

# **Dell Avenue Solar Project**



SCS Dell 014136 Yorktown, LLC  
 Sol Customer Solutions, LLC  
 1101 Connecticut Ave NW, Second Floor  
 Washington, DC 20036

September 21, 2022

**Via Electronic Mail & Overnight Mail**

Hon. Richard Fon, Chairman and Members of the Planning Board  
 Town of Yorktown  
 363 Underhill Avenue  
 Yorktown Heights, NY 10598

***Re: Dell Avenue Solar Farm Project  
 Application for Site Plan and Special Use Permit  
 Tax Map Parcel 70.15-1-2 & 70.11-1-16 (“Property”)***

In connection with the Dell Avenue Solar Farm Project (“Solar Project”) application, enclosed please find the following documents:

| #  | Document   | Prepared By | Dated      | Rev # |
|----|--|-------------|------------|-------|
| 28 | NYSDEC Freshwater Wetland Jurisdictional Determination | NYS DEC     | 2022-08-15 |       |
| 29 | Stormwater Pollution Prevention Plan - September 2022  | TRC         | 2022-09-01 |       |
| 30 | Comment Response Log                                   | SCS / TRC   | 2022-09-21 |       |
| 31 | Visual Impact Assessment                               | TRC         | 2022-09-21 |       |
| 32 | Operations & Maintenance Plan, rev1                    | SCS         | 2022-09-21 | Rev 1 |
| 33 | Site Plan Set, rev1                                    | TRC         | 2022-09-21 | Rev 1 |

SCS Dell 014136 Yorktown, LLC (“Applicant”) was last before you on July 25, 2022. At that time, the Applicant presented at the Public Information Hearing to provide an introduction and overview of the Solar Project based on plans submitted June 15, 2022. The Applicant has since received memoranda reviewing and commenting on said plans from:

- Town of Yorktown Conservation Board – July 14, 2022
- Town of Yorktown Planning Department – July 18, 2022
- Westchester County Planning Board – July 22, 2022
- Town of New Castle Town Board – August 01, 2022
- Town of Yorktown Building Department – August 02, 2022

Since that time, the Applicant has progressed the civil engineering design to the extent that the initial SWPPP submission, *Stormwater Pollution Prevention Plan – September 2022*, has been issued to the New York City Department of Environmental Protection and the Town of Yorktown. All review comments provided to the Applicant in the aforementioned memoranda have been addressed and documented in the enclosed *Comment Response Log*. As such, revisions have occurred to the *Site Plan Set* and the *Operations & Maintenance Plan*, and new documents are submitted in the *New York State Department of Environmental Conservation Freshwater Wetland Jurisdictional Determination* and *Visual Impact Assessment*.



Noteworthy developments incorporated into the *Site Plan Set (Rev 1)* consist of:

- Detailed site engineering, including updates to: stormwater design, erosion and sediment control, grading plan, site entrance, landscaping, and equipment layout
- Con Edison scope for utility interconnection, outside of the project fenceline, is now tentatively indicated on the plans
- As a result of the above, the Solar Project's limits of disturbance and fenceline have been adjusted accordingly, while still remaining at least 100' away from wetlands
- Layout space for a potential future battery energy storage system has been removed
- System size of the solar energy system is unchanged

The Applicant's team looks forward to answering any questions your Board may have at its October 03, 2022 meeting and to working with your Board and Staff to bring this laudable Solar Project to the Town.



SCS Dell 014136 Yorktown, LLC  
Sol Customer Solutions, LLC  
1101 Connecticut Ave NW, Second Floor  
Washington, DC 20036

September 21, 2022

Town of Yorktown Planning Board  
1974 Commerce St  
Yorktown Heights, NY 10598

## Dell Avenue Solar Farm Site Plan & Special Use Permit – Comment Response Log

---

### Format

**Comment # XXX**

Date Received

**Comment Source**

*Comment Text*

**XXX Response:**

Response Text

---

### Dell Avenue Solar Farm Comment Response Log

**Comment # 001**

Jul 14, 2022

**Town of Yorktown Conservation Board Memorandum, re: Dell Avenue Solar**

*The applicant has performed a Phase 1 habitat assessment to address the presence of endangered and protected species (Bald Eagles, Indiana Bats, and Bog Turtles) on the site. The town's Environmental Consultants should review the report and confirm the status of these species on the property.*

**001 Response:**

The report 2022-08-03 Dell Ave Habitat Assessment was shared directly to the Town Planner on Aug 03, 2022 to be forwarded to the town's Environmental Consultant. The Habitat Assessment report was formally submitted to the Planning Department, along with several other documents, as part of a supplemental submission dated Aug 10, 2022.

---

**Comment # 002**

Jul 14, 2022

**Town of Yorktown Conservation Board Memorandum, re: Dell Avenue Solar**

*The proposed solar farm on this ridge will significantly alter the ridge, resulting in a fragmented forest. This area of mature woodlands provides a wildlife corridor linking the forested landscape from New Castle to the south to the protected NYC watershed. The applicant's report claims that alteration to this area will not have a significant impact on the corridor.*

**002 Response:**

The proposed project will disturb fewer than 15 acres of the 62-acre property, therefore approximately 75% of the site will remain untouched. The undisturbed swath of land (roughly 47 acres, exclusive of several adjacent undeveloped land parcels), which is predominantly deciduous forest inclusive of protected wetlands and their 100' buffer zone, will almost entirely remain a contiguously uninterrupted forest landscape and wildlife corridor. Only a relatively small area surrounding the existing cellular tower will be somewhat confined by the Project's fenceline, although it will remain entirely open to Dell Ave to the north. To the south, the proposal is for the perimeter security fence to include a 6" clearance gap (from grade) at the bottom to allow for small wildlife to pass through.

**Comment # 003**

Jul 14, 2022

**Town of Yorktown Conservation Board Memorandum, re: Dell Avenue Solar**

*This corridor also abuts the NYC Reservoir system to the immediate west of Route 100 and serves as a green gateway to the Town of Yorktown from the south. This property was visited and rated by the Yorktown Advisory Knolls as a property to be considered for purchase. The visual impact of solar arrays from distant viewpoints, for example, Turkey Mountain and Teatown Hill, should be assessed.*

**003 Response**

See Comment # 006 and corresponding response.

**Comment # 004**

Jul 14, 2022

**Town of Yorktown Conservation Board Memorandum, re: Dell Avenue Solar**

*The removal of approximately 1000 trees over the site will change the ability of the substrate to retain water in storm events. The applicant is developing bio retention ponds and swales to ameliorate sheet flow to lower areas. The Town Engineer Dan Ciarcia should review these plans and assess their function and overflow capabilities. The planting plan mentioned the use of a seed mix, which we find inadequate. The board would like to see a mix of native plants suitable for wetland conditions instead.*

**004 Response:**

TRC Companies Inc., the engineer of record, assumes the Conservation Board’s comment that a seed mix is inadequate applies only to the bioretention areas and swales, and not to the rest of the Project site. The limits of disturbance are more than 100 feet away from wetlands; therefore, trying to establish plants suitable for wetland conditions in upland habitats would not be viable. The majority of the Project site is upland habitat and the seed mix to be used in the majority of the limits of disturbance will replicate a meadow habitat. Native plantings will be used for the bioretention areas. Appropriate vegetation for the bioretention areas will be selected based on their zone of hydrologic tolerance. There are six zones describing hydrologic conditions of stormwater management facilities. These hydrologic zones represent the degree of tolerance plants exhibit to differing degrees of inundation. Refer to Table 1 below for a description of these hydrologic zones as described in the *New York State Stormwater Design Manual – Appendix H – Table H.1 Hydrologic Zones*.

**Table 1. Hydrologic Zones**

| Zone   | Description         | Hydrologic Conditions          |
|--------|---------------------|--------------------------------|
| Zone 1 | Deep Water Pool     | 1 – 6 feet deep permanent pool |
| Zone 2 | Shallow Water Bench | 6 inches to 1 foot deep        |
| Zone 3 | Shoreline Fringe    | Regularly inundated            |
| Zone 4 | Riparian Fringe     | Periodically inundated         |
| Zone 5 | Floodplain Terrace  | Infrequently inundated         |
| Zone 6 | Upland Slopes       | Seldom or never inundated      |

The native plantings for the bioretention areas will be selected from the list provided in the *New York State Stormwater Management Design Manual - Appendix H – Table H.5 Native Plant Guide for Stormwater Management Areas (NY) based on availability*. Not all of these plants will be used for the bioretention areas. A list of these native plants; including their wetland indicator status, hydrologic zone, inundation tolerance, and wildlife value; is provided in Table 2 below.

**Table 2. Native Planting List for Stormwater Management Areas**

| Plant Name<br>(Scientific Name)                    | Wetland<br>Indicator<br>Status <sup>1</sup> | Hydrologic<br>Zone | Inundation<br>Tolerance              | Wildlife Value   |
|--|---|--------------------|--------------------------------------|--|
| <i>Trees and Shrubs</i>                            |   |                    |                                      |  |
| American Elm<br>( <i>Ulmus americana</i> )         | FACW  | 4, 5, 6            | Irregular-<br>seasonal<br>saturation | High. Food (seeds,<br>browsing), cover, nesting<br>for birds & mammals |
| Arrowwood Viburnum<br>( <i>Viburnum dentatum</i> ) | FAC   | 3, 4               | yes                                  | High.<br>Songbirds and mammals   |
| Bald Cypress<br>( <i>Taxodium distichum</i> )      | OBL   | 3, 4               | yes                                  | Little food value, but good<br>perching site for waterfowl             |

**Table 2. Native Planting List for Stormwater Management Areas**

| Plant Name<br>(Scientific Name)                            | Wetland<br>Indicator<br>Status <sup>1</sup> | Hydrologic<br>Zone | Inundation<br>Tolerance              | Wildlife Value   |
|--|---|--------------------|--------------------------------------|--|
| Bayberry<br>( <i>Myrica pensylvanica</i> )                 | OBL   | 4, 5, 6            | yes                                  | High. Nesting, food,<br>cover. Berries last into<br>winter                                     |
| Black Ash<br>( <i>Fraxinus nigra</i> )                     | FACW  | 3, 4, 5            | Irregular-<br>seasonal<br>saturation | High. Food (seeds, sap),<br>cover, nesting for birds &<br>mammals.<br>Fruit persists in winter |
| Black Cherry<br>( <i>Prunus serotina</i> )                 | FACU  | 5, 6               | no                                   | High. Food   |
| Blackgum or Sourgum<br>( <i>Nyssa sylvatica</i> )          | FAC   | 4, 5, 6            | yes                                  | High. Songbirds, egrets,<br>herons, raccoons, owls   |
| Black Willow<br>( <i>Salix nigra</i> )                     | OBL   | 3, 4, 5            | yes                                  | High.<br>Browsing and cavity<br>nesters.   |
| Buttonbush<br>( <i>Cephalanthus<br/>occidentalis</i> )     | OBL   | 2, 3, 4, 5         | yes                                  | High. Ducks and<br>shorebirds. Seeds, nectar<br>and nesting.                                   |
| Common Spice Bush<br>( <i>Lindera benzoin</i> )            | FACW  | 3, 4, 5            | yes                                  | Very high. Songbirds   |
| Eastern Cottonwood<br>( <i>Populus deltoides</i> )         | FAC   | 4, 5               | yes                                  | Moderate. Cover, food.   |
| Eastern Hemlock<br>( <i>Tsuga canadensis</i> )             | FACU  | 5, 6               | yes                                  | Moderate. Mostly cover<br>and some food  |
| Eastern Red Cedar<br>( <i>Juniperus virginiana</i> )       | FACU  | 4, 5, 6            | no                                   | High. Fruit for birds. Some<br>cover.  |
| Elderberry<br>( <i>Sambucus canadensis</i> )               | FACW  | 3, 4, 5, 6         | yes                                  | Extremely high. Food and<br>cover, birds and mammals.  |
| Green Ash, Red Ash<br>( <i>Fraxinus<br/>pennsylvania</i> ) | FACW  | 4, 5               | yes                                  | Moderate. Songbirds.   |
| Hackberry<br>( <i>Celtis occidentalis</i> )                | FAC   | 5, 6               | some                                 | High. Food and cover   |
| Larch, Tamarack<br>( <i>Larix laricina</i> )               | FACW  | 3, 4               | yes                                  | Low. Nest tree and seeds.  |
| Pin Oak<br>( <i>Quercus palustris</i> )                    | FACW  | 3, 4, 5, 6         | yes                                  | High. Tolerates acidic soil  |
| Red Choke Berry<br>( <i>Aronia arbutifolia</i> )           | FACW  | 3, 4, 5            | yes                                  | Moderate. Songbirds.   |
| Red Maple<br>( <i>Acer rubrum</i> )                        | FAC   | 3, 4, 5, 6         | yes                                  | High seeds and browse.<br>Tolerates acidic soil.   |

**Table 2. Native Planting List for Stormwater Management Areas**

| Plant Name<br>(Scientific Name)                                  | Wetland<br>Indicator<br>Status <sup>1</sup> | Hydrologic<br>Zone | Inundation<br>Tolerance                     | Wildlife Value  |
|--|---|--------------------|---|---|
| River Birch<br>( <i>Betula nigra</i> )                           | FACW  | 3, 4, 5            | yes   | Low. Good for cavity nesters.   |
| Shadowbush,<br>Serviceberry<br>( <i>Amelanchier canadensis</i> ) | FAC   | 4, 5, 6            | yes   | High. Nesting, cover, food. Birds and mammals.                                      |
| Silky Dogwood<br>( <i>Cornus amomum</i> )                        | FACW  | 3, 4, 5            | yes   | High. Songbirds, mammals.   |
| Slippery Elm<br>( <i>Ulmus rubra</i> )                           | FAC   | 3, 4, 5            | yes   | High. Food (seeds, buds) for birds & mammals (browse). Nesting                      |
| Smooth Alder<br>( <i>Alnus serrulata</i> )                       | OBL   | 3, 4, 5            | yes   | High. Food, cover.  |
| Speckled Alder<br>( <i>Alnus incana</i> )                        | FACW  | 3, 4               | yes   | High. Cover, browse for deer, seeds for bird.                                       |
| Swamp White Oak<br>( <i>Quercus bicolor</i> )                    | FACW  | 3, 4, 5            | yes   | High. Mast  |
| Swamp Rose<br>( <i>Rosa palustris</i> )                          | OBL   | 3, 4               | Irregular, seasonal, or regularly saturated | High. Food (hips) for birds including turkey, ruffed grouse and mammals. Fox cover. |
| Sweetgum<br>( <i>Liquidambar styraciflua</i> )                   | FAC   | 4, 5, 6            | yes   | Moderate. Songbirds   |
| Sycamore<br>( <i>Platanus occidentalis</i> )                     | FACW  | 4, 5, 6            | yes   | Low. Food, cavities for nesting.  |
| Tulip Tree<br>( <i>Liriodendron tulipifera</i> )                 | FACU  | 5, 6               | no  | Moderate. Seeds and nest sites  |
| Swamp Tupelo<br>( <i>Nyssa biflora</i> )                         | OBL   | 3, 4, 5            | yes   | High. Seeds and nest sites  |
| White Ash<br>( <i>Fraxinus americana</i> )                       | FACU  | 5, 6               | no  | High. Food  |
| Winterberry<br>( <i>Ilex verticillata</i> )                      | FACW  | 3, 4, 5            | yes   | High. Cover and fruit for birds. Holds berries into winter.                         |
| Witch Hazel<br>( <i>Hamamelis virginiana</i> )                   | FACU  | 4, 5               | no  | Low. Food for squirrels, deer, and ruffed grouse.                                   |



**Table 2. Native Planting List for Stormwater Management Areas**

| Plant Name<br>(Scientific Name)                              | Wetland<br>Indicator<br>Status <sup>1</sup> | Hydrologic<br>Zone | Inundation<br>Tolerance                          | Wildlife Value   |
|--|---|--------------------|--|--|
| <b>Herbaceous Plants</b>                                     |   |                    |  |  |
| Arrow arum<br>( <i>Peltandra virginica</i> )                 | OBL   | 2, 3               | up to 1 ft.                                      | High. Berries are eaten by wood ducks.                               |
| Arrowhead, Duck<br>Potato<br>( <i>Sagittaria latifolia</i> ) | OBL   | 2, 3               | up to 1 ft.                                      | Moderate. Tubers and seeds eaten by ducks.                           |
| Big Bluestem<br>( <i>Andropogon gerardii</i> )               | FACU  | 4, 5               | Irregular or seasonal inundation.                | High. Seeds for songbirds.<br>Food for deer                          |
| Birdfoot deervetch<br>( <i>Lotus corniculatus</i> )          | FACU  | 4, 5, 6            | Infrequent inundation                            | High. Food for birds.  |
| Blue Flag Iris<br>( <i>Iris versicolor</i> )                 | OBL   | 2, 3               | Regular or permanently, up to ½ ft or saturated  | Moderate. Food muskrat and wildfowl.<br>Cover, marshbirds            |
| Blue Joint<br>( <i>Calamagrotis canadensis</i> )             | OBL   | 2, 3, 4            | Regular or permanent inundation up to 0.5 ft.    | Moderate. Food for game birds and moose.                             |
| Broomsedge<br>( <i>Andropogon virginicus</i> )               | FACU  | 2, 3               | up to 3 in.                                      | High.<br>Songbirds and browsers.<br>Winter food and cover.           |
| Bushy Beardgrass<br>( <i>Andropogon glomeratus</i> )         | FACW  | 2, 3               | up to 1 ft.                                      |  |
| Cardinal flower<br>( <i>Lobelia cardinalis</i> )             | OBL   | 4, 5, 6            | Some. Tolerates saturation up to 100% of season. | High. Nectar for hummingbird, oriole, butterflies.                   |
| Cattail<br>( <i>Typha</i> spp.)                              | OBL   | 2, 3               | up to 1 ft.                                      | Low. Except as cover   |
| Coontail<br>( <i>Ceratophyllum demersum</i> )                | OBL   | 1                  | yes  | Low food value. Good habitat and shelter for fish and invertebrates. |
| Common Three-Square<br>( <i>Schoenoplectus pungens</i> )     | OBL   | 2                  | up to 6 in.                                      | High. Seeds, cover.<br>Waterfowl and fish.                           |

**Table 2. Native Planting List for Stormwater Management Areas**

| Plant Name<br>(Scientific Name)                                 | Wetland<br>Indicator<br>Status <sup>1</sup> | Hydrologic<br>Zone | Inundation<br>Tolerance                       | Wildlife Value   |
|---|---|--------------------|---|--|
| Duckweed<br>( <i>Lemna</i> spp.)                                | OBL   | 1, 2               | yes   | High. Food for waterfowl and fish.   |
| Fowl mannagrass<br>( <i>Glyceria striata</i> )                  | OBL   | 4, 5               | Irregular or seasonal inundation              | High. Food for waterfowl, muskrat, and deer.   |
| Hardstem Bulrush<br>( <i>Schoenoplectus acutus</i> )            | OBL   | 2                  | up to 3 ft.                                   | High. Cover, food (achenes, rhizomes) ducks, geese, muskrat, fish.<br>Nesting for bluegill and bass. |
| Giant Burreed<br>( <i>Sparganium eurycarpum</i> )               | OBL   | 2, 3               | Regular to permanently inundated. up to 1 ft. | High. Food (seeds, plant) waterfowl, beaver & other mammals.<br>Cover for marshbirds, waterfowl.     |
| Lizard's Tail<br>( <i>Saururus cernuus</i> )                    | OBL   | 2                  | up to 1 ft.                                   | Low, except wood ducks.  |
| Long-leaved Pond Weed<br>( <i>Potamogeton nodosus</i> )         | OBL   | 1, 2               | up to 1-6 ft. depending on turbidity          | High. Food (seeds, roots) waterfowl, aquatic fur-bearers, deer, moose.<br>Habitat for fish           |
| Marsh Hibiscus<br>( <i>Hibiscus moscheutos</i> )                | OBL   | 2, 3               | up to 3 in.                                   | Low. Nectar.   |
| Pickernelweed<br>( <i>Pontederia cordata</i> )                  | OBL   | 2, 3               | up to 1 ft.                                   | Moderate. Ducks. Nectar for butterflies.   |
| Pond Weed, Sago<br>( <i>Stuckenia pectinata</i> )               | OBL   | 1                  | yes   | Extremely high. Waterfowl, marsh and shorebirds.   |
| Redtop<br>( <i>Agrostis gigantea</i> )                          | FACW  | 3, 4, 5            | Up to 25% of season                           | Moderate. Rabbits and some birds.  |
| Rice Cutgrass<br>( <i>Leersia oryzoides</i> )                   | OBL   | 2, 3               | up to 3 in.                                   | High. Food and cover.  |
| Sedges<br>( <i>Carex</i> spp.)                                  | All   | 2, 3               | up to 3 in.                                   | High waterfowl, songbirds.   |
| Tufted Hairgrass<br>( <i>Deschampsia caespitosa</i> )           | FACW  | 3, 4, 5            | Regular to irregular inundation.              | High.  |
| Soft-stem Bulrush<br>( <i>Schoenoplectus tabernaemontanii</i> ) | OBL   | 2, 3               | up to 1 ft.                                   | Moderate. Good cover and food.   |

**Table 2. Native Planting List for Stormwater Management Areas**

| Plant Name<br>(Scientific Name)  | Wetland<br>Indicator<br>Status <sup>1</sup> | Hydrologic<br>Zone | Inundation<br>Tolerance                   | Wildlife Value  |
|--|---|--------------------|---|---|
| Smartweed<br>( <i>Persicaria</i> spp.)   | OBL,<br>FACW,<br>FAC                        | 2, 3, 4            | up to 1 ft.                               | High. Waterfowl,<br>songbirds.<br>Seeds and cover.                  |
| Soft Rush<br>( <i>Juncus effusus</i> )   | OBL   | 2, 3, 4            | up to 3 in.                               | Moderate.   |
| Spatterdock<br>( <i>Nuphar advena</i> )  | OBL   | 2                  | up to 3 ft.                               | Moderate for food but high<br>for cover.                            |
| Switchgrass<br>( <i>Panicum virgatum</i> )   | FAC   | 2, 3, 4, 5, 6      | up to 3 in.                               | High. Seeds, cover for<br>waterfowl, songbirds.                     |
| Sweet Flag<br>( <i>Acorus calamus</i> )  | OBL   | 2, 3               | up to 3 in.                               | Low.  |
| Waterweed<br>( <i>Elodea canadensis</i> )  | OBL   | 1                  | yes                                       | Low.  |
| Wild Celery<br>( <i>Vallisneria<br/>americana</i> )  | OBL   | 1                  | yes                                       | High. Food for waterfowl.<br>Habitat for fish and<br>invertebrates. |
| Wild Rice<br>( <i>Zizania aquatica</i> )   | OBL   | 2                  | up to 1 ft.                               | High. Food for birds.   |
| Wool Grass<br>( <i>Scirpus cyperinus</i> )   | OBL   | 2, 3               | Irregularly to<br>seasonally<br>inundated | Moderate. Cover, Food.  |
| <p>1. Plants are categorized according to their occurrence in wetlands. The indicator statuses specific to the “Northcentral and Northeast Region” as defined by the USACE apply to the Project Site. The official short definitions for wetland indicator statuses are as follows:</p> <ul style="list-style-type: none"> <li>• OBL - Obligate Wetland: Almost always occur in wetlands.</li> <li>• FACW - Facultative Wetland: Usually occur in wetlands but may occur in non-wetlands.</li> <li>• FAC - Facultative: Occur in wetlands and non-wetlands (50/50 Mix).</li> <li>• FACU - Facultative Upland: Usually occur in non-wetlands but may occur in wetlands.</li> <li>• UPL - Upland: Almost never occur in wetlands.</li> </ul> |   |                    |   |   |

Plantings for the bioretention areas will be broken into two different planting areas. On the bottom of the bioretention area to about 0.75 ft. from the bottom, there will be native Zone 3 plantings. From the top of Zone 3 plantings to the edge of the bioretention area grading, there will be native Zone 5 plantings. Outside of the bio-area, there will be the existing vegetation cover on the down-slope side and meadow grasses on the up-slope side. No woody plants will be planted on the up-slope/inflow side. Plantings will be diverse and random to resemble natural plant layouts. There will be a four foot-deep planting soil bed and surface mulch layer.

The detention pond will consist of native Zone 1 and Zone 2 plantings on the aquatic bench. No woody plants will be planted on the inflow side. Plantings will be diverse and random to resemble natural plant layouts.

**Comment # 005**

Jul 14, 2022

**Town of Yorktown Conservation Board Memorandum, re: Dell Avenue Solar**

*Environmental review should include a site visit by the Conservation Board.*

**005 Response:**

The applicant welcomes a site visit by the Conservation Board at the earliest opportunity. Environmental specialists from the engineer of record, TRC Companies Inc., will be available to accompany the Conservation Board at the site visit.

**Comment # 006**

Jul 18, 2022

**Town of Yorktown Planning Department letter, subject: Dell Avenue Solar Project**

*As part of the Croton Overlook environmental review, a visual assessment was completed and included as Appendix E in the EIS. This appendix is enclosed for your convenience. The Planning Department requests the assessment be updated to reflect the current proposed project.*

**006 Response:**

The report 2022-09-21 Dell Ave Visual Impact Assessment was formally submitted to the Planning Department, along with several other documents, as part of a supplemental submission dated Sep 21, 2022.

**Comment # 007**

Jul 22, 2022

**Westchester County Planning Board Referral Review letter, subject: County Planning Board Referral File YTN 22-010 – Dell Avenue Solar Project Site Plan and Special Use Permit**

*We have previously reviewed the site plan under the provisions of Section 239 L, M, and N of the General Municipal Law and Section 277.61 of the County Administrative Code and we responded to the Town in a letter dated May 17, 2021. We appreciate that the applicant has provided a tree loss mitigation plan and carbon sequestration calculations regarding the removal of woodland. We also note that the site has been redesigned to lessen the impact to on-site wetlands and to preserve more trees. At this time we have no additional comments.*

**007 Response:**

N/A

**Comment # 008**

Aug 01, 2022

**Town of New Castle Town Board Memorandum, subject: Town of Yorktown – Dell Avenue Solar Project**

*The applicant has provided information and it was reviewed by the Environmental Coordinator. There are no anticipated impacts to the Town of New Castle.*

**008 Response:**

N/A

**Comment # 009**

Aug 01, 2022

**Town of New Castle Town Board Memorandum, subject: Town of Yorktown – Dell Avenue Solar Project**

*The Town Engineer has reviewed this information and there is no impact to the Town of New Castle.*

**009 Response:**

N/A

**Comment # 010**

Aug 01, 2022

**Town of New Castle Town Board Memorandum, subject: Town of Yorktown – Dell Avenue Solar Project**

*The Town Engineer has reviewed the latest revised site plan and existing topography relative to the Town of New Castle and has preliminarily found that the stormwater impacts to the Town from the proposed development would be minor in nature. However, prior to a final determination is made by the Town Engineer, the Town Engineer would like to review the submitted Stormwater Pollution Prevention Plan (“SWPPP”) as required by the Town of Yorktown Town Code and the NYC DEP for the SWPPP under Subsection 18-39 (Stormwater Pollution Prevention Plans and Impervious Surfaces) of the New York City Rules and Regulations.*

**010 Response:**

On behalf of the applicant, the engineer of record, TRC Companies Inc., submitted the initial SWPPP to the New York City Department of Environmental Protection on Sep 01, 2022. On the same date, it was also submitted to the Town of Yorktown Engineering Department and later forwarded to the Town of Yorktown Planning Department – as well as the Town of New Castle.

The SWPPP proposal will be resubmitted again to NYC DEP in 4Q2022 after DEP’s determination-of-completeness step is complete, comments are returned to the applicant, and revisions are incorporated into the final SWPPP submittal for full review & approval. At that time, it will also be submitted directly to the Town of Yorktown (Engineering and Planning) – as well as to be circulated to the Town of New Castle.

**Comment # 011**

Aug 01, 2022

**Town of New Castle Town Board Memorandum, subject: Town of Yorktown – Dell Avenue Solar Project**  
*The Building Inspector has spoken with a representative of the Millwood Fire Department who assured him that they are aware of the project and have been in conversation with the Yorktown Fire Department in response to mutual aid.*

**011 Response:**

N/A

**Comment # 012**

Aug 01, 2022

**Town of New Castle Town Board Memorandum, subject: Town of Yorktown – Dell Avenue Solar Project**  
*Information was contained on the site plan in regards to a viewshed analysis. No properties in New Castle were included in this analysis and it appears, based on measurement, that several homes in the Random Farms Subdivision will have views of the solar array through the forested wetland. This wetland contains open areas whereby site lines directly onto the facility can be articulated. The Applicant should address this and provide screening to ensure that these homeowners are screened from the facility. The applicant and/or the Town of Yorktown should reach out to the Random Farms Homeowners Association.*

**012 Response:**

A preliminary line-of-sight analysis from (3) Random Farms residences, including elevation topography and tree cover data, was provided to the Town of Yorktown Town Planner to aid in coordination between Town of Yorktown and Town of New Castle. The applicant believes that adverse visual impacts are avoided by the presence of existing vegetation sufficiently screening visibility. The applicant is awaiting confirmation from the Town of Yorktown Planning Department that the Town of New Castle concerns are sufficiently addressed.

**Comment # 013**

Aug 02, 2022

**Town of Yorktown Building Department Memorandum, re: Dell Ave Solar Farm July 25, 2022**

*Dell Ave is currently in poor condition. After the construction has been completed it is obvious that the street will be in even worse condition. The Bureau [of Fire Prevention] would like to see Dell Ave improved up completion of the project.*

**013 Response:**

Dell Avenue is 0.5 miles long, cutting between the main thoroughfare of Saw Mill River Road (Rt 100) to which it connects on both ends. At present, the road seemingly experiences very limited to no traffic daily, because it only provides access to a cellular tower and one single-family residence. The residence,

249 Dell Ave, is situated near the northern end of the road toward the north intersection with Saw Mill River Rd and away from the project's primary site entrance.

Post-project, there will be no increase in daily traffic due to the solar farm, because operating the facility does not require personnel at site. Regular maintenance, at most, will consist of 1 visit per month by authorized personnel. As such, the project once complete does not require improved road conditions on Dell Avenue.

During the 6-9 month construction period, it is not anticipated that Dell Avenue's current condition will noticeably worsen. In the applicant's experience, the construction demands of a ground-mount solar project do not dictate road improvements along Dell Avenue for safe access or drivability, nor is it expected that the overall condition appreciably degrades. Several EPC contractors have visited the site and assessed Dell Ave as suitable for this project's construction.

The applicant is willing, before construction starts, to document the existing as-is condition of Dell Ave and, toward the end of construction, perform spot repairs to return any instances of project-caused damage to an improved condition.

**Comment # 014**

Aug 02, 2022

**Town of Yorktown Building Department Memorandum, re: Dell Ave Solar Farm July 25, 2022**

*The operator of the solar farm installation shall provide training to the local fire department and provide an electronic version of the training program to the fire department so they can train personnel in the future.*

**014 Response:**

The applicant fully agrees to the request for training to be provided to the local fire department and for an electronic version of the training program to be made available. This is typical for Sol Customer Solutions projects and is coordinated in detail with the EPC (engineering-procurement-construction) contractor selected to design and build the project. It will involve a site walkthrough.

As an EPC contractor will not be authorized until site plan & special use permit approvals are granted, these documents have not been developed yet. In the meantime, a *Local Fire Department Training* section has been added to the most recent revision of the Dell Ave Operations & Maintenance Plan Rev2 to document this condition of permit approval. The latest O&M Plan was formally submitted to the Planning Department, along with several other documents, as part of a supplemental submission dated Aug 21, 2022.

**Comment # 015**

Aug 02, 2022

**Town of Yorktown Building Department Memorandum, re: Dell Ave Solar Farm July 25, 2022**

*The Bureau [of Fire Prevention] would like to see a maintenance plan that includes grass and brush cutting AND snow removal from the access roads and gates in the event of a major snowfall.*

**015 Response:**

The applicant is awaiting comment from the Planning Department and/or the town's Environmental Consultant on seed mix plans for the approach to the site's future grasses, legumes, and flowers. The applicant fully agrees to the request for a maintenance plan that details grass & brush cutting and general vegetation management. This is typical for Sol Customer Solutions projects and is coordinated in detail with the maintenance provider ultimately selected to provide post-construction maintenance of the site's vegetation. After receipt of additional environmental comments, anticipated in Sep 2022, the applicant will propose a seed mix along with details on proposed grass & brush cutting plans.

In the event of snowfall, no snow removal is warranted for operations and maintenance. Snow does not pose any risk to the equipment, and the act of snow removal could potentially damage the equipment and the pervious gravel access roads while also representing a hazardous work condition. Across the portfolio of Sol Customer Solutions projects, snow removal is not performed. The applicant does not propose incorporating snow removal into the Dell Ave Operations & Maintenance Plan.

**Comment # 016**

Aug 02, 2022

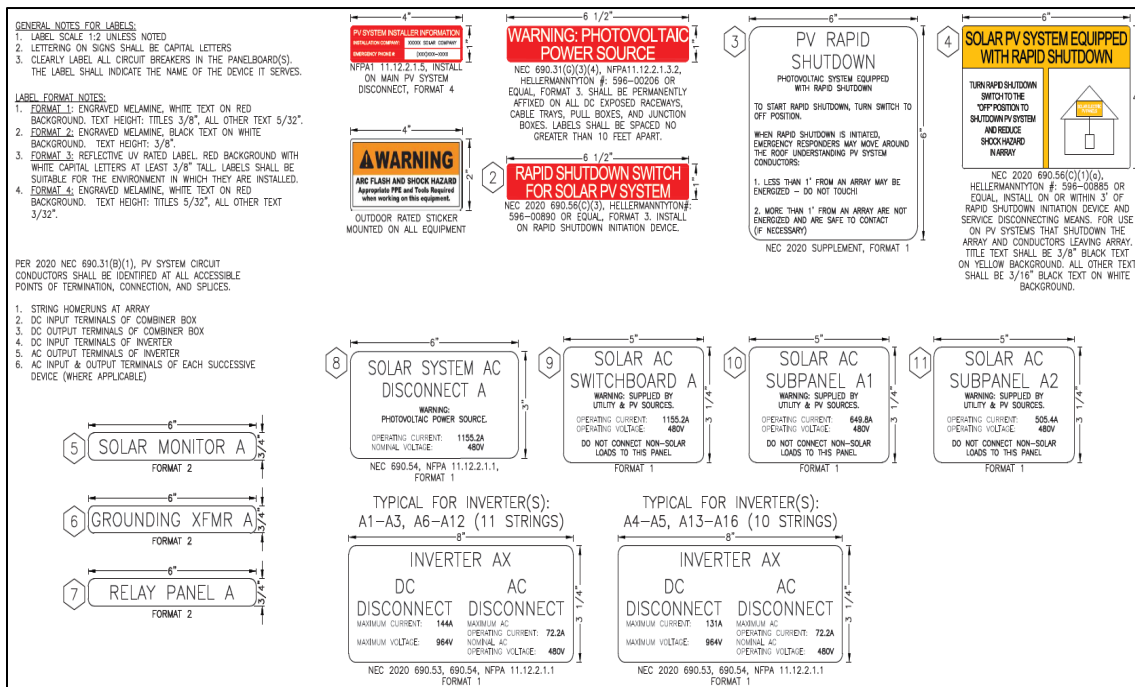
**Town of Yorktown Building Department Memorandum, re: Dell Ave Solar Farm July 25, 2022**

*Compliant signage shall be provided throughout the installation including emergency contact information which shall be displayed on every access gate.*

**016 Response:**

Upon receiving the Building Department Memorandum on Aug 02, 2022, an example photo of (compliant) emergency contact signage was shared with the Town of Yorktown Building & Fire Inspector via email and an affirmative response was replied. The photo and additional example signage is included below. These are not typically finalized this early in the project development phase, and therefore are not intended to be included in the Site Plan Set, but they are a requirement for all Sol Customer Solutions projects. The applicant fully agrees to the request for compliant signage to be provided throughout the facility, including emergency contact information displayed at both access gates.





**Comment # 017**

Aug 02, 2022

**Town of Yorktown Building Department Memorandum, re: Dell Ave Solar Farm July 25, 2022**

*An emergency response plan shall be provided to the Fire Inspector and the fire department for approval.*

**017 Response:**

The applicant fully agrees to the request for an emergency response plan to be provided to the local fire department and to the Fire Inspector for approval. This is typical for Sol Customer Solutions project, is developed specific to the site, and is coordinated in detail with the EPC (engineering-procurement-construction) contractor and the Sol Systems asset management team.

As an EPC contractor will not be authorized until site plan & special use permit approvals are granted, this document has not been developed yet. In the meantime, an *Example of Emergency Response Plan* section has been added to the most recent revision of the Dell Ave Operations & Maintenance Plan Rev2 to document this condition of permit approval. The latest O&M Plan was formally submitted to the Planning Department, along with several other documents, as part of a supplemental submission dated Aug 21, 2022.

**Comment # 018**

Aug 01, 2022

**Town of Yorktown Planning Department email, re: Environmental Consultant & Coordination with DEC**  
*Dan Biggs, from Weston & Sampson, the environmental consultant the Town is using for your project, is asking if we can schedule site visits for next week either on Tuesday or Thursday with the applicant's consultant and DEC.*

**018 Response:**

The correspondence *RE: Sol Systems Dell Ave Solar Farm Freshwater Wetland Jurisdictional Determination (2022-08-15 Dell Ave NYSDEC Wetland JD Not Regulated)* was shared directly to the Town Planner on Aug 17, 2022 with copy to the town's Environmental Consultant. The same Jurisdictional Determination (JD) was formally submitted to the Planning Department, along with several other documents, as part of a supplemental submission dated Sep 21, 2022.

The JD concluded that the on-site wetlands are not within NYS DEC jurisdiction, therefore the environmental site visit did not involve DEC. Weston & Sampson and TRC Companies Inc. conducted the field site visit together on Aug 24, 2022.

**From:** [Pawliczak, Sarah A \(DEC\)](#)  
**To:** [Regan, Matthew](#)  
**Cc:** [Colin Duncan](#); [Erick Alves de Sa](#)  
**Subject:** RE: Sol Systems Dell Ave Solar Farm Freshwater Wetland Jurisdictional Determination  
**Date:** Monday, August 15, 2022 2:31:16 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)

---

To follow up Matt, I can confirm that the wetland boundary is accurate should it become regulated in 2025, although I am not sure what the timeframe for construction, etc. is and if it will be completed by 2025. Unfortunately, I am unavailable the dates that you've offered. I am available August 25<sup>th</sup> and September 1<sup>st</sup>.

Thank you,

**Sarah Pawliczak** (she/her/hers)  
Biologist, Bureau of Ecosystem Health  
**New York State Department of Environmental Conservation**  
21 South Putt Corners Road, New Paltz, NY 12561  
P: (845) 256-3050 | C: (845) 913-6489 | [sarah.pawliczak@dec.ny.gov](mailto:sarah.pawliczak@dec.ny.gov)  
[www.dec.ny.gov](http://www.dec.ny.gov) |



---

**From:** Pawliczak, Sarah A (DEC)  
**Sent:** Monday, August 15, 2022 1:47 PM  
**To:** Regan, Matthew <MRegan@trcccompanies.com>  
**Cc:** Duncan, Colin <CDuncan@trcccompanies.com>; Erick Alves de Sa <erick.alvesdesa@solsystems.com>; dec.sm.Wildlife.R3 <Wildlife.R3@dec.ny.gov>  
**Subject:** RE: Sol Systems Dell Ave Solar Farm Freshwater Wetland Jurisdictional Determination

Hi Matt,

I reviewed the report on Dell Ave Solar Farm, dated August 11, 2022, that you provided. The onsite wetlands are not currently regulated by the NYSDEC but may be regulated when recently adopted changes to Article 24 become effective in 2025. Since the precise regulatory requirements for implementing these statutory changes are only in the initial stages of development, it is impossible to provide specific details regarding how these regulatory changes could potentially impact this project. If the onsite wetlands become jurisdictional under Article 24 in 2025, please know that the Department's regulations generally require avoidance and minimization of impacts to regulated wetlands and their 100-foot adjacent areas. In situations where impacts are unavoidable and have been minimized, mitigation may be required to compensate for remaining losses of wetland benefits. However, it does appear that all disturbances would be more than 100 feet from the wetland boundary. Please also note that DEC-regulated wetland, O-33, is located across from this property. However, it appears that the proposed solar project is also more than 100 feet from the boundary of wetland O-33.

**Endangered and Threatened Species**

Bald eagle nests have been documented in proximity to the project location. Impacts to this species should be assessed following the Conservation Plan for Bald Eagles in New York State ([https://www.dec.ny.gov/docs/wildlife\\_pdf/nybaldeagleplan.pdf](https://www.dec.ny.gov/docs/wildlife_pdf/nybaldeagleplan.pdf)). If project related impacts cannot be fully avoided or minimized, a permit for incidental take may be needed. The acceptable work window that would not result in any impacts to breeding eagles in the area would be October 1<sup>st</sup> to December 31<sup>st</sup>. For work proposed outside of this window, additional information is needed including when construction activities are proposed to take place, the duration of those activities, what equipment would be used, noise levels from construction and operational activities as compared to ambient noise levels. This information should be submitted directly to the Bureau of Wildlife at [wildlife.r3@dec.ny.gov](mailto:wildlife.r3@dec.ny.gov) for a determination. The information on eagle nest locations represents our current knowledge of these resources, new eagle nests could be documented with each breeding season and would at that point, need to be addressed as well. In the absence of current survey data for the project, it is best to check in each year to see if any new nests have been established.

The property is within the NYCDEP East-of-Hudson watershed. I recommend reaching out to DEP, if you haven't already, to attend the site visit as they may have jurisdiction. If you have any questions, please let me know.

