings, equipment, machinery and appurtenances placed within the Lease Area by Lessee comprising the System shall remain the personal property of the Lessee and shall not be or become fixtures, notwithstanding the manner in which the System is or may be affixed to the real property of Lessor. Lessor shall not suffer or permit the System to become subject to any lien or encumbrance for debt of any kind that may be owed by or demanded of Lessor. Lessee agrees that it shall not allow the Site to become subject to any lien or encumbrance for debt of any kind that may be owed by or demanded of Lessee and that if any such lien or encumbrance is filed

against the Site or the Lessor, Lessee shall immediately have same removed or bond same for an amount appropriate to cover the cost of said lien or encumbrance.

13. **QUIET ENJOYMENT.** Lessor covenants and agrees that Lessee, provided it remains in compliance with its obligations under this Lease Agreement, shall lawfully and quietly have, hold, occupy and enjoy the Lease Area and the appurtenant rights thereto in accordance with the terms hereof throughout the entire term of this Lease Agreement. Such occupation and enjoyment shall be free from any claim of any entity or person of superior title thereto without hindrance to, interference with or molestation of Lessee's use and enjoyment thereof, whether by Lessor or any of its agents, employees or independent contractors or by any entity, person or persons having or claiming an interest in the Lease Area.

14. **PRIOR USES.** In entering into this Lease Agreement, Lessor does not seek to make Lessee liable for any past, present or future contamination or pollution or breach of environmental laws, if any, relating to the Site or the land in and around the Lease Area, unless attributable to the actions of Lessee. Accordingly, Lessor agrees to assume full responsibility for (and protect, indemnify and defend Lessee against) any liability or cleanup obligations for any contamination or pollution or breach of environmental laws related to the Site, including the Lease Area, unless attributable to the actions of Lessee. If Lessee causes any contamination, pollution or breach of any environmental laws relating to the Site or the land in and around the Lease Area, Lessee shall assume full responsibility for same and shall protect, indemnify and defend Lessor, its officers, officials and agents against any liability or cleanup obligations for any contamination or pollution or breach of environmental laws related to the Site, including the Lease Area.

15. **ASSIGNMENT.** This Lease Agreement and the rights of the Parties hereto may not be assigned in whole or in part by either Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, Lessee may, without the prior written consent of Lessor, (i) assign, mortgage, pledge or otherwise collaterally assign its interests in this Agreement and the Systems to any financing party, (ii) directly or indirectly assign this Agreement and the Systems to an affiliate or subsidiary of Lessee, (iii) assign this Agreement and the Systems to any entity through which Lessee is obtaining financing or capital for the Systems and (iv) assign this Agreement and the Systems to any person succeeding to all or substantially all of the assets of Lessee (provided that Lessee shall be released from liability hereunder as a result of any of the foregoing permitted assignments only upon assumption of Seller's obligations hereunder by the assignee). In the event of any such assignment, the Lessee shall be released from all its liabilities and other obligations under this Agreement. However, any assignment of Lessee's right and/or obligations under this Agreement, shall not result in any change to Lessor's rights and obligations under this Agreement. Lessor's consent



to any other assignment shall not be unreasonably withheld if Lessor has been provided with reasonable proof that the proposed assignee (x) has comparable experience in operating and maintaining photovoltaic solar systems comparable to the Systems and providing services comparable to those contemplated by this Agreement and (y) has the financial capability to maintain the Systems and provide the services contemplated by this Agreement in the manner required by this Agreement. This Agreement shall be binding on and inure to the benefit of the successors and permitted assignees.

16. **DEFAULT, REMEDIES AND DAMAGES.**

- a. **Default.** Any Party that fails to perform its responsibilities as listed below or experiences any of the circumstances listed below shall be deemed to be the “**Defaulting Party**”, the other Party shall be deemed to be the “**Non-Defaulting Party**”, and each event of default shall be a “**Default Event**”:
- i. failure of a Party to pay any amount due and payable under this Agreement, other than an amount that is subject to a good faith dispute, within ten (10) days following receipt of written notice from the Non-Defaulting Party of such failure to pay (“**Payment Default**”);
  - ii. failure of a Party to substantially perform any other material obligation under this Agreement within thirty (30) days following receipt of written notice from the Non-Defaulting Party demanding such cure; provided, that such thirty (30) day cure period shall be extended (but not beyond ninety (90) days) if and to the extent reasonably necessary to cure the Default Event, if (A) the Defaulting Party initiates such cure within the thirty (30) day period and continues such cure to completion and (B) there is no material adverse effect on the Non-Defaulting Party resulting from the failure to cure the Default Event;
  - iii. if any representation or warranty of a Party proves at any time to have been incorrect in any material respect when made and is material to the transactions contemplated hereby, if the effect of such incorrectness is not cured within thirty (30) days following receipt of written notice from the Non-Defaulting Party demanding such cure;
  - iv. Lessor loses its rights to occupy and enjoy the Site;
  - v. a Party becomes insolvent or is a party to a bankruptcy, reorganization, insolvency, liquidation, receivership, dissolution, winding-up or relief of debtors, or any general assignment for the benefit of creditors or other similar arrangement or any event occurs or proceedings are taken in any jurisdiction with respect to

the Party which has a similar effect, and, if any such bankruptcy or other proceedings were initiated by a third party, if such proceedings have not been dismissed within sixty (60) days following receipt of a written notice from the Non-Defaulting Party demanding such cure; or

- vi. Lessor prevents Lessee from installing the Systems or otherwise failing to perform in a way that prevents the delivery of electric energy from the System to the electric grid.
- vii. In the case of the Lessee, the Lessee fails to achieve Commercial Operation on or before the Outside Commercial Operation Date.

b. **Remedies.**

- i. **Remedies for Payment Default.** If a Payment Default occurs, the Non-Defaulting Party may suspend performance of its obligations under this Agreement. Further, the Non-Defaulting Party may (A) at any time during the continuation of the Default Event, terminate this Agreement upon five (5) days prior written notice to the Defaulting Party, and (B) pursue any remedy under this Agreement, at law or in equity, including an action for damages and/or for specific performance.
- ii. **Remedies for Other Defaults.** On the occurrence of a Default Event other than a Payment Default, the Non-Defaulting Party may (A) at any time during the continuation of the Default Event, terminate this Agreement or suspend its performance of its obligations under this Agreement, upon five (5) days prior written notice to the Defaulting Party, and (B) pursue any remedy under this Agreement, at law or in equity, including an action for damages and/or for specific performance. Nothing herein shall limit either Party's right to collect damages upon the occurrence of a breach or a default by the other Party that does not become a Default Event.
- iii. **Damages Upon Termination by Default.** Upon a termination of this Agreement by the Non-Defaulting Party as a result of a Default Event by the Defaulting Party, the Defaulting Party shall pay a Termination Payment to the Non-Defaulting Party determined as follows (the "**Termination Payment**"):
  - A. **Lessee.** If Lessor is the Defaulting Party and Lessee terminates this Agreement, the Termination Payment to Lessee shall be equal to, for any given Contract Year, the fair market value of the System determined by an independent appraiser.

- B. Lessor. If Lessee is the Defaulting Party and Lessor terminates this Agreement, the Termination Payment to Lessor shall be equal to the sum of (1) the net present value (using a discount rate of **10%**) of the then Guaranteed Annual Lease Payments for the remaining Term (2) any removal costs incurred by Lessor, and (3) any and all other amounts previously accrued under this Agreement and then owed by Seller to Lessor. The Termination Payment shall not be less than zero.
- C. Obligations Following Termination. If a Non-Defaulting Party terminates this Agreement pursuant to this Section, then following such termination, Lessee shall, at the sole cost and expense of the Defaulting Party, remove the equipment (except for mounting pads and support structures) constituting the Systems. The Non-Defaulting Party shall take all commercially reasonable efforts to mitigate its damages as the result of a Default Event.

17. **NOTICE**. All notices and other writings to be given under this Lease Agreement shall be in writing and shall be sent by registered or certified United States Mail (return receipt requested), or by nationally recognized overnight courier, as follows:

If to Lessor:

Chuck Hughes  
Business Administrator  
Pittsgrove Township  
989 Centerton Road  
Pittsgrove, New Jersey 08318  
[chughes@pittsgrovetownship.com](mailto:chughes@pittsgrovetownship.com)

With copies to:

Ryan J. Scerbo, Esq.  
DeCotiis, FitzPatrick, Cole & Giblin, LLP  
Glenponite Centre West  
500 Frank W. Burr Blvd., Suite 31  
Teaneck, New Jersey 07666  
[rscerbo@decotiislaw.com](mailto:rscerbo@decotiislaw.com)  
(201) 928-1100

Andrew Conte  
Gabel Associates  
417 Denison Street  
Highland Park, New Jersey 08904  
[Andrew.conte@gabelassociates.com](mailto:Andrew.conte@gabelassociates.com)  
(732) 296-0770

If to Lessee:

c/o HESP Solar LLC  
Attn: Susan Brodie  
1 Paragon Drive  
Suite 255  
Montvale, NJ 07645

Either Party shall have the right at any time to notify the other in writing of a different addressee to whom a particular type of notice or other writing is to be sent under this Paragraph 11.

18. **SURVIVAL.** The provisions of Paragraphs 3, 14, 16 shall survive termination or expiration of this Lease Agreement.

19. **FURTHER ASSURANCES.** The Parties agree to execute such other documents as may be advisable to give effect to the intentions set out in this Lease Agreement.


20. **COUNTERPARTS.** This Lease Agreement may be executed in any number of counterparts, each of which counterparts shall be deemed an original and all of which, when taken together, shall constitute one and the same agreement at such time as each Party shall have executed and delivered to the other at least one copy of this Lease Agreement.

21. **CHOICE OF LAW.** This Lease Agreement shall be interpreted in accordance with the substantive laws of the State of New Jersey, without regard to its principles or conflicts of laws. Venue with respect to any action brought hereunder shall lie in any state court located in Salem County, New Jersey or in the nearest federal district court thereto.

22. **ENTIRE AGREEMENT, AMENDMENTS AND WAIVERS.** This Lease Agreement constitutes the entire agreement between the Parties and supersedes the terms of any previous agreements or understandings, oral or written. Any waiver or amendment of this Lease Agreement must be in writing. Either Party's waiver of any breach or failure to enforce any of the terms of this Lease Agreement shall not affect or waive that Party's right to enforce any other term of this Lease Agreement.

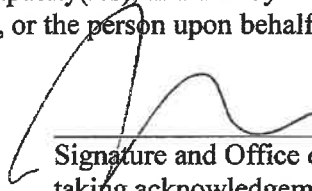
23. **RECORDATION**. This Lease Agreement may be recorded in the official records of Salem County in which the Site is located. Upon termination of this Lease Agreement following an event of default by or otherwise, a notice of termination may be recorded in such official records.

**HESP SOLAR LLC**

By   
Name: Susan Beodre  
Title: Authorized Representative

STATE OF New York )  
COUNTY OF Rockland ) ss.:

On the 12<sup>th</sup> day of February in the year 2020 before me, the undersigned personally appeared Susan Beodre, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

  
Signature and Office of individual taking acknowledgement.

**ARTHUR GRUEN**  
Notary Public, State of New York  
No. 01GR6175212  
Qualified in Rockland County  
Commission Expires Oct. 9, 2021


IN WITNESS WHEREOF, Lessor and Lessee have caused this instrument to be executed by their duly authorized representatives.

PITTSBORO TOWNSHIP

By   
Name: Charles E. Hughes  
Title: Business Administrator

STATE OF New Jersey )  
 ) ss.:  
COUNTY OF Camden )

On the 6 day of March in the year 2020 before me, the undersigned personally appeared Charles E. Hughes, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledge to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

  
Signature and Office of individual  
taking acknowledgement.

STEFANY ERIKA FIGUEROA  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires 11/1/2023

## **EXHIBIT A**

### **Description of Site**

The Site is the landfill located at coordinates 39.537913, -75.15531



**EXHIBIT B**

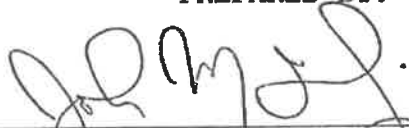
**Closure Plan**

PITTSGROVE TOWNSHIP  
SANITARY LANDFILL  
PITTSGROVE, NEW JERSEY

FACILITY NUMBER 1710-A

CLOSURE AND POST-CLOSURE CARE PLAN

PREPARED BY:



---

JOHN M. FRALINGER  
NEW JERSEY LICENSE NO. 29350

ALBERT A. FRALINGER, JR., P.A.  
590 SHILOH PIKE  
BRIDGETON, NJ 08302

COMM. NO. 4706

NOVEMBER 1988  
REVISED JANUARY 1989

TABLE OF CONTENTS

PAGE NO.

Standard Application Form CP No. 1

A. INTRODUCTION AND BACKGROUND.....A-1  
1. Introduction.....A-1  
2. Site Environmental Characteristics.....A-2

B. CLOSURE AND POST-CLOSURE CARE PLAN ELEMENTS.....B-6  
1. Soil Erosion and Sediment Control Plan.....B-6  
2. Final Cover.....B-7  
3. Final Cover Vegetation.....B-7  
4. Final Cover and Final Cover Vegetation  
Maintenance Program.....B-8  
5. Side Slope Maintenance Program.....B-10  
6. Run-on and Run-off Control Program.....B-10  
7. Run-on and Run-off Control Maintenance  
Program.....B-10  
8. Groundwater Monitoring Wells.....B-11  
9. Groundwater Monitoring Well Maintenance  
Program.....B-11  
10. Groundwater Monitoring Program.....B-12  
11. Methane Gas Venting System.....B-12  
12. Leachate Collection/Control System.....B-13  
13. Leachate Control System Maintenance.....B-13  
14. Facility Access Control System.....B-13  
15. Facility Access Control System Maintenance.....B-14  
16. Conformity of Site to Surrounding Areas.....B-14  
17. Conformity of Site to Surrounding Areas  
Maintenance.....B-14

C. SCHEDULE OF IMPLEMENTATION.....C-15

D. CLOSURE & POST-CLOSURE FINANCIAL PLAN.....D-16

APPENDICES

- Appendix I - Soil Erosion and Sediment Control Plan  
Appendix II - Accountant's Report  
Appendix III - Final Closure Grading Plan for Pittsgrove  
Township Landfill

## A. INTRODUCTION AND BACKGROUND

### 1. INTRODUCTION

This report has been prepared to satisfy regulations governing sanitary landfill closure and post-closure requirements. These regulations, which became effective June 6, 1983, represent revisions to Sections 1.4, 2.9 and 2.13 of Chapter 26 of Title 7 of the New Jersey Administrative Code. These regulations require that sanitary landfills set aside funds and meet technical standards to insure that closure and post-closure care of such facilities is accomplished in an environmentally-sound manner. The regulations require that a Care Plan, including a Soil Erosion and Sediment Control Plan, and Financial Plan, be prepared for the closure and post-closure period. Specific Closure and Post-Closure Care Plan elements addressed herein follow the outline of NJAC 7:26-2.9(e).

The Township of Pittsgrove has been conducting sanitary landfill operations at the Pittsgrove Township Landfill for over 23 years. The project site consists of approximately 35.6 acres with the entire North side bound by Centerton-Porchtown Road, the East side by Garden Road and the remainder of the site by private properties.

The Pittsgrove Township Sanitary Landfill is currently closed, but prior to closure received municipal solid wastes (MSW) from the Township of Pittsgrove. Under Facility Registration Number 1710-A, the landfill was permitted to accept the following Waste Types:

<u>I.D.</u>	<u>WASTE</u>
10	Municipal (Household, Commercial & Industrial)
13	Bulky Waste
23	Vegetative Waste

Prior to closing, landfilling operations were normally conducted on Mondays, Fridays and Saturdays.

When the Salem County Regional Landfill became operational, wastes coming to the Pittsgrove Township Landfill were redirected to the new facility pursuant to NJAC 7:26-6.5(r)14 and the Salem County Solid Waste Management Plan as amended.

## 2. SITE ENVIRONMENTAL CHARACTERISTICS

The Pittsgrove Township Sanitary Landfill is located in the Township of Pittsgrove, Salem County, New Jersey. The project area is bounded by private properties on the South and West, Center-ton-Porchtown Road North and Garden Road to the East. Figure 1, depicts the location of the facility and immediate vicinity.

### Site Geology

Geologically, the landfill is located in the Cohansey Formation which is characterized by mild slopes and shallow relief. The Cohansey Sand Formation is comprised of unconsolidated deposits of sands, gravel, silt and some clay. The Cohansey Sand Formation is of the late Tertiary Age.

Figure 2 illustrates the soils in the project area. Soils on site are mapped as SrA-Sassafras sandy loam, 0-2% slopes, Ps-Pocomoke sandy loam, AlA-Aura loam, 0-2% slopes, Fp-Fallsington-Pocomoke-Berryland Complex by the Salem County Soil Survey. The actual existing soils are composed entirely of made-land brought in by trucks from sand and gravel borrow pits. The slopes on-site range from zero to 33 percent.

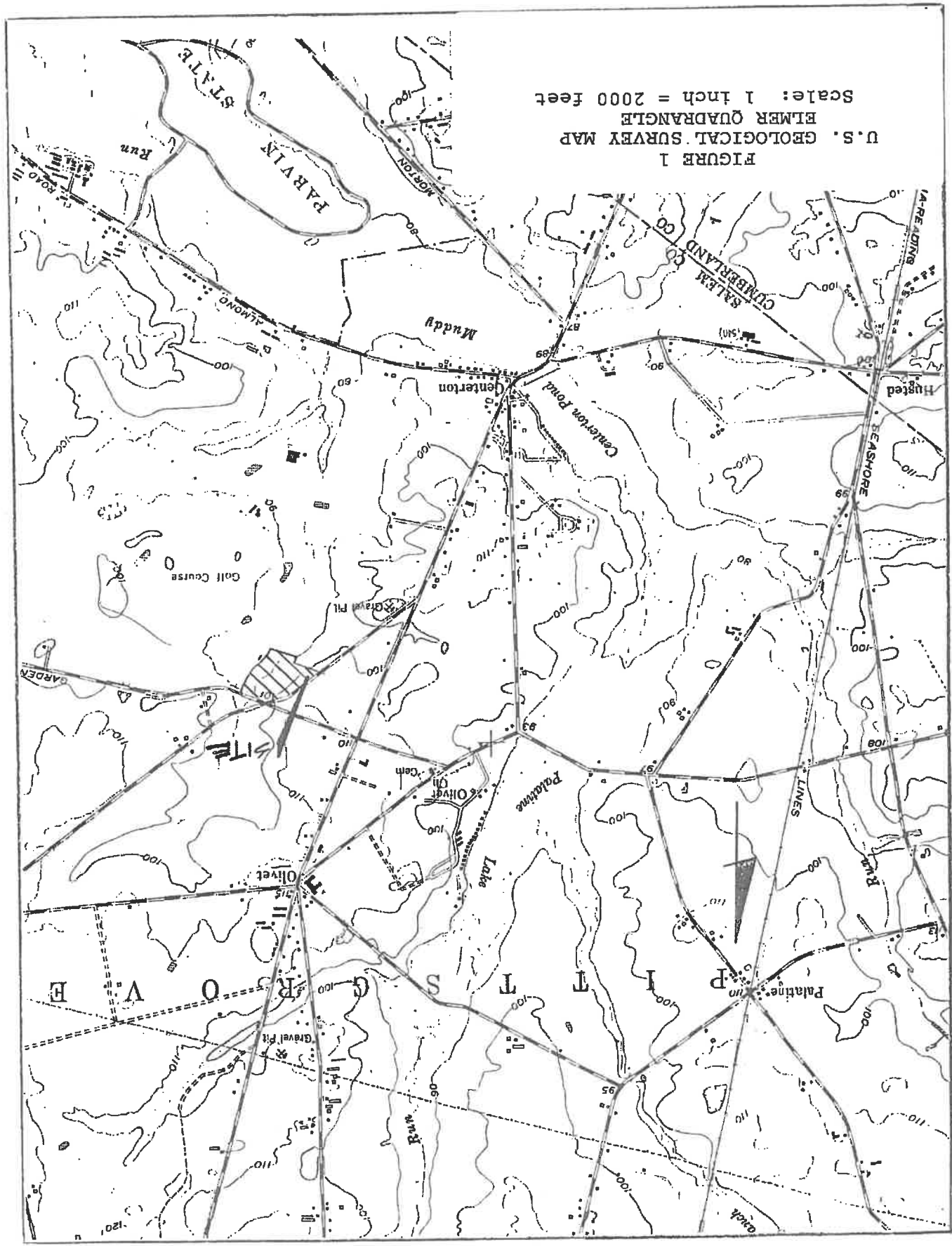
### Hydrogeologic Features

Surface Water Hydrology - The nearest located surface waters are those of the Rosey Run, to the South of the site.

Groundwater Hydrology - Four (4) groundwater monitoring wells have been installed outside of the fill area. Groundwater depth ranged from 4-12 feet below the surrounding grade.

The groundwater quality of the Cohansey-Kirkwood aquifer is characterized by low dissolved solids, low hardness and low pH values. Salt water intrusion is not a problem in this near-surface aquifer.

FIGURE 1  
U.S. GEOLOGICAL SURVEY MAP  
ELMER QUADRANGLE  
Scale: 1 inch = 2000 feet







Groundwater monitoring wells located on the landfill borders provide the samples that are analyzed quarterly and sent directly to the NJDEP.

#### Climate

Generally, the climate of Pittsgrove Township is characterized by a humid temperature climate moderated by the Delaware Bay and the Atlantic Ocean. The average daily minimum and maximum temperatures are 44 degrees and 65 degrees Fahrenheit, respectively. Annual precipitation ranges from 40 to 44 inches/year. Prevailing winds for the Pittsgrove Township area are from the northwest during the winter and from the southwest during the remainder of the year.

#### Terrestrial Wildlife and Vegetation

The Pittsgrove Township Sanitary Landfill is virtually devoid of existing vegetative cover except for very sparse grass cover. Vegetation along the perimeter of the project site consists principally of deciduous trees.

Terrestrial wildlife in the project area is confined to the perimeters of the site and include cottontail rabbits, eastern grey squirrels, woodchucks, raccoons, moles and mice. Bird species observed on-site include bluejays, robins, sparrows and especially seagulls.

Present Zoning Ordinance

According to the Township of Pittsgrove Zoning Map, the Pittsgrove Township Sanitary Landfill is located within the Low Density Residential Zone, LR-2. Potential for residential development near the landfill is probable.

## B. CLOSURE AND POST-CLOSURE CARE PLAN ELEMENTS

The following section discusses measures which have been or are proposed to be implemented as part of the Closure and Post-Closure Care Plan. The measures include those required by the Approved Registration and those included in NJAC 7:26-2.9. This section follows the outline of specific requirements contained in NJAC 7:26-2.9(e)2.

### 1. SOIL EROSION AND SEDIMENT CONTROL PLAN

The Soil Erosion and Sediment Control Plan for landfill closure will be submitted to the Salem County Soil Conservation District for review. Plan certification with minimal modification is anticipated. This Closure Plan will be modified accordingly and submitted to the NJDEP to the extent necessary to reflect SCD-requested modifications. The Soil Erosion and Sediment Control Plan is provided in Appendix I and the attached drawings.

The landfill owner/operator will be responsible for the construction, implementation and maintenance of all soil erosion and sediment control measures in accordance with the Certified Plan. Damage to surface waters resulting from erosion and sedimentation will be minimized by stabilizing disturbed areas. Site activities will be planned to minimize the area and duration of soil disruption.

2. FINAL COVER

permeability tests (well) per acre

The capping cross section for the landfill area is proposed as follows:

Final Cover

12" Clay layer -  $10^{-7}$  cm./sec.

6" Drainage layer

6" Topsoil (Earth Life)

Fertilize and seed.

cholly below the average frost depth

what is earth life?

3. FINAL COVER VEGETATION

The proposed Soil Erosion and Sediment Control Plan describes the vegetative cover to be used on completed landfill areas and other areas disturbed by construction activities.

The specifications for final cover vegetation were based on recommendations in the Standards for Soil Erosion and Sediment Control in New Jersey for the soil/site conditions of the area.

The seed mixture for final cover vegetation of all landfill areas except drainage swales will consist of 30 lbs. Kentucky -31 tall fescue, 30 lbs. red or spreading fescue and 30 lbs. Kentucky bluegrass per acre. The seed mixture for stabilization of drainage swales will consist of 100 lb. Reed canary grass, 100 lb. Kentucky -31 tall fescue and 50 lb. redtop per acre.

Details of measures to be taken for establishment of final cover vegetation, including application rates for lime, fertilizer and mulch, are contained in the proposed Soil Erosion and Sediment Control Plan.

4. FINAL COVER AND FINAL COVER VEGETATION MAINTENANCE PROGRAM

Maintenance of the final cover and final cover vegetation will be conducted by the Township of Pittsgrove for the 30-year post-closure care period.

This program will include replenishment of final cover in areas where subsidence has occurred and ponded water may accumulate or where erosion has created channels that may detract from the integrity of the final cover. Maintenance of the final cover will be performed by Township of Pittsgrove municipal employees.

To alleviate water ponding from differential subsidence, the affected area will be regraded to allow proper drainage, including placement of additional clay and/or soil material, if necessary. Following regrading, the affected area will be seeded with permanent vegetative cover as described herein.

Lime and fertilizer will be added to the six (6) inches of cover soil to enhance fertility at application rates in accordance with N.J. Standards for Soil Erosion and Sediment Control. Appropriate seed mixtures and application

rates will be selected in order to establish stabilized ground cover composed of perennial vegetation. For specific final cover vegetation information, refer to Section B. During the post-closure period, vegetation will be maintained and re-established as required.

Gully erosion may occur on landfill side slopes. To correct this situation, any clay material which has been eroded will be replaced as needed. The soil layers of the final cover will be replaced and revegetated. As a measure to prevent regultying from occurring, an erosion control blanket will be installed overtop the reseeded area. The erosion control blanket will consist of a biodegradable product, reinforced with a plastic mesh. Erosion control blankets will be installed parallel to the slope and anchored with wire staples at four (4) foot intervals. The edge of the blankets will extend beyond the limits of gullying.

Material for the maintenance of the final cover (excepting borrow to be supplied by the Township) will be acquired as necessary. This is reflected in the provisions of the Financial Plan. Estimated cover material requirements are as follows:

Years After Closure

Year 1	300	cubic yards/Year
2	600	cubic yards/Year
3	900	cubic yards/Year
4 - 28	750	cubic yards/Year

Final cover vegetation will also be maintained by municipal employees. The final cover vegetation will be inspected on a semiannual basis, generally corresponding to the prime planting seasons, for the 30-year closure period. Revegetation will follow the specifications outlined in the previous section.

*more frequent*

#### 5. SIDE SLOPE MAINTENANCE PROGRAM

Generally, side slopes of the Pittsgrove landfill will be graded to a maximum 3:1 (horizontal to vertical) slope for the purpose of maintaining slope stability and controlling erosion. Cover material and vegetation on these slopes will be maintained as described in 4. above.

#### 6. RUN-ON AND RUN-OFF CONTROL PROGRAM

The landfill is elevated above the surrounding grade, thus eliminating run-on to the landfill.

Stormwater run-off from the site will be mitigated by proper grading and the proper utilization of permanent vegetation. Grade and surface vegetation improvements will result in calculated post-closure run-off rates less than pre-closure run-off rates.

#### 7. RUN-ON AND RUN-OFF CONTROL MAINTENANCE PROGRAM

The Township of Pittsgrove will be responsible for maintenance of all run-on and run-off control measures as described in 6. above. Maintenance of run-on and run-off control measures will include maintaining grade of final

cover and vegetation (4.), and maintaining side slopes (5.). Maintenance procedures are to continue for the 30-year post-closure period.

#### 8. GROUNDWATER MONITORING WELLS

Groundwater monitoring will be carried out in accordance with New Jersey Pollutant Discharge Elimination Systems (NJPDES; NJAC 7:14A-1. et. seq.) requirements and the Rules of the Division of Waste Management (NJAC 7:26-2.5(v)) for the remainder of the active life of the facility, as well as the post-closure care period.

There are currently four (4) groundwater monitoring wells at the Pittsgrove Landfill. These groundwater monitoring wells have been installed in accordance with the current NJPDES Permit No. NJ0054402. The location of each well is shown on the drawings. All wells have been installed by a licensed New Jersey well driller, pursuant to NJSA 58:4A-6. Permits were obtained from the Water Allocation Office prior to installation of the wells.

#### 9. GROUNDWATER MONITORING WELL MAINTENANCE PROGRAM

Each groundwater monitoring well will be inspected on a quarterly basis for structural integrity and/or damage. If any damage has occurred, the Administrator of the Water Quality Management Element will be notified as well as the Division of Waste Management. Damaged wells will be repaired



or replaced in accordance with the conditions of the NJPDES Permit and the rules of the DWM.

10. GROUNDWATER MONITORING PROGRAM

As discussed in 8. above, the groundwater monitoring program will be conducted in accordance with NJPDES requirements and Rules of the Division of Waste Management. The program will include an annual analysis of each monitoring well for the expanded list of parameters contained in NJAC 14A-120.22(d) and a quarterly analysis from each well for the list of indicator parameters shown also in NJAC 14A-120.12(d).

11. METHANE GAS VENTING SYSTEM

*quarterly first two years*

A semiannual probe testing program will be implemented along the entire perimeter on a 200 foot interval to detect any lateral movement of explosive gases from the landfill site.

Methane migration mitigation measures would be implemented in three (3) phases, if warranted by evidence of subsurface methane gas migration:

1. Increased Monitoring
2. Perform Methane Gas Study
3. Conversion of Passive Vents to Active Evacuation System, if results of study warrant.

If and when these measures become necessary, they will be considered for installation.

*Detail of vent  
through cap  
unclear*

12. LEACHATE COLLECTION/CONTROL SYSTEM

Leachate control at the facility will employ a clay cap cover with permeability of  $1 \times 10^{-7}$  cm./sec. installed atop all landfill areas. The generation of leachate will be minimized by limiting the amount of infiltration from precipitation entering the landfill surface.

Leachate breakout from side slopes will be contained and mitigated by side slope cover maintenance and repair at that specific area. If and when there is evidence that hazardous leachate from the facility has contaminated the groundwater monitoring wells and/or substantive side seep leachate has occurred, then a leachate control system will be considered for installation.

13. LEACHATE CONTROL SYSTEM MAINTENANCE

If and when a leachate control system is installed, appropriate operation and maintenance procedures will be outlined.

14. FACILITY ACCESS CONTROL SYSTEM

Entry to the site after closure of the facility will be prohibited by a locked gate at the main entrance on Centerton-Porchtown Road and a smaller gate has been installed on Centerton-Porchtown Road to gain access to the drainage easement. Furthermore, a 6 foot high chain link fence with barbed wire has already been erected around the entire perimeter.

15. FACILITY ACCESS CONTROL SYSTEM MAINTENANCE

Periodic inspection of the Centerton-Porchtown Road entrance and chain link fence will be performed. In the event that the gate or fencing is damaged, said structure will be immediately repaired as necessary.

16. CONFORMITY OF SITE TO THE SURROUNDING AREAS

Final maximum elevation of the landfill will be 115 feet above sea level or at most 14 feet above the surrounding grade. In the neighborhood, however, the landfill is screened from residential areas by the presence of woods which surround the landfill with well-established vegetation on four (4) sides. In all areas surrounding the landfill areas, these trees are on the order of 40-50 feet high. Permanent vegetation will be promptly established and maintained over the entire site to improve site aesthetics and promote soil stabilization. The vegetated landfill slopes will not be incongruous with the surrounding wooded areas.

17. CONFORMITY OF SITE TO SURROUNDING AREAS MAINTENANCE

Maintenance of the permanent vegetative cover as described in 4. should be sufficient to preserve the ambience of the area.

**CLOSURE AND POST-CLOSURE  
CARE PLAN ELEMENTS**

**C. SCHEDULE OF IMPLEMENTATION \***

	+2 YR.	+10 YR.	+15 YR.	+20 YR.	+25 YR.	+30 YR.
A. SOIL EROSION AND SEDIMENT CONTROL PLAN						
B. FINAL COVER						
C. FINAL COVER VEGETATION						
D. FINAL COVER VEGETATION MAINTENANCE						
E. SIDE SLOPE MAINTENANCE						
F. RUN-ON AND RUN-OFF CONTROL						
G. RUN-ON AND RUN-OFF CONTROL MAINTENANCE						
H. GROUNDWATER MONITORING WELLS	-EXISTING-					
I. GROUNDWATER MONITORING WELL MAINTENANCE						
J. GROUNDWATER MONITORING						
K. METHANE GAS MONITORING						
L. METHANE GAS VENTING						
M. METHANE GAS VENTING SYSTEM MAINTENANCE						
N. LEACHATE CONTROL SYSTEM						
O. LEACHATE CONTROL SYSTEM OPERATION AND MAINTENANCE						
P. FACILITY ACCESS CONTROL	-EXISTING-					
Q. FACILITY ACCESS CONTROL MAINTENANCE						
R. CONFORM SITE TO SURROUNDING AREA						
S. CONFORM SITE TO SURROUNDING AREA MAINTENANCE						

**PITTSGROVE SANITARY LANDFILL - IMPLEMENTATION SCHEDULE**

\* ASSUMES TWO YEAR PERIOD TO INSTALL FINAL CAP

D. CLOSURE AND POST-CLOSURE FINANCIAL PLAN

The Closure and Post-Closure Financial plan is developed so that sufficient funds can be provided and are available for the proper closure and post-closure operation and maintenance of the Pittsgrove Township Sanitary Landfill. Requirements relative to closure and post-closure in the engineering design are used to develop these cost estimates, as are the requirements set forth in the preceding report. In addition, the Post Closure Financial Plan includes costs associated with the maintenance of these items.

The cost estimates presented in Tables 1 and 2 are generally based on 1988 local area construction cost data. Costs were also taken from similar projects.

The remainder of the Financial Plan was prepared by the Township of Pittsgrove and their accountants. They have prepared this Plan based on amounts presented in Table 1 and 2, with adjustments made according to an inflation factor calculated as specified in NJAC 7:26-2.9(f)4. This report is included as Appendix II.

Intervals at which each closure provision and post-closure provision will be implemented and the anticipated schedule of withdrawal of funds are projected in Schedule No. 1 and 1a of the Accounts Report, Appendix II.

Finally, the Landfill Closure Escrow Account, established for Facility No. 1710-A had a balance of \$56,224.52 as of September 30, 1988.

PITTSBORO TOWNSHIP SANITARY LANDFILL FACILITY  
ESTIMATE OF PROBABLE CLOSURE COST

TABLE 1

ITEM	QUANTITY	UNIT COST	TOTAL COST
Soil Erosion and Sediment Control Plan-----	L.S.-----		\$ 10,000
Base to Final Cover (suitable material)---	10,000 CY-----	\$10.00/CY-----	100,000
Final Cover			
12" Clay			
1 x 10 <sup>-7</sup> cm./sec.	18,800 CY-----	\$25.00/CY-----	470,000
6" Drainage Layer	9,400 CY-----	15.00/CY-----	141,000
6" Topsoil (Earth Life)	9,400 CY-----	8.00/CY-----	75,200
Fertilize and Seed-----	56,400 SY-----	0.50/SY-----	28,200
Gas Vents -----	18 UNITS----	1,500/UNIT----	27,000
			<u>\$851,400</u>
	Plus 10% Contingency-----		85,140
	Engineering Design-----		30,000
	Consultant Inspection		
	(Estimated at 6%)-----		51,100
	Total Estimate-----		<u>\$1,017,640</u>

PITTSBORO SANITARY LANDFILL FACILITY

POST CLOSURE COST ESTIMATE

TABLE 2

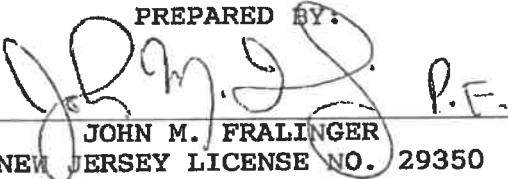
<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL ANNUAL COST</u>
Soil Erosion & Sediment Control, Runon, Runoff Control Maintenance	5 Days	\$700.00	\$ 3,500.00
Vegetation Maintenance, Final Cover Maintenance, Side Slope Maintenance			
<u>Years After Closure</u>			
Year 1	300 CY	4.00	1,200.00
2	600 CY	4.00	2,400.00
3	900 CY	4.00	3,600.00
4 - 28	750 CY	4.00	3,000.00
Monitoring Well Maintenance		L.S.	1,500.00
Methane Vent Well Maintenance		L.S.	1,500.00
Methane Monitoring		L.S.	4,000.00
Groundwater Monitoring		L.S.	2,512.00
Facility Access Control		L.S.	500.00
NJPDES Permit Fee			
1988-1989			8,178.99



**APPENDIX I**

SOIL EROSION AND SEDIMENT CONTROL PLAN  
PREPARED FOR  
TOWNSHIP OF PITTSBORO SANITARY LANDFILL  
PITTSBORO, NEW JERSEY  
FACILITY NO. 1710-A

PREPARED BY:

 P.E.  
JOHN M. FRALINGER  
NEW JERSEY LICENSE NO. 29350

ALBERT A. FRALINGER, JR., P.A.  
590 SHILOH PIKE  
BRIDGETON, NJ 08302

OCTOBER 1989

TABLE OF CONTENTS

	PAGE NO.
SITE DESCRIPTION.....	1
PROJECT DESCRIPTION.....	1
SEQUENCE OF OPERATIONS.....	2
SEQUENCE OF CONSTRUCTION.....	2
SOIL EROSION AND SEDIMENT CONTROL MEASURES.....	3
1. General Requirements.....	3
2. Non-Structural Measures.....	5
a. Permanent Vegetative Stabilization - Landfill Area.....	5
b. Permanent Vegetative Stabilization - Grassed Drainage Waterways.....	8
c. On-Site Traffic Control.....	9
3. Structural Measures.....	10
a. Hay Bale Barriers/Sediment Barriers.....	10
b. Silt Fences.....	12
c. Stabilized Construction Entrance.....	12
4. Maintenance and Control Measures.....	13
 APPENDIX A - RUN-OFF CALCULATIONS	

## NARRATIVE

### SITE DESCRIPTION

The Township of Pittsgrove, Salem County, New Jersey, owns and operates the Pittsgrove Sanitary Landfill located on Centerton-Porchtown Road (see location map on drawing). The parcel is located on approximately 35.6 acres of ground of which approximately 11.7 acres will be disturbed by closure activities. Soil types within the site include the following:

- SrA - Sassafras sandy loam, 0 to 2% slope
- Ps - Pocomoke sandy loam
- Fp - Fallsington-Pocomoke-Berryland complex
- AlA - Aura loam, 0-2% slopes

The Township of Pittsgrove operates the existing facility under New Jersey Division of Waste Management registration number 1710-A.

### PROJECT DESCRIPTION

The Township of Pittsgrove is currently preparing a Closure Plan for facility 1710-A of which this Soil Erosion and Sediment Control Plan is a part. Closure of the landfill involves final grading, installation of a clay cap, drainage layer, topsoiling and planting of permanent vegetative cover. The closure is anticipated to begin some time in 1989 once the Closure Plan is approved by the New Jersey Department of Environmental Protection.

#### SEQUENCE OF OPERATIONS

1. Complete final lifts on the slope of the presently registered facility.
2. Commence installation of soil erosion and sediment control measures.
3. Commence closure construction activities.

#### SEQUENCE OF CONSTRUCTION

All soil erosion and sediment control practices are to be installed in their proper sequence and maintained until permanent protection is established.

1. Construct stabilized construction entrance.
2. Determine routes for on-site traffic control.
3. Silt fences will be erected at all active construction locations indicated on the drawings.
4. Perform subgrading of landfill. (Construction Activity)
5. Grassed waterways will be constructed as indicated on the drawings.
6. Install topsoil and finish grading. (Construction Activity)
7. Stabilization with mulch if necessitated by unfavorable planting dates.
8. Complete permanent vegetative cover for soil stabilization.

9. Finish access roadway, install fence, gate, etc., if required. (Construction Activity)
10. Remove temporary soil erosion and sediment control measures.

#### SOIL EROSION AND SEDIMENT CONTROL MEASURES

##### 1. General Requirements

The owner will be responsible for the construction, implementation and maintenance of all soil erosion and sediment control measures in accordance with the Certified Plan. Damage to surfacewaters resulting from erosion and sedimentation will be minimized by stabilizing disturbed areas and by removing sediment from construction site discharges. Site preparation activities will be planned to minimize the area and duration of soil disruption. The soil erosion and sediment control measures indicated in this Plan are the minimum control measures to be instituted during the term of the project. Further control measures as required in additional Federal, State and local construction permits will apply.

Permanent traffic corridors will be established and stabilized. Traffic corridors are shown on the drawings.

All debris, excess excavated material and refuse incidental to construction activities will be disposed of properly. Trees, stumps, brush and other material from

incidental clearing and grubbing operations will also be disposed of in a presently registered facility.

The owner will adhere to the following soil erosion and sediment control notes:

- a. All soil erosion and sediment control practices are to be installed in their proper sequence and maintained until permanent protection is established.
- b. Any completed landfill areas which are not subject to construction traffic will receive a temporary seeding upon completion. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with straw or equivalent material at a rate of two (2) tons per acre according to the Certified Plan.
- c. Permanent vegetation is to be seeded or sodded on all completed landfill areas within ten (10) days after final (Closure Plan) grading. Mulch is to be used as necessary for protection until seeding is established.
- d. All work is to be done in accordance with the standards for Soil Erosion and Sediment Control in New Jersey.
- e. Stabilized construction entrance standards require the installation of a minimum 50' x 30' pad of

crushed stone (ASTM C-33, Size No. 2 or 3), 6" - 8" deep, at the landfill entrance and exit driveway at Centerton-Porchtown Road.

- f. In accordance with the Standard for Permanent Vegetative Cover for Soil Stabilization, any soil having a pH of 4 or less or containing iron sulfides shall be covered with a minimum of 12" of soil having a pH of 5 or more prior to seedbed preparation.
- g. The Salem County Soil Conservation District shall be notified 72 hours in advance of implementation of any specified soil erosion and sediment control measures.

Salem County Soil Conservation District  
1000 E. Route 40, P.O. Box 47  
Woodstown, NJ 08098  
769-1124

## 2. Non-Structural Measures

- a. Permanent Vegetative Stabilization - Landfill Area.  
At closure, permanent vegetative cover will be established on all areas within the Pittsgrove Township Landfill property that have been disturbed by landfill activities, including but not limited to the following areas:
  - Completed section of facility 1710-A.
  - Vacated stockpiling areas.
  - Traffic routes not intended for permanent future use.
  - Vacated equipment yarding areas.



Stabilization with vegetative cover will be performed only during the periods of February 15 to May 1 or August 15 to October 15. In the event that seeding cannot occur during these periods, disturbed areas will be temporarily stabilized with mulch (Section 2.a.(3)).

(1) Seedbed Preparation. All stones two (2) inches or larger in any dimension and all other debris such as tree roots, logs, pieces of concrete, etc., will be removed. Fertilizer (10-10-10) will be applied at a rate of 600 lbs. per acre. Also, a soil analysis will be performed to determine the pH of the soil. Pulverized dolomitic limestone will be applied at a rate of two (2) tons per acre if the ph is four (4) or less. (A recommended pH range is 6.0 - 6.5) Fertilizer and limestone will be worked into the soil as nearly as practical to a depth of four (4) inches with a disc, springtooth harrow or other suitable equipment. The final harrowing or discing operation should be performed on the general contour until a reasonably uniform seedbed is prepared. If traffic has compacted the soil, the area will be retilled and firmed. If the hydroseeding method is used, fertilizer and limestone will be included in the seeding slurry mixture.

(2) Permanent Vegetation. The seed mixture for permanent vegetative cover will consist of 30 lbs. Kentucky-31 tall fescue, 30 lbs. red or spreading fescue, and 30 lbs.

Kentucky bluegrass, per acre. Seed applied by conventional methods will be applied to a depth of one-fourth (1/4) to one-half (1/2) inch. Hydroseedings may be left on the soil surface. In hydroseeding is utilized, fertilizer and limestone will be included with the seed in the slurry mixture at the rates specified in Section 2.a.(1) of this Plan. Seeding will be performed only during the optimum seeding periods mentioned above. If seeding cannot occur during these periods, disturbed areas will be temporarily stabilized with anchored mulch.

(3) Mulching. Mulch will be placed immediately after seeding if the planting dates are not between February 15 - May 15, or August 15 - October 15. Mulch will consist of either unrotted hay or small grain straw spread uniformly by hand or mechanically at a rate of two (2) tons per acre and anchored immediately after placement. Mulch anchoring will consist of liquid mulch binder or netting tiedown. Liquid mulch binders, when used, will consist of one (1) of the following:

- Synthetic or organic binders such as Curasol, Terra-Tack 1, or equivalent at rates recommended by the Manufacturer.
- Combined wood cellulose fiber mulch/tack products such as Conwed Hydro Mulch or equivalent, at a rate of 400 lbs. per acre.

Mulch nettings may be used in place of liquid mulch binders. Mulch nettings will consist of either jute, paper, excelsior, cotton or plastic and will be anchored on three (3) foot centers by firmly stapling the netting into the soil over the straw or hay mulch. Regardless of the anchoring method employed, mulch anchoring will be performed immediately after placement of hay or straw mulch.

- b. Permanent Vegetative Stabilization - Grassed Drainage Waterways. Reaches of proposed grassed waterways scheduled to be permanently stabilized with vegetation shall be prepared and seeded or stabilized with mulch immediately upon completion of construction. The grassed waterways will be constructed at all locations as indicated on the drawings.

Stabilization with vegetative cover will be performed only during the periods February 15 - May 1, or August 15 - October 15. In the event that seeding waterway construction, the prepared areas shall be temporarily stabilized with mulch until the appropriate seeding time.

- (1) Seedbed Preparation. The seedbed will be prepared as discussed in Section 2.a.(1) of this Plan.
- (2) Vegetation. Seed mixture and seeding rates will be as follows: 100 lb. Reed canary grass, 100 lbs. Kentucky -31 tall fescue and 50 lb. redtop per acre.

Seeding will be performed only during the optimum seeding periods mentioned above. In the event that seeding cannot occur during these periods, the area will be temporarily stabilized with anchored mulch as specified in Section 2.a.(3). Seed applied by conventional methods (i.e., hand, cyclone seeder, drill, cultipacker type seeder, or equivalent) will be applied to a depth of one-fourth (1/4) to one-half (1/2) inch. Hydroseedings may be left on soil surface.

(3) Mulching. Mulching will be performed as indicated in Section 2.a.(3) of this Plan.

c. On-Site Traffic Control. The Contractor shall establish controls for on-site construction traffic in order to minimize land disturbance in any area where vehicular traffic disturbs the land to the extent of reducing protective vegetation, compacting soil or otherwise deteriorating the environment:

(1) Restrict construction traffic to predetermined routes according to types and numbers of vehicles anticipated. Markers or temporary fencing may be helpful.

(2) Predetermine steep banks and vegetative areas to be avoided by traffic.

(3) Traffic during wet weather should be minimized.

(4) Provisions should be made to prevent tracing or flowing of mud onto public right-of-way. The following methods may be among those considered.

- Exit ramp surfaced with materials such as large size gravel or stone, wood chips, timber or other material.
- Inspection and cleaning of vehicles before entering public right-of-way.

### 3. Structural Measures.

#### a. Hay Bale Barriers/Sediment Barriers

(1) Stockpile Protection. The operator will construction hay bale barriers around all stockpiles of fill, topsoil and excavated overburden that are to remain exposed for period greater than one (1) week. Hay bale barriers will be anchored and constructed as specified on the Soil Erosion Sediment Control plan drawing, and will be maintained in good operating condition by the operator until they are removed and the stockpiling areas are brought to final grade and stabilized with permanent vegetative cover. Where stockpiles

lie on paved surfaces, the operator will remove residual stockpiled materials to the maximum extent practicable before removing the hay bale barriers. It will be the responsibility of the operator to remove all hay bale barriers from the construction site after stockpiles are depleted. Where applicable, stockpiling areas will be stabilized by permanent vegetative measures.

- (2) Sediment Barriers. As planned grading proceeds, the operator will construct hay bale barriers at all locations indicated on the drawings. Hay bale barriers will be constructed down slope of construction activities to intercept and detain sediment from disturbed areas. Hay bale barriers will be anchored and constructed as specified on the drawing and will be maintained in good operating condition by the operator until stabilization of upstream contributory areas is achieved. Hay bale barriers will be constructed so that water cannot bypass the barrier around the ends and all bales will be securely tied and placed on the contour.

b. Silt Fences. The operator will construct silt fences at all locations indicated on the drawings. Silt fences will be constructed down slope of construction activities and normal to sediment-laden flows to prevent sediment from reaching surfacewaters and wetlands. Silt fences will be installed immediately prior to commencement of construction activities and will be maintained in good operating condition by the operator until stabilization of upstream contributory areas is achieved. Silt curtains will be constructed so that water cannot bypass the curtain around the end. The filtering medium for silt fences shall consist of woven polypropylene filter fabric such as Mirafi 100X, Enviro-fence, burlap material or equivalent. Silt fences will be anchored and constructed as specified as shown on the drawing.

c. Stabilized Construction Entrance. The operator will stabilize all unpaved landfill exits and entrances with stone bases to reduce the tracking or flowing of sediment into public right-of-way as shown on the drawings. Stone bases will be constructed of crushed stone (ASTM C-33, Size No. 2 or 3) spread at a thickness of 6" - 8". The width of the stabilized bases will not be less than the full

width of points of ingress or egress and the length of the bases will be at least 50 feet. The operator will be responsible for maintaining stone bases in a condition which will prevent tracing or flowing of sediment onto public rights-of-way.

This may require periodic top dressing with additional stone or additional length as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.

#### 4. Maintenance of Control Measures.

Maintenance of all soil erosion and sediment control measures will be the responsibility of the owner. The owner will maintain structural and non-structural measures such that soil erosion is minimized throughout the closure period. When complete site stabilization is achieved, the owner will be responsible for the removal of remaining temporary control structures and bringing disturbed areas to approved grade. These areas will then be permanently vegetated as specified in this Plan.

The Township of Pittsgrove will be responsible for maintenance of all permanent soil erosion and sediment control measures.



**APPENDIX A**

## Worksheet 2: Runoff curve number and runoff

Project Pittsgrove Township Landfill By CMF Date 10/88

Location Centerton-Porchtown Road Checked JMF Date 10/88

Circle one: Present ~~Revised~~

### 1. Runoff curve number (CN)

Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN <sup>1/</sup>			Area <input type="checkbox"/> acres <input type="checkbox"/> mi. <sup>2</sup> <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
"B" Pocomoke Sandy Loam	Fallow, bare soil	86			57.72	4,963.9
"B" Sassafras Sandy Loam	Fallow, bare soil 0-2% slopes	86			29.90	2,571.4
"B" Fallisington Berryland Complex	Fallow, bare soil	86			12.38	1,064.7
1/ Use only one CN source per line.					Totals =	100%

$$CN \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{8600.0}{100.0} = 86.0$$
 Use CN = 86.0

### 2. Runoff

Frequency ..... yr  
 Rainfall, P (24-hour) ..... in  
 Runoff, Q ..... in  
 (Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)

Storm #1	Storm #2	Storm #3
100		
7.40		
5.70		

## Worksheet 2: Runoff curve number and runoff

Project Pittsgrove Township Landfill By CMF Date 10/88  
 Location Centerton-Porchtown Road Checked JMF Date 10/88

Circle one: ~~RUR~~ Developed

### 1. Runoff curve number (CN)

Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN <sup>1/</sup>			Area <input type="checkbox"/> acres <input type="checkbox"/> mi <sup>2</sup> <input type="checkbox"/> %	Product of CN x area
		Table 2-2	FIG. 2-3	FIG. 2-4		
"D" Made-Land Landfill	Meadow, continuous grass or pasture, good condition	78			100	7800
Totals =					100%	

<sup>1/</sup> Use only one CN source per line.

$$CN \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{7800}{100}$$
 Use CN = 78.0

### 2. Runoff

Frequency ..... yr  
 Rainfall, P (24-hour) ..... in  
 Runoff, Q ..... in  
 (Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)

Storm #1	Storm #2	Storm #3
100		
7.40		
4.70		

### Worksheet 3: Time of concentration (T<sub>c</sub>) or travel time (T<sub>t</sub>)

Project Pittsgrove Township Landfill By CMF Date 10/88

Location Centerton-Porchtown Road Checked JMF Date 10/88

Circle one: ~~Developed~~ Developed

Circle one: (T<sub>c</sub>) T<sub>c</sub> through subarea

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T<sub>c</sub> only)

- Segment ID
1. Surface description (table 3-1) .....
  2. Manning's roughness coeff., n (table 3-1) ..
  3. Flow length, L (total L < 300 ft) ..... ft
  4. Two-yr 24-hr rainfall, P<sub>2</sub> ..... in
  5. Land slope, s ..... ft/ft
  6.  $T_c = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$  Compute T<sub>c</sub> ..... hr

AB	
Grass	
0.24	
220	
3.3	
0.06	
.284	+ - - = .284

N/A

Shallow concentrated flow

- Segment ID
7. Surface description (paved or unpaved) .....
  8. Flow length, L ..... ft
  9. Watercourse slope, s ..... ft/ft
  10. Average velocity, V (figure 3-1) ..... ft/s
  11.  $T_c = \frac{L}{3600 V}$  Compute T<sub>c</sub> ..... hr

	+ - - =

Channel flow

- Segment ID
12. Cross sectional flow area, a ..... ft<sup>2</sup>
  13. Wetted perimeter, p<sub>w</sub> ..... ft
  14. Hydraulic radius,  $r = \frac{a}{p_w}$  Compute r ..... ft
  15. Channel slope, s ..... ft/ft
  16. Manning's roughness coeff., n .....
  17.  $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$  Compute V ..... ft/s
  18. Flow length, L ..... ft
  19.  $T_c = \frac{L}{3600 V}$  Compute T<sub>c</sub> ..... hr
  20. Watershed or subarea T<sub>c</sub> or T<sub>t</sub> (add T<sub>c</sub> in steps 6, 11, and 19) ..... hr

BC	
28	
22	
1.27	
.0037	
0.05	
2.13	
1200	
.156	+ - - = .156
	- - - = .440

## Worksheet 4: Graphical Peak Discharge method

Project Pittsgrove Township Landfill By CMF Date 10/88  
 Location Centerton-Porchtown Road Checked JMF Date 10/88

Circle one: ~~XXXXXX~~ Developed

1. Data:

Drainage area .....  $A_m = \frac{0.0182}{640} \text{ mi}^2$  (acres/640)  
 Runoff curve number ....  $CN = 78.0$  (From worksheet 2)  
 Time of concentration ..  $T_c = .440$  hr (From worksheet 3)  
 Rainfall distribution type = III (I, IA, II, III)  
 Pond and swamp areas spread throughout watershed ..... = 0 percent of  $A_m$  (\_\_\_\_ acres or  $\text{mi}^2$  covered)

	Storm #1	Storm #2	Storm #3
2. Frequency ..... yr	100		
3. Rainfall, P (24-hour) ..... in	7.4		
4. Initial abstraction, $I_a$ ..... in (Use CN with table 4-1.)	0.564		
5. Compute $I_a/P$ .....	0.0883		
6. Unit peak discharge, $q_u$ ..... csm/in (Use $T_c$ and $I_a/P$ with exhibit 4-III)	450		
7. Runoff, Q ..... in (From worksheet 2).	4.70		
8. Pond and swamp adjustment factor, $F_p$ ..... (Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond and swamp area.)	0		
9. Peak discharge, $q_p$ ..... cfs (Where $q_p = q_u A_m Q F_p$ )	38.49		

APPENDIX II

ACCOUNTANT'S REPORT

CLOSURE/POST CLOSURE  
FINANCIAL PLAN  
TOWNSHIP OF PITTSBORO  
COUNTY OF SALEM

Warner & Company  Certified Public Accountants

APPENDIX C  
ACCOUNTANT'S REPORT

Warner & Company  Certified Public Accountants



CLOSURE/POST CLOSURE  
FINANCIAL PLAN  
TOWNSHIP OF PITTSBORO  
COUNTY OF SALEM

TABLE OF CONTENTS

	<u>Page</u>
Accountant's Letter	1-2
Exhibit A	3
Exhibit B	4-5
Exhibit C	6
Exhibit D	7

---

# Warner & company

---

Certified Public Accountants  
Professional Association

William D. Lomberk, CPA (NJ & PA)  
David C. Rollison, CPA, RMA  
Michael S. Warner, CPA

---

Jack J. Marandino  
J. Stephen Warner

The Honorable Mayor and  
Members of the Township Committee  
Township of Pittsgrove  
County of Salem  
Elmer, New Jersey 08318

Mesdames and Gentlemen:

We have compiled the accompanying financial forecast of the Township of Pittsgrove Closure and Post-Closure Financial Plan for Sanitary Landfill Facility No. 1710A included in the prescribed form in accordance with standards established by the American Institute of Certified Public Accountants.

