I. Construction phase activities

A. In the response to Question IA of RFI #1, Northern Bobwhite states that a detailed description of construction activities cannot be provided at this time.

Given that response, HE must assume a "worst-case" scenario, based on information provided in the Application, unless otherwise indicated in response to this inquiry. For example, a "worst-case" scenario will assume a full 18-month construction period (40-week peak noise period) and higher-end estimates of traffic, noise and dust levels associated with construction activities over that duration.

As a result of the assumption of a "worst-case" scenario, HE's analysis of impacts may reflect greater impact levels (for traffic, noise, dust) than would actually occur once a specific construction plan is developed. However, in the absence of detailed descriptions from Northern Bobwhite, HE must avoid understating project impacts to the Siting Board and PSC staff.1 Estimated impacts provide the foundation for mitigation recommendations. Thus, it will be mutually beneficial to reconsider the response to Question IA from RFI #1.

1. **Please provide any additional information about the schedule of work to be performed throughout construction activities. Information regarding the sequencing of work to be done throughout the site would be helpful.**

   Response:

   A Project-specific construction schedule will not be completed until the engineering, procurement, and construction ("EPC") contractor is selected. The schedule will be influenced by many factors including labor availability, required commercial operations date, final system design, technology selection, weather, and site conditions.

   Despite these unknowns, Bobwhite has prepared a preliminary engineering, procurement and construction schedule based on its affiliates' experience with other similarly sized solar projects. The preliminary weekly schedule is included as Exhibit A and the preliminary monthly schedule is included as Exhibit B. Bobwhite currently expects site construction activities to take approximately 37 weeks of active work, with an additional 13 weeks of contingency to account for weather delays and other unknown factors.

   Bobwhite has also prepared a detailed description of construction activities and sequencing. This summary of the anticipated construction process is included as Exhibit C

Response to footnote:

In response to the footnote to this Question, Bobwhite clarifies that the construction workforce will be distributed throughout the site, and at no point would the peak number of workers congregate in any one section of the site or utilize any one access point, except the main parking area and the primary access point. As an example, the access point on Horan Lane will be used for component deliveries and worker access for approximately 8-10MWs of solar construction, which is approximately 10% of the Project's total size. Bobwhite anticipates that a commensurate proportion of the on-site workforce and corresponding equipment would be deployed to this section during peak construction. Put another way, if there are 250 workers across the Bobwhite site at peak, approximately 10% or 25 workers would be anticipated to utilize the access point on Horan Lane. Thus, the expected traffic volume at that access point would be commensurate with approximately 10% of the anticipated peak traffic.

Many sections of the Project can be accessed from multiple access points and Bobwhite will work with the EPC to ensure site access and component delivery plans take into account the capacity of local roads. Having multiple access points will help to minimize traffic impacts on any one road. In addition, Bobwhite will implement measures to reduce the number of vehicle trips on public roads by implementing carpooling or ride sharing (i.e. passenger vans or mini buses) from the main laydown area, and by traversing internal access roads to the extent possible.

With these mitigation measures in place, Bobwhite expects that there will be minimal traffic impacts from the Project on local roads. With the exception of the main access point to the laydown area, most access points throughout the Project would be used sparingly by a small construction crew, who would carpool or travel together by van/small bus, and for delivery of equipment and materials.

Witness: Scott Wentzell

B. The construction worker numbers provided in various places appear to be inconsistent at best. The Applicant's response to RFI #1 Question V-A-12 indicates commuter vehicles will carry an average of 2 workers per vehicle. After applying 2 workers per vehicle to the data included in Table 3 of Appendix E ("Traffic Assessment"), HE concludes there would be 500 workers at the Project site during average construction activities and 700 workers at the Project site during peak construction activities. This appears to be inconsistent with the Traffic Assessment included in the SAR, which states "an anticipated 100 local workers and 150 non-local workers will commute to the site each day." And all these construction worker numbers conflict with the economic impact section numbers of a 250 average workforce and a 350 peak workforce. And 400 FTE's identified in that section relate to none of these figures. We will need consistency, clarification and reasonableness with construction workforce figures, perhaps through an oral explanation via a virtual meeting to be scheduled with Siting Board and the Applicant's representatives.

Response:

Bobwhite initially utilized an estimate of 400 FTEs for the Project based on industry numbers for sites of a smaller size that were subsequently scaled up. This initial estimate included onsite workers, transportation personnel, off-site support and other workers associated with the Project as subcontractors that may not be on-site during construction but are part of the Project's construction cost and plan. As such, the total number of estimated FTEs should not be used to calculate traffic flow on any particular day. As the Project and schedule has further developed the anticipated number of FTEs has been further refined (See response to Harvey Economics questions XI.A.1 - 4).