Thank you,

**Sarah Pawliczak** (she/her/hers)  
Biologist, Bureau of Ecosystem Health  
**New York State Department of Environmental Conservation**  
21 South Putt Corners Road, New Paltz, NY 12561  
P: (845) 256-3050 | C: (845) 913-6489 | [sarah.pawliczak@dec.ny.gov](mailto:sarah.pawliczak@dec.ny.gov)  
[www.dec.ny.gov](http://www.dec.ny.gov) |



---

**From:** Regan, Matthew <[MRegan@trccompanies.com](mailto:MRegan@trccompanies.com)>  
**Sent:** Monday, August 15, 2022 9:26 AM  
**To:** Pawliczak, Sarah A (DEC) <[Sarah.Pawliczak@dec.ny.gov](mailto:Sarah.Pawliczak@dec.ny.gov)>  
**Cc:** Duncan, Colin <[CDuncan@trccompanies.com](mailto:CDuncan@trccompanies.com)>; Erick Alves de Sa <[erick.alvesdesa@solsystems.com](mailto:erick.alvesdesa@solsystems.com)>  
**Subject:** Sol Systems Dell Ave Solar Farm Freshwater Wetland Jurisdictional Determination

*ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.*

Hi Sarah,

Thank you for returning my call.

TRC has submitted a cover letter explaining the proposed Sol Systems Dell Ave Solar Farm Project via

ad hoc transfer to you. Please confirm that you have received this submittal.

As part of site plan review by the Town of Yorktown, the town's environmental consultant, Weston & Sampson, has been hired to review the Project for environmental impacts. Weston & Sampson is requesting confirmation if the NYSDEC has jurisdiction over the wetland at the Project Site. Weston & Sampson will be performing a site visit as part of their assessment and would like to coordinate the site visit with NYSDEC. TRC and Weston & Sampson can be available at the following dates and times:

- Monday, August 22, 1:00 PM to 4:00 PM
- Wednesday, August 24, 10:30 AM to 3:30 PM
- Friday, August 26, 10:30 AM to 3:00 PM
- Wednesday, August 31, 10:30 AM to 3:00 PM

Please let us know your availability for a site visit at your earliest convenience.

Thank you,

Matt

**Matt Regan, PWS**  
Environmental Scientist



21 Griffin Road North, Windsor, CT 06095  
**C** 315.409.5740 | **F** 860.298.6399  
[LinkedIn](#) | [Twitter](#) | [Blog](#) | [TRCcompanies.com](#)

# MEMORANDUM

**TO:** Robyn A. Steinberg, AICP, CPESC  
Town of Yorktown, New York

**FROM:** Daniel P. Biggs, RLA, ISA, CERP

**DATE:** August 31, 2022

**SUBJECT:** **Dell Avenue Solar – Wetland Verification**  
Town of Yorktown, New York

---

As requested, Daniel Biggs of Weston & Sampson PE, LS, LA, ARCHITECTS, PC (Weston & Sampson) completed a review of the wetland boundary delineated by Matthew Regan of TRC Companies. A field visit with Matthew Regan and Colin Duncan (TRC Companies) was conducted on August 24<sup>th</sup>, 2022, to inspect the wetland boundary flagging. Wetland flagging was in place and easily visible. Wetland flag numbers 130 through 180, and ephemeral stream flags 1 through 8 were accounted for in the site review and illustrated on the Delineated Resources Map (Figure 4) dated August 2022.

As a result, the wetland delineation in the field and on the above referenced maps accurately depicts the limits of the wetlands on the site.

Please do not hesitate to reach out with any comments or questions regarding our findings and summary of work for this project.

## Certification

I certify that all the statements of fact in this appraisal are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.



---

Daniel P. Biggs, RLA, ISA (MA-5119A), CERP  
Registered Landscape Architect NY-002443-01

8/31/2022

Date

















exp. 1/31/2023

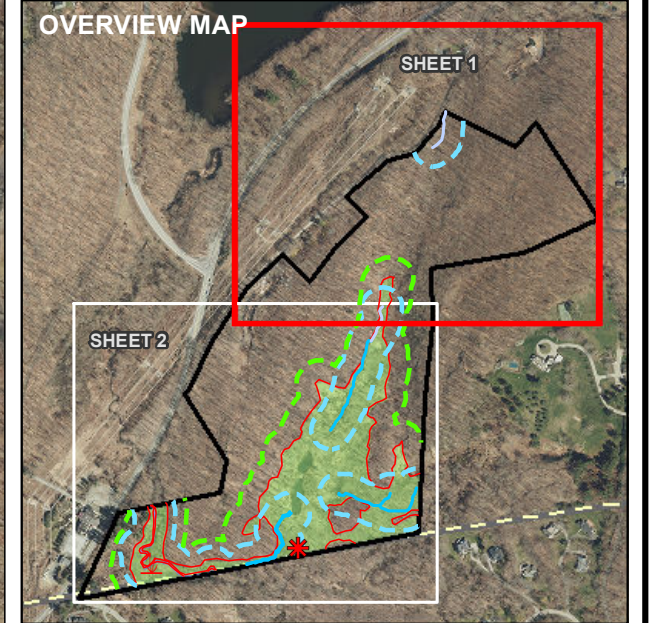
## Attachments:


Delineated Resources Map (Figure 4) dated August 2022.

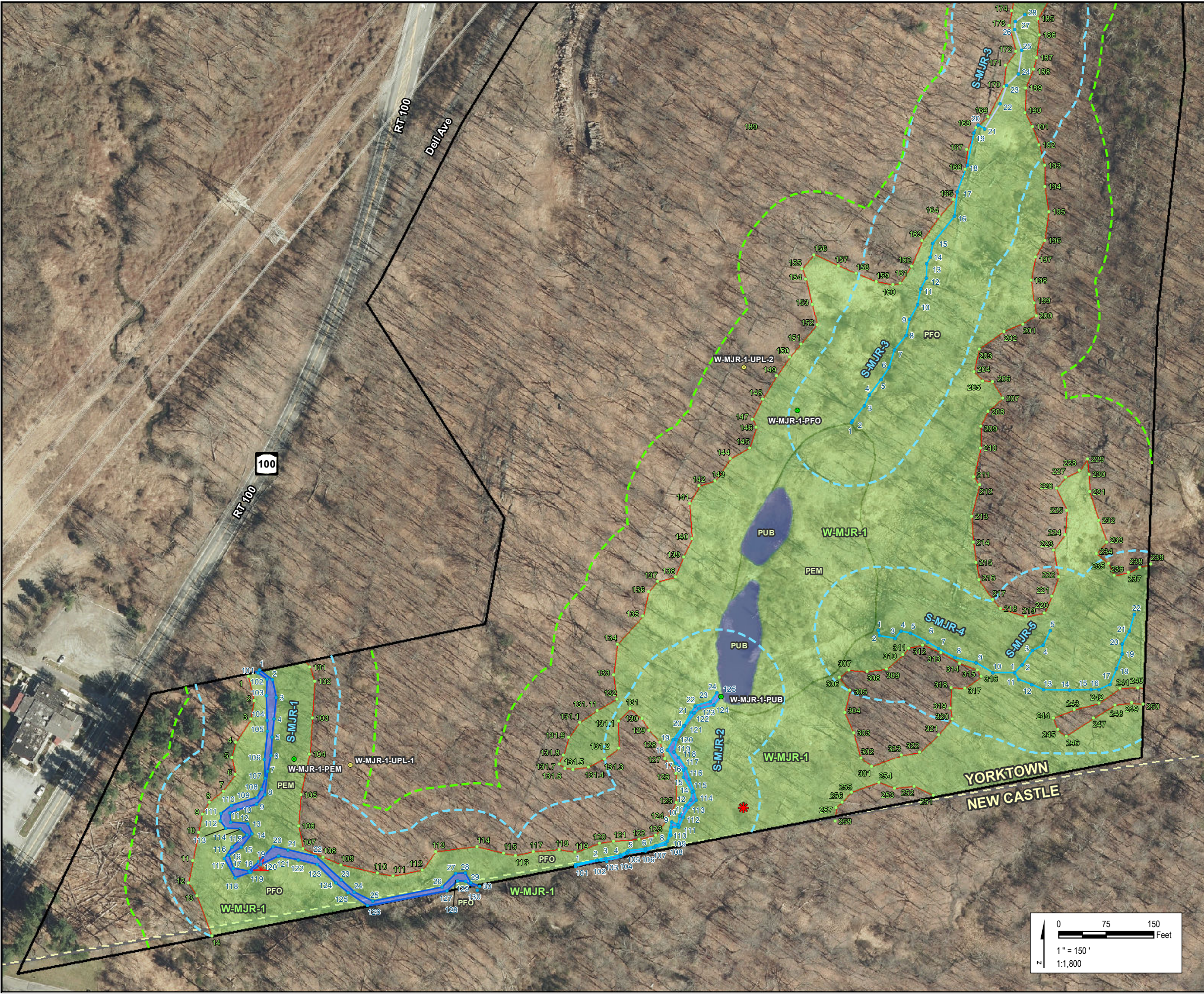


**LEGEND**

-  SITE BOUNDARY
-  INVASIVE PLANT
-  POSSIBLE VERNAL POOL
-  USACE WETLAND PLOT
-  USACE UPLAND PLOT
-  STREAM FLAG
-  WETLAND FLAG
-  DELINEATED EPHEMERAL STREAM
-  DELINEATED INTERMITTENT STREAM
-  DELINEATED PERENNIAL STREAM
-  DELINEATED SURFACE WATER
-  DELINEATED WETLAND BOUNDARY LINE
-  DELINEATED WETLAND
-  100-FT WETLAND ADJACENT AREA (NYSDEC AND YORKTOWN)
-  100-FT STREAM BUFFER (YORKTOWN)
-  MUNICIPAL BOUNDARY

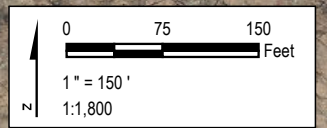
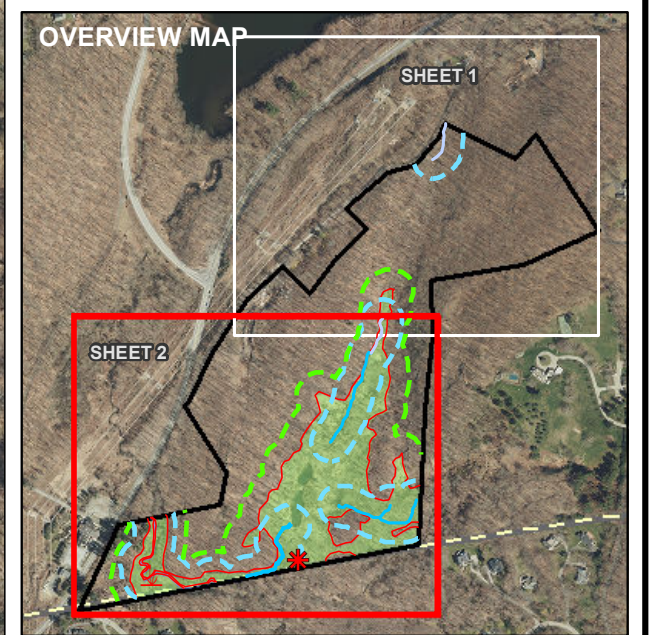


|   |   |
|---|---|
| <b>PROJECT:</b>   |   |
| <b>SOL SYSTEMS DELL AVE</b>   |   |
| TOWN OF YORKTOWN<br>WESTCHESTER COUNTY, NY  |   |
| <b>TITLE:</b>   |   |
| <b>DELINEATED RESOURCES</b>   |   |
| DRAWN BY:   | S. MOTURI                                       |
| CHECKED BY:   | M. REGAN  |
| APPROVED BY:  | C. DUNCAN                                       |
| DATE:   | AUGUST 2022                                     |
| PROJ NO.:   | 431302  |
| <b>FIGURE 4</b>   |   |
| SHEET 1 of 2  |   |
|  |   |
| WANNALANCIT MILLS<br>650 SUFFOLK STREET<br>LOWEL, MA 01854                            |   |
| FILE NO.:   | Fig4_WDR_DellAve_Delineation_11x17_20220831.mxd |



### LEGEND

- SITE BOUNDARY
- INVASIVE PLANT
- POSSIBLE VERNAL POOL
- USACE WETLAND PLOT
- USACE UPLAND PLOT
- STREAM FLAG
- WETLAND FLAG
- DELINEATED EPHEMERAL STREAM
- DELINEATED INTERMITTENT STREAM
- DELINEATED PERENNIAL STREAM
- DELINEATED SURFACE WATER
- DELINEATED WETLAND BOUNDARY LINE
- DELINEATED WETLAND
- 100-FT WETLAND ADJACENT AREA (NYSDEC AND YORKTOWN)
- 100-FT STREAM BUFFER (YORKTOWN)
- MUNICIPAL BOUNDARY



|                             |             |   |        |
|-----------------------------|-------------|---|--------|
| PROJECT:                    |             | <b>SOL SYSTEMS DELL AVE</b>                                 |        |
|                             |             | TOWN OF YORKTOWN<br>WESTCHESTER COUNTY, NY                  |        |
| TITLE:                      |             |   |        |
| <b>DELINEATED RESOURCES</b> |             |   |        |
| DRAWN BY:                   | S. MOTURI   | PROJ NO.:   | 431302 |
| CHECKED BY:                 | M. REGAN    | <b>FIGURE 4</b><br>SHEET 2 of 2                             |        |
| APPROVED BY:                | C. DUNCAN   |   |        |
| DATE:                       | AUGUST 2022 |   |        |
|                             |             | WANNALANCIT MILLS<br>650 SUFFOLK STREET<br>LOWELL, MA 01854 |        |
| FILE NO.:                   |             | Fig4_WDR_DellAve_Delineation_11x17_20220831.mxd             |        |



# MEMORANDUM

**TO:** Robyn A. Steinberg, AICP, CPESC  
Town of Yorktown, New York

**FROM:** Daniel P. Biggs, RLA, ISA, CERP

**DATE:** September 20, 2022

**SUBJECT:** **Dell Ave Solar – Habitat Evaluation**  
Town of Yorktown, New York

As requested, the Weston & Sampson PE, LS, LA, ARCHITECTS, PC (Weston & Sampson) team completed a review of the habitat evaluation completed by TRC Companies for the Dell Ave Solar project. Weston & Sampson reviewed the Habitat Evaluation Report (dated August 2022 by TRC Companies), Tree Mitigation Plan (Preliminary) (dated June 15, 2022 by TRC Companies), for the Dell Ave Solar project located at parcels 70.11-1-16 and 70.15-1-2 in the Town of Yorktown.

The project site consists of converting 12.3 acres of existing woodland into a solar array within meadow (9.1 acres), stormwater management features (4.3 acres), gravel access roads (0.6 acres), and concrete equipment pads (0.1 acres).

The following existing resources were reviewed for this project:

## **Wetland & Streams**

A field verification of existing wetlands and streams was completed in the field with TRC and Weston & Sampson staff on August 24, 2022. A verification memo has been issued under separate cover.

## **Biodiversity Assessment**

The Project Site consists of a temperate deciduous forest and forested wetland, and is surrounded by forested and residential lands. The forest area has minimal understory, due to the dense canopy. Based on the criteria in the Biodiversity Assessment Manual for the Hudson River Estuary Corridor, the habitats present at the Project Site can be classified as mature mesophytic lowland forest, nontidal hardwood swamps, perennial stream, and intermittent streams. Saw Mill River Road and Dell Avenue extend along the western border of the Project Site. In addition, a chain-link fence extends along the western border and is the primary barrier between the Project Site and other natural areas to the west. There are no

roadways or fences along the north, south or eastern boundaries of the Project Site, therefore there are no restrictions to the adjacent lands.

In addition, steep slopes exist in the northeastern portion of the Project Site, while five streams connect and flow through Wetland W-MJR-1, which is located on the eastern boundary of the site. Stream S-MJR-1 flows off-site to the northwest and goes through a culvert underneath Saw Mill River Road before flowing into Cornell Brook. An artificial impoundment area separates two pond sections from each other in the wetland and one of the streams.

Further review of threatened and endangered species onsite was completed for the following species:

### **Indiana Bat**

According to TRC, during site visits, no potential hibernacula were observed; however, several trees were found onsite with exfoliating bark, hollows, or deep furrows, including 59 shagbark hickories. The trees present characteristics suitable for summer roosting habitat for bat species, including the Indiana Bat (USFWS). In addition, the forest area is part of a larger forest patch, thus providing connectivity to more foraging and roosting habitat. However, it should be noted that according to the Hudson Valley Natural Resource Mapper, the Project Site is not part of an important bat foraging area. In addition, since no hibernacula were identified within the vicinity of the Project Site, no impacts to Indiana bat wintering habitat are anticipated due to the Project.

Per the TRC report, tree clearing will be performed during the winter, between October 1 and March 31, in order to avoid impacts to potentially roosting bats. Based on the factors considered herein and confirmed with USFWS, no “take” of Indiana bat is anticipated at the Project Site.

### **Bog Turtle**

TRC herpetologists performed a Phase 1 bog turtle habitat survey on June 18, 2021 and no bog turtles were observed. However, two potential bog turtle habitat areas were identified onsite. A 0.35-acre area of the north-central portion of Wetland W-MJR-1 and a 0.05-acre portion of Wetland W-MJR-1 located in the southwestern portion of the Project Site could provide low-quality potential habitat, based on the surrounding dense canopy cover from the adjacent forest and hydrology disturbances caused by the impoundment.

The USFWS designated three bog turtle conservation zones to protect and help recovering bog turtle populations within their northern range.

No direct impacts to Wetland W-1 are anticipated; therefore, there will be no activities in Conservation Zone 1 at the Project Site. The Project’s LOD will be within two of the three USFWS Conservation Zones for bog turtles. Conservation Zone 2 is the area within the 300-foot adjacent buffer from the limits of wetland W-1. Conservation Zone 3 is the area within a 0.5-mile buffer of this 300-foot adjacent area from

the limits of wetland W-1 (USFWS). Since a portion of the Project's LOD will be within Conservation Zone 2, best management practices are proposed to be followed to avoid indirect impacts that may adversely affect the species. The Project will not impact ground and surface water recharge zones within Conservation Zone 3.

According to the TRC Report, the USFWS concurred that take of bog turtle is not reasonably certain to occur

### **Bald Eagle**

Based on TRC's correspondence with the NYNHP, there is a known bald eagle nest within 0.5 mile of the Project Site. No nests were observed on the Project Site during the site visits and based upon available bald eagle nesting habitat in the vicinity, it is unlikely that there are any eagle nests within 660 feet of the Project Site. Eagles are unlikely to rely on resources onsite but may be supported by the Croton Reservoir and other nearby large waterbodies.

TRC consulted with the NYSDEC regarding potential impacts to bald eagles from noise from construction activities. TRC assumes construction noise levels at the bald eagle nest will not be significantly greater than ambient noise levels. Based on previous studies, it is not expected that the project construction noise will disturb nesting bald eagles. Bald eagles foraging at the Project Site may be disturbed, but only temporarily and during active construction.

The project is planning to comply with the Migratory Bird Treaty Act (MBTA) and Bald and Gold Eagle Protection Act (BGEPA) during construction. As a result, the Project will comply with the MBTA and BGEPA, specifically so that no "takes" of bald eagles, nests, or eggs are anticipated to occur.

### **Tree Inventory**

The existing forest area within the project site is a part of an unfragmented forest patch greater than 100 acres. The project is located within the core of the forest patch, and according to the Hudson River Estuary Program, the forest condition index of the Project Site is in the bottom 20<sup>th</sup> percentile of forest patches within the Hudson River Estuary. This forest condition index indicates that while the Project Site is part of a larger forest patch with a core forest, in comparison to larger forests removed from surrounding development, it has limited connectivity with other large forest patches, provides limited habitat and ecosystem value, and has experienced environmental stressors from surrounding human activity and development.

The subject parcel primarily consists of a mature forest with trees ranging from 8 to 92-in diameter at breast height (dbh), with an average dbh of 15.6-in. A majority of the trees on site are equal to or greater than 12 in dbh. Sugar Maple (*Acer saccharum*) (14.1-in. dbh) and Northern Red Oak (*Quercus rubra*) (avg. 20.2" dbh) were the most common species, followed by White Oak (*Quercus alba*) (avg. 18.7" dbh) and Black Birch (*Betula lenta*) (avg. 15.3" dbh).

According to TRC, 1,007 protected trees are proposed to be removed from the Project Site. Of the 1,007 trees to be removed, 959 of the trees are in good/fair condition, while the remaining 48 are in dead/poor condition. The project proposes to provide 66 evergreen trees around the perimeter of the solar array, primarily for screening purposes. In addition, a contribution to the Yorktown Tree Bank is proposed for removal of the remaining unmitigated trees, and forest area to be cleared.

The following summarizes the total protected trees to be removed and associated mitigation costs.

Attached to this memo is a copy of the Tree Removal/Mitigation Calculations:

- |  |      |
|--|------|
| • Total Protected Trees to be Removed (Fair-Good)                                | 959  |
| • Mitigation Ratio   | 5.20 |
| • Total Replacement Trees to be Planted  | 66   |
| • Total Protected Trees to be Mitigated (deduction of replacement trees planted) | 946  |

#### Tree Fund Calculations

- |   |                     |
|---|---------------------|
| • Total Cost for Protected Trees Removed      | \$ 94,630.77        |
| • <u>Total Cost for Woodland Tree Removal</u> | <u>\$ 32,147.28</u> |
| Total Tree Bank Fund Payment                  | \$ 126,778.05       |

Based upon the requirements included in Chapter 270 – Trees of the Town Code, as well as the Total Protected Trees to be Removed (Fair-Good), Total Replacement Trees to be Planted and the Total Tree Bank Fund Payment, we believe the mitigation measures proposed for this project are adequate for the anticipated loss of forested areas.

#### **Overall Recommendations:**

- Forest Area & Indiana Bat - Tree clearing shall be performed during the winter, between October 1 and March 31, in order to avoid impacts to potentially roosting bats.
- Bog Turtles – Protective Procedures and Measures should be followed during and after construction, including:
  - Bog Turtle Conservation Plan
  - Double Row of Silt Fence
  - Encounter and Education Plan including Future Property Maintenance
- Bald Eagles – The project shall comply with the Migratory Bird Treaty Act (MBTA) and Bald and Gold Eagle Protection Act (BGEPA) during construction.
- Forest Area – To the extent feasible, applicant shall increase number of total replacement trees to be planted, particularly along segments of fence immediately adjacent to roadways or viewable from adjacent properties.
- It is recommended that the area beneath the solar array be planted with wildlife/pollinator species (per TRC Plan). In addition, areas anticipated to receive stormwater runoff or drainage

swales shall be planted with seed species suitable for wet soils, while also providing habitat benefits onsite.

Please do not hesitate to reach out with any comments or questions regarding our findings and summary of work for this project.

**Certification**

I certify that all the statements of fact in this assessment are true, complete, and correct to the best of my knowledge and belief, and that they are made in good faith.

*David P. Biggs*

9/20/2022

Daniel P. Biggs, RLA, ISA (MA-5119A), CERP  
Registered Landscape Architect NY-002443-01

Date  
exp. 1/31/2023

Attachments: Attachment A- Tree Removal/Mitigation Calculations Table

Dell Avenue  
Solar Farm  
Town of Yorktown

| Dell Avenue Solar Project - Per TRC August 2022 memo                                  |                      |                      |
|---|----------------------|----------------------|
| <b>Tree Removal Calculations</b>  |                      |                      |
| Total Trees Surveyed  | Average dbh 15.6 in. | Qty<br>1055          |
| <b>Total Trees Removed</b>  |                      | <b>1007</b>          |
| <i>Invasives - Deduction</i>  |                      | 0                    |
| <i>Dead/Poor Native - Deduction</i>   |                      | 48                   |
| <b>Total Protected Trees Removed (Fair-Good)</b>                                      |                      | <b>959</b>           |
| <br>  |                      |                      |
| Average DBH of Protected Trees (Fair-Good)  |                      | 15.60 in.            |
| <br><b>Tree Mitigation Calculations</b>   |                      |                      |
| Avg. DBH of trees to be removed   |                      | 15.60 in.            |
| Avg. DBH of replacement trees   |                      | 3 in.                |
| <b>Mitigation Ratio</b>   |                      | <b>5.20</b>          |
| Total Protected Trees Removed   |                      | 959                  |
| <b>Total Replacement Rqd. (based upon Ratio)</b>                                      |                      | <b>4987</b>          |
| Replacement Trees to be Planted   |                      | 66                   |
| <b>Total Trees to be Mitigated</b>  |                      | <b>4921</b>          |
| <b>Total Protected Trees to be Mitigated (deduction of replacement trees planted)</b> |                      | <b>946</b>           |
| <hr/>   |                      |                      |
| <b>Tree Fund Calculations</b>   |                      |                      |
| <u>Payment to Tree Bank Fund (per Total Protected Trees Removed)</u>                  |                      |                      |
| <i>Cost per Lost Tree</i>   | \$ 100.00            |                      |
| <i>Total Protected Trees to be Mitigated (deduction of replacement trees planted)</i> | 946                  |                      |
| <b>Total Cost for Protected Trees Removed</b>   |                      | <b>\$ 94,630.77</b>  |
| <u>Payment to Tree Bank Fun (per Total sf of protected woodland removal)</u>          |                      |                      |
| <i>Cost per 5,000 sf</i>  | \$ 300.00            |                      |
| <i>Total Protected Woodland Removal (per TRC Report)</i>                              | 535,788 sf           |                      |
| <b>Total Cost for Woodland Tree Removal</b>   |                      | <b>\$ 32,147.28</b>  |
| <b>Total Tree Bank Fund Payment</b>   |                      | <b>\$ 126,778.05</b> |



SCS Dell 014136 Yorktown, LLC  
Sol Customer Solutions, LLC  
1101 Connecticut Ave NW, Second Floor  
Washington, DC 20036

September 21, 2022

Town of Yorktown Planning Board  
1974 Commerce St  
Yorktown Heights, NY 10598

## Dell Avenue Solar Farm Operations & Maintenance Plan

Preliminary Draft, **Revision #1** (updates in red)

SCOPE OF MAINTENANCE SERVICES – by maintenance provider to Sol Customer Solutions

| <b>1. Monitoring, Reporting, &amp; Inventory</b> | <b>Frequency</b> |
|--|------------------|
| Configuration, Onboarding, & Training            | Included         |
| Active Site Monitoring (Remote)                  | Daily            |
| DC Health Analysis                               | Monthly          |
| Maintain Spare Parts                             | Included         |
| Warranty Enforcement                             | Included         |

| <b>2. Site Property Inspection/Maintenance</b> | <b>Frequency</b>             |
|--|------------------------------|
| Site Host Relations                            | As necessary                 |
| Perimeter & Fence Inspection                   | Annually                     |
| Erosion Inspection                             | Annually                     |
| Site Security Systems Inspection               | Annually                     |
| Signage & Labels Inspection                    | Annually                     |
| Vegetation Management                          | Refer to narrative at bottom |
| Panel Washing                                  | TBD                          |
| Mid-Year Site Inspection                       | Included                     |
| On-Site Emergency Key Lock Box                 | Included                     |

| <b>3. DC Systems</b>                          | <b>Frequency</b>               |
|---|--------------------------------|
| Racking Inspections                           | As recommended by manufacturer |
| Ballast Blocks                                | If applicable                  |
| Module Inspections                            | Annually                       |
| Broken Module Replacement                     | As necessary                   |
| Wire Inspections                              | Annually                       |
| Combiner Box & Re-Combiner Inspections        | If applicable                  |
| Combiner Box & Re-Combiner Torque Inspections | If applicable                  |
| DC Electrical Balance-of-System               | Annually                       |

| <b>4. AC Systems</b>                          | <b>Frequency</b>                           |
|---|--|
| Inverters                                     | As recommended by manufacturer             |
| Inverter Air Filters & Transformer Heat Sinks | As recommended by manufacturer or Annually |
| AC Panelboards & Disconnects                  | Annually                                   |
| Transformers                                  | As recommended by manufacturer or Annually |
| AC Disconnect                                 | Annually                                   |
| Switchgear                                    | Annually                                   |
| AC Electrical Balance-of-System               | Annually                                   |
| MV Equipment                                  | If applicable                              |

| <b>5. DAS/SCADA Inspections</b>                        | <b>Frequency</b>               |
|--|--------------------------------|
| General DAS Inspection                                 | Annually                       |
| Sensor Verification                                    | Annually                       |
| Pyranometers & Reference Cells                         | At least twice per year        |
| Pyranometer Calibration                                | As recommended by manufacturer |
| Data/Instrument Accuracy & Communications Verification | As recommended by manufacturer |

| <b>6. Testing</b>           | <b>Frequency</b> |
|-----------------------------|------------------|
| Module Level Thermal Audits | Annually         |
| Thermal Imaging             | Annually         |
| Transformer Oil Testing     | If applicable    |
| Point-to-Point Testing      | Annually (5%)    |

| <b>7. Corrective Maintenance</b>              | <b>Frequency</b> |
|---|------------------|
| Remote Troubleshooting                        | Included         |
| Remote Equipment Resets                       | Included         |
| On-Site Troubleshooting, Repairs, Diagnostics | Included         |
| On-Site Resets                                | Included         |
| Corrective Maintenance                        | Included         |
| Parts Procurement                             | TBD              |
| Corrective Maintenance Exclusions             | TBD              |



## VEGETATION MANAGEMENT – by maintenance provider to Sol Customer Solutions

For the Dell Avenue Solar Farm, Sol Systems recommends a mixture of native and naturalized grasses and legumes. Due to the site's shallow bedrock, moisture availability and retention will be limited. To support pollinator-friendly species, seed mixes such as or similar to Round Seed Panic Grass, Clover, Black Eyed Susan, and Birds Foot Trefoil are recommended. These grasses and flowers provide value to pollinators and stabilize the soil. Sol Systems will include pollinator-friendly plants in the mix and the final seed mix will be determined based on site conditions, timing of seeding, and availability of seeds.

Vegetation management of a pollinator-friendly site is accomplished through a combination of mowing and herbicide treatment. Long-term maintenance is performed by a vetted firm with conservation and ecology expertise on staff to assess on-site conditions and this same firm is typically that which first seeded the site during the construction phase. Typically, a site will be fully mowed several times in the first three years of growth. This technique, meant to mimic a prescribed burn on a meadow, limits the presence of invasive species while allowing for establishment of native species. Some targeted herbicide application may occur in these early years to manage specific invasive species. In later years, once vegetation is established, maintenance will focus on fewer, more targeted mowing events and some herbicide application. This will manage invasive species in the long term, while allowing the native / naturalized meadow to grow. Vegetation on solar sites is typically allowed to grow to the height of the leading edge of the solar module.

Sol Systems is also willing to explore additional benefits to the site such as the opportunity to add artificial or human-made nesting structures for bees and other pollinators to the perimeters of the site.

Attached is an example of a suitable seed mix to be considered for this site. **Once a seed mix is selected, an addendum to the Scope of Maintenance Services will be developed that covers the vegetation management services, including frequency of cutting/mowing.**

[Final selections are to be determined during detailed engineering design]



## Ernst Conservation Seeds

8884 Mercer Pike  
 Meadville, PA 16335  
 (800) 873-3321 Fax (814) 336-5191  
[www.ernstseed.com](http://www.ernstseed.com)

Date: March 21, 2021

### Fuzz & Buzz Mix - Standard - ERNMX-146

| <b>Botanical Name</b>   | <b>Common Name</b>                          |
|---|---|
| 26.40 % <i>Lolium perenne</i> , 'Crave', Tetraploid           | Perennial Ryegrass, 'Crave', Tetraploid     |
| 20.80 % <i>Dactylis glomerata</i> , 'Pennlate'                | Orchardgrass, 'Pennlate'                    |
| 18.90 % <i>Poa pratensis</i> , 'Ginger'                       | Kentucky Bluegrass, 'Ginger' (pasture type) |
| 17.00 % <i>Festuca elatior</i> x <i>Lolium perenne</i> , Duo  | Festulolium, 'Duo'                          |
| 5.70 % <i>Trifolium hybridum</i>                              | Alsike Clover                               |
| 4.80 % <i>Trifolium pratense</i> , Medium, Variety Not Stated | Red Clover, Medium, Variety Not Stated      |
| 2.00 % <i>Lotus corniculatus</i> , 'Leo'                      | Bird's Foot Trefoil, 'Leo'                  |
| 1.30 % <i>Cichorium intybus</i>                               | Blue Chicory                                |
| 1.00 % <i>Chrysanthemum leucanthemum</i>                      | Oxeye Daisy                                 |
| 0.90 % <i>Coreopsis lanceolata</i>                            | Lanceleaf Coreopsis                         |
| 0.80 % <i>Chamaecrista fasciculata</i> , PA Ecotype           | Partridge Pea, PA Ecotype                   |
| 0.40 % <i>Solidago nemoralis</i> , PA Ecotype                 | Gray Goldenrod, PA Ecotype                  |

**100.00 %**

**Seeding Rate:** Expect to apply about 40 lbs per acre with a cover crop of annual ryegrass 12 lbs/acre

Forage & Pasture Sites; Solar Sites

## EMERGENCY RESPONSE PLAN – to be finalized by EPC contractor on behalf of Sol Customer Solutions

### *Local Fire Department Training*

- The applicant will provide emergency response training to the local fire department and produce an electronic version of the training program, so that it can be utilized to train personnel in the future. The initial training will involve a site walkthrough with local fire department(s), the Town of Yorktown Fire Prevention Bureau, and the EPC (engineering-procurement-construction) contractor. It will occur at the end of the construction phase.

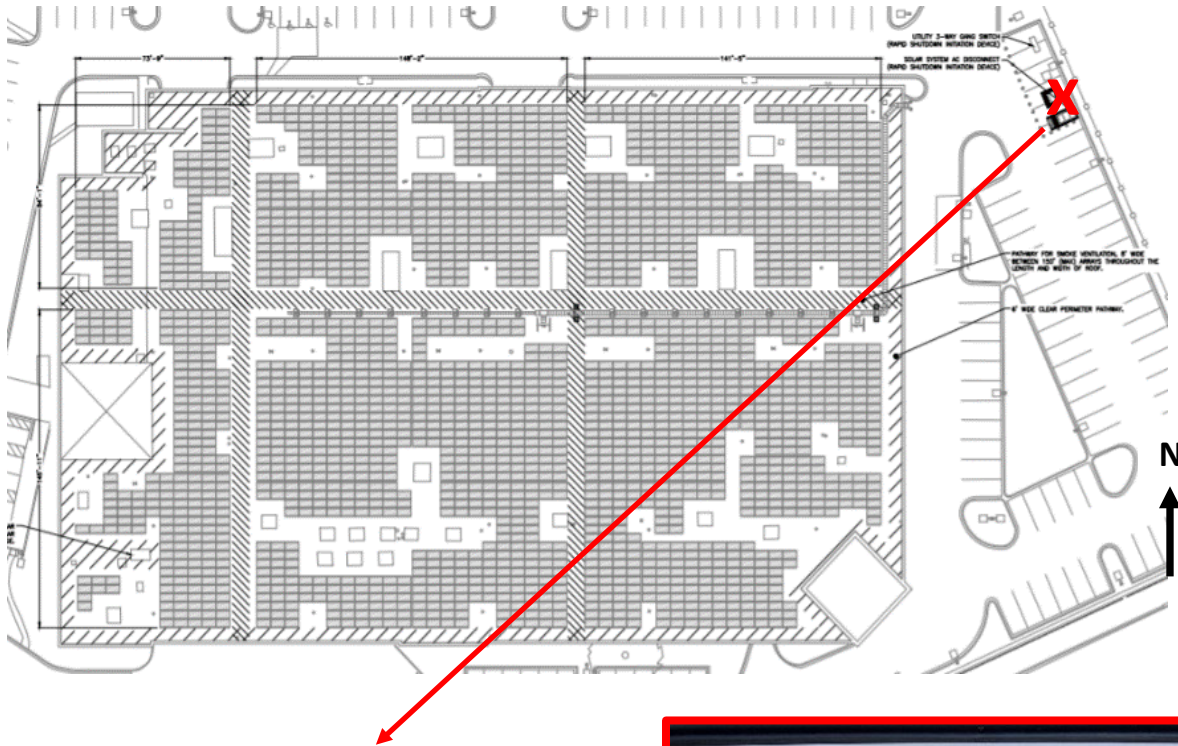
### *Example of Emergency Response Plan*

#### **Site Safety/Emergency Shutdown Procedure**

|  |
|--|
| Call Sol Systems and/or O&M Provider for consultation.   |
| If an immediate unsafe condition exists: CALL 911.   |
| Walk to main AC electrical disconnect switch (noted on site plan as red X). <b>Cabinet lock combination is: 1234</b> |
| Follow instruction shown on the next page to shut down system.   |

*[Continues on next page]*

**Site Plan & Emergency Electrical Disconnect Panel Location**



**Cabinet lock combination is: 1234**

# Visual Impact Assessment

September 21, 2022

## SCS Dell 014136 Yorktown, LLC Dell Avenue Solar Farm Yorktown, New York, 10514

Prepared For:



Prepared By:



TRC Companies  
650 Suffolk Street, Suite 200  
Lowell, MA 01854

# Table of Contents

|            |  |          |
|------------|--|----------|
| <b>1.0</b> | <b>INTRODUCTION</b> .....  | <b>1</b> |
| <b>2.0</b> | <b>METHODOLOGY</b> .....   | <b>1</b> |
| <b>3.0</b> | <b>RESULTS AND DISCUSSION</b> .....  | <b>1</b> |
| 3.1        | LOS 1 – Kitchawan Preserve (top of hill) – Distance to Arrays ~2,700 feet (0.5 miles), View South .....                  | 3        |
| 3.2        | LOS 2 – Kitchawan Preserve (at North County Trailway) – Distance to Arrays ~1,450 feet (0.3 miles), View Southeast ..... | 3        |
| 3.3        | LOS 3 – Intersection Route 100 & Route 134 – Distance to Arrays ~350 feet (0.1 miles), View Southeast .....              | 3        |
| 3.4        | LOS 4 – Route 100 – Distance to Arrays ~300 feet (0.1 miles), View East .....  | 4        |
| 3.5        | LOS 5 – Hilltop Hanover Farm – Distance to Arrays ~13,400 feet (2.5 miles), View South. ....                             | 5        |
| 3.6        | LOS 6 – Turkey Mountain – Distance to Arrays ~15,100 feet (~2.9 miles), View Southeast.....                              | 5        |
| 3.7        | LOS 7 – Pinesbridge Road Residence – Distance to Arrays ~1,750 feet (0.3 miles), View Southeast .....                    | 6        |
| 3.8        | LOS 8 – Near Evan Drive Residence – Distance to Arrays ~1,450 feet (0.3 miles), View East.....                           | 6        |
| <b>4.0</b> | <b>CONCLUSIONS</b> .....   | <b>6</b> |

## ATTACHMENTS

Attachment 1: Comparison Footprint Between Croton Overlook and Dell Avenue Solar Farm

Attachment 2: Overall Plan View: Line of Sight Profiles #1 Through #8

Attachment 3: Line of Sight Profiles

Attachment 4: Photos from Croton Overlook VIA

## 1.0 INTRODUCTION

The Dell Avenue Solar Farm (Project) is a 3,625 kWac fixed-tilt ground mount solar energy system proposed on a site just to the south of Dell Ave and east of its southern intersection with Saw Mill River Rd (Rt 100). A visual assessment for this project site was previously completed in 2010 as part of the Croton Overlook Development environmental review. In a July 18, 2022 letter to SCS Dell 014136 Yorktown, LLC (Applicant), the Town of Yorktown Planning Department requested the Croton Overlook assessment be updated to reflect the current proposed Project. The footprint of the Project vs. Croton Overlook is nearly the same. See Attachment 1 for an overlay comparison of facilities. There is a difference in proposed tree clearing and mitigation plantings. As well, the solar panels will be lower in height (no greater than 10 feet above ground surface) as opposed to the 2½ story residential buildings that were previously proposed for Croton Overlook. References to the 2010 Croton Overlook Visual Impact Assessment (Croton VIA) are made in this document.

## 2.0 METHODOLOGY

In completing the Line of Sight (LOS) Profiles, Light Detection and Ranging (LiDAR) point cloud data from the U.S. Geological Survey (USGS) Lidar Point Cloud NY FEMAR2 Central 2018 D19 dataset was used. The LiDAR data was acquired between January and April 2019 and published for public accessibility on May 18, 2021. Electronic datasets were obtained from the USGS National Map (<https://apps.nationalmap.gov/viewer/>). LiDAR data is the best available elevation data as it contains high resolution accurate ground elevations in addition to building and tree heights that offer realistic physical visual impediments as they occur in the landscape.

When built, the panel heights with a fixed racking system are expected to be between 6 to 8 feet above ground level. However, a conservative height of 10 feet was used for this analysis.

The LiDAR elevation data obtained for the Project was used for the terrain and vegetation data source. ESRI GIS Spatial Analysis was used to post-process the data to modify areas of proposed Project grading and tree clearing. ESRI GIS 3D Analyst was used to produce the linear elevation profiles sampled across select sight lines.

## 3.0 RESULTS AND DISCUSSION

LOS elevation profiles are provided as an update for the Dell Avenue Solar Farm. LOS are able to provide the reviewer with information that assists in examining the reasons why objects such as solar panels may have open or impeded views. The underlying topography of a sight line in addition to vegetative obstructions can be produced, as can an estimated amount of visibility of the upper portion of an object if it is visible.

The LOS viewpoint locations are those requested by the Yorktown Planning Department, most of which originated from the Croton VIA. Please refer to the Overall Plan View in Attachment 2 for profile locations. Bald Mountain and the Taconic State Parkway are not included in this update. The Croton VIA previously concluded that there will be no views from these locations, as both viewpoints are blocked by topography.

Upon examination of LOS and photographs from the Croton VIA, many of the views to the site were minimal to none. It is reasonable to conclude that visual impact of the Project is less than that represented by the Croton Overlook project, as the proposed vertical heights of buildings measured 28 feet tall at the top of roofline. There is also 9 years of additional vegetative growing seasons between data and photographs acquired in 2010 vs the published LiDAR data flown in 2019.

For the following discussion, distances are those from the viewer to the first panels encountered. "Views screened by vegetation" implies full obstruction of views, limited potential partial views, or limited partial fragmented views through leaf-on or leaf-off bare branched trees.

Also noted on the LOS profiles are distance measurements as they pass through an existing high voltage transmission utility right-of-way (power lines) that is in the area. These measurements were taken along the actual profile line where measured distances may be greater than the actual right-of-way (ROW) width because they may consist of oblique angles and diagonal lines. This explains the varying distances noted in the LOS profiles.

Several "rules of thumb" can be employed when reviewing line of sight profiles and have been considered in the conclusions:

1) For clear views through a tree-less, obstacle-free line of sight:

- Generally, visibility extends up to approximately 3 miles on flat ground until the horizon.