The closure and post-closure period amounts for 1989/90 were supplied to us by Albert A. Fralinger, Jr., P.A. and have been adjusted using an inflation adjustment factor of 5.73% based on a 10-year average of the Implicit Price Deflators for 1978 through 1987 for which the source is the Survey of Current Business from the U.S. Department of Commerce. This was confirmed with Mr. William J. McCarthy of the Department of Environmental Protection, State of New Jersey.

Deposits and subsequent withdrawals from the Landfill Escrow account starting in 1991, are to be made at the end of each year with respect to the post closure financial plan. Interest Earnings were determined by utilizing a conservative rate of six percent compounded annually.

A financial forecast is an estimate of the most probable results of operations for one or more future periods and reflects a judgment based on present circumstances of the most likely set of conditions and its most likely cause of action. Forecasts are based on assumptions about circumstances and events that have not yet taken place and are subject to variations. There is no assurance that the forecasted results will be attained.

We have no responsibility to update this report for events and circumstances occurring after the date of this report.

-1-

34 East Avenue  
PO Box 234  
Woodstown, NJ 08098  
(609)769-0707  
FAX - (609) 769-4657

193 W. Commerce Street  
PO Box 930  
Bridgeton, NJ 08302  
(609) 451-4600  
FAX - (609) 455-0024

118 E. Wheat Road  
PO Box 519  
Buena, NJ 08310  
(609) 697-3258  
FAX - (609) 697-3944

MEMBERS:  
American Institute of  
Certified Public Accountants  
New Jersey Society of  
Certified Public Accountants

Our compilation was limited to presenting in the form prescribed by Albert A. Fralinger, Jr., P.A. information that is the representation of management. We have not audited or reviewed the financial forecast referred to above and, accordingly, do not express an opinion or any other form of assurance on it.

Respectfully submitted,



WARNER & COMPANY, CPA'S

January 14, 1989

TOWNSHIP OF PITTSBORO  
COUNTY OF SALEM  
CLOSURE AND POST-CLOSURE FINANCIAL PLAN  
FOR SANITARY LANDFILL FACILITY NO. 17109

	Closure 1989-1990 <u>Construction</u>	Post-Closure 1991-2020 <u>Maintenance</u>	<u>Total</u>
1. Soil Erosion and Sediment Control, Run on, Run off Control Maintenance	\$ 10 000.00	\$ 263 900.78	\$ 273 900.78
2. Base to Final Cover (Suitable Material)	100 000.00		100 000.00
3. Final Cover	686 200.00		686 200.00
4. Final Cover (Fertilizer and Seed)	28 200.00		28 200.00
5. Methane Gas Vents	27 000.00		27 000.00
6. Engineering Design	30 000.00		30 000.00
7. Consultant Inspection	51 100.00		51 100.00
8. Contingencies	85 140.00		85 140.00
9. Final Cover Maintenance, Vegetation Maintenance, and Side Slope Maintenance			
1st Year		1 200.00	1 200.00
2nd Year		2 400.00	2 400.00
3rd Year		3 600.00	3 600.00
4th to 30th Year		183 321.90	183 321.90
10. Monitoring Well Maintenance		113 100.34	113 100.34
11. Methane Vent Well Maintenance		113 100.34	113 100.34
12. Methane Monitoring		301 600.90	301 600.90
13. Groundwater Monitoring		189 405.36	189 405.36
14. Facility Access Control		37 700.11	37 700.11
15. N.J.P.D.E.S. Permit Fee		616 697.68	616 697.68
Totals	<u>\$1 017 640.00</u>	<u>\$1 826 027.41</u>	<u>\$2 843 667.41</u>

TOWNSHIP OF PITTSBORO  
COUNTY OF SALEM  
CLOSURE AND POST-CLOSURE FINANCIAL PLAN  
FOR SANITARY LANDFILL FACILITY NO. 1710A  
SCHEDULE OF FUTURE POST-CLOSURE MAINTENANCE COSTS

EXHIBIT B

<u>Year</u>	<u>Total</u>	<u>Soil Erosion and Sedi- ment Control, Run on, Run off Control Maintenance</u>	<u>Final Cover Maintenance, Vegetation Maintenance, and Side Slope Maintenance</u>
1991	\$ 22 890.99	\$ 3 500.00	\$ 1 200.00
1992	25 333.89	3 700.55	2 400.00
1993	27 848.00	3 912.61	3 600.00
1994	28 637.41	4 136.78	3 000.00
1995	30 278.31	4 373.82	3 171.90
1996	32 013.28	4 624.44	3 353.65
1997	33 847.64	4 889.42	3 545.81
1998	35 787.11	5 169.58	3 748.99
1999	37 837.71	5 465.80	3 963.81
2000	40 005.81	5 779.00	4 190.93
2001	42 298.15	6 110.13	4 431.07
2002	44 721.83	6 460.24	4 684.98
2003	47 284.39	6 830.41	4 953.42
2004	49 993.76	7 221.79	5 237.25
2005	52 858.43	7 635.60	5 537.35
2006	55 887.22	8 073.12	5 854.64
2007	59 089.55	8 535.71	6 190.11
2008	62 475.39	9 024.81	6 544.80
2009	66 055.22	9 541.93	6 919.82
2010	69 840.17	10 088.68	7 316.32
2011	73 842.02	10 666.76	7 735.55
2012	78 073.19	11 277.97	8 178.80
2013	82 546.77	11 924.20	8 647.44
2014	87 276.68	12 607.45	9 142.94
2015	92 277.66	13 329.86	9 666.83
2016	97 565.15	14 093.66	10 220.74
2017	103 155.65	14 901.23	10 806.39
2018	109 066.47	15 755.07	11 425.60
2019	115 315.97	16 657.83	12 080.28
2020	121 923.59	17 612.33	12 772.48
<b>TOTAL</b>	<b>\$1 826 027.41</b>	<b>\$ 263 900.78</b>	<b>\$ 190 521.90</b>

<u>Monitoring Well Maintenance</u>	<u>Methane Vent Well Maintenance</u>	<u>Methane Monitoring</u>	<u>Ground Water Monitoring</u>	<u>Facility Access Control</u>	<u>NJPEDS Permit Fee</u>
\$ 1 500.00	\$ 1 500.00	\$ 4 000.00	\$ 2 512.00	\$ 500.00	\$ 8 178.99
1 585.95	1 585.95	4 229.20	2 655.94	528.65	8 647.65
1 676.82	1 676.82	4 471.53	2 808.12	558.94	9 143.16
1 772.91	1 772.91	4 727.75	2 969.03	590.97	9 667.06
1 874.49	1 874.49	4 998.65	3 139.15	624.83	10 220.98
1 981.90	1 981.90	5 285.07	3 319.03	660.63	10 806.66
2 095.47	2 095.47	5 587.91	3 509.21	698.49	11 425.86
2 215.54	2 215.54	5 908.10	3 710.28	738.51	12 080.57
2 342.49	2 342.49	6 246.63	3 922.88	780.83	12 772.78
2 476.71	2 476.71	6 604.56	4 147.67	825.57	13 504.66
2 618.63	2 618.63	6 983.00	4 385.33	872.88	14 278.48
2 768.67	2 768.67	7 383.13	4 636.61	922.89	15 096.64
2 927.33	2 927.33	7 806.18	4 902.28	975.77	15 961.67
3 095.05	3 095.05	8 253.48	5 183.18	1 031.68	16 876.28
3 272.40	3 272.40	8 726.41	5 480.18	1 090.80	17 843.29
3 459.91	3 459.91	9 226.43	5 794.20	1 153.30	18 865.71
3 658.16	3 658.16	9 755.10	6 126.20	1 219.39	19 946.72
3 867.78	3 867.78	10 314.07	6 477.23	1 289.26	21 089.66
4 089.40	4 089.40	10 905.06	6 848.38	1 363.13	22 298.10
4 323.72	4 323.72	11 529.92	7 240.79	1 441.24	23 575.78
4 571.47	4 571.47	12 190.59	7 655.69	1 523.82	24 926.67
4 833.42	4 833.42	12 889.11	8 094.36	1 611.14	26 354.97
5 110.37	5 110.37	13 627.65	8 558.17	1 703.46	27 865.11
5 403.19	5 403.19	14 408.52	9 048.55	1 801.06	29 461.78
5 712.80	5 712.80	15 234.13	9 567.03	1 904.27	31 149.94
6 040.14	6 040.14	16 107.04	10 115.22	2 013.38	32 934.83
6 386.24	6 386.24	17 029.98	10 694.82	2 128.75	34 822.00
6 752.17	6 752.17	18 005.79	11 307.64	2 250.73	36 817.30
7 139.07	7 139.07	19 037.53	11 955.57	2 379.69	38 926.93
7 548.14	7 548.14	20 128.38	12 640.62	2 516.05	41 157.45
<u>\$ 113 100.34</u>	<u>\$ 113 100.34</u>	<u>\$ 301 600.90</u>	<u>\$ 189 405.36</u>	<u>\$ 37 700.11</u>	<u>\$ 616 697.68</u>

TOWNSHIP OF PITTSBORO  
COUNTY OF SALEM  
CLOSURE AND POST-CLOSURE FINANCIAL PLAN  
FOR SANITARY LANDFILL FACILITY NO. 1710A  
FUNDING OF CLOSURE CONSTRUCTION COSTS

Reserved (set aside from prior year Budgets) for Landfill Closure Construction Costs	\$ 135 613.64
(1) Permanent Financing (Bonds)	<u>882 026.36</u>
Total	<u>\$1 017 640.00</u>

NOTE

(1) Estimated at this point in time.

TOWNSHIP OF PITTSBORO  
COUNTY OF SALEM  
CLOSURE AND POST-CLOSURE FINANCIAL PLAN  
FOR SANITARY LANDFILL FACILITY NO. 1710A  
FUNDING OF POST-CLOSURE MAINTENANCE COSTS

Year	Beginning Balance	(2)Deposits	Interest	Withdrawals	Ending Balance
1991	(1)\$ 64 083.81		\$ 3 845.03	\$ 22 890.99	\$ 45 037.85
1992	45 037.85		2 702.27	25 333.88	22 406.24
1993	22 406.24	\$ 50 000.00	1 344.37	27 848.00	45 902.61
1994	45 902.61	50 000.00	2 754.16	28 637.41	70 019.36
1995	70 019.36	50 000.00	4 201.16	30 278.33	93 942.19
1996	93 942.19	50 000.00	5 636.53	32 013.28	117 565.44
1997	117 565.44	50 000.00	7 053.93	33 847.64	140 771.73
1998	140 771.73	50 000.00	8 446.30	35 787.11	163 430.92
1999	163 430.92	50 000.00	9 805.86	37 837.71	185 399.07
2000	185 399.07	50 000.00	11 123.95	40 005.81	206 517.21
2001	206 517.21	50 000.00	12 391.03	42 298.14	226 610.10
2002	226 610.10	50 000.00	13 596.61	44 721.83	245 484.88
2003	245 484.88	50 000.00	14 729.09	47 284.39	262 929.58
2004	262 929.58	50 000.00	15 775.78	49 993.78	278 711.58
2005	278 711.58	50 000.00	16 722.70	52 858.43	292 575.85
2006	292 575.85	50 000.00	17 554.55	55 887.21	304 243.19
2007	304 243.19	50 000.00	18 254.59	59 089.55	313 408.23
2008	313 408.23	50 000.00	18 804.50	62 475.38	319 737.35
2009	319 737.35	50 000.00	19 184.24	66 055.22	322 866.37
2010	322 866.37	50 000.00	19 371.98	69 840.19	322 398.16
2011	322 398.16	50 000.00	19 343.89	73 842.03	317 900.02
2012	317 900.02	50 000.00	19 074.00	78 073.18	308 900.84
2013	308 900.84	50 000.00	18 534.05	82 546.77	294 888.12
2014	294 888.12	50 000.00	17 693.29	87 276.70	275 304.71
2015	275 304.74	50 000.00	16 518.28	92 277.65	249 545.34
2016	249 545.34	50 000.00	14 972.72	97 565.16	216 952.90
2017	216 952.90	50 000.00	13 017.18	103 155.65	176 814.43
2018	176 814.43	50 000.00	10 608.87	109 066.47	128 356.83
2019	128 356.83	50 000.00	7 701.41	115 315.97	70 742.27
2020	70 742.27	46 936.73	4 244.55	121 923.55	(0.00)
TOTAL	\$ -0-	\$1 396 936.73	\$ 365 006.87	\$1 826 027.41	\$ -0-

## NOTE

- (1) This is an estimated beginning balance in the Landfill Escrow Account.  
(2) Deposits to the account will be provided from subsequent budgets of the Township of Pittsgrove.



APPENDIX III

**Exhibit C**  
**Redevelopment Plan**

**Redevelopment Plan For  
Block 1701, Lot 1  
Pittsgrove Township, NJ**

**January 2019**

---

SARAH BIRDSALL, PLANNING CONSULTING

NJ PP LICENSE #33LI00397400

PO Box 243  
Greenwich, NJ 08323

856-305-1626  
[SEB@sarahbirdsall.com](mailto:SEB@sarahbirdsall.com)

---

<b>Table of Contents</b>	<b>Page Number</b>
I. Introduction	3
II. Designation of Area and Plan Development	4
III. Statutory Requirements of Redevelopment Plan	4
IV. Description of Project Area	5
V. Statement of Goals and Objectives	6
VI. Proposed Land Uses and Building Requirements	6
VII. Housing and Relocation	7
VIII. Property Acquisition	8
IX. Relationship of Redevelopment Plan to Other Plans	8
X. Relationship of the Redevelopment Plan to Township Plans/Ordinances	9
XI. Proposed Redevelopment Actions	9
XII. Obligations of the Redeveloper	10
XIII. Deviations from Provision of Approved Redevelopment Plan	10
XIV. Duration of Redevelopment Plan Restrictions	10
XVI. Amendments to the Approved Redevelopment Plan	11
<b><u>Tables</u></b>	
1: Permitted Uses in Project Area Under Current Zoning	6
<b><u>Exhibits</u></b>	
A: Map of Project Area	12

---

## I. Introduction

---

The area (the Project Area) covered by this Redevelopment Plan consists of Block 1701, Lot 1, which is part of a Non-Condensation Area in Need of Redevelopment in accordance with the Local Redevelopment and Housing Law (N.J.S.A. 40A:12A-1 et seq.) (“LRHL”). The Project Area lot comprises the closed and capped Township landfill and the current Township convenience center location as well as a wooded buffer ranging from 100’ to 500’ wide along its perimeter. It is located on the east side of Porchtown Road between Centerton Road and Garden Road. A Project Area Map is attached as Exhibit A to this Plan.

Pittsgrove anticipates the adoption of this Redevelopment Plan will result in reutilization of an area with limited development possibilities and promotion of the use of renewable energy for the benefit of residents. This Redevelopment Plan, in conformance with the Township Master Plan, endorses development that is “...related to the existing natural capacities of the environment and the level of infrastructure existing or proposed [in the Township].”

---

## II. Designation of Area and Plan Development

---

### A. Designation of the Non-Condensation Redevelopment Area

The Township Committee, pursuant to N.J.S.A. 40A:12A-7, has prepared this Redevelopment Plan for the Project Area to support the redevelopment of the Project Area and provide benefits to Township citizens.

The Township Committee initiated this process with Resolution #204-208, requesting the Planning Board to undertake a Preliminary Investigation to determine whether the proposed Study Area, comprised of Block 1701, Lot 1 and Block 801, Lot 11, qualified as an Area of Non-Condensation Redevelopment pursuant to N.J.S.A. 40A:12A-5. The Planning Board, after a public hearing on the subsequent report, adopted a resolution recommending to the Committee that Block 1701, Lot 1 and Block 801, Lot 11 be designated an Area of Non-Condensation Redevelopment.

The Township Committee passed a resolution ( \_\_\_\_\_ ) so designating the Redevelopment Area on \_\_\_\_\_ and requested that the Township Planner produce a Redevelopment Plan for Block 1701, Lot 1 for immediate review by the Planning Board and eventual adoption by the Township Committee.

---

## III. Statutory Requirements of Redevelopment Plan

---

A redevelopment plan must be prepared and adopted by ordinance prior to undertaking any redevelopment project in all or a portion of an area in need of redevelopment or rehabilitation. This process, which is consistent with applicable state statutes, was followed by the Township in the preparation of this Redevelopment Plan.

Pursuant to the LRHL, a redevelopment plan shall include an outline for the planning, development, rehabilitation or redevelopment of the area sufficient to indicate:

1. Its relationship to definite local objectives as to appropriate land uses, density of population and improved traffic and public transportation, public utilities, recreational and community facilities and other public improvements.
2. Proposed land uses and building requirements in the Project Area.
3. An identification of any property within the Project Area which is proposed to be acquired in accordance with the Redevelopment Plan.
4. Any significant relationship of the Redevelopment Plan to:
  - the Master Plans of contiguous municipalities;
  - the Master Plan of the County in which the municipality is located;
  - the State Development and Redevelopment Plan adopted pursuant to the "State Planning Act" PL 1985, C398 (C52:18A-196 et al.); and
  - the local ordinances and Master Plan.
5. A housing inventory of all affordable housing units to be removed as a result of implementation of the plan; and
6. Adequate provision for the temporary and permanent relocation, as necessary, of residents in the Project Area, including an estimate of the extent to which decent, safe and sanitary dwelling units affordable to displaced residents will be available to them in the existing local housing market.
7. A plan for replacement of any affordable housing removed pursuant to the Redevelopment Plan.

#### **IV. Description of Project Area**

---

The Project Area consists of the one lot, Block 1701, Lot 1, a single tax lot of 35.5 acres owned by Pittsgrove Township. Presently, Lot 1 is the site of the Township's waste and recycle center with a small paved area of approximately one-half acre and the capped landfill mound comprising about 14 acres. The mound is grass covered. The remainder of the lot is wooded. There is a paved entrance to the waste and recycle center from Porchtown Road. This Plan intends that the Township waste and recycle center shall continue to operate concurrent with the proposed re-development of the site.

Lot 1 currently encompasses two zoning districts, Conservation and Rural Residential. The lot is approximately 75% in the Conservation District. The Project Area is bounded on the east by a stream which is part of the Muddy Run sub-watershed, a Category One stream. State regulations require protection from disturbance within 300' of the stream centerline. Presently, the required 300 foot buffer is completely wooded on Lot 1.

The area proposed for re-development under this Plan would be limited to the grassy capped landfill. Approximately two-thirds of the capped landfill is in the Conservation Zone with the remaining third in the Rural Residential Zoning District. The Preliminary Investigation Report

for the Redevelopment Area concluded that the possibilities of development as permitted under Rural Residential Zoning are slight due to the history of the site as a landfill. The possibilities for development, such as trails and/or environmental centers, as permitted under Conservation Zoning are also diminished by the sensitivity to the past use as a landfill. Table 1 lists the permitted uses for each Zoning District within the Project Area.

**TABLE 1: Permitted Uses in Project Area Under Current Zoning**

Permitted Use	Conservation District	Rural Residential District
Agricultural or horticultural uses	X	X
Conservation areas	X	X
Parks and recreational facilities	X	X
Municipal use	X	X
Public buildings, offices, facilities and yards	X	
Environmental centers and wildlife facilities	X	
Single family, detached housing on 5 acres	X	
Farm		X
Churches		X
Educational facilities		X
Single family, detached housing on 3 acres		X

## V. Statement of Goals and Objectives

Pittsgrove Township wants to utilize this Township owned property in a manner that will fulfill New Jersey's energy goal to "...provide for the encouragement and promotion of the efficient use of natural resources and the installation and usage of renewable energy system" Furthermore, this Plan will benefit residents through the best utilization of a Township owned property.

To achieve this, the following goals and objectives have been established:

1. The primary goal of this Redevelopment Plan is to re-utilize the closed landfill in a manner that is cognizant of the area's environmental sensitivity while developing, to the maximum extent possible within those constraints, its economic potential.
2. Considering the limited possibilities for development on Lot 1, the Township's intention is to make the property attractive for re-development as an alternative

energy solar site using a full range of inducements and benefits, local, state and federal.

3. An objective is to explore a wide range of leasing and financing mechanisms for ensuring that any solar plant installed will maximize returns to the residents of the Township.
3. The goal of a solar plant fits with the Master Plan's policy to attract development that conforms to the Township's environmental constraints and its rural character.
4. The Redevelopment will foster public-private partnerships in such a way that the needs of the community are best served and any partnership contributes to the continuing strength of Pittsgrove Township.

## **VI. Proposed Land Uses and Building Requirements**

---

The existing use, bulk, design and performance standards, and all other standards, as currently set forth in the Township's Land Development Ordinances, and as adopted in the future, shall apply to the Project Area as except as set forth herein.

Additional Permitted Use will be **Principal solar energy production facility**, defined as "an area of land or other area used for a solar collection system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for off-site use. Principal solar energy systems consist of one or more free-standing ground mounted solar collector devices, solar related equipment and other accessory structures and buildings including light reflectors, concentrators, and heat exchangers, substations, electrical infrastructure, transmission lines and other appurtenant structures."

Standards for the additional permitted use are:

- The solar array shall be confined to the capped landfill area.
- The existing vegetated buffer to the east, west and south shall be maintained.
- Any substations/inverters installed shall be setback a minimum of 100' from any property line.
- Fencing shall be installed around the entire array with locked entrance gates equipped with Knox Boxes.
- The system shall be installed in compliance with the NEC 2017 Articles 690 and 691.
- The total noise from the facility shall not exceed 50dBA from any property line.
- No trees may be removed for the installation unless specified in the submitted Planning Board site plan.
- The operator shall provide a phone number and identify a person responsible for the Township to contact with inquiries and complaints throughout the life of the project.



- The solar facility shall be accessible to typical emergency service apparatus, including fire equipment and ambulance. An emergency response plan should be developed and include:
  - Material safety data sheets of all components of the system that contain hazardous or flammable materials.
  - identification of potential emergencies,
  - a map/diagram of the system,
  - procedures to follow in the case of various emergencies.
- Any Planning Board approval shall be subject to review and written approval of the pertinent fire district captain.
- The landfill cap shall not be disturbed for the installation.
  - Any installation on the landfill cap shall be ground or above ground. No drilling, excavating or augering shall be allowed.
  - All equipment shall be mounted above ground, including wiring, conduits and panel bases.
  - A NJ certified structural engineer shall certify that the foundation and design of the solar panels racking and support is within accepted professional standards, given local soil and climate conditions.
- The project shall submit a stormwater runoff analysis and meet all pertinent standards for stormwater control.
- Maximum panel height shall be under 20 feet.
- A Decommissioning Plan (based on end of lease and/or abandonment to be defined as “the cessation of the current use of the land for 6 continuous months by the operator with no intention of resuming or transferring the operation of the facility to another who will continue the use”) shall be submitted to the Township Committee and to the Planning Board and shall include:
  - Provisions for the Township to notify the Operator of abandonment and allow 60 days for the resumption of energy generation to at least 75% of its capacities prior to declaring it abandoned.
  - Provisions for the removal of all components of the facility/system from the site and the full restoration of the site to its predevelopment condition insofar as is feasible; and the safe disposal of all components of the facility/system, including the recycling of all recoverable materials, consistent with prevailing best practices relating to the disposal and recycling of photovoltaic waste at the time of decommissioning.
  - Requirement for a demolition permit within 60 days of notice of abandonment by the Township. At the time of issuance of the demolition permit, the operator shall provide financial security in the form and amount acceptable to the Township Committee to secure the expense of complete dismantling and removing all equipment of the facility and the restoration of the land to its original condition
  - Measures to provide for the protection of public health and safety and for protection of the environment and natural resources during both the removal

and site restoration stages, as well as the schedule for the completion of all site restoration work in accordance with the decommissioning plan.

This Redevelopment Plan shall supersede the underlying zoning within the Project Area to the extent set forth above. Any issue of relevant land use and building requirements not specifically addressed in this Redevelopment Plan shall be subject to the Township's Land Development Ordinances and all other ordinances and regulations of the Township unless it contravenes this Redevelopment Plan.

## **VII. Housing and Relocation**

---

The Project Area has no residential units presently and the proposed redevelopment use as a solar facility does not include any residential component. Therefore, a relocation plan and provisions for affordable housing are not included in this Redevelopment Plan.

## **VIII. Property Acquisition**

---

The Project Area is a Non-Condemnation Redevelopment Area and, in addition, the entire Project Area is Township owned.

## **IX. Relationship of this Redevelopment Plan to Other Plans**

---

### **A. Relationship to Master Plans of Contiguous Municipalities**

Pittsgrove Township is contiguous to six municipalities. Franklin Township in Gloucester County lies approximately five miles from the Project Area toward the northeast. Vineland in Cumberland County is about four and one-half miles to the east. Adjacent Salem County municipalities are Upper Pittsgrove and Elmer, each of which is slightly about three miles from the Project Area.

The City of Vineland, Franklin Township, Elmer Borough and Upper Pittsgrove are sufficiently remote from the Project Area that its development as a solar facility will not have any significant impact on their development plans as supported in their Master Plans.

Upper Deerfield and Deerfield in Cumberland County are the two closest municipalities to the Project Area. Their borders with Pittsgrove lie slightly less than two miles from the Project Area. Both these Townships' Master Plans emphasize protecting the character of their rural environments with emphasis on environmental capacities and sensitivities. Their visions are consistent with the goals and objectives of this Redevelopment Plan. This implementation of this Plan will have no significant impact on their development plans.

### **B. Relationship to Salem County Planning**

Salem County planning is focused mainly on growth management and economic development in its western highway corridor. There, according to the 2016 "Comprehensive County Master

Plan,” most of the County’s industry and major employers lie “while agriculture is the mainstay of eastern and central sections.” Pittsgrove Township is in the far eastern agricultural part of the County.

In general, the County Farmland Preservation Plan is more relevant in terms of significant relationship with this Redevelopment Plan. The primary goals of the County Farmland Preservation Plan and the Pittsgrove Township Farmland Preservation Plan are to support the local agricultural economy and retain quality farmland for agricultural use. To this end, both plans propose strategies for preservation of farmland in general and, especially, in targeted areas. The Project Area for this Plan is not within any targeted farmland preservation area. And this Redevelopment Plan does not affect the goals and objectives of either Farmland Preservation Plan.

#### C. Relationship to State Development and Redevelopment Plan

The Project Area is entirely in Planning Area 4B, Rural Environmentally Sensitive. The Policy Objective for Land Use for PA4B is the same as for Planning Area 5, Environmentally Sensitive. It states:

‘Development and redevelopment should use creative land use and design techniques to ensure that it does not exceed the capacity of natural and infrastructure systems and protects areas where public investments in open space preservation have been made. Development and redevelopment in the Environs should maintain and enhance the natural resources and character of the area. ‘

This Redevelopment Plan has a significant and consistent relationship with the State Development and Redevelopment Plan.

### **X. Relationship of the Redevelopment Plan to Township Plans/Ordinances**

This Redevelopment Plan is essentially consistent with the Township’s Master Plan. The Master Plan’s objectives include the Land Use objective to “Direct new development and redevelopment to places in relation to their transportation and environmental capacities.” This Redevelopment Plan’s intention is to re-utilize so called ‘blighted’ land in a manner that minimizes the intrusion on the surrounding untouched areas of conservation zoning and accounts for the remediation in place.

### **XI. Proposed Redevelopment Actions**

#### A. Redevelopment Authority

The Township Committee shall act as the redevelopment entity pursuant to N.J.S.A. 40A:12A-4(c) for purposes of implementing and carrying out this Redevelopment Plan. In doing so, the Committee shall have the powers set forth in N.J.S.A. 40A:12A-15 and 40A:12A-22, and all other relevant statutes and regulations to perform all their duties and responsibilities in the execution and implementation of this Redevelopment Plan.

**B. Redevelopment Agreement**

Pursuant to N.J.S.A. 40A:12A-8, the Township may select one or more redevelopers for the implementation of one or more development projects within the Project Area as it deems necessary. Any development or construction within the Project Area shall be undertaken in accordance with a contractual Redevelopment Agreement between the Township and a municipally designated redeveloper. All Redevelopment Agreements shall be consistent with the requirements of N.J.S.A. 40A:12A-9 and this Redevelopment Plan.

**XII. Obligations of the Redeveloper**

All property within the Project Area must be developed in accordance with the requirements of this Redevelopment Plan Pittsgrove Township Ordinances and the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.) Any private Redeveloper(s) (an entity wishing to avail itself of the opportunities set forth in N.J.S.A. 40A:12A-1 et seq.) will be required to contact the Redevelopment Entity to present its proposal and shall enter into a contractual Redevelopment Agreement with the Redevelopment Entity prior to grant of final approvals by the Township Planning Board.

**XIII Deviations from Provisions of the Approved Redevelopment Plan**

Pursuant to N.J.S.A. 40A:12A-13, all applications for development under this Plan shall be submitted to the Township Planning Board for review and approval in accordance with the requirements for review and approval of subdivisions and site plans as set forth by ordinance adopted pursuant to the Municipal Land Use Law.

All applications requiring relief or deviations from this Plan or other development ordinances shall be governed by the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq. Except as provided below, nothing shall prevent the Planning Board from exercising its jurisdiction to grant variances from this Redevelopment Plan pursuant to the Municipal Land Use Law.

No deviations from the Redevelopment Plan shall be granted that result in any of the following effects or conditions:

- Allowing a use not specifically permitted within the Project Area;
- Exceeding the maximum structure height as measured in feet;
- Deviating from contractual obligations of a redeveloper to the Township acting as the Redevelopment Entity.

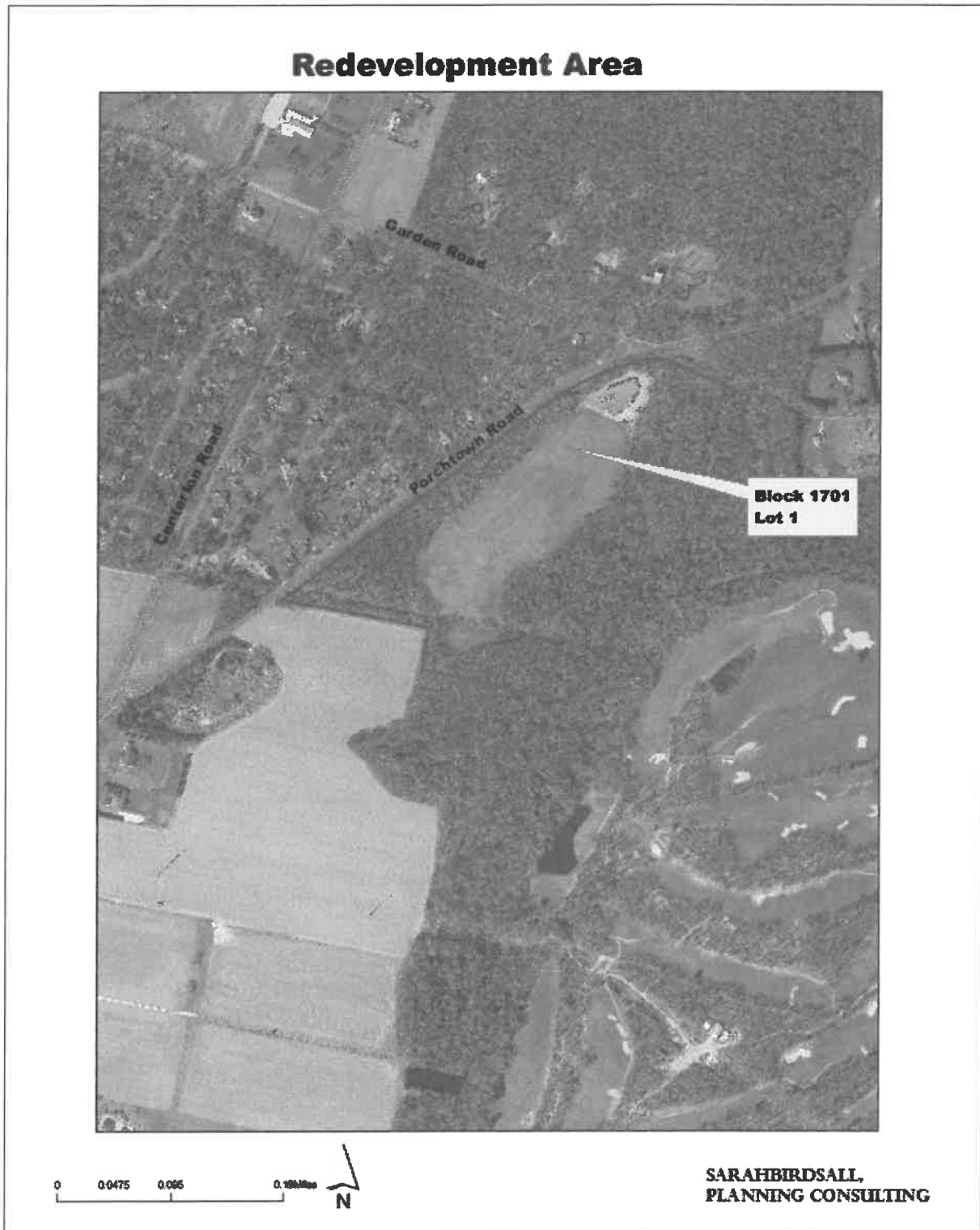
For Projects where a private Redeveloper wishes to avail itself of the opportunities set forth in N.J.S.A. 40A:12A-1 et seq., execution of a Redevelopment Agreement with Pittsgrove Township shall be a precondition to the grant of final approval of any land use application for a Redevelopment Project within the Project Area. For all such Redevelopment Projects, no permits for development shall be issued unless a copy of a fully executed Redevelopment Agreement with the Township has been submitted.

#### **XIV. Amendments to Approved Redevelopment Plan**

---

This Redevelopment Plan may be amended from time to time in accordance with the provisions of the LRHL, as may be amended.

**EXHIBIT A  
PROJECT AREA MAP**




## **Exhibit D**

### **Lease Area**

See attached. The Lease Area may be adjusted based on the final design by Lessee, as approved by Lessor. Lessee may conduct a survey of such final Lease Area at Lessee's cost.



 <p>HESP SOLAR, LLC 400 Rella Blvd Suite 160, Suffern, NY 10901 www.hespsolar.com</p> <p>(c) HESP SOLAR, LLC AND ITS AFFILIATES, ALL RIGHTS RESERVED</p>	<b>PROJECT DETAIL</b>		<b>SYSTEM DESCRIPTION</b>			<b>SHEET INFORMATION</b>								
	PROJECT #:	NJ-19-188	MODULE TYPE:	TRINA SOLAR, TSM-DE14A(11) PERC MONO 400W	TILT ANGLE:	25	AZIMUTH:	180	TOTAL STRINGS:	312	DATE:	08.07.19	SHEET NO:	PV 0
	PROJECT NAME:	PITTSBORO LANDFILL	MODULE QUANTITY:	5,456	RACKING STRUCTURE:			GROUND MOUNTED			DESIGNER:	SY		
	SITE ADDRESS:	SALEM COUNTY, NEW JERSEY	SYSTEM SIZE KW (DC):	2,182.4	INVERTER:		SOLECTRIA PVI 60TL					SCALE:	NTS	
CLIENT NAME:	PITTSBORO TOWNSHIP	SYSTEM SIZE KW (AC):	1,560											
THIS DRAWING IS THE PROPERTY OF HESP SOLAR, LLC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY HESP SOLAR, LLC. NO PART IS TO BE DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION FROM HESP SOLAR, LLC. PRELIMINARY DESIGN NOT FOR CONSTRUCTION														



**RENEWABLE ENERGY PROJECT SUMMARY INFORMATION  
CONCEPTUAL SOLAR OVERLAY PLANS**

- Orange area is approximately 3 MW DC system
- Stay off of steep slopes
- Leave room for access and vents
- Must be ballasted system including conduit with no penetrations of the cap.



## Exhibit E

### System

#### System Location:

1. **System Size (DC kW):** 2,182.4
2. **Expected First Year Energy Production (kWh):** 3,075,002
3. **Expected Structure:** Ground Mount
4. **Expected Module(s):**

<u>Manufacturer/Model</u>	<u>Quantity</u>
TRINA SOLAR, TSM-DE14A(11) PERC MONO 400W	5,456

5. **Expected Inverter(s):**

<u>Manufacturer/Model</u>	<u>Quantity</u>
SOLECTRIA PVI 60TL	26

6. **Local Electric Utility:** Atlantic City Electric & PJM
7. **System Layout:** See below which depicts the anticipated System, Anticipated Conduit Path, Access point needed to install and service the System. System will also be constructed in conformance with the Minimum Technical Specifications set forth in Exhibit F.

**Preliminary System Layout**

See first page of Exhibit D

## **Exhibit F**

### **Minimum Technical Specifications**

1. The Lessee shall provide a design of a ballasted (including conduits and fencing), ground-mounted photovoltaic solar energy system as described above that is in accordance with the landfill closure and post closure plan approvals and redevelopment plan, maximizes the use of the available project area, and maintains access to the vents and landfill cap slopes.
2. The Lessee and its subcontractors, including engineers, shall be licensed in the State of New Jersey to design and install this type of construction project. The Lessee and its subcontractors will be required to ensure that the System and all proposed components shall conform to all applicable codes and standards in force at the time of construction.
3. The Lessee will be responsible for obtaining, and maintaining in full force and effect, all required licenses, zoning, land use, electrical, environmental, soil erosion, storm runoff, drainage, and system construction and operation permits needed for this Project, including site plan approval if required. The Lessee shall provide the Lessor and/or designated representatives with proof of such permits. All costs associated with obtaining and maintaining such permits are the responsibility of the Lessee and cannot be added to the PPA unless allowed under conditions described elsewhere in this agreement.
4. After the submission of drawings for permits, should the Authority Having Jurisdiction (AHJ) note discrepancies or perceived violations, Lessee shall schedule any necessary meetings for resolution of these issues. The Lessee shall provide sufficient notice to the Lessor so that they may be present during any meeting(s) to be held. The Lessor reserves the right to provide input and/or comments regarding perceived violations or other discrepancies on drawings or specifications as noted by the AHJ.
5. The Lessee will provide drawings with the proposed staging area for project, equipment delivery and placement, traffic management plans, parking areas, and any other site disturbances that may arise from the installation of the Solar PV systems prior to delivery of materials to the site, and subject to comment by the Lessor.
6. If tree removal is deemed necessary by the Lessee, the Lessee shall provide the Lessor with a proposed tree removal plan prior to any tree removal activity. The Lessor will review the proposed plan and provide written comments or approval. All tree removal activities will be coordinated to occur at convenient times for the Lessor. The Lessee will be responsible for the costs of all tree removal approved by the Lessor. Any trees removed by the Lessee at any location must be replaced by the Lessee at designated, on-site locations selected by the Lessor. Replacement trees must be a low-growth species with a minimum caliper of 4 inches.
7. O&M Manuals, for each location, prepare two (2) copies of operating and maintenance manuals in hard cover binders and one electronic copy in PDF format on a DVD, CD or thumb drive and deliver to the Lessor. As a minimum the binders and electronic copy shall include:
  - 7.1. System narrative description of operation
  - 7.2. Proof of inspections and results
  - 7.3. Permission to Operate certificate from utility
  - 7.4. A complete set of all approved submittals including shop drawings and product

literature.

- 7.5. Manufacturer's O&M data for each component
  - 7.6. Sealed As Built Drawings, including but not limited to, one-line diagrams, elevation drawings showing the final placement of the electrical equipment.
  - 7.7. Cleaning instructions for the Solar PV panels.
  - 7.8. Recommended snow and ice removal procedures
  - 7.9. An explanation of the start-up procedure.
  - 7.10. Copies of all testing data and reports (including Commissioning Reports).
  - 7.11. Troubleshooting Guidelines.
  - 7.12. System maintenance schedule and procedures.
  - 7.13. Contact information for technical assistance
  - 7.14. Contact information for warranty issues
  - 7.15. Emergency Response Plan
8. Construction Process
- 8.1. All ground mounted arrays, associated equipment and construction shall not affect the normal, existing drainage of the roof.
  - 8.2. The Lessee must contact the NJDEP for pre and post installation inspections if necessary for approval.
  - 8.3. System Installation shall conform to Manufacturers Installation Manual, approved project drawings and specifications.
  - 8.4. Installing Lessee and subcontractors shall receive manufacturer authorized training prior to commencing operations and provide proof of such authorized training prior to commencing operations. The Lessee shall ensure installing subcontractors are familiar with manufacturer's installation guidelines.
  - 8.5. Commissioning Plan shall include checklists and verifications in the following Project Phases: Design, Installation, Operation (Function and Performance Checks), and Turn-Over.
  - 8.6. All System Commissioning and Acceptance testing measurements shall be taken with calibrated equipment. Serial numbers and calibration expiration dates of the measurement equipment shall be recorded and provided as part of the report(s).
  - 8.7. System inspection and safety checks: Lessee shall run through a checklist of startup requirements based on manufacturers' standards and recommendations, and conduct a series of safety tests to ensure proper installation, safe operation and specified performance
  - 8.8. String voltage and current readings. Measurements will be recorded and provided to the Lessor in a clear, tabular format. Each voltage measurement will include the following ancillary data: the date; the time of day that the measurement was taken; the ambient temperature at the time; and the solar irradiation at the time. The strings that make up each sub-array will be clearly identified on a drawing by number.
  - 8.9. After inverter startup, current shall be recorded for each string, each sub-array, and the entire array.
  - 8.10. All inverter startup tests as specified by the inverter manufacturer in the inverter operation and/or commissioning manual and conducted by a factory-authorized technician.
9. System Performance Testing
- 9.1. Lessee shall conduct a performance test of each array to verify that rated performance is met. The test results must be shared with the Lessor and its representatives.
  - 9.2. If it is found, following the test procedures, that the system currently does not meet the stated performance requirements, Lessee shall undertake (at its own expense) the

necessary corrective actions to meet the stated performance requirements. Repeat performance testing shall be required following these corrective measures. Repeat testing shall be verified and observed by the Lessor.

9.3. Written documentation detailing the commissioning test results shall be provided to the Lessor.

9.4. Provide a commissioning report and written logs of items that have been identified and resolved the commissioning process

## 10. Safety Plan

10.1. The Lessee shall provide a site specific Hazard Analysis and Safety Plan

## 11. Schedule

11.1. The Lessee shall develop and provide an implementation schedule including dates and milestones such as final design, permitting, material delivery, inspections, etc.

## 12. Project Maintenance

12.1. At least once per year a full system visual and mechanical inspections of Solar PV System components, field verification of information readings from the DAS and performance of all manufacturer recommended preventative maintenance and summarized in a report that includes the following:

12.1.1. Serial numbers and calibration expiration dates of the measurement equipment used to take measurements during the inspections

12.1.2. Record general site conditions

12.1.3. Inspection of all sensors and meters, including environmental instruments

12.1.4. Random checks of racking systems mechanical connections, correct as necessary

12.1.5. Random checks of electrical connections, correct as necessary

12.1.6. Visual inspection of all solar panels for damage, dirt or dust accumulation

12.1.7. Inspect and clean interior of all combiner boxes

12.1.8. Scan combiner wire terminals with infrared scanner, Re-torque where necessary

12.1.9. Ambient temperature, time and irradiance at time of measurement

12.1.10. Output current

12.1.11. String Testing as needed

12.1.12. Ambient temperature, time and irradiance at time of measurement

12.1.13. Annual production report of actual kWh vs. anticipated kWh

**Exhibit G  
(Annual Lease Payment Calculation and Payment Procedure)**

Within ten (10) days after the first anniversary of the date upon which the interconnected System becomes commercially operable (the “Commercial Operation Date”), Lessee shall pay to Lessor the Annual Lease Payment, and shall do so thereafter within ten (10) days after each Commercial Operation Date anniversary for the term of this Agreement or any extension thereof. The Annual Lease Payment depends on whether the System is operated during such year as a grid connected solar project, or, alternatively, as a community solar project.

Lessee shall pay to Lessor an Annual Lease Payment calculated as follows:

Option 1: Annual Lease Payment = Actual Annual System Production x \$0.029/kWh, increasing by 1% on each anniversary of the Commercial Operation Date

Option 2: Annual Lease Payment = Actual Annual System Production x \$0.065/kWh, increasing by 1% on each anniversary of the Commercial Operation Date;

In each case, if Actual System Production is less than the Guaranteed Annual System Production included in **Table 1** below (other than for reasons outside of Lessee’s reasonable control), then Lessor shall pay to Lessee an Annual Lease Payment of not less than the amount of the Guaranteed Annual Lease Payment stated in the applicable **Table 1** below:

Whether or not

**A. Grid Connected System (Option 1)**

<b>Table 1*</b>		
Contract Year (anniversary of the Commercial Operation Date)	Guaranteed Annual System Production (90% of System’s estimated annual production based upon anticipated capacity of 2,182.4 kW (dc))	Guaranteed Annual Lease Payment
1	2,767,501 kWh	\$80,258
2	2,753,664 kWh	\$79,856
3	2,739,896 kWh	\$79,457
4	2,726,196 kWh	\$79,060
5	2,712,565 kWh	\$78,664
6	2,699,002 kWh	\$78,271
7	2,685,507 kWh	\$77,880
8	2,672,080 kWh	\$77,490
9	2,658,719 kWh	\$77,103

10	2,645,426 kWh	\$76,717
11	2,632,199 kWh	\$76,334
12	2,619,038 kWh	\$75,952
13	2,605,942 kWh	\$75,572
14	2,592,913 kWh	\$75,194
15	2,579,948 kWh	\$74,818
16	2,567,048 kWh	\$74,444
17	2,554,213 kWh	\$74,072
18	2,541,442 kWh	\$73,702
19	2,528,735 kWh	\$73,333
20	2,516,091 kWh	\$72,967

\* To be updated based on as-built system size.

B. Community Solar System (Option 2):

<b>Table 1*</b>		
<b>Contract Year (anniversary of the Commercial Operation Date)</b>	<b>Guaranteed Annual System Production (90% of System's estimated annual production based upon anticipated System size of 2,182.4 kW (dc))</b>	<b>Guaranteed Annual Lease Payment</b>
1	2,767,501 kWh	\$179,888
2	2,753,664 kWh	\$178,988
3	2,739,896 kWh	\$178,093
4	2,726,196 kWh	\$177,203
5	2,712,565 kWh	\$176,317
6	2,699,002 kWh	\$175,435
7	2,685,507 kWh	\$174,558
8	2,672,080 kWh	\$173,685
9	2,658,719 kWh	\$172,817
10	2,645,426 kWh	\$171,953
11	2,632,199 kWh	\$171,093
12	2,619,038 kWh	\$170,237
13	2,605,942 kWh	\$169,386
14	2,592,913 kWh	\$168,539
15	2,579,948 kWh	\$167,697
16	2,567,048 kWh	\$166,858
17	2,554,213 kWh	\$166,024
18	2,541,442 kWh	\$165,194
19	2,528,735 kWh	\$164,368
20	2,516,091 kWh	\$163,546

\* To be updated based on as-built system size.



**Exhibit H  
(Project Schedule)**

Project Schedule for Community Solar*				
	Event	Date	Assumptions	Estimated Calendar Date
1.	Complete Design	180 days from the Effective Date	Assume Effective Date 2/2020	2/2020
2.	submit Application for NJBPU Community Solar Energy Pilot Program Round Two by Program Deadline defined by NJBPU		Assumed to be open Summer 2020	9/2020
3.	Apply for Interconnection Approval	30 days from Community Solar Approval or Disapproval**	Approval or Disapproval is assumed to be issued December 2020	2/2021
4.	Complete Permitting	90 days from Interconnection Approval	Assumed 1 month from date of submission of Interconnection Application for receipt of interconnection approval	6/2021
5.	Initiate Construction Activities	30 days from Completion of Permitting		7/2021
6.	Commercial Operation Date	485 days from receipt of Interconnection Approval		8/2022
7.	Outside Commercial Operation Date***	545 days from receipt of Interconnection Approval		9/2022

\*Project Schedule will be selected based upon determination of whether or not a Community Solar Project will be pursued.

\*\*If Community Solar Application is disapproved, then proceed to Event 2 of Project Schedule for Grid Connected Solar Non-Community Solar.

\*\*\*May be extended due to Force Majeure

Event 2

Project Schedule for Grid Connected Solar Non-Community Solar*					
	Event	Date	Assumptions	Estimated Calendar Date	Alternative Date if Community Solar Application is disapproved
1.	Complete Design	180 days from the Effective Date	Assume Effective Date 2/2020	2/2020	
2.	Apply for Interconnection Approval	30 days from Completion of Design if not pursuing Community Solar approval from NJBPU		3/2020	2/2021
3.	Complete Permitting	90 days from Interconnection Approval	Assume 30 months from date of submission of Interconnection Application for receipt of interconnection approval	12/2022	11/2023
4.	Initiate Construction Activities	30 days from Completion of Permitting		1/2023	12/2023
5.	Commercial Operation Date	912 days from receipt of Interconnection Approval		1/2024	12/2024
6.	Outside Commercial Operation Date***	972 days from receipt of Interconnection Approval		3/2024	2/2025

\*Project Schedule will be selected based upon determination of whether or not a Community Solar Project will be pursued.

\*\*\*May be extended due to Force Majeure

## **Exhibit I**

### **Additional Insurance Requirements Applicable to Seller**

#### **In addition to the requirements set forth in Paragraph 8, above:**

(A) The Lessee shall obtain and maintain in force at all times during the term of this Agreement as a direct cost of operation, insurance coverage as set forth herein. Such coverage will be obtained from an insurance company authorized and licensed to do business in the State of New Jersey and rated not less than A-VIII by the most current Best's Manual. Such coverage shall include, at a minimum, the following:

(1) Comprehensive General Liability Coverage in the amount of \$1,000,000. Each Occurrence; \$1,000,000 Personal & Advertising Injury Limit; \$2,000,000 General Aggregate; and \$2,000,000 Products-Completed Operations Aggregate. This coverage must be in writing on Occurrence Form – Insurance Services Offices – (ISO Form CG0001 (Ed. 12/07; 12/04 or 10/01), claims made policies are not acceptable.

This coverage must be in writing on an occurrence form, claims made policies will be unacceptable. This Comprehensive General Liability insurance shall cover the Lessee, the Lessor, their employees, agents, directors and officers from and against any claim arising out of any action of the Successful Respondent or any subcontractors. Such policy or policies of insurance shall include coverage for claims of any persons as a result of an incident directly or indirectly related to the employment of such persons by the Successful Respondent or by any subcontractors or other persons. This coverage shall include blanket contractual insurance and such coverage shall make express reference to the indemnification provisions set forth in this Agreement. The policy shall also be endorsed to include coverage for products, completed operations, and independent contractors and MUST BE CARRIED FOR A MINIMUM OF TWO (2) YEARS AFTER COMPLETION OF THE PROJECT.

Waiver of Transfer of Rights of Recovery Against Others To Us (CG2404) – Applies to: the Lessor, and to their employees, agents, officers and directors as additional insured.

(2) Casualty and Property Damage in an amount equal to the replacement value of all of the Systems.

(3) Workers' Compensation Coverage as statutorily required by the State of New Jersey for all employees of Successful Respondent. Employers' Liability coverage on the Workers Compensation policy shall be written in the minimal amount of \$1,000,000.

(4) Excess Liability Coverage, in the amount of \$5,000,000 per occurrence and \$5,000,000 aggregate, shall be in the form of an Umbrella policy "follow form excess" policy, but in no event shall coverage be no more restrictive than underlying insurance for: Commercial General Liability; Business Automobile Liability; Employer's Liability. This policy or policies shall be specifically endorsed to be excess of the required Comprehensive General Liability

Coverage, the Employers' Liability Coverage on the Workers' Compensation policy, and the Comprehensive Automobile Liability policy.

(5) Comprehensive Automobile Liability Coverage, in an amount not less than \$1,000,000 shall be maintained. Such coverage will include all owned, non-owned, leased and/or hired motor vehicles that may be used by the Seller in connection with the Services required under this Agreement.

(6) All such insurance coverage, with the exception of Workers' Compensation, shall name each of the Lessor and their respective employees, agents, officers and directors as additional insured hereunder.

(7) Evidence of such coverage being in place will be promptly delivered to the Lessor following commencement of the term of this Agreement. All such coverage shall be endorsed to indicate that coverage will not be materially changed or canceled without at least thirty (30) days prior notice to each of the Lessor, such prior notice being mandatory and not the best efforts of the carrier to notify. Prior to the expiration of the required coverage, the Seller will provide each of the Lessor with evidence of the renewal of all coverage required on at least the same terms and conditions as originally required for this Agreement. All contractors working for the Seller will also be required to maintain all insurance coverages listed above.

## **Attachment 3**

DEP Permit Packet including Permit Readiness Checklist

**DUFFY • DOLCY • McMANUS & ROESCH**

634 LOST PINE WAY, GALLOWAY, NJ 08205 • 609-652-0105 • FAX# 609-652-2032

July 22, 2020

Ms. Ruth Foster, Director  
NJDEP  
Office of Permit Coordination & Environmental Review  
PO Box 420, Mail Code 07J  
Trenton, NJ 08625

**Re: Proposed Solar Panel Array  
Pittsgrove Township Landfill  
Block 1701, Lot 1  
Pittsgrove Township, NJ  
Project No. 10479**

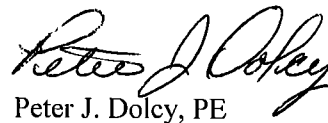
Dear Ms. Foster,

My client, HESP Solar, LLC, has obtained a lease from Pittsgrove Township to install a 2.5 MW Solar Panel array at the above referenced site. All construction activity will be restricted to existing cleared areas within the landfill. The landfill received a Closure and Post Closure Plan approval on October 25, 1991.

For your use, I have enclosed the Permit Readiness Checklist with attachments for this project.

Please review the enclosed information and contact me with any questions.

Sincerely,



Peter J. Dolcy, PE

cc: Susan Brodie, HESP Solar LLC  
Daniel Grohman, HESP Solar LLC  
Stephen Nehmad, Esq. Nehmad, Perillo, Davis & Goldstein  
Michael Lario, Esq., Nehmad, Perillo, Davis & Goldstein

PJD/hmt

Updated 10/11/16

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF PERMIT COORDINATION AND ENVIRONMENTAL REVIEW

**PERMIT READINESS CHECKLIST**

FOR PCER OFFICE USE ONLY

DATE RECEIVED \_\_\_\_

PRC ID NUMBER \_\_\_\_

-----  
Completion of this form will assist the Department in determining what permits might be needed to authorize a project and to insure that all appropriate programs attend a pre-application meeting. Please fill out the below form as completely as possible, noting any areas you are not sure of and including any information about the project and the site that might help the Department determine the permitting needs of the project.<sup>1</sup>

1. Please complete the following questions if applicable and return to the Department with a **1 to 2 page HESP narrative description of project, its function, and its benefits; as well as a site plan, maps, aerial photos, GIS shape files, etc.** (Separate page)

**A. GENERAL INFORMATION**

1. Name of Proposed Project **PITTS GROVE TOWNSHIP LANDFILL SOLAR.**
2. Consultant/Contact Information (if any) **PETER J DOLCY, PE; DUFFY, DOLCY, MCMANUS & ROESCH; 634 LOST PINE WAY, GALLOWAY, NJ 08215**
3. Name/Address of Prospective Applicant **HESP SOLAR, Susan Brodie, EVP**  
Address/tel./fax **1 Paragon Drive, Suite 255, Montvale, NJ 07645 Phone – (845) 405 0600**  
Company Name **HESP Solar**  
Address/tel./fax **1 Paragon Drive, Suite 255, Montvale, NJ 07645 Phone – (845) 405 0600**
4. Does the project have any existing NJDEP ID#s assigned? i.e., Case number, Program Interest (PI)#, Program ID#?  
**New Solidwaste ID- 1710000 746**  
**CSL ID- NJD 980771869**  
**Solid Waste Program Interest STID - 132621**

**B. PROPOSED PROJECT LOCATION**

Street Address/munic. **1050 PORCHTOWN RD / PITTS GROVE TOWNSHIP** County  
**SALEM** Zip Code **08318** Block No. **1701** Lot No **1**

<sup>1</sup> Please be advised that this form is not a permit application. To receive authorization, approval, or a permit to conduct regulated activities, a formal application must be filed and a formal permit or authorization issued by the appropriate Bureau within the Department prior to the conduct of regulated activity. This form is used solely for the Department's preliminary review and discussion of this project to determine what permits or authorizations may be needed to conduct the proposed activity. Any guidance offered to the applicant during this process is not binding on the Department or the applicant and a final response can only be rendered through the actual issuance of permits, approvals, or authorizations.