Bobwhite has, through the course of developing a construction timeline, reviewed staffing models on similar sized projects constructed by its affiliates. Based on this review, Bobwhite now believes the peak on-site construction workforce will be approximately 250 individuals, with an average of approximately 200 individuals. This correlates to a conservative estimate of 200 FTEs. As different phases of construction progress, new and different workers with unique skills will access the site, while other workers will no longer be needed. For example, the majority of the civil construction workforce will demobilize prior to the peak electrical work.

It is important to note that the average and peak workers are not fixed assumptions and will be determined by the final construction schedule, in particular the availability of workers and equipment and the extent to which certain activities overlap (for instance module installation and civil work). More individual workers would be required to complete construction more quickly than is currently contemplated (see Exhibit B); fewer individual workers would be required if a longer construction timeline was proposed. As *the schedule develops, the anticipated flow of traffic (number of vehicles in one area) will be assessed and mitigation efforts, as described in the previous response, will be implemented as necessary.*

The breakdown of local and non-local workers is not knowable at this time and will depend on the local availability of both skilled and unskilled laborers at the time Bobwhite and the EPC begin staffing and recruitment. Bobwhite is committed to recruiting locally and using local labor to the extent it is available and is feasible to do so. Whether the workforce is commuting locally or from outside of the County should not have a material impact on the overall traffic pattern and use of local roads.

Witness: Scott Wentzell

II. Site development plan

A. We would like to include the Site Plan Overview map in our report. Please provide a revised site plan overview map (the main overview map that shows the entire Project boundary) that correctly locates the Marion County Substation outside the Project boundary and also removes the "Map Page 1-4" overlay.

Response: *Please see Exhibit D, Revised Site Overview Map.*

Witness: Scott Wentzell

B. Will the Project substation and construction staging areas (main laydown yard and temporary staging areas) have their own separate security fences installed?

Response:

The Project substation will have its own security fence and locked access. The main laydown yard will be fenced within the Project boundary but will not have a separate security fence installed. The temporary staging areas will also be located within the Project boundary fenced area, but will not have separate security fences installed.

Witness: Scott Wentzell

C. The data provided by Kirkland includes the distance between homes and the closest solar panels specifically for the 60 adjacent properties – that data does not include other homes or other structures in the nearby area that are close to the Project, but not adjacent.

1. **Please provide a table indicating the total number of residential structures within 2,400 feet of the closest solar panels, in 300 foot intervals. For example, # of homes within 300 feet, number of homes between 300 and 600 feet, etc.**

Response:

Bobwhite's responses to Harvey Economics' Questions II.C.1 through II.C.6 reflect a review of the use designations in publicly available property records and satellite imagery in Google Earth and searches using Google Maps.

Residential Structures within 2400' of Solar Panels

Structure Type	Distance from Panel (ft)	Count of Structures
Residence	0-299	5
Residence	300-599	18
Residence	600-899	12
Residence	900-1199	11
Residence	1200-1499	20
Residence	1500-1799	19
Residence	1800-2099	21
Residence	2100-2399	7

Witness: Scott Wentzell

2. Please provide a table indicating the number of non -residential structures within 2,400 feet of the closest solar panels, in 300 foot intervals, by type of structure (commercial, industrial, school, hospital, church, barns, etc.). For example, # of structures within 300 feet, number of structures between 300 and 600 feet, etc.

Response:

Non-Residential Structures within 2400' of Solar Panels

Structure Type	Distance from Panel (ft)	Count of Structures
Barn/Garage	0-299	21
Barn/Garage	300-599	21
Barn/Garage	600-899	12
Barn/Garage	900-1199	11
Barn/Garage	1200-1499	25
Barn/Garage	1500-1799	22
Barn/Garage	1800-2099	21
Barn/Garage	2100-2399	27
Commercial	0-299	0
Commercial	300-599	0
Commercial	600-899	1
Commercial	900-1199	2
Commercial	1200-1499	0
Commercial	1500-1799	0
Commercial	1800-2099	0
Commercial	2100-2399	1
Industrial	0-299	0
Industrial	300-599	0
Industrial	600-899	0
Industrial	900-1199	0
Industrial	1200-1499	0
Industrial	1500-1799	0
Industrial	1800-2099	1
Industrial	2100-2399	0

There are no schools, hospitals, or churches within 2,400 feet of Project solar panels.

Witness: Scott Wentzell

3. Please provide a table indicating the total number of residential structures within 2,400 feet of the Project boundary line, in 300 foot intervals. For example, # of homes within 300 feet, number of homes between 300 and 600 feet, etc.