2) For views through forested tree cover with full foliage:

- Screened views up to 0-50 feet and probably little to no visibility over 150 feet. Variational nuances will factor in a view such as varying tree density and respective heights, varying species (mixed forest vs deciduous vs coniferous) or foliage gaps in overstory, amount of understory as well as position of lowest branches.

3) For views through winter tree cover with less foliage:

- Screened views up to 300 feet and will fall off sharply up to 500 feet, provided favorable conditions. A stand of leaf-off trees and shrubs can act as a solid mass that can preclude visibility. Variational nuances will factor in a view such as varying tree density and respective heights, varying species (mixed forest vs deciduous vs coniferous) or foliage gaps in overstory, amount of understory as well as position of lowest branches.

LOS profiles can be found in Attachment 3.



### **3.1 LOS 1 – Kitchawan Preserve (top of hill) – Distance to Arrays ~2,700 feet (0.5 miles), View South**

Kitchawan Preserve is a 208-acre natural preserve bordered by Croton Reservoir and the North County Trailway. As noted in the aerial photo for LOS 1 in Attachment 3, the Preserve is wooded mainly with mature deciduous tree species. The viewpoint is positioned at a high point and overlooks a south-facing descending slope leading to Croton Reservoir. The LOS 1 viewpoint is higher than the Project. As the elevation profile shows, views are not anticipated because of the approximately 315 feet of existing vegetative screening from varying canopy levels in the forested environment. Prevalent along the profile environment also is the presence of a high voltage transmission utility corridor that is just north of the Project and Dell Avenue. The approximate 150-foot tall lattice towers (as measured by LiDAR data) provide a significant visual presence of their own in the general vicinity. The profile crosses 240 feet of ROW.

Previous photographs from the 2010 Croton Overlook submittal (Attachment 4) taken at the Kitchawan Preserve also show obstructed and screened views. While the photos mark out the Project location, one must also consider that perceived size and scale of an object is diminished with distance and will also show much less detail with less visual impact.

Adverse views to the Project are not expected due to approximately 315 feet of vegetative screening.

### **3.2 LOS 2 – Kitchawan Preserve (at North County Trailway) – Distance to Arrays ~1,450 feet (0.3 miles), View Southeast**

LOS 2 shows a second elevation profile located further south closer to the Project but at a lower elevation that is located along the North County Trailway. This viewpoint is lower than the site location. There are no anticipated views of the Project from the trailway viewpoint due to a series of existing vegetative obstructions. As the LOS 2 profile shows, there is a thin section of trees that would provide approximately 60 feet of screening along the trailway north of Croton Reservoir. The majority of the screened views would mainly be derived from the trees located on the south side of the reservoir. There is tree canopy that provides 155, 190, and 110 feet of screening each, in three different areas in series. There is also another 25 feet of screening from vegetation in front of (north of) Dell Avenue.

Views are not expected due a cumulative 540 feet of vegetative screening. Previous photographs from the Croton VIA in Attachment 4 support the conclusion of no views, as the vegetation south of the reservoir can be seen obstructing views.

### **3.3 LOS 3 – Intersection Route 100 & Route 134 – Distance to Arrays ~350 feet (0.1 miles), View Southeast**

LOS 3 is at the intersection of Route 100 and Route 134 and is a representative view for motorists at the intersection facing southeasterly towards the Project. There is a large high voltage transmission utility ROW that crosses at the intersection in front of the viewpoint. A Google Earth screenshot is provided below to assist in the narrative for this LOS. The viewpoint is essentially on Route 134 where the profile visual environment consists of several suspended traffic lights

strung perpendicular across Route 100 and three vertical elevation levels of transmission line. (The ROW contains 2 parallel lattice transmission towers approximately 150 high. Each lattice tower consists of 6 davit arms, 2 per level. Therefore, there is a series of 12 wire bundles associated with the davit arms of 2 towers). These transmission wires can be seen sweeping across the view at the LOS 3 intersection.

As also noted, left of center in the photograph below shows a topographic obstruction along Route 100 that serves to preclude views to the “left” side of the Project. The LOS profile line was pulled to the right of this topographic feature through lower elevation terrain on the right to show worse-case. As such, there is a narrow line of dense shrubs that exist on the south side of the ROW between the viewer and (north of) Dell Avenue that screens views in this area. More significant screening of the Project occurs from existing taller trees that are approximately 40 feet deep and located on the south side of Dell Avenue (far background). Visual impacts are not expected due to topography as well as vegetative screening north of the perimeter fence.

Views are expected to be non-existent or worse-case, minor fragmented views through vegetation. However, viewing experiences from vehicular traffic are typically intermittent and of short duration.



### **3.4 LOS 4 – Route 100 – Distance to Arrays ~300 feet (0.1 miles), View East**

LOS 4 consists of a similar profile environment to LOS 3 without the suspended traffic lights in the view. Here, roadside shrubs along the south side of Route 100 serve to screen views to lower portions of the Project as seen in the LOS 4 elevation profile. As with LOS 3, there exists a narrow line of dense shrubs that exist on the south side of the ROW between the viewer and (north of) Dell Avenue that will also provide screening in this area. More significant and additional screening will occur from existing taller trees approximately 50 feet deep that is located on the south side of

Dell Avenue. Visual impacts are not expected due to vegetative screening north of the perimeter fence.

Views are expected to be non-existent or worse-case, minor fragmented views through vegetation. Viewing experiences from highway vehicular traffic are typically intermittent and of short duration.

### **3.5 LOS 5 – Hilltop Hanover Farm – Distance to Arrays ~13,400 feet (2.5 miles), View South**

LOS 5 is a long-distance southerly view from Hilltop Hanover Farm. While views may vary within the property, views to the Project are not anticipated at this location. The LOS 5 aerial photograph shows dense forest groups along the profile elevation. The profile shows that approximately 1,340 feet of tree canopy is expected to screen views from vegetation located on the descending slope south of the farm. There is an additional 115 feet of screening from trees closer to the Project in front of the solar panels. The profile also intersects and parallels approximately 2,200 feet of high voltage transmission utility ROW where the lattice towers are also capable of adding an existing and interfering visual impact to the view.

Previous photographs from the Croton VIA seen in Attachment 4 support a conclusion of no views, as the Project would be set in and behind the distant trees located on the Project property. The photos also demonstrate how distance will provide reduced visibility from the Hilltop Hanover Farm by illustrating the muted and “fused” colors seen in the background, as well as if one considers how small 10-foot tall objects seen 2.5 miles away would be perceived. Within the Croton VIA photos, other development in open areas cannot generally be detected other than the tall lattice towers in the existing high voltage utility ROW. Typically at distance, development unless bright white, would be visually absorbed into the visual environment due to similar colors and contrasts with both surrounding leaf-off and leaf-on forested areas as well as the diminished size and scale as it appears embedded into landscape.

Views are not expected at this location due to a cumulative 1,455 feet of vegetative screening.

### **3.6 LOS 6 – Turkey Mountain – Distance to Arrays ~15,100 feet (~2.9 miles), View Southeast**

Turkey Mountain is approximately 125 acres of land located on a land reserve and is currently maintained by the Yorktown Land Trust. It is the highest point in Westchester County. The LOS 6 viewpoint lies to the northwest of the Project site approximately 2.9 miles to the solar arrays.

Views from Turkey Mountain are not expected. There are two areas of natural forested screening along the elevation profile. There is approximately 290 feet of screening from the surrounding vegetation at the viewing point. A second area of screening consists of an additional 355 feet of screening from trees located north of the North County Trailway. Profile views also intersect approximately 170 feet of high voltage transmission utility ROW where lattice towers are capable of adding an existing visual impact in the environment.

Views are not expected due a cumulative 645 feet of vegetative screening. Previous photographs from the Croton VIA in Attachment 4 support the conclusion of no views, as the vegetation in the immediate vicinity can be seen obstructing views.

### **3.7 LOS 7 – Near Pinesbridge Road Residence – Distance to Arrays ~1,750 feet (0.3 miles), View Southeast**

Views are not expected from the LOS 7 viewpoint location(s) located off Pinesbridge Road. The aerial profile for LOS 7 shows a forested area to the east between the viewer and the Project. The elevation profile shows that a location at the residence will have views blocked by topography. Views from the high point on the ridge located approximately 190 feet further east from the building location will have views screened by 310 feet of varying levels of tree canopy. The profile also crosses approximately 185 feet of high voltage transmission utility ROW where the lattice towers are also adding an existing visual impact to the environment.

Adverse views are not expected at this location due to 310 feet of vegetative screening.

### **3.8 LOS 8 – Near Evan Drive Residence – Distance to Arrays ~1,450 feet (0.3 miles), View East**

The LOS viewpoint is on a high point of a ridge located off Evan Drive. Screened views may be possible from this location. Similar to LOS 7, the aerial profile shows a forested slope west of the Project. The elevation profile results show approximately 175 feet of screening from the tree canopy.

The profile also crosses approximately 185 feet of high voltage transmission utility ROW where the lattice towers are also capable of adding an existing visual impact to the environment.

Significant visual impacts are not expected due to 175 feet of vegetative screening.

## **4.0 CONCLUSIONS**

Attachment 3 elevation profiles show that minimal to no views of the Project from the LOS viewpoints are expected. There are no clear open views. In all cases, there is one or more occurrence of intervening vegetation of varying distances along each elevation profile that will screen views. This existing vegetation serves as mitigation in and of itself. Additional coniferous landscape mitigation plantings are also proposed along the Project perimeter fence in three areas along Dell Avenue.

The Attachment 4 Croton VIA photos also support extremely limited to no views even under leaf-off conditions. As those photos demonstrate, forested landscape even without leaves appear as a solid mass that can obstruct views. The photos suggest that even in optimal best-case visibility conditions, views that might be obtained would be extremely minor and/or consist of partial fragmented views through existing vegetation from proximal locations.

As noted in the *Resolution Approving Adopted SEQRA Findings for the Rezoning Petition and Proposal for the Croton Overlook Property and Development* dated December 12, 2011, the Town Board of the Town of Yorktown issued a Findings Statement in which it found “that the high tension power lines are presently quite visible from sensitive locations and have a greater existing visual impact than any potential view of the Project’s roofline.”

The Dell Avenue Solar Farm design, with a significantly lower vertical footprint than the Croton Overlook Development, includes the preservation of existing trees as natural buffers. Through appropriate siting and mitigation, the Applicant also has reasonably minimized or avoided adverse visual impacts to the maximum extent practicable, while also resolving to provide additional year-round evergreen landscape mitigation screening in several areas.

**DELL AVENUE SOLAR FARM**

**ATTACHMENT 1**

**COMPARISON FOOTPRINT BETWEEN CROTON  
OVERLOOK AND DELL AVENUE SOLAR FARM**



PROPERTY LINE

DELL AVE SOLAR FARM SITE PLAN

DELL AVE SOLAR FARM LIMIT OF CONSTRUCTION

DELL AVENUE

CROTON OVERLOOK LIMIT OF CONSTRUCTION

CROTON OVERLOOK SITE PLAN

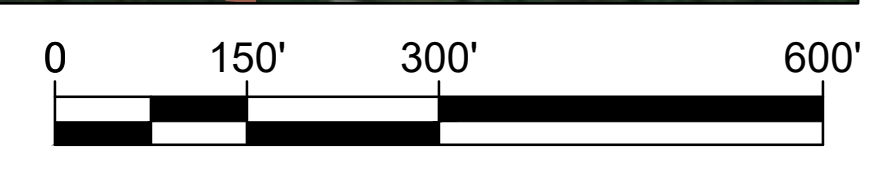
PINESBRIDGE ROAD

SAW MILL RIVER ROAD

**SCS DELL 014136 YORKTOWN, LLC  
GROUND MOUNT SOLAR PV  
DELL AVENUE**

YORKTOWN, NEW YORK 10514  
AUGUST 1, 2022 ◆ REVISION 0

SITE PLAN OVERLAY: CROTON OVERLOOK AND YORKTOWN SOLAR SITE PLANS  
PRELIMINARY DRAWINGS (08/01/2022)

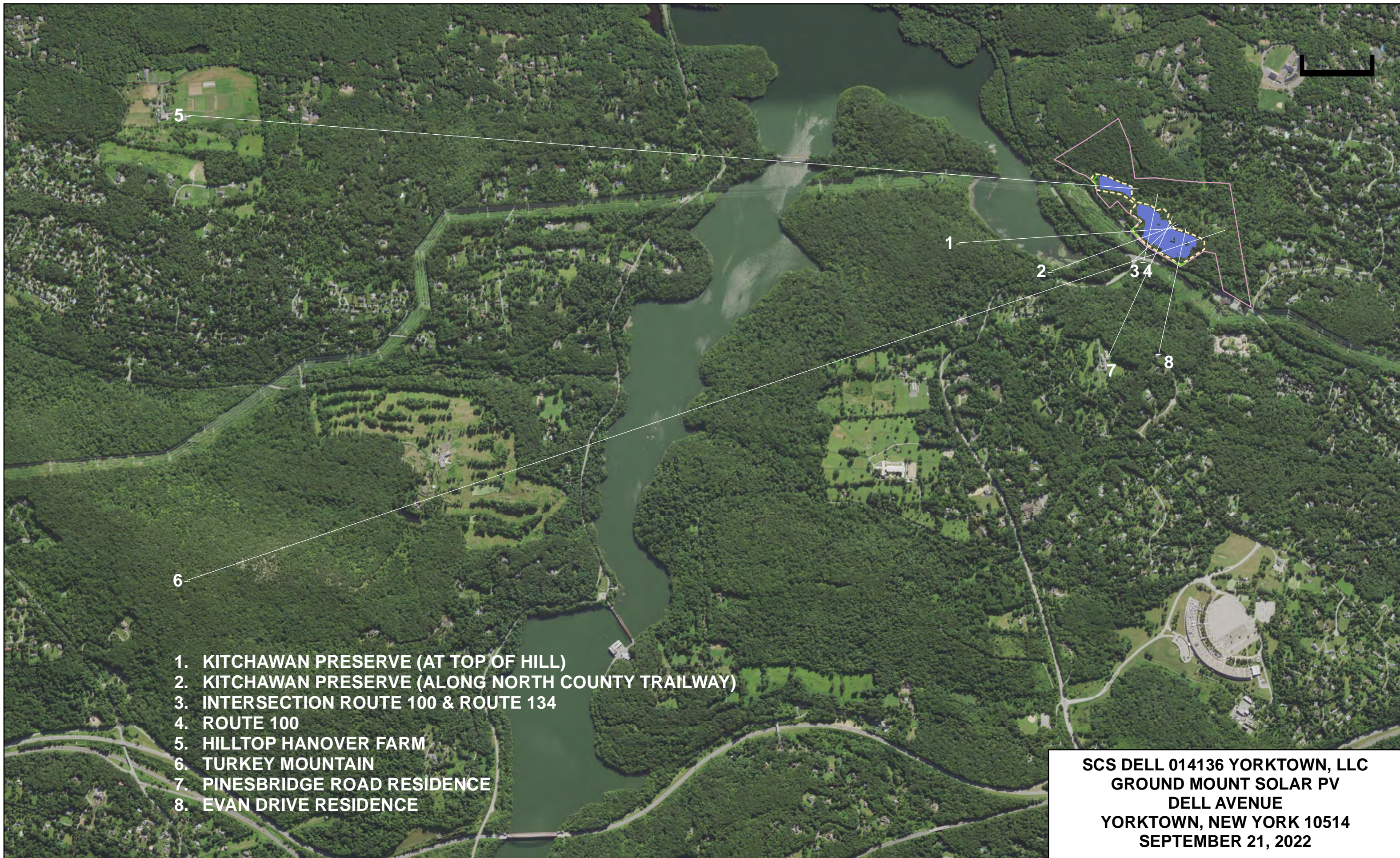


**DELL AVENUE SOLAR FARM**

**ATTACHMENT 2**

**OVERALL PLAN VIEW: LINE OF SIGHT  
PROFILES #1 THROUGH #8**

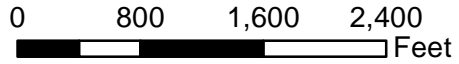




- 1. KITCHAWAN PRESERVE (AT TOP OF HILL)
- 2. KITCHAWAN PRESERVE (ALONG NORTH COUNTY TRAILWAY)
- 3. INTERSECTION ROUTE 100 & ROUTE 134
- 4. ROUTE 100
- 5. HILLTOP HANOVER FARM
- 6. TURKEY MOUNTAIN
- 7. PINESBRIDGE ROAD RESIDENCE
- 8. EVAN DRIVE RESIDENCE

**SCS DELL 014136 YORKTOWN, LLC  
GROUND MOUNT SOLAR PV  
DELL AVENUE  
YORKTOWN, NEW YORK 10514  
SEPTEMBER 21, 2022**

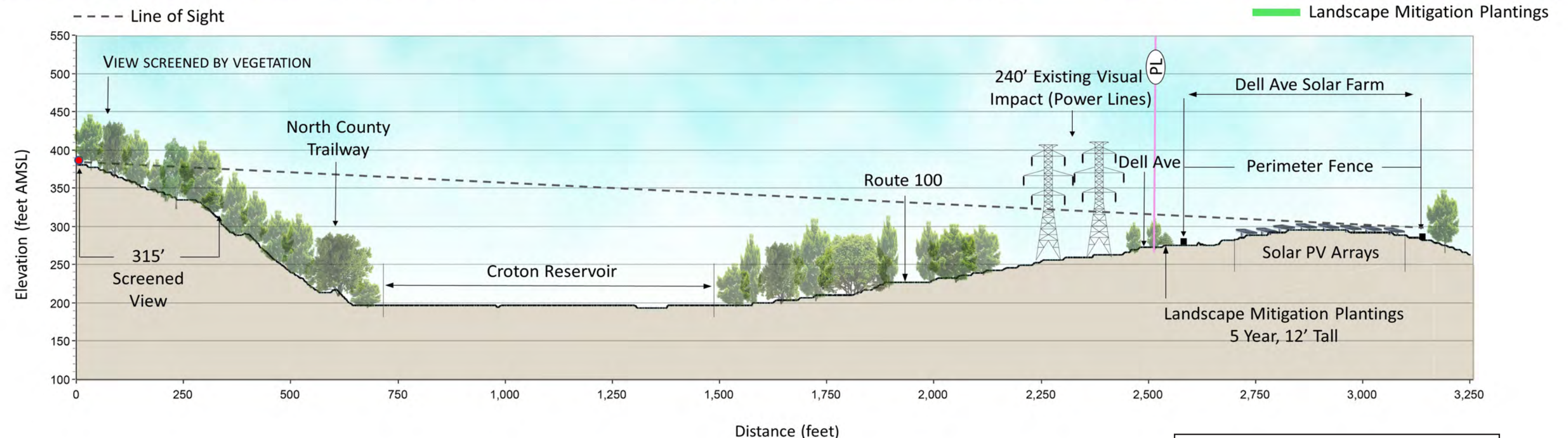
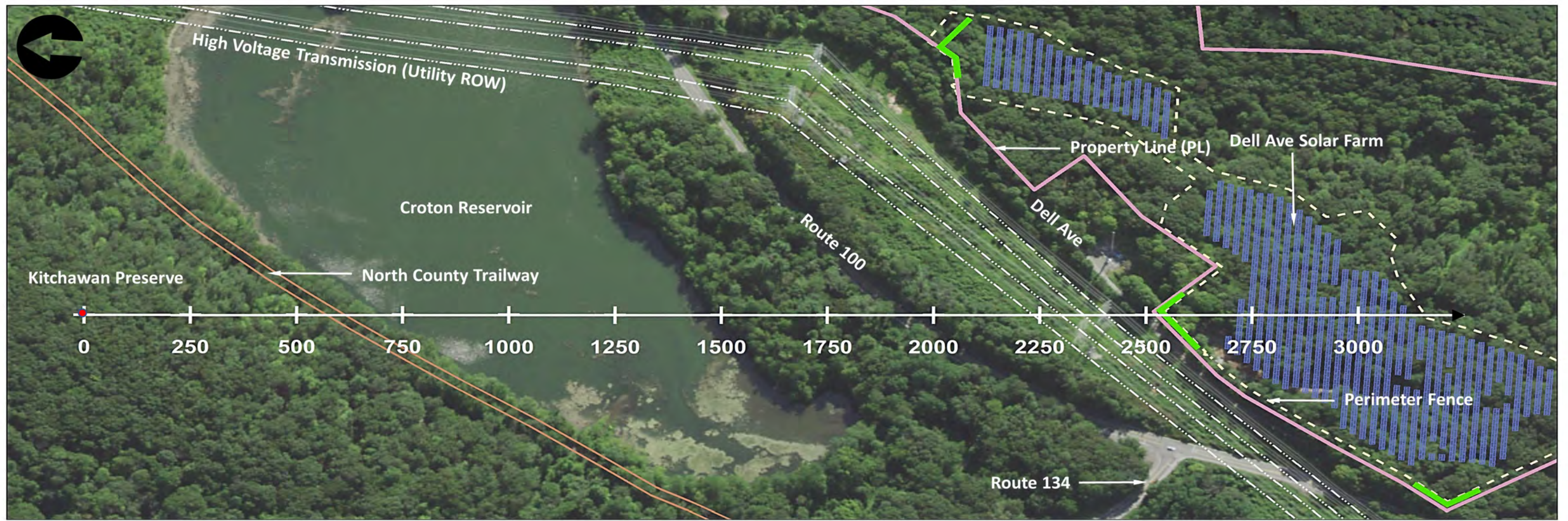
**OVERALL PLAN VIEW: LINE OF SIGHT PROFILES #1 THROUGH #8**



**DELL AVENUE SOLAR FARM**

**ATTACHMENT 3**

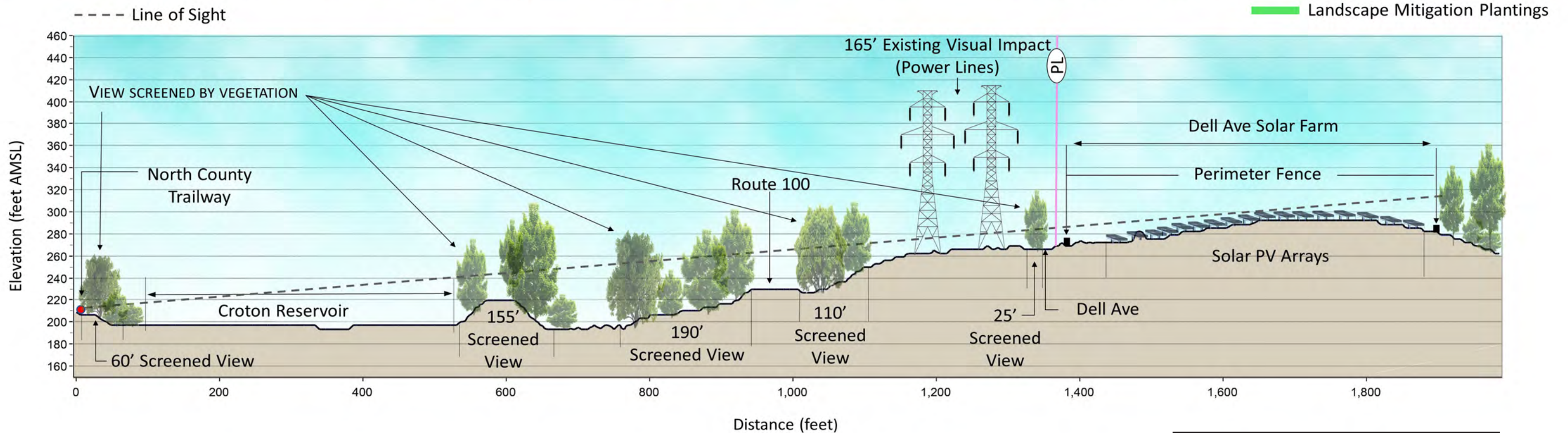
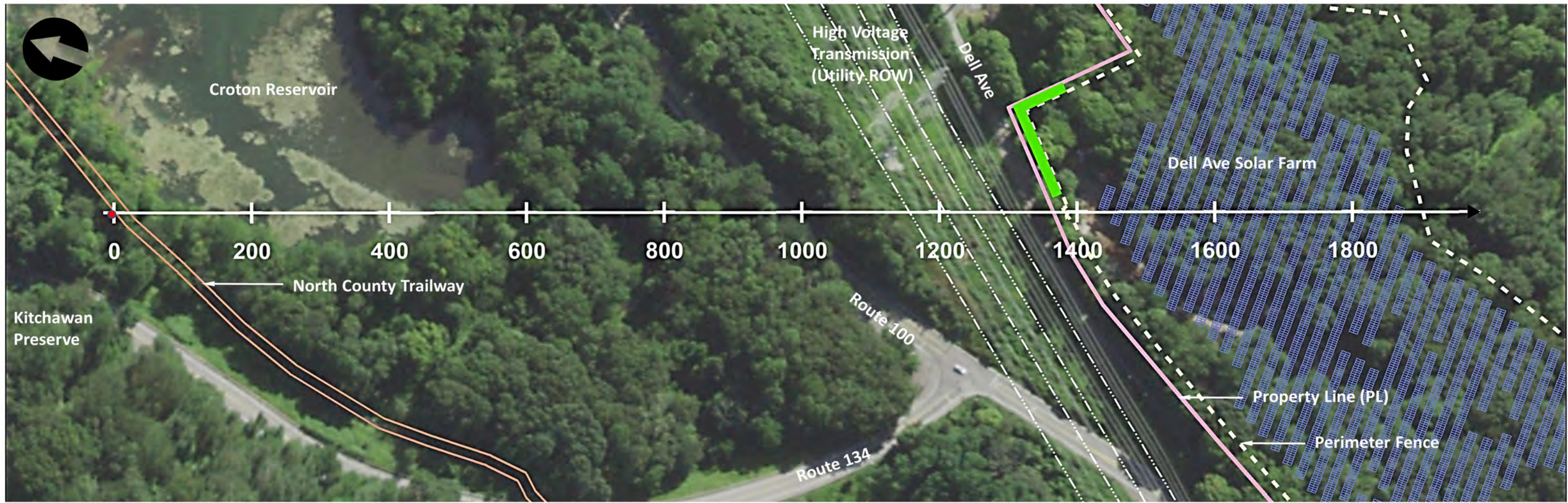
**LINE OF SIGHT PROFILES**



LOS 1- Kitchawan Preserve (top of hill)

DELL AVENUE SOLAR FARM

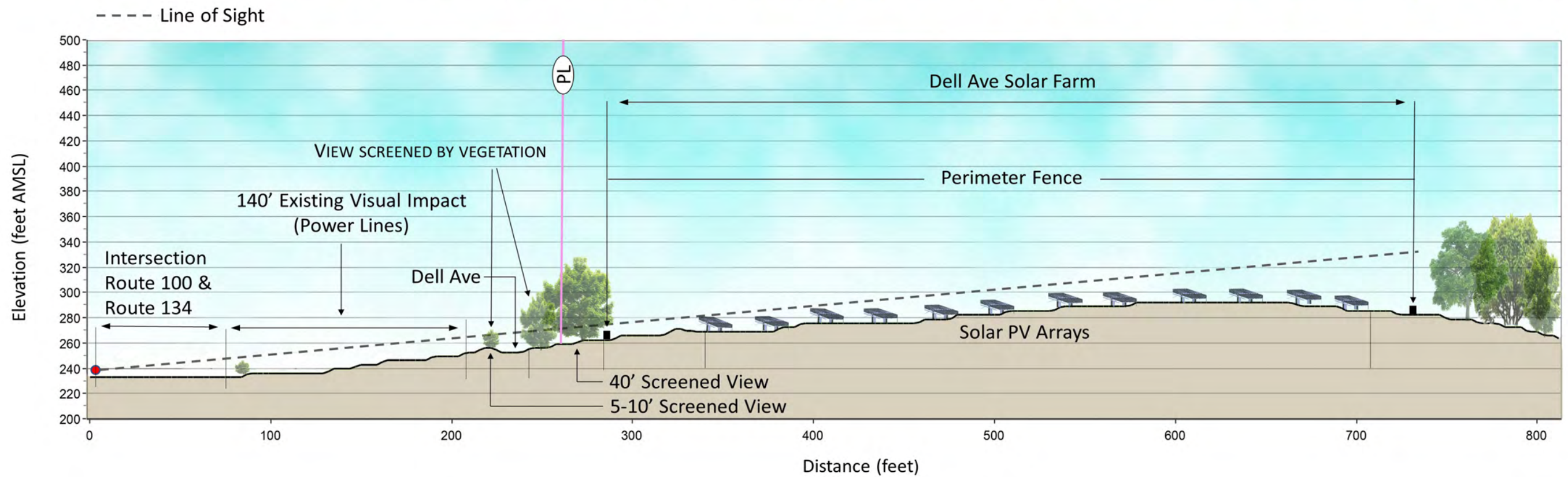
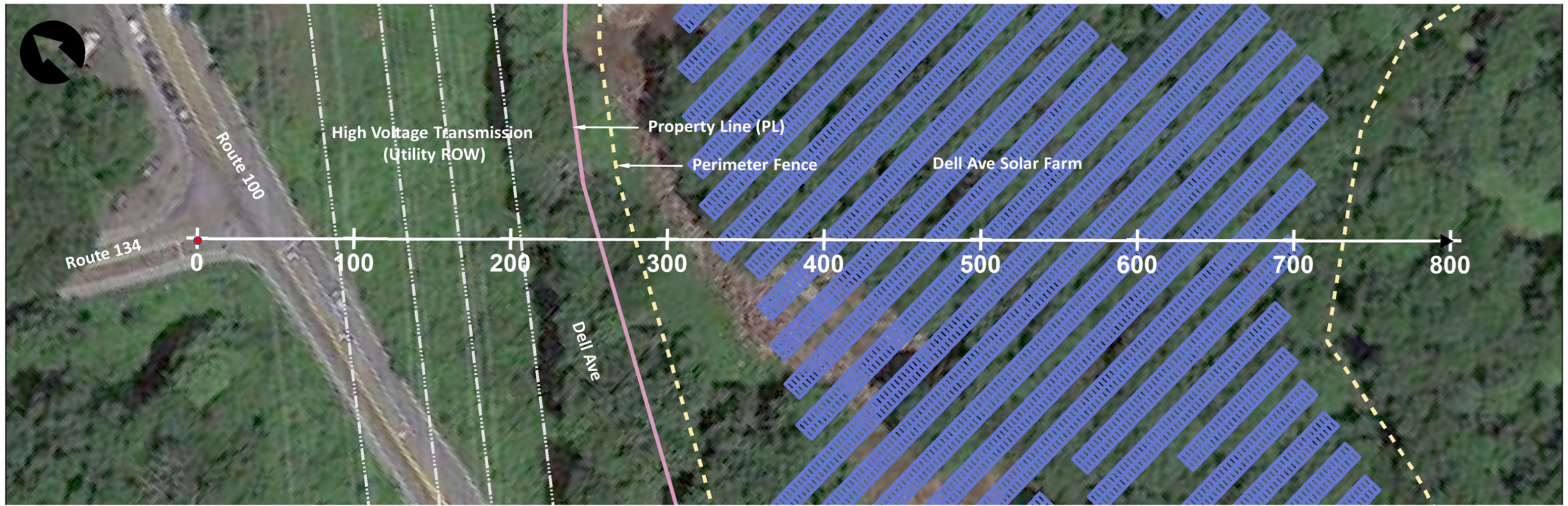
SCS Dell 014136 Yorktown, LLC  
Visual Assessment - September 21, 2022

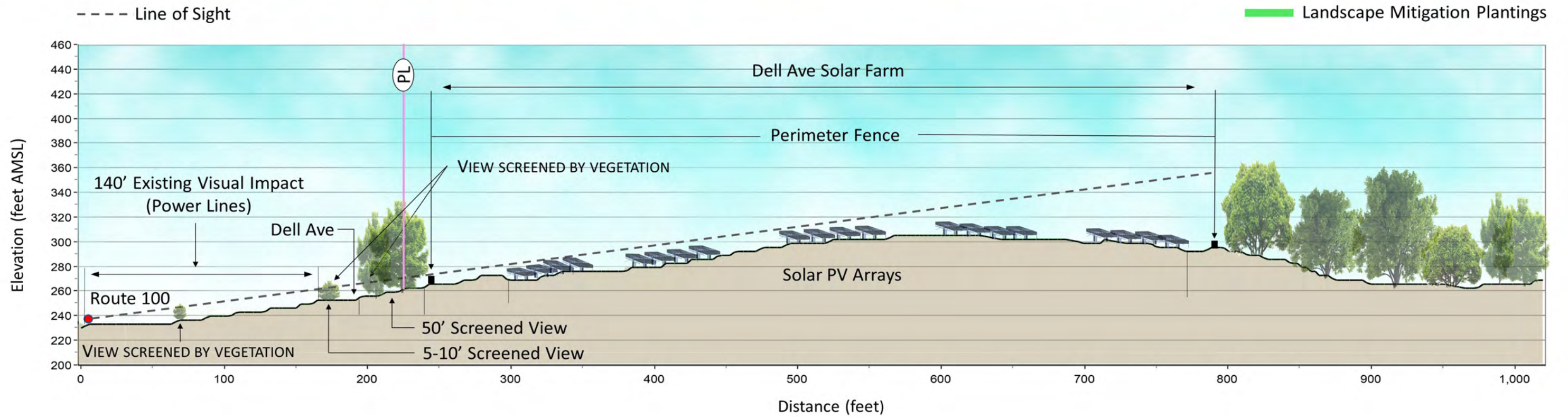
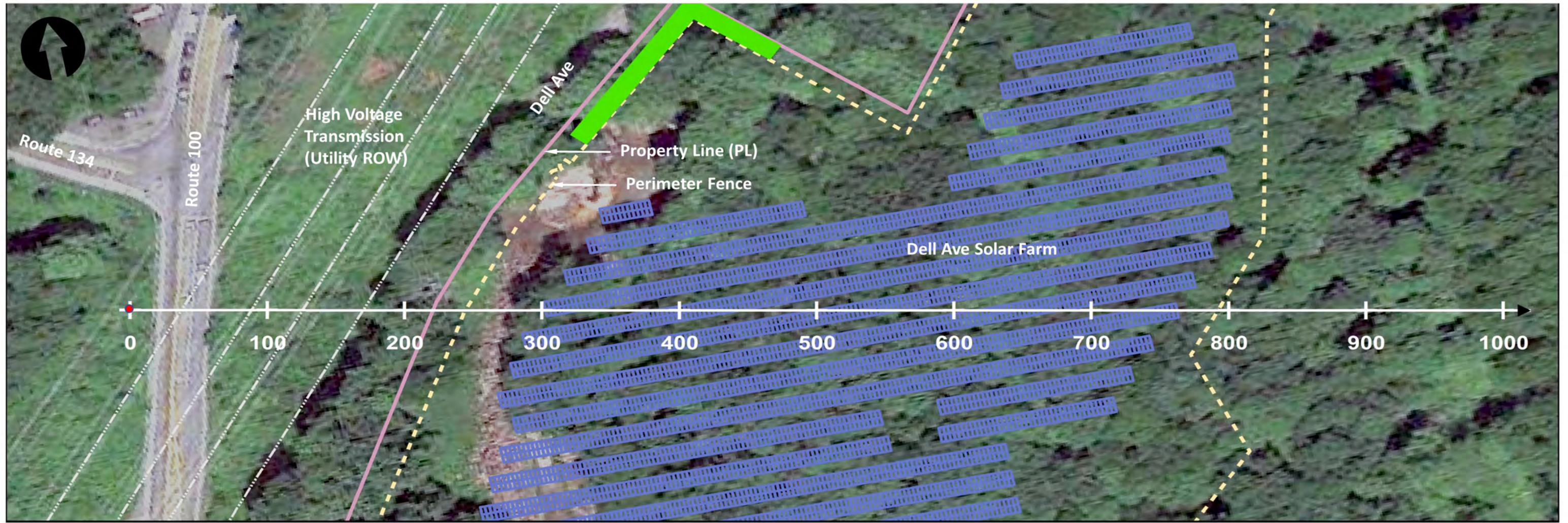


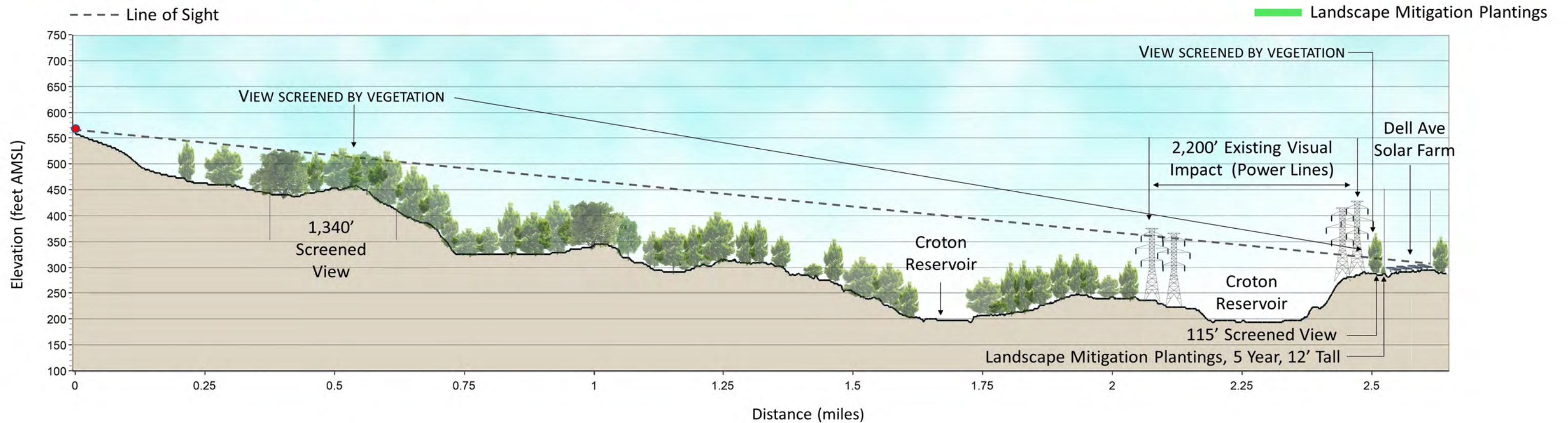
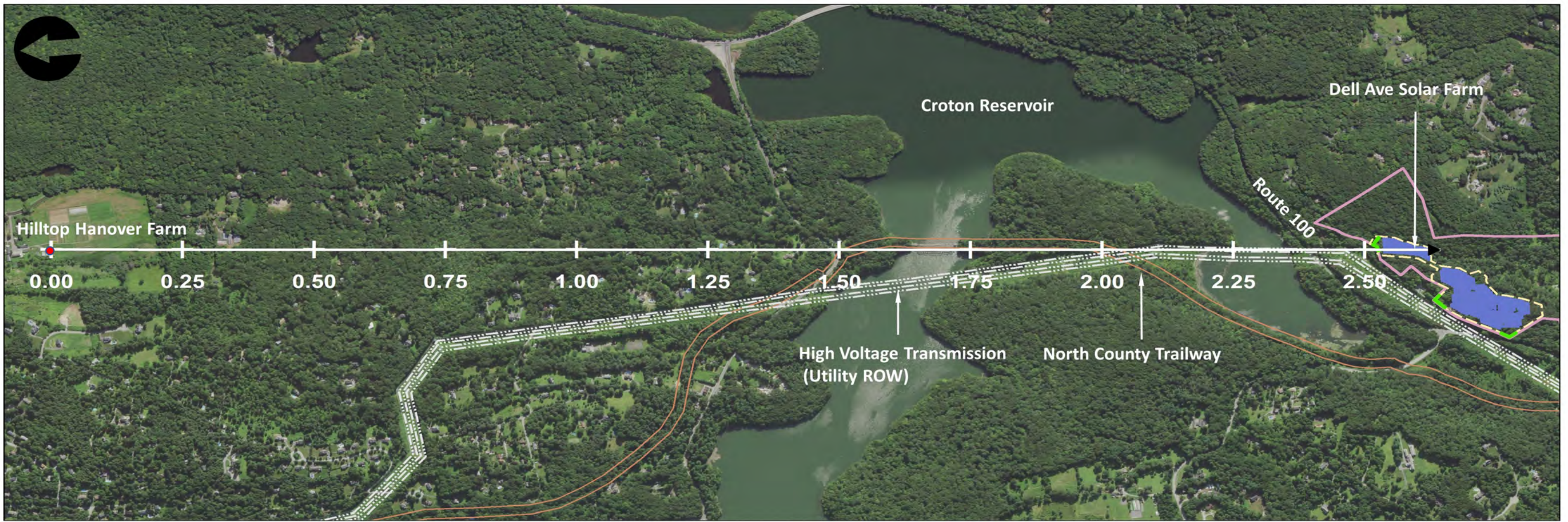
LOS 2- Kitchawan Preserve (North County Trailway)