X Coordinate in State Plane (project centroid) 585959.28

Y Coordinate in State Plane (project centroid) 470135.84

**C. PROPOSED ACTIVITY DESCRIPTION AND SCHEDULE**

1. Project Type: New Construction  Brownfield Redevelop.  
Alternative Energy  Other (Please describe)
  - a) Estimated Schedule: Date permits needed or desired by, beginning construction date; construction completion, and operation of facility date: **See attachments**
  - b) Funding Source: Is any Federal Funding being used for this project? **No**  
State Funding over 1 million dollars? **No**  
Is funding secured at this time? **Yes** Is funding conditional? **No** If so, on what? **N/A**
  - c) Is the project contingent on receiving the identified funding? **No**  
If yes, explain \_\_\_\_\_
  - d) What DEP permits do you think you need for this project? (The Department will confirm this through the PRC process). **Freshwater Wetlands L.O.I., Solid Waste Facility Permit Modification, Construction Activity 5G3; Transition Area Waiver potentially associated with T/E**
2. For additional guidance on Department permits, please refer to the Permit Identification Form (PIF) which will be forwarded upon request. The PIF does not need to be filled out or submitted to the Department.
  - a) Which Department(s), Bureau(s), and staff have you contacted regarding your proposed project? **None.**
  - b) Are there any Department permits that will need to be modified as a result of this project. Please explain and identify the project reviewer of the permit to be modified. **See Section 1(d) above**
  - c) Please identify any pre-permit actions or modifications you have applied for or obtained from the Department or other state agencies for this project:
    - 1) Water Quality Management Plan consistency \_\_\_\_\_
    - 2) Highlands Consistency \_\_\_\_\_
    - 3) Wetland Delineation (LOI) \_\_\_\_\_
    - 4) Tidelands Conveyance \_\_\_\_\_
    - 5) Flood Hazard Jurisdiction or determinations \_\_\_\_\_
    - 6) Water Allocation \_\_\_\_\_
    - 7) Site Remediation RAW, Remedial Action Permit – Soil and or Groundwater, NJPDES Discharge to Ground Water, NJPDES Discharge to Surface Water, No Further Action Response Action Outcome \_\_\_\_\_
    - 8) Landfill Disruption Approval \_\_\_\_\_
    - 9) Landfill Closure Plan \_\_\_\_\_
    - 10) Other \_\_\_\_\_
3. Please submit this Permit Readiness Checklist form, completed to the extent possible, electronically to [Ruth.Foster@dep.nj.gov](mailto:Ruth.Foster@dep.nj.gov) and [Megan.Brunatti@dep.nj.gov](mailto:Megan.Brunatti@dep.nj.gov) and one (1) copy via mail<sup>2</sup> with the following items if available:

---

<sup>2</sup> Submit to: New Jersey Department of Environmental Protection  
Office of Permit Coordination and Environmental Review



- (a) The completed Permit Readiness Checklist;
- (b) A description of the proposed project; **See attachments**
- (c) Any overarching regulatory or policy call(s) or guidance that the Department must make or make known prior to the receipt of the application to determine the project's feasibility, regulatory, or review process. **No**
- (d) USGS map(s) with the site of the proposed project site boundaries clearly delineated (including the title of the USGS quadrangle sheet from which it was taken)<sup>3</sup>; **Attached**
- (e) Aerial photos/GIS information regarding the site;
- (f) A site map including any known environmental features (wetlands, streams, buffers, etc<sup>4</sup>); **Attached see Fralinger Closure Plan**
- (g) Site plans to the extent available; **Attached are Kupper Plan.**
- (h) Street map indicating the location of the proposed project; **Attached**
- (i) Any other information that you think may be helpful to the Department in reviewing this project.
- (j) List of any local or regional governments or entities, their historical involvement in this project or site, identification of conflicts with DEP rules; with contact names and information whose attendance/input would be helpful in facilitating this project, ie Soil Conservation Districts, health departments, local zoning officials, etc. **See attached list**

**D.** The following are questions by Program to guide the Department in its determination of what permits may be needed to authorize this project. If the questions do not apply to the proposed project please indicate **N/A**. Please include any other information you think may be helpful for the Department to determine which permits are needed.

## **WATER AND WASTE WATER INFORMATION**

**DEP Safe Drinking Water Program** (609) 292-5550  
<http://www.nj.gov/dep/watersupply/>

Is the project located within an existing water purveyor service area? If yes, which one? **N/A**

Will the project affect any land or water controlled by a Water Supply Authority or water purveyor in New Jersey? If so, please identify and explain. **N/A**

Does the purveyor have adequate firm capacity and allocation to support project demand? **N/A**

Do water pipes currently extend to the project location? **N/A**

If not, is it located within a franchise area? **N/A**

---

P.O. Box 420, Mail Code 07J  
Trenton, New Jersey 08625  
Street Location: 401 East State Street, 7<sup>th</sup> Floor East Wing  
Telephone Number:(609) 292-3600  
Fax Number: (609) 292-1921

<sup>3</sup> USGS maps may be purchased from NJDEP, Maps and Publications, P.O. Box 420, Trenton 08625-0420; (609) 777-1038

<sup>4</sup> NJGIS information

Does the project have an approved Safe Drinking Water main extension permit? N/A

Will the project affect any land or water controlled by a Water Supply Authority or water purveyor in New Jersey? If so, please identify and explain. N/A

**DEP Water Allocation Program (609) 292-2957**  
<http://www.nj.gov/dep/watersupply>

Is the project seeking a new ground water allocation or modification? If yes, does the project have all necessary well location and safe drinking water permits? N/A

Is the project located within an area of critical water supply concern? N/A

Will this project have the capability to divert more than 100,000 gallons per day from a single source or a combination of surface or groundwater sources? N/A

Will this project draw more than 100,000 gallons per day of ground or surface water for construction or operation? N/A

## WATER POLLUTION MANAGEMENT ELEMENT

### DIVISION OF WATER QUALITY

**Non-Point Pollution Control (609) 292-0407**  
[http://www.nj.gov/dep/dwq/bnpc\\_home.htm](http://www.nj.gov/dep/dwq/bnpc_home.htm)

The **Bureau of Non-Point Pollution Control (BNPC)** is responsible for protecting and preserving the state's groundwater resources through the issuance of NJPDES Discharge to Groundwater Permits and is responsible for permitting industrial facilities and municipalities under NJPDES for discharges of stormwater to waters of the State.

### Groundwater Section (609) 292-0407

This Program does not issue NJPDES-DGW permits for remediation operations.

The following definitions should be used to assist in identifying discharge activities:

**Subsurface disposal system** is any contrivance that introduces wastewater directly to the subsurface environment, such as, but not limited to: septic systems, recharge beds, trench systems, seepage pits, and dry wells.

**Injection/recharge wells** are constructed such that they are deeper than they are wide, receive effluent via gravity flow or pumping, and include dry wells and seepage pits.

**Overland flow** is the introduction of wastewater to the ground surface, over which the wastewater travels and eventually percolates or evaporates.

**Industrial wastewater** is any wastewater or discharge which is not sanitary or domestic in nature, including non-contact or contact cooling water, process wastewater, discharges from floor drains, air conditioner condensate, etc.

1. Will the project/facility have a sanitary wastewater design flow which discharges to groundwater in excess of 2,000 gallons per day? N/A

2. Will the project/facility generate a discharge to groundwater of industrial wastewater in any quantity? N/A

3. Will the project/facility involve the discharge to groundwater by any of the following activities or structures, or include as part of the design any of these activities or structures? **N/A**

Please indicate which:

Upland CDF (Dredge Spoils) Spray Irrigation **N/A**

Overland Flow Subsurface Disposal System (UIC) **N/A**

Landfill Infiltration/Percolation Lagoon **N/A**

Surface Impoundment **N/A**

Please specify the source of wastewater for every structure identified above (e.g., sanitary wastewater to a subsurface disposal system or non-contact cooling water to a dry well): **N/A**

Please specify lining materials for each lined structure identified as being used by the proposed project and give its permeability in cm/sec (e.g., 8-inch thick concrete lined evaporation pond at  $10^{-7}$  cm/sec): **N/A**

Does your project/facility include an individual subsurface sewage disposal system design for a facility with a design flow less than 2,000 gallons per day which does not strictly conform to the State's standards? **N/A**

Does your project involve 50 or more realty improvements? **N/A**

**DEP Pretreatment and Residuals program (609) 633-3823**

Will the project involve the discharge of industrial/commercial wastewater to a publicly owned treatment works (POTW)? **N/A**

If yes, name of POTW: **N/A**

Volume of wastewater (gpd): **N/A**

Will/does this project involve the generation, processing, storage, transfer and/or distribution of industrial or domestic residuals (including sewage sludge, potable water treatment residuals and food processing by-products) generated as a result of wastewater treatment. If so, please explain.

**Stormwater Program (609) 633-7021**

<http://www.njstormwater.org/>

[http://www.state.nj.us/dep/dwg/ispp\\_home.html](http://www.state.nj.us/dep/dwg/ispp_home.html)

Will your site activity disturb more than one acre? **Yes**

Will any industrial activity be conducted at the site where material is exposed to the rain or other elements? **Yes**

Does your facility have an existing NJPDES permit for discharge of stormwater to surface groundwater?  
**Yes #0054402**

Is your facility assigned one of the following Standard Industrial Classification (SIC) Codes? **221114**  
(To determine your SIC Code see the box "Industry Code" on your New Jersey Department of Labor Quarterly Contribution Report.)

**Surface Water Permitting (609) 292-4860**

<http://www.nj.gov/dep/dwq/swp.htm>

Will this wastewater facility discharge to Surface Water? N/A Yes/No N/A

If yes, state the name of the proposed receiving stream N/A

Describe the proposed discharge of wastewater to Surface Water N/A

If no, how is the wastewater proposed to be discharged (e.g., to be conveyed to another STP, Publicly Owned Treatment Works, etc. N/A

**MUNICIPAL FINANCE AND CONSTRUCTION ELEMENT**

**Treatment Works Approvals (609) 984-4429**

<http://www.nj.gov/dep/dwq/twa.htm>

Will this project include the construction, expansion or upgrade of a domestic or industrial wastewater treatment facility or an off-site subsurface disposal system that generates more than 2,000 gallons per day? N/A If yes, explain N/A

Will the project result in a construction design of more than 8000 gallons of water discharge per day? N/A

**Office of Water Resources Management Coordination (609)777-4359**

<http://www.state.nj.us/dep/wrm>

**Sewer Service**

Is the project in an approved sewer service area for the type of waste water service needed? N/A  
If yes, what is the name of the sewer service area? N/A

Has this project received endorsement from the appropriate sewer authority with adequate conveyance and capacity? N/A

Do waste water pipes currently extend to the project location? N/A

Is the project consistent with and in an area covered by an up to date Wastewater Management Plan? N/A

Will an amendment to the existing WQMP be required to accommodate this project? N/A

If tying into an offsite treatment plant, is the capacity and conveyance system currently available? N/A

What is the volume of wastewater that will be generated by the project? N/A

**DEP Land Use Regulation (609) 777-0454**

<http://www.nj.gov/dep/landuse>

Does the project involve development at or near, or impacts to the following; describe the type and extent of development in regards to location and impacts to regulated features:

Water courses (streams) **Muddy Run Tributary**

State Open Waters? Potentially – **Site reconnaissance required**

Freshwater Wetlands and/or freshwater wetland transition areas? **Yes**

Flood Hazard areas and/or riparian buffers **Potentially site reconnaissance required**

Waterfront development areas **No**

Tidally Flowed Areas **No**

Bureau of Tidelands Management: [http://www.nj.gov/dep/landuse/tl\\_main.html](http://www.nj.gov/dep/landuse/tl_main.html) **No**

The CAFRA Planning Area? <http://www.state.nj.us/dep/gis/cafralayers.htm> **No**

## **DEP NATURAL AND HISTORIC RESOURCES**

**Green Acres Program** (609) 984-0631

<http://www.nj.gov/dep/greenacres>

Does the project require a diversion of State property or parkland, lease of same, lifting of a Green Acres of Land Use deed restriction, or work within an existing easement? **N/A** Will any activity occur on State owned lands? **N/A** If so please describe **N/A**

Does the project require a diversion of property funded with federal Land and Water Conservation Funding? **N/A**. If so, please describe **N/A**.

Does the project include activities that are under the jurisdiction of the Watershed Property Review Board? If so, please describe. **N/A** Has the Watershed Property Review Board made a jurisdictional determination? **N/A**

**Division of Parks and Forestry: State Park Service 609-292-2772**

Is the temporary use of State lands administered by the New Jersey State Park Service required for pre-construction, construction and/or post construction activities? If so, please describe.

**Division of Parks and Forestry: State Forestry Services (609) 292-2530**

<http://www.nj.gov/dep/parksandforests/forest>

**Forest clearing activities/No Net Loss Reforestation Act**

Will construction of the project result in the clearing of ½ acres or more of forested lands owned or maintained by a State entity? **N/A**

If so, how many acres? **N/A**

**Division of Parks and Forestry: Office of Natural Lands Management (609) 984-1339**

<http://www.nj.gov/dep/parksandforests/natural/index.html>

Is the project within a State designated natural area as classified in the Natural Areas System Rules at N.J.A.C. 7:5A? **N/A**

If so, please describe. **N/A**

**State Historic Preservation Office – SHPO (609) 292-0061**

<http://www.state.nj.us/dep/hpo/index.htm>

Is the site a Historic Site or district on or eligible for the State or National registry? **N/A**

Will there be impacts to buildings over 50 years old? **N/A**

Are there known or mapped archeological resources on the site? **N/A**

**Dam Safety Program (609) 984-0859**

<http://www.nj.gov/dep/damsafety>

Will the project involve construction, repair, or removal of a dam? **N/A**

If so, please describe **N/A**

**Fish and Wildlife (609) 292-2965**

<http://www.nj.gov/dep/fgw>

Will there be any shut off or drawdown of a pond or a stream? **N/A**

**DuBois - Threatened and Endangered Species Program**

Are there records of any Threatened and Endangered species, plant, or animal in this project area? **Yes State Threatened Barrel Owl (Strix varia) breeding sighting mapped within forested areas to western and eastern areas of site.**

Will the proposed development affect any areas identified as habitat for Threatened or Endangered Species? **No, construction activity is limited to existing cleared areas of the landfill.**

**SITE REMEDIATION PROGRAM (609) 292-1250**

<http://www.nj.gov/dep/srp/>

**Office of Brownfield Reuse (609) 292-1251**

Is the project located on or adjacent to a known or suspected contaminated site? **No**

<http://www.nj.gov/dep/srp/kcsnj/>

Is the project within a designated Brownfield Development Area? **No**

<http://www.nj.gov/dep/srp/brownfields/bda/index.html>

Has a No Further Action, Response Action Outcome, or Remedial Action Permit been issued for the entire project area? **No**

If not, what is the current status of remediation activities? **N/A. Please include remedial phase, media affected and contaminant(s) of concern. No current remediation activities being performed. Site has a completed Closure and Post-Closure Care Plan. (see attached)**

Name of current SRP Case Manager or Licensed Site Remediation Professional and Preferred Identification (PI) Number **N/A**

Is the applicant a responsible party for contamination at the property? **No**

Is the project located on a landfill that will be redeveloped for human occupancy? **No** If yes, is there an approved Landfill Closure Plan? **No human occupancy proposed, landfill onsite does have approved closure plan**

**Dredging and Sediment Technology (609) 292-1250**

Does the project involve dredging or disposing of dredge materials? **No**

**SOLID AND HAZARDOUS WASTE MANAGEMENT PROGRAM (609) 633-1418**  
**<http://www.nj.gov/dep/dshw/>**

Does the project receive, utilize, or transport solid or hazardous wastes? **No**

Will the project involve the disposing of hazardous Substances per 40 CFR part 261 and NJAC 7:26? **No**

Will the project include operation of a solid waste facility according to N.J.A.C. 7:26-1-et seq.? **No**

Is the project a solid waste facility or recycling center? **No**

Is the project included in the appropriate county Solid Waste Management Plan? **No** Explain

**AIR QUALITY PERMITTING PROGRAM**  
**<http://www.nj.gov/dep/aqpp>**

Will activity at the site release substances into the air? **No**

Does the project require Air Preconstruction permits per N.J.A.C. 7:27-8.2©1? **No**

Will your project require Air Operating permits (N.J.A.C. 7:27--22.1)? **No**

Will the project result in a significant increase in emissions of any air contaminant for which the area is nonattainment with the national ambient air quality standards (all of NJ for VOC and NOx; 13 counties for fine particulates), thereby triggering the Emission Offset Rule at NJAC7:27-18? **No**

Will the project emit group 1 or 2 TXS toxic substances listed in NJAC 7:27-17? **No**

Will the project emit hazardous air pollutants above reporting thresholds in NJAC7:27 8, Appendix 1?  
**No**

Will the project result in stationary diesel engines (such as generators or pumps) or mobile diesel engines (such as bulldozers and forklifts) operating on the site? If so, which?  
**No**

**RADIATION PROTECTION AND RELEASE PREVENTION (609) 984-5636**  
**[www.state.nj.us/dep/rpp](http://www.state.nj.us/dep/rpp)**

Will the operation receive, store or dispose of radioactive materials? **No**

Will the operation employ any type of x-ray equipment? **No**

**DISCHARGE PREVENTION PROGRAM (DPCC) (609) 633-0610**

[www.nj.gov/dep/rpp](http://www.nj.gov/dep/rpp)

Is this a facility as defined in N.J.A.C. 7:1E in which more than 20,000 gallons of Hazardous substances other than petroleum or greater than 200,000 gallons of petroleum are stored? **No**

**TOXIC CATASTROPHE PREVENTION ACT (TCPA) (609) 633-0610**

**[HTTP://WWW.STATE.NJ.US/DEP/RPP/BRP/TCPA/INDEX.HTM](http://WWW.STATE.NJ.US/DEP/RPP/BRP/TCPA/INDEX.HTM)**

Is this a facility that handles or stores greater than a threshold amount of extraordinarily hazardous substances as defined in N.J.A.C. 7:31? **No**

**Bureau of Energy and Sustainability (609)633-0538**

<http://www.nj.gov/dep/aqes/energy.html>

<http://www.nj.gov/dep/aqes/sustainability.html>

**GREEN DESIGN (609) 777-4211**

Have you incorporated green design features into this project? Examples of green design features may include: renewable energy, water conservation and use of low impact design for stormwater.

Yes  No

Will this project be certified by any of the following green building rating systems? **N/A**

New Jersey Green Building Manual? **N/A**

<http://greenmanual.rutgers.edu/>

US Green Building Council's LEED (Leadership in Energy and Environmental Design)? **N/A**

<http://www.usgbc.org/>

ASHRAE Standard 189.1? **N/A**

<http://www.ashare.org/publications/page/927>

National Green Building Standard ICC 700-2008? **N/A**

<http://www.nahbgreen.org>

USEPA's ENERGY STAR? **N/A**

[http://www.energystar.gov/index.cfm?c=business.bus\\_index](http://www.energystar.gov/index.cfm?c=business.bus_index)

**INNOVATIVE TECHNOLOGY (609) 292-0125**

Is an environmental and energy innovative technology included in this project?  **Y**  **N**

Is this technology used for manufacturing alternative fuels?  **Y**  **N**

- If yes, what is the non-fossil feedstock(s) used for manufacturing the fuels?



Biomass                      Municipal Solid Waste                      Other Non-Fossil Feedstocks

-What will be the primary use of the manufactured alternative fuels? N/A  
CHP System                      Micro Turbine                      Fuel Cells

For other innovative technology type, what is the proposed application?

**X Energy**                      Site Remediation                      Drinking Water                      Wastewater

For other innovative energy systems, what is the source of energy?

**X Solar**                      Wind                      Tidal/Wave                      Hydroelectric                      Geothermal

Is there independent third-party performance data for the technology? **x Y**                      N

Has the technology been verified by an independent third-party entity? **x Y**                      N

Is this technology in use at any other location at this time? **x Y**                      N

- If yes, please provide location \_\_\_\_\_

## DEP COMPLIANCE AND ENFORCEMENT

Does the applicant have outstanding DEP enforcement violations, and if so, what is the status? **Unknown**

If yes, please identify the case, case manager, program, and phone number. **Unknown**

Does the proposed project facilitate compliance where there is a current violation or ACO? **Unknown**

## COMMUNITY ENGAGEMENT (609)292-2908

The Department is committed to the principles of meaningful and early community engagement in the project's approval process. The Department has representatives available who could discuss community engagement issues with you and we encourage this communication to take place at the earliest possible time.

- (a) What community groups and stakeholders have you identified that may be interested in or impacted by this project? **Pittsgrove Township Planning Board**
- (b) How have you or will you engage community and stakeholders in this project? Please supply individuals or stakeholder groups contacted or who have been identified for community engagement. **Planning Board Hearing, Public Notices**
- (c) What are the potential impacts of this project on the community? **Reduce Municipal costs.**
- (d) How do you intend to mitigate these potential impacts? **N/A**
- (e) What are the community concerns or potential concerns about this project? **N/A**
- (f) How do you intend to address these concerns? **N/A**

- (g) As part of this project, do you plan to perform any environmental improvements in this community? If yes, describe. N/A

Please provide the Department with an additional 1 to 2 page narrative description of the project, focusing on its function and its local/regional environmental, social, and economic benefits and impacts. Also, what sensitive receptors are present and how might they be affected by this project?

**State Threatened Barred Owl is mapped in forested areas in eastern and western portions of site. These areas are mapped with breeding sightings (dated circa 2006). Since all proposed construction includes solar panel arrays (i.e. no human occupancy) and since the construction is proposed to be confined to the non forested area of the site, no significant impacts to potential breeding habitat for barred owl is anticipated.**

#### GENERAL

Is the project subject to:

Highlands Regional Master Plan – Planning or Preservation Area? N/A  
[http://www.nj.gov/dep/highlands/highlands\\_map.pdf](http://www.nj.gov/dep/highlands/highlands_map.pdf)

Pinelands Comprehensive Management Plan? N/A  
<http://www.state.nj.us/pinelands/cmp/>

D&R Canal Commission Standards N/A  
<http://www.dandrcanal.com/drcc/maps.html>

Delaware River Basin Commission N/A  
(609) 883-9500  
<http://www.state.nj.us/drbc/>

US Army Corp of Engineers review? N/A

### **Section C.1a**

#### **Proposed Activity Description and Schedule**

**Permits requested by September 15, 2021**

**Start construction January 1, 2022**

**Construction completion and operation June 15, 2022**

### **Section C.3.b**

#### **Project Description**

HESP Solar, LLC proposes to construct 2.7 megawatt solar facility at the closed Pittsgrove Township Landfill located at 1050 Porchtown Rd. The landfill was closed in accordance with NJDEP regulations. The NJDEP approved the Closure Plan on October 25, 1991(see attached letter). All construction will be limited to the existing cleared areas within the landfill property.

HESP executed a Lease Agreement with Pittsgrove Township.

### **Section C3.j**

#### **Local Approvals**

Pittsgrove Township Planning Board  
Salem County Planning Board  
Cumberland Salem County Conservation District

#### **Attachments**

1. USGS Map
2. NJDEP GEOWEB Map
3. Aerial Map
4. NJDEP Closure and Post Closure Plan Approval - October 25, 1991
5. Fralinger Engineering- Final Grading Plan- Revised May 25, 1989
6. Fralinger Engineering- Soil Erosion and Sediment Control Plan- Revised June 12, 1989
7. Kupper Engineering - Electrical Site Plan March 23, 2020

1710A



State of New Jersey  
Department of Environmental Protection and Energy  
Division of Solid Waste Management  
CN 414  
Trenton, NJ 08625-0414  
Tel. # 609-530-8591  
Fax. # 609-530-8899

Scott A. Weiner  
Commissioner

Steven Gabel  
Director

OCT 25 1991

The Honorable Stanley Wojculewski  
Mayor, Pittsgrove Township  
Box 280B  
Township of Pittsgrove Municipal Building  
Elmer, New Jersey 08318


Re: Closure and Post-Closure Plan Approval  
Pittsgrove Township Sanitary Landfill  
Facility Number 1710A  
Pittsgrove Township  
Salem County

Dear Mayor Wojculewski:

Enclosed please find a sanitary landfill Closure and Post-Closure Care and Financial Plan Approval for the above referenced site.

The conditions contained within this Approval are intended to ensure the environmentally sound closure and post-closure care of Pittsgrove Township Sanitary Landfill. Conditions have been incorporated within this Approval that must be complied with in order for the Approval to remain valid. The Department will consider amendment or modification of the specific terms of the conditions of this Approval if a written request is submitted by certified mail within fifteen (15) calendar days of the date of this letter. Said written request must clearly state the proposed amendment or modification and the factual basis for the request.

This Approval is non-transferable.

Sincerely,  
  
Edward J. Londres, P.E.  
Assistant Director  
Engineering Element

HH/plp  
Enclosure

cc: J. Michael Fralinger  
New Jersey is an Equal Opportunity Employer  
Recycled Paper



State of New Jersey  
Department of Environmental Protection and Energy  
Division of Solid Waste Management

CN 414  
Trenton, NJ 08625-0414  
Tel. # 609-530-8591  
Fax. # 609-530-8899

Scott A. Welner  
Commissioner

Steven Gabel  
Director

CLOSURE AND POST-CLOSURE PLAN APPROVAL

Under the provisions of N.J.S.A. 13:1E-1 et seq., the Solid Waste Management Act, Closure and Post-Closure Plan Approval is hereby issued to Pittsgrove Township:

FACILITY NAME: Pittsgrove Township Sanitary Landfill1  
FACILITY REGISTRATION NUMBER: 1710A1SP01  
LOT NUMBER(S): 1 and 2  
BLOCK NUMBER(S): 1701  
MUNICIPALITY: Pittsgrove Township  
COUNTY: Salem  
CLOSURE DATE: April 1, 1988  
POST-CLOSURE PERIOD: 1988-2018  
FINANCIAL PLAN UPDATE: October 25, 1993

This Approval applies to both a Closure and Post-Closure Care Plan and a Closure and Post-Closure Financial Plan. Approval is issued to both to ensure that all environmental safeguards are adequate and to guarantee that sufficient funds are dedicated to implement those environmental safeguards.


This Approval is subject to compliance with all the conditions specified herein and all regulations promulgated by the Department of Environmental Protection. The Department may require additional closure and post-closure care measures or waive any of the conditions specified herein should specific health and/or environmental circumstances justify such action. The Department reserves the right to amend the Closure and Post-Closure Plan should changes in either the facility's Solid Waste Permit or Departmental regulations become effective.

This Approval shall not prejudice any claim the State may have to riparian land, nor does it allow the registrant to fill or alter, or allow to be filled or altered, in any way, lands that are deemed to be riparian, wetlands, stream encroachment or flood plains, or within the Coastal Area Facility Review Act (CAFRA) zone, or subject to the New Jersey Pinelands Protection Act of 1979, nor shall it allow the discharge of pollutants to waters of this State without first acquiring the necessary grants, permits or approvals from the Department of Environmental Protection. In addition, this Approval does not relieve the applicant of the responsibility to obtain any and all other permits and approvals as necessary.

Failure to comply with all the conditions specified herein may result in revocation of this Approval and/or may result in other regulatory or legal actions which the Department is authorized to institute by law.

This Approval is non-transferable.

October 25, 1991

  
Edward J. Londres, P.E.  
Assistant Director  
Engineering Element

## CLOSURE AND POST-CLOSURE PLAN APPROVAL

### A. GENERAL REQUIREMENTS

This Approval covers those activities and costs associated with the design, purchase, construction and maintenance of all environmental safeguards which occur after this facility has ceased accepting waste as set forth in the Closure and Post-Closure Plan, including any amendments or modifications as approved herein, specifically: the "Closure and Post-Closure Care Plan" prepared by Albert A. Fralinger, Jr., P.A., dated November, 1988, final revision dated May 9, 1989, signed and sealed by John M. Fralinger, P.E. for Pittsgrove Township. In the event of a conflict, the conditions of this Approval as contained herein shall prevail.

This Approval is based upon estimates contained in the Closure and Post-Closure Financial Plan that sufficient funds will be available to implement the Closure and Post-Closure Care Plans throughout the 30 year post-closure care period. Based on current economic indicators, all cost projections use an annual interest rate of 9.00% and an annual inflation rate of 4.86%. Should any estimates prove inaccurate to the extent that the Closure and Post-Closure Plan may not be fully implemented, then additional financial guarantees shall be required by the Department.

A complete and final Closure and Post-Closure Plan, consisting of both the Care Plan and the Financial Plan, shall be submitted to the Department within ninety (90) days from the date the owner/operator receives this Approval. The complete and final plan shall be marked so that it is identifiable from all others and shall incorporate all of the changes herein and changes to any previous plan submission as may be necessary. This includes, but is not limited to, revisions to narrative sections, tables, schedules, projections of fees, and projected time frames affected by this Approval and/or any other requirements set forth by the Department.

### B. FINANCIAL PLAN REQUIREMENTS

All funds deposited in the DEPE account (established pursuant to N.J.S.A. 13:1E-100 et seq.), including all interest and income derived therefrom, shall be used exclusively for the final years of the post-closure care period. All closure costs are to be covered by the reserved funds set aside from prior year budgets and by bond funds costs other post-closure maintenance costs shall be secured through an alternative fund escrow account or a letter of credit. The following are requirements and conditions of Financial Plan Approval:

#### 1. Source of Funds

Funding sources, as outlined in the Financial Plan, include bond funds and appropriations as well as the DEPE escrow account. The Office of the Attorney General has ruled that the use of Township resolutions and budget appropriations as sources of closure and post-closure funds not to be in compliance with the minimum standards set forth in N.J.A.C. 7:26-2A.9(f)2, which requires alternative funds

to be "set-aside, wholly-committed and dedicated..." Therefore, any shortfall of funds in the Financial Plan must be covered by a Letter-of-Credit or an alternative funds escrow account, or by other means of financial guarantee acceptable to the Department.

This and additional Financial Plan requirements which may be imposed by the Department's Bureau of Special Funds Administration or by any other agency within the Department shall be immediately incorporated into the Financial Plan and Pittsgrove Township shall comply with those restrictions and/or conditions.

2. Surplus Funds

The Financial Plan's projections of costs and revenues should result in a zero balance of funds when proper closure and post-closure operations at the landfill are completed. (Pursuant to N.J.A.C. 7:26-2.9(g)17, funds remaining in the P.L. 1981, c.306 Closure Escrow Account after complete and proper closure and post-closure care operations shall be paid into the Sanitary Landfill Contingency Fund.)

3. Eligible Costs

Approval for this Plan is a conceptual approval and specific withdrawals from P.L. 1981, c.306 Closure Escrow Account will be subject to legal approval of the definitions of eligible costs, i.e., environmentally necessary and reasonable costs, as well as final audit.

4. Two Year Update

The owner/operator shall review the cost estimates every 2 years and, if necessary, revise the Closure and Post-Closure Financial Plan. The updated Financial Plan shall be submitted on the second anniversary of the date the Financial Plan was last approved. Also to be included in the update shall be a review and statement of the Care Plan's present status with revisions which may have been made as a result of changes to the regulation or specific conditions of this Approval.

5. Methane Gas

Should the recovery and sale of methane gas become economically feasible for the landfill, then the revenues should be dedicated to closure and post-closure activities.

C. CARE PLAN REQUIREMENTS

The owner/operator shall close and maintain the facility in accordance with the approved engineering design, the conditions in all Solid Waste Facility Permits, whether active or expired, and the conditions of this Approval. Such operation and maintenance shall apply in general to final cover, final cover vegetation, side slopes, run-on/run-off control structures, erosion control, monitoring wells, gas venting, facility



access controls and site conformance measures. In the event of a conflict, the conditions of this Approval shall prevail. Specific measures shall include, but not be limited to, the following:

1. Final Cap and Cover

Final cover shall consist of twelve (12) inches of compacted clay with a permeability equal to or less than  $1 \times 10^{-7}$  cm/sec., nine (9) inches of drainage material and six (6) inches of top soil (Earthlife). The final cap shall be located wholly below the average frost depth for the area. Final cover shall be suitable to support final cover vegetation. Fertilizer, seed and mulch shall be applied in accordance with the certified soil erosion and sediment control plan and the Closure and Post-Closure Care Plan. A minimum of one (1) permeability test shall be performed per acre of capped area. Results of permeability tests shall be equal to or less than  $1 \times 10^{-7}$  cm/sec.

2. Soil Erosion and Sediment Control Plan

Final cover grades, side slopes, final cover materials and final cover vegetation shall be installed and maintained in accordance with the conditions of the Solid Waste Facility Permit, and the approved Soil Erosion and Sediment Control Plan certification dated June 20, 1989 and the conditions of this Approval. Should the Department determine that final cover and/or side slopes are eroding or otherwise failing, a corrective action plan, including a timetable for required corrective actions, shall be developed by the owner/operator. Such action plan shall be submitted to both the Department and the local Soil Conservation District within thirty (30) days of such determination and shall be implemented, in its entirety, immediately upon its approval.

3. Surface Water Discharge Monitoring

Pursuant to the Regulations concerning the New Jersey Pollutant Discharge Elimination System (NJPDES), N.J.A.C. 7:14-1 a discharge to surface water permit application may be necessary for the stormwater run-off.

Should any permit(s) be required, a copy of the application shall be submitted to this office within thirty (30) days of the date of this Approval as proof of filing. Upon receipt of a surface water discharge permit, a copy shall be submitted to this office. Applications may be obtained from:

New Jersey Department of Environmental Protection and Energy  
Bureau of Information Systems  
P.O. Box 29  
Trenton, New Jersey 08625  
(609) 984-4425

4. Ground Water Discharge Monitoring

Ground water monitoring shall be conducted in accordance with the NJPDES/Ground Water Discharge Permit Number NJ0054402 issued to Pittsgrove Township. This permit requires the annual and quarterly monitoring of four (4) existing ground water monitoring wells. In addition to reporting requirements stated in the Permit, copies of all monitoring reports shall be submitted to the Division of Solid Waste Management.

In the event that pollutants are detected which exceed ground water quality standards, a corrective action plan, including a timetable for required corrective actions, shall be developed by the owner/operator. Such action plan shall be submitted to the Department within thirty (30) days of discovery of such leachate and shall be implemented, in its entirety, immediately upon its approval.

5. Methane Gas Evacuation System

The passive methane gas evacuation system shall be constructed, operated and maintained in accordance with all permits, approvals, designs and conditions of this Approval.

In the event the system becomes inoperable, or is ineffective in controlling off-site migration of methane gas, a corrective action plan, including a timetable for implementation, shall be immediately developed and submitted to the Department. The plan shall be implemented, in its entirety, immediately upon approval by the Department.

6. Methane Gas Monitoring

A methane gas survey to detect any lateral migration of gases shall be performed on a quarterly basis for a minimum of two (2) years. The survey shall be conducted in accordance with Departmental guidelines and the results submitted to this Department. If landfill gases are detected at or above 25% of the lower explosive limit, then a corrective action plan, including a timetable for implementation, shall be developed by the owner/operator. Such an action plan shall be submitted to the Department within thirty (30) days of such a migration determination and shall be implemented, in its entirety, immediately upon its approval.

7. Leachate Control

Should leachate be detected and determined to be adversely impacting the environment, either emanating from the Convenience Center or from the landfill proper, then a corrective action plan, including a timetable for implementation, shall be developed by the owner/operator. Such an action plan shall be submitted to the Department within thirty (30) days of such determination and shall be implemented, in its entirety, immediately upon its approval.

8. Convenience Center Operations

The Convenience Center shall be maintained and operated in accordance with the approval letter dated October 26, 1989. If at any time, the operation of the Convenience Center interferes with closure or post-closure activities, the Department reserves the right to impose additional requirements and/or reconsider the operational plans and designs of the Convenience Center in order to facilitate the implementation of this Approval.

9. Freshwater Wetlands

Pittsgrove Township shall, at all times, comply with the Freshwater Wetlands Transition Area Waiver Approval and its conditions issued by the Division of Coastal Resources on October 13, 1989 regarding the operations of the Convenience Center.

10. Facility Maintenance

The maintenance of the final cover, final cover vegetation, side slopes, run-on/run-off control structures, monitoring wells, gas evacuation system, facility access controls and site conformance measures shall be in accordance with this Approval and the Closure and Post-Closure Care Plan.

Periodic inspections of the facility shall be conducted on a quarterly basis and after major storm events. Reports of the inspections shall be submitted to the Bureau of Landfill Engineering within thirty (30) days of each inspection and shall be signed and dated by the person inspecting the facility and an authoritative representative of Pittsgrove Township.

Each report shall contain, at a minimum, the date of the inspection, a list of the items inspected, the conditions of each item, and the inspector's comments, if any. Should one of the inspected items require maintenance work, note this situation and discuss the remedial action taken to correct the deficiency.

11. Professional Engineer's Certification

Pursuant to N.J.A.C. 7:26-2A.9(e)5, the owner/operator shall submit to the Department the certification of a New Jersey licensed professional engineer that the construction and/or maintenance measures required in the Closure and Post-Closure Care Plan have been carried out in accordance with the terms and conditions specified herein. Reports submitted in accordance with condition 10 above shall also be so certified. No work performed pursuant to this Approval shall be considered complete until such certification has been submitted to and accepted by the Department.

In the event that such certification is not received or is not accepted by the Department, escrow funds will not be released.

12. Right of Entry

The owner/operator hereby agrees, consents and authorizes representatives of the Department to make whatever inspections, searches and examinations of all premises occupied by it which may be impacted by the activities authorized by this Approval whenever these representatives, in their discretion, consider such an inspection, search and/or examination necessary to determine the extent of compliance with any and all conditions of the Approval. Any refusal to allow entry to the Departmental representatives shall constitute grounds for either suspension and/or revocation of this Approval.

HH/plp



State of New Jersey

Christine Todd Whitman  
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.  
Commissioner

Division of Solid and Hazardous Waste  
CN 414  
Trenton, New Jersey 08625-0414  
Tel. # (609) 530-8591  
Fax. # (609) 530-8899

May 1, 1995

J. Michael Fralinger P.E., P.P. & P.L.S.  
West Park Executive Campus  
629 Shiloh Pike  
P.O. Box 477  
Bridgeton, N.J. 08302

RE: Approval - Miscellaneous Technical Review  
Landfill Cap Certification  
Pittsgrove Township Sanitary Landfill  
Facility Number 1710A

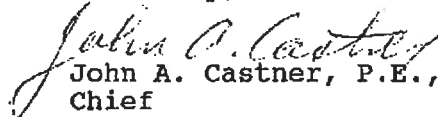
Dear Mr. Fralinger:

This is in response to your letter dated April 20, 1995 and the accompanying "Revised Summary Report, Geotechnical Engineering & Quality Control Services, Pittsgrove Township Sanitary Landfill, Clay Cap Placement, Pittsgrove Township, New Jersey" which is dated February 20, 1995.

The referenced report certifies that proper closure has been accomplished at the above referenced landfill. We consider this report to be administratively and technically complete. Your certification is hereby approved.

Should you have any questions regarding this approval, please contact Mr. Timothy Disbrow, of my staff, at (609) 530-8008.

Sincerely,

  
John A. Castner, P.E., P.P.  
Chief  
Bureau of Landfill Engineering

TD:TD  
File:PITTQAQC.APR

c: Constance Perry, Clerk, Pittsgrove Township

1710A



State of New Jersey  
Department of Environmental Protection and Energy  
Division of Solid Waste Management  
CN 414  
Trenton, NJ 08625-0414  
Tel. # 609-530-8591  
Fax. # 609-530-8899

Scott A. Weiner  
Commissioner

Steven Gabel  
Director

OCT 25 1991

The Honorable Stanley Wojculewski  
Mayor, Pittsgrove Township  
Box 280B  
Township of Pittsgrove Municipal Building  
Elmer, New Jersey 08318


Re: Closure and Post-Closure Plan Approval  
Pittsgrove Township Sanitary Landfill  
Facility Number 1710A  
Pittsgrove Township  
Salem County

Dear Mayor Wojculewski:

Enclosed please find a sanitary landfill Closure and Post-Closure Care and Financial Plan Approval for the above referenced site.

The conditions contained within this Approval are intended to ensure the environmentally sound closure and post-closure care of Pittsgrove Township Sanitary Landfill. Conditions have been incorporated within this Approval that must be complied with in order for the Approval to remain valid. The Department will consider amendment or modification of the specific terms of the conditions of this Approval if a written request is submitted by certified mail within fifteen (15) calendar days of the date of this letter. Said written request must clearly state the proposed amendment or modification and the factual basis for the request.

This Approval is non-transferable.

Sincerely,  
  
Edward J. Londres, P.E.  
Assistant Director  
Engineering Element

HH/plp  
Enclosure

cc: J. Michael Fralinger  
New Jersey is an Equal Opportunity Employer  
Recycled Paper



State of New Jersey  
Department of Environmental Protection and Energy  
Division of Solid Waste Management

CN 414  
Trenton, NJ 08625-0414  
Tel. # 609-530-8591  
Fax. # 609-530-8899

Scott A. Welner  
Commissioner

Steven Gabel  
Director

CLOSURE AND POST-CLOSURE PLAN APPROVAL

Under the provisions of N.J.S.A. 13:1E-1 et seq., the Solid Waste Management Act, Closure and Post-Closure Plan Approval is hereby issued to Pittsgrove Township:

FACILITY NAME: Pittsgrove Township Sanitary Landfill1  
FACILITY REGISTRATION NUMBER: 1710A1SP01  
LOT NUMBER(S): 1 and 2  
BLOCK NUMBER(S): 1701  
MUNICIPALITY: Pittsgrove Township  
COUNTY: Salem  
CLOSURE DATE: April 1, 1988  
POST-CLOSURE PERIOD: 1988-2018  
FINANCIAL PLAN UPDATE: October 25, 1993

This Approval applies to both a Closure and Post-Closure Care Plan and a Closure and Post-Closure Financial Plan. Approval is issued to both to ensure that all environmental safeguards are adequate and to guarantee that sufficient funds are dedicated to implement those environmental safeguards.


This Approval is subject to compliance with all the conditions specified herein and all regulations promulgated by the Department of Environmental Protection. The Department may require additional closure and post-closure care measures or waive any of the conditions specified herein should specific health and/or environmental circumstances justify such action. The Department reserves the right to amend the Closure and Post-Closure Plan should changes in either the facility's Solid Waste Permit or Departmental regulations become effective.

This Approval shall not prejudice any claim the State may have to riparian land, nor does it allow the registrant to fill or alter, or allow to be filled or altered, in any way, lands that are deemed to be riparian, wetlands, stream encroachment or flood plains, or within the Coastal Area Facility Review Act (CAFRA) zone, or subject to the New Jersey Pinelands Protection Act of 1979, nor shall it allow the discharge of pollutants to waters of this State without first acquiring the necessary grants, permits or approvals from the Department of Environmental Protection. In addition, this Approval does not relieve the applicant of the responsibility to obtain any and all other permits and approvals as necessary.

Failure to comply with all the conditions specified herein may result in revocation of this Approval and/or may result in other regulatory or legal actions which the Department is authorized to institute by law.

This Approval is non-transferable.

October 25, 1991

  
Edward J. Londres, P.E.  
Assistant Director  
Engineering Element



## CLOSURE AND POST-CLOSURE PLAN APPROVAL

### A. GENERAL REQUIREMENTS

This Approval covers those activities and costs associated with the design, purchase, construction and maintenance of all environmental safeguards which occur after this facility has ceased accepting waste as set forth in the Closure and Post-Closure Plan, including any amendments or modifications as approved herein, specifically: the "Closure and Post-Closure Care Plan" prepared by Albert A. Fralinger, Jr., P.A., dated November, 1988, final revision dated May 9, 1989, signed and sealed by John M. Fralinger, P.E. for Pittsgrove Township. In the event of a conflict, the conditions of this Approval as contained herein shall prevail.

This Approval is based upon estimates contained in the Closure and Post-Closure Financial Plan that sufficient funds will be available to implement the Closure and Post-Closure Care Plans throughout the 30 year post-closure care period. Based on current economic indicators, all cost projections use an annual interest rate of 9.00% and an annual inflation rate of 4.86%. Should any estimates prove inaccurate to the extent that the Closure and Post-Closure Plan may not be fully implemented, then additional financial guarantees shall be required by the Department.

A complete and final Closure and Post-Closure Plan, consisting of both the Care Plan and the Financial Plan, shall be submitted to the Department within ninety (90) days from the date the owner/operator receives this Approval. The complete and final plan shall be marked so that it is identifiable from all others and shall incorporate all of the changes herein and changes to any previous plan submission as may be necessary. This includes, but is not limited to, revisions to narrative sections, tables, schedules, projections of fees, and projected time frames affected by this Approval and/or any other requirements set forth by the Department.

### B. FINANCIAL PLAN REQUIREMENTS

All funds deposited in the DEPE account (established pursuant to N.J.S.A. 13:1E-100 et seq.), including all interest and income derived therefrom, shall be used exclusively for the final years of the post-closure care period. All closure costs are to be covered by the reserved funds set aside from prior year budgets and by bond funds costs other post-closure maintenance costs shall be secured through an alternative fund escrow account or a letter of credit. The following are requirements and conditions of Financial Plan Approval:

#### 1. Source of Funds

Funding sources, as outlined in the Financial Plan, include bond funds and appropriations as well as the DEPE escrow account. The Office of the Attorney General has ruled that the use of Township resolutions and budget appropriations as sources of closure and post-closure funds not to be in compliance with the minimum standards set forth in N.J.A.C. 7:26-2A.9(f)2, which requires alternative funds

to be "set-aside, wholly-committed and dedicated..." Therefore, any shortfall of funds in the Financial Plan must be covered by a Letter-of-Credit or an alternative funds escrow account, or by other means of financial guarantee acceptable to the Department.

This and additional Financial Plan requirements which may be imposed by the Department's Bureau of Special Funds Administration or by any other agency within the Department shall be immediately incorporated into the Financial Plan and Pittsgrove Township shall comply with those restrictions and/or conditions.

2. Surplus Funds

The Financial Plan's projections of costs and revenues should result in a zero balance of funds when proper closure and post-closure operations at the landfill are completed. (Pursuant to N.J.A.C. 7:26-2.9(g)17, funds remaining in the P.L. 1981, c.306 Closure Escrow Account after complete and proper closure and post-closure care operations shall be paid into the Sanitary Landfill Contingency Fund.)

3. Eligible Costs

Approval for this Plan is a conceptual approval and specific withdrawals from P.L. 1981, c.306 Closure Escrow Account will be subject to legal approval of the definitions of eligible costs, i.e., environmentally necessary and reasonable costs, as well as final audit.

4. Two Year Update

The owner/operator shall review the cost estimates every 2 years and, if necessary, revise the Closure and Post-Closure Financial Plan. The updated Financial Plan shall be submitted on the second anniversary of the date the Financial Plan was last approved. Also to be included in the update shall be a review and statement of the Care Plan's present status with revisions which may have been made as a result of changes to the regulation or specific conditions of this Approval.

5. Methane Gas

Should the recovery and sale of methane gas become economically feasible for the landfill, then the revenues should be dedicated to closure and post-closure activities.

C. CARE PLAN REQUIREMENTS

The owner/operator shall close and maintain the facility in accordance with the approved engineering design, the conditions in all Solid Waste Facility Permits, whether active or expired, and the conditions of this Approval. Such operation and maintenance shall apply in general to final cover, final cover vegetation, side slopes, run-on/run-off control structures, erosion control, monitoring wells, gas venting, facility

access controls and site conformance measures. In the event of a conflict, the conditions of this Approval shall prevail. Specific measures shall include, but not be limited to, the following:

1. Final Cap and Cover

Final cover shall consist of twelve (12) inches of compacted clay with a permeability equal to or less than  $1 \times 10^{-7}$  cm/sec., nine (9) inches of drainage material and six (6) inches of top soil (Earthlife). The final cap shall be located wholly below the average frost depth for the area. Final cover shall be suitable to support final cover vegetation. Fertilizer, seed and mulch shall be applied in accordance with the certified soil erosion and sediment control plan and the Closure and Post-Closure Care Plan. A minimum of one (1) permeability test shall be performed per acre of capped area. Results of permeability tests shall be equal to or less than  $1 \times 10^{-7}$  cm/sec.

2. Soil Erosion and Sediment Control Plan

Final cover grades, side slopes, final cover materials and final cover vegetation shall be installed and maintained in accordance with the conditions of the Solid Waste Facility Permit, and the approved Soil Erosion and Sediment Control Plan certification dated June 20, 1989 and the conditions of this Approval. Should the Department determine that final cover and/or side slopes are eroding or otherwise failing, a corrective action plan, including a timetable for required corrective actions, shall be developed by the owner/operator. Such action plan shall be submitted to both the Department and the local Soil Conservation District within thirty (30) days of such determination and shall be implemented, in its entirety, immediately upon its approval.

3. Surface Water Discharge Monitoring

Pursuant to the Regulations concerning the New Jersey Pollutant Discharge Elimination System (NJPDES), N.J.A.C. 7:14-1 a discharge to surface water permit application may be necessary for the stormwater run-off.

Should any permit(s) be required, a copy of the application shall be submitted to this office within thirty (30) days of the date of this Approval as proof of filing. Upon receipt of a surface water discharge permit, a copy shall be submitted to this office. Applications may be obtained from:

New Jersey Department of Environmental Protection and Energy  
Bureau of Information Systems  
P.O. Box 29  
Trenton, New Jersey 08625  
(609) 984-4425

4. Ground Water Discharge Monitoring

Ground water monitoring shall be conducted in accordance with the NJPDES/Ground Water Discharge Permit Number NJ0054402 issued to Pittsgrove Township. This permit requires the annual and quarterly monitoring of four (4) existing ground water monitoring wells. In addition to reporting requirements stated in the Permit, copies of all monitoring reports shall be submitted to the Division of Solid Waste Management.

In the event that pollutants are detected which exceed ground water quality standards, a corrective action plan, including a timetable for required corrective actions, shall be developed by the owner/operator. Such action plan shall be submitted to the Department within thirty (30) days of discovery of such leachate and shall be implemented, in its entirety, immediately upon its approval.

5. Methane Gas Evacuation System

The passive methane gas evacuation system shall be constructed, operated and maintained in accordance with all permits, approvals, designs and conditions of this Approval.

In the event the system becomes inoperable, or is ineffective in controlling off-site migration of methane gas, a corrective action plan, including a timetable for implementation, shall be immediately developed and submitted to the Department. The plan shall be implemented, in its entirety, immediately upon approval by the Department.

6. Methane Gas Monitoring

A methane gas survey to detect any lateral migration of gases shall be performed on a quarterly basis for a minimum of two (2) years. The survey shall be conducted in accordance with Departmental guidelines and the results submitted to this Department. If landfill gases are detected at or above 25% of the lower explosive limit, then a corrective action plan, including a timetable for implementation, shall be developed by the owner/operator. Such an action plan shall be submitted to the Department within thirty (30) days of such a migration determination and shall be implemented, in its entirety, immediately upon its approval.

7. Leachate Control

Should leachate be detected and determined to be adversely impacting the environment, either emanating from the Convenience Center or from the landfill proper, then a corrective action plan, including a timetable for implementation, shall be developed by the owner/operator. Such an action plan shall be submitted to the Department within thirty (30) days of such determination and shall be implemented, in its entirety, immediately upon its approval.

8. Convenience Center Operations

The Convenience Center shall be maintained and operated in accordance with the approval letter dated October 26, 1989. If at any time, the operation of the Convenience Center interferes with closure or post-closure activities, the Department reserves the right to impose additional requirements and/or reconsider the operational plans and designs of the Convenience Center in order to facilitate the implementation of this Approval.

9. Freshwater Wetlands

Pittsgrove Township shall, at all times, comply with the Freshwater Wetlands Transition Area Waiver Approval and its conditions issued by the Division of Coastal Resources on October 13, 1989 regarding the operations of the Convenience Center.

10. Facility Maintenance

The maintenance of the final cover, final cover vegetation, side slopes, run-on/run-off control structures, monitoring wells, gas evacuation system, facility access controls and site conformance measures shall be in accordance with this Approval and the Closure and Post-Closure Care Plan.

Periodic inspections of the facility shall be conducted on a quarterly basis and after major storm events. Reports of the inspections shall be submitted to the Bureau of Landfill Engineering within thirty (30) days of each inspection and shall be signed and dated by the person inspecting the facility and an authoritative representative of Pittsgrove Township.

Each report shall contain, at a minimum, the date of the inspection, a list of the items inspected, the conditions of each item, and the inspector's comments, if any. Should one of the inspected items require maintenance work, note this situation and discuss the remedial action taken to correct the deficiency.

11. Professional Engineer's Certification

Pursuant to N.J.A.C. 7:26-2A.9(e)5, the owner/operator shall submit to the Department the certification of a New Jersey licensed professional engineer that the construction and/or maintenance measures required in the Closure and Post-Closure Care Plan have been carried out in accordance with the terms and conditions specified herein. Reports submitted in accordance with condition 10 above shall also be so certified. No work performed pursuant to this Approval shall be considered complete until such certification has been submitted to and accepted by the Department.

In the event that such certification is not received or is not accepted by the Department, escrow funds will not be released.

12. Right of Entry

The owner/operator hereby agrees, consents and authorizes representatives of the Department to make whatever inspections, searches and examinations of all premises occupied by it which may be impacted by the activities authorized by this Approval whenever these representatives, in their discretion, consider such an inspection, search and/or examination necessary to determine the extent of compliance with any and all conditions of the Approval. Any refusal to allow entry to the Departmental representatives shall constitute grounds for either suspension and/or revocation of this Approval.

HH/plp



State of New Jersey

Christine Todd Whitman  
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.  
Commissioner

Division of Solid and Hazardous Waste  
CN 414  
Trenton, New Jersey 08625-0414  
Tel. # (609) 530-8591  
Fax. # (609) 530-8899

May 1, 1995

J. Michael Fralinger P.E., P.P. & P.L.S.  
West Park Executive Campus  
629 Shiloh Pike  
P.O. Box 477  
Bridgeton, N.J. 08302

RE: Approval - Miscellaneous Technical Review  
Landfill Cap Certification  
Pittsgrove Township Sanitary Landfill  
Facility Number 1710A

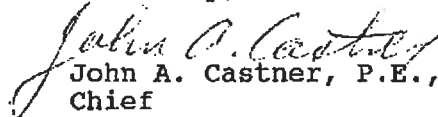
Dear Mr. Fralinger:

This is in response to your letter dated April 20, 1995 and the accompanying "Revised Summary Report, Geotechnical Engineering & Quality Control Services, Pittsgrove Township Sanitary Landfill, Clay Cap Placement, Pittsgrove Township, New Jersey" which is dated February 20, 1995.

The referenced report certifies that proper closure has been accomplished at the above referenced landfill. We consider this report to be administratively and technically complete. Your certification is hereby approved.

Should you have any questions regarding this approval, please contact Mr. Timothy Disbrow, of my staff, at (609) 530-8008.