Response:

Residential Structures within 2400' of Project Boundary

Structure Type	Distance from Boundary (ft)	Count of Structures
Residence	In Project	7
Residence	0-299	32
Residence	300-599	13
Residence	600-899	17
Residence	900-1199	15
Residence	1200-1499	18
Residence	1500-1799	9
Residence	1800-2099	11
Residence	2100-2399	13

Witness: Scott Wentzell

4. Please provide a table indicating the number of non -residential structures within 2,400 feet of the Project boundary line, in 300 foot intervals, by type of structure (commercial, industrial, school, hospital, church, barns, etc.). For example, # of structures within 300 feet, number of structures between 300 and 600 feet, etc.

Response:

Non-Residential Structures within 2400' of Project Boundary

Structure Type	Distance from Boundary (ft)	Count of Structures
Barn/Garage	In Project	30
Barn/Garage	0-299	26
Barn/Garage	300-599	11
Barn/Garage	600-899	19
Barn/Garage	900-1199	23
Barn/Garage	1200-1499	13
Barn/Garage	1500-1799	24
Barn/Garage	1800-2099	24
Barn/Garage	2100-2399	12
Commercial	In Project	0
Commercial	0-299	1
Commercial	300-599	1
Commercial	600-899	1
Commercial	900-1199	0
Commercial	1200-1499	0
Commercial	1500-1799	2
Commercial	1800-2099	9
Commercial	2100-2399	1
Industrial	In Project	0
Industrial	0-299	0
Industrial	300-599	0
Industrial	600-899	0
Industrial	900-1199	0
Industrial	1200-1499	1
Industrial	1500-1799	0
Industrial	1800-2099	1
Industrial	2100-2399	2

There are no schools, hospitals, or churches within 2,400 feet of the Project boundary. There is a cemetery 515 feet from the project boundary, but there are no structures within the cemetery.

Witness: Scott Wentzell

5. Please provide a table indicating the total number of residential structures within 2,400 feet of the closest transformer, in 300 foot intervals. For example, # of homes within 300 feet, number of homes between 300 and 600 feet, etc.

Response:

The Project will include two types of transformers: medium-voltage transformers co-located with each inverter and the main-power transformer located at the Project substation. The specific location of each medium-voltage transformer will not be known until final Project design is complete; however, because those transformers are located within the footprint of the solar panel array, there will be no structures closer to a medium-voltage transformer than to a solar panel as identified in Bobwhite's response to Harvey Economics' request II.C.1&2. The medium voltage transformers were evaluated as part of the RSG Sound Study included as Exhibit P to Bobwhite's Responses to Harvey Economics' First Request for Information.

Information regarding distances from structures to the main-power transformer is provided below:

Residential Structures within 2400' of Project Substation (Main power transformer)

Structure Type	Distance from Substation (ft)	Count of Structures
Residence	0-299	0
Residence	300-599	0
Residence	600-899	0
Residence	900-1199	0
Residence	1200-1499	0
Residence	1500-1799	1
Residence	1800-2099	1
Residence	2100-2399	0

Witness: Scott Wentzell

6. Please provide a table indicating the number of non -residential structures within 2,400 feet of the closest transformer, in 300 foot intervals, by type of structure (commercial, industrial, school, hospital, church, barns, etc.). For example, # of structures within 300 feet, number of structures between 300 and 600 feet, etc.

Response:

The Project will include two types of transformers: medium-voltage transformers co-located with each inverter and the main-power transformer located at the Project substation. The specific location of each medium-voltage transformer will not be known until final Project design is complete; however, because those transformers are located within the footprint of the solar panel array, there will be no structures closer to a medium-voltage transformer than to a solar panel as identified in Bobwhite's response to Harvey Economics' request II.C.1&2. The medium voltage transformers were evaluated as part of the RSG Sound Study included as Exhibit P to Bobwhite's Responses to Harvey Economics' First Request for Information.

Information regarding distances from structures to the main-power transformer is provided below:

Non-Residential Structures within 2400' of Project Substation (Main power transformer)

Structure Type	Distance from Substation (ft)	Count of Structures
Barn/Garage	0-299	2
Barn/Garage	300-599	0
Barn/Garage	600-899	0
Barn/Garage	900-1199	0
Barn/Garage	1200-1499	7
Barn/Garage	1500-1799	3
Barn/Garage	1800-2099	2
Barn/Garage	2100-2399	2

There are no commercial properties, industrial properties, schools, hospitals, or churches within 2,400 feet of the Project main-power transformer.