DELL AVENUE SOLAR FARM

SCS Dell 014136 Yorktown, LLC  
Visual Assessment - September 21, 2022



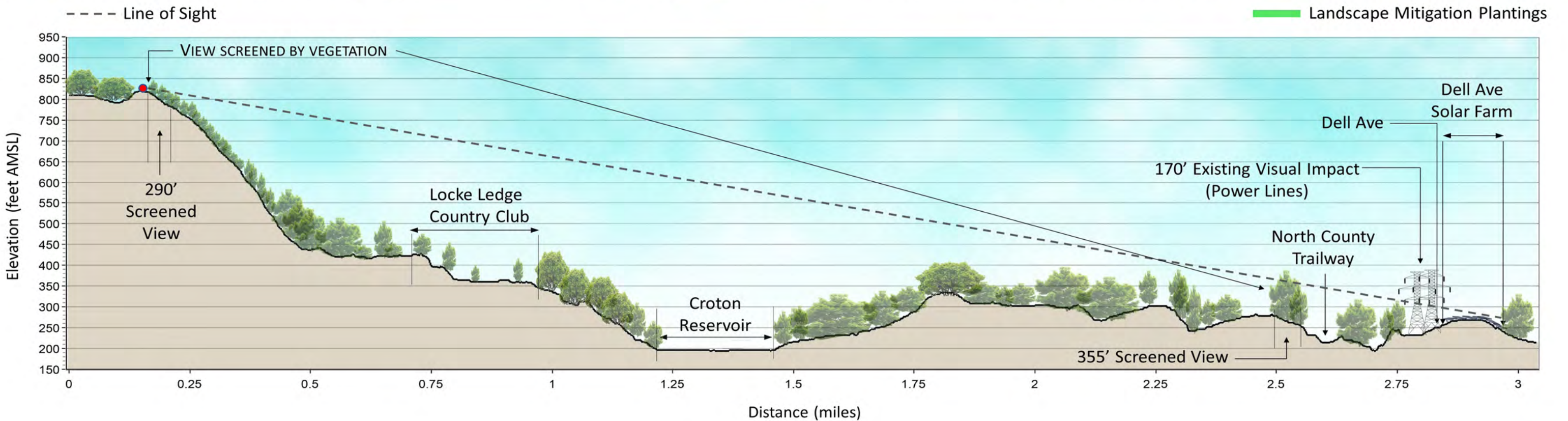
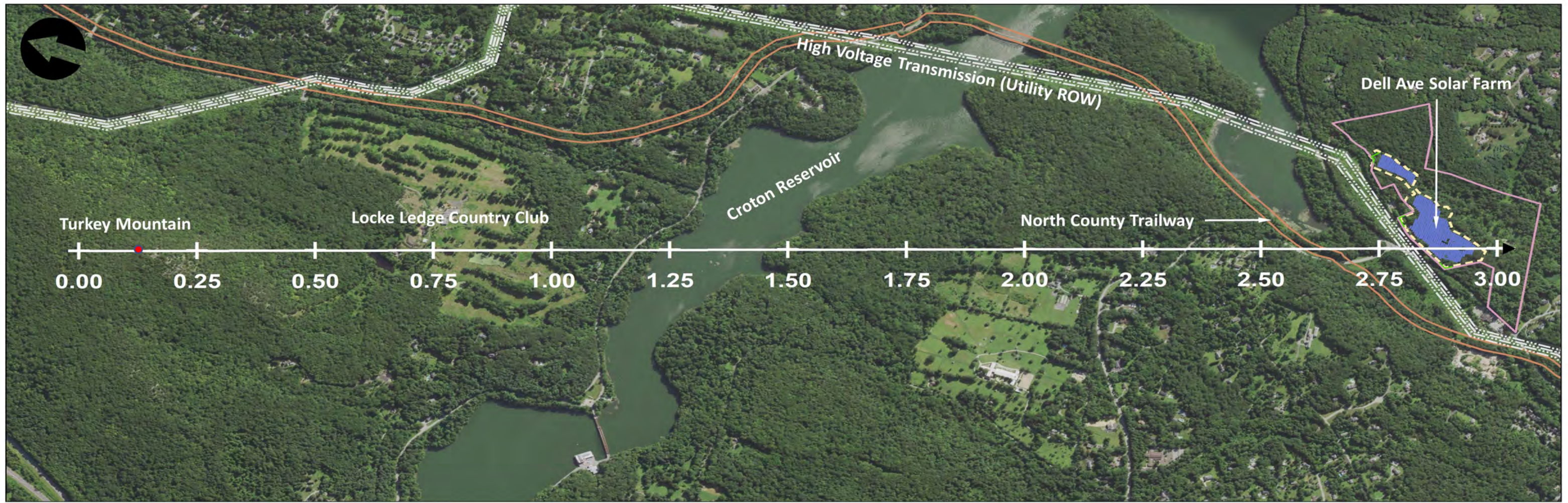




LOS 5 - Hilltop Hanover Farm

DELL AVENUE SOLAR FARM

SCS Dell 014136 Yorktown, LLC  
Visual Assessment - September 21, 2022

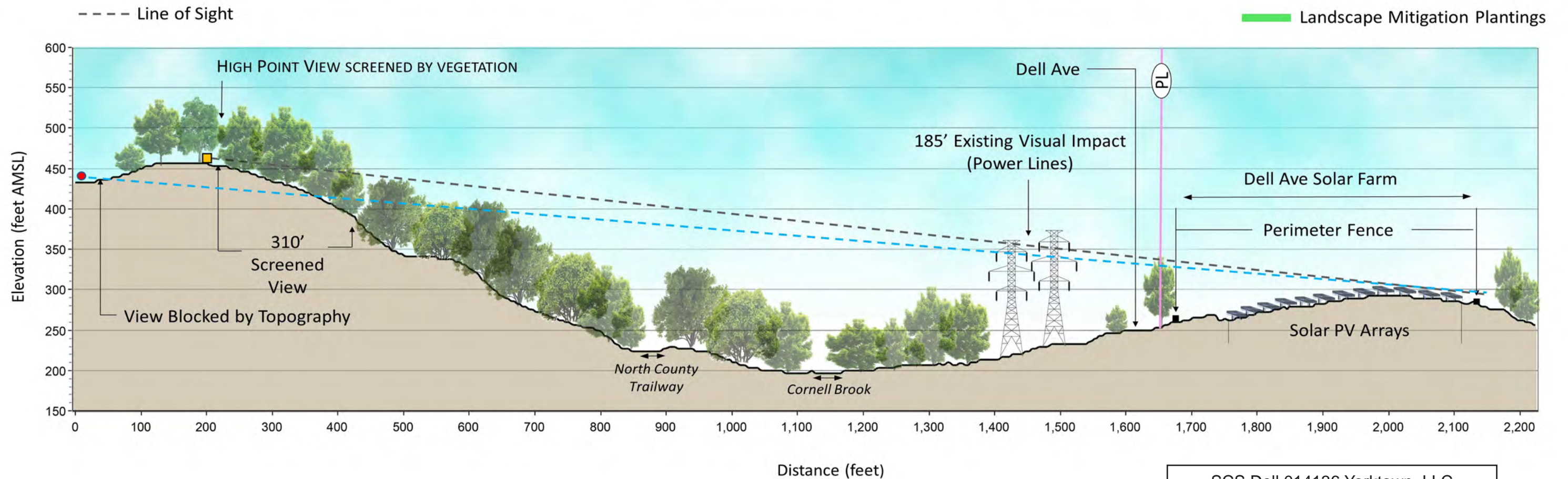


LOS 6 - Turkey Mountain

DELL AVENUE SOLAR FARM

SCS Dell 014136 Yorktown, LLC  
Visual Assessment - September 21, 2022

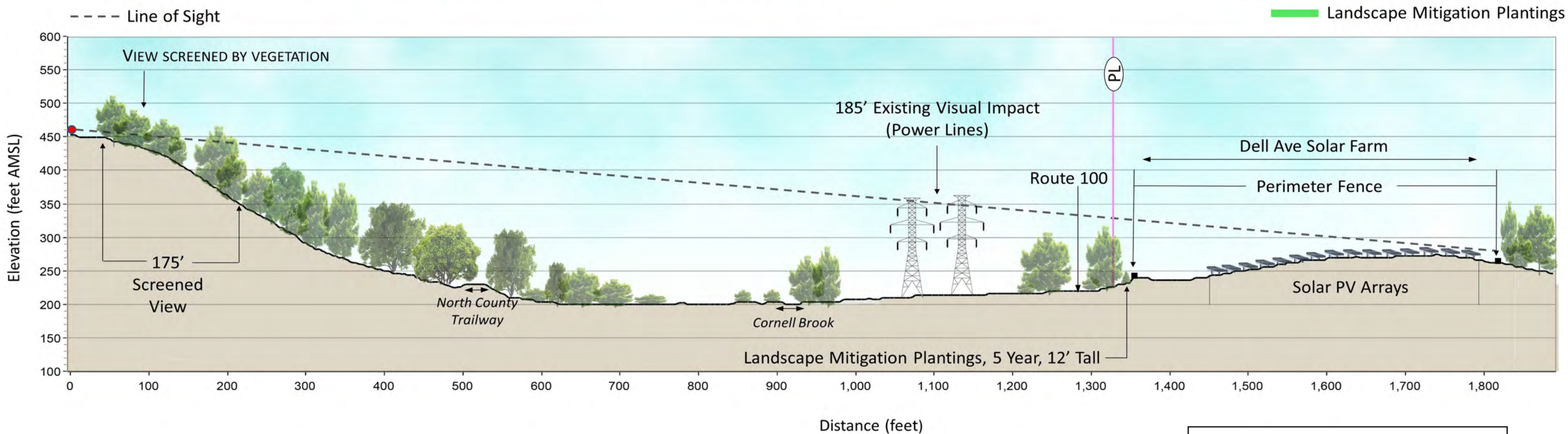
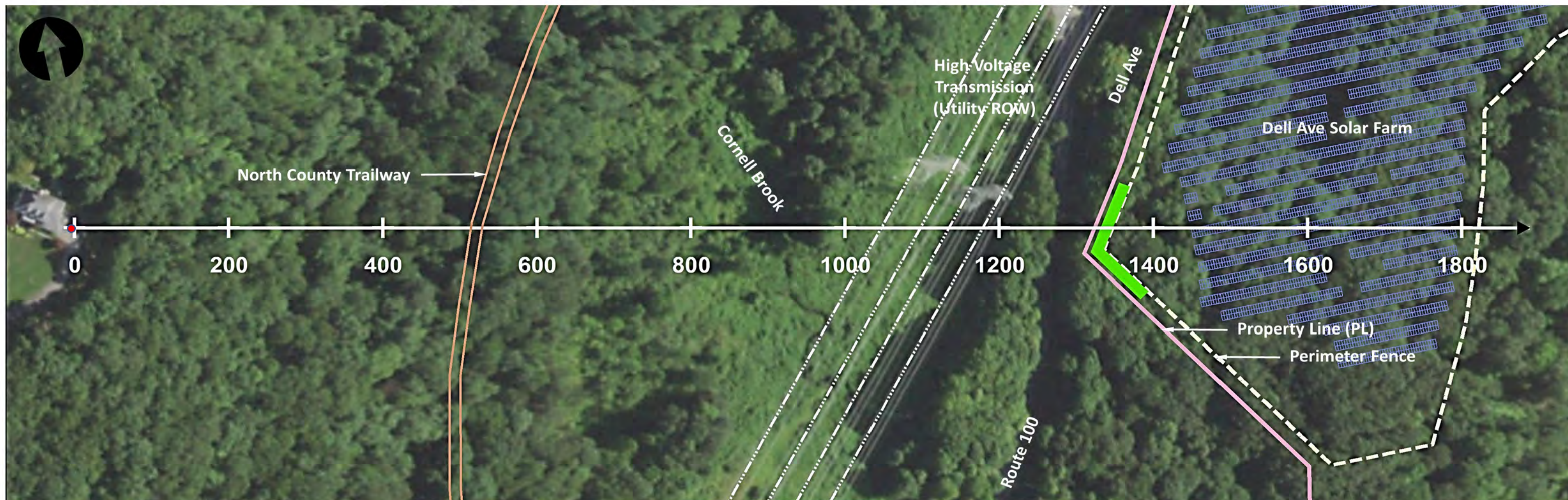




LOS 7 - Near Pinesbridge Road Residence

DELL AVENUE SOLAR FARM

SCS Dell 014136 Yorktown, LLC  
Visual Assessment - September 21, 2022



LOS 8 - Near Evan Drive Residence

DELL AVENUE SOLAR FARM

SCS Dell 014136 Yorktown, LLC  
Visual Assessment - September 21, 2022

**DELL AVENUE SOLAR FARM**

**ATTACHMENT 4**

**PHOTOS FROM CROTON OVERLOOK VIA**



Power Lines

Project Site



Power Lines

Project Site



Power Lines

Project Site



Power Lines

Project Site

Power Lines

Project Site





Power Lines

Project Site





Hog Hill

Project Site

Power Lines

Hanover Farm



Hog Hill

Project Site

Power Lines



Hog Hill

Project Site

Power Lines

## Turkey Mountain

Turkey Mountain 2 Looking  
South-Southeast To site





Project Site

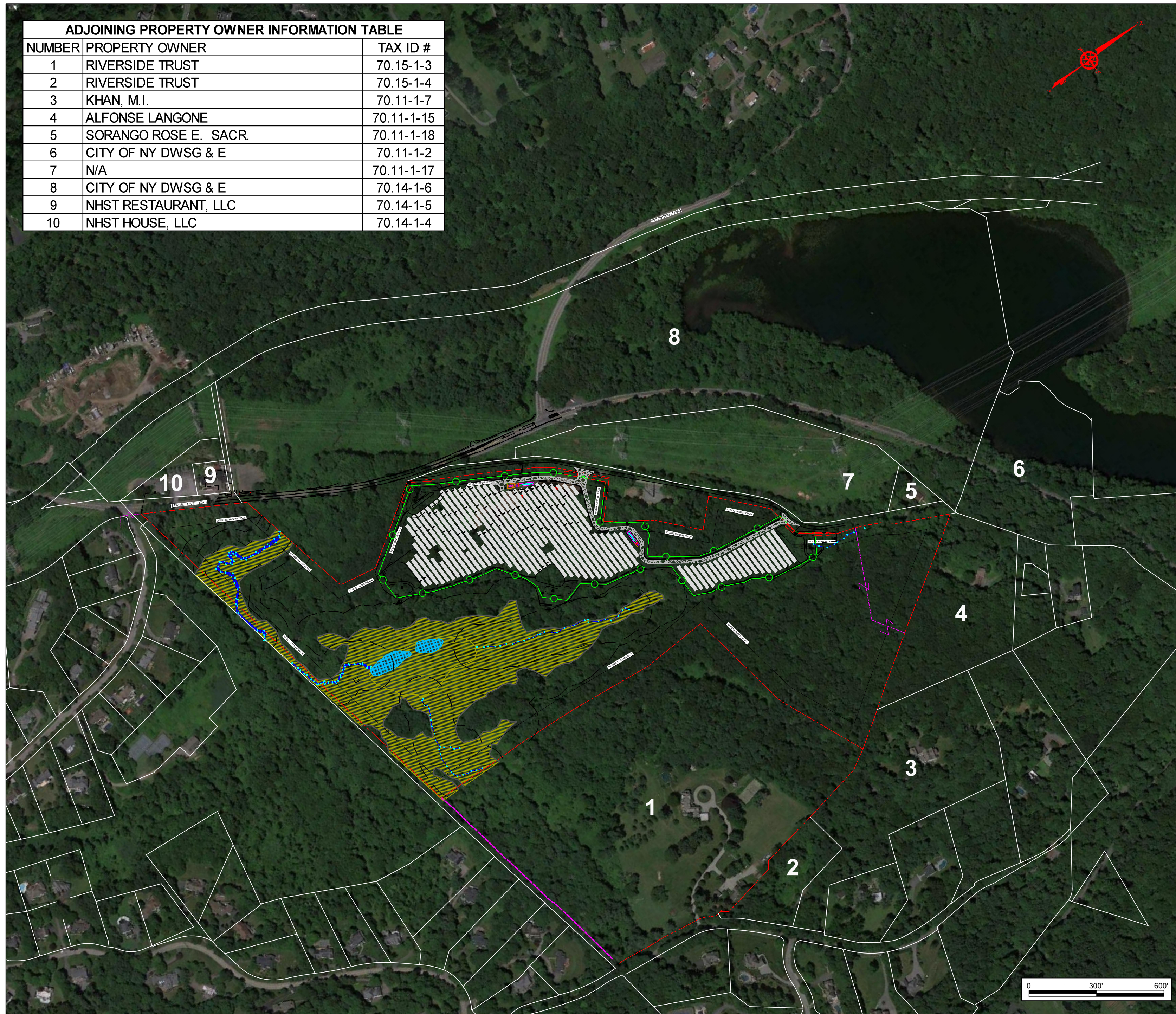
Project Site







| ADJOINING PROPERTY OWNER INFORMATION TABLE |                       |            |
|--|-----------------------|------------|
| NUMBER                                     | PROPERTY OWNER        | TAX ID #   |
| 1  | RIVERSIDE TRUST       | 70.15-1-3  |
| 2  | RIVERSIDE TRUST       | 70.15-1-4  |
| 3  | KHAN, M.I.            | 70.11-1-7  |
| 4  | ALFONSE LANGONE       | 70.11-1-15 |
| 5  | SORANGO ROSE E. SACR. | 70.11-1-18 |
| 6  | CITY OF NY DWSG & E   | 70.11-1-2  |
| 7  | N/A                   | 70.11-1-17 |
| 8  | CITY OF NY DWSG & E   | 70.14-1-6  |
| 9  | NHST RESTAURANT, LLC  | 70.14-1-5  |
| 10   | NHST HOUSE, LLC       | 70.14-1-4  |



| LAND USE INFORMATION |       |          |          |
|----------------------|-------|----------|----------|
| LAND USE             | UNIT  | EXISTING | PROPOSED |
| TOTAL PARCEL AREA    | ACRES | 62.3     | 62.3     |
| UNDISTURBED AREA     | ACRES | 62.3     | 47.4     |
| DISTURBED AREA       | ACRES | N/A      | 14.9     |
| SOLAR AREA           | ACRES | N/A      | 9.2      |
| WETLAND AREA         | ACRES | 13.3     | 13.3     |

| SITE DATA   |                      |                                    |
|-------------|----------------------|------------------------------------|
| TAX ID #    | PROPERTY OWNER       | SITE ADDRESS                       |
| 70.15-1-2   | B & M MANAGEMENT CO. | 70.15-01-02 & 70.11-01-16          |
| 70.11-01-16 |                      | DELL AVENUE<br>YORKTOWN, NY, 10514 |

| ZONING CONFORMANCE TABLE       |  |  |
|--------------------------------|--|--|
| ZONING CODE DESCRIPTION        | ZONING CODE REQUIREMENT                                  | PROPOSED PROJECT   |
| ZONING DESIGNATION             | R1-160   | R1-160   |
| MINIMUM LOT AREA (SQUARE FEET) | 160,000  | 2,663,201  |
| MINIMUM LOT WIDTH (FEET)       | 200  | 2,890  |
| MINIMUM LOT DEPTH (FEET)       | 200  | 416  |
| MAXIMUM BUILDING HEIGHT (FEET) | MAIN BUILDING - 35 / ACCESSORY BUILDING OR STRUCTURE -15 | NOT APPLICABLE (EQUIPMENT HEIGHT IS NOT MORE THAN 10 FEET) |
| FRONT YARD DEPTH (FEET)        | 75   | 116  |
| SIDE YARD DEPTH (FEET)         | 50   | 50   |
| REAR YARD DEPTH (FEET)         | 75   | 147  |
| ROAD FRONTAGE (FEET)           | 200  | 1,610  |

GENERAL NOTES

- THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 NEW YORK STATE PLANE (US SURVEY FEET, EAST ZONE, NY83-E). ELEVATIONS ARE BASED ON NAVD88 (US SURVEY FEET).
- TOPOGRAPHY SHOWN ON THESE PLANS WAS COMPLETED BY LAND DESIGN ASSOCIATES ENGINEERING, SURVEYING AND LAND ARCHITECTURE D.P.C. USING A BASE & ROVER RTKGPS SYSTEM TO DEVELOP CONTOURS AT A 2 FOOT INTERVAL.
- PROJECT PROPERTY BOUNDARIES ARE BASED ON INFORMATION PROVIDED BY LAND DESIGN ASSOCIATES ENGINEERING, SURVEYING AND LAND ARCHITECTURE D.P.C. LAND SURVEYING FROM A SURVEY COMPLETED IN OCTOBER 2019.
- EXISTING UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR. DIG SAFELY NEW YORK (811) SHALL BE NOTIFIED A MINIMUM OF 72-HOURS PRIOR TO COMMENCING ANY EXCAVATION.
- THIS IS A PRELIMINARY DESIGN PLAN PROVIDED FOR PERMITTING ONLY. FINAL DESIGN SHALL BE MODIFIED TO SUPPORT CONSTRUCTION, MATCH FINAL ELECTRICAL INTERCONNECTION STUDIES, EQUIPMENT PURCHASED, AND POSSIBLE PERMIT CONSTRAINTS REVEALED DURING PROJECT'S REVIEW.
- ALL WORK DETAILED ON THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AND ANY OTHER APPLICABLE TECHNICAL REPORTS. WHERE INDICATED, STATE AND/OR LOCAL CODES AND STANDARD SPECIFICATIONS SHALL APPLY.
- THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING STATE AND FEDERAL REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN OR ADJACENT TO THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONSTRUCTION SHALL NOT OCCUR IN ANY PUBLIC RIGHTS OF WAY, PUBLIC OR PRIVATE EASEMENTS, BEYOND THE LIMITS OF DISTURBANCE, OR OUTSIDE THE PROPERTY LIMITS WITHOUT NECESSARY PERMITS AND APPROVALS. ANY PUBLIC OR PRIVATE PROPERTY OR IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE COST OF THE CONTRACTOR.
- OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT OF WAY. OVERNIGHT PARKING OF CONSTRUCTION VEHICLES ON PRIVATE PROPERTY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- ALL PROPERTY CORNERS OR MONUMENTS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF NEW YORK.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
- CONTRACTOR SHALL FIELD FIT ALL PROPOSED CULVERT INVERTS TO PROVIDE POSITIVE DRAINAGE IN THE DIRECTION OF EXISTING SLOPES. ALL CULVERTS TO BE INSTALLED AT ADEQUATE DEPTHS AND TO DAYLIGHT. INLETS AND OUTLETS OF ALL CULVERTS TO BE STABILIZED WITH RIP RAP IN ACCORDANCE WITH EROSION CONTROL PLAN.
- THE CONTRACTOR SHALL SECURE PERMITS FROM THE STATE, COUNTY, AND TOWN AUTHORITIES AS NECESSARY BEFORE DRIVING CONSTRUCTION EQUIPMENT OVER AND ACROSS STATE, COUNTY OR TOWN MAINTAINED ROADS.
- ALL WORK IN THE PUBLIC RIGHT OF WAYS SHALL CONFORM WITH THE NEW YORK DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS", DATED JANUARY 1, 2019 OR CURRENT EDITION.
- WETLANDS AND WATERCOURSES SHOWN IN THIS PLAN ARE SUBJECT TO FUTURE CONFIRMATION BY NYSDEC.
- THE EROSION AND SEDIMENTATION CONTROL MEASURES FOR THIS PROJECT SHALL BE IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THE PROJECT.
- TREES AND OTHER VEGETATION IN AREAS OF IDENTIFIED CLEARING AND GRUBBING MAY BE REDUCED TO CHIPS BY THE USE OF CHIPPING MACHINES OR STUMP GRINDER AND BE PREPARED FOR USE AS EROSION CONTROL MIX. ALL OTHER CHIPS AND WOOD WASTE RESULTING FROM CLEARING AND GRUBBING OPERATIONS SHALL BE DISPOSED OF OFF-SITE AT AN APPROPRIATELY LICENSED FACILITY AND IN A MANNER AS APPROVED BY THE OWNER.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING IMPROVEMENTS AND FACILITIES TO REMAIN IN PLACE. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND REPLACEMENT OF DAMAGED ITEMS AS A RESULT OF CONSTRUCTION OF THE PROPOSED FACILITY.
- THE WORK SHALL BE CARRIED OUT NEAR AND UNDER ENERGIZED EQUIPMENT. EXTREME CAUTION IS REQUIRED AT ALL TIMES. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL APPLICABLE SAFETY REQUIREMENTS.
- EARTHWORK: UNLESS EXPLICITLY STATED OTHERWISE, REFER TO THE LATEST EDITION OF THE STATE OF NEW YORK, DEPARTMENT OF TRANSPORTATION, STANDARDS SPECIFICATIONS, CONSTRUCTION AND MATERIALS, FOR GENERAL REQUIREMENTS, PRODUCTS, AND EXECUTION RELATED TO THE COMPLETION OF PROPOSED WORK.
- THE LIMITS OF DISTURBANCE SHALL BE FIELD STAKED BY A LICENSED LAND SURVEYOR PRIOR TO THE START OF WORK. A COPY OF THE STAKEOUT SKETCH SHALL BE PROVIDED TO THE TOWN OF YORKTOWN.
- PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, THE APPLICANT SHALL SUBMIT A NOTICE OF INTENT (N.O.I.) TO THE NYSDEC AND PROVIDE PROOF OF COVERAGE UNDER THE SPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES TO THE TOWN OF YORKTOWN.
- ANY IMPORTED SOIL SHALL MEET THE NYSDEC STANDARDS OF UNRESTRICTED FILL AND BE SUITABLE FOR RESIDENTIAL USE. CONSTRUCTION DEBRIS IS NOT PERMITTED TO BE IMPORTED. ANY MATERIAL MEETING THE NYSDEC DEFINITION OF BENEFICIAL USE SHALL BE CERTIFIED AS SUCH BY THE DESIGN PROFESSIONAL OF RECORD. NOTIFY THE TOWN OF YORKTOWN PRIOR TO IMPORT. SOIL TESTING MAY STILL BE REQUIRED.
- PRIOR TO THE BACKFILLING OF ANY STORM WATER BEST MANAGEMENT PRACTICE, DOTS-ENGINEERING SHALL BE NOTIFIED TO PERFORM AN INSPECTION. CONTACT ENGINEERING AT 914-734-1060 TO SCHEDULE AN INSPECTION.
- THE APPLICANT IS AWARE THAT THE ENTIRE SITE MUST BE 100% STABILIZED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY. DISTURBED AREAS SHALL BE RESTORED AND STABILIZED APPROPRIATELY AND IN A TIMELY MANNER. APPLICANT SHALL SUBMIT A NOTICE OF TERMINATION FOR THE SPDES GENERAL PERMIT.
- PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, AN "AS-BUILT" SURVEY PREPARED BY A LICENSED PROFESSIONAL LAND SURVEYOR OF THE PROPERTY SHALL BE SUBMITTED TO THE DEPARTMENT OF TECHNICAL SERVICES.
- ALL DEMOLITION DEBRIS INCLUDING FOUNDATIONS AND SLABS SHALL BE LAWFULLY DISPOSED OF OFF-SITE. ROCK FROM WALLS SHALL BE STOCKPILED ON-SITE.
- ELECTRICAL DESIGN PROVIDED HEREON WAS PREPARED BY SOL SYSTEMS, LLC.
- ABSOLUTELY NO RECYCLED MATERIAL SHALL BE PERMITTED ONSITE. ONLY EARTHEN MATERIAL OR NATURAL STONE IS PERMITTED TO BE USED AS FILL. ALL FILL SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE NYSDEC RULES AND REGULATIONS AND SHALL BE CERTIFIED AS UNRESTRICTED FOR RESIDENTIAL USE, CERTIFIED BY A PROFESSIONAL ENGINEER PRIOR TO IMPORTATION ON SITE, AND SHALL BE FROM A CERTIFIED VIRGIN SOURCE.

NOTE: UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.  
NOT FOR CONSTRUCTION

NOTE: THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
NOT FOR CONSTRUCTION



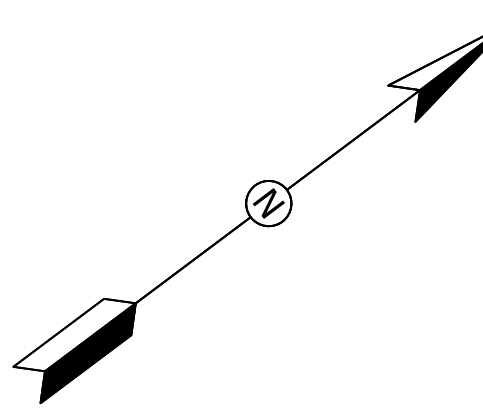
| Revisions: |       |
|------------|-------|
| No.        | Date: |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |

Drawn by:  
A. REXROAT  
Checked by:  
S. MEERSMA  
Approved by:  
C. DUNCAN

SCS DELL 014136 YORKTOWN, LLC  
DELL AVENUE SOLAR FARM  
FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
DELL AVENUE, YORKTOWN, NEW YORK 10514

Contract No:  
431302  
Scale:  
AS SHOWN  
Date:  
SEPTEMBER 21, 2022  
Sheet:  
GENERAL NOTES

Drawing No:  
G-102



- MAP REFERENCES:**
1. SURVEY COMPLETED BY LAND DESIGN ASSOCIATES ENGINEERING, SURVEYING AND LAND ARCHITECTURE D.P.C. OF HAUPPAGE, NEW YORK DATED MAY 29, 2021.
  2. THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 NEW YORK STATE PLANE (US SURVEY FEET, EAST ZONE, NY83-E). ELEVATIONS ARE BASED ON NAVD83 (US SURVEY FEET).
  3. TREE LOCATIONS AND NUMBERS REFERENCE THE TREE IDENTIFICATION REPORT BY TRC ENGINEERS, INC. DATED JUNE 2022.

- LEGEND:**
- 420 --- EXISTING MAJOR CONTOUR (FEET)
  - 418 --- EXISTING MINOR CONTOUR (FEET)
  - --- PARCEL LINE
  - --- 100-FOOT NYSDEC ADJACENT WETLAND BUFFER
  - --- 50-FOOT NYSDEC ADJACENT STREAM BUFFER
  - --- 100-FOOT NYSDEC ADJACENT STREAM BUFFER
  - --- STONE WALL
  - --- TREE LINE
  - --- TRAIL
  - ROCK
  - --- ROCKS
  - --- DELINEATED STREAM LINE
  - --- DELINEATED WETLAND
  - --- DELINEATED SURFACE WATER
  - --- TREE LOCATION AND TREE NUMBER



**LEGAL DESCRIPTION**  
SECTION 70.11 BLOCK 1 LOT 16 AND SECTION 70.15 BLOCK 1 LOT 2 TOWN OF YORKTOWN, COUNTY OF WESTCHESTER, NY

ALL THAT CERTAIN PLOT, PIECES OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE SOUTHERLY SIDE OF SAW MILL RIVER ROAD IN THE TOWN OF YORKTOWN, COUNTY OF WESTCHESTER, STATE OF NEW YORK, AND BEING MORE PARTICULARLY DESCRIBED IN TWO (2) PARCELS AS FOLLOWS:

**BEGINNING AT A POINT ON THE SOUTHERLY SIDE OF SAW MILL RIVER ROAD SAID POINT BEING DETERMINED AS FOLLOWS, STARTING AT A POINT ON THE SOUTHERLY SIDE OF SAW MILL RIVER ROAD SAID POINT BEING FORMED BY THE INTERSECTION OF THE DIVIDING LINE BETWEEN LANDS NOW OR FORMERLY OF GABRIEL AND LANDS OF CONSOLIDATED EDISON CO. WITH THE SAID SOUTHERLY SIDE OF SAW MILL RIVER ROAD:**

THENCE from starting point in a northeasterly direction and along the southerly side of Saw Mill River Road; North 44 degrees 40 minutes 30 seconds East for a distance of 104.35 feet to the aforementioned point of beginning;

THENCE from said point of beginning in a northeasterly direction and along the southerly side of Saw Mill River Road; North 41 degrees 19 minutes 50 seconds East for a distance of 473.56 feet (deed) 473.56 feet (survey) to a corner and lands of the City of New York, said lands of the City of New York being shown as Parcel 160, Sheet 15, on Maps of New Croton Reservoir;

THENCE in an easterly direction and along the dividing line between lands of City of New York and lands of Gabriel; North 88 degrees 50 minutes 00 seconds East for a distance of 554.57 feet (deed) North 88 degrees 57 minutes 25 seconds East 554.62 feet (survey) to a corner;

THENCE still along the aforementioned dividing line; North 21 degrees 50 minutes 20 seconds (deed) 21 degrees 48 minutes 45 seconds (survey) East for a distance of 171.48 feet and North 22 degrees 06 minutes 10 seconds West for a distance of 413.59 feet (deed) North 22 degrees 06 minutes 45 seconds West for a distance of 413.21 feet (survey) to a corner and the southerly side of Dell Avenue;

THENCE in a northeasterly direction and along the southerly side of Dell Avenue, the following courses and distances:  
North 43 degrees 56 minutes 40 seconds East for a distance of 133.90 feet;  
North 40 degrees 07 minutes 10 seconds East for a distance of 186.22 feet;  
North 41 degrees 15 minutes 50 seconds East for a distance of 258.22 feet;  
North 49 degrees 26 minutes 30 seconds East for a distance of 88.58 feet;  
North 57 degrees 50 minutes 10 seconds East for a distance of 237.07 feet to a corner and lands now or formerly of Adam;

THENCE in a southerly direction and along the dividing line between lands of Adam and lands of Gabriel;  
South 34 degrees 53 minutes 30 seconds East for a distance of 196.79 feet to a corner;

THENCE in a northeasterly direction;  
North 46 degrees 16 minutes 30 seconds East for a distance of 227.20 feet and  
North 58 degrees 57 minutes 20 seconds East for a distance of 219.85 feet to a corner;

THENCE in a northwesterly direction, still along the aforementioned dividing line;

North 33 degrees 02 minutes 20 seconds West for a distance of 152.78 feet to a corner and the southerly side of Dell Avenue;  
THENCE in a northeasterly direction and along the southerly side of Dell Avenue, the following courses;  
North 58 degrees 55 minutes 20 seconds East for a distance of 281.76 feet;  
South 88 degrees 36 minutes 50 seconds East for a distance of 157.46 feet;  
North 47 degrees 33 minutes 10 seconds East for a distance of 185.48 feet;  
North 30 degrees 17 minutes 30 seconds East for a distance of 105.27 feet;  
North 33 degrees 09 minutes 30 seconds East for a distance of 80.62 feet;  
North 49 degrees 43 minutes 00 seconds East for a distance of 70.52 feet;  
North 37 degrees 32 minutes 30 seconds East for a distance of 242.23 feet to a corner and lands now or formerly of Dearborn;

THENCE to a southerly direction and along the dividing line between lands of Dearborn and lands of Gabriel;  
South 22 degrees 47 minutes 00 seconds East for a distance of 111.57 feet;  
South 21 degrees 05 minutes 10 seconds East for a distance of 400.52 feet;  
South 22 degrees 12 minutes 30 seconds East for a distance of 310.32 feet;  
South 23 degrees 53 minutes 10 seconds East for a distance of 113.24 feet to lands now or formerly of Mino;

THENCE still southerly direction and along the dividing line between lands of Mino and lands of Gabriel;  
South 22 degrees 23 minutes 30 seconds East for a distance of 179.29 feet to a corner and lands now or formerly of Crawford;

THENCE in a westerly direction and along the dividing line between lands of Crawford and lands of Gabriel;  
North 77 degrees 48 minutes 40 seconds West for a distance of 425.77 feet;  
North 88 degrees 22 minutes 30 seconds West for a distance of 492.84 feet to a corner;

THENCE in a southerly direction still along the aforementioned dividing line, the following courses and distances:  
South 08 degrees 32 minutes 10 seconds West for a distance of 302.15 feet;  
South 17 degrees 26 minutes 30 seconds West for a distance of 378.44 feet;  
South 14 degrees 59 minutes 50 seconds West for a distance of 1837.73 feet;  
South 12 degrees 20 minutes 50 seconds West for a distance of 181.34 feet;  
South 13 degrees 33 minutes 30 seconds West for a distance of 212.08 feet;  
South 11 degrees 28 minutes 50 seconds West for a distance of 54.91 feet to a corner;

THENCE in a westerly direction and through lands of Gabriel and approximately along the Town lines between the Towns of New Castle and Yorktown;  
North 88 degrees 59 minutes 17 seconds (deed) West for a distance of 1837.73 feet;  
North 89 degrees 02 minutes 22 seconds (calculated) West for a distance of 1839.27 feet to the southerly side of Saw Mill River Road and the point of place of BEGINNING.

WCTM: 70.11-1-16 & 70.15-1-2

- EXCEPTIONS:**
1. Survey Attached
  2. Boundary line agreement effects extreme southeast corner of parcel not part of current Deed of Record.
  3. Assignment of leases and rents to bank to secure mortgage
  4. Matter of Foreclosure.
  5. Matter of Foreclosure.
  6. Matter of Foreclosure.
  7. Tax search N/A see report.
- NOTES:**
1. NO PART OF THE SUBJECT PROPERTY LIES IN A SPECIAL FLOOD HAZARD AREA OR FLOOD HAZARD OR FLOOD PLAIN, HOWEVER DESIGNATED, AS DETERMINED BY OR IN ACCORDANCE WITH CRITERIA ESTABLISHED BY THE FEDERAL INSURANCE ADMINISTRATION OR AS DEFINED BY OR IN ACCORDANCE WITH CRITERIA ESTABLISHED BY ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION, (FLOOD ZONE X)
  2. LOCATIONS AND EXISTENCE OF ANY SUBSURFACE UTILITIES AND/OR STRUCTURES, NOT READILY VISIBLE, ARE NOT CERTIFIED.
  3. NO ENCROACHMENTS AFFECT SUBJECT PROPERTY EXCEPT AS SHOWN
  4. THE USE OF THE PROPERTY IS PERMITTED IN ITS ZONE.
  5. PROPERTY HAS PUBLIC ACCESS TO ALL ADJACENT STREETS AS PUBLIC

NOTE: UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

NOT FOR CONSTRUCTION

NOTE: THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.

NOT FOR CONSTRUCTION

0 120' 240'  
SHEET SIZE: 24" BY 36"  
(DRAWING MAY BE PRINTED AT REDUCED SIZE)

**TRC**  
1430 Broadway, 10th Floor  
New York, NY 10018  
Phone: 212.221.7822  
www.trcengineers.com  
TRC Project No.: 431302.0000.0005

**SOL SYSTEMS**  
Sol Systems, LLC  
1101 Connecticut Avenue NW  
2nd Floor  
Washington, DC 20036



Revisions:

| No. | Date |
|-----|------|
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |

Drawn by:  
**A. REXROAT**

Checked by:  
**S. MEERSMA**

Approved by:  
**C. DUNCAN**

**SCS DELL 014136 YORKTOWN, LLC  
DELL AVENUE SOLAR FARM  
FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
DELL AVENUE, YORKTOWN, NEW YORK 10514**

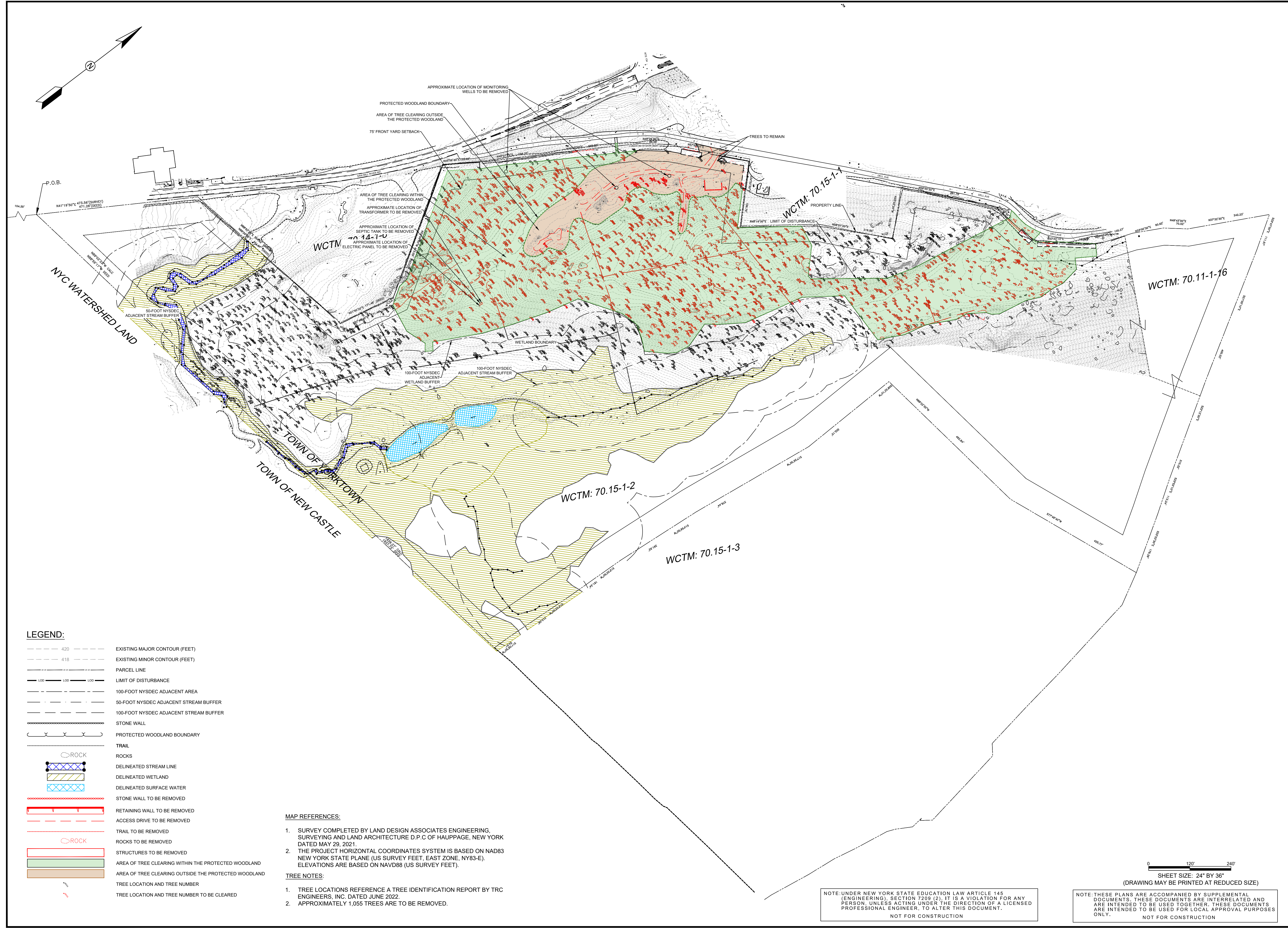
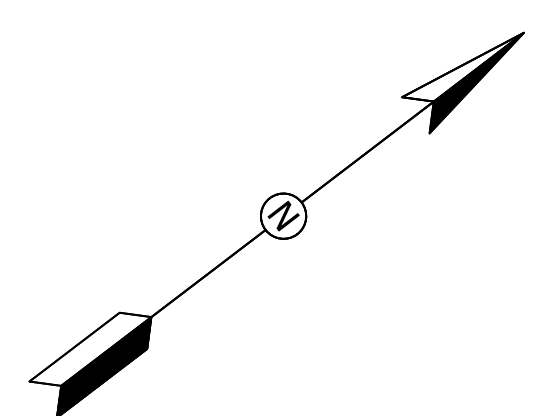
Contract No:  
431302

Scale:  
AS SHOWN

Date:  
SEPTEMBER 21, 2022

Sheet:  
EXISTING FEATURES

Drawing No:  
**C-101**



**LEGEND:**

|  |  |
|--|--|
|  | EXISTING MAJOR CONTOUR (FEET)                        |
|  | EXISTING MINOR CONTOUR (FEET)                        |
|  | PARCEL LINE  |
|  | LIMIT OF DISTURBANCE                                 |
|  | 100-FOOT NYSDEC ADJACENT AREA                        |
|  | 50-FOOT NYSDEC ADJACENT STREAM BUFFER                |
|  | 100-FOOT NYSDEC ADJACENT STREAM BUFFER               |
|  | STONE WALL   |
|  | PROTECTED WOODLAND BOUNDARY                          |
|  | TRAIL  |
|  | ROCKS  |
|  | DELINEATED STREAM LINE                               |
|  | DELINEATED WETLAND                                   |
|  | DELINEATED SURFACE WATER                             |
|  | STONE WALL TO BE REMOVED                             |
|  | RETAINING WALL TO BE REMOVED                         |
|  | ACCESS DRIVE TO BE REMOVED                           |
|  | TRAIL TO BE REMOVED                                  |
|  | ROCKS TO BE REMOVED                                  |
|  | STRUCTURES TO BE REMOVED                             |
|  | AREA OF TREE CLEARING WITHIN THE PROTECTED WOODLAND  |
|  | AREA OF TREE CLEARING OUTSIDE THE PROTECTED WOODLAND |
|  | TREE LOCATION AND TREE NUMBER                        |
|  | TREE LOCATION AND TREE NUMBER TO BE CLEARED          |

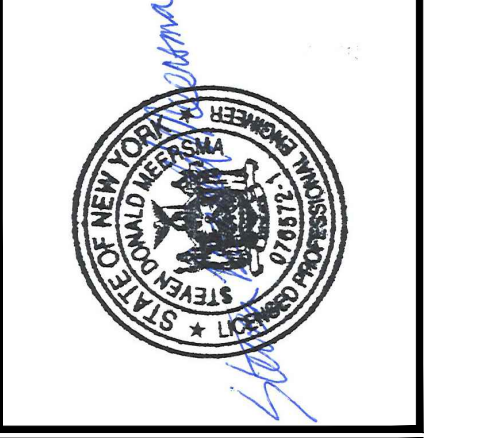
- MAP REFERENCES:**
1. SURVEY COMPLETED BY LAND DESIGN ASSOCIATES ENGINEERING, SURVEYING AND LAND ARCHITECTURE D.P.C OF HAUPPAGE, NEW YORK DATED MAY 29, 2021.
  2. THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 NEW YORK STATE PLANE (US SURVEY FEET, EAST ZONE, NY83-E). ELEVATIONS ARE BASED ON NAVD89 (US SURVEY FEET).