Sincerely,

  
John A. Castner, P.E., P.P.  
Chief  
Bureau of Landfill Engineering

TD:TD  
File:PITTQAQC.APR

c: Constance Perry, Clerk, Pittsgrove Township

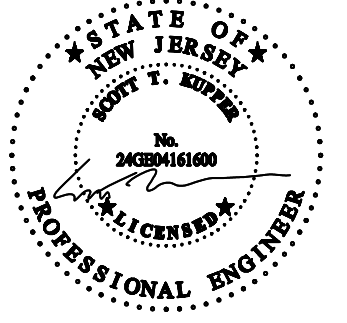
Copyright - 2019 - All Rights Reserved. All documents prepared by Kupper Engineering Inc. as well as all information depicted on documents are instruments of service with respect to the project for which they were specifically designed and for the listed applicant. Such documents and information are not intended or represented to be suitable for reuse by the listed applicant or others on extensions or modification of the project or on any project. Any reuse or reuse of documents and information by any other party without the express written consent of Kupper Engineering, Inc. is prohibited. Kupper Engineering, Inc. shall have no liability or responsibility for any unauthorized use, reproduction or misuse of said documents and/or information and the listed applicant and/or owner shall indemnify and hold harmless Kupper Engineering, Inc. from any and all claims, damages, losses and expenses arising out of or resulting from the said unauthorized reproduction, misuse, or misappropriation of said documents and/or information.



**SHEET NOTES:**

- HANDHOLE LOCATIONS ARE APPROXIMATE. PROVIDE ADDITIONAL HANDHOLES IF REQUIRED.
- EXACT POLE SPACING AND LOCATION TO BE COORDINATED BY CIVIL AND SURVEYOR DRAWINGS.
- ANY EXISTING CURB, MACADAM, EXISTING STORM SEWER, CONCRETE PAD OR VEGETATION DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONDUIT ROUTING LAYOUTS ARE GENERIC AND DO NOT REPRESENT ALL CONDUITS REQUIRED IN SCOPE OF WORK. MAJOR CONDUIT ROUTES ARE SHOWN TO PROVIDE COORDINATION BETWEEN TRADES AND TO LOCATE CONDUIT ENTRANCE POINTS. IN GENERAL, THESE ENTRANCE POINTS TO EQUIPMENT SHALL BE FOLLOWED TO PREVENT SHEARING OF CONDUITS FROM PAD SETTLEMENTS. COORDINATE LAYOUT OF CONDUITS AND EXACT BURIAL DEPTHS WITH SHOP DRAWINGS. BURIAL DEPTHS AND SPACING IN ACCORDANCE WITH THE NEC.
- DRAWINGS DO NOT REPRESENT EXACT END LOCATION OF WIRING AND CONDUIT. WIRING AND CONDUIT SHALL BE PROVIDED AS REQUIRED TO EXTEND TO THE FINAL TERMINAL BLOCK DESTINATIONS. E.C. SHALL COORDINATE WITH EACH MANUFACTURER'S SHOP DRAWINGS.
- COORDINATE CONDUIT ENTRY LOCATION WITH EQUIPMENT MANUFACTURER.
- E.C. SHALL COORDINATE WITH CIVIL DRAWINGS FOR EXACT LOCATION OF HORIZONTAL DIRECTIONAL DRILL (JACKING PTIS), AND UNDERGROUND DUCTBANK IN FIELD.
- POLE LINE SHALL MEET ALL OF JCP&L REQUIREMENTS.
- SPLICE LOCATIONS SHALL BE PROVIDED.

SYSTEM SPECS	
DC SYSTEM SIZE	3355.8 KW
AC SYSTEM SIZE	2700 KW
MODULE MODEL	SPR-X21-470-COM
MODULE RATING	470W
TOTAL MODULE QUANTITY	7140
INVERTER MODEL	CHINT CPS SCA100KTL-DO/US-600
MODULES PER STRING	14
TOTAL ACREAGE	(+/-)9.5 ACRES
ACRES/ MW	2.75 ACRES/ MW
TILT ANGLE	15°
AZIMUTH	180°
RACKING	FIXED TILT



SCOTT T. KUPPER  
NJ PROFESSIONAL ENGINEER  
NJ PE No. 24GE04161600 / NJ COA No. 24GA28110700



**PITTSBURGH LANDFILL**  
**3.36MW DC / 2.7MW AC**  
TIVERSTOCK DRIVE,  
PITTSBURGH TOWNSHIP  
SALEM COUNTY, NJ

Rev. #	description	date	By	Chk	CER
A	ISSUE FOR IX APPLICATION	05/23/2020	GR		
Project No.		Scale			
102-20		As Noted			

ELECTRICAL  
SITE PLAN

**E0.50**





SunPower® X-Series Commercial Solar Panels | X21-470-COM

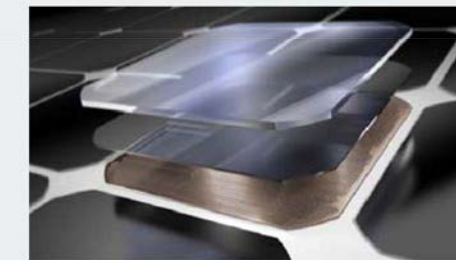
**More than 21% Efficiency**  
Captures more sunlight and generates more power than conventional panels.

**Maximum Performance**

Delivers excellent performance in real-world conditions, such as high temperatures, clouds and low light.<sup>1</sup>

**Utility Grade**

Optimized to maximize returns, the X-Series panel is a bankable solution for large-scale power plants.



**Maxeon® Solar Cells: Fundamentally better**  
Engineered for performance, designed for reliability.

**Engineered for Peace of Mind**

Designed to deliver consistent, trouble-free energy over a very long lifetime.<sup>2</sup>

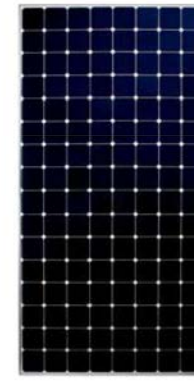
**Designed for Reliability**

The SunPower Maxeon solar cell is the only cell built on a solid metal foundation. Virtually impervious to the corrosion and cracking that degrade conventional panels.

Same excellent durability as E-Series panels. #1 Rank in Fraunhofer durability test.<sup>3</sup>

Datasheet

**High Performance & Excellent Reliability**

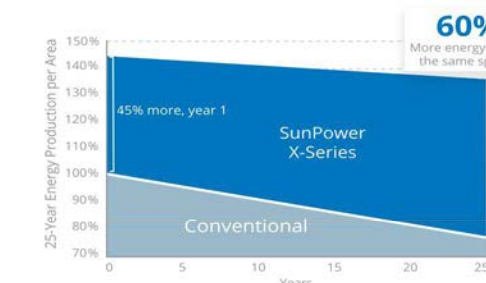


SPR-X21-470-COM



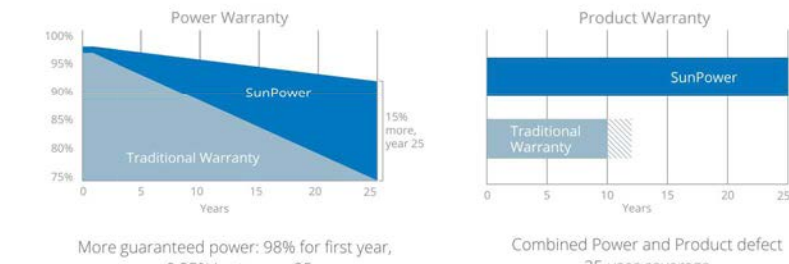
**High Efficiency**  
Generate more energy per square foot

More energy to power your operations. X-Series commercial systems convert more sunlight to electricity by producing 45% more energy in the first year. This advantage increases over time, producing 60% more energy over the first 25 years to meet your needs.<sup>4</sup>



**Best Reliability, Best Warranty**

A better warranty starts with a better product. Proven performance backs up our industry-best coverage, including out warranted 0.25% per year degradation rate.<sup>4</sup>



SUNPOWER®

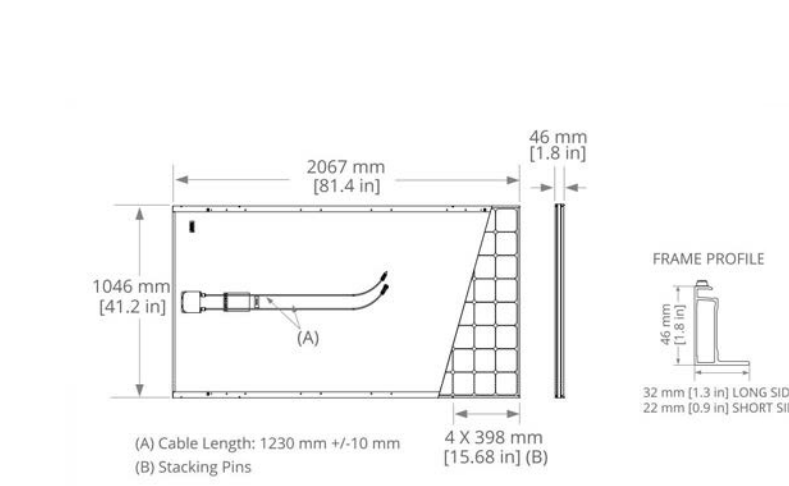


SunPower® X-Series Commercial Solar Panels | X21-470-COM

Electrical	SPR-X21-470-COM	SPR-X21-460-COM	SPR-X20-445-COM
Nominal Power (P <sub>nom</sub> ) <sup>7</sup>	470 W	460 W	445 W
Power Tolerance	+5/-0%	+5/-0%	+5/-0%
Avg. Panel Efficiency <sup>8</sup>	21.7%	21.3%	20.6%
Rated Voltage (V <sub>mpp</sub> )	77.6 V	77.3 V	76.5 V
Rated Current (I <sub>mpp</sub> )	6.06 A	5.95 A	5.82 A
Open-Circuit Voltage (V <sub>oc</sub> )	91.5 V	90.5 V	90.0 V
Short-Circuit Current (I <sub>sc</sub> )	6.45 A	6.30 A	6.21 A
Max. System Voltage	1000 V, UL 516, 1000 V, IEC		
Maximum Series Fuse	15 A		
Power Temp. Coef.	-0.29% / °C		
Voltage Temp. Coef.	-223.2 mV / °C		
Current Temp. Coef.	2.9 mA / °C		

Operating Condition And Mechanical Data	
Temperature	-40° F to +185° F (-40° C to +85° C)
Impact Resistance	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
Appearance	Class B
Solar Cells	128 Monocrystalline Maxeon Gen III
Tempered Glass	High-transmission tempered anti-reflective
Junction Box	IP-65, 1230 mm cables / MC4 compatible
Weight	56 lbs (25.4 kg)
Max. Load	Wind: 50 psf, 2400 Pa front & back Snow: 112 psf, 5400 Pa front

Frame: Class B, silver anodized, 4041 aluminum



Please read the safety and installation guide.

Tests And Certifications	
Standard Tests <sup>7</sup>	UL 1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Management System Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, REACH SVHC 163, PV Cycle
Sustainability	Cradle to Cradle Certified™ Silver (contributes to LEED categories) <sup>8</sup>
Ammonia Test	IEC 62716
Desert Test	10.11.09/ PVSC 2013.6744437
Salt Spray Test	IEC 61701 (Maximum Severity)
PID Test	1000V, IEC 62804, PVEL 600hr duration
Available Listings	UL, TLV, CEC

**REFERENCES:**  
 1 SunPower 300W compared to a Conventional Panel on same sized array (300W, 16% efficient, approx. 1.6m<sup>2</sup>), 45% more energy per watt based on 30yr module characterization and P50m, 0.75%/yr slower degradation (Campeau, Z. et al, "SunPower Module Degradation Rate," SunPower white paper, 2013).  
 2 "SunPower Module 40-Year Useful Life," SunPower white paper, May 2015. Useful life is 99 out of 100 panels operating at more than 70% of rated power.  
 3 X-Series same as E-Series. 5 of top 8 panel manufacturers tested in 2013 report, 3 additional panels in 2014. Ferrara, C., et al, "Fraunhofer IZD Durability Initiative for Solar Modules Part 2," Photovoltaics International, 2014.  
 4 See us SunPower.com/home/solar-system-warranty/ for more details.  
 5 Standard Test Conditions (1000 W/m<sup>2</sup> irradiance, AM 1.5, 25° C, NREL calibration Standard 50MS current, LACCS HF and Voltage).  
 6 Based on average of measured power values during production.  
 7 Type 2 fire rating per UL1703:2013, Class C fire rating per UL1703:2002.  
 8 See salesperson for details.

Document # S24935 Rev B-A, TLV, US

SUNPOWER®

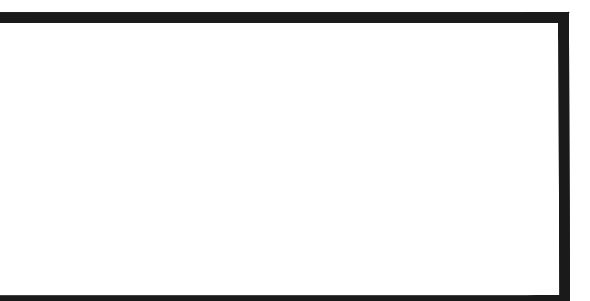
1 MODULE DATASHEET

Copyright - 2019 - All Rights Reserved. All documents prepared by Kupper Engineering Inc. as well as all information depicted on documents are instruments of service with respect to the project for which they were specifically designed and for the listed applicant. Such documents and information are not intended or represented to be suitable for reuse by the listed applicant or others on extensions or modification of the project or on any project. Any reproduction or reuse of these documents and information by any party other than the listed applicant is prohibited. Kupper Engineering, Inc. shall have no liability or responsibility for any unauthorized use, reproduction or reuse of these documents and information and the listed applicant and/or owner shall indemnify and hold harmless Kupper Engineering, Inc. from any and all claims, damages, losses and expense arising out of or resulting from the said unauthorized reproduction, misuse, or misappropriation of said documents and/or information.

SCOTT T. KUPPER  
NJ PROFESSIONAL ENGINEER  
NJ PE No. 24GE04161600 / NJ COA No. 24GA28110700

**Kupper**  
ENGINEERING, INC.  
300 Brookside Ave.  
Bldg. #14  
Amler, PA 19002  
Telephone 215-884-5970

**HESP**  
SOLAR



**PITTSBURGH LANDFILL**  
**3.36MW DC / 2.7MW AC**  
**TIVERSTOCK DRIVE,**  
**PITTSBURGH TOWNSHIP,**  
**SALEM COUNTY, NJ**

Rev. #	design	date	05/23/2020	By	GR	Chk	CER
A	ISSUE FOR IX APPLICATION						
Project No.		102-20					
Scale		As Noted					

**ELECTRICAL**  
**DETAILS**

**E0.51**

2 OF 2 SHEETS



Source: <https://www.nj.gov/dep/gis/geoweb splash.htm>

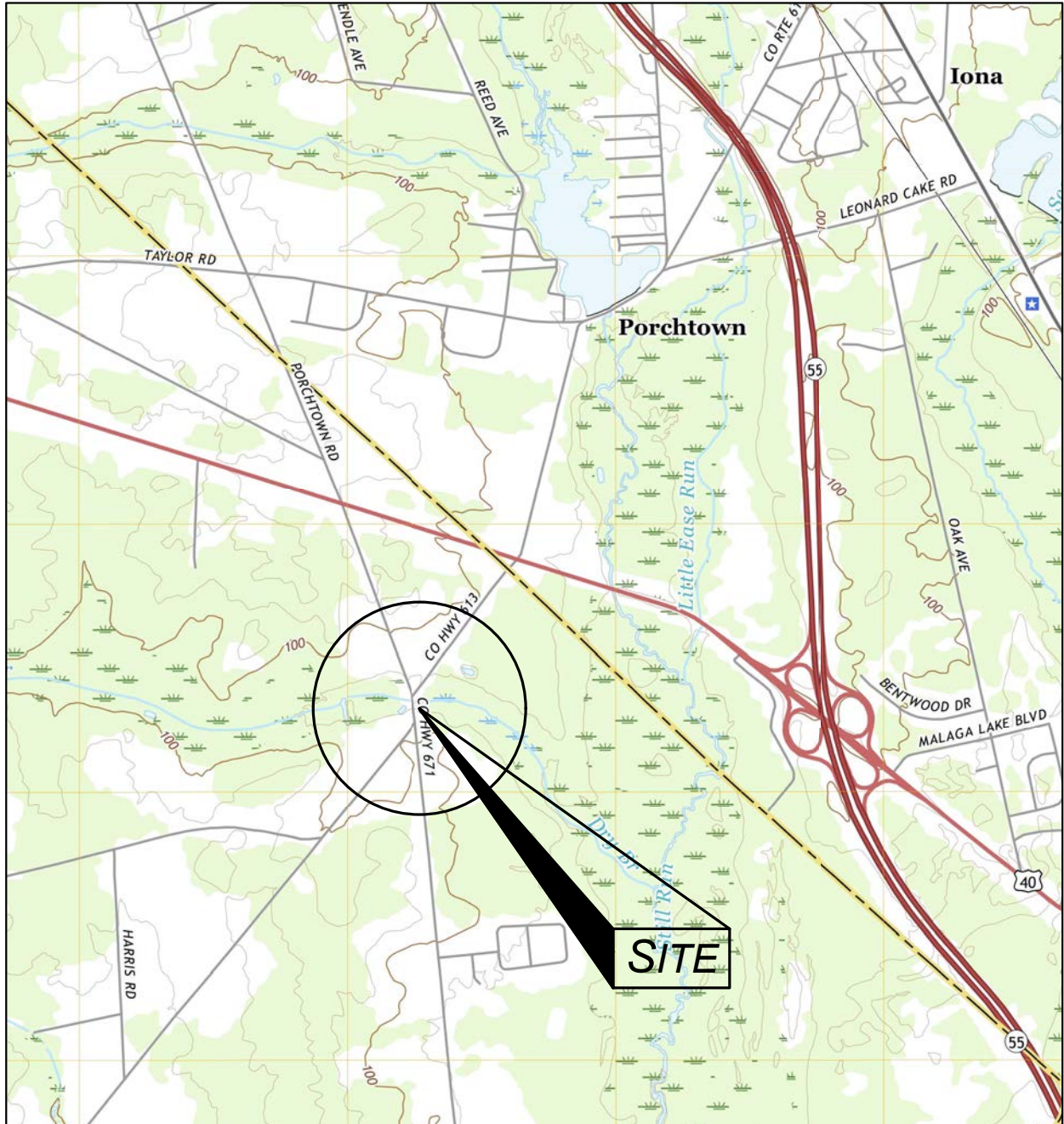
# DUFFY • DOLCY • McMANUS & ROESCH

634 Lost Pine Way, Galloway, N.J. 08205

(609) 652 - 0105

## AERIAL MAP

Block 1701		Lot 1	
TOWNSHIP OF PITTSBORO		State of New Jersey	
County of Salem			
Scale: NTS	Proj: 10479	Date: 07-08-20	Dwg. 1 of 1
Dwn. By: DWB	Chk. By: PJD	Fd. Bk.	File No.



Source: USGS MAP  
NEWFIELD, NJ QUADRANGLE

**USGS Map**  
Scale: 1" = 2000'

**DUFFY • DOLCY • McMANUS & ROESCH**

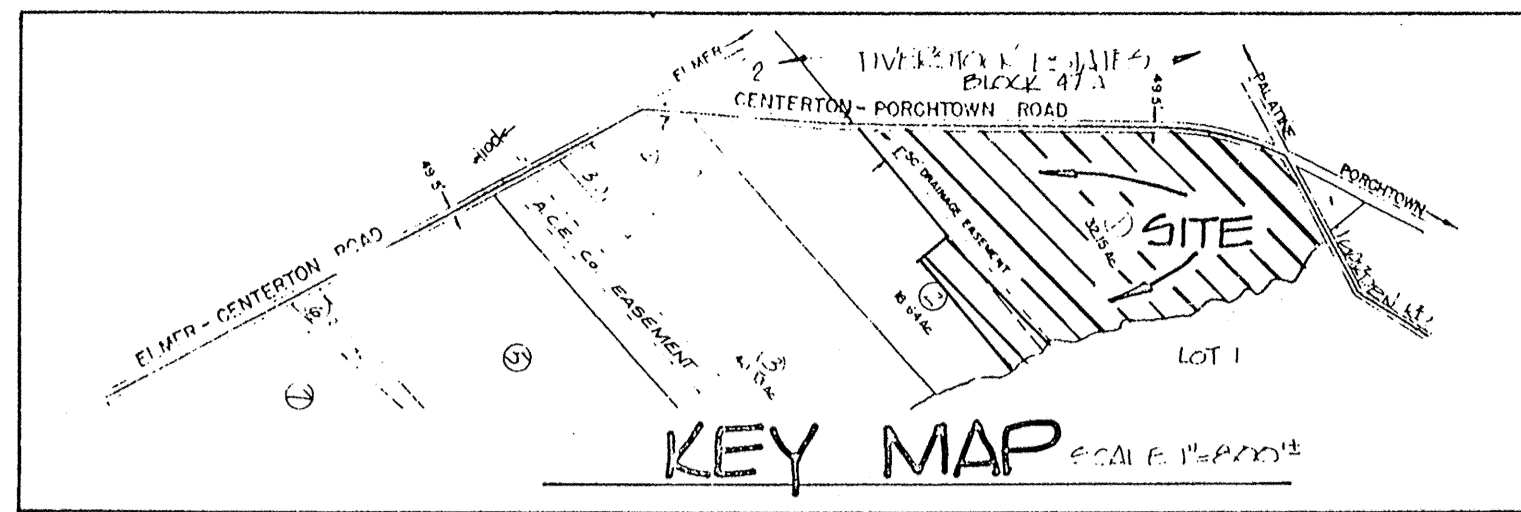
634 Lost Pine Way, Galloway, N.J. 08205

(609) 652 - 0105

**USGS MAP**

Block 1701		Lot 1	
TOWNSHIP OF PITTSBORO			
County of Salem		State of New Jersey	
Scale: 1"=2000'	Proj: 10479	Date: 07-08-20	Dwg. 1 of 1
Dwn. By: DWB	Chk. By: PJD	Fd. Bk.	File No.

© DUFFY, DOLCY, McMANUS & ROESCH 2020



CONSTRUCT TEMPORARY ENTRANCE FOR CONSTRUCTION TRAFFIC 2' WIDE. ALL VEHICLES TO BE INSPECTED AND CLEANED IF NECESSARY BEFORE ENTERING A PUBLICLY TRAVELED RIGHT OF WAY.

NOTE: THE SOIL EROSION AND SEDIMENT CONTROL DISTRICT TO BE NOTIFIED PRIOR TO START OF CONSTRUCTION.

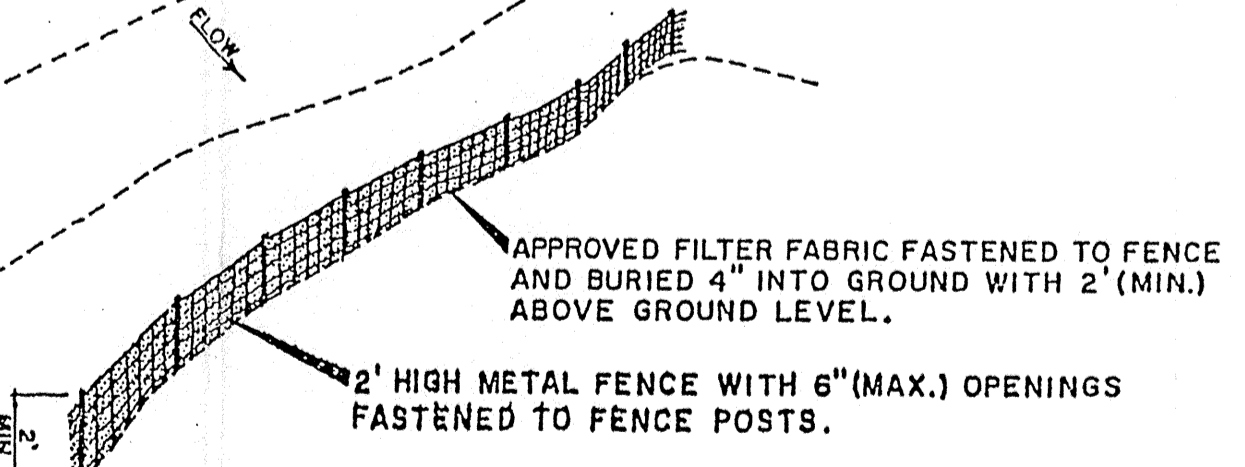
TEMPORARY SEEDING: ALL AREAS EXPOSED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH PERENNIAL RYEGRASS APPLIED AT A 40 LBS. PER ACRE RATE.

- NOTES:**
1. TOTAL DISTURBED AREA = 11.7 ACRES ±.
  2. FINISHED GRADE ELEVATIONS INCLUDE PROVISIONS FOR A 12" CLAY CAP WITH DRAINAGE LAYER AND 6" TOPSOIL COVER.
  3. FINAL SEEDING MIX (PERMANENT SEEDING COVER) SEEDING SHALL BE A MIX OF THE FOLLOWING:  
150 LBS/ACRE KENTUCKY-31 TALL FESCUE.  
150 LBS/ACRE WITH PERENNIAL RYEGRASS  
25 LBS/ACRE RED TOP
  4. EARLIFE "MANUFACTURED" TOPSOIL WILL BE USED IN PLACE OF COMMERCIAL TOPSOIL.
  5. THE FINAL COVER VEGETATION WILL BE INSPECTED AND ADJUSTED BACK AND ESPECIALLY AFTER HEAVY RAINFALLS.
  6. METAL AND SOIL TESTING WILL BE PERFORMED ON A QUARTERLY BASIS FOR AT LEAST THE FIRST TWO (2) YEARS AND SENT TO THE NJ DEP FOR REVIEW.
  7. A FINAL STATEMENT OF OBSERVATION WILL BE PREPARED BY A NEW JERSEY PROFESSIONAL ENGINEER REGARDING THE STATE OF THE FACILITY FOR COMPLIANCE OF THE APPROVED CLOSURE PLAN AND ANY REMEDIAL OR CORRECTIVE MEASURES THAT MAY HAVE BEEN REQUIRED AND IMPLEMENTED DURING THAT CALIBER YEAR.
  8. A PERMEABILITY TEST OF ONE (1) PER ACRE WILL BE PERFORMED ON THE IMPERMEABLE CLAY CAP WITH RESULTS EQUAL TO OR LESS THAN 1X10<sup>-7</sup> CM/SEC. CERTIFICATION OF TEST RESULTS FOR THE CLAY CAP WILL BE SUBMITTED AS INSTALLATION PROGRESSES AND WORK IS COMPLETED.

9. LANDFILL CAP DRAINAGE LAYER TO HAVE 7 TO 10% FINES FOR MOISTURE HOLDING CAPACITY.
10. EXISTING DITCH ALONG SOUTHWEST CORNER OF SITE SHALL NOT BE CROSSED BY CONSTRUCTION EQUIPMENT UNLESS A CULVERT IS INSTALLED.
12. ANY DISTURBED AREA IN THE NEW CONVENIENCE CENTER AREA THAT IS NOT COVERED BY GRAVEL OR RECEIVING VEHICLE OR EQUIPMENT TRAFFIC, SHALL BE SEED FOR TEMPORARY GRASS COVER.

**OWNERSHIP LISTING:**

Block 1606 Lot 4	ROBERT J. & LINDA M. PISTELLI
Block 1606 Lot 47	ROBERT S. NASH
Block 1606 Lot 46	HAROLD L. & VALERIE A. PIERCK
Block 1606 Lot 45	MICHAEL & KATHERINE NOVAK
Block 1606 Lot 44	JOHN H. & ROSIE SHIND
Block 1606 Lot 43	GEORGE W. & PAMELA A. SPRENGER
Block 1606 Lot 42	HAROLD H. & BERTHA A. QUINN
Block 1606 Lot 41	WALTER S. & ROSIE E. DAVIS
Block 1606 Lot 40	ROBERT K. POSTER & AL ESTATE
Block 1606 Lot 39	FRANCIS E. C. & IVANKA J. BREGUI
Block 1606 Lot 38	LESLIE M. CARROLL
Block 1606 Lot 37	PATRICK D. & JENNIFER D. SMITH
Block 1606 Lot 36	STEPHEN S. & LINDA L. CRISAFULLI
Block 1606 Lot 35	DAVID A. & MARY JANE DRINGS
Block 1606 Lot 34	FRANCIS J. & DEBORAH LYNN
Block 1606 Lot 33	HAROLD, JR., & SARINA L. HYND



**SILT FENCE SEDIMENT BARRIER**

**LEGEND**

- EXISTING CONTOUR LINE
- FINISHING SURF ELEVATION
- 10% OF CURB
- MINIMUM OF CURB
- LINE OF PAVEMENT
- UTILITY POLE
- MONITORING WELL
- PROPOSED CONTROL LINE
- PROP. METHANE GAS VENT

Only copies from the original of this survey, exactly marked with the original of the land surveyor's embossed seal, shall be considered to be valid copies. This survey prepared without benefit of title records. This comparison and seal are provided as a guide to the surveyor in questions resulting from this condition. This state does not show or intend to show any non-ownership boundaries or rights of way. The original of this drawing is the property of Albert A. Fralinger, P.E., P.S.

**"SOIL EROSION AND SEDIMENT CONTROL PLAN"**

**GROUNDWATER MONITORING WELL DATA**

WELL NO.	PERMIT NO.	COORDINATES AT (NORTH)	COORDINATES AT (WEST)	ELEV. GROUND	ELEV. GROUND
1	16658-0	39° 32' 17.38"	15° 09' 25.68"	98.40	95.55
2	16656-3	39° 32' 19.16"	15° 09' 15.03"	91.41	88.90
3	16657-1	39° 32' 14.76"	15° 09' 20.70"	92.20	89.12
4	16658-1	39° 32' 22.49"	15° 09' 13.28"	91.95	89.83

TOPOGRAPHIC INFORMATION SHOWN HEREON BASED ON ACTUAL FIELD SURVEY PERFORMED ON 6/17/88

*John M. Fralinger*  
JOHN M. FRALINGER, P.E.  
NEW JERSEY LIC. #29350

**WARNING**  
AS PER N.J.A.C. 13-40.1 THIS PLAN DOES NOT HAVE A RAISED SEAL. THIS PLAN REFLECTS CONDITIONS AS OF 1/2/89. THIS PLAN MAY NOT SHOW CURRENT CONDITIONS AS OF 4/22/02.

**GENERAL NOTES:**

1. TAX MAP REFERENCE: SHEET-17 BLOCK-1701 LOT-1,2
2. DEED REFERENCE: LOT 2 - HORACE E. GARRISON SR. & NELLIE V. GARRISON TO IVAN L. & STELLA S. GARRISON DEED BOOK 458 PG 330 DATE 1-20-64 LOT 1 - EDWARD E. & MADORA M. GARRISON TO THE TOWNSHIP OF PITTSBORO DEED BOOK 428 PG 106 DATE 8-14-61
3. AREA = 35.55 AC.
4. OWNER OF RECORD: TOWNSHIP OF PITTSBORO BOX 280 B MUNICIPAL BUILDING ELMER, N.J. 08818
5. BENCHMARK: STANDARD N.I.C.S. DISK #1033 SE1 IN CONCRETE ON THE NORTH SIDE OF U.S. ROUTE 1, 1/4 MILES EAST OF MAIN STREET. ELEV. 126.27. ON SITE BENCHMARK TOP OF PLASTIC WASHING ON MONITORING WELL #1 ELEV. 98.40

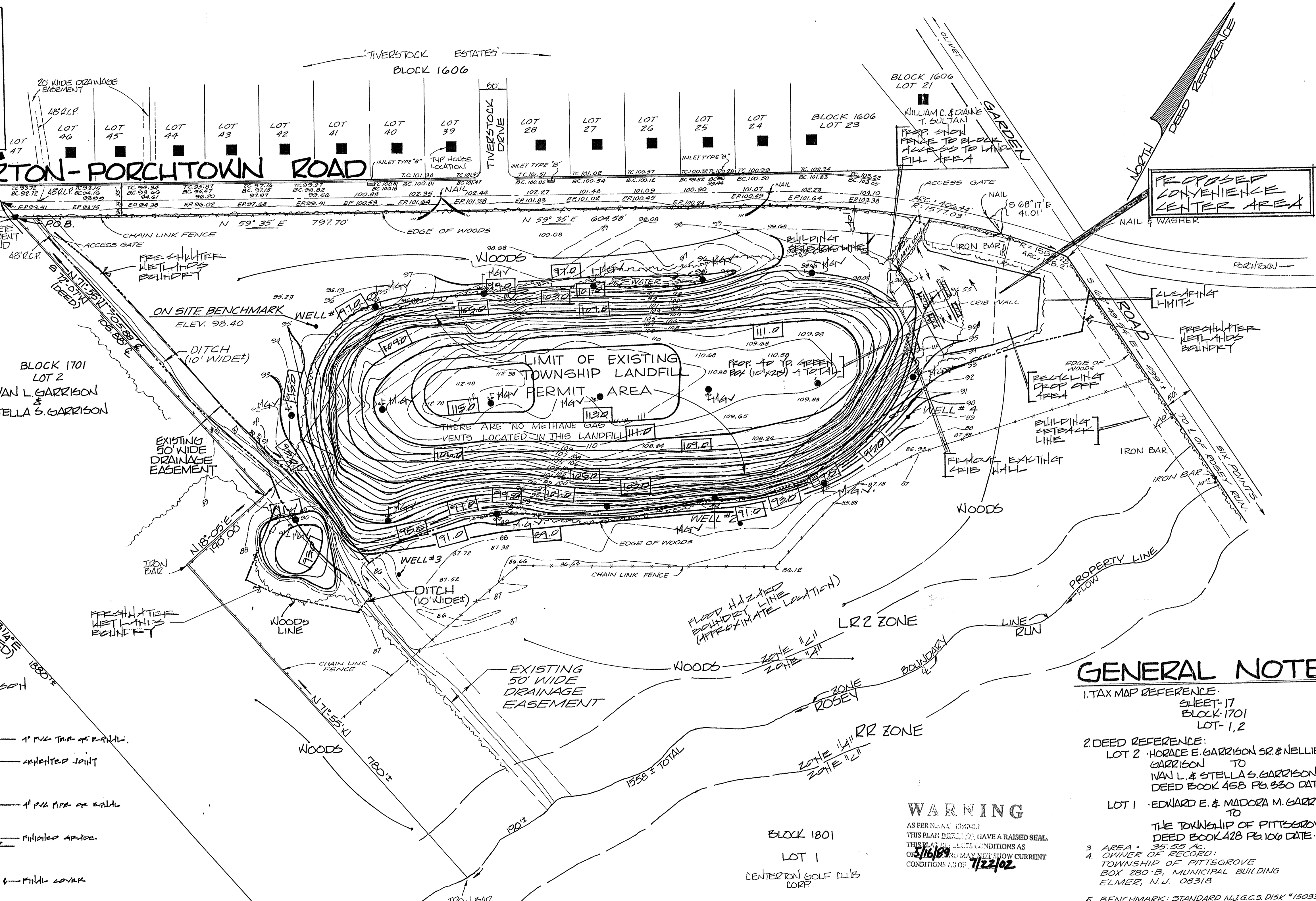
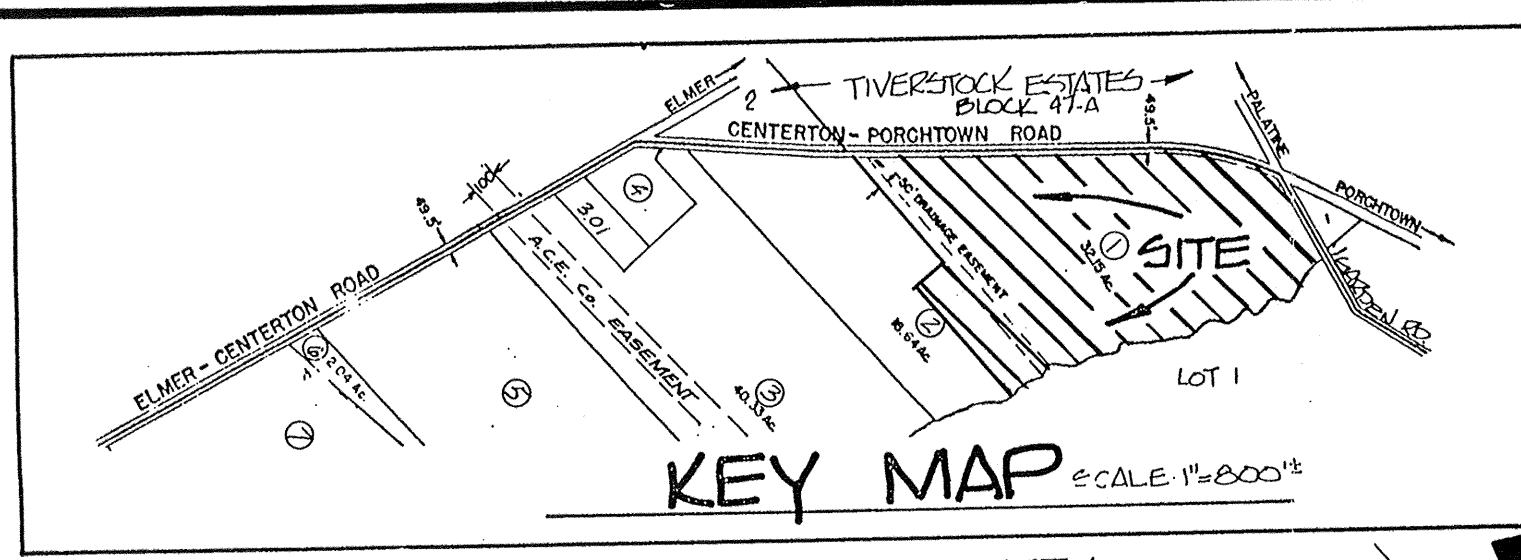
**SURVEY OF PITTSBORO TOWNSHIP SANITARY LANDFILL**

ALBERT A. FRALINGER, JR., P.A.  
PROFESSIONAL ENGINEERS, PLANNERS & LAND SURVEYORS  
HOPEWELL MUNICIPAL & PROFESSIONAL BUILDING 500 SHILOH PIKE  
BRIDGE TON, NEW JERSEY 07092

KARL G. GLEISSNER, L.S.  
NEW JERSEY LIC. #2931

GRAPHIC SCALE

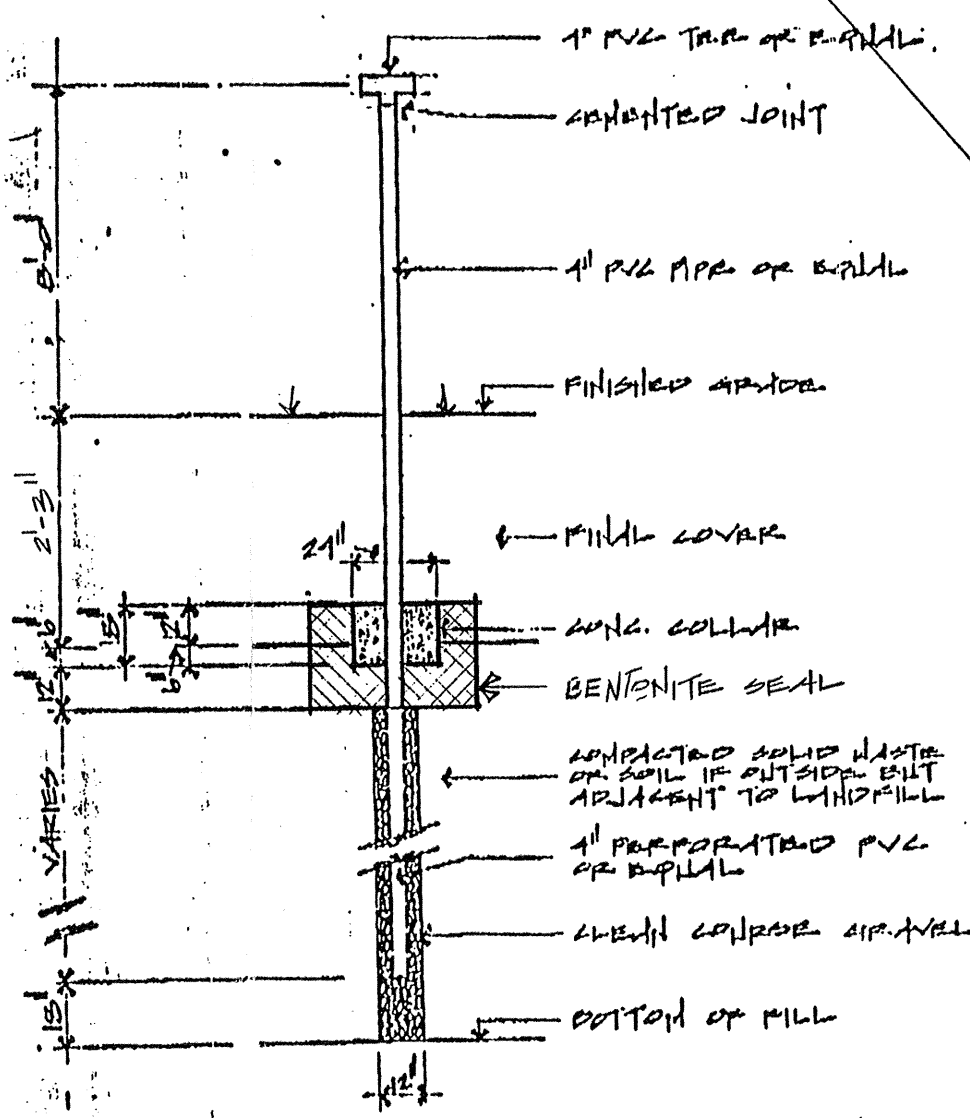
REV. 10/20/88	REV. 1/2/89	REV. 3/28/89
REV. 1/3/89	REV. 5/10/89	REV. 6/12/89



- NOTES:**
- TOTAL DISTURBED AREA = 11.7 ACRES ±.
  - FINISHED GRADE ELEVATIONS INCLUDE PROVISIONS FOR A 12" SLAY CAP, 4" DRAINAGE LAYER AND 6" TOPSOIL (EARTH LIFE).
  - FINAL SEEDING MIX (PERMANENT SEEDING COVER) SEEDING SHALL BE A MIX OF THE FOLLOWING:
    - 150 LBS/ACRE KENTUCKY-31 TALL FESCUE
    - 150 LBS/ACRE LHM PERENNIAL RYEGRASS
    - 25 LBS/ACRE RED TOP
  - EARTH LIFE "MANUFACTURED" TOPSOIL WILL BE USED IN PLACE OF COMMERCIAL TOPSOIL.
  - THE FINAL COVER VEGETATION WILL BE INSTALLED ON A QUARTERLY BASIS AND ESPECIALLY AFTER HEAVY RAINSTORMS.
  - METHANE GAS TESTING WILL BE PERFORMED ON A QUARTERLY BASIS FOR AT LEAST THE FIRST TWO (2) YEARS AND SENT TO THE N.J.D.E.P. FOR REVIEW.
  - AN ANNUAL STATEMENT OF COMPLIANCE WILL BE PREPARED BY A NEW JERSEY PROFESSIONAL ENGINEER, FURNISHING THE STATE OF THE FACILITY FOR COMPLIANCE OF THE APPROVED CLOSURE PLAN AND ANY RECOMMENDATIONS OR MEASURES THAT MAY HAVE BEEN REQUIRED AND IMPLEMENTED DURING THAT CALENDAR YEAR.
  - A PERMEABILITY TEST OF ONE (1) PER ACRE WILL BE PERFORMED ON THE IMPERMEABLE SLAY CAP WITH RESULTS EQUAL TO OR LESS THAN 1 X 10<sup>-7</sup> CM/SEC. CERTIFICATION OF TEST RESULTS FOR THE SLAY CAP WILL BE SUBMITTED AS INSTALLATION PROGRESSES AND WORK IS COMPLETED.

**OWNERSHIP LISTING:**

BLOCK 1606 LOT 4	ROBERT J. & LINDA M. PITTELLI.
BLOCK 1606 LOT 47	ROBERT S. NASH.
BLOCK 1606 LOT 26	HAROLD L. & VALESKA A. PIERCE.
BLOCK 1606 LOT 45	MICHAEL & ELSIEL NOVAK.
BLOCK 1606 LOT 44	JOHN H. & ROSE SHINN.
BLOCK 1606 LOT 43	GEORGE W. & PAMELA A. SPENCER.
BLOCK 1606 LOT 42	CHARLES H. & ROBIN A. QUINN.
BLOCK 1606 LOT 41	DANIEL S. & BONNIE L. DAVIS.
BLOCK 1606 LOT 40	ROBERT K. FOSTER REAL ESTATE.
BLOCK 1606 LOT 39	KENNETH C. & IVANETTA J. MCCOY.
BLOCK 1606 LOT 28	LOUIS W. GARMAN.
BLOCK 1606 LOT 27	RICHARD D. & JEANNETTE SCHMIDT.
BLOCK 1606 LOT 26	PATRICK S. & LINDA L. CRISAFULLI.
BLOCK 1606 LOT 25	DAVID A. & MARY JANE DONNS.
BLOCK 1606 LOT 24	KENNETH J. & DEBORAH LYNCH.
BLOCK 1606 LOT 23	CHARLES, JR., & SANDRA L. MYSKO.



- LEGEND:**
- 100' - EXISTING CONTOUR LINE
  - 96.02 - EXISTING SPOT ELEVATION
  - TC - TOP OF CURB
  - BC - BOTTOM OF CURB
  - EP - EDGE OF PAVEMENT
  - Ø - UTILITY POLE
  - - MONITORING WELL
  - 1000 - PROPOSED CONTOUR LINE
  - MAN - PROP. METHANE GAS VENT

Only copies from the original of this survey, clearly marked with an original of the land surveyor's enclosed seal shall be considered to be valid copies.  
 This survey prepared without benefit of title report. This Corporation and/or its employees are not liable for errors or omissions resulting from this condition.  
 This plan does not show or intend to show any non-recorded easements or Right-of-Way.  
 The original of this drawing is the property of Albert A. Fralinger, Jr., P.A.

**GENERAL NOTES:**

- TAX MAP REFERENCE: SHEET 17 BLOCK 1701 LOT 1, 2
- DEED REFERENCE: LOT 2 - HORACE E. GARRISON SR. & NELLIE V. GARRISON TO NAN L. & STELLA S. GARRISON DEED BOOK 458 PG. 330 DATE 1-20-66 LOT 1 - EDWARD E. & MADORA M. GARRISON TO THE TOWNSHIP OF PITTSBORO DEED BOOK 428 PG. 106 DATE 8-14-61
- AREA = 95.55 AC.
- OWNER OF RECORD: TOWNSHIP OF PITTSBORO BOX 280-B, MUNICIPAL BUILDING ELMER, N.J. 08318
- BENCHMARK: STANDARD N.I.G.C.S. DISK #15033 SET IN CONCRETE ON THE NORTH SIDE OF U.S. ROUTE 40, 3.70 MILES WEST OF STILL RUN AND 1.15 MILES EAST OF MAIN STREET. ELEV.: 126.27. ON SITE BENCHMARK TOP OF PLASTIC CASING ON MONITORING WELL #1 ELEV. 98.40

**WARNING**  
 AS PER N.J.A.C. 15A:26.1 THIS PLAN BEARING THERE HAS A RAISED SEAL. THIS PLAN MEETS ALL THE CONDITIONS AS SET FORTH IN THE STATE DEPARTMENT OF TREASURY CURRENT CONDITIONS 115 OF 7/22/02

**"FINAL GRADING PLAN"**

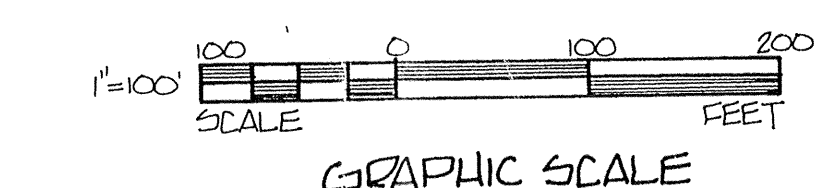
**GROUNDWATER MONITORING WELL DATA**  
 (N.J. PDES PERMIT # NJ0054402)

WELL NO.	PERMIT NO.	LAT. (NORTH)	LONG. (WEST)	ELEV. WELL BOTTOM	ELEV. GROUND
1	31-16658-0	39° 32' 17.38"	75° 09' 25.68"	98.40	95.55
2	31-16656-3	39° 32' 19.16"	75° 09' 15.03"	91.41	88.90
3	31-16657-1	39° 32' 18.76"	75° 09' 20.70"	92.20	89.12
4	31-22582-9	39° 32' 22.49"	75° 09' 13.28"	91.95	89.83

TOPOGRAPHIC INFORMATION SHOWN HEREON BASED ON ACTUAL FIELD SURVEY PERFORMED ON 6/17/88

*John M. Fralinger, Jr.*  
 JOHN M. FRALINGER, P.E.  
 NEW JERSEY LIC. #29350

REV. 10/20/88	REV. 1/13/89	REV. 3/25/89
REV. 1/3/89	REV. 5/16/89	



**SURVEY OF PITTSBORO TOWNSHIP SANITARY LANDFILL**  
 PREPARED FOR PITTSBORO TOWNSHIP  
 MUNICIPALITY: PITTSBORO TOWNSHIP  
 COUNTY & STATE: SALEM COUNTY, NEW JERSEY  
 SCALE: 1" = 100'  
 DATE: 11-28-89  
 COMM. NO. 4706  
 REVISED: 2/10/88  
 DRAWN BY: SLUSSER  
 CHKD BY:  
 ALBERT A. FRALINGER, JR., P.A.  
 HOPEWELL ENGINEERS, PLANNERS & LAND SURVEYORS  
 HOPEWELL MUNICIPAL & PROFESSIONAL BUILDING 580 SHILOH PIKE BRIDGETON, NEW JERSEY 08302  
*Karl G. Gleissner*  
 KARL G. GLEISSNER, L.S.  
 NEW JERSEY LIC. #29391



Source: <https://www.nj.gov/dep/gis/geoweb splash.htm>

# DUFFY • DOLCY • McMANUS & ROESCH

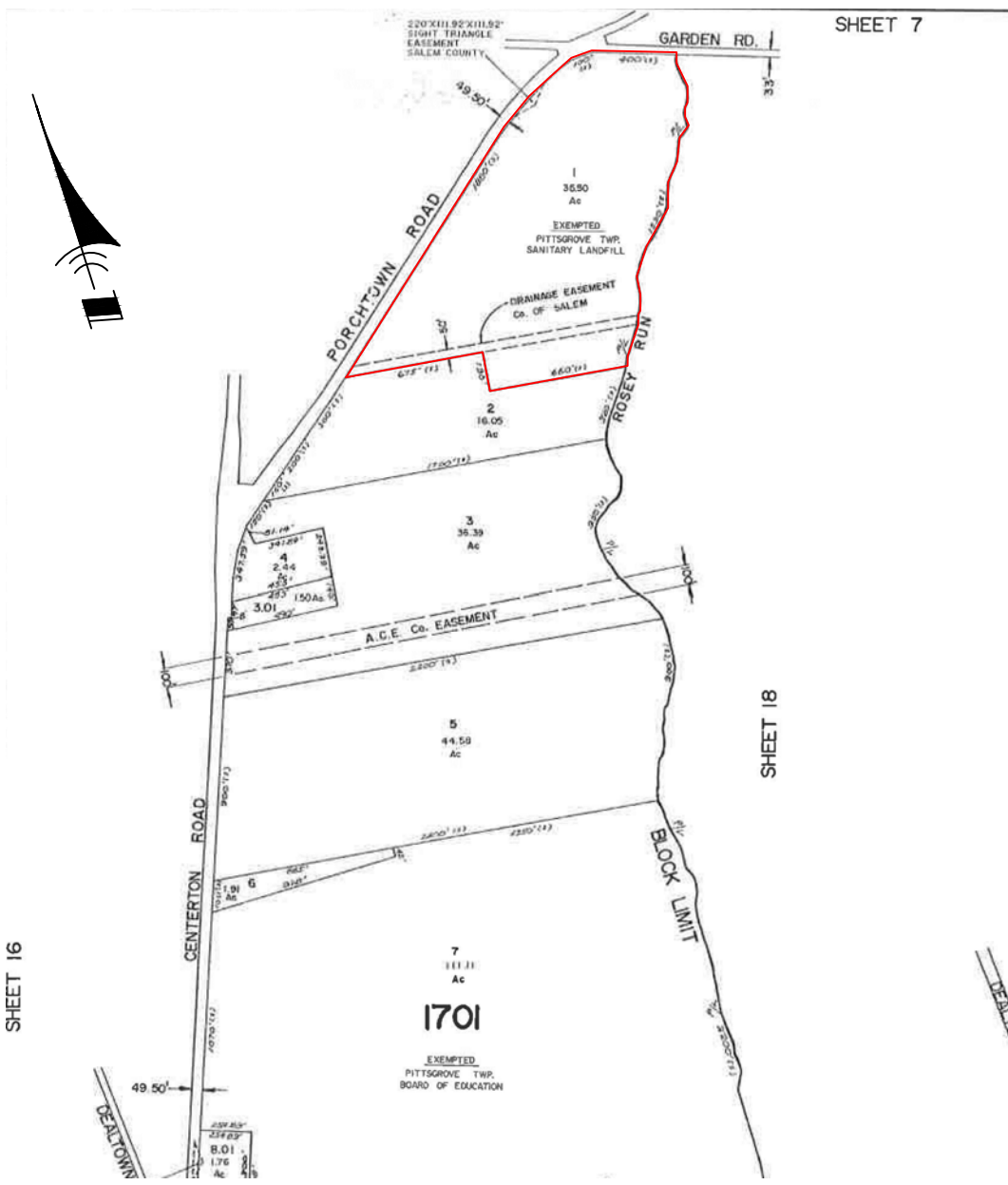
634 Lost Pine Way, Galloway, N.J. 08205

(609) 652 - 0105

## WETLANDS MAP

Block 1701		Lot 1	
TOWNSHIP OF PITTSBORO		State of New Jersey	
County of Salem			
Scale: NTS	Proj: 10479	Date: 07-08-20	Dwg. 1 of 1
Dwn. By: DWB	Chk. By: PJD	Fd. Bk.	File No.