Witness: Scott Wentzell

D. Please confirm that the total acreage within the Project boundary is approximately 1,680.5 acres (according to Exhibit L included in the response to RFI #1) and that the Project facilities (solar panels, etc) will be situated on about 1,300 acres within that boundary.

Response:

Bobwhite analyzed the Project boundary with GIS software and calculated approximately 1,688 acres in NAD 1983 State Plane Kentucky South are within the boundary. There are about 907 acres within the Project fence line for the solar array and Project substation.

Witness: Scott Wentzell

E. Please confirm that the information provided in Exhibit L of the response to RFI #1 (Updated Land Control Map) is consistent with the legal boundary description provided in Appendix B of Exhibit O of the Application.

Response:

The Map provided previously as Exhibit L depicts the boundary of the Project and is consistent with the legal boundary description previously provided in Appendix B of Exhibit O (the Site Assessment Report ("SAR") with one revision: tax parcel 070-035 was mistakenly shown within the project boundary. This parcel has an underground collection easement but is not within the solar boundary. The map has been updated and submitted as Exhibit E. Several clarifying notes which may be helpful:

- *Legal descriptions are provided for two tax parcels (070-001 and 070-007) in Appendix B to the SAR that were not depicted in Exhibit L. The landowners for these two parcels have entered into easement agreements with Bobwhite and have been represented in other Exhibits as The Easement Parcels. These easement parcels have been identified in the updated Exhibit E, which should replace Exhibit L to the response to RFI #1.*

- *A legal description for tax parcel 064-001 is provided in Appendix B to the SAR but was not depicted in Exhibit L, although it is within the Project boundary. The portion of the parcel within the Project is an approximately 50' wide strip of land that was too small to visualize. The portion of tax parcel 064-001 within the Project boundary has been identified in Exhibit E.*

The Project boundary encompasses portions or all of the parcel boundaries in Appendix B to the SAR. Some parcels, for example, tax parcel 064-001 referenced above, are only partially included in the project boundary. Since Bobwhite has not yet independently surveyed the site, we are unable to verify the legal descriptions accompanying the parcel deeds, nor are we able to submit a legal description specific to the project boundary. For the sake of clarity, Applicant has resubmitted the previous Exhibit L (Updated Land Control Map) as Exhibit E to show to easement parcels and more clearly identify the location of 064-001. The Exhibit D Revised Site Overview Map has also been updated.

Witness: Scott Wentzell

F. Please confirm that the 10 lease agreements noted in the Response to the Siting Boards Staffs' First Request for Information Question 2b reflect the 16 individual parcels identified in Exhibit L (Updated Land Control Map) of the response to HE's RFI #1.

Response:

Confirmed, and please see Exhibit E, discussed in Bobwhite's response to Harvey Economics' request II.E for additional detail.

Witness: Scott Wentzell

1. **Are there 10 lease agreements for 16 parcels because one person might own multiple parcels?**

   Response: *Yes.*

   Witness: Scott Wentzell

G. Utilities to Serve Facility - The Application addresses electricity needs during construction and operations and the Motion for Deviation from Setback Requirements addresses water for dust suppression. Will the Project require any other utility needs during construction or operations, such as water?

Response:

It is anticipated that the Project O&M facility will also require municipal water and sewer once the Project is operational. Bobwhite does not expect to utilize utility services other than electricity during construction.

Witness: Scott Wentzell

III. Setback Deviation Request

A. HE has no follow-up questions related to the setback deviation request.

Response: *No response is required.*

IV. Property values and land use

A. Is the Substation identified as an adjoining use on Page 4 of the Property Value Impact Report (Appendix A of the SAR) as the Marion County 161 kV Substation, or is that the existing sub-station?

Response:

Yes, the Marion County 161 kV Substation is the existing substation identified as adjoining use. A second existing substation owned by Kentucky Utilities is located immediately to the west of the Marion County 161 kv Substation.

Witness: Scott Wentzell

V. Traffic

A. After driving the area during our site visit, we are concerned about the capabilities of certain existing access roads and additional roads Northern Bobwhite might develop. Further discussion of this issue is needed and will be discussed at a virtual meeting to be scheduled with Siting Board and the Applicant's representatives.

Response:

As described in response to Harvey Economics Question I.A.1, Bobwhite has updated the anticipated number and sequencing of on-site workers required during construction. This update also reduces the number of vehicles using the existing road infrastructure at any one time.

Witness: Scott Wentzell

B. Table 3 of Appendix E ("Traffic Assessment") provides the number of trips for "Class 9" vehicles, but the Applicant's response to RFI #1 Question V-A-9 lists vehicle weights for "Class 8" vehicles.