- TREE NOTES:**
1. TREE LOCATIONS REFERENCE A TREE IDENTIFICATION REPORT BY TRC ENGINEERS, INC. DATED JUNE 2022.
  2. APPROXIMATELY 1,055 TREES ARE TO BE REMOVED.

NOTE: UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.  
NOT FOR CONSTRUCTION

NOTE: THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
NOT FOR CONSTRUCTION

0 120' 240'  
SHEET SIZE: 24" BY 36"  
(DRAWING MAY BE PRINTED AT REDUCED SIZE)



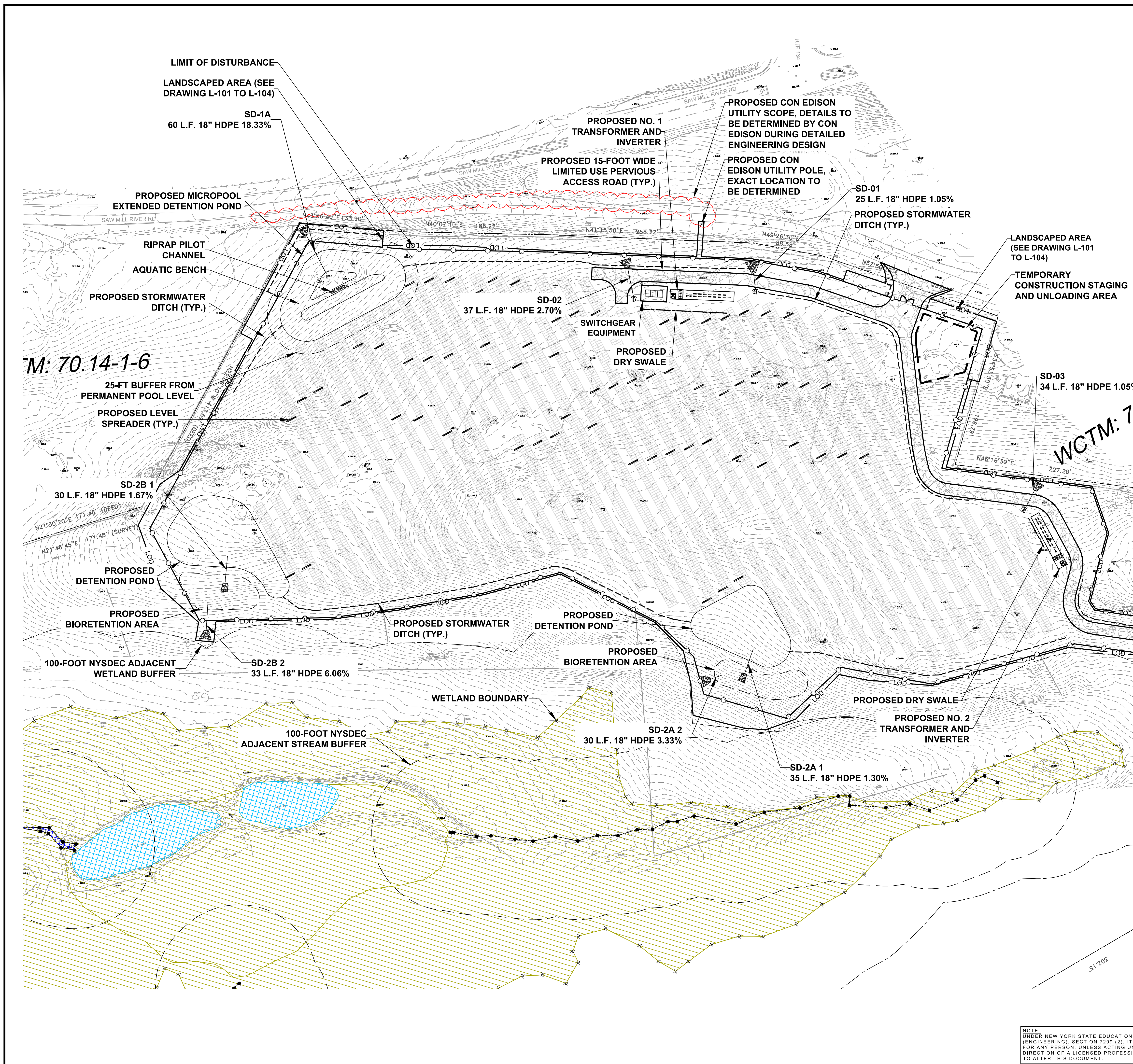
**Revisions:**

| No. | Date |
|-----|------|
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |
|     |      |

Drawn by:  
**A. REXROAT**  
Checked by:  
**S. MEERSMA**  
Approved by:  
**C. DUNCAN**

**SCS DELL 014136 YORKTOWN, LLC  
DELL AVENUE SOLAR FARM  
FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
DELL AVENUE, YORKTOWN, NEW YORK 10514**

Contract No:  
431302  
Scale:  
AS SHOWN  
Date:  
SEPTEMBER 21, 2022  
Sheet:  
DEMOLITION PLAN  
Drawing No:  
**C-102**

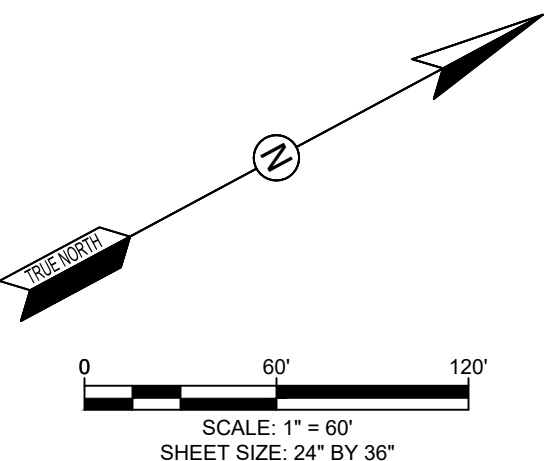
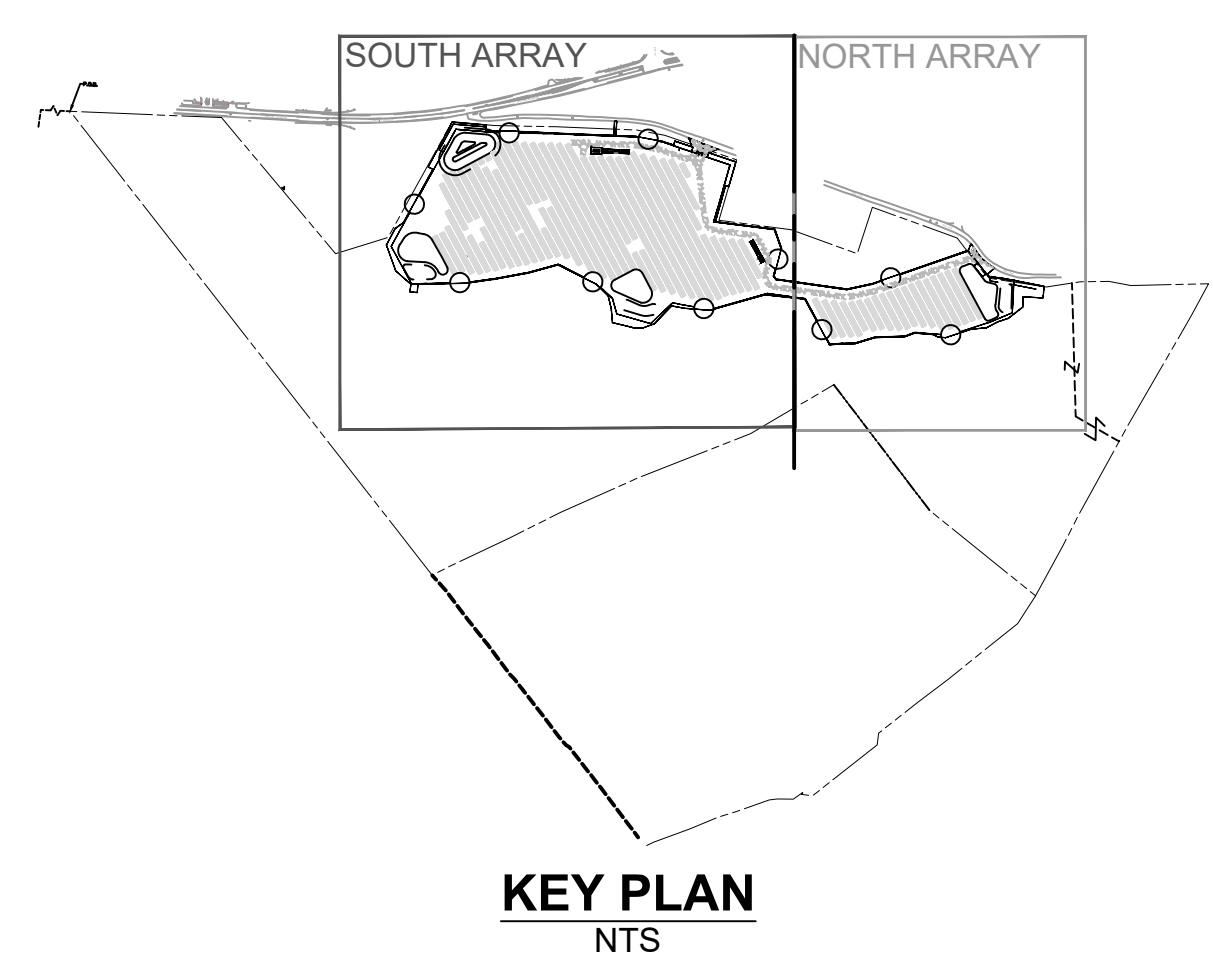


- LEGEND:**
- 420 --- EXISTING MAJOR CONTOUR (FEET)
  - 418 --- EXISTING MINOR CONTOUR (FEET)
  - --- PARCEL LINE
  - LOD --- LIMIT OF DISTURBANCE
  - --- PROPOSED PERIMETER FENCE
  - --- 100-FOOT NYSDEC ADJACENT AREA
  - --- 50-FOOT NYSDEC ADJACENT STREAM BUFFER
  - --- 100-FOOT NYSDEC ADJACENT STREAM BUFFER
  - --- STONE WALL
  - --- TREE LINE
  - --- TRAIL
  - --- ROCKS
  - --- DELINEATED STREAM LINE
  - --- DELINEATED WETLAND
  - --- DELINEATED SURFACE WATER
  - --- 15' WIDE ACCESS ROAD

REFER TO DRAWING C-103

- MAP REFERENCES:**
1. SURVEY COMPLETED BY LAND DESIGN ASSOCIATES ENGINEERING, SURVEYING AND LAND ARCHITECTURE D.P.C. OF HAUPPAGE, NEW YORK DATED MAY 29, 2021.
  2. THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 NEW YORK STATE PLANE (US SURVEY FEET, EAST ZONE, NY83-EF). ELEVATIONS ARE BASED ON NAVD88 (US SURVEY FEET).

- GENERAL NOTES:**
1. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND PROPERTY BOUNDARIES ARE APPROXIMATE.
  2. THE PROJECT SHALL BE DESIGNED IN COMPLIANCE WITH ALL APPLICABLE CODES, STANDARDS, AND REQUIREMENTS, INCLUDING BUT NOT LIMITED TO:
    - TOWN OF YORKTOWN CODES
    - 2020 FIRE CODE OF NEW YORK STATE (FCNYS 2020)
    - 2020 BUILDING CODE OF NEW YORK STATE (BCNYS 2020)
    - 2019 ENERGY STORAGE SYSTEM SUPPLEMENT - NEW YORK STATE
    - 2018 INTERNATIONAL BUILDING CODE (IBC 2018)
    - NATIONAL ELECTRICAL CODE - NFPA 70
    - NATIONAL ELECTRICAL SAFETY CODE - IEEE C2-2017
    - ANSI/UL STANDARD FOR ENERGY STORAGE SYSTEMS AND EQUIPMENT - STANDARD 9540
    - STANDARD FOR THE INSTALLATION OF STATIONARY ENERGY STORAGE SYSTEMS - NFPA 855
    - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE - ACI 318-14

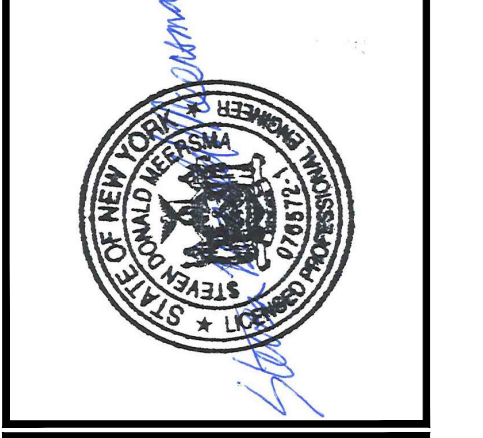


**NOTE:**  
 UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

**NOTE:** THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
 NOT FOR CONSTRUCTION

**TRC**  
 1430 Broadway, 10th Floor  
 New York, NY 10018  
 Phone: 212.221.7822  
 www.trccompanies.com  
 TRC Project No: 431302.0000.0005

**SOLSYSTEMS**  
 Sol Systems, LLC  
 1101 Connecticut Avenue NW  
 2nd Floor  
 Washington, DC 20036



| Revisions: |       |
|------------|-------|
| No.        | Date: |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |

Drawn by:  
**A. REXROAT**

Checked by:  
**S. MEERSMA**

Approved by:  
**C. DUNCAN**

**SCS DELL 014136 YORKTOWN, LLC  
 DELL AVENUE SOLAR FARM  
 FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
 DELL AVENUE, YORKTOWN, NEW YORK 10514**

Contract No:  
 431302

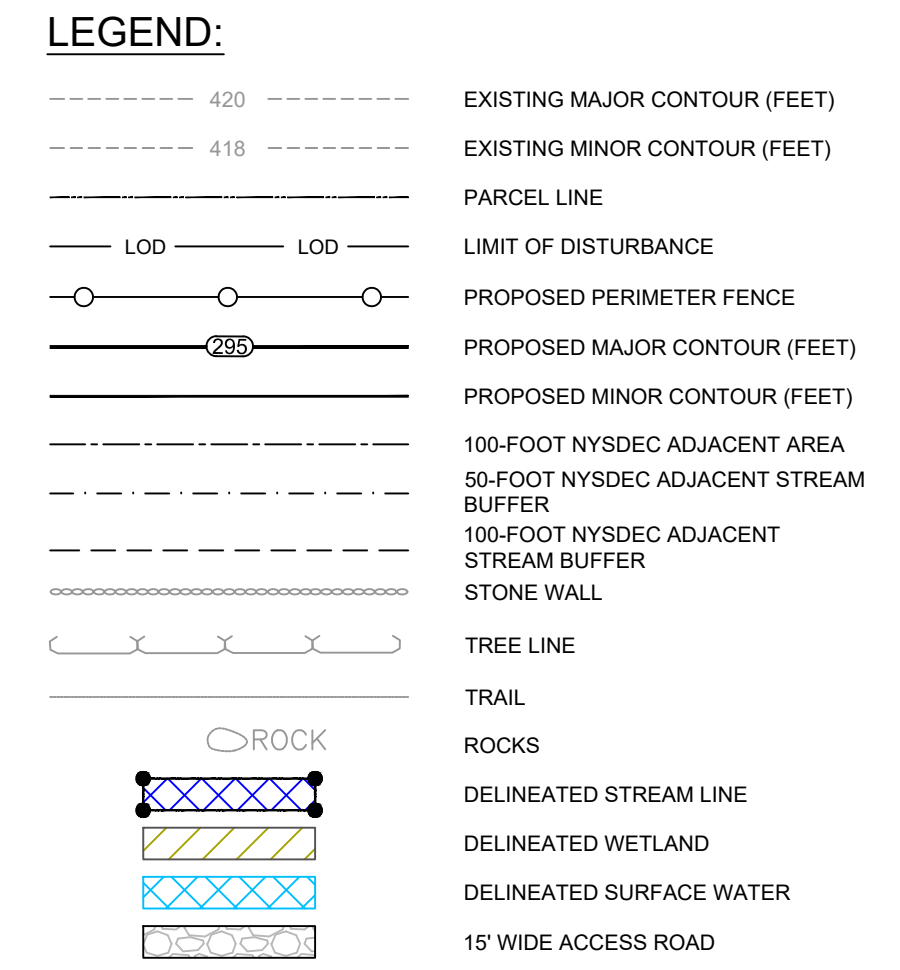
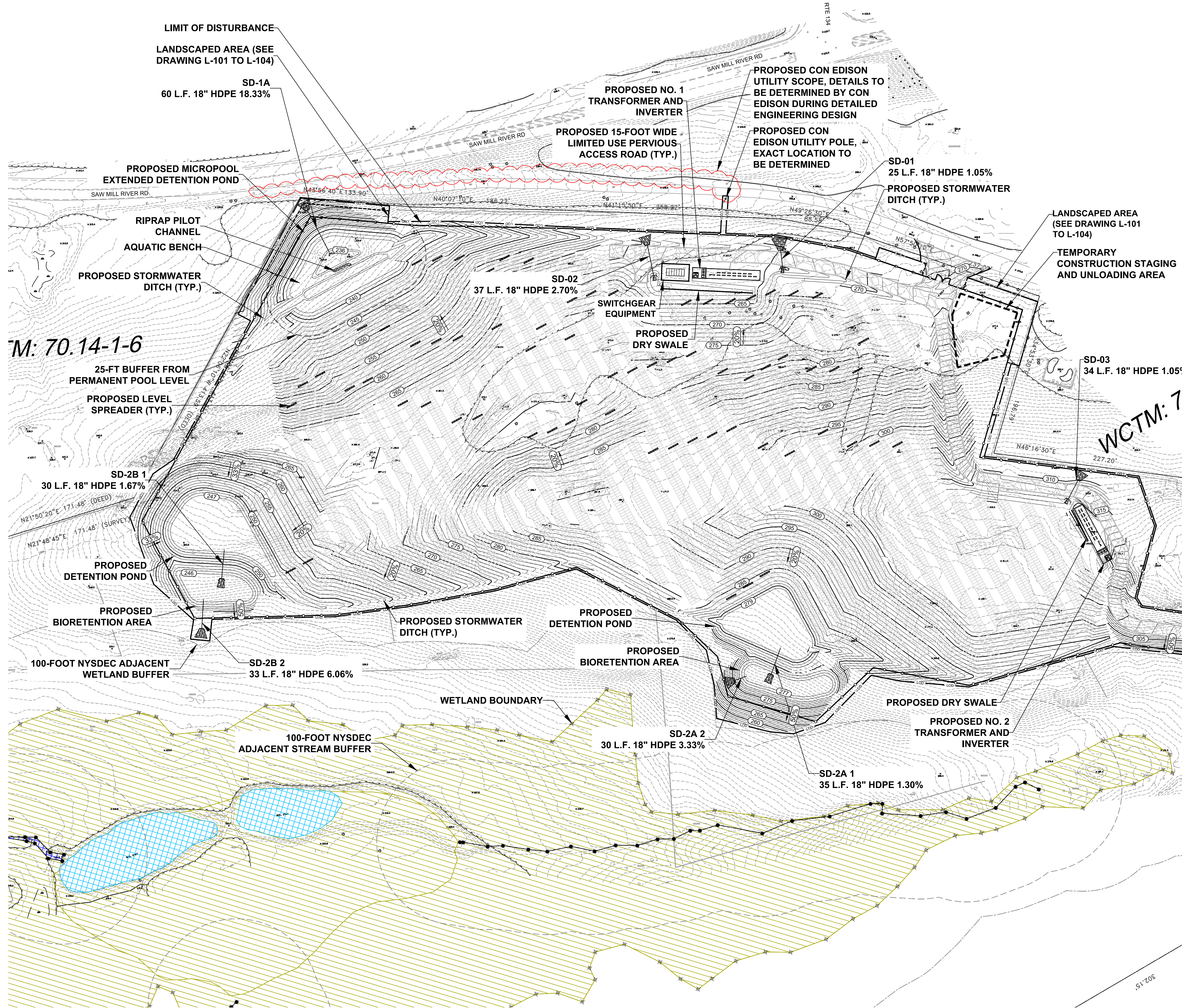
Scale:  
 AS SHOWN

Date:  
 SEPTEMBER 21, 2022

Sheet:  
 SITE PLAN - SOUTH

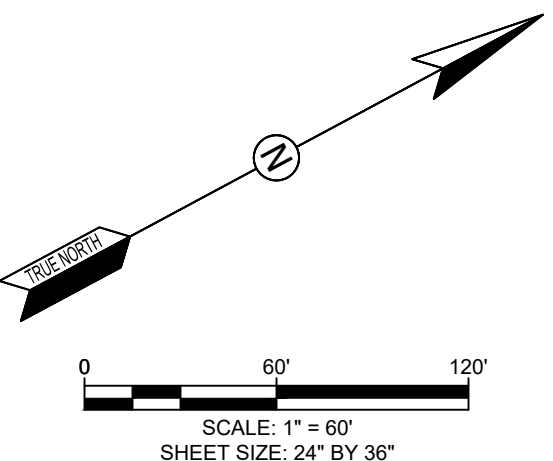
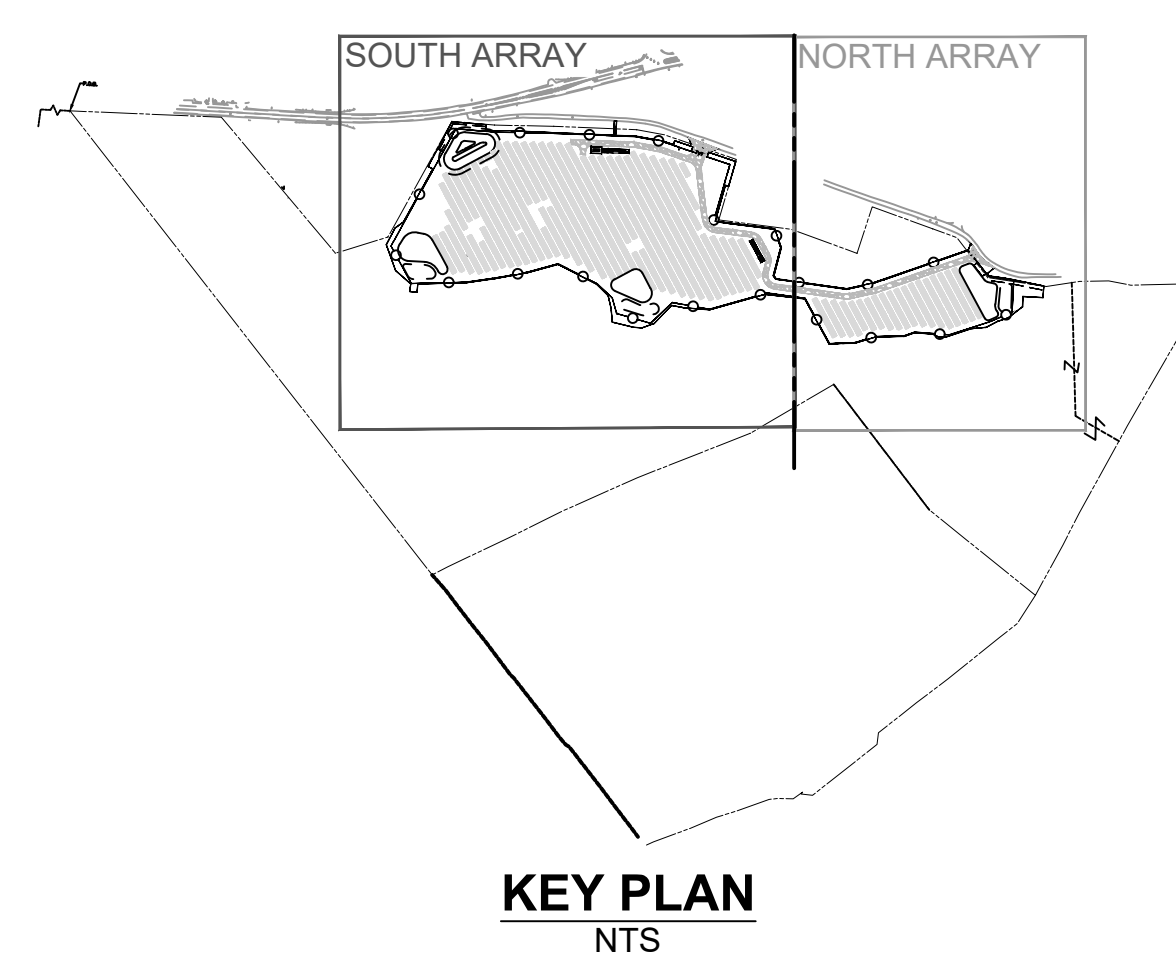
Drawing No:  
**C-103**





- MAP REFERENCES:**
1. SURVEY COMPLETED BY LAND DESIGN ASSOCIATES ENGINEERING, SURVEYING AND LAND ARCHITECTURE D.P.C. OF HAUPPAGE, NEW YORK DATED MAY 29, 2021.
  2. THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 NEW YORK STATE PLANE (US SURVEY FEET, EAST ZONE, NY83-EF). ELEVATIONS ARE BASED ON NAVD83 (US SURVEY FEET).

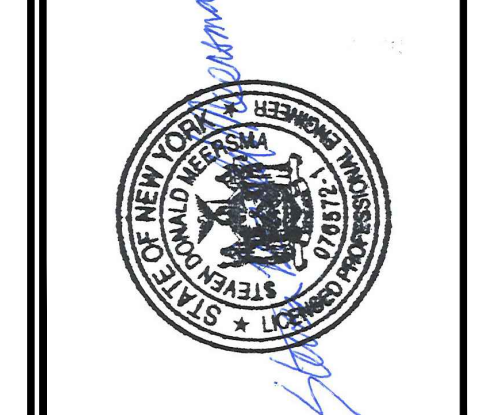
- GENERAL NOTES:**
1. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND PROPERTY BOUNDARIES ARE APPROXIMATE.
  2. THE PROJECT SHALL BE DESIGNED IN COMPLIANCE WITH ALL APPLICABLE CODES, STANDARDS, AND REQUIREMENTS, INCLUDING BUT NOT LIMITED TO:
    - TOWN OF YORKTOWN CODES
    - 2020 FIRE CODE OF NEW YORK STATE (FCNYS 2020)
    - 2020 BUILDING CODE OF NEW YORK STATE (BCNYS 2020)
    - 2019 ENERGY STORAGE SYSTEM SUPPLEMENT - NEW YORK STATE
    - 2018 INTERNATIONAL BUILDING CODE (IBC 2018)
    - NATIONAL ELECTRICAL CODE - NFPA 70
    - NATIONAL ELECTRICAL SAFETY CODE - IEEE C2-2017
    - ANSI/UL STANDARD FOR ENERGY STORAGE SYSTEMS AND EQUIPMENT - STANDARD 9540
    - STANDARD FOR THE INSTALLATION OF STATIONARY ENERGY STORAGE SYSTEMS - NFPA 855
    - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE - ACI 318-14



**NOTE:** UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

**NOTE:** THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.

NOT FOR CONSTRUCTION



| Revisions: |       |
|------------|-------|
| No.        | Date: |
|            |       |
|            |       |
|            |       |
|            |       |

Drawn by:  
A. REXROAT

Checked by:  
S. MEERSMA

Approved by:  
C. DUNCAN

SCS DELL 014136 YORKTOWN, LLC  
DELL AVENUE SOLAR FARM  
FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
DELL AVENUE, YORKTOWN, NEW YORK 10514

Contract No:  
431302

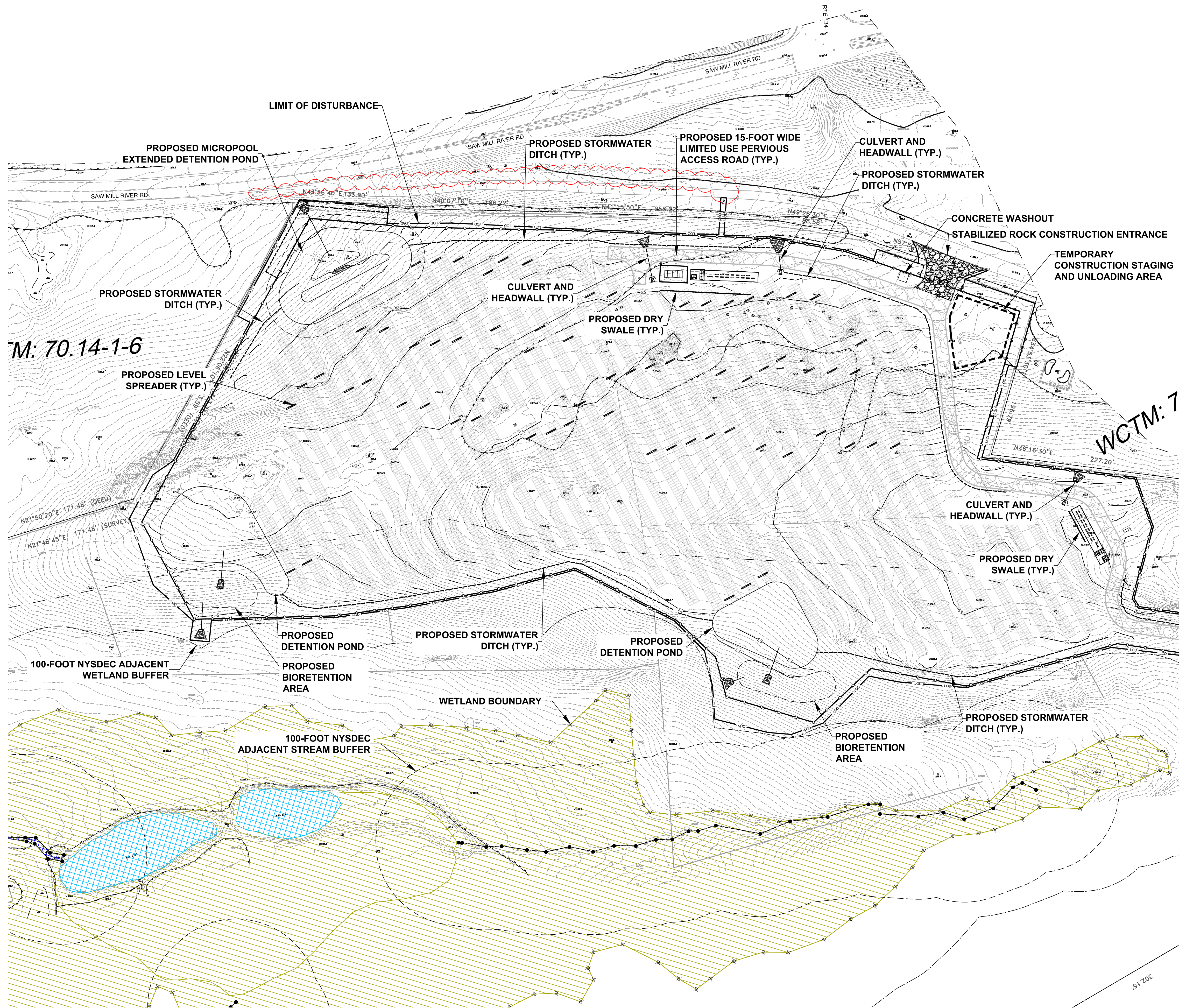
Scale:  
AS SHOWN

Date:  
SEPTEMBER 21, 2022

Sheet:  
GRADING PLAN - SOUTH

Drawing No:  
C-105



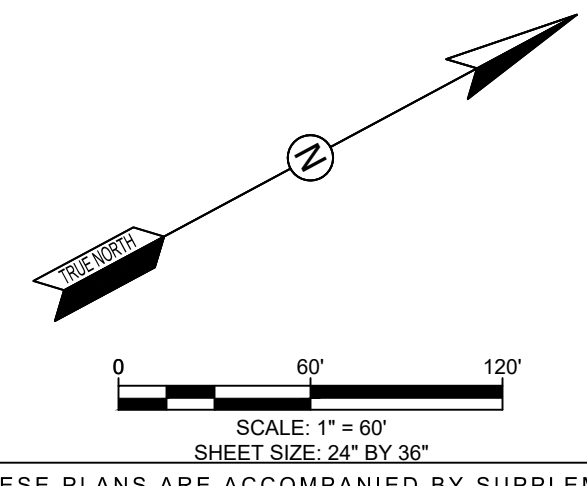
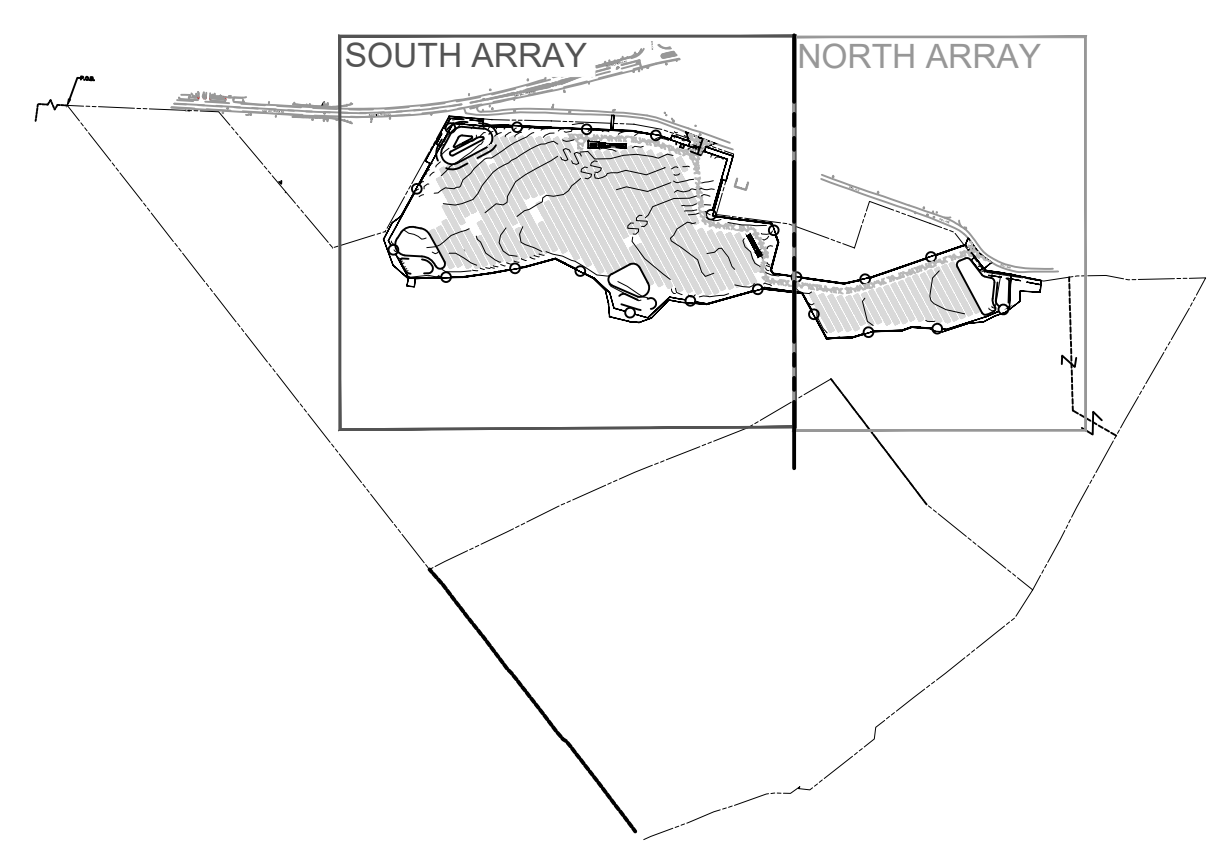


- LEGEND:**
- 420 --- EXISTING MAJOR CONTOUR (FEET)
  - 418 --- EXISTING MINOR CONTOUR (FEET)
  - --- PARCEL LINE
  - LOD --- LOD LIMIT OF DISTURBANCE
  - PROPOSED PERIMETER FENCE
  - 100-FOOT NYSDEC ADJACENT AREA
  - 50-FOOT NYSDEC ADJACENT STREAM BUFFER
  - 100-FOOT NYSDEC ADJACENT STREAM BUFFER
  - --- STONE WALL
  - --- TREE LINE
  - --- TRAIL
  - ROCK
  - DELINEATED STREAM LINE
  - DELINEATED WETLAND
  - DELINEATED SURFACE WATER
  - 15' WIDE ACCESS ROAD
  - STABILIZED CONSTRUCTION ENTRANCE
  - TEMPORARY CONSTRUCTION STAGING AREA
  - COMPOST FILTER SOCK

REFER TO DRAWING C-108

- MAP REFERENCES:**
1. SURVEY COMPLETED BY LAND DESIGN ASSOCIATES ENGINEERING, SURVEYING AND LAND ARCHITECTURE D.P.C. OF HAUPPAGE, NEW YORK DATED MAY 29, 2021.
  2. THE PROJECT HORIZONTAL COORDINATES SYSTEM IS BASED ON NAD83 NEW YORK STATE PLANE (US SURVEY FEET, EAST ZONE, NY83-EF). ELEVATIONS ARE BASED ON NAVD88 (US SURVEY FEET).