\\Server\acad files\projects\10479\10479\_exhibits.dwg, 7/8/2020 12:17:02 PM, DWG To PDF.pcs3



Source: PITTSBORO TOWNSHIP TAX MAP SHEET 17

## Tax Map

Not to Scale

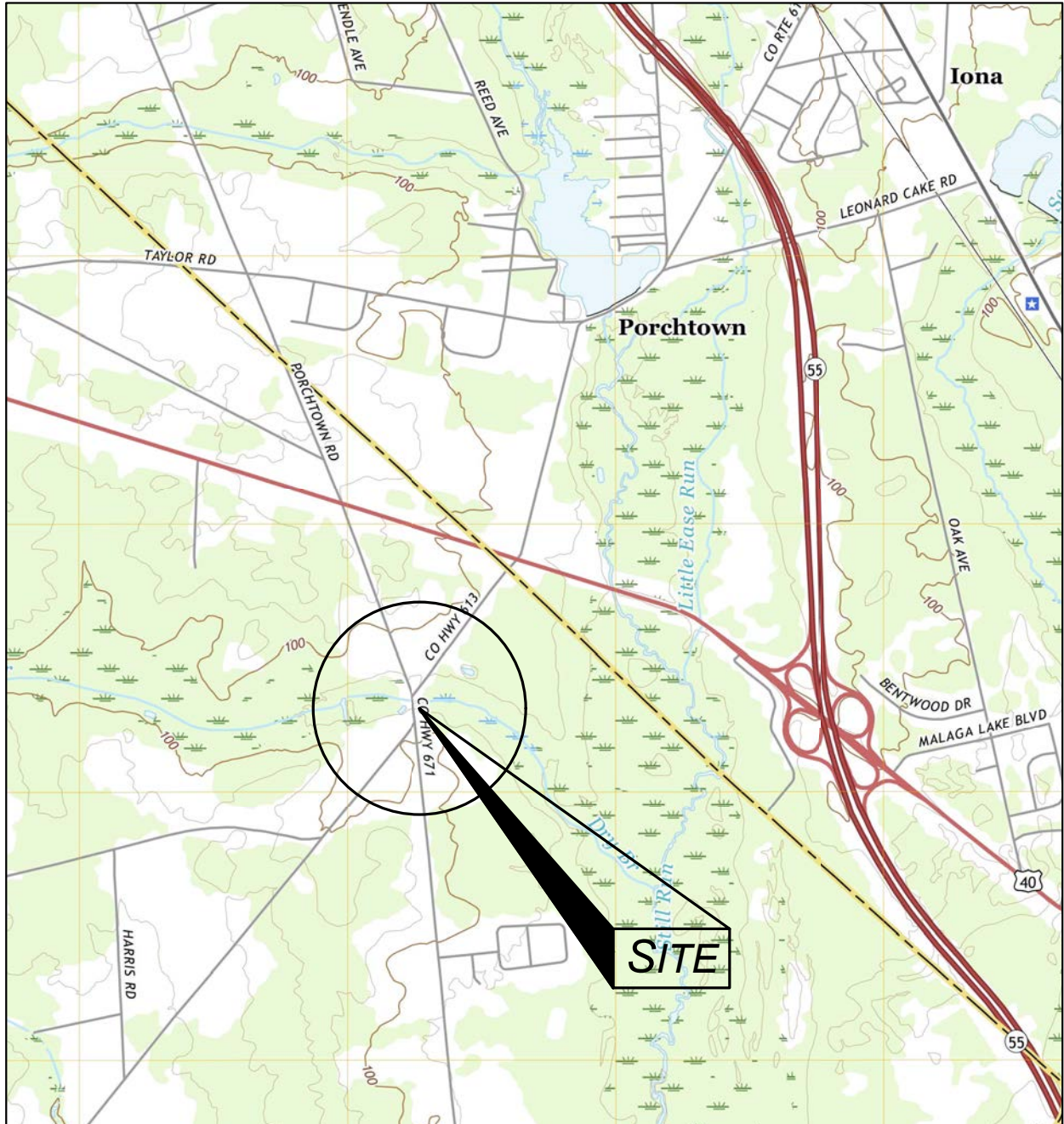
# DUFFY • DOLCY • McMANUS & ROESCH

634 Lost Pine Way, Galloway, N.J. 08205

(609) 652 - 0105

### TAX MAP

Block 1701		Lot 1	
TOWNSHIP OF PITTSBORO		State of New Jersey	
County of Salem			
Scale: NTS	Proj: 10479	Date: 07-08-20	Dwg. 1 of 1
Dwn. By: DWB	Chk. By: PJD	Fd. Bk.	File No.



Source: USGS MAP  
NEWFIELD, NJ QUADRANGLE

**USGS Map**  
Scale: 1" = 2000'

**DUFFY • DOLCY • McMANUS & ROESCH**

634 Lost Pine Way, Galloway, N.J. 08205

(609) 652 - 0105

**USGS MAP**

Block 1701		Lot 1	
<b>TOWNSHIP OF PITTSBORO</b>			
County of Salem		State of New Jersey	
Scale: 1"=2000'	Proj: 10479	Date: 07-08-20	Dwg. 1 of 1
Dwn. By: DWB	Chk. By: PJD	Fd. Bk.	File No.

© DUFFY, DOLCY, McMANUS & ROESCH 2020



## **Attachment 4**

Copy of Communication with DEP OPPN

## Daniel Grohman

---

**From:** Nolan, Katherine <Katherine.Nolan@dep.nj.gov>  
**Sent:** Wednesday, August 19, 2020 2:37 PM  
**To:** peter dolcy; Daniel Grohman; Susan Brodie; Matt Leatherwood  
**Cc:** Carper, Elizabeth; Goldman, MaryAnne; Hull, Ross; Hunter, Benjamin; Corleto, Joseph; Krukowski, Eleanor; Mazzei, Becky; Pepe, David; Brunatti, Megan; Dromboski, Andrew  
**Subject:** Pittsgrove LF Solar 8/19/20 Meeting follow-up  
**Attachments:** Pittsgrove Landfill Solar Farm, Pittsgrove, Salem County.docx

To All;

It was a pleasure to meet with you this afternoon.

If you wish to have an additional follow-up meetings, please let our office know and we will coordinate and schedule the meeting accordingly. If you would like to work with the programs directly, we just ask that you keep us copied on any correspondence so we may update our records.

To close out this email, below is a courtesy conceptual summary of possible permits and action items this project may require (but not limited to): *\*\* this is neither a comprehensive nor a technical summary \*\**

### **Clean Energy & Climate Change:** Elizabeth Carper

- According to our Solar Siting Analysis, there appears to be some discrepancy with the site. In the 2002 Land Use Land Cover data, the site is identified as barren land or a landfill, which is Preferred. However, in the 2007 update Land Use Land Cover data going forward, a significant portion of the site (11.68/35.50 acres) is considered cropland or pastureland, which is Not Preferred under the current SSA. For the purpose of this preliminary review and until further investigation can be made, we are identifying this site as "Indeterminate".
- Please be advised that the State of New Jersey is undergoing a Solar Transition. The State 5.1% milestone (percent of kWh from solar) was achieved on April 30, 2020, therefore the project would qualify for the TREC (Transition) Incentive. Any project that is not yet SRP registered will qualify for the Successor Program. <https://www.state.nj.us/bpu/pdf/boardorders/2020/20200309/3-9-20-8H.pdf>

### **Solid Waste:** Ross Hull and MaryAnne Goldman

- Apply for a modification to the Closure and Post-Closure Plan that addresses disruption of the landfill during construction and impacts/changes to the closure and post-closure requirements/controls at the landfill.

### **Land Resources Protection:** Andrew Dromboski

- Apply for Letter of Interpretation to determine wetland buffer.
- Any proposed activities within wetlands and/or wetland transition areas would require a permit from the Division of Land Resource Protection.
- Flood hazard verification to determine whether any flood hazard area permits are required.

### **NJ BPU:** Scott Hunter

- The BPU is currently undergoing a solar transition. The applicant should apply for a Sub-T application under the Transition Incentive Program.

### **Fish and Wildlife:** Joe Corleto

- Fish and Wildlife was not able to attend the meeting, but provided the attached comments.

### **NJPDES Stormwater:** Eleanor Krukowski

- NJPDES Stormwater was not able to attend the meeting, but provided the following comments.
- Construction projects that disturb 1 acre or more of land, or less than 1 acre but are part of a larger common plan of development that is greater than 1 acre, are required to obtain coverage under the Stormwater construction general permit (5G3). Applicants must first obtain certification of their soil erosion and sediment control plan (251 plan) form their local soil conservation district office. Upon certification, the district office will provide the applicant with two codes process (SCD certification code and 251 identification code) for use in the DEPonline portal system application. Applicants must then become a registered user for the DEPonline system and complete the application for the Stormwater Construction General Authorization. Upon completion of the application the applicant will receive a temporary authorization which can be used to start construction immediately, if necessary. Within 3-5 business days the permittee contact identified in the application will receive an email including the application summary and final authorization.

Should circumstances or conditions be or become other than as set forth in the information that was recently provided to the NJDEP, the comments and regulatory requirements provided above are subject to change and may no longer hold true. Statements made within this email are not indicative that the NJDEP has made any decisions on whether the proposed project will be permitted. OPCER looks forward to working with you on the proposed project.

If you have any questions or concerns, please let me know.

Sincerely,

**Katie Nolan**

New Jersey Department of Environmental Protection  
 Office of Permitting & Project Navigation (formerly Permit Coordination)  
 401 East State Street  
 Trenton, NJ 08625-0420  
 Mailcode: 401-07J

Office #: (609) 272-3600  
 Direct #: (609) 984-6506  
 Fax #: (609) 633-1196  
 Email: [Katherine.Nolan@dep.nj.gov](mailto:Katherine.Nolan@dep.nj.gov)



*NOTE: This E-mail is protected by the Electronic Communications Privacy Act, 18 U.S.C. Sections 2510-2521. This E-Mail and its contents, may be Privileged & Confidential due to the Attorney-Client Privilege, Attorney Work Product, and Deliberative Process or under the New Jersey Open Public Records Act. If you are not the intended recipient of this e-mail, please notify the sender, delete it and do not read, act upon, print, disclose, copy, retain or redistribute it.*

## **Attachment 5**

A Screenshot of The EDC Capacity Hosting Map at The Proposed Location

Legend

LVAC

RadialCapacity\_PHI - ACE\_Sec

Allowable\_PV\_kW

- > 1,500
- > 1,000 - 1,500
- > 500 - 1,000
- > 250 - 500
- > 0 - 250
- 0 - 0

RadialCapacity\_PHI - ACE

Allowable\_PV\_kW

- > 1,500
- > 1,000 - 1,500
- > 500 - 1,000
- > 250 - 500
- > 0 - 250
- 0 - 0



All rights reserved

# **Attachment 6**

Substantiating Evidence of Project Cost in The Form of Charts and/or  
Spreadsheet Models



## PROJECT COST BREAKDOWN

System Size (W):  
2,249,890

Expense Category	Total	\$/W
Panels	\$ 614,497	\$ 0.27
Racking	\$ 601,515	\$ 0.27
Inverters	\$ 80,058	\$ 0.04
Equip Rentals	\$ 103,859	\$ 0.05
Civil Site Work	\$ 398,125	\$ 0.18
Landscaping	\$ 19,124	\$ 0.01
Fencing	\$ 121,168	\$ 0.05
Concrete, Stone, Paving	\$ 43,274	\$ 0.02
Switchgear, Switch, Transformers	\$ 268,302	\$ 0.12
Electrical, Construction Material	\$ 283,448	\$ 0.13
Electrical Labor	\$ 815,724	\$ 0.36
Engineering	\$ 64,912	\$ 0.03
Interconnection Costs	\$ 411,107	\$ 0.18
<b>Total Cost to Build</b>	<b>\$ 3,825,113</b>	<b>\$ 1.70</b>
Lifetime kWh	60,478,768	
Avg Annual Operating Expenses (\$/kWh)	\$ 47,386	
Total Lifetime Operating Expenses	\$ 947,717	
Levelized Cost of Energy (\$/kWh)	\$ 0.079	
Initial Customer Acquisition Cost (\$/kWh)	\$ 0.0050	

# **Attachment 7**

Evidence Of Project Property Location Within A Redevelopment Area

- Redevelopment Plan



**Redevelopment Plan For  
Block 1701, Lot 1  
Pittsgrove Township, NJ**

**January 2019**

---

SARAH BIRDSALL, PLANNING CONSULTING

NJ PP LICENSE #33LI00397400

PO Box 243  
Greenwich, NJ 08323

856-305-1626  
[SEB@sarahbirdsall.com](mailto:SEB@sarahbirdsall.com)

---

<b>Table of Contents</b>	<b>Page Number</b>
I. Introduction	3
II. Designation of Area and Plan Development	4
III. Statutory Requirements of Redevelopment Plan	4
IV. Description of Project Area	5
V. Statement of Goals and Objectives	6
VI. Proposed Land Uses and Building Requirements	6
VII. Housing and Relocation	7
VIII. Property Acquisition	8
IX. Relationship of Redevelopment Plan to Other Plans	8
X. Relationship of the Redevelopment Plan to Township Plans/Ordinances	9
XI. Proposed Redevelopment Actions	9
XII. Obligations of the Redeveloper	10
XIII. Deviations from Provision of Approved Redevelopment Plan	10
XIV. Duration of Redevelopment Plan Restrictions	10
XVI. Amendments to the Approved Redevelopment Plan	11
<b><u>Tables</u></b>	
1: Permitted Uses in Project Area Under Current Zoning	6
<b><u>Exhibits</u></b>	
A: Map of Project Area	12

---

## I. Introduction

---

The area (the Project Area) covered by this Redevelopment Plan consists of Block 1701, Lot 1, which is part of a Non-Condensation Area in Need of Redevelopment in accordance with the Local Redevelopment and Housing Law (N.J.S.A. 40A:12A-1 et seq.) (“LRHL”). The Project Area lot comprises the closed and capped Township landfill and the current Township convenience center location as well as a wooded buffer ranging from 100’ to 500’ wide along its perimeter. It is located on the east side of Porchtown Road between Centerton Road and Garden Road. A Project Area Map is attached as Exhibit A to this Plan.

Pittsgrove anticipates the adoption of this Redevelopment Plan will result in reutilization of an area with limited development possibilities and promotion of the use of renewable energy for the benefit of residents. This Redevelopment Plan, in conformance with the Township Master Plan, endorses development that is “...related to the existing natural capacities of the environment and the level of infrastructure existing or proposed [in the Township].”

---

## II. Designation of Area and Plan Development

---

### A. Designation of the Non-Condensation Redevelopment Area

The Township Committee, pursuant to N.J.S.A. 40A:12A-7, has prepared this Redevelopment Plan for the Project Area to support the redevelopment of the Project Area and provide benefits to Township citizens.

The Township Committee initiated this process with Resolution #204-208, requesting the Planning Board to undertake a Preliminary Investigation to determine whether the proposed Study Area, comprised of Block 1701, Lot 1 and Block 801, Lot 11, qualified as an Area of Non-Condensation Redevelopment pursuant to N.J.S.A. 40A:12A-5. The Planning Board, after a public hearing on the subsequent report, adopted a resolution recommending to the Committee that Block 1701, Lot 1 and Block 801, Lot 11 be designated an Area of Non-Condensation Redevelopment.

The Township Committee passed a resolution ( \_\_\_\_\_ ) so designating the Redevelopment Area on \_\_\_\_\_ and requested that the Township Planner produce a Redevelopment Plan for Block 1701, Lot 1 for immediate review by the Planning Board and eventual adoption by the Township Committee.

---

## III. Statutory Requirements of Redevelopment Plan

---

A redevelopment plan must be prepared and adopted by ordinance prior to undertaking any redevelopment project in all or a portion of an area in need of redevelopment or rehabilitation. This process, which is consistent with applicable state statutes, was followed by the Township in the preparation of this Redevelopment Plan.

Pursuant to the LRHL, a redevelopment plan shall include an outline for the planning, development, rehabilitation or redevelopment of the area sufficient to indicate:

1. Its relationship to definite local objectives as to appropriate land uses, density of population and improved traffic and public transportation, public utilities, recreational and community facilities and other public improvements.
2. Proposed land uses and building requirements in the Project Area.
3. An identification of any property within the Project Area which is proposed to be acquired in accordance with the Redevelopment Plan.
4. Any significant relationship of the Redevelopment Plan to:
  - the Master Plans of contiguous municipalities;
  - the Master Plan of the County in which the municipality is located;
  - the State Development and Redevelopment Plan adopted pursuant to the "State Planning Act" PL 1985, C398 (C52:18A-196 et al.); and
  - the local ordinances and Master Plan.
5. A housing inventory of all affordable housing units to be removed as a result of implementation of the plan; and
6. Adequate provision for the temporary and permanent relocation, as necessary, of residents in the Project Area, including an estimate of the extent to which decent, safe and sanitary dwelling units affordable to displaced residents will be available to them in the existing local housing market.
7. A plan for replacement of any affordable housing removed pursuant to the Redevelopment Plan.

#### **IV. Description of Project Area**

---

The Project Area consists of the one lot, Block 1701, Lot 1, a single tax lot of 35.5 acres owned by Pittsgrove Township. Presently, Lot 1 is the site of the Township's waste and recycle center with a small paved area of approximately one-half acre and the capped landfill mound comprising about 14 acres. The mound is grass covered. The remainder of the lot is wooded. There is a paved entrance to the waste and recycle center from Porchtown Road. This Plan intends that the Township waste and recycle center shall continue to operate concurrent with the proposed re-development of the site.

Lot 1 currently encompasses two zoning districts, Conservation and Rural Residential. The lot is approximately 75% in the Conservation District. The Project Area is bounded on the east by a stream which is part of the Muddy Run sub-watershed, a Category One stream. State regulations require protection from disturbance within 300' of the stream centerline. Presently, the required 300 foot buffer is completely wooded on Lot 1.

The area proposed for re-development under this Plan would be limited to the grassy capped landfill. Approximately two-thirds of the capped landfill is in the Conservation Zone with the remaining third in the Rural Residential Zoning District. The Preliminary Investigation Report

for the Redevelopment Area concluded that the possibilities of development as permitted under Rural Residential Zoning are slight due to the history of the site as a landfill. The possibilities for development, such as trails and/or environmental centers, as permitted under Conservation Zoning are also diminished by the sensitivity to the past use as a landfill. Table 1 lists the permitted uses for each Zoning District within the Project Area.

**TABLE 1: Permitted Uses in Project Area Under Current Zoning**

Permitted Use	Conservation District	Rural Residential District
Agricultural or horticultural uses	X	X
Conservation areas	X	X
Parks and recreational facilities	X	X
Municipal use	X	X
Public buildings, offices, facilities and yards	X	
Environmental centers and wildlife facilities	X	
Single family, detached housing on 5 acres	X	
Farm		X
Churches		X
Educational facilities		X
Single family, detached housing on 3 acres		X

## V. Statement of Goals and Objectives

Pittsgrove Township wants to utilize this Township owned property in a manner that will fulfill New Jersey's energy goal to "...provide for the encouragement and promotion of the efficient use of natural resources and the installation and usage of renewable energy system" Furthermore, this Plan will benefit residents through the best utilization of a Township owned property.

To achieve this, the following goals and objectives have been established:

1. The primary goal of this Redevelopment Plan is to re-utilize the closed landfill in a manner that is cognizant of the area's environmental sensitivity while developing, to the maximum extent possible within those constraints, its economic potential.
2. Considering the limited possibilities for development on Lot 1, the Township's intention is to make the property attractive for re-development as an alternative

energy solar site using a full range of inducements and benefits, local, state and federal.

3. An objective is to explore a wide range of leasing and financing mechanisms for ensuring that any solar plant installed will maximize returns to the residents of the Township.
3. The goal of a solar plant fits with the Master Plan's policy to attract development that conforms to the Township's environmental constraints and its rural character.
4. The Redevelopment will foster public-private partnerships in such a way that the needs of the community are best served and any partnership contributes to the continuing strength of Pittsgrove Township.

## **VI. Proposed Land Uses and Building Requirements**

---

The existing use, bulk, design and performance standards, and all other standards, as currently set forth in the Township's Land Development Ordinances, and as adopted in the future, shall apply to the Project Area as except as set forth herein.

Additional Permitted Use will be **Principal solar energy production facility**, defined as "an area of land or other area used for a solar collection system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for off-site use. Principal solar energy systems consist of one or more free-standing ground mounted solar collector devices, solar related equipment and other accessory structures and buildings including light reflectors, concentrators, and heat exchangers, substations, electrical infrastructure, transmission lines and other appurtenant structures."

Standards for the additional permitted use are:

- The solar array shall be confined to the capped landfill area.
- The existing vegetated buffer to the east, west and south shall be maintained.
- Any substations/inverters installed shall be setback a minimum of 100' from any property line.
- Fencing shall be installed around the entire array with locked entrance gates equipped with Knox Boxes.
- The system shall be installed in compliance with the NEC 2017 Articles 690 and 691.
- The total noise from the facility shall not exceed 50dBA from any property line.
- No trees may be removed for the installation unless specified in the submitted Planning Board site plan.
- The operator shall provide a phone number and identify a person responsible for the Township to contact with inquiries and complaints throughout the life of the project.

- The solar facility shall be accessible to typical emergency service apparatus, including fire equipment and ambulance. An emergency response plan should be developed and include:
  - Material safety data sheets of all components of the system that contain hazardous or flammable materials.
  - identification of potential emergencies,
  - a map/diagram of the system,
  - procedures to follow in the case of various emergencies.
- Any Planning Board approval shall be subject to review and written approval of the pertinent fire district captain.
- The landfill cap shall not be disturbed for the installation.
  - Any installation on the landfill cap shall be ground or above ground. No drilling, excavating or augering shall be allowed.
  - All equipment shall be mounted above ground, including wiring, conduits and panel bases.
  - A NJ certified structural engineer shall certify that the foundation and design of the solar panels racking and support is within accepted professional standards, given local soil and climate conditions.
- The project shall submit a stormwater runoff analysis and meet all pertinent standards for stormwater control.
- Maximum panel height shall be under 20 feet.
- A Decommissioning Plan (based on end of lease and/or abandonment to be defined as “the cessation of the current use of the land for 6 continuous months by the operator with no intention of resuming or transferring the operation of the facility to another who will continue the use”) shall be submitted to the Township Committee and to the Planning Board and shall include:
  - Provisions for the Township to notify the Operator of abandonment and allow 60 days for the resumption of energy generation to at least 75% of its capacities prior to declaring it abandoned.
  - Provisions for the removal of all components of the facility/system from the site and the full restoration of the site to its predevelopment condition insofar as is feasible; and the safe disposal of all components of the facility/system, including the recycling of all recoverable materials, consistent with prevailing best practices relating to the disposal and recycling of photovoltaic waste at the time of decommissioning.
  - Requirement for a demolition permit within 60 days of notice of abandonment by the Township. At the time of issuance of the demolition permit, the operator shall provide financial security in the form and amount acceptable to the Township Committee to secure the expense of complete dismantling and removing all equipment of the facility and the restoration of the land to its original condition
  - Measures to provide for the protection of public health and safety and for protection of the environment and natural resources during both the removal

and site restoration stages, as well as the schedule for the completion of all site restoration work in accordance with the decommissioning plan.

This Redevelopment Plan shall supersede the underlying zoning within the Project Area to the extent set forth above. Any issue of relevant land use and building requirements not specifically addressed in this Redevelopment Plan shall be subject to the Township's Land Development Ordinances and all other ordinances and regulations of the Township unless it contravenes this Redevelopment Plan.

## **VII. Housing and Relocation**

---

The Project Area has no residential units presently and the proposed redevelopment use as a solar facility does not include any residential component. Therefore, a relocation plan and provisions for affordable housing are not included in this Redevelopment Plan.

## **VIII. Property Acquisition**

---

The Project Area is a Non-Condemnation Redevelopment Area and, in addition, the entire Project Area is Township owned.

## **IX. Relationship of this Redevelopment Plan to Other Plans**

---

### **A. Relationship to Master Plans of Contiguous Municipalities**

Pittsgrove Township is contiguous to six municipalities. Franklin Township in Gloucester County lies approximately five miles from the Project Area toward the northeast. Vineland in Cumberland County is about four and one-half miles to the east. Adjacent Salem County municipalities are Upper Pittsgrove and Elmer, each of which is slightly about three miles from the Project Area.

The City of Vineland, Franklin Township, Elmer Borough and Upper Pittsgrove are sufficiently remote from the Project Area that its development as a solar facility will not have any significant impact on their development plans as supported in their Master Plans.

Upper Deerfield and Deerfield in Cumberland County are the two closest municipalities to the Project Area. Their borders with Pittsgrove lie slightly less than two miles from the Project Area. Both these Townships' Master Plans emphasize protecting the character of their rural environments with emphasis on environmental capacities and sensitivities. Their visions are consistent with the goals and objectives of this Redevelopment Plan. This implementation of this Plan will have no significant impact on their development plans.

### **B. Relationship to Salem County Planning**

Salem County planning is focused mainly on growth management and economic development in its western highway corridor. There, according to the 2016 "Comprehensive County Master



Plan,” most of the County’s industry and major employers lie “while agriculture is the mainstay of eastern and central sections.” Pittsgrove Township is in the far eastern agricultural part of the County.

In general, the County Farmland Preservation Plan is more relevant in terms of significant relationship with this Redevelopment Plan. The primary goals of the County Farmland Preservation Plan and the Pittsgrove Township Farmland Preservation Plan are to support the local agricultural economy and retain quality farmland for agricultural use. To this end, both plans propose strategies for preservation of farmland in general and, especially, in targeted areas. The Project Area for this Plan is not within any targeted farmland preservation area. And this Redevelopment Plan does not affect the goals and objectives of either Farmland Preservation Plan.

#### C. Relationship to State Development and Redevelopment Plan

The Project Area is entirely in Planning Area 4B, Rural Environmentally Sensitive. The Policy Objective for Land Use for PA4B is the same as for Planning Area 5, Environmentally Sensitive. It states:

‘Development and redevelopment should use creative land use and design techniques to ensure that it does not exceed the capacity of natural and infrastructure systems and protects areas where public investments in open space preservation have been made. Development and redevelopment in the Environs should maintain and enhance the natural resources and character of the area. ‘

This Redevelopment Plan has a significant and consistent relationship with the State Development and Redevelopment Plan.

### **X. Relationship of the Redevelopment Plan to Township Plans/Ordinances**

This Redevelopment Plan is essentially consistent with the Township’s Master Plan. The Master Plan’s objectives include the Land Use objective to “Direct new development and redevelopment to places in relation to their transportation and environmental capacities.” This Redevelopment Plan’s intention is to re-utilize so called ‘blighted’ land in a manner that minimizes the intrusion on the surrounding untouched areas of conservation zoning and accounts for the remediation in place.

### **XI. Proposed Redevelopment Actions**

#### A. Redevelopment Authority

The Township Committee shall act as the redevelopment entity pursuant to N.J.S.A. 40A:12A-4(c) for purposes of implementing and carrying out this Redevelopment Plan. In doing so, the Committee shall have the powers set forth in N.J.S.A. 40A:12A-15 and 40A:12A-22, and all other relevant statutes and regulations to perform all their duties and responsibilities in the execution and implementation of this Redevelopment Plan.

**B. Redevelopment Agreement**

Pursuant to N.J.S.A. 40A:12A-8, the Township may select one or more redevelopers for the implementation of one or more development projects within the Project Area as it deems necessary. Any development or construction within the Project Area shall be undertaken in accordance with a contractual Redevelopment Agreement between the Township and a municipally designated redeveloper. All Redevelopment Agreements shall be consistent with the requirements of N.J.S.A. 40A:12A-9 and this Redevelopment Plan.

**XII. Obligations of the Redeveloper**

All property within the Project Area must be developed in accordance with the requirements of this Redevelopment Plan Pittsgrove Township Ordinances and the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.) Any private Redeveloper(s) (an entity wishing to avail itself of the opportunities set forth in N.J.S.A. 40A:12A-1 et seq.) will be required to contact the Redevelopment Entity to present its proposal and shall enter into a contractual Redevelopment Agreement with the Redevelopment Entity prior to grant of final approvals by the Township Planning Board.

**XIII Deviations from Provisions of the Approved Redevelopment Plan**

Pursuant to N.J.S.A. 40A:12A-13, all applications for development under this Plan shall be submitted to the Township Planning Board for review and approval in accordance with the requirements for review and approval of subdivisions and site plans as set forth by ordinance adopted pursuant to the Municipal Land Use Law.

All applications requiring relief or deviations from this Plan or other development ordinances shall be governed by the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq. Except as provided below, nothing shall prevent the Planning Board from exercising its jurisdiction to grant variances from this Redevelopment Plan pursuant to the Municipal Land Use Law.

No deviations from the Redevelopment Plan shall be granted that result in any of the following effects or conditions:

- Allowing a use not specifically permitted within the Project Area;
- Exceeding the maximum structure height as measured in feet;
- Deviating from contractual obligations of a redeveloper to the Township acting as the Redevelopment Entity.

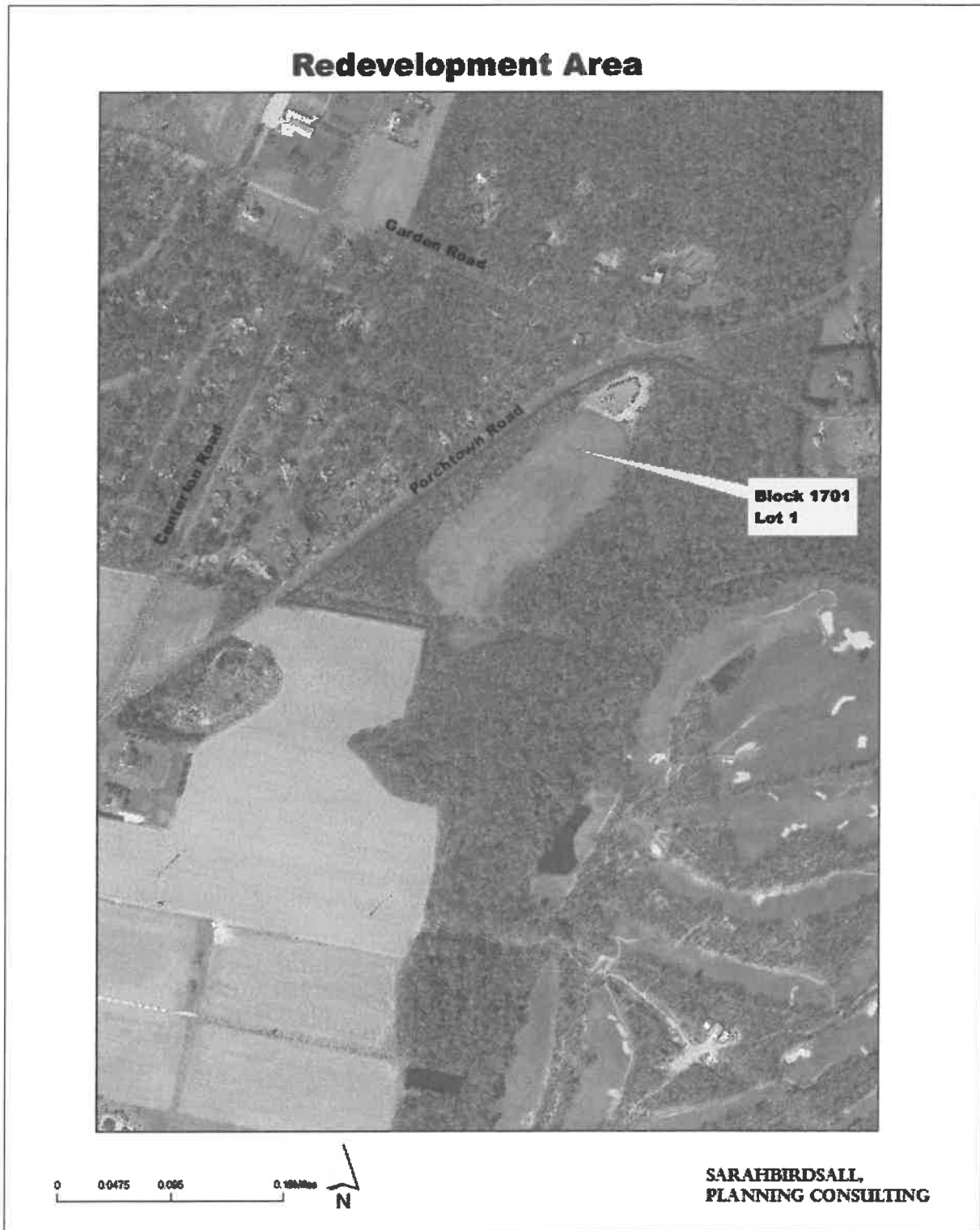
For Projects where a private Redeveloper wishes to avail itself of the opportunities set forth in N.J.S.A. 40A:12A-1 et seq., execution of a Redevelopment Agreement with Pittsgrove Township shall be a precondition to the grant of final approval of any land use application for a Redevelopment Project within the Project Area. For all such Redevelopment Projects, no permits for development shall be issued unless a copy of a fully executed Redevelopment Agreement with the Township has been submitted.

#### **XIV. Amendments to Approved Redevelopment Plan**

---

This Redevelopment Plan may be amended from time to time in accordance with the provisions of the LRHL, as may be amended.

**EXHIBIT A  
PROJECT AREA MAP**



# **Attachment 8**

## Landfill Closure Plan

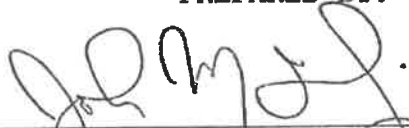
- Closure Plan
- DEP Permit Package

PITTSGROVE TOWNSHIP  
SANITARY LANDFILL  
PITTSGROVE, NEW JERSEY

FACILITY NUMBER 1710-A

CLOSURE AND POST-CLOSURE CARE PLAN

PREPARED BY:



---

JOHN M. FRALINGER  
NEW JERSEY LICENSE NO. 29350

ALBERT A. FRALINGER, JR., P.A.  
590 SHILOH PIKE  
BRIDGETON, NJ 08302

COMM. NO. 4706

NOVEMBER 1988  
REVISED JANUARY 1989

TABLE OF CONTENTS

PAGE NO.

Standard Application Form CP No. 1

A.	INTRODUCTION AND BACKGROUND.....	A-1
1.	Introduction.....	A-1
2.	Site Environmental Characteristics.....	A-2
B.	CLOSURE AND POST-CLOSURE CARE PLAN ELEMENTS.....	B-6
1.	Soil Erosion and Sediment Control Plan.....	B-6
2.	Final Cover.....	B-7
3.	Final Cover Vegetation.....	B-7
4.	Final Cover and Final Cover Vegetation Maintenance Program.....	B-8
5.	Side Slope Maintenance Program.....	B-10
6.	Run-on and Run-off Control Program.....	B-10
7.	Run-on and Run-off Control Maintenance Program.....	B-10
8.	Groundwater Monitoring Wells.....	B-11
9.	Groundwater Monitoring Well Maintenance Program.....	B-11
10.	Groundwater Monitoring Program.....	B-12
11.	Methane Gas Venting System.....	B-12
12.	Leachate Collection/Control System.....	B-13
13.	Leachate Control System Maintenance.....	B-13
14.	Facility Access Control System.....	B-13
15.	Facility Access Control System Maintenance.....	B-14
16.	Conformity of Site to Surrounding Areas.....	B-14
17.	Conformity of Site to Surrounding Areas Maintenance.....	B-14
C.	SCHEDULE OF IMPLEMENTATION.....	C-15
D.	CLOSURE & POST-CLOSURE FINANCIAL PLAN.....	D-16

APPENDICES

- Appendix I - Soil Erosion and Sediment Control Plan
- Appendix II - Accountant's Report
- Appendix III - Final Closure Grading Plan for Pittsgrove  
Township Landfill

## A. INTRODUCTION AND BACKGROUND

### 1. INTRODUCTION

This report has been prepared to satisfy regulations governing sanitary landfill closure and post-closure requirements. These regulations, which became effective June 6, 1983, represent revisions to Sections 1.4, 2.9 and 2.13 of Chapter 26 of Title 7 of the New Jersey Administrative Code. These regulations require that sanitary landfills set aside funds and meet technical standards to insure that closure and post-closure care of such facilities is accomplished in an environmentally-sound manner. The regulations require that a Care Plan, including a Soil Erosion and Sediment Control Plan, and Financial Plan, be prepared for the closure and post-closure period. Specific Closure and Post-Closure Care Plan elements addressed herein follow the outline of NJAC 7:26-2.9(e).

The Township of Pittsgrove has been conducting sanitary landfill operations at the Pittsgrove Township Landfill for over 23 years. The project site consists of approximately 35.6 acres with the entire North side bound by Centerton-Porchtown Road, the East side by Garden Road and the remainder of the site by private properties.



The Pittsgrove Township Sanitary Landfill is currently closed, but prior to closure received municipal solid wastes (MSW) from the Township of Pittsgrove. Under Facility Registration Number 1710-A, the landfill was permitted to accept the following Waste Types:

<u>I.D.</u>	<u>WASTE</u>
10	Municipal (Household, Commercial & Industrial)
13	Bulky Waste
23	Vegetative Waste

Prior to closing, landfilling operations were normally conducted on Mondays, Fridays and Saturdays.

When the Salem County Regional Landfill became operational, wastes coming to the Pittsgrove Township Landfill were redirected to the new facility pursuant to NJAC 7:26-6.5(r)14 and the Salem County Solid Waste Management Plan as amended.

## 2. SITE ENVIRONMENTAL CHARACTERISTICS

The Pittsgrove Township Sanitary Landfill is located in the Township of Pittsgrove, Salem County, New Jersey. The project area is bounded by private properties on the South and West, Center-ton-Porchtown Road North and Garden Road to the East. Figure 1, depicts the location of the facility and immediate vicinity.

### Site Geology

Geologically, the landfill is located in the Cohansey Formation which is characterized by mild slopes and shallow relief. The Cohansey Sand Formation is comprised of unconsolidated deposits of sands, gravel, silt and some clay. The Cohansey Sand Formation is of the late Tertiary Age.

Figure 2 illustrates the soils in the project area. Soils on site are mapped as SrA-Sassafras sandy loam, 0-2% slopes, Ps-Pocomoke sandy loam, AlA-Aura loam, 0-2% slopes, Fp-Fallsington-Pocomoke-Berryland Complex by the Salem County Soil Survey. The actual existing soils are composed entirely of made-land brought in by trucks from sand and gravel borrow pits. The slopes on-site range from zero to 33 percent.

### Hydrogeologic Features

Surface Water Hydrology - The nearest located surface waters are those of the Rosey Run, to the South of the site.

Groundwater Hydrology - Four (4) groundwater monitoring wells have been installed outside of the fill area. Groundwater depth ranged from 4-12 feet below the surrounding grade.

The groundwater quality of the Cohansey-Kirkwood aquifer is characterized by low dissolved solids, low hardness and low pH values. Salt water intrusion is not a problem in this near-surface aquifer.

FIGURE 1  
U.S. GEOLOGICAL SURVEY MAP  
ELMER QUADRANGLE  
Scale: 1 inch = 2000 feet

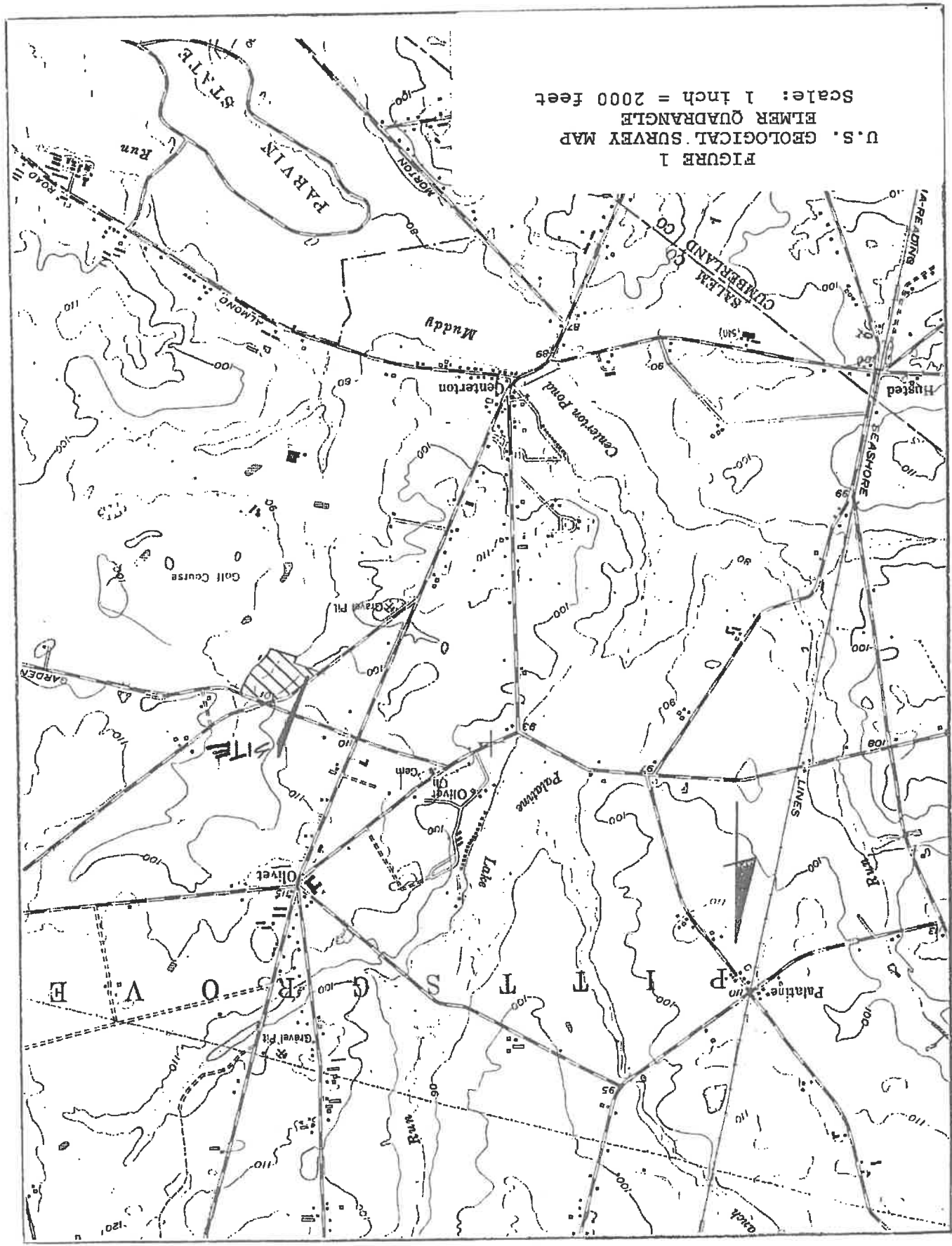




FIGURE 2  
 SOIL SURVEY MAP OF SALEM COUNTY  
 PITTSGROVE TWP. SANITARY LANDFILL  
 Scale 1 inch = 1320 feet

Groundwater monitoring wells located on the landfill borders provide the samples that are analyzed quarterly and sent directly to the NJDEP.

#### Climate

Generally, the climate of Pittsgrove Township is characterized by a humid temperature climate moderated by the Delaware Bay and the Atlantic Ocean. The average daily minimum and maximum temperatures are 44 degrees and 65 degrees Fahrenheit, respectively. Annual precipitation ranges from 40 to 44 inches/year. Prevailing winds for the Pittsgrove Township area are from the northwest during the winter and from the southwest during the remainder of the year.

#### Terrestrial Wildlife and Vegetation

The Pittsgrove Township Sanitary Landfill is virtually devoid of existing vegetative cover except for very sparse grass cover. Vegetation along the perimeter of the project site consists principally of deciduous trees.

Terrestrial wildlife in the project area is confined to the perimeters of the site and include cottontail rabbits, eastern grey squirrels, woodchucks, raccoons, moles and mice. Bird species observed on-site include bluejays, robins, sparrows and especially seagulls.

Present Zoning Ordinance

According to the Township of Pittsgrove Zoning Map, the Pittsgrove Township Sanitary Landfill is located within the Low Density Residential Zone, LR-2. Potential for residential development near the landfill is probable.

## B. CLOSURE AND POST-CLOSURE CARE PLAN ELEMENTS

The following section discusses measures which have been or are proposed to be implemented as part of the Closure and Post-Closure Care Plan. The measures include those required by the Approved Registration and those included in NJAC 7:26-2.9. This section follows the outline of specific requirements contained in NJAC 7:26-2.9(e)2.

### 1. SOIL EROSION AND SEDIMENT CONTROL PLAN

The Soil Erosion and Sediment Control Plan for landfill closure will be submitted to the Salem County Soil Conservation District for review. Plan certification with minimal modification is anticipated. This Closure Plan will be modified accordingly and submitted to the NJDEP to the extent necessary to reflect SCD-requested modifications. The Soil Erosion and Sediment Control Plan is provided in Appendix I and the attached drawings.

The landfill owner/operator will be responsible for the construction, implementation and maintenance of all soil erosion and sediment control measures in accordance with the Certified Plan. Damage to surface waters resulting from erosion and sedimentation will be minimized by stabilizing disturbed areas. Site activities will be planned to minimize the area and duration of soil disruption.

2. FINAL COVER

*permeability tests (well) per acre*

The capping cross section for the landfill area is proposed as follows:

Final Cover

12" Clay layer -  $10^{-7}$  cm./sec.

6" Drainage layer

6" Topsoil (Earth Life)

Fertilize and seed.

*cholly below the average frost depth*

*what is earth life?*

3. FINAL COVER VEGETATION

The proposed Soil Erosion and Sediment Control Plan describes the vegetative cover to be used on completed landfill areas and other areas disturbed by construction activities.

The specifications for final cover vegetation were based on recommendations in the Standards for Soil Erosion and Sediment Control in New Jersey for the soil/site conditions of the area.

The seed mixture for final cover vegetation of all landfill areas except drainage swales will consist of 30 lbs. Kentucky -31 tall fescue, 30 lbs. red or spreading fescue and 30 lbs. Kentucky bluegrass per acre. The seed mixture for stabilization of drainage swales will consist of 100 lb. Reed canary grass, 100 lb. Kentucky -31 tall fescue and 50 lb. redtop per acre.



Details of measures to be taken for establishment of final cover vegetation, including application rates for lime, fertilizer and mulch, are contained in the proposed Soil Erosion and Sediment Control Plan.

4. FINAL COVER AND FINAL COVER VEGETATION MAINTENANCE PROGRAM

Maintenance of the final cover and final cover vegetation will be conducted by the Township of Pittsgrove for the 30-year post-closure care period.

This program will include replenishment of final cover in areas where subsidence has occurred and ponded water may accumulate or where erosion has created channels that may detract from the integrity of the final cover. Maintenance of the final cover will be performed by Township of Pittsgrove municipal employees.

To alleviate water ponding from differential subsidence, the affected area will be regraded to allow proper drainage, including placement of additional clay and/or soil material, if necessary. Following regrading, the affected area will be seeded with permanent vegetative cover as described herein.

Lime and fertilizer will be added to the six (6) inches of cover soil to enhance fertility at application rates in accordance with N.J. Standards for Soil Erosion and Sediment Control. Appropriate seed mixtures and application

rates will be selected in order to establish stabilized ground cover composed of perennial vegetation. For specific final cover vegetation information, refer to Section B. During the post-closure period, vegetation will be maintained and re-established as required.

Gully erosion may occur on landfill side slopes. To correct this situation, any clay material which has been eroded will be replaced as needed. The soil layers of the final cover will be replaced and revegetated. As a measure to prevent regultying from occurring, an erosion control blanket will be installed overtop the reseeded area. The erosion control blanket will consist of a biodegradable product, reinforced with a plastic mesh. Erosion control blankets will be installed parallel to the slope and anchored with wire staples at four (4) foot intervals. The edge of the blankets will extend beyond the limits of gullying.

Material for the maintenance of the final cover (excepting borrow to be supplied by the Township) will be acquired as necessary. This is reflected in the provisions of the Financial Plan. Estimated cover material requirements are as follows:

Years After Closure

Year 1	300	cubic yards/Year
2	600	cubic yards/Year
3	900	cubic yards/Year
4 - 28	750	cubic yards/Year

Final cover vegetation will also be maintained by municipal employees. The final cover vegetation will be inspected on a semiannual basis, generally corresponding to the prime planting seasons, for the 30-year closure period. Revegetation will follow the specifications outlined in the previous section.

*more frequent*

5. SIDE SLOPE MAINTENANCE PROGRAM

Generally, side slopes of the Pittsgrove landfill will be graded to a maximum 3:1 (horizontal to vertical) slope for the purpose of maintaining slope stability and controlling erosion. Cover material and vegetation on these slopes will be maintained as described in 4. above.

6. RUN-ON AND RUN-OFF CONTROL PROGRAM

The landfill is elevated above the surrounding grade, thus eliminating run-on to the landfill.

Stormwater run-off from the site will be mitigated by proper grading and the proper utilization of permanent vegetation. Grade and surface vegetation improvements will result in calculated post-closure run-off rates less than pre-closure run-off rates.

7. RUN-ON AND RUN-OFF CONTROL MAINTENANCE PROGRAM

The Township of Pittsgrove will be responsible for maintenance of all run-on and run-off control measures as described in 6. above. Maintenance of run-on and run-off control measures will include maintaining grade of final

cover and vegetation (4.), and maintaining side slopes (5.). Maintenance procedures are to continue for the 30-year post-closure period.

#### 8. GROUNDWATER MONITORING WELLS

Groundwater monitoring will be carried out in accordance with New Jersey Pollutant Discharge Elimination Systems (NJPDES; NJAC 7:14A-1. et. seq.) requirements and the Rules of the Division of Waste Management (NJAC 7:26-2.5(v)) for the remainder of the active life of the facility, as well as the post-closure care period.

There are currently four (4) groundwater monitoring wells at the Pittsgrove Landfill. These groundwater monitoring wells have been installed in accordance with the current NJPDES Permit No. NJ0054402. The location of each well is shown on the drawings. All wells have been installed by a licensed New Jersey well driller, pursuant to NJSA 58:4A-6. Permits were obtained from the Water Allocation Office prior to installation of the wells.

#### 9. GROUNDWATER MONITORING WELL MAINTENANCE PROGRAM

Each groundwater monitoring well will be inspected on a quarterly basis for structural integrity and/or damage. If any damage has occurred, the Administrator of the Water Quality Management Element will be notified as well as the Division of Waste Management. Damaged wells will be repaired

or replaced in accordance with the conditions of the NJPDES Permit and the rules of the DWM.

10. GROUNDWATER MONITORING PROGRAM

As discussed in 8. above, the groundwater monitoring program will be conducted in accordance with NJPDES requirements and Rules of the Division of Waste Management. The program will include an annual analysis of each monitoring well for the expanded list of parameters contained in NJAC 14A-120.22(d) and a quarterly analysis from each well for the list of indicator parameters shown also in NJAC 14A-120.12(d).

11. METHANE GAS VENTING SYSTEM

*quarterly first two years*

A semiannual probe testing program will be implemented along the entire perimeter on a 200 foot interval to detect any lateral movement of explosive gases from the landfill site.

Methane migration mitigation measures would be implemented in three (3) phases, if warranted by evidence of subsurface methane gas migration:

1. Increased Monitoring
2. Perform Methane Gas Study
3. Conversion of Passive Vents to Active Evacuation System, if results of study warrant.

If and when these measures become necessary, they will be considered for installation.

*Detail of vent  
through cap  
unclear*

12. LEACHATE COLLECTION/CONTROL SYSTEM

Leachate control at the facility will employ a clay cap cover with permeability of  $1 \times 10^{-7}$  cm./sec. installed atop all landfill areas. The generation of leachate will be minimized by limiting the amount of infiltration from precipitation entering the landfill surface.

Leachate breakout from side slopes will be contained and mitigated by side slope cover maintenance and repair at that specific area. If and when there is evidence that hazardous leachate from the facility has contaminated the groundwater monitoring wells and/or substantive side seep leachate has occurred, then a leachate control system will be considered for installation.

13. LEACHATE CONTROL SYSTEM MAINTENANCE

If and when a leachate control system is installed, appropriate operation and maintenance procedures will be outlined.

14. FACILITY ACCESS CONTROL SYSTEM

Entry to the site after closure of the facility will be prohibited by a locked gate at the main entrance on Centerton-Porchtown Road and a smaller gate has been installed on Centerton-Porchtown Road to gain access to the drainage easement. Furthermore, a 6 foot high chain link fence with barbed wire has already been erected around the entire perimeter.

15. FACILITY ACCESS CONTROL SYSTEM MAINTENANCE

Periodic inspection of the Centerton-Porchtown Road entrance and chain link fence will be performed. In the event that the gate or fencing is damaged, said structure will be immediately repaired as necessary.

16. CONFORMITY OF SITE TO THE SURROUNDING AREAS

Final maximum elevation of the landfill will be 115 feet above sea level or at most 14 feet above the surrounding grade. In the neighborhood, however, the landfill is screened from residential areas by the presence of woods which surround the landfill with well-established vegetation on four (4) sides. In all areas surrounding the landfill areas, these trees are on the order of 40-50 feet high. Permanent vegetation will be promptly established and maintained over the entire site to improve site aesthetics and promote soil stabilization. The vegetated landfill slopes will not be incongruous with the surrounding wooded areas.

17. CONFORMITY OF SITE TO SURROUNDING AREAS MAINTENANCE

Maintenance of the permanent vegetative cover as described in 4. should be sufficient to preserve the ambience of the area.

**CLOSURE AND POST-CLOSURE  
CARE PLAN ELEMENTS**

**C. SCHEDULE OF IMPLEMENTATION \***

	+2 YR.	+10 YR.	+15 YR.	+20 YR.	+25 YR.	+30 YR.
A. SOIL EROSION AND SEDIMENT CONTROL PLAN						
B. FINAL COVER						
C. FINAL COVER VEGETATION						
D. FINAL COVER VEGETATION MAINTENANCE						
E. SIDE SLOPE MAINTENANCE						
F. RUN-ON AND RUN-OFF CONTROL						
G. RUN-ON AND RUN-OFF CONTROL MAINTENANCE						
H. GROUNDWATER MONITORING WELLS	-EXISTING-					
I. GROUNDWATER MONITORING WELL MAINTENANCE						
J. GROUNDWATER MONITORING						
K. METHANE GAS MONITORING						
L. METHANE GAS VENTING						
M. METHANE GAS VENTING SYSTEM MAINTENANCE						
N. LEACHATE CONTROL SYSTEM						
O. LEACHATE CONTROL SYSTEM OPERATION AND MAINTENANCE						
P. FACILITY ACCESS CONTROL	-EXISTING-					
Q. FACILITY ACCESS CONTROL MAINTENANCE						
R. CONFORM SITE TO SURROUNDING AREA						
S. CONFORM SITE TO SURROUNDING AREA MAINTENANCE						

**PITTSGROVE SANITARY LANDFILL - IMPLEMENTATION SCHEDULE**

\* ASSUMES TWO YEAR PERIOD TO INSTALL FINAL CAP



D. CLOSURE AND POST-CLOSURE FINANCIAL PLAN

The Closure and Post-Closure Financial plan is developed so that sufficient funds can be provided and are available for the proper closure and post-closure operation and maintenance of the Pittsgrove Township Sanitary Landfill. Requirements relative to closure and post-closure in the engineering design are used to develop these cost estimates, as are the requirements set forth in the preceding report. In addition, the Post Closure Financial Plan includes costs associated with the maintenance of these items.

The cost estimates presented in Tables 1 and 2 are generally based on 1988 local area construction cost data. Costs were also taken from similar projects.

The remainder of the Financial Plan was prepared by the Township of Pittsgrove and their accountants. They have prepared this Plan based on amounts presented in Table 1 and 2, with adjustments made according to an inflation factor calculated as specified in NJAC 7:26-2.9(f)4. This report is included as Appendix II.

Intervals at which each closure provision and post-closure provision will be implemented and the anticipated schedule of withdrawal of funds are projected in Schedule No. 1 and 1a of the Accounts Report, Appendix II.

Finally, the Landfill Closure Escrow Account, established for Facility No. 1710-A had a balance of \$56,224.52 as of September 30, 1988.