1. Are Class 9 and Class 8 vehicles the same? If not, please provide information about the Class 9 vehicles accessing the Project site.

Response:

There was a typographic error in Table 3 of Appendix E. "Class 9" should read "Class 8." Class 8 vehicles are vehicles weighing greater than 33,001 pounds.

Witness: Karen Thompson

C. Table 3 of Appendix E ("Traffic Assessment") refers to "Class 2 and 3" vehicles, but the Applicant's response to RFI #1 Question V-B-1 lists vehicle weights for "Class 1 and 2" vehicles.

1. **Please provide the same information about Class 3 vehicles accessing the Project site.**

   Response:

   Class 3 vehicles are considered medium duty trucks that would include larger pickup trucks and SUVs between 10,001 and 14,000 pounds.

   Bobwhite cannot predict with specificity the personal commuter vehicles that construction workers will utilize to commute to the site daily. Bobwhite expects that the workforce would commute mainly in Class 2 and Class 3 vehicles. Because Class 3 vehicles are common personal vehicles and the weight difference as compared to Class 2 vehicles is not large, the impacts from Class 3 vehicles are expected to be similarly negligible to those from Class 2 vehicles.

   Witness: Karen Thompson

D. The Applicant's response to RFI #1 Question V-A-12 indicates commuter vehicles will carry an average of 2 workers per vehicle. After applying 2 workers per vehicle into the data included in Table 3 of Appendix E ("Traffic Assessment"), HE concludes there would be 500 workers at the Project site during average construction activities and 700 workers at the Project site during peak construction activities. This appears to be inconsistent with the Traffic Assessment included in the SAR, which states "an anticipated 100 local workers and 150 non-local workers will commute to the site each day."

1. **How many workers will be travelling to the Project site per day on average? During the peak period?**

   Response:

   Bobwhite anticipates 200 individuals on average will be traveling to the Project site per day and 250 individuals during the peak period. Please refer to Bobwhite's detailed response to Harvey Economics Question I. A.1 and 1.B.

   Witness: Karen Thompson

2. **How many vehicles will be traveling to the Project site per day on average? During the peak period?**

   Response:

   Bobwhite anticipates that a portion of the workforce will commute together to the Project site on a daily basis and thus expects a maximum of 200 passenger vehicles arriving at the main laydown area and parking lot daily, with an average of approximately 100-150 passenger vehicles. In addition, there will be an average of 10 and a maximum of 25 delivery vehicles arriving per week during the delivery timeframe.

   Witness: Scott Wentzell

VI. Dust

A. HE has no follow-up questions related to dust.

Response: *No response is required.*

VII. Noise

A. Does the RSG Sound Study (Exhibit P: "NBW Sound Study" in RFI #1) replace or supplement the "Operational Noise Conditions" section of the SMG report? We are unsure about how to apply both these reports together, and this might need oral discussion.

Response:

The RSG Solar Sound Study (the "RSG Study") should be considered a replacement to the Operational Noise Conditions in the SMG report. The RSG Study provides a more comprehensive analysis of all equipment anticipated to be on-site during operation and was completed after the last changes were made to the site layout. The RSG Study provides a modeled study of the total/cumulative sound emanating from the site during operation. Bobwhite commissioned the RSG Study to further evaluate operational noise impacts in response to concerns raised by the Board about operational noise levels in other cases. The RSG Study was not finalized and reviewed in time to include with the Application.

The SMG report estimated noise levels of individual pieces of equipment closest to residences using a rule-of-thumb sound propagation calculation. This approach did not incorporate ground or atmospheric absorption, and was not well suited for modeling real-world noise propagation at significant distances. The RSG Study includes these parameters in accordance with internationally recognized sound modeling standards.

The RSG Study used CadnaA acoustical modeling software from Datakustik GmbH to conduct sound propagation modeling in accordance with the international standard ISO 9613-2. CadnaA is a widely accepted acoustical propagation modeling tool, used by many noise control professionals in the United States and internationally. This approach is more rigorous and thus replaces the previous sound study from SMG.

Witness: Scott Wentzell

1. **Did RSG and SMG utilize the same schematic layout of operational components in their noise analyses? I.e., did RSG and SMG utilize the same distances residences would be from tracker motors, co-located transformers/ inverters, and the main substation transformer?**

   Response:

   The same panel layout was used for both reports; however, some minor changes were made to inverter count and placement in the RSG Study. The layout used in *the RSG Study is identical to the layout provided with Bobwhite's application as Appendix C to the Site Assessment Report (Exhibit O to the Application).*

Witness: Scott Wentzell

B. In Appendix B ("Site Plan with propagated Noise Levels") of Appendix D ("Noise Assessment"), HE counts 40 estimated inverters. In Exhibit P ("NBW Sound Study") of the Applicant's response to RFI #1, RSG evaluates 42 inverters. Please confirm the correct number of inverters.