- GENERAL NOTES:**
1. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND PROPERTY BOUNDARIES ARE APPROXIMATE.
  2. THE PROJECT SHALL BE DESIGNED IN COMPLIANCE WITH ALL APPLICABLE CODES, STANDARDS, AND REQUIREMENTS, INCLUDING BUT NOT LIMITED TO:
    - TOWN OF YORKTOWN CODES
    - 2020 FIRE CODE OF NEW YORK STATE (FCNYS 2020)
    - 2020 BUILDING CODE OF NEW YORK STATE (BCNYS 2020)
    - 2019 ENERGY STORAGE SYSTEM SUPPLEMENT - NEW YORK STATE
    - 2018 INTERNATIONAL BUILDING CODE (IBC 2018)
    - NATIONAL ELECTRICAL CODE - NFPA 70
    - NATIONAL ELECTRICAL SAFETY CODE - IEEE C2-2017
    - ANSI/UL STANDARD FOR ENERGY STORAGE SYSTEMS AND EQUIPMENT - STANDARD 9540
    - STANDARD FOR THE INSTALLATION OF STATIONARY ENERGY STORAGE SYSTEMS - NFPA 855
    - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE - ACI 318-14

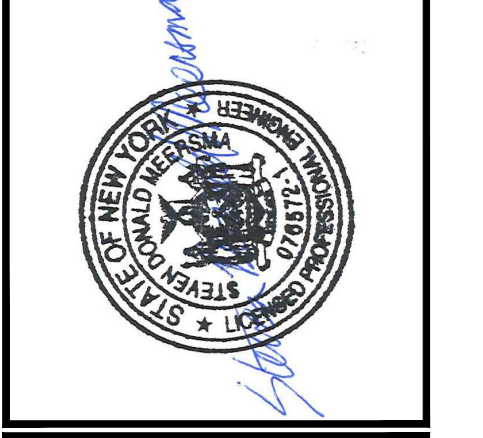


**NOTE:** UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

**NOTE:** THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
NOT FOR CONSTRUCTION

**TRC**  
 1430 Broadway, 10th Floor  
 New York, NY 10018  
 Phone: 212.221.7822  
 www.trccompanies.com  
 TRC Project No. 431302.0000.0005

**SOLSYSTEMS**  
 Sol Systems, LLC  
 1101 Connecticut Avenue NW  
 2nd Floor  
 Washington, DC 20036



Revisions:

| No. | Date: |
|-----|-------|
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |

Drawn by:  
A. REXROAT

Checked by:  
S. MEERSMA

Approved by:  
C. DUNCAN

SCS DELL 014136 YORKTOWN, LLC  
 DELL AVENUE SOLAR FARM  
 FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
 DELL AVENUE, YORKTOWN, NEW YORK 10514

Contract No:  
431302

Scale:  
AS SHOWN

Date:  
SEPTEMBER 21, 2022

Sheet:  
E&S PLAN - SOUTH

Drawing No:  
C-107

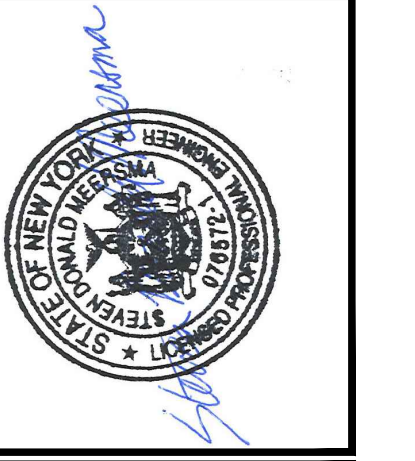












Revisions:

| No. | Date: |
|-----|-------|
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |
|     |       |

Drawn by:  
A. REXROAT

Checked by:  
S. MEERSMA

Approved by:  
C. DUNCAN

**SCS DELL 014136 YORKTOWN, LLC**  
**DELL AVENUE SOLAR FARM**  
**FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM**  
**DELL AVENUE, YORKTOWN, NEW YORK 10514**

Contract No:  
431302

Scale:  
AS SHOWN

Date:  
SEPTEMBER 21, 2022

Sheet:  
LANDSCAPE PLANTING TEMPLATE,  
SCHEDULES, & COORDINATE POINTS

Drawing No:  
**L-104**

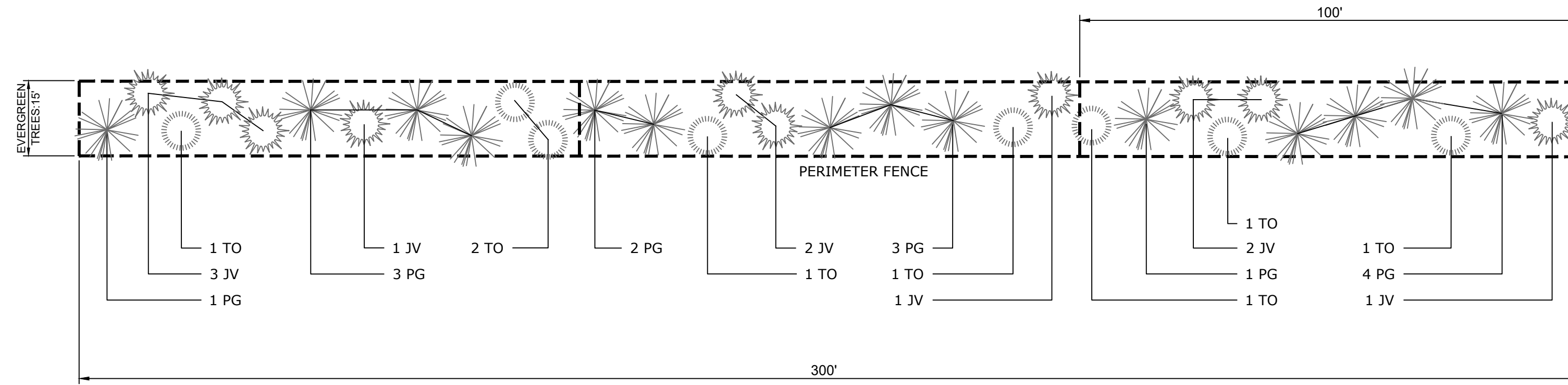
**VISUAL MITIGATION PLANTING TEMPLATE - TYPE A**

N.T.S.

**LEGEND** VISUAL MITIGATION PLANTING TYPE "A":

**BUFFER TYPE "A" NOTE:**

- SEE GENERAL SEEDING AND LANDSCAPE NOTES FOR ADDITIONAL PLANTING REQUIREMENTS AND SEED MIXTURES.
- THE 15-FOOT-WIDE PROPOSED BUFFER TYPE "A" WILL BE A MIX OF NATIVE EVERGREEN TREES ARRANGED TO FORM A NATURAL APPEARANCE AND CONTINUOUS SOLID SCREEN. SEE THE PLANTING TEMPLATE FOR ARRANGE OF PLANTS AND THE PLANT SCHEDULES FOR TYPE AND SIZE.
- THE PROPOSED BUFFER TREATMENT MEETS THE GENERAL LANDSCAPING REQUIREMENTS PER THE TOWN OF YORKTOWN CODE FOR SOLAR POWER GENERATION SYSTEM AND FACILITIES SECTION 300-81.4 - E. (3) (E).
  - A GROUND MOUNTED SOLAR ENERGY SYSTEM SHALL BE FULLY SCREENED FROM ADJACENT RESIDENTIAL PROPERTIES, STREETS OR ROADS ON WHICH IT FRONT OR IS VISIBLE FROM, AND ANY OTHER VIEWS WHICH THE PLANNING BOARD DETERMINES IS NECESSARY.
- THIS BUFFER IS LOCATED ALONG THE FOLLOWING:
  - ALONG PUBLIC ROAD FRONTAGE/STREET RIGHT-OF-WAY
  - FACING A RESIDENTIAL PROPERTY
- SEE SHEET L103 FOR PLANT MATERIAL TOTALS



**LEGEND** VISUAL MITIGATION PLANTING TEMPLATE - TYPE A

LANDSCAPE PLANTING SCHEDULE (15' EVERGREEN VISUAL BUFFER/SCREENING EFFORT)

| DECIDUOUS AND EVERGREEN TREES |  |    |           |     |             |
|-------------------------------|--|----|-----------|-----|-------------|
| JV                            | JUNIPERUS VIRGINIANA<br>EASTERN RED CEDAR  | 10 | 5'-6' HT. | B&B | 40'-50' HT. |
| PG                            | PICEA GLAUCA<br>WHITE SPRUCE               | 14 | 5'-6' HT. | B&B | 40'-60' HT. |
| TO                            | THUJA OCCIDENTALIS<br>NORTHERN WHITE CEDAR | 8  | 5'-6' HT. | B&B | 40'-50' HT. |

**VISUAL MITIGATION PLANTING SCHEDULE & COORDINATE TABLES - TYPE A**

**LEGEND - VM1** PLANTING TEMPLATE TYPE A  
LANDSCAPE PLANTING SCHEDULE TOTAL MITIGATION LENGTH = 185 LF

| EVERGREEN TREES |  |          |           |      |               |
|-----------------|--|----------|-----------|------|---------------|
| SYMBOL          | BOTANICAL NAME/<br>COMMON PLANT NAME       | QUANTITY | SIZE      | ROOT | MATURE HEIGHT |
| JV              | JUNIPERUS VIRGINIANA<br>EASTERN RED CEDAR  | 6        | 5'-6' HT. | B&B  | 40'-50' HT.   |
| PG              | PICEA GLAUCA<br>WHITE SPRUCE               | 9        | 5'-6' HT. | B&B  | 40'-60' HT.   |
| TO              | THUJA OCCIDENTALIS<br>NORTHERN WHITE CEDAR | 5        | 5'-6' HT. | B&B  | 40'-50' HT.   |

**VM1 - COORDINATES**

| VM1 - VEGETATIVE BUFFER / SCREEN MITIGATION TABLE |                 |        |                      |                              |                              |
|---|-----------------|--------|----------------------|------------------------------|------------------------------|
| NUMBER  | MITIGATION TYPE | LENGTH | LINE/CHORD DIRECTION | START EASTING, NORTHING      | END EASTING, NORTHING        |
| L1  | TYPE A          | 87     | N32° 47' 12.82"W     | E:689489.5216, N:866952.6692 | E:689442.5172, N:867025.6424 |
| L2  | TYPE A          | 98     | N33° 16' 12.18"E     | E:689442.5172, N:867025.6424 | E:689496.3927, N:867107.7535 |

**LEGEND - VM2** PLANTING TEMPLATE TYPE A  
LANDSCAPE PLANTING SCHEDULE TOTAL MITIGATION LENGTH = 60 LF

| EVERGREEN TREES |  |          |           |      |               |
|-----------------|--|----------|-----------|------|---------------|
| SYMBOL          | BOTANICAL NAME/<br>COMMON PLANT NAME       | QUANTITY | SIZE      | ROOT | MATURE HEIGHT |
| JV              | JUNIPERUS VIRGINIANA<br>EASTERN RED CEDAR  | 4        | 5'-6' HT. | B&B  | 40'-50' HT.   |
| PG              | PICEA GLAUCA<br>WHITE SPRUCE               | 2        | 5'-6' HT. | B&B  | 40'-60' HT.   |
| TO              | THUJA OCCIDENTALIS<br>NORTHERN WHITE CEDAR | 1        | 5'-6' HT. | B&B  | 40'-50' HT.   |

**VM2 - COORDINATES**

| VM2 - VEGETATIVE BUFFER / SCREEN MITIGATION TABLE |                 |        |                      |                              |                              |
|---|-----------------|--------|----------------------|------------------------------|------------------------------|
| NUMBER  | MITIGATION TYPE | LENGTH | LINE/CHORD DIRECTION | START EASTING, NORTHING      | END EASTING, NORTHING        |
| L3  | TYPE A          | 60     | N47° 09' 38.69"E     | E:689813.3783, N:867605.0219 | E:689857.7105, N:867646.1304 |

**LEGEND - VM3** PLANTING TEMPLATE TYPE A  
LANDSCAPE PLANTING SCHEDULE TOTAL MITIGATION LENGTH = 155 LF

| EVERGREEN TREES |  |          |           |      |               |
|-----------------|--|----------|-----------|------|---------------|
| SYMBOL          | BOTANICAL NAME/<br>COMMON PLANT NAME       | QUANTITY | SIZE      | ROOT | MATURE HEIGHT |
| JV              | JUNIPERUS VIRGINIANA<br>EASTERN RED CEDAR  | 6        | 5'-6' HT. | B&B  | 40'-50' HT.   |
| PG              | PICEA GLAUCA<br>WHITE SPRUCE               | 7        | 5'-6' HT. | B&B  | 40'-60' HT.   |
| TO              | THUJA OCCIDENTALIS<br>NORTHERN WHITE CEDAR | 4        | 5'-6' HT. | B&B  | 40'-50' HT.   |

**VM3 - COORDINATES**

| VM3 - VEGETATIVE BUFFER / SCREEN MITIGATION TABLE |                 |        |                      |                              |                              |
|---|-----------------|--------|----------------------|------------------------------|------------------------------|
| NUMBER  | MITIGATION TYPE | LENGTH | LINE/CHORD DIRECTION | START EASTING, NORTHING      | END EASTING, NORTHING        |
| L4  | TYPE A          | 82     | N47° 09' 44.78"E     | E:689895.7809, N:867681.4667 | E:689955.7688, N:867737.0893 |
| L5  | TYPE A          | 73     | S45° 33' 57.82"E     | E:689955.7688, N:867737.0893 | E:690007.9618, N:867685.9175 |

**LEGEND - VM4** PLANTING TEMPLATE TYPE A  
LANDSCAPE PLANTING SCHEDULE TOTAL MITIGATION LENGTH = 45 LF

| EVERGREEN TREES |  |          |           |      |               |
|-----------------|--|----------|-----------|------|---------------|
| SYMBOL          | BOTANICAL NAME/<br>COMMON PLANT NAME       | QUANTITY | SIZE      | ROOT | MATURE HEIGHT |
| JV              | JUNIPERUS VIRGINIANA<br>EASTERN RED CEDAR  | 3        | 5'-6' HT. | B&B  | 40'-50' HT.   |
| PG              | PICEA GLAUCA<br>WHITE SPRUCE               | 2        | 5'-6' HT. | B&B  | 40'-60' HT.   |
| TO              | THUJA OCCIDENTALIS<br>NORTHERN WHITE CEDAR | 1        | 5'-6' HT. | B&B  | 40'-50' HT.   |

**VM4 - COORDINATES**

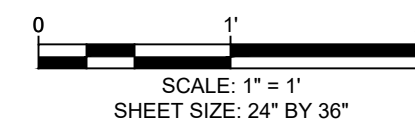
| VM4 - VEGETATIVE BUFFER / SCREEN MITIGATION TABLE |                 |        |                      |                              |                              |
|---|-----------------|--------|----------------------|------------------------------|------------------------------|
| NUMBER  | MITIGATION TYPE | LENGTH | LINE/CHORD DIRECTION | START EASTING, NORTHING      | END EASTING, NORTHING        |
| L6  | TYPE A          | 45     | N80° 37' 10.92"E     | E:690591.3788, N:868256.3369 | E:690635.7521, N:868263.6672 |

**LEGEND - VM5** PLANTING TEMPLATE TYPE A  
LANDSCAPE PLANTING SCHEDULE TOTAL MITIGATION LENGTH = 170 LF

| EVERGREEN TREES |  |          |           |      |               |
|-----------------|--|----------|-----------|------|---------------|
| SYMBOL          | BOTANICAL NAME/<br>COMMON PLANT NAME       | QUANTITY | SIZE      | ROOT | MATURE HEIGHT |
| JV              | JUNIPERUS VIRGINIANA<br>EASTERN RED CEDAR  | 6        | 5'-6' HT. | B&B  | 40'-50' HT.   |
| PG              | PICEA GLAUCA<br>WHITE SPRUCE               | 8        | 5'-6' HT. | B&B  | 40'-60' HT.   |
| TO              | THUJA OCCIDENTALIS<br>NORTHERN WHITE CEDAR | 4        | 5'-6' HT. | B&B  | 40'-50' HT.   |

**VM5 - COORDINATES**

| VM5 - VEGETATIVE BUFFER / SCREEN MITIGATION TABLE |                 |        |                      |                              |                              |
|---|-----------------|--------|----------------------|------------------------------|------------------------------|
| NUMBER  | MITIGATION TYPE | LENGTH | LINE/CHORD DIRECTION | START EASTING, NORTHING      | END EASTING, NORTHING        |
| L7  | TYPE A          | 66     | N37° 06' 09.33"E     | E:690654.1539, N:868274.4382 | E:690693.7426, N:868326.7788 |
| L8  | TYPE A          | 104    | N39° 35' 14.14"E     | E:690693.7426, N:868326.7788 | E:690760.0450, N:868406.9609 |



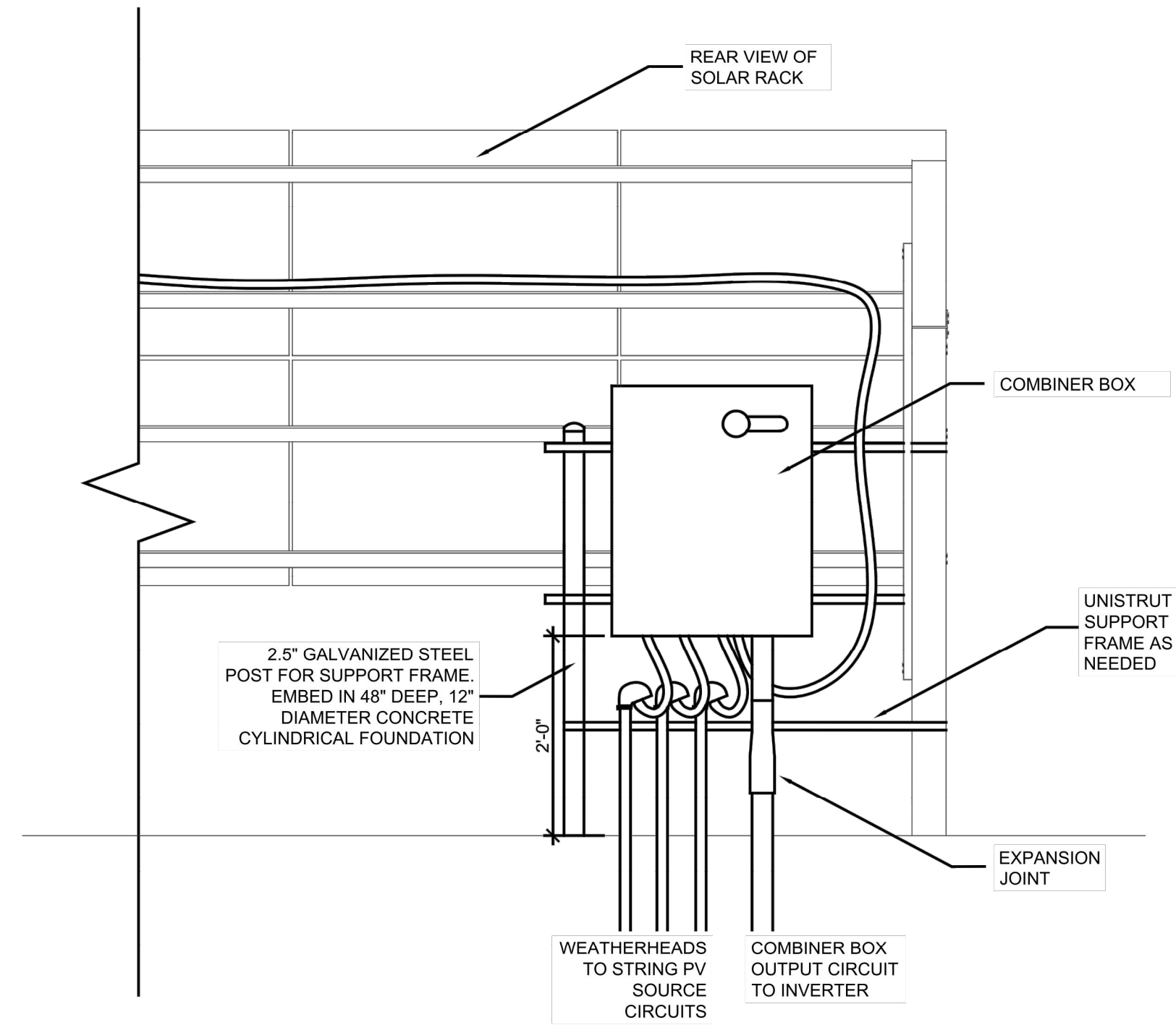
NOTE: THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
NOT FOR CONSTRUCTION



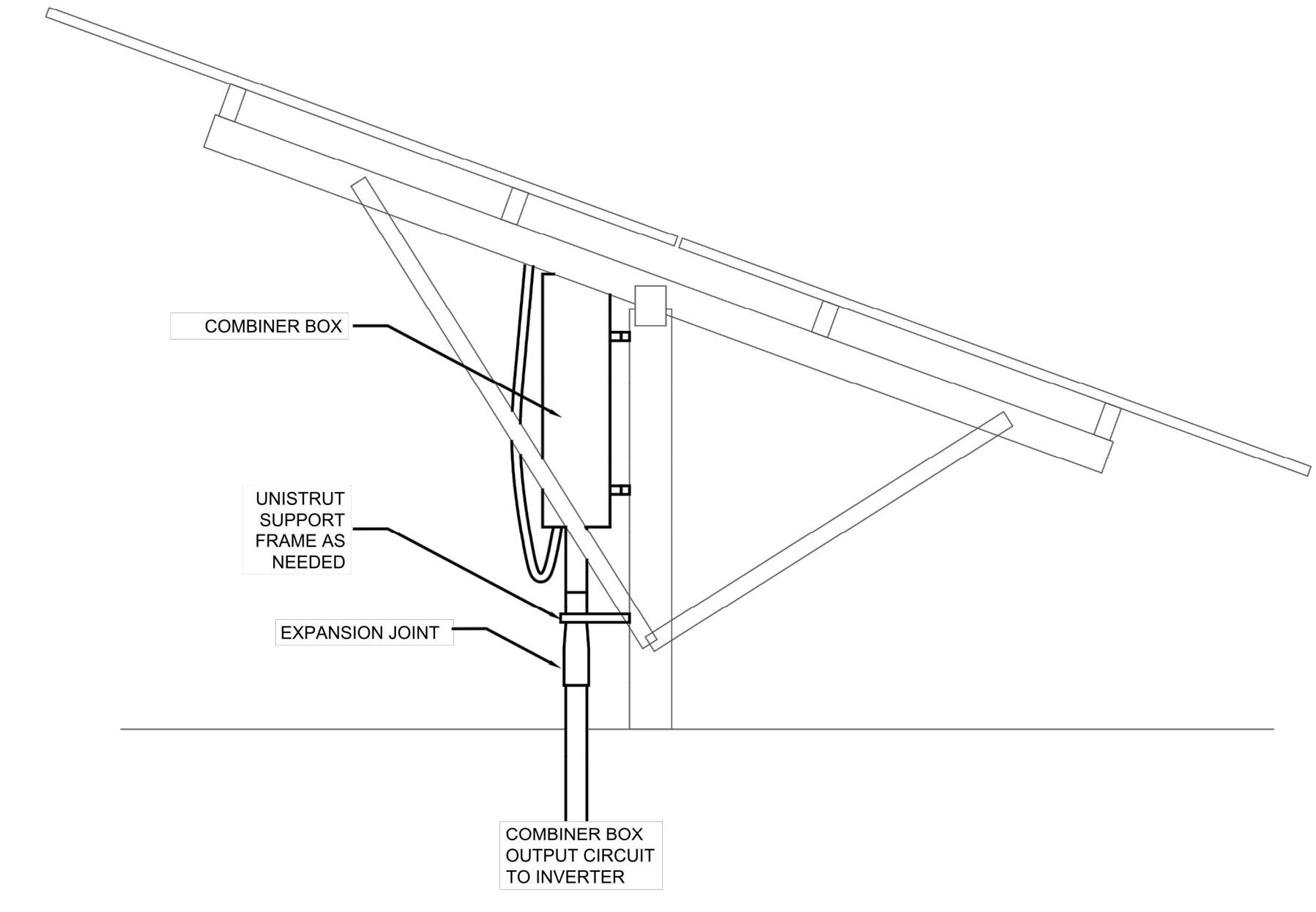




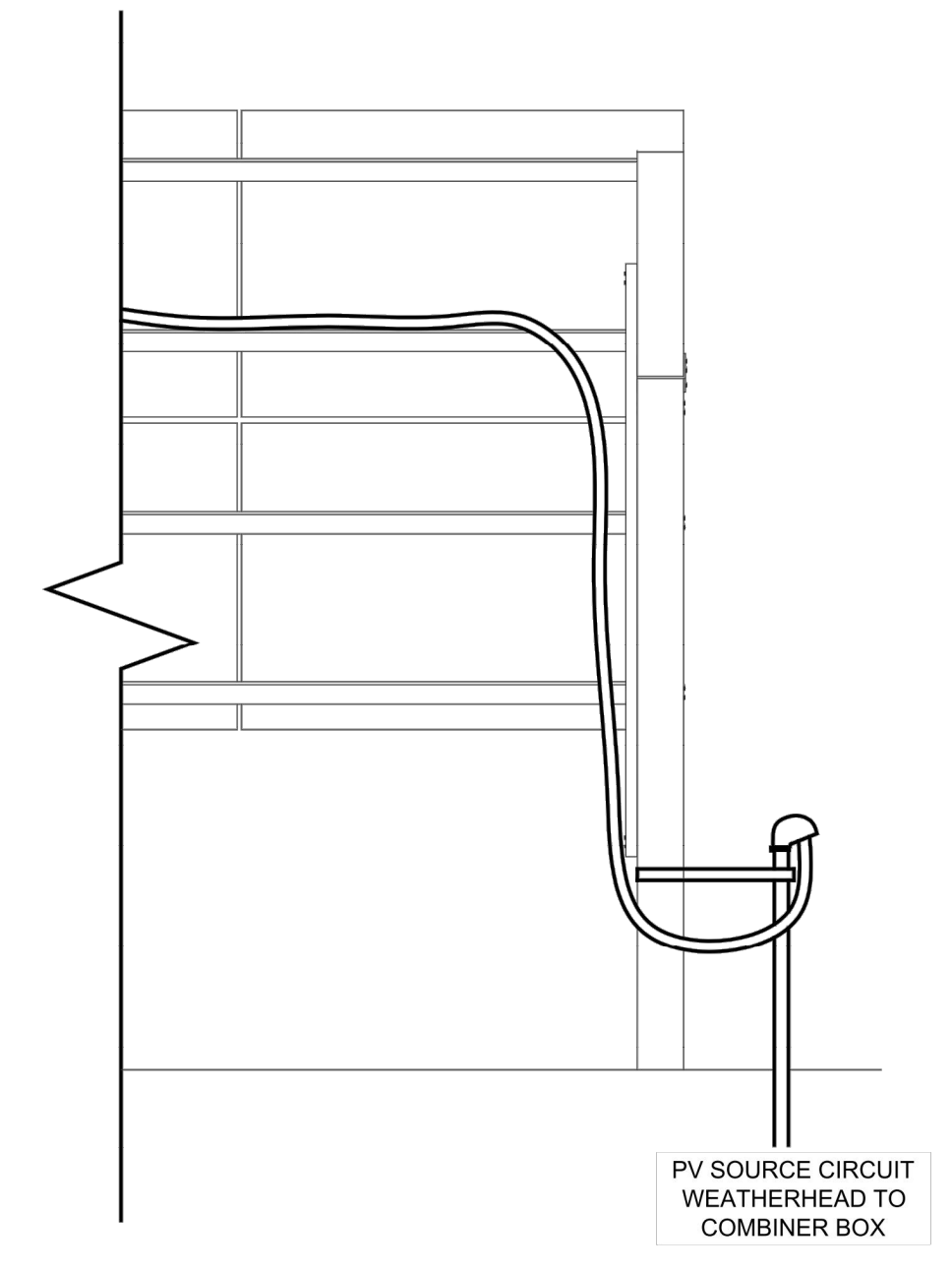




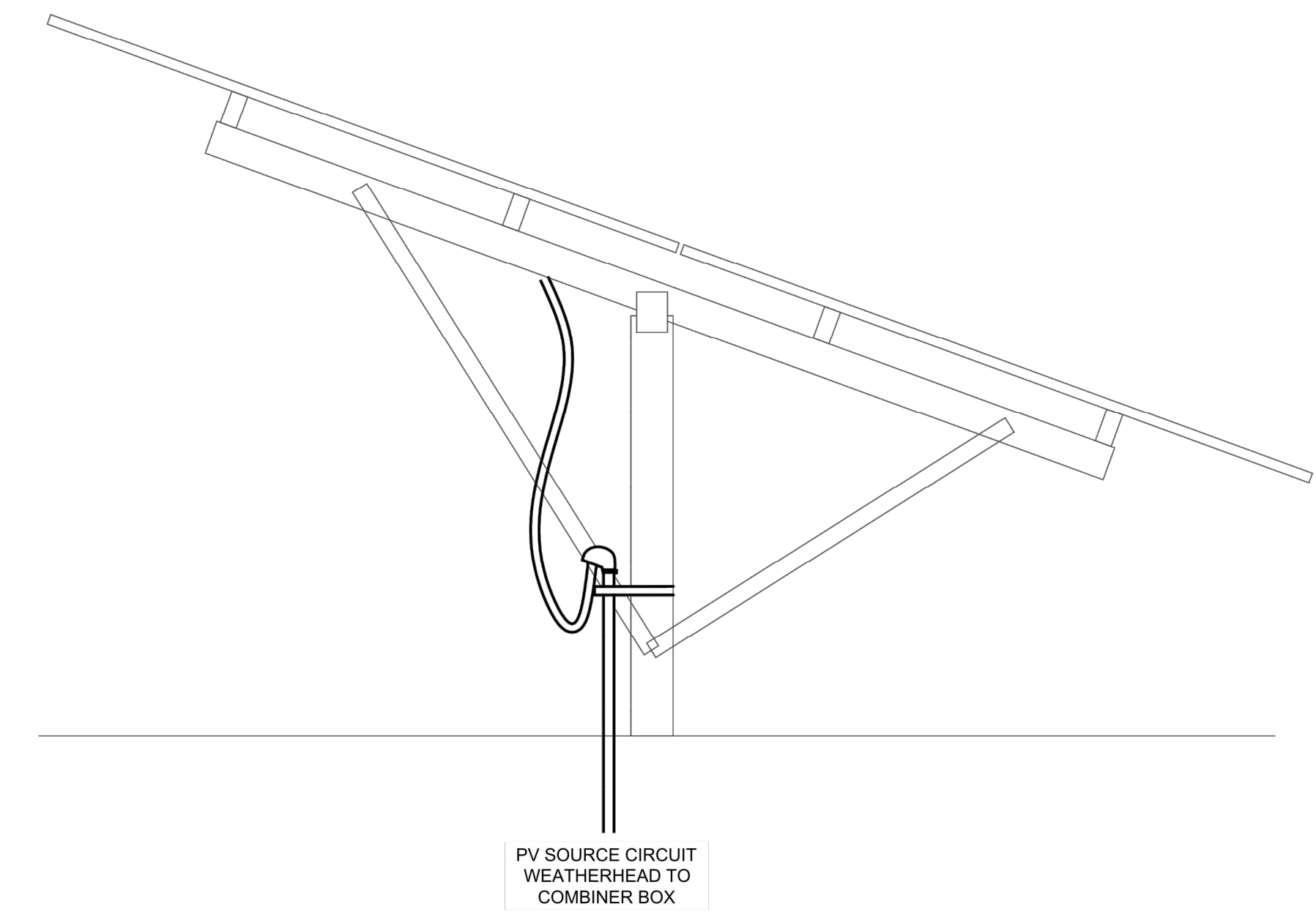
1 COMBINER BOX FRONT  
E-412 3/4" = 1'-0"



2 COMBINER BOX SIDE  
E-412 3/4" = 1'-0"



3 STRING CONDUIT WEATHERHEAD  
E-412 3/4" = 1'-0"



4 STRING CONDUIT WEATHERHEAD SIDE  
E-412 3/4" = 1'-0"

NOTE: UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

NOTE: THESE PLANS ARE ACCOMPANIED BY A SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
NOT FOR CONSTRUCTION



| Revisions: |       |
|------------|-------|
| No.        | Date: |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |

Drawn by:  
A. REXROAT

Checked by:  
S. MEERSMA

Approved by:  
C. DUNCAN

SCS DELL 014136 YORKTOWN, LLC  
DELL AVENUE SOLAR FARM  
FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
DELL AVENUE, YORKTOWN, NEW YORK 10514

Contract No:  
431302

Scale:  
AS SHOWN

Date:  
JUNE 14, 2022

Sheet:  
DETAIL SHEET 4

Drawing No:  
D-104





## 100/125kW, 1500Vdc String Inverters for North America



CPS SCH100/125KTL-DO-US-600

The 100 & 125kW high power CPS three phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch safe fusing for up to 20 strings. The CPS Flex Gateway enables communication, controls and remote product upgrades.

### Key Features

- NFPA 70, NEC 2014 and 2017 compliant
- Touch safe DC Fuse holders adds convenience and safety
- CPS Flex Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- 11 MPPT with 20 fused inputs for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- KVA Headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.87 and 1.5 DC/AC Inverter Load Ratios
- Separable wire-box design for fast service
- Standard 5 year warranty with extensions to 20 years



100/125KTL Standard Wire-box



100/125KTL Centralized Wire-box



© CHINT POWER SYSTEMS AMERICA 2021.01.AMT.NA

CHINT Power Systems America  
6800 Koll Center Parkway, Suite 235 Pleasanton, CA 94566  
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpower.com

| Model Name                                    | CPS SCH100KTL-DO-US-600  | CPS SCH125KTL-DO-US-600  |
|---|--|--|
| DC Input                                      |  |  |
| Max. PV Power                                 | 187.5kW  | 125kW  |
| Max. DC Input Voltage                         | 1500V  | 1500V  |
| Operating DC Input Voltage Range              | 860-1450Vdc  | 860-1450Vdc  |
| Start-up DC Input Voltage / Power             | 900V / 250W  | 900V / 250W  |
| Number of MPP Trackers                        | 1  | 1  |
| MPPT Voltage Range <sup>1</sup>               | 870-1300Vdc  | 870-1300Vdc  |
| Max. PV Input Current (Isc x1.25)             | 275A   | 275A   |
| Number of DC Inputs                           | 20 PV source circuits, pos. & neg. fused (Standard Wire-box)   | 20 PV source circuits, pos. & neg. fused (Standard Wire-box)   |
| DC Disconnection Type                         | 1 PV output circuit, 1-2 terminations per pole, non-fused (Centralized Wire-box)   | 1 PV output circuit, 1-2 terminations per pole, non-fused (Centralized Wire-box)   |
| DC Surge Protection                           | Type II MOV with indicator/remote signaling, Up=2.5kV, In=20kA (8/20uS)  | Type II MOV with indicator/remote signaling, Up=2.5kV, In=20kA (8/20uS)  |
| AC Output                                     |  |  |
| Rated AC Output Power                         | 100kW  | 125kW  |
| Max. AC Output Power <sup>2</sup>             | 100kVA (111kVA @ PF=0.9)   | 125kVA (132kVA @ PF=0.95)  |
| Rated Output Voltage                          | 600Vac   | 600Vac   |
| Output Voltage Range <sup>3</sup>             | 528-660Vac   | 528-660Vac   |
| Grid Connection Type <sup>4</sup>             | 3Ø / PE / N (Neutral optional)   | 3Ø / PE / N (Neutral optional)   |
| Max. AC Output Current @600Vac                | 96.2/106.8A  | 120.3/127.0A   |
| Rated Output Frequency                        | 60Hz   | 60Hz   |
| Output Frequency Range <sup>5</sup>           | 57-63Hz  | 57-63Hz  |
| Power Factor                                  | >0.99 (±0.8 adjustable)  | >0.99 (±0.8 adjustable)  |
| Current THD                                   | <3%  | <3%  |
| Max. Fault Current Contribution (1-cycle RMS) | 41.47A   | 175A   |
| Max. OCPD Rating                              | 150A   | 175A   |
| AC Disconnection Type                         | Load-rated AC switch   | Load-rated AC switch   |
| AC Surge Protection                           | Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)  | Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)  |
| System  |  |  |
| Topology                                      | Transformerless  | Transformerless  |
| Max. Efficiency                               | 98.1%  | 98.1%  |
| CEC Efficiency                                | 98.5%  | 98.5%  |
| Stand-by / Night Consumption                  | <4W  | <4W  |
| Environment                                   |  |  |
| Enclosure Protection Degree                   | NEMA Type 4X   | NEMA Type 4X   |
| Cooling Method                                | Variable speed cooling fans  | Variable speed cooling fans  |
| Operating Temperature Range                   | -22°F to +140°F / -30°C to +60°C (derating from +113°F / +45°C)  | -22°F to +140°F / -30°C to +60°C (derating from +113°F / +45°C)  |
| Non-Operating Temperature Range <sup>6</sup>  | -40°F to +158°F / -40°C to +70°C maximum   | -40°F to +158°F / -40°C to +70°C maximum   |
| Operating Humidity                            | 0-100%   | 0-100%   |
| Operating Altitude                            | 8200ft / 2500m (no derating)   | 8200ft / 2500m (no derating)   |
| Audible Noise                                 | <65dBA@1m and 25°C   | <65dBA@1m and 25°C   |
| Display and Communication                     |  |  |
| User Interface and Display                    | LED Indicators, WiFi + APP   | LED Indicators, WiFi + APP   |
| Inverter Monitoring                           | Modbus RS-485  | Modbus RS-485  |
| Site Level Monitoring                         | CPS Flex Gateway (1 per 32 inverters)  | CPS Flex Gateway (1 per 32 inverters)  |
| Modbus Data Mapping                           | SunSpec/CPS  | SunSpec/CPS  |
| Remote Diagnostics / FW Upgrade Functions     | Standard / (with Flex Gateway)   | Standard / (with Flex Gateway)   |
| Mechanical                                    |  |  |
| Dimensions (WxHxD)                            | 45.28x24.32x6.84in (1150x618x200mm) with Standard Wire-box<br>39.37x24.25x6.84in (1000x618x200mm) with Centralized Wire-box  | 45.28x24.32x6.84in (1150x618x200mm) with Standard Wire-box<br>39.37x24.25x6.84in (1000x618x200mm) with Centralized Wire-box  |
| Weight  | Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (Standard Wire-box); 33lbs / 15kg (Centralized Wire-box)   | Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (Standard Wire-box); 33lbs / 15kg (Centralized Wire-box)   |
| Mounting / Installation Angle                 | 15 - 90 degrees from horizontal (vertical or angled)   | 15 - 90 degrees from horizontal (vertical or angled)   |
| AC Termination                                | M10 Stud Type Terminal (3Ø) (Wire range: 10AWG - 500kcmil CU/AL, Lugs not supplied)<br>Screw Clamp Terminal Block (N) (#12 - 10AWG CU/AL)  | M10 Stud Type Terminal (3Ø) (Wire range: 10AWG - 500kcmil CU/AL, Lugs not supplied)<br>Screw Clamp Terminal Block (N) (#12 - 10AWG CU/AL)  |
| DC Termination                                | Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box<br>Busbar, M10 Bolts (Wire range: #1AWG - 500kcmil CU/AL (1 termination per pole), #1AWG - 300kcmil CU/AL (2 terminations per pole), Lugs not supplied) - Centralized Wire-box<br>20A fuses provided (Fuse values of 16A or 20A acceptable) | Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box<br>Busbar, M10 Bolts (Wire range: #1AWG - 500kcmil CU/AL (1 termination per pole), #1AWG - 300kcmil CU/AL (2 terminations per pole), Lugs not supplied) - Centralized Wire-box<br>20A fuses provided (Fuse values of 16A or 20A acceptable) |
| Fused String Inputs                           | 20A fuses provided (Fuse values of 16A or 20A acceptable)  | 20A fuses provided (Fuse values of 16A or 20A acceptable)  |
| Safety and EMC Standard                       | UL1741-SA-2016, CSA-C22.2 NO. 107.1-01, IEEE1547a-2014, FCC PART15   | UL1741-SA-2016, CSA-C22.2 NO. 107.1-01, IEEE1547a-2014, FCC PART15   |
| Selectable Grid Standard                      | IEEE 1547a-2014, CA Rule 21, ISO-NE  | IEEE 1547a-2014, CA Rule 21, ISO-NE  |
| Smart-Grid Features                           | Volt-Ride Thru, Freq-Ride Thru, Ramp-Rate, Specified-PF, Volt-VAr, Freq-Watt, Volt-Watt  | Volt-Ride Thru, Freq-Ride Thru, Ramp-Rate, Specified-PF, Volt-VAr, Freq-Watt, Volt-Watt  |
| Warranty <sup>7</sup>                         | 5 years  | 5 years  |
| Extended Terms                                | 10, 15 and 20 years  | 10, 15 and 20 years  |

1) See user manual for further information regarding MPPT Voltage Range when operating at non-unity PF  
2) Max. AC Output Power\* rating valid within MPPT voltage range and temperature range of -30°C to +60°C (-22°F to +140°F) for 100kW PF=0.9 and 125kW PF=0.95  
3) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.  
4) Wire must be grounded. Details may be come grounded.  
5) See user manual for further requirements regarding non-operating conditions.  
6) 5 year warranty effective for units purchased after October 1st, 2016.  
7) 5 year warranty effective for units purchased after October 1st, 2016.

## THE FLEXRACK SERIES G3-X



### FLEXRACK SERIES G3-X | Specifications

| MATERIALS                     |   |
|-------------------------------|---|
| Hardware                      | Mounting hardware is Magni 560 coated standard. Stainless available upon request.                                 |
| Racking Structure             | G 90 galvanized steel standard. Higher coatings available for high corrosion areas                                |
| Foundations                   | Hot Dipped Galvanized   |
| DESIGN                        |   |
| Orientation                   | Landscape or Portrait   |
| Tilt Angle                    | 5° - 45° (custom tilts can be accommodated)   |
| Adjustability                 | 20% E/W Landscape, 20% E/W Portrait   |
| Wind Speed                    | Any   |
| Snow Load                     | Any   |
| Module Accommodation          | Any 60 or 72 cell framed module along with any frameless module   |
| Module Mounting Type          | Direct bolt to vertical rails (bonded connection)   |
| Foundation Accommodation      | W-Section, SmartPost, Round Post, Helical Pier, Ballast   |
| Warranty                      | 20 Years  |
| CERTIFICATIONS AND TESTING    |   |
| UL Compliance                 | UL 2703 (Issue 2) compliant.  |
| Wind Tunnel Testing           | CPP third party testing laboratory  |
| Structural Connection Testing | Accutek Testing Laboratory  |
| Code Compliance               |   |
| Finite Element Modeling       | Risa 3D   |
| Engineering                   | PE stamped drawings and calculations  |
| SERVICES                      |   |
| Geotechnical Engineering      | Field investigation and engineering, laboratory testing, engineering analysis, push/pull tests, foundation design |
| Structural/Civil Engineering  | Preliminary investigation, engineering, layout  |
| Installation                  | Foundation, racking, module, and module pre-wiring  |

Solar FlexRack, a division of Northern States Metals, is an integrated solar company that offers custom-designed, fixed tilt ground mount and single-axis solar tracking systems in the commercial, community solar and utility-scale solar mounting industries. Solar FlexRack offers full turnkey packages including engineering, geotechnical, geotechnical testing, field, layout, and installation services to address the actual site conditions of an installation and provide a full scope of services from design to delivery and installation. Solar FlexRack has completed over 2 GW of solar racking installations in 40 states across America and five countries globally.

For more information on Solar FlexRack visit: [www.solarflexrack.com](http://www.solarflexrack.com)

NOTE:

## LG NeON<sup>®</sup>H

The LG NeON<sup>®</sup>H is one of the most powerful and versatile modules on the market today. The LG NeON<sup>®</sup>H is equipped with N-type cells and half-cell technology to increase power and efficiency. The LG NeON<sup>®</sup>H includes a 25-year product and 90.6% performance warranty for high performance and reliability.

### 450W | 445W | 440W

#### FEATURES

**90.6% Efficiency**  
Enhanced Performance Warranty  
LG NeON<sup>®</sup>H comes with an enhanced performance warranty. After 25 years of use, the LG NeON<sup>®</sup>H is guaranteed to provide at least 90.6% of initial performance.