PITTSBORO TOWNSHIP SANITARY LANDFILL FACILITY  
ESTIMATE OF PROBABLE CLOSURE COST

TABLE 1

ITEM	QUANTITY	UNIT COST	TOTAL COST
Soil Erosion and Sediment Control Plan-----	L.S.-----		\$ 10,000
Base to Final Cover (suitable material)---	10,000 CY-----	\$10.00/CY-----	100,000
Final Cover			
12" Clay			
1 x 10 <sup>-7</sup> cm./sec.	18,800 CY-----	\$25.00/CY-----	470,000
6" Drainage Layer	9,400 CY-----	15.00/CY-----	141,000
6" Topsoil (Earth Life)	9,400 CY-----	8.00/CY-----	75,200
Fertilize and Seed-----	56,400 SY-----	0.50/SY-----	28,200
Gas Vents -----	18 UNITS----	1,500/UNIT----	27,000
			<u>\$851,400</u>
	Plus 10% Contingency-----		85,140
	Engineering Design-----		30,000
	Consultant Inspection		
	(Estimated at 6%)-----		51,100
	Total Estimate-----		<u>\$1,017,640</u>

PITTSBORO SANITARY LANDFILL FACILITY

POST CLOSURE COST ESTIMATE

TABLE 2

<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL ANNUAL COST</u>
Soil Erosion & Sediment Control, Runon, Runoff Control Maintenance	5 Days	\$700.00	\$ 3,500.00
Vegetation Maintenance, Final Cover Maintenance, Side Slope Maintenance			
<u>Years After Closure</u>			
Year 1	300 CY	4.00	1,200.00
2	600 CY	4.00	2,400.00
3	900 CY	4.00	3,600.00
4 - 28	750 CY	4.00	3,000.00
Monitoring Well Maintenance		L.S.	1,500.00
Methane Vent Well Maintenance		L.S.	1,500.00
Methane Monitoring		L.S.	4,000.00
Groundwater Monitoring		L.S.	2,512.00
Facility Access Control		L.S.	500.00
NJPDES Permit Fee			
1988-1989			8,178.99

## **Attachment 9**

### Proof of Project Maturity

- HESP Proposal
- Also see the Lease agreement Attachment 2 and DEP permit package Attachment 3

## **Attachment 12**

### Evidence That the Proposed Project Is Being Designed For Land Enhancement

- HESP Proposal O&M section



**Response to Request for Proposal  
Solar PV Energy Proposal**

Pittsgrove Township

989 Centerdon Road  
Pittsgrove Township, NJ 08318

**HESP Solar LLC**

400 Rella Boulevard, Suite 160  
Suffern, NY 10901

Susan Brodie – EVP, Business Development  
845-405-0600 x223  
sbrodie@hespsolar.com  
[www.hespsolar.com](http://www.hespsolar.com)

August 9, 2019

## TABLE OF CONTENTS

<b>Cover Letter</b> .....	1
<b>SECTION I – RESPONDENT INFORMATION/COVER LETTER</b>	
Respondent Information/Cover Letter Form .....	2-4
<b>SECTION II – GENERAL INFORMATION</b>	
Project Roles .....	6
Our Team .....	7-10
Experience and References .....	11-15
Current Projects .....	16-19
Metrix Experience .....	20-22
Photos .....	23-26
<b>SECTION III – RESPONDENT'S FINANCIAL INFORMATION</b>	
Financials .....	28-47
<b>SECTION IV – TECHNICAL AND PROJECT-RELATED INFORMATION</b>	
Technical Proposal and Project Overview .....	49-50
Construction Schedule .....	51
Design Approach and Component Section .....	52
Design Summary Table .....	53
Monitoring, Training, and Maintenance .....	54-60
Preliminary Array Layout Designs and Line Diagram .....	61-62
PV Watts Energy Yield Forecast .....	63
Component Specification Sheets .....	64-70
<b>SECTION V – PPA PRICE QUOTATIONS SHEETS</b>	
PPA Price Quotation Proposal Option 1 .....	72-80
PPA Price Quotation Proposal Option 2 .....	81-89
<b>SECTION VI – ALL OTHER APPENDIX D PROPOSAL FORMS</b>	
Appendix D-3: Consent of Surety Form .....	91-92
Appendix D-6: Proposal Bond .....	93-98
Appendix D-7: Stockholder Disclosure Certification .....	99
Appendix D-8: Non-Collusion Affidavit .....	100
Appendix D-9: Consent to Investigation .....	101
Appendix D-10: Statement of Respondent's Qualifications .....	102-103
Appendix D-11: Acknowledgement of Receipt of Addenda .....	104



Appendix D-12: Affirmative Action Compliance Notice/EEO Mandatory Language..... 105-109  
Appendix D-13: Disclosure of Investment Activities in Iran ..... 110-111  
Appendix D-14: Proposal Checklist .....112  
Appendix D-15: Political Contribution C.271..... 113-114

**SECTION VII – OTHER SUBMISSION REQUIREMENTS**

Business Registration Certificate ..... 116-117  
Public Works Contractor Registration Act..... 118-119  
Certificate of Authority .....120  
Metrix Electrical License .....121  
Metrix Notice of Classification.....122  
Total Amount of Uncompleted Contracts.....124





8/9/2019

Pittsgrove Township  
989 Centerdon Road  
Pittsgrove Township, NJ 08318

Please find attached HESP Solar's response to the Pittsgrove Township's request for proposal for the potential development of Solar Photovoltaic Systems.

HESP Solar has assembled an experienced team of solar industry experts in project development, project management, finance and legal, design, engineering and construction.

HESP Solar will provide various mechanisms to mitigate project risk for the Pittsgrove Township including insurance, and system operations and maintenance.

I trust that our response meets your requirements and we look forward to the opportunity to work with you on this very exciting project.

Please do not hesitate to contact me for any further information.

A handwritten signature in black ink, appearing to read "Susan Brodie", written in a cursive style.

Susan Brodie  
EVP, Business Development  
845-405-0600 x223  
sbrodie@hespsolar.com



## **Section I**

### **Respondent Information/ Cover Letter**



## APPENDIX D-2

### RESPONDENT INFORMATION/COVER LETTER FORM

Date: 8/6/19

Respondent: HESP Solar LLC

Address: 400 Rella Blvd, Suite 160  
Suffern, NY 10901

Telephone: 845-405-0600 Ext. 223

Contact Person: Susan Brodie, EVP  
sbrodie@hespsolar.com

Type of Business Entity (Corporation, Partnership, Joint Venture, Other (Attach Agreement(s) governing or creating/organizing business entity))<sup>2</sup>: Limited Liability Company

#### A. GENERAL:

In submitting this Proposal, the Respondent warrants and represents that (capitalized words and terms shall have the meanings ascribed to such terms in the Request for Proposals):

1. (a) The Respondent has reviewed and understands the requirements set forth within the Proposal Specifications and, if selected, will carry out all of the provisions set forth within same.

(b) The Respondent has prepared its Proposal using a complete set of Proposal Documents, including all addenda to the Request for Proposals issued by Pittsgrove Township ("Township") prior to the date established for submission of all Proposals.

---

<sup>2</sup>If a joint venture, partnership or other form of organization is submitting this Proposal, all such firms shall be listed and each such participant shall execute this Respondent Information/Cover Letter.

(c) All information submitted in response to the Request for Proposals is accurate and factual and all representations made regarding the Respondent's willingness and ability to provide the required Services are true and correct.

(d) The name, title and contact information of the individuals who will be responding to questions on behalf of the Respondent are:

Susan Brodie, EVP  
845-405-0600 Ext. 223  
sbrodie@hespsolar.com

(e) Respondent has reviewed and accepts the provisions of the RFP. Respondent is not relying on the Township nor any of their respective advisors regarding any federal or state tax matters set forth in the RFP, and Respondent shall consult, or has consulted, with its own tax advisors regarding such matters.

(f) Respondent has submitted with its Proposal a Consent of Surety for Construction Performance Security in the form included in this RFP as **Appendix D-3**. Respondent also agrees to provide the Construction Performance Bond in a form substantially similar to **Appendix D-4**.

If applicable: If the Proposal is being submitted by a joint venture, special purpose entity or similar business entity of more than one firm and/or organization, list the members, firms or organizations and designate a sole contact person for the joint venture, special purpose entity or similar business entity below:

2. Except to the extent expressly disclosed in the Proposal, there has been no material adverse changes in the financial status of the Respondent since the date of the most recent financial data (including Forms 10-K and 10-Q) submitted as part of the response to this Proposal.

3. There is no action, suit or proceeding, at law or in equity, before or by any court or similar Governmental Body against the Respondent wherein any unfavorable decision, ruling or finding would adversely affect the ability of the Respondent to carry out the duties and obligations imposed upon it under the Power Purchase Agreement.

4. The Respondent is duly organized and validly existing in good standing and is duly qualified to transact business in each and every jurisdiction where such qualification is required to enable the Respondent to perform its obligations under the Power Purchase Agreement. Execution of the Power Purchase Agreement and the performance of all obligations thereunder, have been authorized by all required action of the Respondent, including any action required by any charter, by-laws, and/or partnership agreement, as the case may be, and any applicable laws which regulate the conduct of the Respondent's affairs. The execution of the Power Purchase Agreement and the performance of all obligations set forth in the RFP, including in such Power Purchase Agreement, does not conflict with and do not constitute a breach of or an event of default under any charter, by-laws and/or partnership agreement, as the case may be, of the Respondent or any agreement, indenture, mortgage, contract or instrument to which the Respondent is a party or by which it is bound. Upon execution hereof and upon satisfaction of the conditions contained in the RFP and in such Power Purchase Agreement, the Power Purchase Agreement and the requirements of the RFP will constitute a valid, legally binding obligation of the Respondent, enforceable in accordance with their terms, except to the extent that the enforcement thereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other laws relating to or limiting creditors' rights generally and the application of the general principles of equity.

5. There is no action, suit or proceeding, at law or in equity, before or by any court or similar Governmental Body against the Respondent wherein an unfavorable decision, ruling or finding would materially adversely affect the performance by the Respondent of its obligations under the RFP and/or under the Power Purchase Agreements

or the other transactions contemplated thereby, or which, in any way, would materially adversely affect the validity or enforceability of the Power Purchase Agreements or any other agreement or instrument entered into by Respondent in connection with the transactions contemplated by the RFP and/or the Power Purchase Agreement.

6. The Respondent has in its possession valid approvals, registrations or permits (or Respondent will have such approvals, registrations or permits prior to or simultaneously with the execution of the Power Purchase Agreements) that, pursuant to Applicable Laws, permit the Respondent to provide the Services as required by the RFP and/or under and in accordance with the terms of the Power Purchase Agreements for the term of the Power Purchase Agreements.

7. The Proposal is submitted pursuant to due authorization by, and is in all respects binding upon, the Respondent. The Proposal is authorized to be prepared and submitted under and in accordance with the provisions of the documents and/or agreements which govern the Respondent's business activities.

8. No corporation, partnership, individual or association, officer, director, employee, manager, parent, subsidiary, affiliate or principal shareholder of the Respondent has been adjudicated to be in violation of any state or federal environmental law, or charged with or convicted of bribery, fraud, collusion, or any violation of any state or federal anti-trust or similar statute within the preceding five (5) years, or previously adjudged in contempt of any court order enforcing such laws.

9. The facility(ies), materials and equipment to be utilized by the Respondent in the performance of the Services meets or exceeds, in all material respects, the Technical Specifications as set forth in the RFP.

[NAME OF RESPONDENT] HESP Solar LLC

By: 

Name: Susan Brodie

Title: EVP



## **Section II**

### **General Information**



## Project Roles

HESP Solar is a solar project development company with more than 8 years of experience developing and operating solar projects in the Northeast US. HESP Solar will be the project lead; will work to secure all permits necessary for construction; will coordinate directly with design engineers to produce design plans for the project; and will procure all equipment for the project. HESP Construction is our construction arm, handling all construction responsibilities for projects under development. HESP Construction has over 20MW of experience building and maintaining commercial solar projects over the past 3 years. Here is our proposed breakdown of the project roles:

- **Project Development:**  
HESP Solar will coordinate and finance the project. The team will work with the engineers and procure all equipment. HESP Solar will be your partner from Request for Proposal until the end of the contracted term.
- **Legal Consultation:**  
HESP Solar has engaged an experienced group of attorneys to work on project documents and to ensure that all rules and regulations agreed upon with the client are adhered to and implemented accordingly.
- **Financing:**  
HESP Solar has tax equity partners, access to construction and permanent debt, as well as its own Balance Sheet to invest in this and other solar projects. We have never included a financing contingency in our contracts, and we have never delayed a project due to a financing issue.
- **Design and Engineering:**  
KMB Design Group will serve as the solar and electrical engineer of record. KMB will be responsible for all electrical designs as well as roof structural evaluation and civil engineering. Racking structural services will be provided by the racking provider(s).
- **Construction Management:**  
HESP Construction will have a dedicated project manager assigned to the project to oversee all logistical coordination and construction for the project. The project manager will be the contact point person for the project and will be present at the site every day.
- **Maintenance:**  
HESP Solar will operate and vigorously maintain the completed PV sites using semi-annual scheduled site visits and constant remote data monitoring to maximize system performance.



## Our Team

Our team is comprised of experienced professionals who are well respected in the renewable energy industry. These subject matter experts are uniquely qualified and capable in their areas of work to successfully complete all aspects of the project.

Specifically, this includes:

### **Abe Grohman, Founder and Chief Executive Officer, HESP Solar**

Abe Grohman is the founder and Chief Executive Officer of HESP Solar, a solar development company specializing in municipal and commercial distributed generation PV projects along the East Coast. Prior to starting HESP, Abe was SVP in charge of New Ventures at Just Energy Group Inc., a public company servicing approximately 2 million customers in the deregulated retail energy business. Abe was also CEO of Hudson Energy Solar Corp., former subsidiary of Just Energy, which finances and operates solar energy installations in the United States and Canada. Prior to joining Just Energy, Abe was Founder and President of Hudson Energy Services, LLC, an energy supply company servicing about 300,000 customers in New York, New Jersey, Texas and Illinois with natural gas and electricity. The company was started at the end of 2002 and was sold to Just Energy in May of 2010. Before Hudson Energy, Abe was the Chief Information Officer of Viatel Communications, an international telecommunication and fiber company. Prior to that that, Abe was the Chief Information Officer of Destia Communications, a privately held international telecommunications company that went public in 1999 and was bought out by Viatel Communications. Before that, Abe was the Director of Technology at LDM Systems in New City, New York. Abe has an MBA from New York University with a major in Finance and a BS in Computer Science and Math from Brooklyn College.

### **Susan Brodie, EVP of Business Development, HESP Solar**

Susan Brodie is the EVP of Business Development for HESP Solar, a solar development company specializing in municipal and commercial distributed generation PV projects along the East Coast. In her role managing the company's growth, Susan has developed numerous strategic alliances in the industry and is directly responsible for the rapid expansion of HESP's business in both emerging and established state and local markets, resulting in a development pipeline of over 30 MW in the past 2 years. Additionally, Susan provides construction oversight as well as coordination of finance for HESP's projects. She maintains a deep understanding of solar technologies and current market drivers, and she has garnered valuable project finance and tax equity knowledge and experience. Prior to the founding of HESP, Susan was the Director of Solar Operations at Hudson Energy Solar Corp., where she successfully developed more than 30 MW of solar installations on residential, commercial and municipal properties, with a combined value of more than \$120,000,000. Previously, Susan taught High School Mathematics in





Rockland County, New York for over twenty years. Susan currently sits on the board of the Mid-Atlantic Solar Energy Industries Association, MSEIA, in the position of Vice President for the state of New Jersey. She uses her post to further the goals of solar developers throughout the state, pushing for improved coordination and more interaction between the solar industry and state regulators and legislators. Susan holds a BA/BS from Brooklyn College, with majors in Accounting and Mathematics.

**Sean Brodie, *Development Manager, HESP Solar***

Sean Brodie develops beneficial relationships with industry participants to create greater efficiencies within HESP's vertically integrated platform. Recently, Sean has taken control of the municipal project pipeline at HESP Solar which now consists of close to 50MW of solar installations across more than one hundred locations. Previously, Sean worked as an analyst for Integra Realty Resources, a national commercial real estate firm, and has parlayed many of those relationships into valuable commercial channels for HESP Solar. Sean graduated from Loyola University Maryland with an MBA and a concentration in finance.

**Daniel Grohman, *Technical Manager, HESP Solar***

Daniel Grohman is responsible for asset management and integration for HESP Solar. This includes design technical advisory for projects in development as well as operations and maintenance, performance monitoring, and customer liaising for operational projects. Previously Daniel managed operations for over 30 MW of solar facilities for Hudson Energy Solar.

## SKILLS

- Sixteen years of electrical experience
- Ability to install, adjust, modify, calibrate and test operation of various power systems in accordance with NEC (National Electrical Code) and state regulated codes.
- Excellent mathematical skills; ability to determine specific components and requirements for installation
- Expertise in electrical difficulties and troubleshooting.
- Proficiency in multi meter testing
- In depth knowledge of facility systems. This includes electrical services, sub electrical stations, lighting and HVAC systems, solar array systems, fire alarm systems, card access systems, telephone and data systems etc.
- Ability to work from verbal or written instructions, diagrams, blueprints, and technical manuals.
- Extensive experience in high and low voltage operations
- Able to work independently and with minimum supervision.
- Knowledge of Occupation Safety and Hazard Policies and Precautions.

## WORK EXPERIENCE

**Metrix Electric, Nutley NJ**  
**Owner**

**2013**

**Amberjack Solar Energy, Oakland NJ**  
**Project Manager**

**2011 - 2013**

- Demonstrated ability to creatively troubleshoot, solve problems, and make informed decisions while successfully guiding others through constant change.
- Demonstrated excellent communication skills with staff, managers, and clients.
- Experienced in bidding projects by planning job costing and subcontractor pricing.
- Experienced in facilitating multiple projects simultaneously while inspiring highly functioning, cross-disciplined teams. Experienced in handling simultaneous projects and meeting deadlines effectively

***Amptek electric, Hawthorne NJ***  
***Supervisor, journeyman***

**2003 – 2011**

- Connection of wires to transformers, circuit breakers, as well as other components.
- Fabrication and construction of parts, using hard tools and other specifics.
- Inspection of electrical equipment and systems to recognize defects and hazards and the requirement of repairs and modifications.
- Installation of ground leads and connection of power cables to various equipment.
- Replacement and repair of electrical wiring, fixtures, and equipment.
- Testing of circuit and electrical systems using devices including, voltmeters, ohmmeters, amp meters, mega ohm meters, battery meters
- Install, program and maintain fire alarm systems, card access systems, burglar systems
- Install, program, interface and certify mitigation systems
- Test, troubleshoot and certify systems as mentioned above
- Install, program and maintain lighting systems
- Install, maintain IP CCTV systems
- Install terminate PA systems, data and phone cabling testing and certifying
- Business management duties such as maintaining files and records.
- Various projects completed throughout the years

*APS Electrical Contractors, Paterson, NJ*

**2001- 2003**

*Journeyman, Apprentice*

- Connection of wires to electrical devices (motors, pumps, HVAC, heaters, light fixtures etc.)
- Installation of EMT, RMC and PVC conduits
- Installation of electrical panels, breakers and terminating wires
- Electrical troubleshooting

## CERTIFICATIONS

- 10 hour OSHA course - ***Completed***
- Silent Knight Fire systems course - ***Completed***
- Firelite Fire systems course - ***Completed***
- Gas mitigation course – ***Completed***
- Solar installation, testing and maintenance - ***Completed***
- Master electrician certification – ***Completed***

## EDUCATION

*St. Kliment Ohridski University, Macedonia – Associate Degree*

- Traffic Engineering and Transportation

*Riste Risteski – Ricko - Electro Mechanical School Center, Macedonia - GED*

**HESP Solar has completed all awarded projects and has never had a canceled contract.**

**EXPERIENCE: Project Experience & References – HESP Solar LLC**

We have built and operated more than 200 projects – over 80 MW of power capacity – in the past eight years. The largest portion of our project experience has been with municipal offtakers. In addition, we have also built many projects for commercial customers, as well as smaller portfolios of non-profit and residential installations. We have experience with all phases of project development including design, construction, and operation.

Some notable projects are listed below. Additional project profiles may be found on our website [www.hespsolar.com](http://www.hespsolar.com).

**South Brunswick BOE**

14 Schools in South Brunswick, NJ

4.8 MW DC

Project Role: Project Development, Construction, and Operation

Finance Vehicle: 15 Yr. PPA

Commercial Operation: December 2018

14,000 Trina modules

Inverters: Yaskawa-Solectria

Racking: Ballasted Roof System, Patriot Penetrating Ground System

Cost to Complete: \$11.5M

Contact: Mr. David Pawlowski ([david.pawlowski@sbschools.org](mailto:david.pawlowski@sbschools.org), 732-297-7800 x5105)

**Stafford BOE**

5 Schools in Stafford, NJ

2.3 MW DC

Project Role: Project Development, Construction, and Operation

Finance Vehicle: 15 Yr. PPA

Commercial Operation: December 2018

6,700 Sunedison modules

Inverters: Yaskawa-Solectria

Racking: Ballasted Roof System, Patriot Penetrating Ground System & Canopies

Cost to Complete: \$5.5M

Contact: Mr. Michael Nikola ([mnikola@staffordschools.org](mailto:mnikola@staffordschools.org), 609-978-5700 x1032)

**Howell BOE**

16 Schools in Howell, NJ

4.5 MW DC

Project Role: Project Development, Construction, and Operation

Finance vehicle: 15 Yr. PPA

Commercial Operation: February 2019

13,500 Canadian Solar modules

Inverters: Solectria

Racking: Patriot Ballasted Roof and Ground Systems; IronRidge Rail System  
Cost to Complete: \$4.8M  
Contact: Ron Sanasac ([rsanasac@howell.k12.nj.us](mailto:rsanasac@howell.k12.nj.us), 732-751-2480)

**Paterson BOE**

10 Schools in Paterson, NJ  
1.3 MW DC  
Project Role: Project Development, Construction, and Operation  
Finance vehicle: 15 Yr. PPA  
Commercial Operation: February 2019  
3,900 Canadian Solar modules  
Inverters: Solectria  
Racking: Patriot Ballasted Roof System  
Cost to Complete: \$3.6M  
Contact: Rodney Williams ([rlwilliams@paterson.k12.nj.us](mailto:rlwilliams@paterson.k12.nj.us); 973-321-0143)

**East Greenwich Cooperative**

4 municipal sites in Mickleton, NJ  
2.5 MW DC  
Project Role: Project Development, Construction, and Operation  
Finance vehicle: 15 Yr. PPA  
Commercial Operation: December 2017  
7,500 Canadian Solar modules  
Inverters: Solectria  
Racking: Patriot Solar Canopies and Post Ground System, Iron Ridge Sloped Roof System  
Cost to Complete: \$6M  
Contact: Dr. James Lynch ([lynchj@eastgreenwich.k12.nj.us](mailto:lynchj@eastgreenwich.k12.nj.us), 856.423.0412)

**Bridgewater Corporate Center**

Commercial property in Bridgewater, NJ  
3 MW DC  
Finance vehicle: 20 Yr. PPA  
Commercial Operation: November 2017  
9,800 Canadian Solar modules  
Inverters: Solectria  
Racking: Patriot Solar Penetrating Ground System  
Cost to Complete: \$7M  
Contact: Mr. Sol Berger ([SBerger@lincolnequities.com](mailto:SBerger@lincolnequities.com), 201.531.2360)

**Manchester-Haledon BOE**

2 Schools in Haledon, NJ  
550 kW DC  
Project Role: Project Development, Construction, and Operation  
Finance vehicle: 15 Yr. PPA  
Commercial Operation: December 2017

1,700 Canadian Solar modules  
Inverters: Solectria  
Racking: Ballasted Roof System  
Cost to Complete: \$1M  
Contact: Mr. John Serapiglia ([jserapiglia@mrhs.net](mailto:jserapiglia@mrhs.net), 973.389.2820)

**Sun Crest Apartments**

Commercial Project in Capitol Heights, MD  
250 kW DC  
Project Role: Project Development, Construction, and Operation  
Finance Vehicle: 20 Yr. PPA  
780 SunEdison modules  
Inverters: Outback Proharvest  
Racking: SnapNRack Flush Mount Roof System; SnapNRack Canopy Racking System  
Cost to Complete: \$0.7M  
Contact: Chris VanArsdale ([chris@vnddevelopment.com](mailto:chris@vnddevelopment.com))

**Chevy Chase Baptist Church**

Commercial Project in Washington, DC  
95 kW DC  
Project Role: Project Development, Construction, and Operation  
Finance Vehicle: 25 Yr. PPA  
300 Trina modules  
Inverters: Solectria  
Racking: Aerocompact Ballasted Roof System; IronRidge Flush Mount Roof System  
Cost to Complete: \$0.3M  
Contact: Mark Davis ([mdavis@wdsolar.com](mailto:mdavis@wdsolar.com), 202-506-7586)

**26 Main Street**

Commercial Project in Chatham, NJ  
180 kW DC  
Project Role: Project Development and Construction  
Finance vehicle: EPC  
Commercial Operation: May 2018  
540 Canadian Solar modules  
Inverters: Solectria  
Racking: Patriot Ballasted Roof System  
Cost to Complete: \$430,000  
Contact: Patrick Leary ([Patrickl@eiallc.com](mailto:Patrickl@eiallc.com), 973-992-4952 x104)

**Linnett Street**

Commercial Project in Bayonne, NJ  
120 kW DC  
Project Role: Project Development and Construction  
Finance vehicle: EPC

Commercial Operation: July 2018  
360 Canadian Solar modules  
Inverters: Solectria  
Racking: Patriot Ballasted Roof System  
Cost to Complete: \$290,000  
Contact: Sy Mendlowitz ([sygkc@aol.com](mailto:sygkc@aol.com), 718-257-1212)

**RollerJam USA**

Commercial Project in Staten Island, NY  
400 kW DC  
Project Role: Project Development and Construction  
Finance Vehicle: 25 Yr. PPA  
Commercial Operation: December 2017  
1,175 SunEdison modules  
Inverters: Solectria  
Racking: Patriot Ballasted Roof System; IronRidge Rail System  
Cost to Complete: \$950,000  
Contact: Mr. Jack Friedman ([frieg21@gmail.com](mailto:frieg21@gmail.com), 917-837-9581)

**Village of Malone / Franklin County**

Landfill in Malone, NY  
3.5 MW DC  
Project Role: Project Development  
Finance Vehicle: 15 Yr. PPA  
Commercial Operation: December 2018  
11,400 Canadian Solar modules  
Inverters: Solectria  
Racking: GameChange Ballasted Roof System  
Cost to Complete: \$8M  
Contact: Mr. William Buchan, Esq. ([buchanlaw@aol.com](mailto:buchanlaw@aol.com), 315.623.7133)

**Morris County Solar 2**

Nine municipal locations in Morris County, NJ  
3 MW DC  
HESP Project Role: EPC  
Commercial Operation: December 2016  
10,000 Canadian Solar and Trina modules  
Inverters: Solectria  
Racking: Genmounts Ballasted Roof System, Patriot Solar Ground System and Canopies  
Cost to Complete: \$7M  
Contact: Mr. Matthew Jessup ([mjessup@msbnj.com](mailto:mjessup@msbnj.com), 973-622-4850)

**Tenafly School District**

3 Schools in Tenafly, NJ

810 kW DC  
Project Role: Project Development, Construction, and Operation  
Finance Vehicle: 15 Yr. PPA  
Commercial Operation: March 2016  
2,600 Canadian Solar modules  
Inverters: Advanced Energy  
Racking: Genmounts Ballasted Roof System  
Cost to Complete: \$2M  
Contact: Mr. Yas Usami ([yusami@tenafly.k12.nj.us](mailto:yusami@tenafly.k12.nj.us), 201.816.4504)

**Plumsted School District**

2 Schools in New Egypt, NJ  
1.8 MW DC  
Project Role: Project Development and Construction  
Finance Vehicle: 15 Yr. PPA  
Commercial Operation: July 2016  
5,300 Canadian Solar modules  
Inverters: Advanced Energy  
Racking: Patriot Penetrating Ground System, Genmounts Ballasted Roof System  
Cost to Complete: \$4M  
Contact: Mr. Sean Gately ([gatelys@newegypt.us](mailto:gatelys@newegypt.us), 609.758.6800 x4200)

**Kingsway School District**

2 Schools in Woolwich, NJ  
1.8 MW DC  
Project Role: Project Development and Construction  
Finance Vehicle: 15 Yr. PPA  
Commercial Operation: November 2015  
6,200 Trina modules  
Inverters: Advanced Energy  
Racking: RBI Penetrating Ground System  
Cost to Complete: \$4M  
Contact: Mr. Jason Schimpf ([schimpfj@kingsway.k12.nj.us](mailto:schimpfj@kingsway.k12.nj.us), 856.467.4600 x4203)



## HESP Solar Current Projects Under Construction:

### **Borough of Mt Arlington**

Municipal property in Mt. Arlington, NJ  
2.0 MW DC  
Finance vehicle: Hybrid 15 Yr. PPA, 25 Yr. Lease  
Commercial Operation: Expected October 2019  
6,000 Canadian Solar modules  
Inverters: Solectria  
Racking: Patriot Solar Ballasted Ground System  
Cost to Complete: \$4.5M

### **Jackson Legler Landfill**

Municipal property in Jackson, NJ  
5 MW DC  
Finance Vehicle: 15 Yr. Lease  
Commercial Operation: Expected October 2019  
15,600 Canadian Solar modules  
Inverters: SMA  
Racking: Patriot Solar Ballasted Ground System  
Cost to Complete: \$11M

### **Pine Brook R&C Center**

Commercial Project in Englishtown, NJ  
670 KW DC  
Finance vehicle: 25 Yr. PPA  
Commercial Operation: Expected August 2019  
2,000 Canadian Solar modules  
Inverters: Solectria  
Racking: Patriot Ballasted Roof and Ground Systems; IronRidge Rail System  
Cost to Complete: \$1.5M

### **Elizabeth BOE**

2 Schools in Elizabeth, NJ  
1.5 MW DC  
Finance vehicle: 15 Yr. PPA  
Commercial Operation: Expected August 2019  
4250 Trina modules

Inverters: Solectria  
Racking: Patriot Ballasted Roof Systems  
Cost to Complete: \$2.9M

**Woodmont Crossing**

Commercial Project in Washington, DC  
350 kW DC  
Finance Vehicle: 20 Yr. PPA  
Commercial Operation: Expected August 2019  
1,050 Canadian Solar modules  
Inverters: Fronius Primo  
Racking: IronRidge  
Cost to Complete: \$0.8M

**Benning Heights**

Commercial Project in Washington, DC  
215 kW DC  
Finance Vehicle: 20 Yr. PPA  
Commercial Operation: Expected August 2019  
650 Canadian Solar modules  
Inverters: Fronius Symo  
Racking: IronRidge  
Cost to Complete: \$0.5M

**Bishop McCarthy Center for Rehab**

Commercial project in Vineland, NJ  
650 kW DC  
Finance Vehicle: 25 Yr. PPA  
Commercial Operation: Expected October 2019  
1,840 Trina Solar modules  
Inverters: Solectria  
Racking: Patriot Solar Ballasted Roof System, Patriot Solar T-& Y-Frame Carports  
Cost to Complete: \$1.8M

**Our Lady's Center for Rehab and Health**

Commercial project in Pleasantville, NJ  
680 kW DC  
Finance Vehicle: 25 Yr. PPA  
Commercial Operation: Expected October 2019

1,950 Trina Solar modules

Inverters: Solectria

Racking: Patriot Solar Ballasted Roof System, Patriot Solar T-& Y-Frame Carports

Cost to Complete: \$1.8M

**Caldwell - West Caldwell BOE**

7 schools in Caldwell, NJ

1 MW DC

Finance Vehicle: 15 Yr. PPA

Commercial Operation: Expected August 2019

2,857 Trina Solar modules

Inverters: Solectria

Racking: Patriot Solar Ballasted Roof System

Cost to Complete: \$2.4M

**City of Newton**

Municipal Project in Newton, MA

2 MW DC

Finance Vehicle: 15 Yr. PPA

Commercial Operation: Expected October 2019

5,370 Trina Solar modules

Inverters: Solectria

Racking: Patriot Solar Ballasted Roof System, Patriot Solar T-& Y-Frame Carports

Cost to Complete: \$6M

**75 Livingston Ave**

Commercial Project in Roseland, NJ

250 kW DC

Finance Vehicle: EPC

Commercial Operation: Expected August 2019

738 Canadian Solar modules

Inverters: Solectria

Racking: Patriot Solar Ballasted Roof System

Cost to complete: \$0.6M

**240 South Main Street**

Commercial Project in South Hackensack, NJ

50 kW DC

Annual Yield: 60 MWh

Finance Vehicle: EPC



Commercial Operation: Expected August 2019  
275 Ningbo Solar modules  
Inverters: Solectria  
Racking: Patriot Solar Ballasted Roof System  
Cost to Complete: \$0.1M



**LICENSE # 17743**  
**95 MYRTLE AVENUE**  
**NUTLEY, NJ 07110**  
**PHONE #: (201) 925-4224    PHONE #: (862) 823-6009**  
**FAX #: 973-667-5818**  
**Email: info@metrixelectric.com**

---

## **Company Resume**

Metrix Electric LLC is an electrical business since 2013. Our list of projects includes commercial, light industrial, government and residential projects.

Project: Kean University Child Care Center, Union, NJ  
Contractor/ Manager: Unimak LLC, Craig Miller  
Address: 82 Midland Ave., Saddle Brook, NJ  
Tel: 973-478-4925

Project: Kean University Highland Campus Phase 1, Oak Ridge, NJ  
Contractor/ Manager: Unimak LLC, Toni Jovanoski  
Address: 82 Midland Ave., Saddle Brook, NJ  
Tel: 973-478-4925

Project: Montvale Fire House, Montvale, NJ  
Contractor/Manager: Unimak LLC, Craig Miller  
Address: 82 Midland Ave., Saddle Brook, NJ  
Tel: 973-478-4925

Project: Verona Public Library, Verona, NJ  
Contractor/Manager: Billy Contracting & Restoration Inc., Billy Runtevski  
Address: 12 Maple Ave. Bldg. F, Pine Brook, NJ  
Tel: 908-413-7297

Project: Fairview BOE interior and toilet renovations, Fairview, NJ  
Contractor/Manager: Billy Contracting & Restoration Inc., Billy Runtevski  
Address: 12 Maple Ave. Bldg. F, Pine Brook, NJ  
Tel: 908-413-7297

Project: Passaic County Technical Institute B-wing Renovations, Wayne, NJ  
Contractor/Manager: Unimak LLC, Toni Jovanoski  
Address: 82 Midland Ave., Saddle Brook, NJ  
Tel: 973-478-4925

Project: Ramapo College Presidents Suite Renovations, Mahwah, NJ  
Contractor/Manager: Billy Contracting & Restoration Inc., Billy Runtevski  
Address: 12 Maple Ave. Bldg. F, Pine Brook, NJ  
Tel: 908-413-7297

Project: Picatinny Ballistic Evaluation Center, Dover, NJ  
Contractor/Manager: APS Contracting Inc., Atanas Nakev  
Address: 155-161 Pennsylvania Ave. Paterson, NJ  
Tel: 201-206-9672

Project: West Milford Public Library, West Milford, NJ  
Contractor/Manager: Unimak LLC, Toni Jovanoski  
Address: 82 Midland Ave., Saddle Brook, NJ  
Tel: 973-478-4925

Project: Testrite Visual Products, Hackensack, NJ  
Contractor/Manager: Unimak LLC, Toni Jovanoski  
Address: 82 Midland Ave., Saddle Brook, NJ  
Tel: 973-478-4925



**LICENSE # 17743**  
**95 MYRTLE AVENUE**  
**NUTLEY, NJ 07110**  
**PHONE #: (201) 925-4224    PHONE #: (862) 823-6009**  
**FAX #: 973-667-5818**  
**Email: info@metrixelectric.com**

---

Project: Ramapo College – Buckeye Residence Interior Renovations, Mahwah, NJ  
Contractor/Manager: GL Group Inc. Michael B. Solakov  
Address: 140 Hamburg Turnpike, Bloomingdale, NJ  
Tel: 201-710-9725

HIGH SCHOOL SOUTH



INTERMEDIATE EAST SCHOOL





SOUTH BRUNSWICK HIGH SCHOOL



MEMORIAL ELEMENTARY SCHOOL



MACYS-DEPTFORD



MACYS-PARAMUS



CHATHAM, NJ



EAST GREENWICH BOE





**Section IV**  
**Technical and Project-Related Information**

## Technical Proposal – Pittsgrove Township Solar Project

After a detailed review of the information made available for this RFP, HESP Solar LLC is pleased to submit the following technical proposal and analysis for consideration.

We have produced preliminary system module layout- and electrical- design drawings as well as energy forecast simulations based on the site-specific information that was available, and we have included them in this Technical Proposal. We have also included a general description of our approach to component selection and PV array design, project development, construction, system operation, performance monitoring, and maintenance.

We are flexible regarding many aspects of the designs, and we would work together with the Township to tailor the project to match your aesthetic and logistical considerations. It is our intention for the solar installation to be completely non-disruptive to regular facility operation, and at the same time to maximize the financial benefit to the Township.

## Project Overview

This section will summarize the project design and energy forecast at the site. In addition, we spell out our approach to designing and building PV systems. We have included descriptions regarding our methods for project development and construction as well as general information describing the systems and components likely to be incorporated in the projects.

### Project Development

Our project development approach is divided into four stages:

- Stage I: Legal and Preliminary Development
- Stage II: Design, Engineering, and Interconnection Planning
- Stage III: Permitting and Procurement
- Stage IV: Construction and Operations & Maintenance

#### Stage I: Legal and Preliminary Development

Following project award, HESP Solar will initiate work with the Township on several fronts in parallel. This coordinated response ensures that the project moves forward quickly and efficiently.

Our project management and legal teams will reach out for preliminary meetings and introductions, and we will work together to negotiate agreements in good faith. Our engineering teams will begin formal due diligence to fully assess site conditions such as: topographical conditions; shading analysis; electric service survey; ground array and electric line location site and surveys; and environmental studies. This will dictate electrical engineering plans and requirements and ultimately the final system design.

Our project management team will develop a complete permitting matrix and project schedule.

We will arrange for funding for procurement and construction both from internal sources and from our established financial partners.

#### Stage II: Engineering

Once due diligence is complete, our engineering teams will develop detailed engineering design documents. Our engineering design will adhere to all federal, state, and local codes, and will ensure the aesthetic beauty of each system design. We will begin the conversation with local Load Serving Entities (LSE) to arrange coordination on grid interconnection. Third party engineers will be engaged as needed to perform quality assurance and to verify project design and calculations.

#### Stage III: Permitting and Procurement

Once the designs have been “stamped” by the project engineers, the entire package will be submitted to the applicable utilities for preliminary interconnection approval. SREC applications will be made to the BPU. Design package will be presented to the relevant planning and permitting authorities with jurisdiction. Construction design packages are then submitted to the local permitting agencies for building and electrical permits.

Component procurement and material delivery begin towards the end of this phase. Modules and inverters are kept in inventory or ordered with relatively short lead times to be available for start of construction. HESP coordinates with facilities managers to ensure no disruption to regular facility activities as a result of deliveries, material staging, or presence of construction personnel.

#### Stage IV: Construction and Operations & Maintenance

Regular project meetings (often weekly or bi-weekly) facilitate communication and coordination between our project managers and site facility managers. Quality-assurance and safety inspections are conducted regularly to ensure the safety of site employees as well as our construction personnel, and to maintain a high standard of construction.

When construction is complete, HESP conducts a series of electrical and mechanical tests to fully commission the system and confirm power-generating capacity. When permission to operate the system is granted by the local LSE, HESP operates, maintains, and insures the system at zero cost to the host partner. We use real-time cloud-based data monitoring to track on a constant basis system key performance indicators and respond quickly in the event of component failures or outages. We perform twice-annual regular maintenance visits to each site to administer a suite of preventative maintenance measures and cleanings.

Please find a preliminary project schedule on the following page.



## Pittsgrove Solar Project Construction Schedule

<b>Task Description</b>	<b>Duration</b>	<b>Project Dates</b>
Project Team Introduction	1 day	1
Electrical, GeoTech, and Civil Layout Survey	14 days	2-16
Project Design-Preliminary	45 days	17-60
Interconnection Applications/Approval to Interconnect	30 days	61-91
Drawing Review and Approval by Township representatives	7 days	61-67
Final Drawings for Permit Submissions	10 days	61-71
Apply for all Civil Permits/Permit Approval	30 days	72-102
Procurement of Equipment	45 days	60-105
Construction Kick-off Meeting	3 days	106-109
Construction Staging	21 days	110-131
Ground Array Assembly/Install	90 days	132-222
Wiring and Connecting Arrays	40 days	223-263
Service Interconnect	30 days	260-290

### **Design Approach and Component Selection**

Our design engineers are professionals across many areas of expertise who have designed, value-engineered, and deployed hundreds of MW of solar array systems in the past 8 years. Our focus is first on safety, as well as strict preservation of facility use and function. Components are sited in locations that will allow for easy passage around and between arrays. Walkways are designed between the arrays to provide easy access for maintenance and facility personnel.

We are proposing to design the project systems around Tier 1 manufacturer Trina Solar's 375W poly-silicon PV modules. The UL listed TSM-DE14A(II) module is a high-efficiency module rated with a "positive power tolerance" designation, allowing for a higher energy yield per given area. Trina Solar modules come with a standard 10-year product warranty and a 25-year linear performance insured-warranty. Modules used in final design will be dependent on availability at time of design. If necessary, modules will be replaced by an approved replacement technology of equal or superior quality.

We are proposing to have DC-to-AC power inversion to be accomplished via Yaskawa-Solectria commercial string inverters. These are flexible, lightweight string inverters. The inverters utilize maximum power point tracking (MPPT) and are designed to operate in tandem with the utility in grid-connected PV systems. Solectria string inverters come with a standard 10-year warranty.

The ground-mounted arrays have been designed with Patriot's Delta ballasted system. Ground mounted systems are tilted at 25 degrees and oriented towards south for the best balance of energy output and efficiency. Patriot warrants that its racking systems will be free of defects in material and/or workmanship for 15 years.

As part of the data acquisition system (DAS) to be provided by Locus Energy, solar energy produced will be measured by revenue grade Veris E50 Series meters. The E50 meter is ANSI C12.20 certified to 0.2% accuracy, and is under warranty for 5 years. The DAS system is described in further detail below in this tab.

In addition to all manufacturer warranties, HESP Solar warrants the workmanship of the installation and all of the components for the full contract term.

On the next page is an overview of the project design(s) and energy forecast(s), followed by system preliminary design drawings and component data sheets at the end of this section. An energy forecast simulation for each module plane of array will be provided at the end of the section as well.





### Design Summary Table

The table below summarizes the primary design elements for the electrical system, including the system size (“kW”), as well as the number of the solar panels (“modules”) and inverters (“INV”).

The Yield refers to the site-specific energy production value that will be produced by the system, as expressed in kWh per kW. Expected kWh/Yr. 1 is the actual expected energy in Year 1 for the system. Guaranteed energy is 90% of expected.

Modules are spaced to avoid shade between the hours of 10-2 on the Winter Solstice. Assumed annual degradation is 0.5%.

Site	Modules	kW dc	INV	INVs	kW ac	Yield	Expected kWh/Yr. 1	Guaranteed kWh/Yr. 1
Pittsgrove Landfill	5,456	2,182.4	60TL	26	1,560	1409	3,075,002	2,767,501

## Monitoring, Training, and Maintenance

Over the past 8 years, we have managed over 35 MW of distributed generation solar projects at more than 100 sites. We have learned that efficient operations and maintenance begins already during the system design phase. We design our PV systems to last well beyond the life of the PPA, and we utilize only industry leading components and methods to ensure the long term mechanical and electrical integrity of the system. Semi-annually scheduled comprehensive preventative maintenance visits that include full electrical testing, visual checks, and thermal imaging, together with constant generation and alert monitoring with 24-hour dispatch of experienced and trained PV professionals are all of primary importance in maximizing system uptime and production efficiency.

### **Metering, Monitoring, Production Verification & Weather Station:**

In line with best industry practice, HESP will supply a real-time web-based data acquisition system (DAS). Additionally, we will install an LCD kiosk display at select locations for the Township. HESP will also provide Inverter-Direct monitoring, allowing users to see detailed operational inverter data (DC and AC) on a web enabled device. Furthermore, this will allow the user to view daily, weekly, monthly, and annual graphs up to 5 years into the past, viewing single events or long-term performance trends. Revenue Grade Energy Production monitoring package also keeps track of lifetime energy produced by the PV system. The Weather Station is a real-time weather package which allows the operators to view accurate readings of crucial environmental information that affect the performance of the PV system. Data Acquisition System product specification sheets are provided in the below pages.

### **Facility Training:**

We will coordinate with facility staff and local fire personnel during the construction phase to ensure that we have a safety and emergency response plan in place that all parties are comfortable with. We recommend local fire personnel to be familiar with the safety guidelines issued by the National Fire Protection Association available for download at the below link: <https://goo.gl/UcGv8n>  
In the unlikely event of an emergency, we will be available 24/7 to respond via phone as well as have trained personnel at the site within a reasonable time period <2-3 hours.

# PERFORMANCE DATA ACQUISITION FOR COMMERCIAL, INDUSTRIAL & UTILITY PV SYSTEMS

## LGate 360

Locus Energy's LGate 360 is a performance data acquisition kit for Commercial, Industrial, and Utility solar photovoltaic systems. Designed to integrate easily into three-phase PV systems of all sizes, the LGate360 continually collects a multitude of energy and environmental data, allowing site owners and operators to efficiently manage solar assets.



The LGate 360 can be configured to monitor nearly any type of PV system. The standard configuration consists of an industrial grade datalogger and revenue-grade energy meter mounted inside a weatherized enclosure. Additional equipment can be added into the LGate360 such as cellular modems and network conversion hardware. All LGates are shipped with integrated disconnect breakers making field installation much simpler. In addition, each unit can be configured to aggregate data from a large variety of peripheral devices such as inverters, trackers, relays, string/sub-array combiner boxes and weather stations.

### DATA COLLECTION

The LGate uses Modbus RTU/TCP protocol to communicate with downstream devices. Any device that supports Modbus can be connected and monitored by the LGate. Up to 32 devices can be connected through native Modbus RTU inputs (expandable), while up to 100 devices can be connected using Modbus/TCP. All data is collected, timestamped and then stored in non-volatile memory. This interval data is stored locally until the next scheduled upload.

### CONNECTIVITY

Once the LGate collects and stores performance data from connected devices, it will upload batches of data at regular intervals to Locus Energy's LocusNOC™ web application. The LGate can transmit data over Ethernet or cellular networks. The integrated datalogger can be set to communicate through almost any type of local area network.



### COMPONENTS

Datalogger	AcquiSuite EMB A8810
Meter	Veris Industries E50 Series Meter
DC Power	Schneider Electric ABL8RP
Cell Modem	Digi Transport WR21
External Battery Backup	24 Hours
Data Storage Interval	5 Minute (1 Minute Optional)
Remote Upgrades	Yes

### COMMUNICATION

LAN	RJ45 10/100 Ethernet, full half duplex, auto polarity
Cellular (optional)	4G LTE and 3G Compatible
Networking	DHCP or Static IP
Modbus TCP	100 Clients per Logger
Modbus RTU	32 Clients per Logger

### COMPLIANCE

- ANSI C12.20 Class 0.5 (Power Meter)
- CAN/CSA-C22.2 No. 14 listed Industrial Control Panel
- UL Listed 508A listed Industrial Control Panel

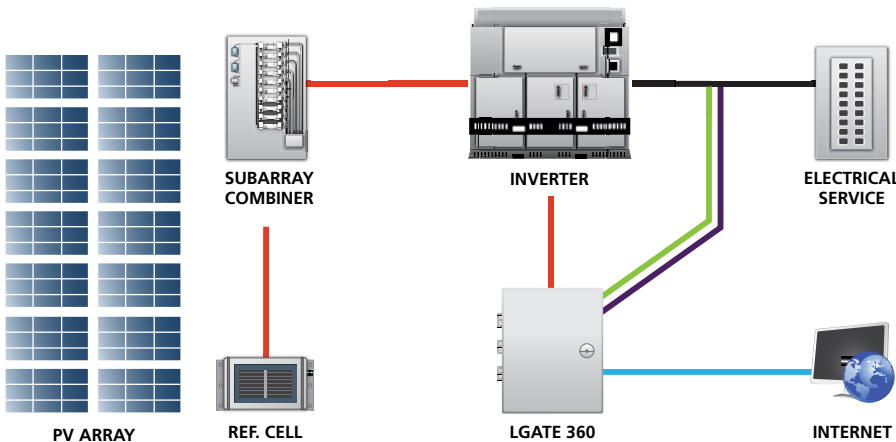
### PHYSICAL

Enclosure Rating	NEMA 4
Weight	30 lbs+
Dimensions	20" L x 16" W x 8" H
Environment	-30 C to 70 C, 95% RH, non-condensing

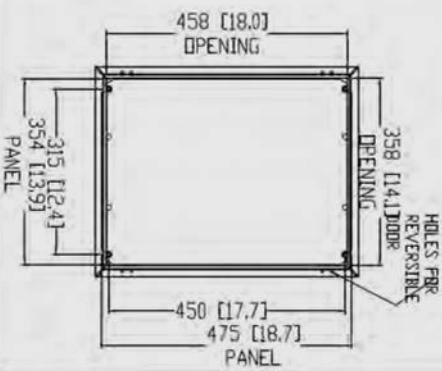
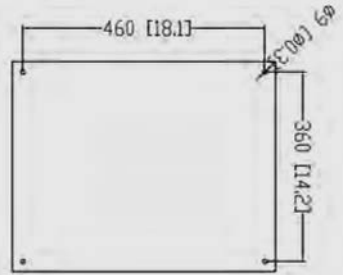
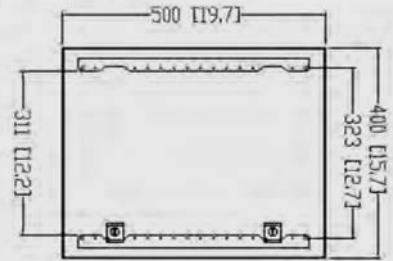
### POWER METER

Voltage Inputs	277/480V, 120/208V
Phases	Single phase, Split phase, Three phase at 50 or 60 Hz
Current Inputs	mV full scale output CTs

### DIAGRAM: TYPICAL CONFIGURATION



### DIMENSIONS



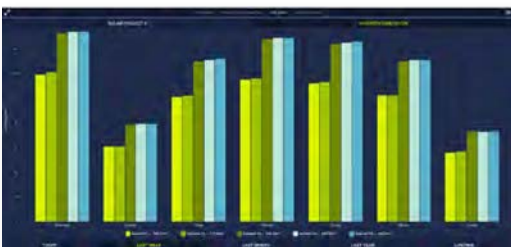


# SOLARNOC™ KIOSK APPLICATION

- » Publicly display PV performance data and project images that feature a specific project or portfolio
- » Leverage the Kiosk as a marketing tool to show off how your system is generating clean energy

The SOLARNOC™ Kiosk application is a public, web-based interface to display solar performance data and educational content. With the Kiosk, customers can display both current power output and historical generation from one system or a portfolio of systems in an animated layout.

The kiosk is designed for widescreen high definition monitors and touchscreen displays, and is compatible with all major browsers. With your logo, project images, and real-time data, the Kiosk functions as a customizable, client-branded, interactive marketing tool.



## FEATURES:

- Open web application that does not require a login
- Application can be configured with up to five sub-tabs which can show data from different sites or specific components
- Choose from several stock environmental benefit equivalencies
- A custom banner that is displayed on all pages and can feature project partner logos
- Animated layout of a typical solar PV installation
- Automated slideshow
- Ability to display the kiosk with any resolution from an iPad up to a large widescreen TV/monitor with a VGA or HDMI input
- Option to embed the Kiosk application into the customer's website
- Irradiance data displayed in the weather module

## BENEFITS:

- See near-real-time performance information with system data that is updated every 15-minutes
- Get a flexible interface that highlights performance data for your projects to help viewers understand how PV system components work together
- Save time and quickly troubleshoot issues with remote desktop support from Locus Energy with the purchase of a precision configured mini PC

To learn more about Locus Energy's SOLARNOC Kiosk Application, or to request a demo, please visit: [info.locusenergy.com/na-solar-solarnoc-kiosk-application](http://info.locusenergy.com/na-solar-solarnoc-kiosk-application) »

## Maintenance Plan

### System Performance Monitoring, Scheduled & Unscheduled Maintenance

- Using the DAS, monitor on a constant basis the system output and performance
- Analyze and track key performance indicators
- 24-hour dispatch of trained technicians to respond to system outage or alert event
- Regular mowing and vegetation control to maintain site appearance and to prevent array shading
- Twice-annual preventative maintenance site visits that will incorporate the following items:

### Full Site Visual Inspection

- PV Panel Condition
  - Inspect for cleanliness, cracked/chipped/scratched/ shattered panels, fading/discoloration, burn marks, seal condition, frame damage or rust
- PV Mounting Structure
  - Inspect mounts and mounting structures (loose panels, loose rack/clips missing hardware, rusted bolts, flashing issues, ballast condition, rack anchor condition)
- PV Array Ventilation
  - Inspect conditions under panels, remove of any large debris or pests; visual check to ensure maximum ventilation under panels
- PV System Foundations
  - Roof mount arrays (visual review of roof conditions, check sealants around roof penetrations)
  - Ground mount arrays (visual inspection of grounds and vegetation, identify issues related to mud, water pooling, soil erosion)
  - Carport mount arrays (visual inspection of physical carport structure and ground condition)
- Balance of System
  - Inspect conduit runs (separated/cracked conduits, misaligned wire runs)
  - Inspect panel interconnectivity and string lines (wire/cable wear, wire fading, chewed wire due to pests, identify loose/detached wires)
  - Inspect junction/combiner enclosure(s) condition (seals, rust, damage, locks)
  - Inspect electrical equipment enclosure(s) (seals, rust, damage, door condition, locks, equipment pad(s))
- Inverter(s)
  - Inspect inverter structure(s) and enclosure(s) (seals, rust, damage, door condition, switch/handle condition, locks)
  - Inspect inverter equipment pad(s) (cracks, base damage, soil erosion)
- Data Acquisition System (DAS)
  - Weather stations condition (alignment of irradiance sensor, condition of wind and temperature meters)

- DAS device condition (screen, seals, rust, damage)
- Shading Conditions
  - Visual inspection to identify any shading issues, preventive care if shading caused by nearby vegetation)
- Vegetation/Pest Conditions
  - Vegetation management (inspection for vegetation issues, removal of any weeds, vines, tree branches or other plants/trees blocking panels/system, grass mowing and control)
  - Pest Control (insects, bird nests, squirrels, spider nests, etc.)
- System Security
  - Visually inspect fence line or confinement structures for wear, damage, breach, vandalism, or other problems
  - Visually inspect any electronic surveillance equipment (cameras, alarms, etc.) and identify if operating.
  - Check condition of any locks, chains or other protection measures preventing unauthorized access to the system.