Response:

The correct number of inverters is 42 as used in the RSG Study and shown on Bobwhite's Site Plan Map.

Witness: Scott Wentzell

C. Assuming 325,000 solar panels (provided by the Applicant in response to RFI #1 Question II-D-4) and 210 tracker motors (estimated by RSG), each motor would be required to tilt 1,548 solar panels. In HE's experience with solar facilities, the ratio of panels to tracking motors is commonly closer to 100 solar panels per tracking motor.

1. **Please confirm and provide documentation that if the solar panels include tracker motors, 210 tracker motors would be sufficient to tilt 325,000 panels. Please provide more detailed information about the ATI motors, such as the manufacturer specifications which would prove the motors' capabilities.**

   Response:

   A single ATI tracker motor is rated up to 1.152MW DC according to manufacturer's specifications. One drive motor can operate up to 32 rows of panels, each with up to 100 crystalline/bifacial modules per row, or a total of 3,200 panels. As such, an estimate of 210 tracker motors is conservative and likely fewer than 210 drive motors will be deployed.

   See Exhibit F for the Manufacturer's Datasheet.

   Witness: Scott Wentzell

2. **How many tracker motors did SMG assume in their Noise Assessment (Appendix D of SAR)?**

   Response:

   Please use the RSG Study for the operational conditions at the site. The SMG Noise Assessment did not analyze cumulative noise from the site, and thus did not model any specific number of motors. The RSG Solar Sound Study assumed 210 tracker motors and modeled the cumulative noise impacts from all sound emitting equipment.

   Witness: Scott Wentzell

D. Will there be any residual power in inverters that would make noise during nighttime hours? The Kirkland report states that solar farms are silent at night, but the noise analysis performed by RSG says the inverters were modeled at night.

1. Did RSG mean to say the inverters were modeled "to produce constant levels of noise" at night. Is that correct, and what was that noise level?

Response:

Correct, the inverters were modeled at constant maximum sound emissions for both the day and nighttime modeling configurations. Inverter sound was assumed to be steady at the maximum sound emissions. Although inverters are generally quiet at night, they can be utilized for ancillary service support, namely VAR control, which helps to regulate reactive power needs on the grid. This is a service that certain customers may require of Bobwhite; it is also a grid service that would be compensated by PJM. Bobwhite has not yet decided whether the Project inverters will be utilized in this manner, therefore RSG conservatively modeled worst-case nighttime noise assuming constant VAR support.

For the model inputs, please refer to Table 1: Modeling Configurations in the RSG Study. Modeled nighttime and daytime sound levels were the same assuming the active use of inverters for VAR support. As mentioned above, the model provides a worst-case scenario, and noise levels may be lower or non-existent at night.

Witness: Scott Wentzell

2. Did SMG assume inverters would be producing constant levels of noise at night, and what were their noise estimates?

Response:

Please use the RSG Study for the operational conditions at the site.

Witness: Scott Wentzell

E. In "Table 1: Modeling Configurations" of the RSG Noise Assessment, how many feet away are the "Modeled Sound Power (dBA)" values measured for each of the five equipment types? For example, a transformer has a modeled sound power (dBA) of 102 at ___feet away.

Response:

This table shows the sound power level of each sound source, not the sound pressure level. The sound power level is the intrinsic sound emissions of a sound source and is independent of the distance to the sound source and environmental conditions. Sound power level data for sound sources is what is most typically used to conduct sound propagation modeling. The sound pressure level will be dependent on the distance to the source and environmental conditions in addition to the sound power level of the source. The sound power level is similar to the sound pressure level at 1 meter from a sound source, if the sound source is a perfect point source. If the source is relatively large (like a transformer) the sound power level will never reach the sound pressure level. For example, the sound pressure level at 1 foot from the transformer tank in the ONAN condition is 75 dBA (the sound power is 102 dBA). The realized sound pressure level by the human ear, at a certain distance from the sound source, is the appropriate measurement for noise impact.

Witness: Scott Wentzell

F. The SMG noise analysis calculated a projected noise of 53-55 dBA at the property 300 feet away from the substation. The RSG noise analysis states "the highest sound levels at a residence are 42 dBA during night and day." Please elaborate on this apparent discrepancy.

Response:

Please use the RSG Study for the operational conditions at the site.

The SMG calculation was premised on an erroneous assumption that the transformer would register a sound pressure level of 77 dBa at 6 meters from the source. As is discussed in the previous response, the transformer would in fact produce a sound pressure level of 75dBa at a distance of 1 foot.