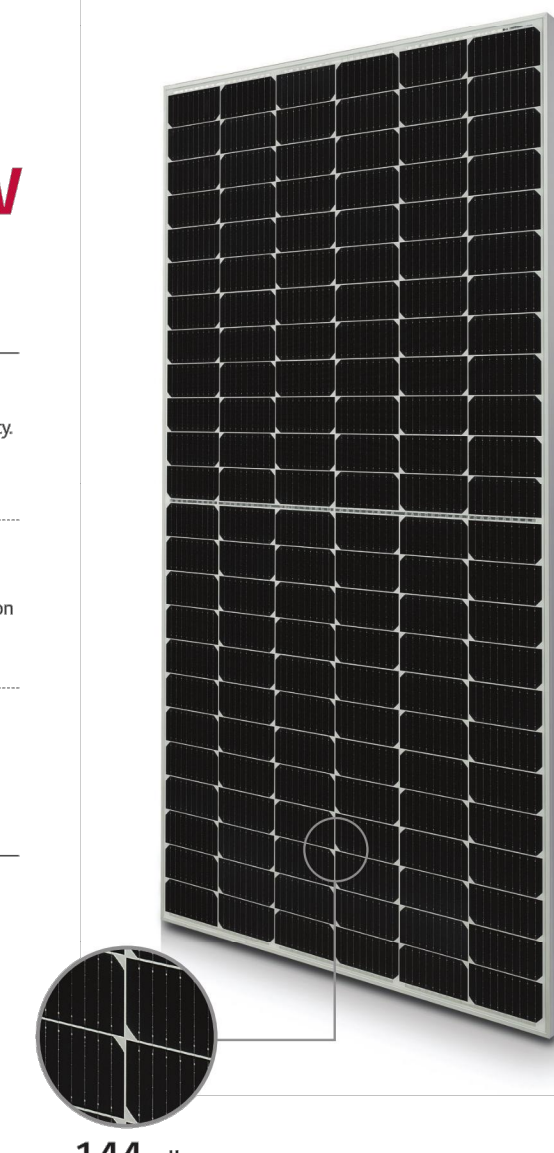
**25 Year Warranty**  
Industry-Leading Product Warranty  
LG offers an industry-leading 25 year product warranty on the NeON<sup>®</sup>H.

**Reliable Quality**  
LG NeON<sup>®</sup>H offers reliable and proven quality through rigorous testing\*.

\* LG is subject to rigorous quality verification through PVEL POF test. The PVEL POF includes test sequences examining both the reliability and performance characteristics of PV modules.



About LG Electronics  
LG is transforming today's solar landscape, offering high-efficiency solar panels for customers who demand high performance, reliability and consistently strong energy yield from a brand they can trust. LG's modules feature high power outputs, outstanding durability, appealing aesthetics and high-efficiency technology.



144cell

## LG NeON<sup>®</sup>H

LG450N2W-E6 / LG445N2W-E6 / LG440N2W-E6

#### General Data

| Cell Properties (Material / Type) | Monocrystalline / N-type       |
|-----------------------------------|--------------------------------|
| Cell Maker                        | LG                             |
| Cell Configuration                | 144 Cells (6 x 24)             |
| Number of Buses                   | 9/5A                           |
| Module Dimensions (L x W x H)     | 2,110 x 1,042 x 40 mm          |
| Weight                            | 22 kg                          |
| Glass (Material)                  | Tempered Glass with AR coating |
| Backsheet (Color)                 | White                          |
| Frame (Material)                  | Anodized Aluminum              |
| Junction Box (Protection Degree)  | IP 67 with 3 bypass diodes     |
| Cables Length                     | 1,400 mm x 2 EA                |
| Connector (Type / Maker)          | MC4 / SunLab                   |

#### Electrical Properties (STC)<sup>1</sup>

| Model                              | LG450N2W-E6 | LG445N2W-E6 | LG440N2W-E6 |
|------------------------------------|-------------|-------------|-------------|
| Maximum Power (Pmax)               | [W] 450     | 445         | 440         |
| MPPT Voltage (Vmppt)               | [V] 41.8    | 41.5        | 41.2        |
| MPPT Current (Imppt)               | [A] 10.79   | 10.74       | 10.70       |
| Open Circuit Voltage (Voc @ 5% I)  | [V] 49.7    | 49.4        | 49.1        |
| Short Circuit Current (Isc @ 5% I) | [A] 11.34   | 11.27       | 11.20       |
| Module Efficiency                  | [%] 20.3    | 20.2        | 20.0        |
| Power Tolerance                    | [%] 0 - +3  |             |             |

<sup>1</sup>STC (Standard Test Condition)  
<sup>2</sup> Irradiance 1,000W/m<sup>2</sup>; Cell temperature 25°C; AM 1.5; Maximum Spectrum ± 0.3%

#### Certifications and Warranty

|   |
|---|
| IEC 61215-1/-1-1/2:2016, IEC 61730-1/2:2016, UL 61730-1/2017, UL 61730-2:2017 |
| CEC 50701, 5014:2001  |
| CSAS 18001  |
| IEC 61701-2011 Section 6  |
| ATEX 01716:2013   |
| Module Fire Performance Type 1 (A, B1730)                                     |
| Class C (UL 790)  |
| Fire Rating Class C (UL 790)  |
| Solar Module Product Warranty 25 Years  |
| Solar Module Output Warranty* Linear Warranty**                               |

\* 1) Free year - 98.5%, 2) After 1st year - 0.32%/year, 3) 90.6% for 25 years

\*\* Based on IEC 61215-2:2016 (Test Load = Design Load x Safety Factor) (S)

#### Temperature Characteristics

|              |        |
|--------------|--------|
| MPPT [°C]    | 42 ± 3 |
| Power [W/°C] | -0.33  |
| Voc [V/°C]   | -0.26  |
| Isc [A/°C]   | 0.04   |

<sup>1</sup> MPP (Optimal Module Operating Temperature)  
<sup>2</sup> Irradiance 800W/m<sup>2</sup>; Ambient temperature 20°C; Wind speed 1m/s; Spectrum AM 1.5

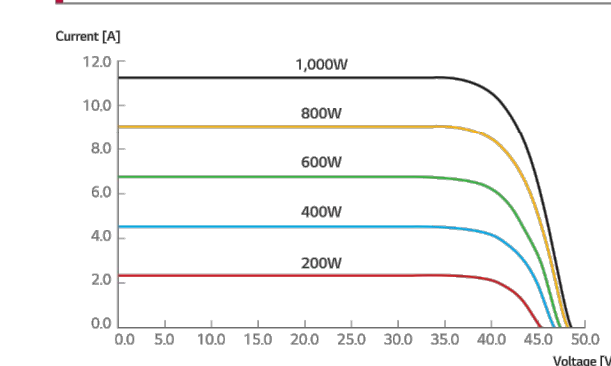
#### Electrical Properties (MMO)<sup>1</sup>

| Model                       | LG450N2W-E6 | LG445N2W-E6 | LG440N2W-E6 |
|-----------------------------|-------------|-------------|-------------|
| Maximum Power (Pmax)        | [W] 341     | 336         | 332         |
| MPPT Voltage (Vmppt)        | [V] 39.60   | 39.50       | 39.00       |
| MPPT Current (Imppt)        | [A] 8.64    | 8.60        | 8.57        |
| Open Circuit Voltage (Voc)  | [V] 46.90   | 46.60       | 46.30       |
| Short Circuit Current (Isc) | [A] 9.13    | 9.08        | 9.02        |

<sup>1</sup> MPP (Optimal Module Operating Temperature)

<sup>2</sup> Irradiance 800W/m<sup>2</sup>; Ambient temperature 20°C; Wind speed 1m/s; Spectrum AM 1.5

#### I-V Curves



#### Operating Conditions

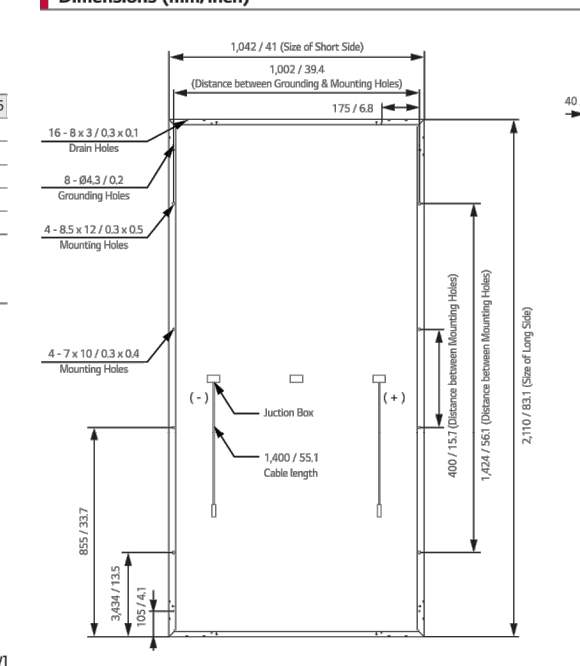
|                               |                            |
|-------------------------------|----------------------------|
| Operating Temperature         | [°C] -40 ~ +85             |
| Maximum System Voltage        | [V] 1,000(IEC) / 1,500(UL) |
| Maximum Series Fuse Rating    | [A] 20                     |
| Mechanical Test Load* (Front) | [Pa] 5,400                 |
| Mechanical Test Load* (Rear)  | [Pa] 3,000                 |

\* Based on IEC 61215-2:2016 (Test Load = Design Load x Safety Factor) (S)

#### Packaging Configuration

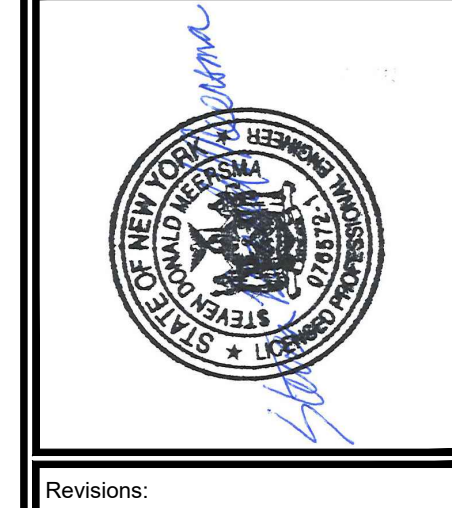
|                                       |                            |
|---------------------------------------|----------------------------|
| Number of Modules Per Pallet          | [EA] 25                    |
| Number of Modules Per 40'HQ Container | [EA] 530                   |
| Packaging Box Dimensions (L x W x H)  | [mm] 2,160 x 1,220 x 1,213 |
| Packaging Box Gross Weight            | [kg] 588                   |

#### Dimensions (mm/inch)



LG Electronics Inc.  
Energy Business Division  
LG Twin Towers, 120 Twin Drive, Yongin-si, Gyeonggi-do, Seoul 17336, Korea  
www.lg-solar.com

Product specifications are subject to change without notice.  
© 2021 LG Electronics. All rights reserved.



| Revisions: |       |
|------------|-------|
| No.        | Date: |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |

Drawn by:  
A. REXROAT  
Checked by:  
S. MEERSMA  
Approved by:  
C. DUNCAN

SCS DELL 014136 YORKTOWN, LLC  
DELL AVENUE SOLAR FARM  
FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
DELL AVENUE, YORKTOWN, NEW YORK 10514

Contract No:  
431302  
Scale:  
AS SHOWN  
Date:  
JUNE 14, 2022  
Sheet:  
DETAIL SHEET 7  
Drawing No:  
D-107

NOTE: UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

NOTE: THESE PLANS ARE ACCOMPANIED BY A SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE INTENDED TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
NOT FOR CONSTRUCTION

**EROSION CONTROL MEASURES**

EROSION AND SEDIMENT CONTROL MEASURES SHALL CONSIST OF NON-WOVEN FILTER FABRIC MATERIAL WITH A WIRE MESH BACKING, OR A WOVEN FABRIC (SILT FENCE). ALL MATERIAL SHALL BE NEW AND FREE FROM DEFECTS THAT WOULD COMPROMISE THE EFFECTIVENESS OF THE CONTROL MEASURES. AFTER COMPLETION, ALL MATERIAL SHALL BE DISPOSED PROPERLY. LOCATION OF EROSION AND SEDIMENT CONTROL STRUCTURES CAN BE SEEN ON THE SITE PLAN. NOTE: ALL WATER ARE LOCATED DOWN-GRADE FROM DISTRIBUTED STREET IF TOPSOIL IS TO BE STORED IN AN AREA NOT SHOWN ON THE SITE PLAN, DUE TO UNFORESEEN EVENTS, PRIOR TO STORING, THE DOWN-GRADE PERIMETER OF THE STORAGE AREA SHALL BE PROPERLY PROTECTED PER THE SPECIFICATIONS DETAILED ON THIS PLAN.

**CONSTRUCTION HOUSEKEEPING**

CONTRACTOR MUST MAINTAIN THE PROJECT SITES IN ACCORDANCE WITH THE FOLLOWING PERFORMANCE STANDARDS:

**MATERIAL STOCKPILING:** MATERIAL RESULTING FROM CLEARING AND GRUBBING, GRADING, AND OTHER CONSTRUCTION ACTIVITIES, OR NEW MATERIAL DELIVERED TO THE SITE, SHALL BE STOCKPILED UPSLOPE OF DISTURBED AREAS. THE STOCKPILE AREAS SHALL HAVE THE PROPER EROSION AND SEDIMENT CONTROLS INSTALLED TO PREVENT MIGRATION OF SEDIMENTS AND MATERIALS.

**STAGING, STORAGE, AND MARSHALLING AREAS:** CONSTRUCTION MATERIALS AND EQUIPMENT SHALL BE STORED IN DESIGNATED STAGING AREAS AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE, OR ENGINEER. STAGING, STORAGE, AND MARSHALLING AREAS SHALL BE LOCATED IN AN AREA THAT MINIMIZES IMPACTS TO STORMWATER QUALITY, CHEMICALS, SOLVENTS, FERTILIZERS, AND OTHER TOXIC MATERIALS SHALL BE COLLECTED AND DISPOSED OF AT AN APPROVED SOLID WASTE OR CHEMICAL DISPOSAL FACILITY. BULK STORAGE OF FUEL MATERIALS WILL BE STAGED AT THE PROJECT MARSHALLING YARD PER SAFETY DATA SHEET (SDS) SPECIFICATION AND ENVIRONMENTAL HEALTH AND SAFETY STANDARDS, WHICHEVER IS MORE RESTRICTIVE.

**EQUIPMENT CLEANING AND MAINTENANCE:** ALL ON-SITE CONSTRUCTION VEHICLES SHALL BE MONITORED FOR LEAKS AND SHALL RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE RISK OF LEAKAGE. ANY EQUIPMENT LEAKING OIL, FUEL, OR HYDRAULIC OIL SHALL BE REPAIRED OR REMOVED FROM THE PROJECT SITE IMMEDIATELY. STORAGE, PARKING, MAINTENANCE, AND SERVICE OF CONSTRUCTION VEHICLES SHALL BE A MINIMUM OF 200 FEET FROM A WETLAND, WATERBODY, OR OTHER ECOLOGICALLY SENSITIVE AREA AND STORMWATER CONVEYANCE FEATURES OR WATER QUALITY TREATMENT BMPs. PETROLEUM PRODUCTS AND HYDRAULIC FLUIDS THAT ARE NOT IN VEHICLES SHALL BE STORED IN TIGHTLY SEALED CONTAINERS THAT ARE CLEARLY LABELED, ALL GASOLINE, DIESEL FUEL, OR OTHER FUEL STORAGE VESSELS WITH GREATER THAN 25-GALLON SHELL CAPACITY MUST HAVE SECONDARY CONTAINMENT CONSTRUCTED OF AN IMPERVIOUS MATERIAL CAPABLE OF CONTAINING A MINIMUM OF 110% OF THE SHELL CAPACITY.

**DEBRIS AND OTHER MATERIALS:** CONTRACTOR SHALL MANAGE ALL LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER TO PREVENT MATERIALS FROM BECOMING A SOURCE OF POLLUTION. ALL DEMOLITION WASTE, DEBRIS, AND RUBBISH GENERATED DURING CONSTRUCTION OF THE PROJECT SHALL BE PROPERLY REMOVED FROM THE SITE AS IT OCCURS. ALL MATERIALS SHALL BE PROPERLY DISPOSED OF OFF-SITE IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE PROPER HANDLING, STORAGE, AND DISPOSAL OF HAZARDOUS SUBSTANCES.

**TRENCH OR FOUNDATION DEWATERING:** TRENCH DEWATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDING BASINS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SITED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL REMOVE COLLECTED WATER FROM THE PONDING AREAS, EITHER THROUGH GRAVITY OR PUMPING, IN A MANNER THAT SPREADS IT THROUGH NATURAL WOODED OR VEGETATED BUFFERS OR TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT LADEN WATER FROM DEWATERING TO FLOW OVER DISTURBED AREAS OF THE PROJECT SITES. OTHER MEASURES OR METHODS MAY BE UTILIZED AS REVIEWED AND APPROVED BY THE ENGINEER.

**NON-STORMWATER DISCHARGES:** CONTRACTOR SHALL IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES.

**CONCRETE WASHOUT AREAS:** DESIGNATED CONCRETE WASHOUT AREAS SHALL BE PROVIDED AS NEEDED TO ALLOW CONCRETE TRUCKS TO WASHOUT OR DISCHARGE SURPLUS CONCRETE AND WASH WATER ON-SITE. CONCRETE WASHOUT AREAS SHALL BE A DIKED IMPERVIOUS AREA LOCATED A MINIMUM OF 100 FEET FROM A DRAINAGE WAY, WATERBODY, WETLAND AREA, OR INFILTRATION BMP. CONCRETE WASHOUT AREAS SHALL HAVE PROPER SIGNAGE AND BE CONSTRUCTED TO PREVENT CONTACT BETWEEN WASHWATER AND STORMWATER. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF CONCRETE WASHOUT AREAS. CONCRETE WASHOUT AREAS SHALL NOT BE FILLED BEYOND 95% OF DESIGN CAPACITY AND SHALL BE CLEANED OUT ONCE 75% CAPACITY HAS BEEN MET UNLESS A NEW FACILITY HAS BEEN CONSTRUCTED.

**ADDITIONAL REQUIREMENTS:** COMPLETION OF THE WORK WILL REQUIRE FREQUENT ACCESS TO VARIOUS PORTIONS OF THE PROJECT AREA FROM STATE AND LOCAL ROADWAYS. CONTRACTOR SHALL MONITOR PUBLIC ROADWAYS AND SHALL CLEAN PAVEMENT BY MEANS NECESSARY IN THE EVENT THAT SEDIMENT OR TRACKING IS OBSERVED. SIGNAGE SHALL BE POSTED AT INTERSECTIONS OF PROJECT ACCESS ROADS AND PUBLIC WAYS, STATING COMPANY NAME AND 24-HOUR CONTACT PHONE NUMBER.

**TEMPORARY STABILIZATION FOR FROZEN CONDITIONS**

**SITE STABILIZATION:** MULCHING SHOULD BE TRACKED INTO SOIL PRIOR TO FROZEN CONDITIONS, OR ANCHORED WITH NATURAL FIBER NETTING. APPLICATION OF MULCHING SHOULD BE PERFORMED PRIOR TO SIGNIFICANT SNOW FALL. STRAW MULCH ALONE IS USED FOR TEMPORARY STABILIZATION, IT SHALL BE APPLIED AT DOUBLE THE STANDARD RATE OF 2 TONS PER ACRE, MAKING THE APPLICATION RATE 4 TONS PER ACRE. OTHER MANUFACTURED MULCHES SHOULD BE APPLIED AT DOUBLE THE MANUFACTURER'S RECOMMENDED RATE. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES SHOULD BE INITIATED BY THE END OF NEXT BUSINESS DAY AND COMPLETED WITHIN THREE DAYS. ACCUMULATED SNOW AND FROZEN CONDITIONS ALONE ARE NOT CONSIDERED STABILIZATION.

**SLOPES:** ALL SLOPES AND GRADES MUST BE PROPERLY STABILIZED WITH APPROVED METHODS. ROLLED EROSION CONTROL PRODUCTS MUST BE USED ON ALL SLOPES GREATER THAN 3H:1V, OR WHERE CONDITIONS FOR EROSION DICTATE SUCH MEASURES.

**STRIPBACKS:** A MINIMUM 25-FOOT BUFFER SHALL BE MAINTAINED FROM ALL PERIMETER CONTROLS SUCH AS SILT FENCE, MARK SILT FENCE WITH TALL STAKES THAT ARE VISIBLE ABOVE THE SNOW PACK. EDGES OF DISTURBED AREAS THAT DRAIN TO A WATERBODY WITHIN 100-FOOT WILL HAVE 2 ROWS OF SILT FENCE, 5-FOOT APART, INSTALLED ALONG THE CONTOUR.

**CONSTRUCTION ENTRANCE:** ALL ENTRANCE AND EXIT LOCATIONS TO THE SITE MUST BE PROPERLY STABILIZED AND MUST BE MAINTAINED TO ACCOMMODATE SNOW MANAGEMENT AS SET FORTH IN THE NEW YORK SDESC.

**SNOW MANAGEMENT:** SNOW MANAGEMENT SHALL NOT DESTROY OR DEGRADE EROSION AND SEDIMENT CONTROL PRACTICES. PLOWING PERFORMED SHOULD NOT MIGRATE PLACED CRUSHED STONE OR ACCUMULATED MATTING DEBRIS WITHIN WATERBODIES, CONVEYANCES OR PROTECTED AREAS. PREPARE A SNOW MANAGEMENT PLAN WITH ADEQUATE STORAGE FOR SNOW AND CONTROL OF MELT WATER, REQUIRING CLEARED SNOW TO BE STORED IN A MANNER NOT AFFECTING ONGOING CONSTRUCTION ACTIVITIES. ENLARGE AND STABILIZE ACCESS POINTS TO PROVIDE FOR SNOW MANAGEMENT AND STOCKPILING. DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS. ALL DEBRIS OR ICE DAMS FROM PLOWING OPERATIONS THAT RESTRICT FLOW OF RUNOFF AND MELT WATER SHALL BE REMOVED.

**FROST HEAVES:** HEAVING FROST, FROZEN GROUND, WINTER CONDITIONS AND EQUIPMENT CAN AFFECT EROSION AND SEDIMENTATION CONTROL PRACTICES. EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE CHECKED FOR DAMAGE AND REPAIRED BY TRAINED CONTRACTOR AND QUALIFIED INSPECTORS. DEFICIENCIES SHALL BE REPAIRED AND OR INSTALLED MEASURES SHALL BE REPLACED AS DEEMED NECESSARY. THIS IS ESPECIALLY IMPORTANT DURING THAWING PERIODS AND PRIOR TO SPRING RAIN EVENTS.

**WINTER SHUTDOWN:** IN THE EVENT OF TEMPORARY SHUTDOWN TO SOIL DISTURBING ACTIVITIES UNDER WINTER CONDITIONS, TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED TO ALL DISTURBED AREAS AND SWPPP INSPECTIONS CAN BE REDUCED TO A MONTHLY FREQUENCY. THE CONTRACTOR SHALL REFER TO SOIL STABILIZATION MEASURES IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (NOVEMBER 2016) AND SPDES GENERAL PERMIT GP-0-20-001.

**PERMANENT CONSTRUCTION AREA SEEDING**

FINAL STABILIZATION SHOULD BE IMPLEMENTED AT THE COMPLETION OF EACH PHASE. ONCE CONSTRUCTION IS COMPLETE, EXPOSED SOILS REQUIRE FINAL AND PERMANENT STABILIZATION. SOILS SHOULD BE GRADED SMOOTH AND LEVEL TO ELIMINATE RUTTING AND CONCENTRATED FLOWS, PONDING AND UNEVEN SURFACES FOR FUTURE MAINTENANCE ACTIVITIES. UNIMPROVED AREAS SHOULD BE RESTORED TO ORIGINAL GRADE UNLESS PERMITTED AND PLANNED FOR REQUIRING FUTURE MAINTENANCE. CONSERVED STOCKPILED TOPSOIL SHOULD BE UTILIZED FOR TOPDRESSING GRADED SUB-SOILS AT EXCAVATION LOCATIONS. ANY SEVERELY COMPACTED SECTIONS WILL REQUIRE TILLING OR DISKING TO PROVIDE AN ADEQUATE ROOTING ZONE, TO A MINIMUM DEPTH OF 12". THE SEEDBED MUST BE PREPARED TO ALLOW GOOD SOIL TO SEED CONTACT, WITH THE SOIL NOT TOO SOFT AND NOT TOO COMPACT. ADEQUATE SOIL MOISTURE MUST BE PRESENT TO ACCOMPLISH THIS. IF SURFACE IS POWDER DRY OR STICKY WET, POSTPONE OPERATIONS UNTIL MOISTURE CHANGES TO A FAVORABLE CONDITION. REMOVE ALL STONES AND OTHER DEBRIS FROM THE SURFACE THAT ARE GREATER THAN 4 INCHES, OR THAT WILL INTERFERE WITH FUTURE MOWING OR MAINTENANCE.

SOIL AMENDMENTS SHOULD BE INCORPORATED INTO THE UPPER 2 INCHES OF SOIL WHEN FEASIBLE. THE SOIL SHOULD BE TESTED TO DETERMINE THE AMOUNTS OF AMENDMENTS NEEDED. APPLY GROUND AGRICULTURAL LIMESTONE TO ATTAIN A PH OF 6.0 IN THE UPPER 2 INCHES OF SOIL. IF SOIL MUST BE FERTILIZED BEFORE ANY STONES AND OTHER DEBRIS FROM THE SURFACE THAT ARE GREATER THAN 4 INCHES, APPLY COMMERCIAL FERTILIZER AT 600 LBS. PER ACRE OF 5-5 -10 OR EQUIVALENT.

IF SOILS ARE SOFT, MECHANICAL MULCHING MAY NOT BE AVAILABLE DUE TO THE INEVITABLE RUTTING WITH MULCHING EQUIPMENT.

ANY UPLAND AREAS THAT ARE DISTURBED SHALL BE STABILIZED USING PERMANENT SEED MIX AS SPECIFIED IN THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (SDESC), UNLESS DIRECTED OTHERWISE IN ASSOCIATED PERMITTING DOCUMENTS.

**PROJECT CONSTRUCTION SEQUENCING NOTES**

THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCING OR CONSTRUCTION PHASING PLAN FOR OWNER APPROVAL THAT COMPLIES WITH THE PERMITTING REQUIREMENTS, THE PROJECT SWPPP, AND OTHER REQUIREMENTS AS IDENTIFIED BY LOCAL AND STATE AUTHORITIES. THE PLAN SHALL SHOW THAT ACTIVE LAND DISTURBANCE WILL BE LIMITED TO LESS THAN FIVE (5) CONTIGUOUS ACRES AND SHALL ADEQUATELY DISCUSS, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:

1. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES AS OUTLINED IN THE PROJECT SWPPP OR AS DIRECTED BY THE OWNER.
2. PRIOR TO STARTING ANY WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, NOTIFY CITY OFFICIALS OF CONSTRUCTION COMMENCEMENT, AND SUBMIT CONSTRUCTION TIMETABLE.
3. PRIOR TO COMMENCING ON-SITE EARTHWORK ACTIVITIES, THE CONTRACTOR SHALL ESTABLISH THE CONSTRUCTION WORKSPACE LIMITS AND IDENTIFY AND MARK SENSITIVE RESOURCES.
4. THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES (BMPs) IN ORDER TO PROTECT DOWN GRADIENT AREAS, WHERE APPROPRIATE, DIVERSION BMPs SHALL BE IMPLEMENTED TO DIRECT RUNOFF FROM UPGRADE AREAS AROUND THE PROJECT SITE.
5. ON-SITE CONSTRUCTION SEQUENCE SHALL START WITH THE MINIMUM AMOUNT OF CLEARING REQUIRED TO INSTALL EROSION CONTROL MEASURES. THIS INCLUDES, SILTATION FENCING, ANTI-TRACK PADS (STABILIZED CONSTRUCTION ENTRANCE), AND OTHER MEASURES NOTED ON THE PLAN. NO WORK SHALL TAKE PLACE UNTIL THE OWNER'S REPRESENTATIVE HAS INSPECTED AND APPROVED INSTALLED MEASURES.
6. AFTER PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES WITHIN THE CURRENT PHASE OF WORK ARE INSTALLED AND FUNCTIONING, THE CONTRACTOR SHALL OBTAIN OWNER APPROVAL BEFORE BEGINNING EARTHWORK IN THE SUBSEQUENT PHASE.
7. AFTER EROSION CONTROL MEASURES ARE INSTALLED THE TYPICAL SEQUENCE SHALL BE AS FOLLOWS:
  - a. REMOVE VEGETATION FROM PROPOSED DEVELOPMENT AREA. ALL STUMPS AND WOOD SHALL BE TAKEN OFF-SITE AND DISPOSED ACCORDINGLY.
  - b. REMOVE AND STOCKPILE TOPSOIL AFTER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. THE TOPSOIL SHALL BE SEEDDED IMMEDIATELY AFTER STOCKPILING IN ORDER TO STABILIZE THE SLOPE AND LIMIT SEDIMENT RUNOFF. STOCKPILED TOPSOIL SHALL BE SEEDDED AND MULCHED WHEN IT IS TO BE STORED MORE THAN 30 DAYS FROM TIME OF STOCKPILING. THE SITE CAN NOW BE REFORMED TO PROPOSED FINAL ELEVATIONS (LESS TOPSOIL DEPTH).
  - c. PROCEED WITH ALL WORK DEPICTED ON THE DEMOLITION PLAN, IF ANY.
  - d. PREPARE AND COMPACT SUBGRADE (IF AND AS DIRECTED) AND INSTALL DRAINAGE AND STORMWATER BMP'S IN ACCORDANCE WITH "GRADING AND STORMWATER MANAGEMENT PLAN".
  - e. EXCAVATE SOIL TO THE DEPTH NECESSARY TO CONSTRUCT GRADE ACCESS ROAD AND POROUS ASPHALT PAVEMENT. ALL REMOVED TOPSOIL SHALL BE UTILIZE ON SITE AS LOAM FOR GRASS AREAS. NO SOILS SHALL BE REMOVED FROM THE SUBJECT PROPERTY.
  - f. COMPLETE REMAINING GRADING REQUIRED AS SHOWN ON THE GRADING PLANS. INSTALL EROSION CONTROL MATTING ON ALL SLOPES OF 3H:1V OR GREATER (IF ANY), THEN SEED AND MULCH THE AREA.
  - g. INSTALL CONCRETE UTILITY PADS, FOOTINGS, PHOTOVOLTAIC PANELS, UTILITY POLES, FENCE AND GATES AND OTHER IMPROVEMENTS PER THE PLAN.
  - h. LOAM AND SEED FRONT YARD AND ALL REMAINING DISTURBED AREAS. UTILIZE EXISTING SITE SOIL WHERE POSSIBLE.
  - i. REMOVE ALL EROSION AND SEDIMENT STRUCTURES AFTER FINAL STABILIZATION AND ACCEPTANCE. IF STABILIZATION DOES NOT OCCUR (INCLUDING DUE TO SEASONAL CONDITIONS) IN ALL AREAS BEFORE CONTRACTOR HAS SATISFIED ALL OTHER CONDITIONS TO FINAL ACCEPTANCE, CONTRACTOR SHALL PROVIDE A PLAN (INCLUDING APPROPRIATE PERFORMANCE ASSURANCES) TO THE OWNER'S REPRESENTATIVE TO REMOVE SUCH EROSION CONTROL MEASURES AFTER STABILIZATION (AND ALLOWING CONTRACTOR TO ACHIEVE FINAL ACCEPTANCE), FOR ACCEPTANCE IN THE SOLE AND ABSOLUTE DISCRETION BY THE OWNER'S REPRESENTATIVE.
  - j. DURING THIS TIME ALL EROSION AND SEDIMENT STRUCTURES SHALL BE MAINTAINED IN PROPER WORKING ORDER. DISTURBED AREAS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY TAKE PLACE WHERE IMMEDIATELY REQUIRED TO FURTHER CONSTRUCTION. IT IS DESIRABLE FOR AN EROSION PREVENTION TO MINIMIZE DISTURBED AREAS. FINAL GRADING AND SEEDING SHALL TAKE PLACE AS SOON AS PRACTICAL.

**MULCH ANCHORING REQUIREMENTS**

ON SLOPES GREATER THEN 3 PERCENT, STRAW MULCH WILL BE FIRMLY ANCHORED INTO SOIL UTILIZING ONE OF THE FOLLOWING METHODS:

- CRIMPING WITH A STRAIGHT OR NOTCHED MULCH CRIMPING TOOL;
- TRACK WALKING WITH DEEP-CLEATED EQUIPMENT OPERATING UP AND DOWN THE SLOPE (MULCH CRIMPED PERPENDICULAR TO THE SLOPE) ON SLOPES <25 PERCENT;
- APPLICATION OF MULCH NETTING;
- APPLICATION OF 500 LB./ACRE OF WOOD FIBER MULCH OVER STRAW/HAY MULCH; AND
- COMMERCIALY AVAILABLE TACKIFIERS (EXCEPT WITHIN 100 FEET OF WATERBODIES OR WETLANDS).

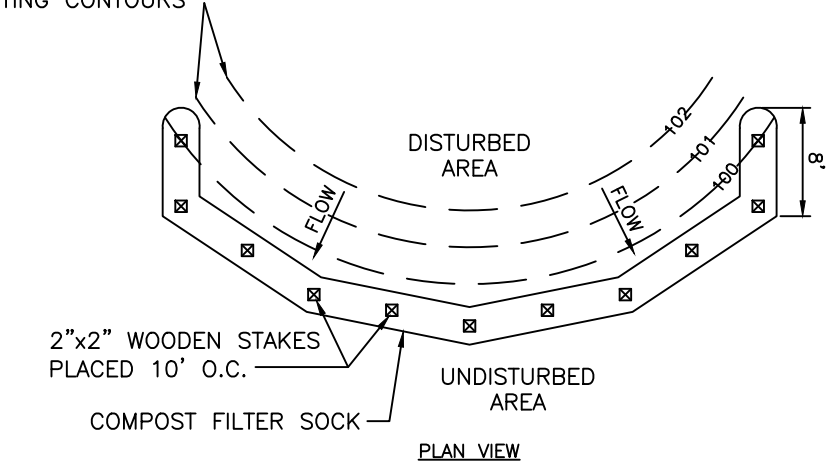
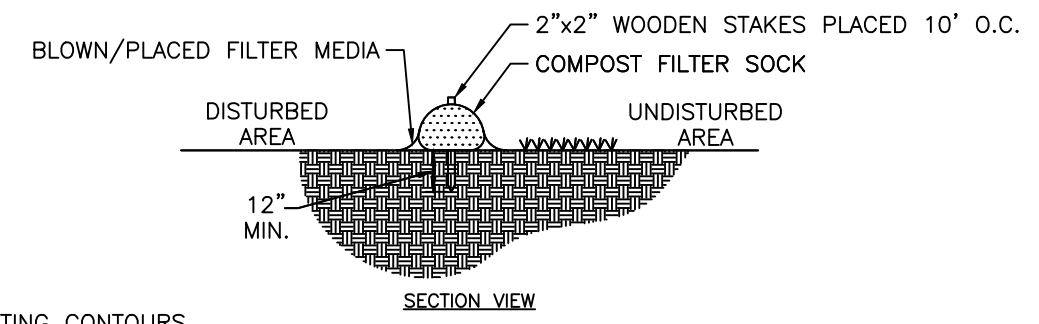
**CONSTRUCTION LITTER CONTROL**

DURING CONSTRUCTION, ALL WRAPPING, BOXES, SCRAPS OF BUILDING MATERIAL, AND OTHER LITTER ITEMS SHALL BE DISPOSED OF PROPERLY BY USE OF DUMPSTER OR CARTED AWAY. THE SITE SHALL BE INSPECTED AND CLEANED DAILY DURING CONSTRUCTION.

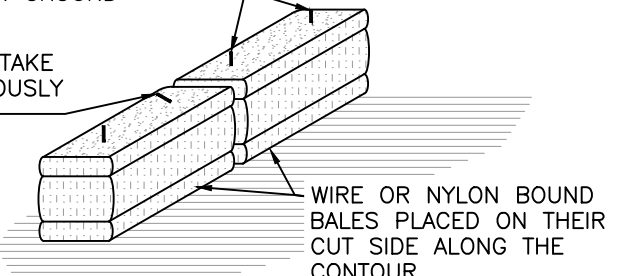
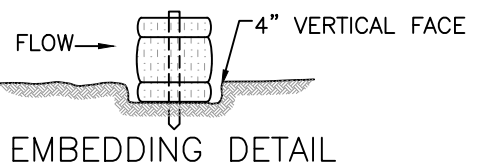
**PROTECTION OF POST-CONSTRUCTION STORMWATER BMPs**

POST-CONSTRUCTION STORMWATER BMPs DESIGNED FOR WATER QUALITY TREATMENT SHALL NOT BE USED AS A SEDIMENT CONTROL DEVICES DURING CONSTRUCTION PHASE OF THE PROJECT. WHEN POSSIBLE, POST CONSTRUCTION STORMWATER BMP INSTALLATION SHALL OCCUR AFTER FINAL STABILIZATION IS ACHIEVED IN UPGRADE AREAS.

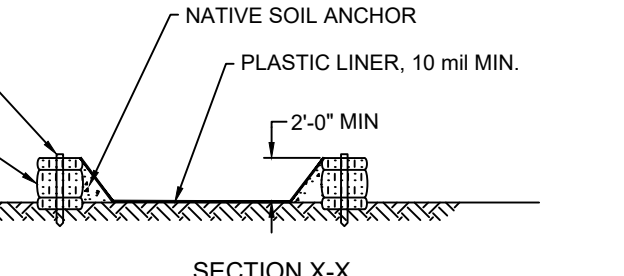
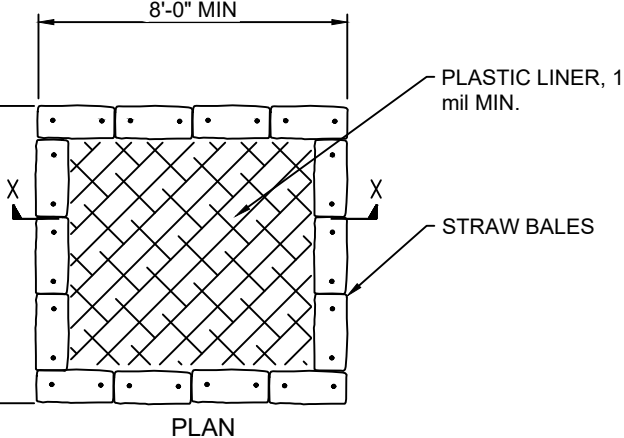
CONSTRUCTION PHASE STORMWATER SHALL BE DIVERTED AROUND POST-CONSTRUCTION STORMWATER QUALITY BMPs UNTIL FINAL STABILIZATION IS ACHIEVED IN UPGRADE AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF BMP FILTER MATERIAL IN THE EVENT CONSTRUCTION PHASE STORMWATER IS DISCHARGED TO CONSTRUCTED BMPs. NATURE AND DEGREE OF REPAIR SHALL BE AS DIRECTED BY THE OWNER.



**COMPOST FILTER SOCK**  
NOT TO SCALE

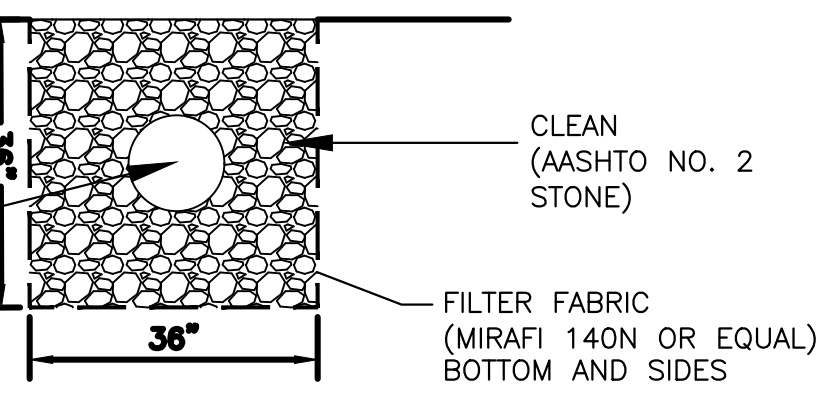


**STRAW BALE BARRIER**  
NOT TO SCALE

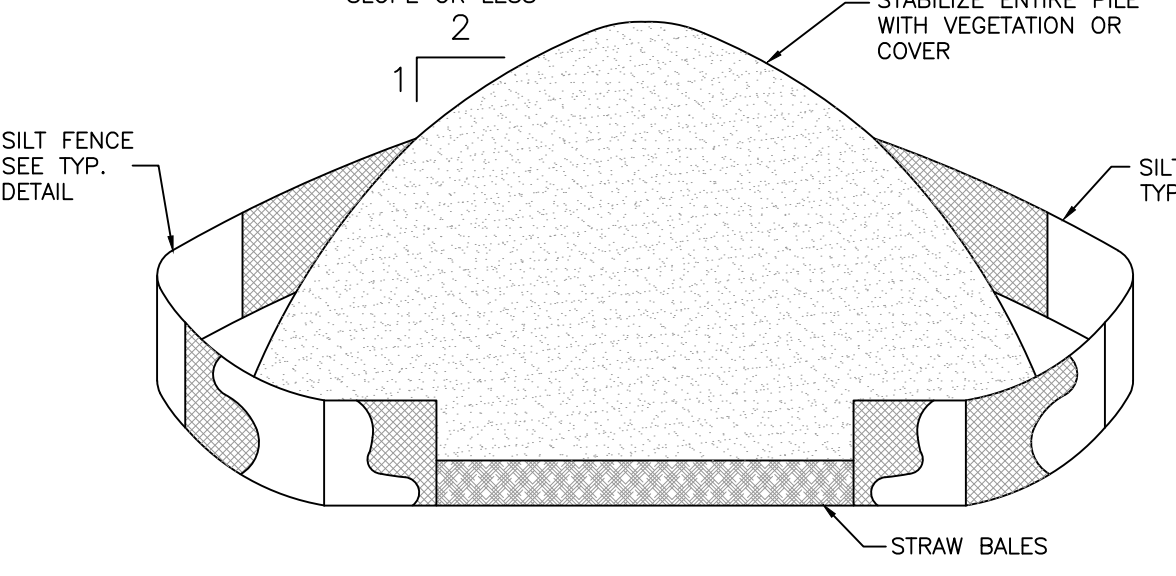


- NOTES:**
1. SUMP(S) SHALL BE LOCATED NEAR WORK SITES BUT SHALL BE PLACED AS FAR AWAY FROM WETLANDS, BUFFERS AND DRAINAGE SWALES AS PRACTICAL.
  2. SUMP(S) SHALL BE CLEANED AND WASTE CONCRETE REMOVED AND PROPERLY DISPOSED OF PERIODICALLY AND UPON COMPLETION OF WORK.
  3. A SIGN SHALL BE INSTALLED INDICATING "CONCRETE WASHOUT".