#### **Inverter Preventative Maintenance**

- Conduct preventative maintenance in accordance with manufacturer specifications
- Clean and vacuum enclosure, vents and heat sink / remove any identifiable debris and clean any accumulation of dust
- Change air filters according to manufacturer specifications
- Check fuses and switchboards (visually inspect for signs of corrosion/burning of components)
- Check wiring (visually inspect for breaks, deterioration or signs of corrosion/burning, check cable wire protection)

#### **Warranty Enforcement**

- Make and coordinate claims for reimbursement and/or replacement under any available warranty from manufacturers, installers or other similar entities relating to the System

#### **String level Voc, DC operating current**

- Perform testing to measure the open circuit voltage (Voc) and operating current of each string in the system.
- Analyze and document any anomalies that affect system performance and propose correct actions if necessary

#### **String Level IV Curve Tracing**

- Perform string level IV Curve tracing with a minimum of 400 w/m<sup>2</sup>
- Analyze and document any anomalies that affect system performance and propose correct actions if necessary



**Thermal Imaging Combiners, Inverters and Disconnects**

- Thermal imaging of combiners, inverters and disconnects by a trained thermographer
- Analyze and document all images taken, identify any potential hot spots and propose corrective actions if necessary






## PV Design and Energy Simulation Attachments

Please see the following pages for:

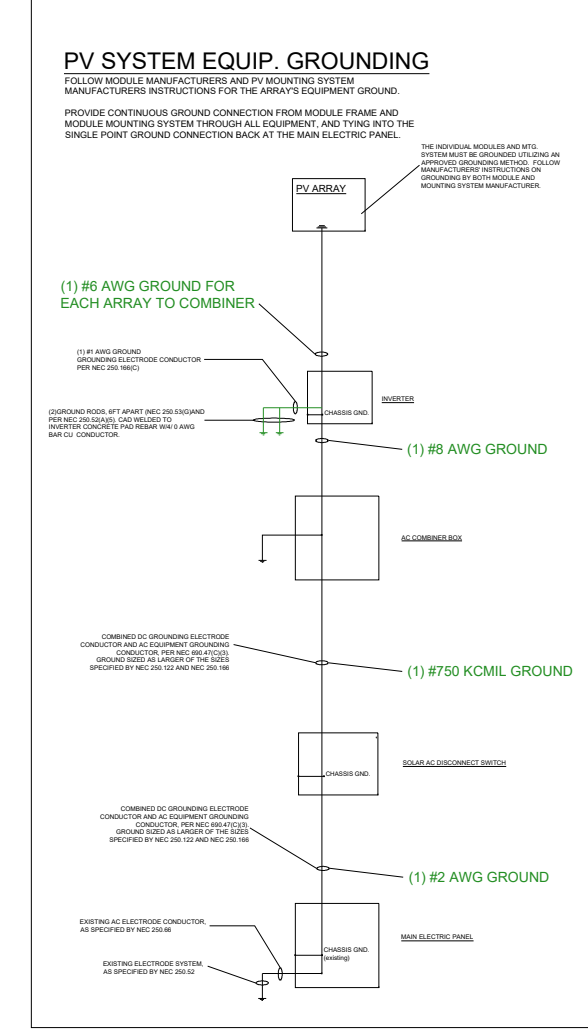
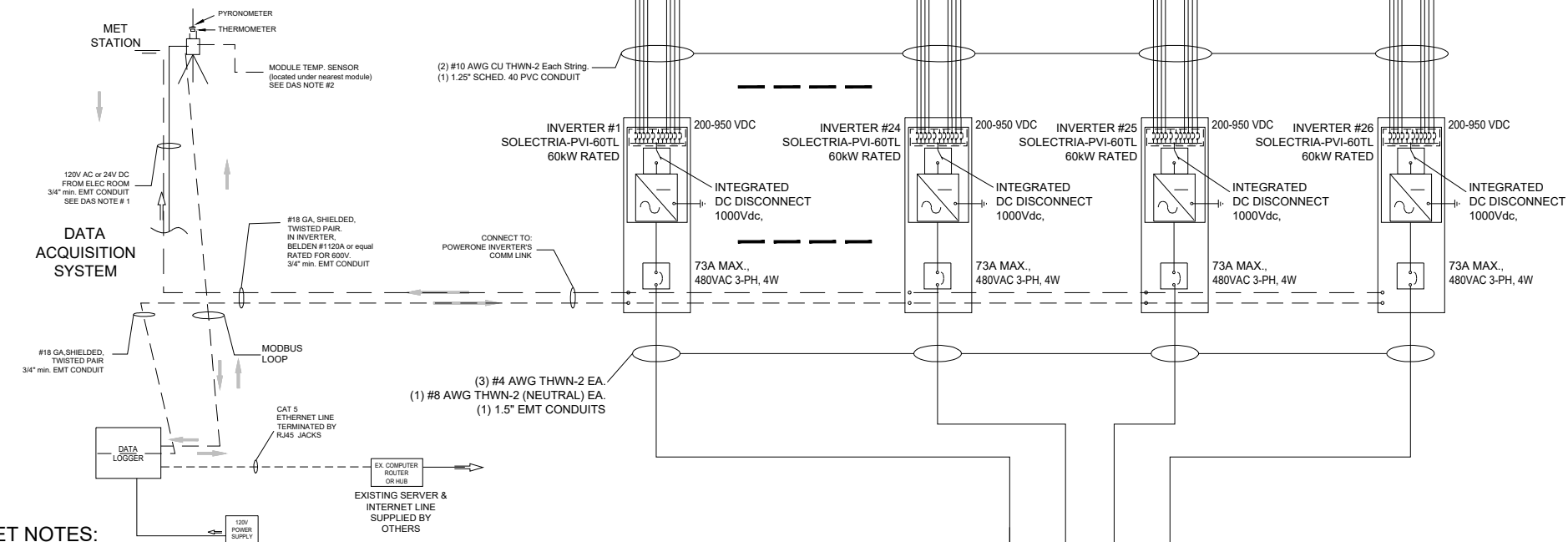
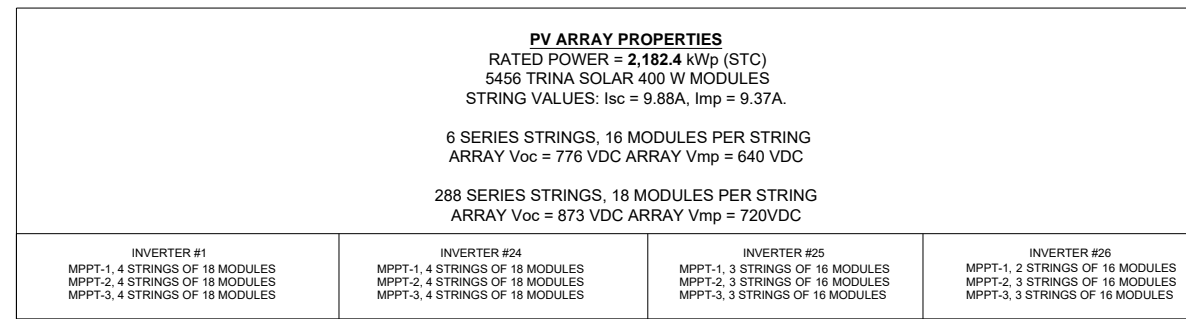
- Preliminary Array Layout Designs and Line Diagrams
- PV Watts Energy Yield Forecast
- Component Specification Sheets



 HESP SOLAR, LLC 400 Rella Blvd Suite 160, Suffern, NY 10901 <a href="http://www.hespsolar.com">www.hespsolar.com</a> (c) HESP SOLAR, LLC AND ITS AFFILIATES, ALL RIGHTS RESERVED	<b>PROJECT DETAIL</b>		<b>SYSTEM DESCRIPTION</b>			<b>SHEET INFORMATION</b>								
	PROJECT #:	NJ-19-188	MODULE TYPE:	TRINA SOLAR, TSM-DE14A(11) PERC MONO 400W	TILT ANGLE:	25	AZIMUTH:	180	TOTAL STRINGS:	312	DATE:	08.07.19	SHEET NO:	PV 0
	PROJECT NAME:	PITTSGROVE LANDFILL	MODULE QUANTITY:	5,456	RACKING STRUCTURE:		GROUND MOUNTED		DESIGNER:	SY			SCALE: NTS	
	SITE ADDRESS:	SALEM COUNTY, NEW JERSEY	SYSTEM SIZE kW (DC):	2,182.4	INVERTER:		SOLECTRIA PVI 60TL							
CLIENT NAME:	PITTSGROVE TOWNSHIP	SYSTEM SIZE kW (AC):	1,560											

THIS DRAWING IS THE PROPERTY OF HESP SOLAR, LLC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY HESP SOLAR, LLC. NO PART IS TO BE DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION FROM HESP SOLAR, LLC. PRELIMINARY DESIGN NOT FOR CONSTRUCTION

CODES & STANDARDS:  
 ALL EQUIPMENT, MATERIALS, AND METHODS SHALL MEET THE FOLLOWING CODES & STANDARDS:  
 2011 NATIONAL ELECTRIC CODE  
 UL 1741  
 UL 1703  
 IEEE 1547-2003  
 ALL OTHER APPLICABLE NATIONAL, STATE, AND LOCAL CODES



**SHEET NOTES:**

1. INVERTER AUTOMATICALLY DEENERGIZES THE OUTPUTS IF THE LINE SOURCE IS REMOVED.
2. ARRAY GROUNDING IS ACCOMPLISHED UTILIZING THE UL APPROVED MEANS. EACH COMBINER RECEIVES A GROUND FROM THE ARRAY UTILIZING A UL LISTED DIRECT BURIAL GROUND LUG. THIS EQUIPMENT GROUNDING SYSTEM IS CONTINUOUS (EVEN IF A MODULE IS REMOVED) FROM THE ARRAY THRU THE INVERTER BACK TO A SINGLE POINT OF GROUND AT THE MAIN DISTRIBUTION PANEL.
3. UPON DETECTION OF 4 AMPS OF GROUND FAULT CURRENT, THE INVERTER EXECUTES AN ORDERLY SHUT DOWN AND ANNUNCIATES A GROUND FAULT AT THE OPERATOR INTERFACE.
4. PV MODULE, STRING, AND ARRAY CIRCUIT RATINGS ARE DISPLAYED ON LABELS PERMANENTLY MARKED ON THE INVERTER, SWITCHES AND COMBINER BOXES.

**SIGNAGE NOTES:**

1. WARNING. THIS FACILITY IS SERVED BY A SECOND, PHOTVOLTAIC GENERATING SOURCE. BOTH THE UTILITY AND PHOTVOLTAIC SYSTEMS DISCONNECT MEANS ARE LOCATED IN THE MAIN ELEC. SERVICE AREA. THE PHOTVOLTAIC DC DISCONNECT MEANS IS LOCATED ADJACENT TO THE INVERTERS.
2. ALL AC & DC FUSES & DISCONNECTS TO BE LABELED: WARNING. ELECTRIC SHOCK HAZARD. DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.
3. PV SOURCE CIRCUIT BREAKERS. WARNING. ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.
4. WARNING. IF A GROUNDFAULT IS DETECTED, THE NORMALLY GROUNDING CONDUCTORS MAY BE ENERGIZED AND UNGROUNDING.

**DAS NOTES:**

1. 24 VOLT DC POWER SUPPLY CONDUCTORS CAN BE RUN IN THE SAME CONDUIT AS THE 18 GA., SHIELDED MODBUS CABLE.
2. THE MODULE TEMPERATURE SENSOR'S CABLE CANNOT BE MODIFIED. LOCATE THE MET STATION SO THAT THIS SENSOR'S CABLE WILL REACH UNDERNEATH, AND SECURE IT TO THE CLOSEST MODULE.



PROJECT:

PITTSBORO LANDFILL

PHOTOVOLTAIC SYSTEM

ADDRESS:

PSE&G ACCT #:

SHEET:

SINGLE LINE DIAGRAM

Rev #	Date	COMMENTS
0	08/01/19	DRAFT REVIEW

INSTALLER:

HESP SOLAR, LLC  
 Suite 160,  
 400 Rella Blvd  
 Suffern, NY 10901

CONSULTANT #1:

CONSULTANT #2:

PROJECT #

PV-0



Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at <https://sam.nrel.gov>) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

Disclaimer: The PVWatts® Model ("Model") is provided by the National Renewable Energy Laboratory ("NREL"), which is operated by the Alliance for Sustainable Energy, LLC ("Alliance") for the U.S. Department Of Energy ("DOE") and may be used for any purpose whatsoever.

The names DOE/NREL/ALLIANCE shall not be used in any representation, advertising, publicity or other manner whatsoever to endorse or promote any entity that adopts or uses the Model. DOE/NREL/ALLIANCE shall not provide

any support, consulting, training or assistance of any kind with regard to the use of the Model or any updates, revisions or new versions of the Model.

YOU AGREE TO INDEMNIFY DOE/NREL/ALLIANCE, AND ITS AFFILIATES, OFFICERS, AGENTS, AND EMPLOYEES AGAINST ANY CLAIM OR DEMAND, INCLUDING REASONABLE ATTORNEYS' FEES, RELATED TO YOUR USE, RELIANCE, OR ADOPTION OF THE MODEL FOR ANY PURPOSE WHATSOEVER. THE MODEL IS PROVIDED BY DOE/NREL/ALLIANCE "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. IN NO EVENT SHALL DOE/NREL/ALLIANCE BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO CLAIMS ASSOCIATED WITH THE LOSS OF DATA OR PROFITS, WHICH MAY RESULT FROM ANY ACTION IN CONTRACT, NEGLIGENCE OR OTHER TORTIOUS CLAIM THAT ARISES OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE MODEL.

The energy output range is based on analysis of 30 years of historical weather data for nearby, and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

## RESULTS

# 1,409 kWh/Year\*

System output may range from 1,354 to 1,464 kWh per year near this location.

Month	Solar Radiation ( kWh / m <sup>2</sup> / day )	AC Energy ( kWh )	Value ( \$ )
January	3.32	88	13
February	4.24	98	15
March	4.94	124	19
April	5.67	134	20
May	5.86	140	21
June	6.24	141	21
July	6.50	148	22
August	6.05	138	21
September	5.47	122	18
October	4.54	110	16
November	3.56	87	13
December	2.97	77	12
<b>Annual</b>	<b>4.95</b>	<b>1,407</b>	<b>\$ 211</b>

### Location and Station Identification

Requested Location	Pittsgrove, NJ
Weather Data Source	Lat, Lon: 39.53, -75.22 1.4 mi
Latitude	39.53° N
Longitude	75.22° W

### PV System Specifications (Residential)

DC System Size	1 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	25°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	96%
DC to AC Size Ratio	1.2

### Economics

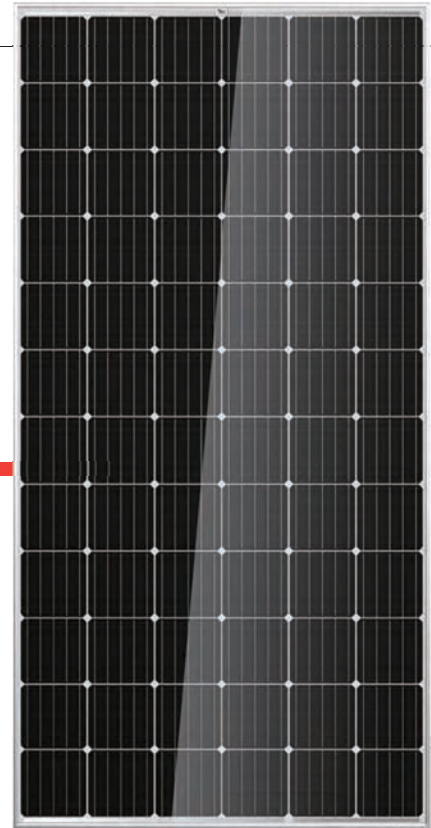
Average Retail Electricity Rate	0.149 \$/kWh
---------------------------------	--------------

### Performance Metrics

Capacity Factor	16.1%
-----------------	-------

# THE TALLMAX<sup>M</sup> PLUS<sup>+</sup>

## FRAMED 72-CELL MODULE(1500V)



**72 CELL**  
MONOCRYSTALLINE MODULE

**340-375W**  
POWER OUTPUT RANGE

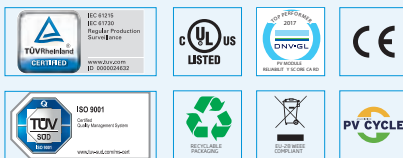
**19.3%**  
MAXIMUM EFFICIENCY

**0~+5W**  
POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy. We believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

### Comprehensive Products And System Certificates

IEC61215/IEC61730/UL1703/IEC61701/IEC62716  
ISO 9001: Quality Management System  
ISO 14001: Environmental Management System  
ISO14064: Greenhouse gases Emissions Verification  
OHSAS 18001: Occupation Health and Safety Management System



### Ideal for large scale installations

- Reduce BOS cost by connecting more modules in a string
- 1500V UL/1500V IEC certified



### Maximize limited space with top-end efficiency

- Up to 193 W/m<sup>2</sup> power density
- Low thermal coefficients for greater energy production at high operating temperatures



### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- 100% EL double inspection

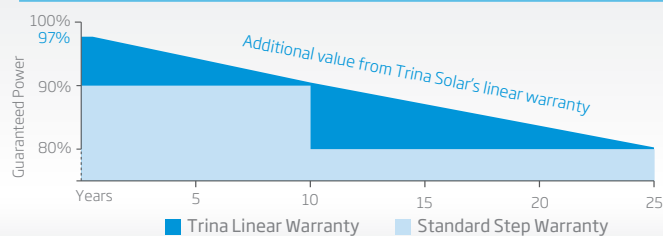


### Certified to withstand the most challenging environmental conditions

- 2400 Pa wind load
- 5400 Pa snow load

### LINEAR PERFORMANCE WARRANTY

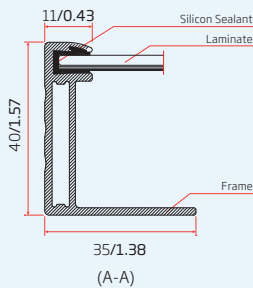
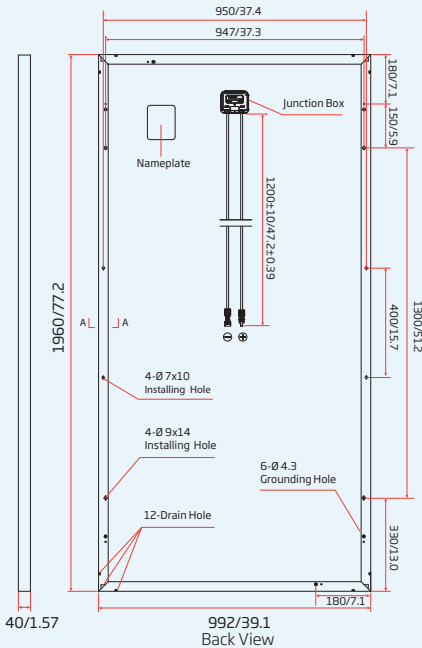
10 Year Product Warranty · 25 Year Linear Power Warranty



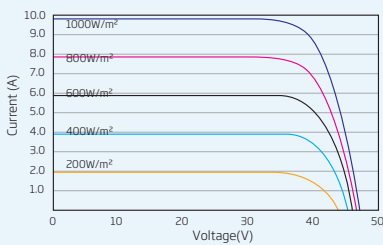
**PRODUCTS POWER RANGE**

TSM-DE14A(II) STD MONO 340-350W  
 TSM-DE14A(II) PERC MONO 355-375W

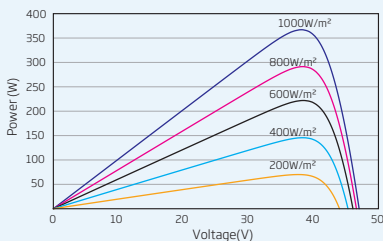
**DIMENSIONS OF PV MODULE(mm/inches)**



**I-V CURVES OF PV MODULE(365W)**



**P-V CURVES OF PV MODULE(365W)**



**ELECTRICAL DATA (STC)**

Peak Power Watts- $P_{MAX}$ (Wp)*	340	345	350	355	360	365	370	375
Power Output Tolerance- $P_{MAX}$ (W)	0 ~ +5							
Maximum Power Voltage- $V_{MPP}$ (V)	38.2	38.5	38.7	38.8	39.0	39.3	39.7	40.0
Maximum Power Current- $I_{MPP}$ (A)	8.90	8.96	9.04	9.14	9.24	9.30	9.33	9.37
Open Circuit Voltage- $V_{OC}$ (V)	46.2	46.7	47.0	47.4	47.7	48.0	48.3	48.5
Short Circuit Current- $I_{SC}$ (A)	9.50	9.55	9.60	9.65	9.70	9.77	9.83	9.88
Module Efficiency $\eta_m$ (%)	17.5	17.7	18.0	18.3	18.5	18.8	19.0	19.3

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
 \*Measuring tolerance: ±3%.

**ELECTRICAL DATA (NOCT)**

Maximum Power- $P_{MAX}$ (Wp)	253	257	261	264	268	272	276	279
Maximum Power Voltage- $V_{MPP}$ (V)	35.4	35.7	35.9	36.0	36.2	36.4	36.8	37.1
Maximum Power Current- $I_{MPP}$ (A)	7.15	7.20	7.26	7.34	7.42	7.47	7.50	7.53
Open Circuit Voltage- $V_{OC}$ (V)	42.9	43.4	43.7	44.1	44.3	44.6	44.9	45.1
Short Circuit Current- $I_{SC}$ (A)	7.67	7.71	7.75	7.79	7.83	7.89	7.94	7.98

NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

**MECHANICAL DATA**

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6 inches)
Cell Orientation	72 cells (6 × 12)
Module Dimensions	1960 × 992 × 40 mm (77.2 × 39.1 × 1.57 inches)
Weight	22.5 kg (49.6 lb) with 3.2 mm
Glass	3.2 mm (0.13 inches) for Std Mono and Mono PERC, High Transmission, AR Coated Tempered Glass
Backsheet	White
Frame	Silver Anodized Aluminium Alloy
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ), 1200 mm (47.2 inches)
Connector	UTX
Fire Type	Type 1 or Type 2

**TEMPERATURE RATINGS**

NOCT (Nominal Operating Cell Temperature)	44°C (±2°C)
Temperature Coefficient of $P_{MAX}$	- 0.39%/°C
Temperature Coefficient of $V_{OC}$	- 0.29%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

**MAXIMUM RATINGS**

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC) 1500V DC (UL)
Max Series Fuse Rating	15A (Power ≤ 350W) 20A (Power ≥ 355W)

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

**WARRANTY**

10 year Product Workmanship Warranty
25 year Linear Power Warranty

(Please refer to product warranty for details)

**PACKAGING CONFIGURATION**

Modules per box: 27 pieces
Modules per 40' container: 648 pieces

# PVI 50TL & PVI 60TL

## 3-Ph Transformerless Commercial String Inverters

### Features

- Integrated arc fault protection
- Compliant with UL 1741SA
- 3 MPPTs with 5 inputs each
- Integrated DC and AC disconnects
- AC terminals compatible with copper and aluminum conductors
- Modbus communications
- Internal data logger
- 0 - 90° installation orientation
- Remote firmware upgrades
- Remote diagnostics

### Options

- H4 wiring box
- Shade cover
- DC combiners bypass
- Web-based monitoring



Yaskawa Solectria Solar's PVI 50TL and PVI 60TL are grid-tied, transformerless three-phase inverters designed for ground mount, rooftop and carport arrays and can be installed from 0 - 90 degrees. The PVI 50/60TL inverters are the most reliable, efficient and cost effective in their class. They come standard with AC and DC disconnects, three MPPTs, a 15-position string combiner, remote diagnostics, remote firmware upgrades and various protection features. Options include H4 wiring box, shade cover, DC combiner fuse bypass, and web-based monitoring.

# PVI 50TL & PVI 60TL

## Specifications

	PVI 50TL	PVI 60TL
<b>DC Input</b>		
Absolute Maximum Input Voltage	1000 VDC	1000 VDC
Maximum Power Input Voltage Range (MPPT)	480-850 VDC	540-850 VDC
Operating Voltage Range (MPPT)	200-950 VDC	200-950 VDC
Maximum Operating Input Current	108 A (36 A per MPPT)	114 A (38 A per MPPT)
Number of MPP Trackers	3	3
Maximum Available PV Current (Isc x 1.25)	204 A (68 A per MPPT)	204 A (68 A per MPPT)
Maximum PV Power	75 kW (30 kW per MPPT)	90 kW (33 kW per MPPT)
Start Voltage	330 V	330 V
<b>AC Output</b>		
Nominal Output Voltage	480 VAC, 3-Ph/PE/N	480 VAC, 3-Ph/PE/N
AC Voltage Range (Standard)	-12/+10%	-12/+10%
Continuous Output Power	50 kW	60 kW
Maximum AC Apparent Power	55 kVA	66 kVA
Maximum Output Current	66.2 A	79.4 A
Nominal Output Frequency	60 Hz	60 Hz
Output Frequency Range	57-63 Hz	57-63 Hz
Power Factor	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)	Unity, >0.99 (Adjustable 0.8 leading to 0.8 lagging)
Fault Current Contribution (1 Cycle RMS)	55 A	55 A
Total Harmonic Distortion (THD) @ Rated Load	<3%	<3%
Recommended OCPD Device	90 A	100 A
AC Surge Protection	Type II MOV, 1240Vc, 15kA I <sub>tm</sub> (8/20μ)	
<b>Efficiency</b>		
Peak Efficiency	99.0%	99.0%
CEC Efficiency	98.5%	98.5%
Tare Loss	< 2 W	< 2 W
<b>Integrated String Combiner</b>		
Fused Inputs	15 Fused Positions (5 Positions per MPPT) 15 A Standard (20, 25, 30 A accepted*)	
<b>Temperature</b>		
Ambient Temperature Range	-22°F to +140°F (-30°C to +60°C); Derating occurs over +122°F (+50°C)	
Storage Temperature Range	No low temp minimum to +158°F (+70°C)	
Relative Humidity (non-condensing)	0-95%	
Operating Altitude	13,123 ft (4,000 m) Derating occurs from 9,842.5 ft (3,000 m)	
<b>Communications</b>		
Data Logger Hardware	Standard, Internal	
SolrenView Web-Based Monitoring Service	Optional	
Revenue Grade Metering	Optional, External	
Communication Interface	RS-485 Modbus RTU	
Remote Firmware Upgrades	Standard	
Remote Diagnostics	Standard	
<b>Features &amp; Protections</b>		
Arc-Fault	Standard	
Smart Grid Features	L/HVRT, L/HFRT, Soft Start, Volt-Var, Frequency-Watt and Volt-Watt, Soft-Start, Soft-Step	
<b>Testing &amp; Certifications</b>		
Safety Listings & Certifications	UL 1741:2010, UL1699B, CSA-C22.2 #107.1, IEEE1547	
Advanced Grid Support Functionality	Rule 21, UL 1741SA	
Testing Agency	ETL	
FCC Compliance	FCC Part 15	
<b>Warranty</b>		
Standard and Options	10 year; Options for 15 or 20 years	
<b>Enclosure</b>		
Acoustic Noise Rating	< 60 dBA @ 1 m at room temperature	
AC/DC Disconnect	Standard, fully-integrated	
Mounting Angle**	0-90° from horizontal (vertical, angled, flat)	
Dimensions (H x W x D)	39.4 in. x 23.6 in. x 10.2 in (1000 x 600 x 260 mm)	
Weight	Inverter: 123.5 lbs (56 kg); Wiring Box: 33 lbs (15 kg)	
Enclosure Rating and Finish	Type 4X; Polyester Powder Coated Aluminum	

\*Yaskawa Solectria Solar does not supply the optional fuses

\*\*Shade cover accessory required for installation of 75° or less

**SOLECTRIA SOLAR**

**Yaskawa Solectria Solar**

360 Merrimack Street  
Lawrence, MA 01843  
[solectria.com](http://solectria.com)

1-978-683-9700  
[inverters@solectria.com](mailto:inverters@solectria.com)

DOCR-070642-K | May 2018  
© 2018 Yaskawa Solectria Solar

**YASKAWA**





- (Patent Pending)

**Delta - 1 Portrait**  
1 - High Ballasted Ground Mount

**Light-Weight Solution For Any Terrain**

The Delta is a non-penetrating ballasted ground mount system for any size solar installation. Ben-include several adjustment features varying terrain as well as UL 467 integrated grounding mid clamps. The Delta is an ideal solution for rocky soils, and impenetrable ground conditions. Patriot can install over 1 MW per week with a 6 man crew.

**Starter Section**



**Add-On Section**



**Key Features**

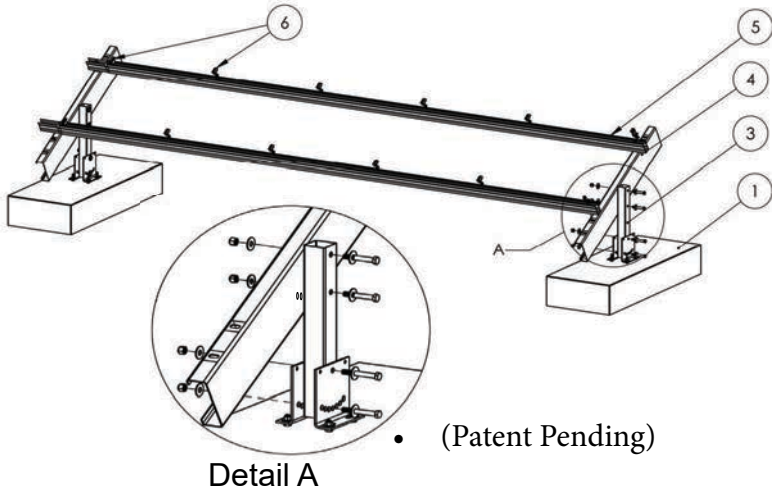
- 100% galvanized material
- Ideal for any scale project
- Can be installed on un-even terrain
- Minimal components for quick installation

**Rail Attachment**

- UL 467 grounding mid clamps
- Optimal solution for and
- Accomodates both 60 and 72 - cell panels
- Standard tilt angles between 5° - 40°

# Delta - 1

5 panel ballasted ground mount



• (Patent Pending)

## Major Components

### 1 Concrete Ballast Block

Available in multiple sizes to meet various wind loads, tilt angles, and height clearances. 10"x24"x60" Ballast Block weighs 1250 lbs. 10"x30"x60" Ballast Block weighs 1850 lbs.

### 2 Post Mounting Bracket

Pre-punched holes allow for tilt North / South adjustment to follow land contours with 0° - 20° of adjustability.

### 3 Adjustable Post

Multiple lengths available to meet various height clearances. Includes 1" increment holes for in field vertical adjustment.

### 4 Stamped Truss

Pre-punched truss design allows for faster connection to post. 5° - 40° tilt angles available in 5° increments.

### 5 Stamped Purlin

Quick assembly with easy adjustment. slide add-on Purlin into preceding Purlin section without the need for additional assembly hardware or splice bar.

### 6 Mid & End Clamps

Includes integrated UL 467 grounding mid clamps. Adjustable to accommodate all major module thicknesses from 30 mm - 50 mm.

## Technical Specifications

Application	Open Field, &
Foundation	Concrete Ballast Block
Module Orientation	Portrait
Module Compatibility	All Major Brands - 60 & 72 Cell Modules
Available Tilt Angles	5° - 40°
Ground Clearance	Standard - 24"
Grade of Terrain	NS = 20° / EW = 5°
Wind Load	Up to 100 MPH * Higher Wind Options Available
Snow Load	Up to 80 PSF *
Purlin Length	207"
Material Composition	Galvanized Steel Concrete Ballast Block
Warranty	20 Years
Manufacturing	Made in USA



No.	Part	Starter Section	Add-On Section
1.	10" Concrete Ballast with Hilti-Bolt 60" X 24" X 10" or 10" 10" x 24" x 60" Block - 1250 lbs 10" x 30" x 60" Block - 1850 lbs	2 pcs	1 pc
2.	Post Mounting Bracket	4 pcs	2 pcs
3.	Adjustable Post, 3" X 3" X 26"	2 pcs	1 pc
4.	52" Stamped Truss	2 pcs	1 pc
5.	207", 11 GA, Stamped Purlin	2 pcs	2 pcs
6.	Mid & End Clamps	12 pcs	12 pcs

All assembly hardware included.

\*Snow loads are ground snow loads es<sub>s</sub> i ted at 40 deg.

\*wind loads are es<sub>s</sub> i ted at 10 deg.

\*Loading is single factor snow only or wind only.

change



**Section V**  
**Price Quotation Sheets**

APPENDIX D-1a

**MANDATORY**  
QUOTATION PROPOSAL FORM – OPTION 1

**OPTION 1: LEASE FOR GROUND-MOUNTED GRID-CONNECTED PROJECT**

**Respondents MUST propose on Option 1 and MAY Option 2**

**NAME OF RESPONDENT:** HESP Solar LLC

**TO: PITTSGROVE TOWNSHIP**

**RE: REQUEST FOR PROPOSALS FOR A DEVELOPER OF A PHOTOVOLTAIC SYSTEM ON LANDS OWNED BY PITTSGROVE TOWNSHIP, SALEM COUNTY, NEW JERSEY DATED, JULY 2, 2019**

The undersigned, authorized to bind the above-named Respondent, hereby acknowledges Respondent's understanding and acceptance of the terms, conditions and requirements included in the RFP and all Appendices, including this **Appendix D-1a**, and any addenda thereto, and proposes to furnish and deliver the Services in accordance therewith:

**1. General:**

(A) At the Successful Respondent's sole cost, design, permit, acquire, construct, install, operate and maintain the Renewable Energy Project all in accordance with the terms set forth on this Quotation Form (**Appendix D-1a**), specifically, and all provisions of this RFP, generally. The Successful Respondent will own the Renewable Energy Project.

(B) **Services** – The Successful Respondent must perform all of the Services set forth in RFP Section 2.1. The Successful Respondent will be required to pay to the Township a lease payment pursuant to a Lease Agreement, and the Successful Respondent will retain the SRECs, if any, generated by the Renewable Energy Projects, and certain federal income tax benefits, all as discussed in RFP Section 2.1.

(C) **Project Development Costs** – The Project Development Costs, discussed in RFP Section 2.1, are currently estimated to be \$189,500 for Option 1. This estimate is subject to adjustment (see RFP Section 2.1, and section B below). The Successful Respondent shall be required to pay to the Township the Project Development Costs at the time of execution of the Lease Agreement.

**2. Project Forms:** The Successful Respondent will be required to enter into a Lease Agreement, meeting all the material terms and conditions of, and substantially in the forms of, **Appendix A-1**.

**3. Instructions for completing Appendix D-1a:** Respondent shall complete, execute and submit **Appendix D-1a** as required by the RFP, in accordance with the following:

**Section A. Preliminary Information.** Respondent must completely fill out Section A, subsections 1 through 5. These subsections are self-explanatory. Note that in subsection 1, a joint venture or other joint business arrangement, Respondent must list all entities in the joint venture or other joint business arrangement, and identify the managing or lead entity.

**Section B. Proposal.**

**Subsection 3. Total Project Costs.** Total Project Cost, and its components, must be set forth on the appropriate lines provided in subsection 3. For purposes of developing the Total Project Cost, Respondent shall presume the Project Development Costs of \$189,500 for Option 1. The other components to Total Project Costs – Renewable Energy Project costs (including solar panels, electrical modifications, inverters, interconnection and other needed equipment or work, as more particularly set forth in **Appendix B-1 and B-3** to this RFP), are to be determined by Respondent within the parameters of this RFP, and shall be inserted by Respondent on the appropriate lines. **Specifically, the Respondent must provide its estimated cost for interconnection of the Renewable Energy Project.**

**Subsection 4.** In subsection 4(a), Respondent must set forth its proposed Lease Payment, which shall not be less than \$0.01/Kwh, from the Commencement Date. In subsection 4(b), Respondents must propose a post-proposal adjustment in the Lease Payment expressed in dollars per kWh, in the event the estimated Project Development Costs increase or decrease (See RFP Section 2.1). At subsection 4(c), Respondent may propose an escalation factor expressed as a percentage of the increase in the Lease Payment over the prior year Lease Payment for each of years two (2) through (20) of the Lease, which years shall immediately follow each other, and begin on the anniversary date of the Commencement Date. If Respondent proposes no escalation, it must insert “none” on the appropriate line. Subsection 4(d) requires Respondents to propose a post-proposal Lease Payment adjustment factor, expressed in dollars per kWh, for unforeseen electrical interconnection costs that exceed \$150,000 (the “Unforeseen Costs”). Specifically, subject to verification, an adjustment to the Lease Payment for Unforeseen Costs in the ranges set forth below may be permitted under the following circumstance: following submission of an interconnection application to the local electric utility, additional unforeseen electrical related upgrades are required by the local electric utility as part of the interconnection process – e.g., transformer upgrade(s). The Lease Payment adjustment will be applied solely under the foregoing circumstance, if discovered following additional due diligence by the Successful Respondent, and not otherwise discoverable. The Successful Respondent will be required to provide a full accounting of such Unforeseen Costs to the Township and its Consultants for review and approval before work proceeds. The applicable post-proposal Lease Payment adjustment factor shall be applied to the Lease Payment without escalation. Respondents may submit up to three post-proposal Lease Payment adjustment factors for the following ranges of Unforeseen Costs in excess of \$150,00. Subsection 4(e) is Reserved.

**Subsection 5.** Subsection 5(a) requires that Respondent set forth the amount of electricity to be generated by the Renewable Energy Project (See RFP Section 1.3), measured in

kW (dc), and post inversion, annual kWh (ac) for each year of the twenty (20) year Lease. Subsection 5(b) requires that Respondent set forth the guaranteed amount of electricity to be generated by the Renewable Energy Project included in this RFP, measured in kW (dc), and post inversion, annual kWh (ac) for each year of the twenty (20) year term of the Lease. A minimum Guaranteed Lease payment will be included in the Lease based upon the guaranteed production of the Renewable Energy Project.

**Subsection 6.** Subsection 6(b) requires that Respondent provide a detailed description of any revision(s) it proposes to the Lease Agreement (**Appendix A-1**) and/or the Proposal Forms (**Appendices D-1 through D-15**, as appropriate), together with a justification for such revisions. The Township reserves the right, in its sole discretion, to determine whether such proposed revisions are material or non-material, consistent with law. If deemed non-material, the Township reserves the right, in its sole discretion, to determine whether such non-material revisions are acceptable to it. Revisions deemed material shall result in Respondent's Proposal being rejected as non-responsive. **Accordingly, Respondents should pose all questions to the Township regarding proposed revisions, in accordance with the process established in RFP Section 1.5. This will permit the Township to consider such proposed revisions prior to the Proposal Submission Date and, if the Township deems such revisions acceptable, it will issue an addendum to the RFP.** The Township reserves the sole and exclusive right to accept, reject or modify any and all such proposed revisions received during the period established in RFP Section 1.5.

**Subsection 7.** Subsection 7 allows Respondent to propose innovative benefits, as contemplated by RFP Section 3.15B.

**Subsection 8.** Subsection 8 allows Respondent, at its option, to provide a form of removal and restoration security to be held in favor of or by the Township and intended to ensure the proper and timely removal of the Renewable Energy Project, and restoration of the Township's property to satisfactory condition at the end of the Lease term.

APPENDIX D-1a (continued)

OPTION 1

QUOTATION FORM

Respondents MUST propose on Option 1 and MAY Option 2

**A. Preliminary Information:**

1. Respondent: HESP Solar LLC

---

[List all entities if a joint venture, and identify lead entity—attach any additional sheets as necessary]

2. Date: August 6th, 2019

3. Does Respondent intend to form a special purpose entity?

[Answer yes or no] No

4. Lease term is 20 years.

5. Respondent Contact Person:

Name: Susan Brodie Title: EVP

Phone: 845-405-0600 ext.222 Fax: 914-485-4891

E-mail Address: sbrodie@hespsolar.com Cell: 914-714-9341

Signature: 

Date: 8/6/2019

**B. Proposal:**

1. *General.* By executing this Proposal form, the Respondent Contact Person is authorized to bind the Respondent to all of the representations and terms of this Proposal form, and Respondent is so bound.

2. *Defined Terms in Proposal Form.* Capitalized terms not defined in this Proposal form shall be as defined in the RFP.

3. *Total Project Costs:*

Respondent proposes that the Total Project Cost shall be \$ 4,753,500, the sum of:

- (i) Project Development Costs of \$189,500; and
- (ii) Estimated Interconnection Costs \$ 200,000
- (ii) Renewable Energy Project costs of \$ 4,364,000

4. *Lease Payment and related information.* Respondent hereby proposes the following Lease Payment (**Note: Lease Payment must be not less than \$0.01/kWh**), and related information, to perform the Services, which Lease Payment for each year of the Lease (including any escalation factor below) shall be established in a Lease Payment table to be included in the Lease.

(a) Lease Payment. Respondent proposes the following Lease Payment to be paid to the Township for the lease of the Facility included in this RFP, expressed in dollars per kWh, from the Commencement Date to, but excluding the first anniversary of such Commencement Date (exclusive of any escalation factor):

**Lease Payment (\$ per kWh, from Commencement Date for one year), \$ 0.029 /kWh exclusive of escalation factor, if any**

(b) (i) Lease Payment Adjustment – Project Development Costs. Respondent must set forth below an adjustment factor to the Lease Payment, expressed in dollars per kWh, in the initial year of the Lease Payment (from the Commencement Date) in the event that the Project Development Costs (presently estimated at \$189,500) increase or decrease (See RFP Section 2.1). The annual adjustment proposed shall be for each \$10,000 increase or decrease in the Project Development Costs. Project Development Costs shall be paid by the Successful Respondent to the Township at the time of Lease execution.

**Adjustment to Lease Payment (\$ per kWh) for each \$10,000 increase or decrease in the Project Development Costs from \$189,500. \$ 0.0001 /kWh**

(c) Escalation Factor. The Lease Payment proposed in subsection (a) above, shall be increased for each remaining year of the Lease (other than the initial year from the Commencement Date), by the following constant, escalation factor, expressed as an annual percentage increase from the prior year's Lease Payment. If no escalation factor is being proposed, write none in the space below:



**Lease Payment fixed escalation factor for all subsequent years of Lease (expressed as an annual percentage increase from the prior year's Lease Payment)**

1 %

(d) Lease Payment Post Proposal Adjustment (Downward) – Unforeseen Costs (Electrical Interconnection). Respondent must set forth below an adjustment factor to the Lease Payment, expressed in dollars per kWh, in the initial year of the Lease (from the Commencement Date) in the event of Unforeseen Costs related to electrical interconnection requirements imposed by the local electric utility. If aggregate Unforeseen Costs are less than \$150,000, no price adjustment will be made. If aggregate Unforeseen Costs are \$150,000 or greater, the applicable adjustment, proposed below, may be applied to the Lease Payment.

**Adjustment to Lease Payment (\$ per kWh) downward in the initial year of the Lease from Commencement Date, for Unforeseen Costs in the following ranges:**

- A. \$ 10,000 - \$ 20,000 : \$ 0.0001 /kWh
- B. \$ 20,000 - \$ 30,000 : \$ 0.0002 /kWh
- C. \$ 30,000 and above: \$ 0.0005 /kWh

(e) Reserved

5. *Production of Electricity.*

(a) Expected System Output. Respondent must provide the expected solar output in kWh (ac), for each year of the 20 year Lease term. The basis for this calculation shall be determined by using PVWatts Version 1 or 2, Helioscope, or PVSyst based upon orientation and tilt angle of the specific system.

<u>Option 1</u>	<b>System Size (KW)</b>	<b>Expected System Output (kWh) per <u>PV Watts</u></b>
Pittsgrove Landfill	2,182.4 kW	3,075,002

(b) Guaranteed Output. Please provide the guaranteed output, in kWh (ac) for each year of the 20 year Lease term. The Successful Respondent must guarantee annual electricity output for the Renewable Energy Project (Guaranteed Production Level), which Guaranteed Production Level will be converted (based on final system size) to a Guaranteed Lease Payment in the Lease. The Guaranteed Production Level must be ninety (90) percent of the expected electricity output from the Renewable Energy Project. These Guaranteed Production Levels shall be part of the final Lease.

<u>Option 1</u>	System Size (KW)	Guaranteed System Output (kWh) per <u>PV Watts</u>
Pittsgrove Landfill	2,182.4	2,767,501

6. *Non-Material Changes.* Respondents are advised that any material revisions to the Project Documents (**Appendix A-1**) and/or the Proposal Forms (**Appendix D**) shall result in Respondent's Proposal being rejected as non-responsive. If Respondent proposes to make any non-material revision(s) to these documents, Respondent shall provide a detailed description of the proposed revision(s) together with a justification for such revisions, below. The Township reserves the right, in their sole discretion, to determine whether such proposed revisions are material or non-material, consistent with law. If deemed non-material, the Township reserves the right, in their sole discretion, to determine whether such non-material revisions are acceptable.

(a)  None.

(b) Respondent proposes the following changes to the following identified documents:

---



---



---



---



---



---



---



---



---

[attach additional sheets as necessary]

7. *Innovative Benefits.* Describe any proposed innovative benefits being offered to the Township as contemplated by RFP Section 3.15B.

(a)  None.

(c) Respondent proposes the following innovative benefits:

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

[attach additional sheets as necessary]

8. *Removal and Restoration Security.*

(a) General. Respondent, at its option, to provide a form of removal and restoration security to be held in favor or by the Township and intended to ensure the proper and timely removal of the Renewable Energy Project, and restoration of the Township's property to satisfactory condition at the end of the Lease term.

(i) Respondent proposes the following form of removal and restoration security:

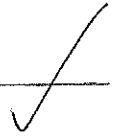
---

---

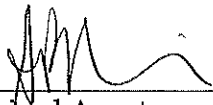
---

(i) No estimate provided

Check here



[RESPONDENT]



\_\_\_\_\_  
Signature of Authorized Agent

Title: EVP

\_\_\_\_\_  
Susan Brodie

Type or Print Name

Date: 8/6/19

APPENDIX D-1b

OPTIONAL  
QUOTATION PROPOSAL FORM – OPTION 2

**OPTION 1: LEASE FOR GROUND-MOUNTED GRID-CONNECTED PROJECT AND OPERATING AS A COMMUNITY SOLAR PROJECT APPROVED BY THE BOARD OF PUBLIC UTILITIES**

Respondents MUST propose on Option 1 and MAY Option 2 If a Respondent proposes on Option 2, is selected as the Successful Respondent and is ultimately unable to obtain BPU approval for a Community Solar Project, then Respondent shall be required to implement its Option 1 proposal.

NAME OF RESPONDENT: HESP Solar LLC

TO: **PITTSGROVE TOWNSHIP**

RE: **REQUEST FOR PROPOSALS FOR A DEVELOPER OF A PHOTOVOLTAIC SYSTEM ON LANDS OWNED BY PITTSGROVE TOWNSHIP, SALEM COUNTY, NEW JERSEY DATED, JULY 2, 2019**

The undersigned, authorized to bind the above-named Respondent, hereby acknowledges Respondent's understanding and acceptance of the terms, conditions and requirements included in the RFP and all Appendices, including this **Appendix D-1b**, and any addenda thereto, and proposes to furnish and deliver the Services in accordance therewith:

1. General:

(A) At the Successful Respondent's sole cost, design, permit, acquire, construct, install, operate and maintain the Renewable Energy Project as a **Community Solar Project** all in accordance with the terms set forth on this Quotation Form (**Appendix D-1b**), specifically, and all provisions of this RFP, generally. The Successful Respondent will own the Renewable Energy Project.

(B) **Services** – The Successful Respondent must perform all of the Services set forth in RFP Section 2.1. The Successful Respondent will be required to pay to the Township a lease payment pursuant to a Lease Agreement, and the Successful Respondent will sell energy from the Project as a Community Solar Project pursuant to approvals to be obtained from the Board of Public Utilities, will retain the SRECs, if any, generated by the Renewable Energy Projects, and will retain certain federal income tax benefits, all as discussed in RFP Section 2.1.

(C) **Project Development Costs** – The Project Development Costs, discussed in RFP Section 2.1, are currently estimated to be \$189,500 for Option 1. This estimate is subject to adjustment (see RFP Section 2.1, and section B below). The Successful Respondent shall be

required to pay to the Township the Project Development Costs at the time of execution of the Lease Agreement.

**2. Project Forms:** The Successful Respondent will be required to enter into a Lease Agreement, meeting all the material terms and conditions of, and substantially in the forms of, **Appendix A-1**.

**3. Instructions for completing Appendix D-1b:** Respondent shall complete, execute and submit **Appendix D-1a** as required by the RFP, in accordance with the following:

**Section A. Preliminary Information.** Respondent must completely fill out Section A, subsections 1 through 5. These subsections are self-explanatory. Note that in subsection 1, a joint venture or other joint business arrangement, Respondent must list all entities in the joint venture or other joint business arrangement, and identify the managing or lead entity.

**Section B. Proposal.**

**Subsection 3. Total Project Costs.** Total Project Cost, and its components, must be set forth on the appropriate lines provided in subsection 3. For purposes of developing the Total Project Cost, Respondent shall presume the Project Development Costs of \$189,500 for Option 1. The other components to Total Project Costs – Renewable Energy Project costs (including solar panels, electrical modifications, inverters, interconnection and other needed equipment or work, as more particularly set forth in **Appendix B-1 and B-3** to this RFP), are to be determined by Respondent within the parameters of this RFP, and shall be inserted by Respondent on the appropriate lines. Specifically, the Respondent must provide its estimated cost for interconnection of the Renewable Energy Project.

**Subsection 4.** In subsection 4(a), Respondent must set forth its proposed Lease Payment, which shall not be less than \$0.01kWh, from the Commencement Date. In subsection 4(b), Respondents must propose a post-proposal adjustment in the Lease Payment expressed in dollars per kWh, in the event the estimated Project Development Costs increase or decrease (See RFP Section 2.1). At subsection 4(c), Respondent may propose an escalation factor expressed as a percentage of the increase in the Lease Payment over the prior year Lease Payment for each of years two (2) through (20) of the Lease, which years shall immediately follow each other, and begin on the anniversary date of the Commencement Date. If Respondent proposes no escalation, it must insert “none” on the appropriate line. Subsection 4(d) requires Respondents to propose a post-proposal Lease Payment adjustment factor, expressed in dollars per kWh, for unforeseen electrical interconnection costs that exceed \$150,000 (the “Unforeseen Costs”). Specifically, subject to verification, an adjustment to the Lease Payment for Unforeseen Costs in the ranges set forth below may be permitted under the following circumstance: following submission of an interconnection application to the local electric utility, additional unforeseen electrical related upgrades are required by the local electric utility as part of the interconnection process – e.g., transformer upgrade(s). The Lease Payment adjustment will be applied solely under the foregoing circumstance, if discovered following additional due diligence by the Successful Respondent, and not otherwise discoverable. The Successful Respondent will be required to provide a full accounting of such Unforeseen Costs to the Township and its

Consultants for review and approval before work proceeds. The applicable post-proposal Lease Payment adjustment factor shall be applied to the Lease Payment without escalation. Respondents may submit up to three post-proposal Lease Payment adjustment factors for the following ranges of Unforeseen Costs in excess of \$150,000. Subsection 4(e) is Reserved.

**Subsection 5.** Subsection 5(a) requires that Respondent set forth the amount of electricity to be generated by the Renewable Energy Project (See RFP Section 1.3), measured in kW (dc), and post inversion, annual kWh (ac) for each year of the twenty (20) year Lease. Subsection 5(b) requires that Respondent set forth the guaranteed amount of electricity to be generated by the Renewable Energy Project included in this RFP, measured in kW (dc), and post inversion, annual kWh (ac) for each year of the twenty (20) year term of the Lease. A minimum Guaranteed Lease payment will be included in the Lease based upon the guaranteed production of the Renewable Energy Project.

**Subsection 6.** Subsection 6(b) requires that Respondent provide a detailed description of any revision(s) it proposes to the Lease Agreement (**Appendix A-1**) and/or the Proposal Forms (**Appendices D-1 through D-15**, as appropriate), together with a justification for such revisions. The Township reserves the right, in its sole discretion, to determine whether such proposed revisions are material or non-material, consistent with law. If deemed non-material, the Township reserves the right, in its sole discretion, to determine whether such non-material revisions are acceptable to it. Revisions deemed material shall result in Respondent's Proposal being rejected as non-responsive. **Accordingly, Respondents should pose all questions to the Township regarding proposed revisions, in accordance with the process established in RFP Section 1.5. This will permit the Township to consider such proposed revisions prior to the Proposal Submission Date and, if the Township deems such revisions acceptable, it will issue an addendum to the RFP.** The Township reserves the sole and exclusive right to accept, reject or modify any and all such proposed revisions received during the period established in RFP Section 1.5.

**Subsection 7.** Subsection 7 allows Respondent to propose innovative benefits, as contemplated by RFP Section 3.15B.

**Subsection 8.** Subsection 8 allows Respondent, at its option, to provide a form of removal and restoration security to be held in favor or by the Township and intended to ensure the proper and timely removal of the Renewable Energy Project, and restoration of the Township's property to satisfactory condition at the end of the Lease term.

APPENDIX D-1b (continued)

OPTION 2

QUOTATION FORM

Respondents MUST propose on Option 1 and MAY Option 2 If a Respondent proposes on Option 2, is selected as the Successful Respondent and is ultimately unable to obtain BPU approval for a Community Solar Project, then Respondent shall be required to implement its Option 1 proposal.

**A. Preliminary Information:**

1. Respondent: HESP Solar LLC

---

[List all entities if a joint venture, and identify lead entity—attach any additional sheets as necessary]

2. Date: August 6th, 2019

3. Does Respondent intend to form a special purpose entity?

[Answer yes or no] No

4. Lease term is 20 years.

5. Respondent Contact Person:

Name: Susan Brodie Title: EVP

Phone: 845-405-0600 ext. 223 Fax: 914-485-4891

E-mail Address: sbrodie@hespsolar.com Cell: 914-714-9341

Signature: 

Date: 8/6/19

**B. Proposal:**

1. *General.* By executing this Proposal form, the Respondent Contact Person is authorized to bind the Respondent to all of the representations and terms of this Proposal form, and Respondent is so bound.



2. *Defined Terms in Proposal Form.* Capitalized terms not defined in this Proposal form shall be as defined in the RFP.

3. *Total Project Costs:*

Respondent proposes that the Total Project Cost shall be \$ 4,753,500, the sum of:

- (i) Project Development Costs of \$189,500; and
- (ii) Estimated Interconnection Costs \$ 200,000
- (ii) Renewable Energy Project costs of \$ 4,364,000

4. *Lease Payment and related information.* Respondent hereby proposes the following Lease Payment (**Note: Lease Payment must be not less than \$0.01/kWh**), and related information, to perform the Services, which Lease Payment for each year of the Lease (including any escalation factor below) shall be established in a Lease Payment table to be included in the Lease.

(a) Lease Payment. Respondent proposes the following Lease Payment to be paid to the Township for the lease of the Facility included in this RFP, expressed in dollars per kWh, from the Commencement Date to, but excluding the first anniversary of such Commencement Date (exclusive of any escalation factor):

**Lease Payment (\$ per kWh, from Commencement Date for one year), \$ 0.065/kWh exclusive of escalation factor, if any**

(b) (i) Lease Payment Adjustment – Project Development Costs. Respondent must set forth below an adjustment factor to the Lease Payment, expressed in dollars per kWh, in the initial year of the Lease Payment (from the Commencement Date) in the event that the Project Development Costs (presently estimated at \$189,500) increase or decrease (See RFP Section 2.1). The annual adjustment proposed shall be for each \$10,000 increase or decrease in the Project Development Costs. Project Development Costs shall be paid by the Successful Respondent to the Township at the time of Lease execution.

**Adjustment to Lease Payment (\$ per kWh) for each \$10,000 increase or decrease in the Project Development Costs from \$189,500. \$ 0.0001/kWh**

(c) Escalation Factor. The Lease Payment proposed in subsection (a) above, shall be increased for each remaining year of the Lease (other than the initial year from the Commencement Date), by the following constant, escalation factor, expressed as an annual percentage increase from the prior year's Lease Payment. If no escalation factor is being proposed, write none in the space below:

**Lease Payment fixed escalation factor for all subsequent years of Lease (expressed as an annual percentage increase from the prior year's Lease Payment)**

1 %

(d) Lease Payment Post Proposal Adjustment (Downward) – Unforeseen Costs (Electrical Interconnection). Respondent must set forth below an adjustment factor to the Lease Payment, expressed in dollars per kWh, in the initial year of the Lease (from the Commencement Date) in the event of Unforeseen Costs related to electrical interconnection requirements imposed by the local electric utility. If aggregate Unforeseen Costs are less than \$150,000, no price adjustment will be made. If aggregate Unforeseen Costs are \$150,000 or greater, the applicable adjustment, proposed below, may be applied to the Lease Payment.

**Adjustment to Lease Payment (\$ per kWh) downward in the initial year of the Lease from Commencement Date, for Unforeseen Costs in the following ranges:**

- A. \$ 10,000 - \$ 20,000 : \$ 0.0001 /kWh
- B. \$ 20,000 - \$ 30,000 : \$ 0.0002 /kWh
- C. \$ 30,000 and above: \$ 0.0005 /kWh

(e) Reserved

5. *Production of Electricity.*

(a) Expected System Output. Respondent must provide the expected solar output in kWh (ac), for each year of the 20 year Lease term. The basis for this calculation shall be determined by using PVWatts Version 1 or 2, Helioscope, or PVSyst based upon orientation and tilt angle of the specific system.

<u>Option 1</u>	<u>System Size (KW)</u>	<u>Expected System Output (kWh) per PV Watts</u>
Pittsgrove Landfill	2,182.4	3,075,002

(b) Guaranteed Output. Please provide the guaranteed output, in kWh (ac) for each year of the 20 year Lease term. The Successful Respondent must guarantee annual electricity output for the Renewable Energy Project (Guaranteed Production Level), which Guaranteed Production Level will be converted (based on final system size) to a Guaranteed Lease Payment in the Lease. The Guaranteed Production Level must be ninety (90) percent of the expected electricity

output from the Renewable Energy Project. These Guaranteed Production Levels shall be part of the final Lease.

<u>Option 1</u>	System Size (KW)	Guaranteed System Output (kWh) per <u>PV Watts</u>
Pittsgrove Landfill	2,182.4	2,767,501

6. *Non-Material Changes.* Respondents are advised that any material revisions to the Project Documents (**Appendix A-1**) and/or the Proposal Forms (**Appendix D**) shall result in Respondent's Proposal being rejected as non-responsive. If Respondent proposes to make any non-material revision(s) to these documents, Respondent shall provide a detailed description of the proposed revision(s) together with a justification for such revisions, below. The Township reserves the right, in their sole discretion, to determine whether such proposed revisions are material or non-material, consistent with law. If deemed non-material, the Township reserves the right, in their sole discretion, to determine whether such non-material revisions are acceptable.