In addition, the RSG Study modeled atmospheric and ground absorption in accordance to internationally recognized modeling standards. The SMG study did not account for these real-world variables.

The RSG Study calculates that none of the eight nearest homes are expected to experience day or nighttime cumulative noise from the project exceeding 42 dBa. There is not an occupied residence or sensitive property line at 300 feet away from the substation. The structures in closest proximity to the substation, located to the southeast, belong to a participating landowner and are unoccupied. The proposed Project substation is on the same tax parcel and belongs to the same landowner as these structures. This landowner has consented to the substation's location.

Witness: Scott Wentzell

G. Does the RSG noise analysis assume baseline noise levels? Many residences appear to have a day/night noise level of 13 dBA, which is much lower than the "quiet rural area" of 30 dBA shown in Figure 5 of RSG's analysis.

Response:

Sound propagation modeling results in the RSG Study do not include existing background sound levels. For situations where the modeled (Project only) sound levels are very low, this means that Project-only sound levels will likely be below background sound levels most of the time and thus will not be perceptible.

Witness: Scott Wentzell

H. Please add a column to Table 5 of Appendix C the RSG noise analysis, showing the distance in feet from each residence to the closest tracking motor and inverter.

1. For the eight residences near the substation, please include the distance in feet from each residence to the substation.

Response:

Eight Nearest Residential Structures to the Project Substation	
Parcel ID	Distance to Sub (ft)
063-015	1,633.11
064-001A	1,868.34
064-041	2,586.03
063-020	2,678.11
064-001-03	2,743.17
064-006A-01	2,818.59
064-006A-01	2,838.45
055-005	2,862.35

Please see Exhibit G for the updated Table 5 of Appendix C. As the location of tracking motors is not currently known, and will not be known until at least 30% design work is complete, RSG modeled 5 tracker motors located adjacent to each inverter pad. This model provides a good approximation of the cumulative noise impacts of tracker motors throughout the site. Since sound power levels from the tracker motors are lower than from the other noise emitting equipment, re-locating the tracker motors within the Project layout will have little or no impact on the cumulative noise impact on any residence. The maximum sound power level for ATI tracker motors is 66 dBa at the source.

Witness: Scott Wentzell

VIII. Topography/ Scenery

A. Is the Applicant committed to reseeding/ repairing all areas degraded by vehicles that do not park in laydown areas?

Response:

Yes, all portions of the Project site that are disturbed during construction will be re-graded if necessary and reseeded.

Witness: Scott Wentzell

B. Vegetative Buffers

1. Relative to the construction schedule, when will the vegetative buffer be planted?

Response:

Bobwhite anticipates that the vegetative buffering will be installed through the latter half of the construction process. Bobwhite will consult with local landscaping and vegetation specialists on the timing of installation to ensure the successful establishment of the vegetative buffer. For instance, planting during the hottest days of summer may not be advised for plant health.

Witness: Scott Wentzell

2. What is the basis for planting vegetative buffers within 500 feet of residences?

Response:

Beyond 500 feet, the visual impact of the solar farm will be minimal. The Kirkland Appraisal report concludes that the impacts of the Project on property values would be limited to those parcels immediately adjacent to the Project and that such impacts are mitigated through visual buffering. Buffering for residences within 500 feet of the Project appropriately mitigates any impacts.

Witness: Scott Wentzell

a. How many residences would trigger the planting of a buffer?

Response:

There are 16 residences within 500 feet of Project panels. One of those residences is on a participating landowner property, Parcel ID 063-017, is outside of a Do Not Disturb area, and consistent with the agreement with the landowner could be torn down or removed. Thus, Bobwhite anticipates that up to 15 residences would trigger the planting of a vegetative buffer.

Residence Parcel ID	Distance to Panels (ft)
063-022	200
070-035	243
063-008-01	249
064-002-06	262
064-041	280
064-001A	309
070-017-01	332
070-010-01	349
063-007	361
070-007-02	397
070-035	397
070-034	446
064-001-03	466
026-020	471
070-017-02	479

Witness: Scott Wentzell

3. **What is the basis for planting vegetative buffers within 300 feet from roadways?**

Response:

Buffering from the roadway is intended to break-up the viewshed and allow the Project to more naturally blend into the surroundings when viewed from a moving vehicle. At a distance of over 300 feet from the roadway, the Project is not a visual distraction to driving and does not require buffering.

Additionally, the continued balancing of costs and commercial viability are important. Landscaping costs are significant and buffering roadways beyond 300 feet would place an unreasonable financial burden on the Project. Other similar forms of large commercial development, for instance warehouse buildings, generally do not plant visual buffering from roadways.