**CONCRETE WASHOUT AREA**  
NOT TO SCALE

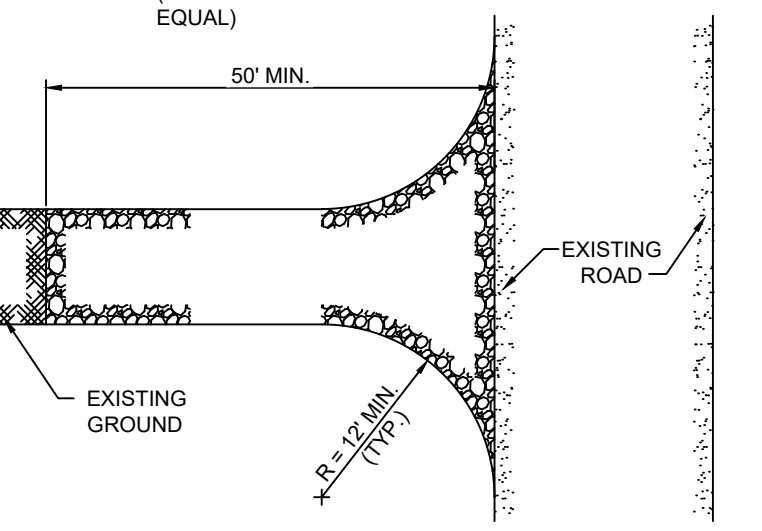
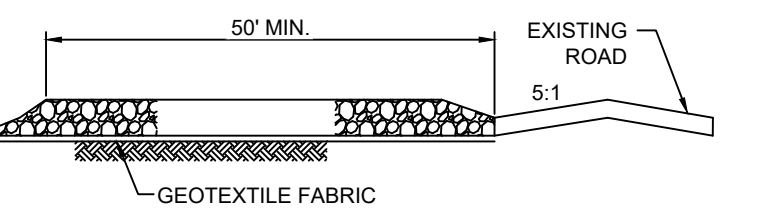


**STORMWATER DIAPHRAGM**  
NOT TO SCALE

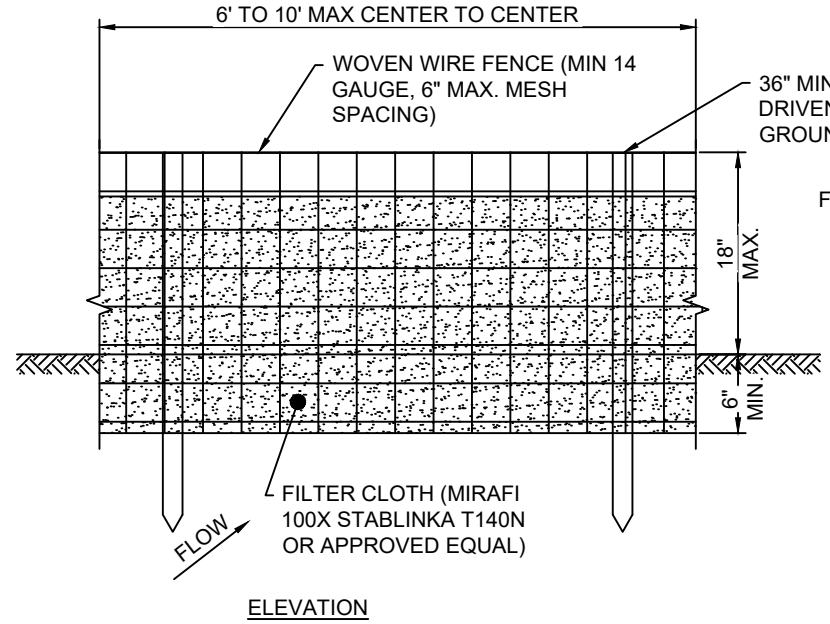


- INSTALLATION NOTES:**
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
  2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
  3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

**TYPICAL SOIL STOCKPILE**  
NOT TO SCALE



**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE

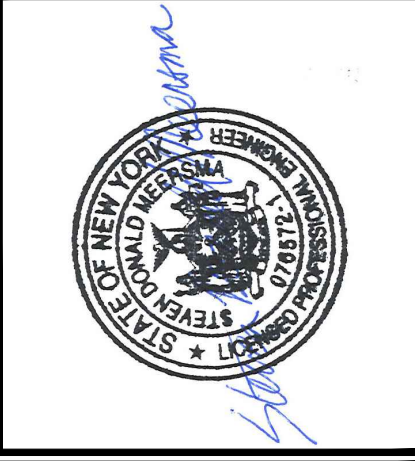


1. WOVEN WIRE FENCE SHALL BE FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BUILD-UP REACHES 1/2 THE HEIGHT OF THE FENCE.

- POSTS: STEEL "T" OR "U" TYPE OR 2" HARDWOOD.  
FENCE: WOVEN WIRE. 14G GA 6" MAX MESH OPENING.  
FILTER CLOTH: FILTER X, MIRAFI 100X. STABILINKA T140N OR APPROVED EQUAL.  
PREFABRICATED UNIT: ENVIROFENCE OR APPROVED EQUAL.

**SILT FENCE DETAILS**  
NOT TO SCALE

NOTE: THESE PLANS ARE ACCOMPANIED BY SUPPLEMENTAL DOCUMENTS. THESE DOCUMENTS ARE INTERRELATED AND ARE INTENDED TO BE USED TOGETHER. THESE DOCUMENTS ARE NOT TO BE USED FOR LOCAL APPROVAL PURPOSES ONLY.  
NOT FOR CONSTRUCTION



| Revisions: |       |
|------------|-------|
| No.        | Date: |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |
|            |       |

Drawn by: A. REXROAT

Checked by: S. MEERSMA

Approved by: C. DUNCAN

SCS DELL 014136 YORKTOWN, LLC  
DELL AVENUE SOLAR FARM  
FIXED-TILT GROUND MOUNT SOLAR ENERGY SYSTEM  
DELL AVENUE, YORKTOWN, NEW YORK 10514

Contract No: 431302

Scale: AS SHOWN

Date: AUGUST 30, 2022

Sheet: DETAIL SHEET 8

Drawing No: D-108

NOTE: UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.



**Parks, Recreation,  
and Historic Preservation**

**KATHY HOCHUL**  
Governor

**ERIK KULLESEID**  
Commissioner

June 28, 2022

Karen E Mack  
Principal Investigator - Operations Manager  
TRC  
1356 Washington St  
Suite A  
Bath, ME 04530

Re: DEC  
Dell Avenue Solar Farm / 3.7 MW / 16 of 59 acres  
200 Dell Ave, Yorktown, NY 10562  
21PR03179

Dear Karen E Mack:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

R. Daniel Mackay

Deputy Commissioner for Historic Preservation  
Division for Historic Preservation



Rohit T. Aggarwala  
Commissioner

Paul V. Rush, P.E.  
Deputy Commissioner  
[prush@dep.nyc.gov](mailto:prush@dep.nyc.gov)

465 Columbus Ave.  
Valhalla, New York 10595  
Tel. (845) 340-7800  
Fax (845) 334-7175

September 26, 2022

Mr. Steven Meersma, P.E.  
TRC Engineers, Inc.  
1430 Broadway, 10th Floor  
New York, NY 10018

Via Email: [smeersma@trccompanies.com](mailto:smeersma@trccompanies.com)

Re: Dell Avenue Solar Farm- SWPPP  
Dell Avenue  
Yorktown, NY-10514  
Tax Map # 70.11-1-16 & 70.15-1-2  
New Croton Reservoir Drainage Basin  
DEP Log# 2010-CNC-0479-SP.1

RECEIVED  
PLANNING DEPARTMENT

SEP 27 2022

TOWN OF YORKTOWN

Dear Mr. Meersma:

New York City Environmental Protection (DEP) has received the above-referenced application on September 7, 2022 for approval of a Stormwater Pollution Prevention Plan (SWPPP). Upon review of the submitted documentation and the associated drawings, DEP has determined that the application is *incomplete*. The following information is required before review of the application may commence:

**A. General**

1. A completed and signed DEP SWPPP application form must be provided.
2. The General Description must include a reference to the applicable section of the NYC DEP Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and Its Sources (herein referred to as Watershed Regulations) regarding regulated activities that requires this SWPPP. Please note that this project meets the following thresholds: Watershed Regulations Section 18-39(b) (4) (iv)&(x).
3. A list of all other permits/approvals required from DEP and other agencies, and the status of the applications must be provided DEP SWPPP approval should be added to the list of approvals required.
4. State Environmental Quality Review Act (SEQRA) Determination of Nonsignificance issued by the lead agency.

## **B. SWPPP Report**

1. The total disturbances involved and the total new impervious area resulting from the project must be added to the project description part of the SWPPP for clarity. Also, tabular information by sub-watershed, indicating the acres of impervious surface created by the proposed activities must be added to the report.
2. A downstream survey of watercourses, wetlands and/or drainage system that will receive stormwater discharges from the site must be provided in the narrative. For areas where the post-development runoff volume will change you must address the potential impacts of the changes on downstream hydrology. If no impacts are anticipated, the narrative must provide adequate documentation to support the conclusion
3. Identify any elements of the design that are not in conformance with the requirements of the General Permit GP-0-20-001, the reason for non-compliance, and information demonstrating that the alternative design is equivalent to the technical standard must be provided. If none exist, this must be stated in the report.
4. The anticipated project start and completion dates must be provided.
5. A discussion of design provisions included in the stormwater management facilities that address safety and maintenance needs must be provided.
6. Temporary and permanent soil stabilization plan must be explained in the report.
7. Demonstrate that and include in the report that maintenance of natural drainage systems and open channel drainage is provided to the extent practical.
8. Explain in the report that alteration of existing drainage areas and loss of recharge areas are minimized to the extent practical.
9. Describe on the minimum erosion and sediment control measures to be installed including a schedule that identifies timing and time frames that the practices should remain in place. Conversion of temporary erosion and sediment control facilities to permanent storm water management facilities and the techniques necessary for proper conversion be added.
10. A pre and post development coliform runoff quantitative analysis be provided for projects proposed in terminal reservoir basins of the Watershed Regulations.
11. Soil testing must be witnessed by DEP and the results and locations be added on the report. You may contact the undersigned to schedule soil testing onsite.



### **C. Plans**

1. Please provide a full size pre and post development drainage maps at a reasonable scale. It should clearly identify the limits of the Tc flow paths (used to calculate the curve numbers), Tc flow lengths for each of the drainage areas/ subcatchments, and locations of stormwater discharges. Include the Natural Resources Conservation Service (NRCS) soil survey boundaries and Hydrologic Soil Groups (HSG) on these maps.
2. An existing condition plan with existing land uses, types of vegetative cover, public/ permanent open space, public facilities, utility lines and easements, water supply wells, sewage treatment systems shall be added to the plan set.
3. The topographic contour lines must be labelled clearly on the plans.
4. Provide the address of the project site and tax map numbers on the respective plan set. Also, identify/label all the buffers on the site plan.
5. The boundaries of any 100-year flood plain (from United States Flood Emergency Management Area Maps) on the site must be provided along with any available 100-year flood elevations and floodway boundaries. If any, an evaluation of the post development impact stormwater runoff will have on identified floodplains or designated flood hazard areas in the community must be given in the narrative.
6. Include a table with separation distance to groundwater and bedrock from the existing grade and from the bottom of all the proposed stormwater practices and sediment basins/traps if any.
7. Plan view and cross-sectional designs of all stormwater management facilities and a description of materials to be used for construction of each of the proposed facilities.

### **D. Stormwater Management**

1. Demonstrate for each watershed that the treatment volume is the greater volume of runoff generated by the 1-year 24-hour storm or water quality volume (90% storm rainfall). For comparison use the one-year storm runoff modeled in the Hydrologic analysis and the 90% storm from section 4.2 of the New York State Stormwater Management Design Manual (NYS DM) for the water quality equation.

2. Calculations of the required runoff reduction volume (based on the 1-year, 24- hour storm in the EOH watershed) must be provided.

**E. Erosion and Sediment Control**

1. It is unclear from the ECP how much disturbance is anticipated and how many phases of construction are proposed. Based on the total disturbances proposed, all efforts must be made to satisfy the New York State Department of Environmental Conservation rule that " ... construction activity shall not disturb greater than five (5) acres of soil at any one time." DEP recommends phasing of construction and that each phase be broken down in such a way that the construction work is manageable and efficient.
2. Identify any temporary measures that will be converted to permanent measures after construction and the techniques necessary for proper conversion must be added to the sequence.
3. The areas where vegetation will be cleared and protected must be marked on the plan.

**F. Inspection & Maintenance**

1. Name, addresses and phone numbers of parties responsible for implementing the inspection and maintenance of the temporary and permanent stormwater management practices must be added to the narrative part of the report and plans.
2. A detailed inspection and maintenance schedule for each of the temporary and permanent stormwater management practices with specific frequency, intervals and criteria must be added in a tabular format on the plans.
3. Provide a draft legally binding and enforceable maintenance agreement that will be implemented to designate maintenance responsibilities of all on-site stormwater management practices.
  - a. A blank, fillable list of responsible parties and their contact information can be provided to be completed by the future owner.
  - b. The agreement should reference the long-term O&M requirements. It is recommended that the O&M schedule be presented in tabular format for ease of use.

The review of your application will not commence until the DEP receives the necessary information and determines that the application is complete. The DEP will notify you within 10 days of its receipt of the additional information requested above as to the completeness of your application. Please be advised that failure to submit information to the DEP or to follow DEP procedures is grounds to deny approval, pursuant to Section 18-23(b) (3).

If you have any questions or would like to discuss these comments, please do not hesitate to call me at (914) 749-5357 or [mzachariah@dep.nyc.gov](mailto:mzachariah@dep.nyc.gov).

Sincerely,

*Mariyam Zachariah*

Mariyam Zachariah  
Associate Project Manager II  
EOH Project Review Group  
Regulatory & Engineering Programs

Cc: Erick Alves de Sa, Owner/Operator, [erick.alvesdesa@solsystems.com](mailto:erick.alvesdesa@solsystems.com)  
Town of Yorktown Planning Board, [planning@yorktownny.org](mailto:planning@yorktownny.org)



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
3817 Luker Road  
Cortland, New York 13045



July 19, 2022

Mr. Matthew Regan  
Environmental Scientist  
TRC Companies, Inc.  
21 Griffin Rd. North  
Windsor, CT 06095

Dear Mr. Regan:

This letter responds to the September 17, 2021, submittal and July 19, 2022, electronic mail requesting U.S. Fish and Wildlife Service (Service) review of the Dell Ave Solar Project, which is a 3.6-megawatt ground-mounted solar power facility proposed along Dell Avenue in the Town of Yorktown, Westchester County, New York. The project consists of the installation of solar arrays on 9.1 acres, and includes wildlife-friendly perimeter fencing, transformers, inverters, overhead poles and lines, post-stormwater controls, and access roads.

We appreciate the opportunity to provide the following comments pertaining to threatened or endangered species under our jurisdiction pursuant to the Endangered Species Act (ESA)(87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). We understand that there is no federal nexus (*i.e.*, funding, permitting) associated with this project.

On behalf of SCS Dell 014136 Yorktown, LLC (Project Sponsor), TRC has determined that the proposed project will have no adverse impact on the federally listed Indiana bat (*Myotis sodalis*; Endangered). The Service agrees that “take”<sup>1</sup> of this species is not reasonably certain to occur given the description of the proposed tree removal, landscape setting, and conservation measures (*e.g.*, conducting tree removal between October 1 and March 31, when bats are in hibernation).

TRC also determined that the proposed project will have no adverse impact on the federally listed bog turtle (*Glyptemys muhlenbergii*; Threatened). Suitable habitat for this species is present within the project area; however, conservation measures, as described in the Bog Turtle Conservation Plan (dated July 2022), will be incorporated into project plans to avoid potential adverse impacts. The Service agrees that take of this species is not reasonably certain to occur.

---

<sup>1</sup> Take is defined in section 3 of the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct.

No further coordination with the Service is required pursuant to the ESA for this project. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of federally listed and proposed endangered and threatened species in New York is available for your information. Until the proposed project is complete, we recommend that you check our website regularly to ensure that listed species presence/absence information for the proposed project is current.\*

This letter does not exempt the project proponent from obtaining approvals or permits that may be required by State or Federal agencies. Further, this letter does not convey any authorization for take under the ESA or any other authorities. Any new information regarding the proposed project and its potential to impact listed species should be coordinated with both this office and with the New York State Department of Environmental Conservation, New Paltz Office.

Thank you for coordinating with us. If you require additional information or assistance, please contact Noelle Rayman-Metcalf at [noelle\\_rayman@fws.gov](mailto:noelle_rayman@fws.gov). Future correspondence with us on this project should reference project file 2022-0065100.

Sincerely,

Ian Drew  
Acting Field Supervisor

\*Additional information referred to above may be found on our website at:  
[New York Project Reviews | U.S. Fish & Wildlife Service \(fws.gov\)](#)

cc: NYSDEC, New Paltz, NY (Env. Permits, Wildlife)



**Town of Yorktown** [www.yorktownny.org](http://www.yorktownny.org)

RECEIVED  
PLANNING DEPARTMENT

AUG 2 - 2022

TOWN OF YORKTOWN

## Building Department

Town Hall, 363 Underhill Avenue, Yorktown Heights, NY 10598  
Tel. (914) 962-5722 ext.254 Fax (914) 962-1731

### MEMORANDUM

**Edward Kolisz, Assistant Building Inspector**

Telephone (914) 962 5722 ext. 254

Email: [ekolisz@yorktownny.org](mailto:ekolisz@yorktownny.org)

Office hours: Weekdays 9:00-10:00 a.m., 3:30-5:00 p.m.

To: Planning Board, Town of Yorktown  
From: Edward Kolisz, Assistant Building & Fire Inspector  
Re: Dell Avenue Solar Farm Proposal  
Date: July 25, 2022

The Bureau of Fire Prevention meet to discuss the plans for the proposed solar farm on Dell Avenue. We were able to meet virtually with the applicant and had a productive discussion. Overall, the Bureau has no major concerns with the June 14<sup>th</sup>, 2022 site plan that was provided to us. We do have the following comments on the project:

- Dell Avenue is currently in poor condition. After the construction has been completed it is obvious that the street will be in even worse condition. The Bureau would like to see Dell Avenue improved upon completion of the project.
- The operator of the solar farm installation shall provide training to the local fire department and provide an electronic version of the training program to the fire department so they can train personnel in the future.
- The Bureau would like to see a maintenance plan that includes grass and brush cutting AND snow removal from the access roads and gates in the event of a major snowfall.
- Compliant signage shall be provided throughout the installation including emergency contact information which shall be displayed on every access gate.
- An emergency response plan shall be provided to the Fire Inspector and the fire department for approval.

Please contact me with any questions.

**From:** Brian Rosenblatt <[brianrosenblatt@gmail.com](mailto:brianrosenblatt@gmail.com)>  
**Sent:** Thursday, September 22, 2022 9:18 AM  
**To:** Robyn Steinberg <[rsteinberg@yorktownny.org](mailto:rsteinberg@yorktownny.org)>  
**Subject:** Dell Avenue Solar Project

September 22, 2022

*VIA EMAIL*

Town of Yorktown Planning Board  
1974 Commerce St  
Yorktown Heights, NY 10598

**RE: Dell Avenue Solar Project**

Dear Planning Board Members:

We live at 36 Random Farms Circle, Chappaqua, New York and are writing to you as concerned owners of residential property adjacent to the proposed large-scale solar energy system and related developments known as the Dell Avenue Solar Project (the "Project").

The Town Code requires that "Large-scale solar energy systems shall be fully screened from adjacent residential properties." We have reviewed all of the materials submitted to the Planning Board that are available online on the Planning Board's website, including the cursory line of sight analysis which was limited to only Dell Avenue and a single home on Hog Hill Road, and appears to have been conducted during warmer months when trees are full of leaves.

Based on a review of the materials, our knowledge of the topography, and our experience living in our home since 2017, the Project and its large-scale solar energy system would, as currently proposed, be visible from our home and not "fully screened" from our residential property, in direct contravention of the Town Code.

We respectfully request that the Planning Board require a comprehensive line of sight analysis / Viewshed Impact Assessment be conducted during the winter months (when the trees have no leaves) from all adjacent residential properties, including from our residential property, and require that the plans for the Project include full screening, with mature landscaping, from adjacent residential properties, in accordance with the Town Code, so that the Project is fully screened from inception of the Project's development.

Please confirm receipt of this email. You can reach us at 818.590.1866 or [brianrosenblatt@gmail.com](mailto:brianrosenblatt@gmail.com).

Thank you in advance.

Respectfully yours,

Brian & Randi Rosenblatt

RECEIVED  
PLANNING DEPARTMENT  
SEP 23 2022  
TOWN OF YORKTOWN

SEP 30 2022

**Nancy Calicchia**

**From:** Clifford Davis <cdavis@clifforddavis.com>  
**Sent:** Friday, September 30, 2022 9:14 AM  
**To:** John Tegeder; Nancy Calicchia; Robyn Steinberg  
**Cc:** esrcool; george@georgejanes.com; Jody Cross; David Steinmetz  
**Subject:** Dell Avenue Solar Farm  
**Attachments:** scan\_20220927142958.pdf

TOWN OF YORKTOWN

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi John, I am counsel for the Riverside Trust, 71 Hog Hill Road, the adjacent residential neighbor to the Dell Avenue Solar Farm application. I attach hereto for your review and that of the Planning Board our proposed protocol for a visual impact assessment regarding this project. We previously provided this protocol to Applicant's counsel. Please distribute to the Planning Board and all staff. Respectfully, Clifford L. Davis

Clifford L. Davis, Esq.  
202 Mamaroneck Avenue  
Third Floor  
White Plains, NY 10601  
Tel. 914-761-1003  
Fax 914-997-6529  
cdavis@clifforddavis.com  
<http://www.clifforddavis.com/>

IRS Circular 230 Disclosure: To ensure compliance with requirements imposed by the IRS, we inform you that any tax advice contained in this communication (including any attachments) was not intended or written to be used, and cannot be used, for the purpose of (i) avoiding any tax penalty or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

Privileged Information: This message, together with any attachments, is intended only for the use of the individual or entity to which it is addressed and may contain information that is legally privileged, confidential and/or exempt from disclosure. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution, or copying of this message, or any attachment, is strictly prohibited. If you have received this message in error, please delete this message, along with any attachments, from your computer. Thank you.



GEORGE M.  
JANES &  
ASSOCIATES

250 EAST 87TH STREET  
NEW YORK, NY 10128

[www.georgejanes.com](http://www.georgejanes.com)

T: 646.652.6498  
E: [george@georgejanes.com](mailto:george@georgejanes.com)

September 27, 2022

Clifford L. Davis, Esq.  
202 Mamaroneck Avenue  
Third Floor  
White Plains, NY 10601

RECEIVED  
PLANNING DEPARTMENT

SEP 30 2022

TOWN OF YORKTOWN

RE: Assessing the visual impacts of the  
proposed solar farm on Dell Avenue in  
Yorktown, New York

Dear Mr. Davis:

You have asked me to provide my thoughts regarding the preparation of a visual impact assessment (VIA) for the proposed solar farm on Dell Avenue in the Town of Yorktown. We are both involved in this project because of an abutting residential neighbor's concerns at 71 Hog Hill Road.

I have been a member of the American Institute of Certified Planners for the past 24 years. My office has produced or reviewed hundreds of photosimulations and/or VIAs and produced primers that instruct users on how to create technical materials that go into VIAs. More on my qualifications and projects can be found on my website, [www.georgejanes.com](http://www.georgejanes.com).

### **The proposal**

The applicant is proposing to construct a solar panel array on Dell Avenue in the Town of Yorktown on an irregularly shaped parcel of about 62.33 acres [the "Project."] According to the applicant's site plan, much of the eastern side of the parcel is NYSDEC wetland and the parcel has a small stream. The panel array is proposed in two parts: a smaller northern portion and a larger southern portion. The panels, related equipment and access road are proposed to be located outside the wetland, wetland buffer and stream buffer areas, but inside the area identified as "Protected Woodland" by the Town. A total of about 14 acres will be disturbed, including deforesting about 12.3 acres of Protected Woodland.

Because the area is forested, views to the project will be filtered through trees. The forest in and around this area can be characterized as mature without substantial undergrowth, which means that the existing forest may not provide an effective visual screen to viewers who are located within the same forested area looking toward the Project. In other words, while there will be tree trunks and branches between the viewer and the Project, there may not be enough to fully screen views from the abutting residential property at 71 Hog Hill Road, especially in leaf-off conditions. Generally, the further the distance, the less impact there will be. However, the effectiveness of the forest as a screen is highly

dependent on a number of factors including topography, the number and volume of trees at specific locations, as well as the distance from the panels.

### *The Town's code*

Solar panels<sup>1</sup> are designated as permitted special uses, subject to the conditions under Article VII, and specifically Section 300-81.4 of the Town Code. The code is unusually strict regarding the visibility of such uses. It requires that the project be “fully screened” from adjacent residential properties, streets or roads on which it fronts, or from any other views where the Planning Board determines screening is necessary. I note that the code does not require screening from residential buildings but instead it indicates adjacent residential properties. Further, it uses the adverb “fully” to indicate the exacting extent of screening required. The only reasonable interpretation is that the solar panels must not be seen from neighboring residential properties.

In contrast, a much lower standard applies to adjacent commercial properties, which only requires that views be minimized to the extent reasonably practicable. This lower standard does not apply to the adjacent residential neighbor. Since the proposed panels are not tall, screening can likely be achieved with a berm, fence and/or grading. The standard the Town adopted for residential properties is high, but achievable. Since the site is so large, however, with several potential receptors, assessing the visual impacts, designing a mitigation program, and demonstrating its effectiveness will be complicated and not typical. My recommendation is to conduct a complete Visual Impact Assessment that will meet both the requirements of SEQR and the Town's code all at once for the ease of the applicant and the approving agency.

### **A Visual Impact Assessment for Dell Avenue Solar Farm**

The recommended scope of a VIA for this project consists of the following five parts:<sup>2</sup>

1. Visibility analysis & viewpoint selection
2. Photography
3. Photosimulation and Analysis
4. Mitigation program
5. Alternatives

---

<sup>1</sup> Solar panels are large-scale energy systems, as defined in the Town's code.

<sup>2</sup> This scope draws on guidance from New York State's Department of Environmental Conservation's (NYSDEC) guidance document: Assessing and Mitigating Visual and Aesthetic Impacts, which can be found here:

[https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/visualpolicydep002.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/visualpolicydep002.pdf)

### 1. Visibility analysis & viewpoint selection

The first step in assessing visual impacts is determining from where the Project will be visible. This is done systematically with a viewshed map,<sup>3</sup> which shows areas within a designated radius<sup>4</sup> that have theoretical visibility to the action. The applicant should inventory and identify all listed visual resources within an appropriate radius and identify which resources have theoretical visibility to the proposed action. Listed resources are found in the NYSDEC guidance document referenced in the first footnote.

Viewpoints selected for analysis should not be limited to listed resources but should also include visual resources that are important to the local community. These could be views that add to the community character of the area, scenic vistas or community gateways. Viewpoints of local concern can include views from roads, local parks, public buildings, and so on. At the July 6, 2022 meeting, the Town's Conservation Board identified Turkey Mountain and Teatown Hill as visual resources that need to be evaluated. The applicant should consult with the Town on other resources that should be evaluated. This consultation is best done with the viewshed map available for reference.

#### *Viewpoints on private property*

Because the Town's code requires full screening to adjacent residential properties, the VIA needs to assess visual impacts on private property. This is not typical for VIAs done for SEQRA but is a requirement for this project because of the strict language of the Town's code. Abutting residential property owners and others who have potential visibility to the project site will need to be contacted so that they can grant permission to the applicant to access their property to assess visibility and take photographs from viewpoints that would be impacted. Viewpoints selected for analysis should always show worst-case, or best visibility, conditions to the project being studied.

I recommend that a representative of the neighbor at 71 Hog Hollow Road be on-site during the viewpoint photography. Not only should the applicant's technician(s) be accompanied while on private property, but there should be another professional with them to evaluate from where the action is most visible and assist with viewpoint selection. The residential property abuts the subject property for about 2,310 feet and the neighbor is at or near the property line on a daily basis. I expect that there should be at least three viewpoints studied, but considering the long property line there could very well be more viewpoints to study if the views warrant them. There is no way to predetermine the number and location of the viewpoints to demonstrate that the project is or is not fully

---

<sup>3</sup> A detailed description on how to perform a viewshed mapping can be found here:

<http://www.georgejanes.com/PDF/TechnicalMethods/TechnicalMethods001-Viewsheds.pdf>

<sup>4</sup> The NYSDEC generically recommends a five-mile radius but this guidance is based on very large projects. Smaller projects require smaller study areas. A three-mile radius is likely appropriate for a project like this.

screened as proposed. That can only be done on-site, during leaf-off conditions with the references in place. To ensure that the viewpoints taken from private property accurately and completely demonstrate the reasonable worst-case visual impact of the project, as well as demonstrate fully screening, these decisions should be made with the agreement of a competent representative of the neighbor's interest.

After the viewpoints for analysis are identified and agreed upon, the visual impact of the proposed project on the viewpoints selected for analysis should be demonstrated through photography showing existing conditions and photosimulation showing proposed conditions.<sup>5</sup>

## 2. Photography

Best practices dictate that the existing conditions photographs should depict reasonable worst-case visibility conditions, which are leaf-off, no snow conditions when atmospheric conditions are clear. The analysis may also optionally include photographs taken at other times of year, if they add to the understanding of visual impacts. Generally, photographs should be taken, near midday, when shadows are short, although other times of day are appropriate if a viewpoint suffers from glare or unusual reflection around midday.

### *Camera & Lenses*

Photographs are typically taken with a normal lens, which is a 50mm lens. A normal lens produces a photograph that replicates the distance relationships of the human eye and is usually the ideal lens for a photograph used for photosimulation. There are times, however, when a photograph can and should use a different lens. For example, for viewpoints that are very close to the action, a wide-angle lens may be used if a 50mm lens cannot capture the entire action within the frame of the photograph. For long distance views, a telephoto lens may be used to simulate the acuity of the human eye to focus on objects far in the distance. If the lens deviates from a 50mm perspective, the applicant should explain why and the reason should be apparent. There are few reasons, for instance, to use a wide-angle lens on a long-distance viewpoint.

A full frame digital camera is the ideal camera for capturing photographs used in visual simulation. Full frame digital cameras have a sensor that matches the size of 35mm film, which means the lens conventions between traditional film

---

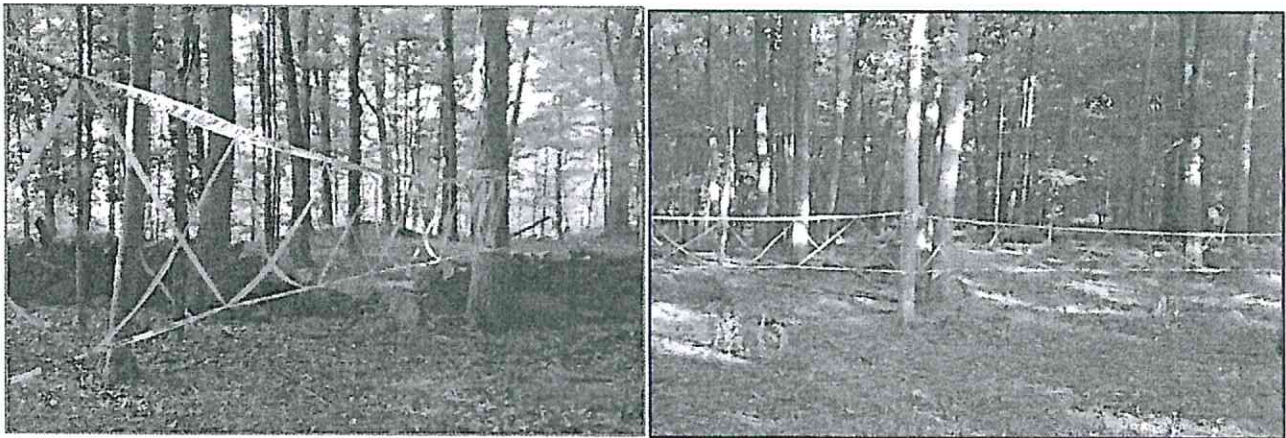
<sup>5</sup> The applicant has produced three line-of-sight profiles from the abutting property. Line-of-sight profiles are a form of visibility analysis that is often included in a VIA. These line-of-sight profiles demonstrate that there will likely be visibility from points on the abutting residential property, demonstrating the need for photosimulations to show what the actual impact will be. To my knowledge, the applicant has not produced line-of-sight profiles for the surrounding area. The applicant may wish to perform line-of-sight profiles for some of the longer distant views, especially if they show no potential visibility. But if the applicant is performing photosimulations, they provide more information and are more easily understood by layperson and professional alike, making the line-of-sight profile largely redundant.

cameras and full frame cameras are transparent. Other SLR digital cameras are acceptable<sup>6</sup> but care must be taken since their lens conventions vary by manufacturer. The photograph should be translated to a full frame/film equivalency to understand the image captured. Panoramic lenses or panoramic stitching should only be used if there is no other way to capture the entire action in a view. In other words, a wide-angle lens is preferable to a panoramic image if it can be made wide enough to capture the entire action. All photographs must identify the lens used and the technical documentation should discuss lens selection and its impact, if a lens other than 50mm lens is used.

### *References*

References are objects that are placed into the photograph of a known size and location. References are used to help assess visibility in the creation of photosimulations, but also when selecting viewpoints, as they assist the technician in selecting viewpoints that have visibility to the action. Because this location is in a forest, and many viewpoints will be assessed through a forest, appropriate references are critical for an accurate VIA.

In August, the applicant provided photographs of their flagging of the solar array's perimeter. Examples of those photographs are shown below:



*Figures 1 and 2 – Overview of the visual flagging for the solar array*

While the above would work for the vast majority of VIAs, considering the nature of this location, I would recommend different references. The references they used are likely not prominent enough for this mature forest. Tree trunks, branches, and the longer distances involved in some of the viewpoints may create the impression that some viewpoints do not have visibility, when they actually do. Although bright colored materials are used, the thin material will be difficult to see when marking the area of disturbance on viewpoint photographs. I would

---

<sup>6</sup> Cameras in cellular phones are not recommended.

recommend a more opaque material, like a brightly colored silt fence, polyethylene sheeting or similar material.

Further, the flags only show the perimeter of the proposed solar array, creating a linear reference. Because there is considerable topography in this area, a material laid on the surface, like brightly colored tarps, may help identify areas beyond the perimeter in assessing visibility. The bright color will highlight the surface on pictures and will help as an additional reference point when performing photomontages. Corner locations of the tarps can be recorded as coordinates and can be marked in the 3D terrain file in computer software to match the photograph. Having reference points with different distances to the camera location would help the photomontage process.

I acknowledge that this work is difficult in forested areas, as the existing trees can create many problems. When existing trees obstruct the accurate locating of references, they should be moved to the nearest reasonable location and their difference from the actual proposal should be accounted for when making photosimulations. Finally, many decisions regarding references are best made by the technician doing the work. If there is another method or means of setting references that the applicant would prefer, they should be discussed and the reasons for the decisions that were made explained in the technical documentation. The point of the analysis is to demonstrate the visual impacts of the Project, and if there is a better and/or easier way of getting the information to do that, it should be discussed.

### **3. Photosimulation<sup>7</sup>**

Photosimulations that demonstrate both the visibility and the visual impact of the proposed Project should be constructed from selected viewpoints. The total number studied depends on the action's visibility to the surrounding neighborhood and the number of visual resources with potential visibility.

To meet standards regarding accuracy and verifiability, photosimulations must be performed as "verifiable digital photomontages." Verifiable digital photomontage is a technique that merges an existing conditions photograph with an elevated, 3D computer model of the proposed action. It is verifiable since the computer model of the action can be measured and its placement in the terrain checked for accuracy. Verifiable simulations are also auditable by third parties to confirm their accuracy. A key part of making a photosimulation verifiable is the use of references to ensure that the computer camera used to render the 3D computer model matches the camera used to take the photograph.

---

<sup>7</sup> An instruction manual with much more detail on how to produce photosimulations can be found here: <http://www.georgejanes.com/PDF/TechnicalMethods/TechnicalMethods002-Photosimulation.pdf>

The proposed Project clears a wooded site from a larger forest and some viewpoints will be studied from within that forest. This site condition means that technical aspects of the photosimulations will be very difficult and the preparer will have to inventory trees to understand which trees in the existing conditions photograph will stay and which trees will be removed in each of the viewpoints. The technician is reminded that best practices dictate if there is any doubt whether a tree or branch should be removed or not, it should be removed, as the simulation should err toward showing more visibility, not less. References and assumptions used should be discussed in the technical documentation.

#### *Representation of the action*

The action is not only the proposed panels, but also all vegetation removal, planned landscaping and physical changes to the land, including driveways, grading, equipment sheds and fences. All components of the action should be shown in photosimulations and should be represented using photorealistic textures that accurately depict the proposed color and materials. The lighting in the simulations should be set to the same time, date, location, and conditions of the existing conditions photographs. Landscaping should be actual landscaping proposed at the time of planting.

#### *Presentation*

The existing conditions photographs and photosimulations should be available digitally, formatted in such a way that a viewer can flip back and forth between existing conditions to proposed conditions with a single keystroke so that they can see the impact of the proposed project on the view. There should be a key map demonstrating the location of each viewpoint. Printed materials must show existing conditions photographs and accompanying photosimulations printed in color, one image per letter-sized page, and should include information on the location, lens, and date/time the photo was taken. The photosimulations should be accompanied by technical documentation that details how they were produced.

#### **4. Analysis & mitigation program**

While photosimulations speak for themselves, they should nevertheless be accompanied by a narrative that discusses the existing landscape character to establish baseline visual conditions from which change is evaluated. The action's impact on visual resources should be analyzed using generally accepted criteria to evaluate impacts on visual resources (e.g. displacement, form, line, color, texture, scale/spatial dominance). If significant visual impacts are disclosed, a mitigation program should be discussed.

NYSDEC advises the following mitigation measures for consideration. Not all are appropriate for this proposal, but each is discussed briefly below:

1) Professional Design and Siting refers to visual elements related to how the project is designed and where it is placed on the land. Components of this mitigation include:

*Screening:* Screens can be made with vegetation, berms or walls. Care needs to be taken with screens, however, as they bring their own visual impacts. Vegetative screens must be appropriately sized to be an effective mitigation measure.

*Relocation:* Is there another site where the activity can be moved that will have smaller visual impacts? This could mean just moving the project further from the most impacted viewpoints on the same site, as distance mitigates visual impacts.

*Camouflage/Disguise:* Can actions be disguised to look like objects that are not visually discordant?

*Low profile:* Can the discordant objects be lower or sited at lower elevations so they are less visible? This can sometimes be done through grading.

*Downsizing:* Can the project be made smaller so that it is less impactful?

*Alternative Technologies:* Is there another technology that can be less impactful? Are there other types or sizes of panels that have a smaller impact, or would allow the project to be downsized, or achieve a lower profile while still allowing the applicant to achieve their goals?

*Non-specular materials:* Specular refers to shiny objects that reflect sunlight and create glare. Solar panels are designed to absorb light and glare, and so reflected light is normally not an issue for the panels, but it is possible that there can be glare from accompanying equipment, frames and supports.

*Lighting:* Nighttime lighting can often create impacts to the character of an area. Will the project be lit at night? If so, will lights be designed to minimize light pollution?

2) Maintenance & Decommissioning: This element refers to both the primary action and its mitigation measures. Regarding the primary action, technologies and energy needs change. Is there a plan to remove the panels if they are no longer being used? Will they be repaired or replaced should they be damaged or vandalized?

Regarding mitigation, if vegetative screens are being used as a mitigation measure, how will they be maintained? They grow and change over time and their effectiveness will change as the screen changes. How will vegetation be maintained so that it continues to function as a screen as it ages?



3) **Offsets:** Offsets refer to actions undertaken by the applicant to offset visual impacts the project produces. It is unlikely that an offset will mitigate a visual impact of this solar farm.

To be clear, the effectiveness of a mitigation program must be demonstrated with evidence and not simply asserted. Photosimulation should be used not only to demonstrate visual impacts (or lack thereof), but also the effectiveness of the mitigation program that is proposed. If vegetative screens are involved, they should be evaluated at their size at time of planting so that decisions are made using reasonable worst-case conditions.

### 5. Alternatives

Simulations of alternatives should use the same viewpoints and be performed at the same level of detail as the proposed action so that an apples-to-apples comparison can be made. For solar farms, a common alternative is relocating the panels to locations that have lower impacts and/or studying the effectiveness of different types of screens as mitigation measures.

### Close

In my opinion, a full VIA should be a part of the application to demonstrate that the project complies with the Town's Code. The VIA should also be complete enough to disclose the project's visual impacts for SEQR purposes.

This VIA will be difficult to perform and evaluate. The Town should have professional assistance that can competently review the VIA for accuracy and completeness. To make an informed decision on siting and the effectiveness of the mitigation, the viewshed analysis and photosimulations must be accurate, and the only way to ensure their accuracy is to have an independent expert review the materials and verify their accuracy. Further, an expert can help the Town interpret the visual impacts of the project and determine if the project meets the strict standards set by the Town's code. The Town should establish an applicant-funded escrow account for the review of this application and make use of an expert to help in the review.

Should you, the applicant or the Town have any questions, please feel free to contact me at [george@georgejanes.com](mailto:george@georgejanes.com) or at 917-612-7478.

Sincerely,



George M. Janes, AICP  
George M. Janes & Associates

Ronald Yaskovic  
522 Saw Mill River Road  
Yonkers, New York 10701

June , 2022

Hon. Richard Fon, Chairman  
And Members of the Planning Board  
Town of Yorktown  
363 Underhill Avenue  
Yorktown Heights, NY 10598

*Re: Dell Ave. Solar Farm  
Application for Site Plan and Special Use Permit  
Tax Map Parcel 70.15-1-2 ("Subject Property")*

Dear Chairman Fon and members of the Planning Board:

I am the owner of the 1.65-acre parcel on Dell Avenue that is designated as Tax Map Parcel 70.15-1-1. My property is directly adjacent on three sides to the above-referenced Subject Property.

I write in support of the pending application for Site Plan Approval and a Special Use Permit to develop the Subject Property as a solar farm ("Solar Project"). It is my opinion that the Subject Property is an appropriate location for this type of environmentally sustainable use. Although I was not opposed to the prior residential development proposal for the Subject Property, I believe that the Solar Project will have fewer impacts on the surrounding area.

Very truly yours,



Ronald Yaskovic