(a)                      None.

(b) Respondent proposes the following changes to the following identified documents:

---



---



---



---



---



---



---



---



---



---

[attach additional sheets as necessary]

7. *Innovative Benefits.* Describe any proposed innovative benefits being offered to the Township as contemplated by RFP Section 3.15B.

(a) ~~\_\_\_\_\_~~ None.

(c) Respondent proposes the following innovative benefits:

---

---

---

---

---

---

---

---

---

---

[attach additional sheets as necessary]

8. *Removal and Restoration Security.*

(a) General. Respondent, at its option, to provide a form of removal and restoration security to be held in favor or by the Township and intended to ensure the proper and timely removal of the Renewable Energy Project, and restoration of the Township's property to satisfactory condition at the end of the Lease term.

(ii) Respondent proposes the following form of removal and restoration security:

---

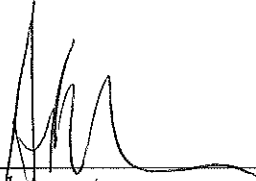
---

---

(ii) No estimate provided

Check here

[RESPONDENT]



\_\_\_\_\_  
Signature of Authorized Agent

Susan Brodie

\_\_\_\_\_  
Type or Print Name

Title: EVP

.....Date: 8/6/19



## **Section VI**

### **All Other Appendix D Proposal Forms**

APPENDIX D-3

FORM OF CONSENT OF SURETY FOR  
CONSTRUCTION PERFORMANCE BOND

In completing this Consent of Surety, this Surety shall not add any conditions to its obligation to provide the Performance Bond referred to herein.

In consideration of the sum of One Dollar (\$1.00), lawful money of the United States, to it in hand paid, the receipt whereof is hereby acknowledged, <sup>The Guarantee Company of</sup> (hereinafter, the "Surety"), organized and existing under the laws of the State of <sup>North America USA</sup> MI and duly authorized and qualified to transact business in the State of New Jersey, the undersigned Surety, consents and agrees that if HESP Solar, LLC, (hereinafter, "Respondent") is selected as the Successful Respondent and awarded a Power Purchase Agreement by Pittsgrove Township ("Township") under this Request for Proposals for a Developer of Photovoltaic Systems (RFP), the undersigned Surety will become bound as Surety for the Respondent's faithful performance of designing, permitting, acquiring, constructing and installing (collectively, "Construction") of the Renewable Energy Project all as set forth in the RFP, to the point of commercial operation of the Renewable Energy Project under the Lease Agreement, and the Surety will provide Respondent with a Construction Performance Bond in 100% of the "Renewable Energy Project Cost" proposed by Respondent on Proposal Forms D-1 all as required under the RFP. This Consent of Surety shall not cover any other performance obligations of Respondent or any other party set forth in the Lease Agreement.

This Consent of Surety shall become effective on the date set forth below and remain in effect until the Surety shall issue the Construction Performance Bond.

IN WITNESS WHEREOF, said Surety has caused these presents to be signed and attested by a duly authorized officer, and its corporate seal to be hereto affixed this 7th day of August, 2019.

(A power of attorney, corporate acknowledgment and statement of authority to be attached hereto by the surety company.)

ATTEST:

By: \_\_\_\_\_

(Signature)

Name: \_\_\_\_\_

SUSAN BRODIE

Title: \_\_\_\_\_

ESP

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

8/8/19

The Guarantee Company of North America USA

(Name of Surety)

By: \_\_\_\_\_

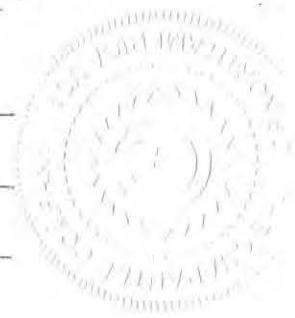
*[Signature]*

Title: \_\_\_\_\_

Jeffrey W. Price, Attorney-In-Fact

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

8/7/19





APPENDIX D-6

FORM OF PROPOSAL BOND

(THIS FORM IS TO BE COMPLETED IF THE RESPONDENT PROVIDES A PROPOSAL BOND WITH ITS PROPOSAL INSTEAD OF A CERTIFIED CHECK OR CASHIER'S CHECK.)

KNOW ALL MEN BY THESE PRESENTS, that, HESP Solar, LLC |, as Principal (hereinafter, the "Principal") and The Guarantee Company of North America USA, a [Corporation] [Partnership] duly organized under the laws of the State of MI, as Surety (hereinafter, the "Surety"), are held and firmly bound unto PITTSBORO TOWNSHIP, as Oblige (hereinafter, the "Oblige"), in the sum of TWENTY THOUSAND (\$20,000) DOLLARS lawful money of the United States of America, for which payment well and truly to be made, the said Principal and Surety bind ourselves, our successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted or is about to submit to the Oblige a Proposal for the provision of certain Services, which Proposal is made a part hereof;

NOW THEREFORE, the Surety hereby understands that if the said Proposal is accepted and the Lease Agreement (the "Agreement") be awarded to the Respondent, said Principal will execute the Agreement and give the Construction Performance Bond with Surety acceptable to the Oblige for the faithful performance of Oblige's Construction Obligations, or if the Principal shall fail to enter such agreement and give such Construction Performance Bond, then the Principal shall be deemed to have abandoned the Services and the Agreements, and thereupon the Proposal and its acceptance shall be null and void. In such event, Surety hereby agrees that it will pay to the Oblige the Penal amount of this Proposal Bond as liquidated damages; otherwise the said Bond shall be returned to the undersigned concurrently upon the issuance of a Notice to Proceed, if any, by the Oblige, and the receipt by the Oblige of the Successful Respondent's Construction Performance Bond.

It is agreed that this Proposal Bond shall be effective on the date the Proposal is submitted and will continue in full force until the issuance of a Notice to Proceed by the Oblige, and the receipt by the Oblige of the Successful Respondent's Construction Performance Bond.

SIGNED AND SEALED this 7th day of August 2019 .

In the presence of:

[Signature] (Seal)
PRINCIPAL
[Signature]
WITNESS

TITLE

The Guarantee Company of North America USA

[Signature] (Seal)
SURETY

[Signature]
WITNESS

Attorney-In-Fact
TITLE

**BID BOND**

**The Guarantee Company of North America USA  
One Towne Square Suite 1470, Southfield, MI 48076**

KNOWN ALL BY THESE PRESENTS, That we, HESP Solar LLC,  
as Principal, and The Guarantee Company of North America USA, as Surety, are  
held and firmly bound unto Edison Board of Education, as  
Obligee, in the sum of Twenty Thousand and 00/100  
Dollars ( \$20,000.00 ) for the payment of which we bind ourselves, and our  
successors and assigns, jointly and severally, as provided herein.

WHEREAS, Principal has submitted or is about to submit a bid to the Obligee on a  
contract for Supply and Install Solar Power System ("Project").

NOW, THEREFORE, the condition of this bond is that if Obligee accepts Principal's bid,  
and Principal enters into a contract with Obligee in conformance with the terms of the  
bid and provides such bond or bonds as may be specified in the bidding or contract  
documents, then this obligation shall be void; otherwise Principal and Surety will pay to  
Obligee the difference between the amount of Principal's bid and the amount for which  
Obligee shall in good faith contract with another person or entity to perform the work  
covered by Principal's bid, but in no event shall Surety's and Principal's liability exceed  
the penal sum of this bond.

Signed this 7th day of August, 2019.

HESP Solar, LLC  
(Principal)  
By: [Signature]

The Guarantee Company of North America USA  
By: [Signature]  
Jeffrey W. Price, Attorney-in-Fact



Any performance bonds required under this contract will cover only construction of  
the project until commencement of commercial operation. This bid bond does not  
guarantee that surety will provide restoration bond.

-----  
Surety Acknowledgment

State of New York }  
County of Nassau } ss:

On this 7<sup>th</sup> day of August, 2019, before me personally came Jeffrey W. Price to me known, who, being by me duly sworn, did depose and say that he/she is an attorney-in-fact of The Guarantee Company of North America USA the corporation described in and which executed the within instrument; that he knows the corporate seal of said corporation; that the seal affixed to the within instrument is such corporate seal, and that he signed the said instrument and affixed the said seal as Attorney-in-Fact by authority of the Board of Directors of said corporation and by authority of this office under the Standing Resolutions thereof.

My commission expires

MARY A. PRICE  
NOTARY PUBLIC, State of New York  
No. 01PR5056603  
Qualified in Nassau County  
Commission Expires 03/04/ 22

  
\_\_\_\_\_  
Notary Public



**THE GUARANTEE COMPANY OF NORTH AMERICA USA**  
Southfield, Michigan

**SURETY DISCLOSURE STATEMENT AND CERTIFICATION**  
Pursuant to N.J.S.A. 2A:44-143

The Guarantee Company of North America USA, surety(ies) on the attached bond, hereby certifies(y) the following:

- 1) The surety meets the applicable capital and surplus requirements of R.S.17:17-6 or R.S.17:17-7 as of the surety's most current annual filing with the Michigan Department of Insurance and Financial Services.
- 2) The capital and surplus, as determined in accordance with the applicable laws of this State, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, 2017 which amounts have been certified as indicated by certified public accountants Ernst and Young LLP, One Kennedy Square, Suite 1000, 777 Woodward Avenue, Detroit, MI 48226.

<u>Surety Company</u>	<u>Capital Surplus</u>
The Guarantee Company of North America USA	\$189,950,348

- 3) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows:

<u>Surety Company</u>	<u>Limitation</u>	<u>Date</u>
The Guarantee Company of North America USA	\$18,995,000	July 1, 2018

- 4) The amount of the bond to which this statement and certification is attached is \$ \_\_\_\_\_
- 5) If, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3) above, then for each such contract of reinsurance:
  - a) The name and address of the reinsurer under that contract if applicable, and the amount of that reinsurer's participation in the contract is:

Limitation

NOT APPLICABLE


and

- b) Each surety that is party to any such contract of reinsurance certifies that each reinsurer listed under item (5)(a) satisfies the credit for reinsurance requirement established under P.L.1993, c.243 (C.17:51B-1 et seq.) and any applicable regulations in effect as of the date on which the bond to which this statement and certification is attached shall have been filed with the appropriate public agency.

**CERTIFICATE**

I, Jeffrey W. Price, as Attorney-in-fact for The Guarantee Company of North America USA, a corporation domiciled in Michigan, DO HEREBY CERTIFY that, to the best of my knowledge, the foregoing statements made by me are true, and ACKNOWLEDGE that, if any of those statements are false, this bond is VOIDABLE.

Dated this 7th day of August, 2018

  
\_\_\_\_\_  
, Attorney-in-fact  
(Title)

**THE GUARANTEE COMPANY OF NORTH AMERICA USA**  
**Home Office, Southfield, Michigan**  
**STATUTORY BALANCE SHEET**  
**December 31, 2018**

**ASSETS**

Cash and Short-Term Investments	\$ 88,508,407
Marketable Securities	151,857,941
Premium and Agents Balances (under 90 days)	5,007,524
Reinsurance Receivable on paid losses	529,666
Accrued Interest and Dividends	812,435
Net Deferred Tax Asset	1,637,933
Other Assets	<u>1,195,275</u>
Total Admitted Assets	<u><u>\$249,549,181</u></u>

**LIABILITIES**

Reserve for Losses and Loss Adjustment Expenses	\$ 9,077,422
Unearned Premium Reserve	22,744,950
Accrued Expenses	4,210,825
Ceded Reinsurance Premiums Payable	1,207,940
Taxes, Licenses and Fees Payable	374,668
Federal Income Tax Payable	296,413
Funds Held	9,869,832
Other Liabilities	<u>1,844,929</u>
Total Liabilities	<u><u>\$ 49,626,979</u></u>

**CAPITAL AND SURPLUS**

Common Stock and Paid-In Capital	\$144,020,970
Surplus	<u>55,901,232</u>
Total Policyholders' Surplus	<u><u>\$199,922,202</u></u>
Total Liabilities, Capital and Surplus	<u><u>\$249,549,181</u></u>

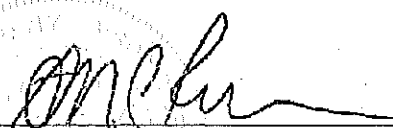
State of Michigan  
County of Oakland

Stephen C. Ruschak being duly sworn, says: That he is the President & COO of The Guarantee Company of North America USA; that said company is a corporation duly organized, existing, and engaged in business as a surety by virtue of the laws of the State of Michigan, and has duly complied with all the requirements of the laws of said state applicable to said company and is duly qualified to act as surety under such laws; that said company has also complied with and is duly qualified to act as surety under the Act of Congress of July 30, 1947, as amended (6 U.S.C. 6-13); that the foregoing is a full, true and correct statement of the financial condition of said company on the 31<sup>st</sup> day of December 2018.

Sworn to before me this 19th day of March 2019.

*Cynthia A. Takai*  
Notary

Cynthia A. Takai  
Notary Public, State of Michigan  
County of Oakland  
My Commission Expires February 27, 2024  
Acting in Oakland County

  
Stephen C. Ruschak, President & COO



The Guarantee Company of North America USA  
Southfield, Michigan

**POWER OF ATTORNEY**

KNOW ALL BY THESE PRESENTS: That THE GUARANTEE COMPANY OF NORTH AMERICA USA, a corporation organized and existing under the laws of the State of Michigan, having its principal office in Southfield, Michigan, does hereby constitute and appoint

Jeffrey W. Price, Rachel L. Price  
Price and Price Enterprises, Inc.

its true and lawful attorney(s)-in-fact to execute, seal and deliver for and on its behalf as surety, any and all bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof, which are or may be allowed, required or permitted by law, statute, rule, regulation, contract or otherwise.

The execution of such instrument(s) in pursuance of these presents, shall be as binding upon THE GUARANTEE COMPANY OF NORTH AMERICA USA as fully and amply, to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at the principal office.

The Power of Attorney is executed and may be certified so, and may be revoked, pursuant to and by authority of Article IX, Section 9.03 of the By-Laws adopted by the Board of Directors of THE GUARANTEE COMPANY OF NORTH AMERICA USA at a meeting held on the 31<sup>st</sup> day of December, 2003. The President, or any Vice President, acting with any Secretary or Assistant Secretary, shall have power and authority:

1. To appoint Attorney(s)-in-fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof; and
2. To revoke, at any time, any such Attorney-in-fact and revoke the authority given, except as provided below
3. In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.
4. In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner – Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

Further, this Power of Attorney is signed and sealed by facsimile pursuant to resolution of the Board of Directors of the Company adopted at a meeting duly called and held on the 6th day of December 2011, of which the following is a true excerpt:

RESOLVED that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, contracts of indemnity and other writings obligatory in the nature thereof, and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, THE GUARANTEE COMPANY OF NORTH AMERICA USA has caused this instrument to be signed and its corporate seal to be affixed by its authorized officer, this 23rd day of February, 2012.

THE GUARANTEE COMPANY OF NORTH AMERICA USA



STATE OF MICHIGAN  
County of Oakland

Stephen C. Ruschak, Sr. Vice President, COO

Randall Musselman, Secretary

On this 23rd day of February, 2012 before me came the individuals who executed the preceding instrument, to me personally known, and being by me duly sworn, said that each is the herein described and authorized officer of The Guarantee Company of North America USA; that the seal affixed to said instrument is the Corporate Seal of said Company; that the Corporate Seal and each signature were duly affixed by order of the Board of Directors of

Cynthia A. Takai  
Notary Public, State of Michigan  
County of Oakland  
My Commission Expires February 27, 2018  
Acting in Oakland County

IN WITNESS WHEREOF, I have hereunto set my hand at The Guarantee Company of North America USA offices the day and year above written.

I, Randall Musselman, Secretary of THE GUARANTEE COMPANY OF NORTH AMERICA USA, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by THE GUARANTEE COMPANY OF NORTH AMERICA USA, which is still in full force and effect.

IN WITNESS WHEREOF, I have thereunto set my hand and attached the seal of said Company this 7<sup>th</sup> day of August, 2019



Randall Musselman, Secretary

APPENDIX D-7

**STOCKHOLDER DISCLOSURE CERTIFICATION**

This Statement Shall Be Included with Bid Submission

Name of Respondent's Business HESP Solar LLC

**CHECK ONE:**

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

OR

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

If a corporation owns all or part of the stock of the corporation or partnership submitting the bid, then the statement shall include a list of the stockholders who own 10% or more of the stock of any class of that owning corporation. If no one owns 10% or more stock, attest to that.

**Check the box that represents the type of business organization:**

- Partnership
- Limited Partnership
- Subchapter S Corporation
- Corporation
- Limited Liability Partnership
- Sole Proprietorship
- Limited Liability Corporation

**Sign and notarize the form below, and, if necessary, complete the stockholder list below.**

**Stockholders:**

Name: <u>Abe Grohman</u> Home Address: <u>178 Grandview Ave</u> <u>Monsey, NY 10952</u>	Name: _____ Home Address: _____
Name: _____ Home Address: _____	Name: _____ Home Address: _____
Name: _____ Home Address: _____	Name: _____ Home Address: _____

Subscribed and sworn before me this 6<sup>th</sup> day of

August, 2019

(Notary Public)  
My Commission Expires:

ARTHUR GRUEN  
Notary Public, State of New York  
No. 01GR6175212  
Qualified in Rockland County  
Commission Expires Oct. 9, 2019

[Signature]  
(Affiant)  
Susan Beadle EVL  
(Print Name & Title of Affiant)

(Corporate Seal)

APPENDIX D-8

NON-COLLUSION AFFIDAVIT

State of New York  
County of Rockland

ss:

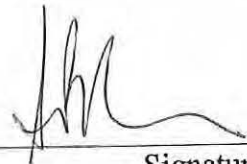
I, Susan Brodie of the City of Suffern  
in the County of Rockland and State of New York of full  
age, being duly sworn according to law on my oath depose and say that:

I am EVP, Business Development of the firm of HESP Solar LLC,  
(Title or position) (Name of firm)

the Respondent making this Proposal for Pittsgrove Township (Township) Renewable Energy Program, and that I executed the said Proposal with full authority so to do; that said Respondent has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive contracting in connection with the above named Program; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the Township relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said Program.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide employees or bona fide established commercial or selling agencies maintained by HESP Solar LLC.  
(N.J.S.A. 52:34-25) (Name of Respondent)

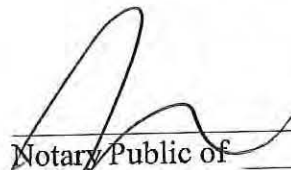
Subscribed and sworn to  
before me this 6<sup>th</sup> day  
of July, 2019.



Signature

Susan Brodie

Print name of affiant under Signature

  
Notary Public of \_\_\_\_\_

My Commission expires \_\_\_\_\_

ARTHUR GRUEN  
Notary Public, State of New York  
No. 01GR6175212  
Qualified in Rockland County  
Commission Expires Oct. 9, 2019



## APPENDIX D-9

### CONSENT TO INVESTIGATION

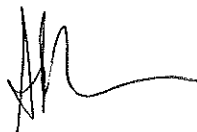
The Respondent hereby gives its consent to Pittsgrove Township ("Township") or its authorized representatives, to investigate and verify all information contained in the Proposal submitted herewith in response to the Request for Proposals, dated July 2, 2019, with respect to the provision of Services, including financial and law enforcement information relating to the Respondent. The Respondent agrees that all financial institutions, law enforcement agencies, and regulatory agencies are authorized to release information verifying those representations and/or submissions made by the Respondent. The Respondent further agrees that the Township and/or its authorized representatives are authorized to inspect all premises and relevant records of the Respondent in order to verify information contained in the Proposal.

The Respondent agrees that a photocopy of this Consent to Investigation may be accepted by any agency or institution in lieu of the original.

Name of Respondent<sup>3</sup>: HESP Solar LLC

Respondent's Address: 400 Rella Blvd, Suite 160  
Suffern, NY 10901

By:  
(Signature)



Name: Susan Brodie

Title: EVP, Business Development

Date: 8/6/19

---

<sup>3</sup>If a joint venture, partnership or other form of organization is submitting this Proposal, all such firms shall be listed and each such participant shall execute this Form.

**APPENDIX D-10**

**STATEMENT OF RESPONDENT 'S QUALIFICATIONS**

*(This form must be completed and submitted with Proposal, one form for each entity if a joint proposal or joint venture)*

1. If firm is a Corporation, list state of incorporation:

New York

2. If firm is a Partnership, list names of partners:

\_\_\_\_\_

*All questions must be answered and the data given must be concise, comprehensive and acceptable to the Owner. Attach separate sheets wherever necessary to properly answer question.*

1. Firm name. HESP Solar LLC
2. Principal address, 400 Rella Blvd., Suite 160, Suffern, NY 10901
3. Year firm was organized. 2014
4. Where and when incorporated. New York, 2014
5. Years of firm's experience in similar contracts. 8 years, previously Principals of Hudson Energy Solar Corp.
6. List of comparable work completed by firm within the past 3 years and any jobs currently in progress and provide at least 3 references, including contact information for work of similar size and scope. Include the cost for each contract, and beginning and completion dates. Please see our completed project and jobs currently in progress in Section II- General Information
7. List default experience on previous contracts, within the past 10 years. None
8. List present comparable contracts presently underway. Please see our completed projects and jobs currently in progress in Section II- General Information
9. List of major equipment available for this contract. All major equipment for this project will be purchased post-award
10. Credit line (substantiate submittal). N/A
11. Two (2) years of most recent audited financial statements. Please see Section III- Financial Information.
12. Respondent must provide complete financial statements for the current fiscal year to date and prior fiscal year, including balance statement (detailing cash and cash equivalents, current assets, current liabilities, stockholder equity), statement of operations (detailing pre-tax earnings) and statement of cash flows.
13. List all threatened and pending claims, litigation and judgments or settlements, and government enforcement actions. (If none, so state). None
14. List the names and contact information for Respondent's banks or other financial institutions.

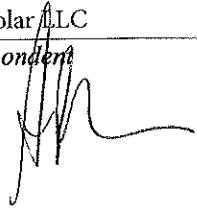
Anthony J. Doherty Vice  
President Managing  
Director Commercial  
Banking

400 Rella Blvd. Montebello, NY 10901 Phone:  
845-533-8424 Cell: 914-574-7432 Fax: 845-703-6041  
adoherty@snb.com

**CONTINUATION SHEET**  
**STATEMENT OF RESPONDENT S QUALIFICATIONS**  
*(This form must be completed and submitted with Proposal)*

*The undersigned hereby authorizes any person, firm or corporation to furnish any information requested by Pittsgrove Township verifying data submitted in the Statement of Qualification.*

Date: 8/6/19

HESP Solar LLC  
Respondent  


APPENDIX D-11

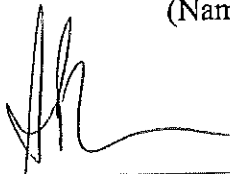
**ACKNOWLEDGMENT OF RECEIPT OF ADDENDA**

The undersigned Respondent<sup>1</sup> hereby acknowledges receipt of the following Addenda:

Addendum Number	Dated	Acknowledge Receipt (initial)
<u>1</u>	<u>7/3/19</u>	<u>SB</u>
<u>2</u>	<u>7/16/19</u>	<u>SB</u>
<u>3</u>	<u>8/06/19</u>	<u>SB</u>
<u> </u>	<u> </u>	<u> </u>

No addenda were received: *(Respondent must check if no addenda were received)*

Acknowledged for: HESP Solar LLC  
(Name of Respondent)

By:   
(Signature of Authorized Representative)

Name: Susan Brodie  
(Print or Type)

Title: EVP, Business Development

Date: 8/6/2019

<sup>1</sup> If a joint venture, partnership or other formal organization or firm submits this Proposal, all such firms shall be listed and each such participant shall execute this Proposal Form.

**APPENDIX D-12**

**AFFIRMATIVE ACTION COMPLIANCE/MANDATORY EEO LANGUAGE  
CONSTRUCTION CONTRACTS**

This form is a summary of the Successful Respondent's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1, et seq.

The Successful Respondent shall submit to the Pittsgrove Township ("Township"), after notification of award but prior to execution of the contract, one of the following three documents as forms of evidence.

- (a) A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);  
OR
- (b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;  
OR
- (c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the contractor in accordance with N.J.A.C. 17:27-4.

The Successful Respondent may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours. The Successful Respondent must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The public agency copy is submitted to the Township, and the vendor copy is retained by the Successful Respondent.

The undersigned Respondent certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.1 et seq. and agrees to furnish the required forms of evidence. The undersigned Respondent further understands that its Proposal shall be rejected as non-responsive if Respondent fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

RESPONDENT: HESP Solar LLC

SIGNATURE: 

PRINT NAME: Susan Brodie

TITLE: EVP, Business Development

DATE: 8/6/19

**APPENDIX D-12 (CONTINUED)**

**MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE**

**N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)**

**N.J.A.C. 17:27**

**CONSTRUCTION CONTRACTS**

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such action shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the applicable employment goal prescribed by N.J.A.C. 17:27-7.3; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C,

as long as the Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the applicable employment goal established in accordance with N.J.A.C. 17:27-7.3. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to attempt to hire or schedule minority and women workers directly, consistent with the applicable employment goal. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire or schedule minority and women workers directly, consistent with the applicable employment goal, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines or is so notified by the Division that the union is not referring minority and women workers consistent with the applicable employment goal.

(B) If the hiring or scheduling of a workforce consistent with the employment goal has not or cannot be achieved for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions consistent with the applicable employment goals:

- (1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;
- (2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
- (3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;
- (4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment

Service and other approved referral sources in the area until such time as the workforce is consistent with the employment goal;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and Federal statutes and court decisions, that sufficient minority and women employees remain on the site consistent with the employment goal; and to employ any minority and women workers laid off by the contractor on any other construction site on which its workforce composition is not consistent with an employment goal established pursuant to rules implementing N.J.S.A. 10:5-31 et. seq.;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each construction trade is not consistent with the applicable employment goal, it shall hire or schedule those individuals who satisfy appropriate qualification standards. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(ii) If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of any interested women or minority individual shall be maintained on a waiting list for the first consideration, in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable employment goal.

(iii) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program



will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) provided to the public agency by the Division for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

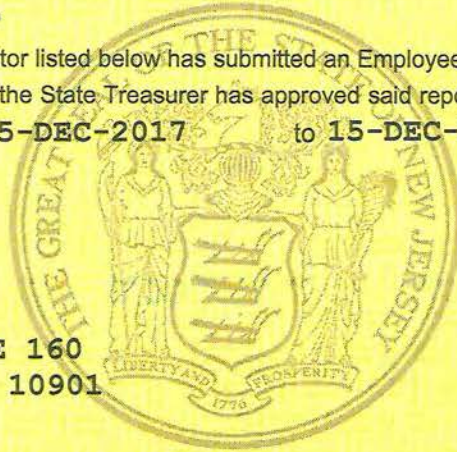
The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Division of Contract Compliance & EEO as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Contract Compliance & EEO for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

# CERTIFICATE OF EMPLOYEE INFORMATION REPORT INITIAL

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of **15-DEC-2017** to **15-DEC-2024**

**HESP SOLAR LLC  
400 RELLA BLVD., SUITE 160  
SUFFERN NY 10901**



A handwritten signature in black ink, appearing to read "Ford M. Scudder".

FORD M. SCUDDER  
State Treasurer

**APPENDIX D-13**

**DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN**  
*(This form must be completed and submitted with bid)*

**Bidder:** HESP Solar LLC

**PART 1: CERTIFICATION**  
**BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.**  
**FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE BID NON-RESPONSIVE**

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division's website at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. Bidders must review this list prior to completing the below certification. **Failure to complete the certification will render a bidder's bid non-responsive.** If Pittsgrove Township ("Township") finds a person or entity to be in violation of law, the Township shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

**PLEASE CHECK THE APPROPRIATE BOX:**

I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. **I will skip Part 2 and sign and complete the Certification below.**

**OR**

I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

---

**PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN**

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

**EACH BOX WILL PROMPT YOU TO PROVIDE INFORMATION RELATIVE TO THE ABOVE QUESTIONS, PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE PROVIDE ON A SEPARATE ATTACHED PAGE.**

Name \_\_\_\_\_ Relationship to Bidder \_\_\_\_\_

Description of Activities \_\_\_\_\_

Duration of Engagement \_\_\_\_\_ Anticipated Cessation Date \_\_\_\_\_

Bidder/Offeror Contact Name \_\_\_\_\_ Contact Phone Number \_\_\_\_\_

**Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the Township is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the Township to notify the state in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the Township at its option may declare any contract(s) resulting from this certification void and unenforceable.**

Full Name (Print): Susan Brodie Signature: 

Title: EVP Date: 8/6/19

APPENDIX D-14

PROPOSAL CHECK-LIST

PITTSBORO TOWNSHIP
RENEWABLE ENERGY PROGRAM
REQUEST FOR PROPOSALS

For a Developer of a Photovoltaic System on Lands Owned by
Pittsgrove Township,
Salem County, New Jersey
Dated, July 2, 2019

The following is a check-list of all items that each Respondent shall submit with their Proposal in order for their Proposal to be considered by the Township in accordance with the provisions of the RFP. Capitalized terms not defined in this check-list shall be as defined in the RFP. Respondents shall submit a copy of this Proposal Checklist with their Proposals.

(1) The following documents shall be considered mandatory items that shall be submitted as part of the Proposal. Failure to submit any of the following shall be deemed a fatal defect that cannot be cured, and will result in mandatory rejection of the Proposal as unresponsive to the RFP:

Table with 3 columns: Item ID, Description, and CHECK status. Includes items like Appendix D-1a, D-1b, D-2, D-3, D-5\*\*, D-6\*\*, D-7, D-10, D-11, and D-13.

\*\*Provide Appendix D-5 or d-6, as applicable (Proposal Bond, Cashier’s Check or Certified Check (RFP Section 4.2))

(2) Failure to submit any of the following documents with submission of the Proposal may be cause for rejection of the Proposal:

Table with 3 columns: Item ID, Description, and CHECK status. Includes items like Appendix D-8, D-9, D-12, D-14, D-15, Public Works Contractor Certificate, Notice of Classification, Total Amount of Uncompleted Contracts Form, and Business Registration Certificate.



**List of Agencies with Elected Officials Required for Political Contribution Disclosure  
N.J.S.A. 19:44A-20.26**

**County Name: Salem**

State: Governor, and Legislative Leadership Committees

Legislative District #: 3

State Senator and two members of the General Assembly per district.

County:

Freeholders

County Clerk

Sheriff

Surrogate

Municipalities (Mayor and members of governing body, regardless of title):

Alloway Township

Carneys Point Township

Elmer Borough

Elsinboro Township

Lower Alloways Creek Township

Mannington Township

Oldmans Township

Penns Grove Borough

Pennsville Township

Pilesgrove Township

Pittsgrove Township

Quinton Township

Salem City

Upper Pittsgrove Township

Woodstown Borough

Boards of Education (Members of the Board):

Alloway Township

Elmer Borough

Elsinboro Township

Lower Alloways Creek

Mannington Township

Oldmans Township

Penns Grove-Carney's Point Regional

Pennsville

Pittsgrove Township

Quinton Township

Salem City

Upper Pittsgrove Township

Woodstown-Pilesgrove Regional

Fire Districts (Board of Fire Commissioners):

Pittsgrove Township Fire District No. 1

Pittsgrove Township Fire District No. 2

Pittsgrove Township Fire District No. 3



**Section VII**  
**Other Submission Requirements**





## STATE OF NEW JERSEY BUSINESS REGISTRATION CERTIFICATE

**Taxpayer Name:** HESP SOLAR LLC  
**Trade Name:**  
**Address:** 7 CEDAR ST  
RAMSEY, NJ 07446  
**Certificate Number:** 1955025  
**Effective Date:** May 21, 2015  
**Date of Issuance:** May 28, 2015

**For Office Use Only:**  
20150528130721792

11/14/13

Taxpayer Identification# 464-079-423/000

Dear Business Representative:

Congratulations! You are now registered with the New Jersey Division of Revenue.

Use the Taxpayer Identification Number listed above on all correspondence with the Divisions of Revenue and Taxation, as well as with the Department of Labor (if the business is subject to unemployment withholdings). Your tax returns and payments will be filed under this number, and you will be able to access information about your account by referencing it.

Additionally, please note that State law requires all contractors and subcontractors with Public agencies to provide proof of their registration with the Division of Revenue. The law also amended Section 92 of the Casino Control Act, which deals with the casino service industry.

We have attached a Proof of Registration Certificate for your use. To comply with the law, if you are currently under contract or entering into a contract with a State agency, you must provide a copy of the certificate to the contracting agency.

If you have any questions or require more information, feel free to call our Registration Hotline at (609)292-9292.

I wish you continued success in your business endeavors.

Sincerely,



James J. Fruscione  
Director  
New Jersey Division of Revenue

STATE OF NEW JERSEY  
BUSINESS REGISTRATION CERTIFICATE

DEPARTMENT OF TREASURY/  
DIVISION OF REVENUE  
PO BOX 252  
TRENTON, N J 08646-0252

TAXPAYER NAME:

**METRIX ELECTRIC LIMITED LIABILITY COMPAN**

TRADE NAME:

ADDRESS:

**95 MYRTLE AVE.  
NUTLEY NJ 07110**

EFFECTIVE DATE:

**11/14/13**

SEQUENCE NUMBER:

**1834860**

ISSUANCE DATE:

**11/14/13**



Director  
New Jersey Division of Revenue

FORM-BRC  
104-081 D205846V

This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address.

Certificate Number  
703996

Registration Date: 01/08/2019  
Expiration Date: 01/07/2021



# State of New Jersey

## Department of Labor and Workforce Development Division of Wage and Hour Compliance

### Public Works Contractor Registration Act

Pursuant to N.J.S.A. 34:11-56.48, et seq. of the Public Works Contractor Registration Act, this certificate of registration is issued for purposes of bidding on any contract for public work or for engaging in the performance of any public work to:

HESP Solar LLC  
**2019**

**Responsible Representative(s):**

Abe Grohman, CEO

Robert Asaro-Angelo, Commissioner  
Department of Labor and Workforce Development

NON TRANSFERABLE

This certificate may not be transferred or assigned and may be revoked for cause by the Commissioner of Labor and Workforce Development.

Certificate Number  
698879

Registration Date: 12/26/2017  
Expiration Date: 12/25/2019



# State of New Jersey

## Department of Labor and Workforce Development Division of Wage and Hour Compliance

### Public Works Contractor Registration Act

Pursuant to N.J.S.A. 34:11-56.48, et seq. of the Public Works Contractor Registration Act, this certificate of registration is issued for purposes of bidding on any contract for public work or for engaging in the performance of any public work to:

Metrix Electric LLC  
**2017**

**Responsible Representative(s):**

Mihajlo Filiposki, Owner

Aaron R. Fichtner, Ph.D., Commissioner  
Department of Labor and Workforce Development

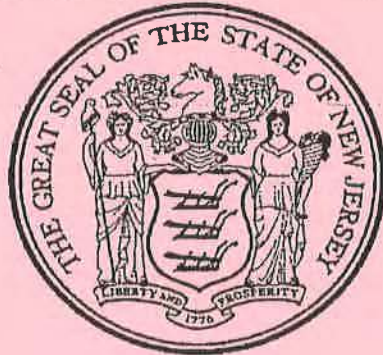
NON TRANSFERABLE

This certificate may not be transferred or assigned and may be revoked for cause by the Commissioner of Labor and Workforce Development.

STATE OF NEW JERSEY  
DEPARTMENT OF THE TREASURY  
CERTIFICATE OF AUTHORITY

HESP CONSTRUCTION, LLC  
0450069618

*I, the Treasurer of the State of New Jersey, do hereby certify that the above-named Foreign Limited Liability Company organized under the laws of Delaware, has complied with all the requirements of Title 42:2C of the New Jersey Statutes, and that the business or activity of said Foreign Limited Liability Company to be carried on within the State of New Jersey is such as may be lawfully carried on by Foreign Limited Liability Company filed under the laws of this State for similar business or activity. The Certificate of Authority was duly filed April 20th, 2016.*



*IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal at Trenton, this at Trenton, this 26th day of July, 2017*

*Ford M Scudder  
State Treasurer*

Certificate Number: 139780514

Verify this certificate online at

[https://www1.state.nj.us/TYTR\\_StandingCert/JSP/Verify\\_Cert.jsp](https://www1.state.nj.us/TYTR_StandingCert/JSP/Verify_Cert.jsp)

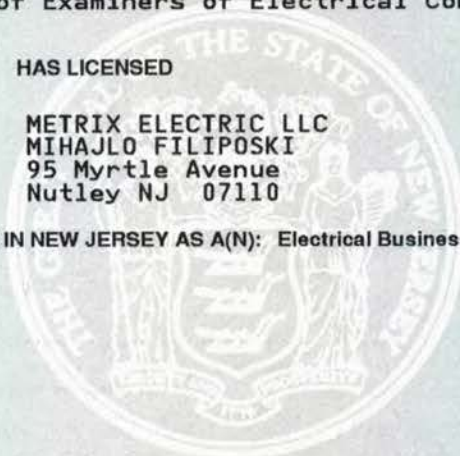
State Of New Jersey  
New Jersey Office of the Attorney General  
Division of Consumer Affairs

THIS IS TO CERTIFY THAT THE  
Board of Examiners of Electrical Contractors

HAS LICENSED

METRIX ELECTRIC LLC  
MIHAJLO FILIPOSKI  
95 Myrtle Avenue  
Nutley NJ 07110

FOR PRACTICE IN NEW JERSEY AS A(N): Electrical Business Permit



New Jersey Office of the Attorney General  
Division of Consumer Affairs  
THIS IS TO CERTIFY THAT THE  
Board of Examiners of Electrical Contractors  
HAS LICENSED  
METRIX ELECTRIC LLC  
Electrical Business Permit

*[Signature]*  
SIGNATURE  
ACTING DIRECTOR

03/07/2018 TO 03/31/2021  
VALID

34EB01774300  
License/Registration/Certificate #

03/07/2018 TO 03/31/2021  
VALID

34EB01774300  
LICENSE/REGISTRATION/CERTIFICATION #

Signature of Licensee/Registrant/Certificate Holder

ACTING DIRECTOR

PLEASE DETACH HERE

IF YOUR LICENSE/REGISTRATION/  
CERTIFICATE ID CARD IS LOST  
PLEASE NOTIFY:

Board of Examiners of Electrical Contractors  
P.O. Box 45006  
Newark, NJ 07101

PLEASE DETACH HERE

METRIX ELECTRIC LLC

EXPIRATION DATE 2021

YOUR LICENSE/REGISTRATION/CERTIFICATE NUMBER IS 34EB 01774300 . PLEASE USE IT IN ALL  
CORRESPONDENCE TO THE DIVISION OF CONSUMER AFFAIRS. USE THIS SECTION TO REPORT ADDRESS  
CHANGES. YOU ARE REQUIRED TO REPORT ANY ADDRESS CHANGES IMMEDIATELY TO THE ADDRESS NOTED  
BELOW.

Board of Examiners of Electrical Contractors  
P.O. Box 45006  
Newark, NJ 07101

PRINT YOUR NEW ADDRESS OF RECORD BELOW.

YOUR ADDRESS OF RECORD IS THE ADDRESS THAT WILL PRINT ON  
YOUR LICENSE/REGISTRATION/CERTIFICATE AND IT MAY BE MADE  
AVAILABLE TO THE PUBLIC.

HOME   
BUSINESS

PRINT YOUR NEW MAILING ADDRESS BELOW.

YOUR MAILING ADDRESS IS THE ADDRESS THAT WILL BE USED BY  
THE DIVISION OF CONSUMER AFFAIRS TO SEND YOU ALL  
CORRESPONDENCE.

HOME   
BUSINESS

TELEPHONE  
INCLUDE AREA CODE

TELEPHONE  
INCLUDE AREA CODE

If the law governing your profession requires the current license/registration/certificate to be displayed, it should be  
within reasonable proximity of your original license/registration/certificate at your principal office or place of business.



Mihajlo Filiposki <miki.filiposki@metrixelectric.com>

**Notice of Classification**

1 message

**CClass@treas.state.nj.us** <CClass@treas.state.nj.us>  
 To: info@metrixelectric.com

Fri, Apr 6, 2018 at 8:12 AM

METRIX ELECTRIC, LLC  
 95 MYRTLE AVE  
 NUTLEY, NJ 07110

*State of New Jersey*



**DEPARTMENT OF THE TREASURY  
 DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION  
 33 WEST STATE STREET - P.O. BOX 034  
 TRENTON, NEW JERSEY 08625-0034**

**NOTICE OF CLASSIFICATION**



In accordance with N.J.S.A. 18A:18A-27 et seq (Department of Education) and N.J.S.A. 52:35-1 (Department of the Treasury) and any rules and regulations issued pursuant hereto, you are hereby notified of your classification to do State work for the Department (s) as previously noted.

Aggregate Amount	Trade(s) & License(s)	Effective Date	Expiration Date
\$2,500,000	C047 -ELECTRICAL license #: 34EB01774300	04/05/2018	04/04/2020

- Licenses associated with certain trades are on file with the Division of Property Management & Construction (DPMC).
- Current license information must be verified prior to bid award.
- A copy of the DPMC 701 Form (Total Amount of Uncompleted Projects) may be accessed from the DPMC website at [http://www.state.nj.us/treasury/dpmc/Assets/Files/dpmc-27\\_03\\_07.pdf](http://www.state.nj.us/treasury/dpmc/Assets/Files/dpmc-27_03_07.pdf).



April 13, 2018

Mihajlo Filiposki, Owner  
Metrix Electric, LLC  
95 Myrtle Avenue  
Nutley, NJ 07110

Re: Contractor Prequalification Notice  
Federal Tax ID: 46-4079423

Dear Mr. Filiposki:

The New Jersey Schools Development Authority (NJSDA) has completed its review of your firm's Application for Prequalification including the required DPMC classification.

We are pleased to inform you that **Metrix Electric, LLC** has been approved with NJSDA Prequalification status in the trade(s) and corresponding aggregate limit(s) as listed below:

<i>Trade(s)</i>	<i>Aggregate Rating</i>
ELECTRICAL	\$2.5 MILLION

Your firm is prequalified by the NJSDA until **April 4, 2020**. Please keep in mind that during this period, the NJSDA must be notified in writing within ten days of any substantial changes that occur within your organization. This would include any changes your firm makes with DPMC as well as changes in ownership, financial condition, key people, safety records, disciplines, etc. Also note that your firm's status as a "prequalified firm" is always subject to review, and we reserve the right to change or revoke this prequalification status for cause at any time.

We look forward to your firm's participation in the Schools Construction Program. Should you have any questions regarding your status, or require assistance of any kind, please contact the Prequalification Unit at 609-943-5955.

Sincerely,

Karon L. Simmonds  
Director,  
Risk Management and Vendor Services

cc: Prequalification File  
A.Bonar





State of New Jersey

DEPARTMENT OF THE TREASURY
DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION
33 W. STATE STREET
PO BOX 034
TRENTON, NEW JERSEY 08625-0034

REPLY TO:
TEL: (609) 943-3400
FAX: (609) 292-7651

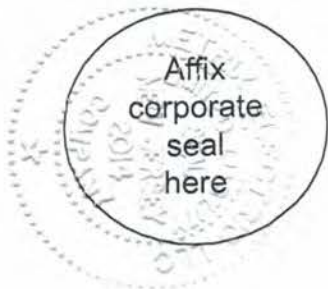
TOTAL AMOUNT OF UNCOMPLETED CONTRACTS

(This form is to be used with the NOTICE OF CLASSIFICATION when submitting bids to the Department of Education.)

I Certify that the amount of uncompleted work on contracts is \$ 220,000.00

The amount claimed includes uncompleted portions of all currently held contracts from all sources (public and private) in accordance with N.J.A.C. 17:19-2.13.

I further certify that the amount of this bid proposal, including all outstanding incomplete contracts does not exceed my prequalification dollar limit.



Respectfully submitted,

By Metrix Electric LLC
Name of Firm

Signature

MANAGING MEMBER
Title

95 Myrtle Ave
Business Address

Notley, NJ 07110

201-925-4224
Phone

Sworn to and subscribed before me
This 8 day of November
20 SASO ANCOVSKI
NOTARY PUBLIC OF NEW JERSEY
Comm # 50078310
My Commission Expires 3/14/2023



## **Attachment 10**

Evidence That the Proposed Project Is Being Developed by Or in Partnership and Collaboration with The Municipality in Which the Project Is Located

## **Attachment 11**

Evidence That the Proposed Project Is Being Developed with Support and In Consultation with The Community in Which the Project Is Located

- Resolution by Township Committee

Resolution No. 174-2019

**RESOLUTION**

**Of The Township Of Pittsgrove**  
**In The County Of Salem, State Of New Jersey**

**AUTHORIZING THE AWARD OF A LEASE AGREEMENT IN ACCORDANCE  
WITH THE RECOMMENDATION SET FORTH IN THE EVALUATION  
REPORT DATED OCTOBER 21, 2019, IN CONNECTION WITH THE  
TOWNSHIP'S RENEWALBE ENERGY PROGRAM**

**WHEREAS**, Pittsgrove Township ("Township") desires to undertake the development and implementation of a Renewable Energy Program ("Program"); and

**WHEREAS**, under the Program, solar panels, including any related electrical modifications or other work required or convenient for the installation of a solar project will be installed on or at the Pittsgrove Township Landfill (the "Landfill") by a private solar developer responsible for the design, financing, construction, operation and maintenance of the solar projects as well as the leasing of the Landfill from the Township; and

**WHEREAS**, among other benefits, the solar project will provide the Township with lease revenue, and provide for educational opportunities; and

**WHEREAS**, the Township issued a *Request for Proposals for a Developer of Photovoltaic System to be Located on Lands Owned by the Township of Pittsgrove, Salem County, New Jersey*, Dated July 2, 2019, (the "RFP"); and

**WHEREAS**, on August 6, 2019, the Township received four (4) proposals in response to the RFP from the following firms:

- Advanced Solar Products
- EZNergy / Standard Solar
- HESP Solar
- Infinity Energy Solutions

**WHEREAS**, following a legal and technical review of the proposals received, the Evaluation Team determined that the two proposals, Advanced Solar Products; and Infinity Energy Solutions were not compliant with the requirements of the RFP; and

**WHEREAS**, the Evaluation Team interviewed each of the two remaining compliant respondents; and

**WHEREAS**, in accordance with N.J.S.A. 40A:11-4.5(d), the Evaluation Team has completed an Evaluation Report, dated October 21, 2019 and attached hereto as **Exhibit A** recommending a Successful Respondent to the Township Committee; and

**NOW THEREFOR BE IT RESOLVED**, by the Township Committee of the Township of Pittsgrove that:

1. The recommendation of the Evaluation Team contained in the Evaluation Report attached hereto as **Exhibit A** that the proposals submitted by Advanced Solar Products and Infinity Energy Solutions be rejected as noncompliant with the requirements of the RFP, is hereby accepted.

2. The recommendation of the Evaluation Team contained in the Evaluation Report attached hereto as **Exhibit A** that HESP Solar, be selected as the Successful Respondent and awarded a Lease Agreement under Option 1 of the RFP, is hereby accepted.
3. The Township Administrator is hereby authorized and directed to work with the Township's special legal counsel, the Township's energy consultant to develop an acceptable form of Lease Agreement with HESP Solar, and execute same along with any other ancillary documents necessary to effectuate the intent and purpose of this Resolution and the Lease Agreement.
4. Notice of this award shall be published in an official Township designated newspaper.
5. This Resolution shall take effect immediately.

ATTEST:



Constance S. Garton, Municipal Clerk



Thomas G. Hickson, Jr., Mayor

October 23, 2019

Date

Roll Call:

Botticello

Copare

Ridgway

Spinelli

Hickson



### CERTIFICATION

I, the Municipal Clerk of the Township of Pittsgrove, do hereby certify that the foregoing is a true copy of a Resolution duly adopted at a Regular Meeting of the Pittsgrove Township Committee held October 23, 2019.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Municipal Clerk

# **Attachment 13**

Other Benefits

## Monitoring, Training, and Maintenance

Over the past 8 years, we have managed over 35 MW of distributed generation solar projects at more than 100 sites. We have learned that efficient operations and maintenance begins already during the system design phase. We design our PV systems to last well beyond the life of the PPA, and we utilize only industry leading components and methods to ensure the long term mechanical and electrical integrity of the system. Semi-annually scheduled comprehensive preventative maintenance visits that include full electrical testing, visual checks, and thermal imaging, together with constant generation and alert monitoring with 24-hour dispatch of experienced and trained PV professionals are all of primary importance in maximizing system uptime and production efficiency.

### **Metering, Monitoring, Production Verification & Weather Station:**

In line with best industry practice, HESP will supply a real-time web-based data acquisition system (DAS). Additionally, we will install an LCD kiosk display at select locations for the Township. HESP will also provide Inverter-Direct monitoring, allowing users to see detailed operational inverter data (DC and AC) on a web enabled device. Furthermore, this will allow the user to view daily, weekly, monthly, and annual graphs up to 5 years into the past, viewing single events or long-term performance trends. Revenue Grade Energy Production monitoring package also keeps track of lifetime energy produced by the PV system. The Weather Station is a real-time weather package which allows the operators to view accurate readings of crucial environmental information that affect the performance of the PV system. Data Acquisition System product specification sheets are provided in the below pages.

### **Facility Training:**

We will coordinate with facility staff and local fire personnel during the construction phase to ensure that we have a safety and emergency response plan in place that all parties are comfortable with. We recommend local fire personnel to be familiar with the safety guidelines issued by the National Fire Protection Association available for download at the below link: <https://goo.gl/UcGv8n>  
In the unlikely event of an emergency, we will be available 24/7 to respond via phone as well as have trained personnel at the site within a reasonable time period <2-3 hours.

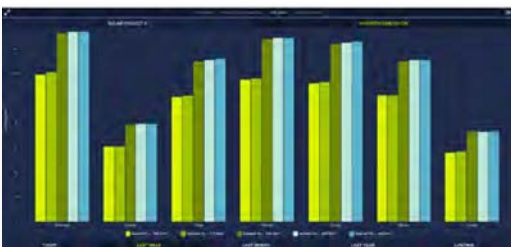


# SOLARNOC™ KIOSK APPLICATION

- » Publicly display PV performance data and project images that feature a specific project or portfolio
- » Leverage the Kiosk as a marketing tool to show off how your system is generating clean energy

The SOLARNOC™ Kiosk application is a public, web-based interface to display solar performance data and educational content. With the Kiosk, customers can display both current power output and historical generation from one system or a portfolio of systems in an animated layout.

The kiosk is designed for widescreen high definition monitors and touchscreen displays, and is compatible with all major browsers. With your logo, project images, and real-time data, the Kiosk functions as a customizable, client-branded, interactive marketing tool.



## FEATURES:

- Open web application that does not require a login
- Application can be configured with up to five sub-tabs which can show data from different sites or specific components
- Choose from several stock environmental benefit equivalencies
- A custom banner that is displayed on all pages and can feature project partner logos
- Animated layout of a typical solar PV installation
- Automated slideshow
- Ability to display the kiosk with any resolution from an iPad up to a large widescreen TV/monitor with a VGA or HDMI input
- Option to embed the Kiosk application into the customer's website
- Irradiance data displayed in the weather module

## BENEFITS:

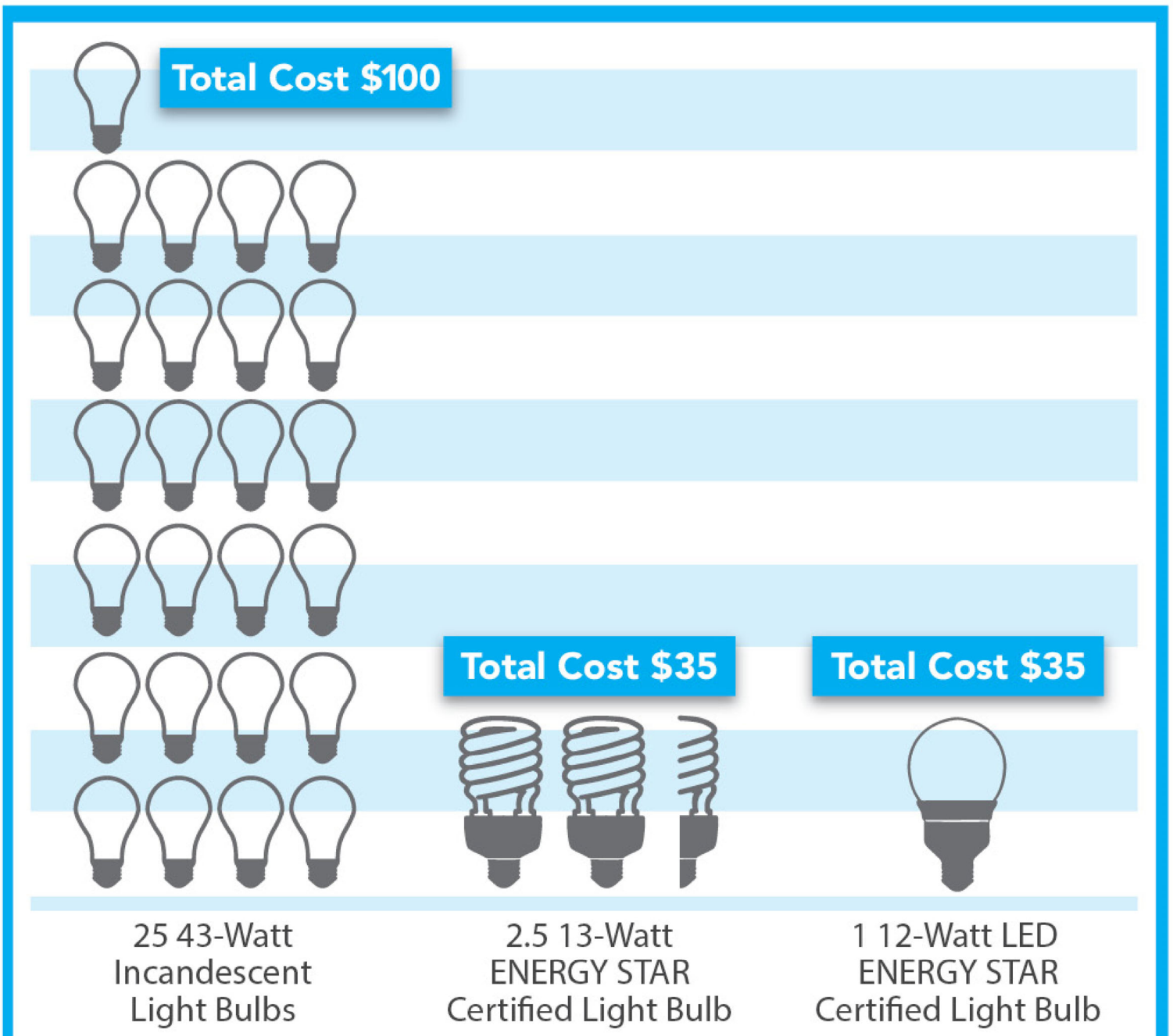
- See near-real-time performance information with system data that is updated every 15-minutes
- Get a flexible interface that highlights performance data for your projects to help viewers understand how PV system components work together
- Save time and quickly troubleshoot issues with remote desktop support from Locus Energy with the purchase of a precision configured mini PC

To learn more about Locus Energy's SOLARNOC Kiosk Application, or to request a demo, please visit:  
[info.locusenergy.com/na-solar-solarnoc-kiosk-application](http://info.locusenergy.com/na-solar-solarnoc-kiosk-application)



# Lifetime Savings

ENERGY STAR® certified bulbs use 70-90% less energy than incandescent bulbs, last 10 to 25 times longer, and save you \$30 to \$80 in energy bills over their lifetime.



Savings figures based on 25,000 hour LED lifetime; 10,000 hour CFL lifetime; 1,000 hour incandescent lifetime; an average lifetime electric rate of 8¢ per kWh; and an LED price of \$10, a CFL price of \$3, an incandescent price of \$0.40.