Witness: Scott Wentzell

a. **How many miles of roadways would trigger the planting of a buffer?**

Response:

There are approximately 1.85 miles (9,751 feet) of public roadway within 300 feet of the panels.

Witness: Scott Wentzell

C. The Applicant has not performed any glare studies regarding glare impacts on traffic, residences, or businesses, nor are any studies planned for these groups.

1. **Will the Applicant guarantee there will be no glare effects for residences, traffic, businesses, etc.?**

   Response:

   The Applicant cannot guarantee there will be no glare observed as a result of the operation of the Project. While the PV panels are designed to absorb as much of the solar spectrum as possible, PV panels can reflect a portion of the incoming solar radiation at high incidence angles. The utilization of trackers ensures that the panels will be oriented as closely as possible to perpendicular to the sun which will limit the duration of time when high incidence angles may occur. In addition, the natural topography and vegetation surrounding the Project in combination with the planned visual buffering will further minimize the potential for glare. Any glare observed as a result of operation of the Project would be brief, typically occur near sunrise or sunset, and would likely be seasonal.

   Notably, glare is common in the existing environment. The sun and artificial light sources can cause glare either directly (such as from a sunset when driving westbound) or indirectly (such as from the sun's reflection off of a body of water, building window, or car windshield).

   Witness: Scott Wentzell

2. **Is the Applicant committed to ceasing operations or altering operations of solar panels if glare is experienced during operations?**

   Response:

   No. Ceasing or altering operations as a result of glare would be commercially unreasonable and would make the Project unfinanceable. As noted above, glare is common in the existing environment from numerous sources including water and windows. Any glare observed as a result of operation of the Project would be brief, would typically be limited to sunrise or sunset, and would likely be seasonal. The Project will implement a number of measures to minimize the potential for glare to be observed including utilizing trackers, panels with an anti-reflective coating, and planting visual buffers.

   The FAA does not prohibit glare from being observed by pilots from on-site solar at airports and Bobwhite is not aware of any other industry that has glare restrictions imposed upon it. If such prohibitions were placed upon the solar *industry, similar measures should also be applied to other types of infrastructure development such as roads, buildings, parking lots and artificial ponds – all of which have the potential to create similar or greater glare effects.*

Bobwhite is committed to engaging with any community member that experiences frequent nuisance glare to develop a mitigation plan. For the sake of clarity, Bobwhite would define frequent nuisance glare as glare experienced at any one fixed point in space at a sensitive receptor such as a home for more than 60 minutes a year.

Witness: Scott Wentzell

3. **Is the Applicant planning on utilizing solar panels equipped with anti-glare technology?**

Response:

Yes, panels are treated with an anti-reflective coating by the manufacturer.

Witness: Scott Wentzell

IX. Public meeting materials

A. HE has no follow-up questions related to public meeting materials or public concerns.

Response: *No response is required.*

X. Other permitting activities

A. The Applicant's response to RFI #1 provides an updated list of permits expected for the Project. Please provide copies of any submittals made to those agencies, other than anything already provided.

Response: *To date, no applications have been submitted.*

Witness: Scott Wentzell

XI. Economic Analysis

A. The Economic Assessment indicated 400 FTEs and assumes 50 to 100 local hires.

1. Are the 50 to 100 local hires FTEs or individual people?

Response:

The local hires are individuals and the number of hires is only an estimate. The breakdown of local and non-local workers is not knowable at this time and will depend on the local availability of both skilled and unskilled laborers at the time Bobwhite and the EPC begin staffing and recruitment. Bobwhite is committed to recruiting locally and using local labor to the extent such is available and is feasible to do so. Whether the workforce is commuting locally or from outside of the County should not have a material impact on the overall traffic pattern and use of local roads.

Witness: Karen Thompson

2. How many individual workers are reflected in the 400 FTEs of the Economic Assessment?

Response:

As described in detail in response to Harvey Economics' Question I.A.1, Bobwhite has updated the peak on-site construction workforce to 250 individuals, with an average of approximately 200 individuals.

With the reconsideration of staffing, the economic impact from labor should be revised from that originally projected. To be conservative at this point in the process, estimates should be revised to reflect 200 full-time employees over a one-year period.

Witness: Karen Thompson

3. How was the 400 FTE estimate developed, given that the Applicant has not yet developed a detailed construction schedule?

Response:

The 400 FTE estimate was based on solar sites of a smaller size that were scaled to accommodate this larger Project; however, as the construction schedule has been developed, Bobwhite now believes the construction workforce will *correspond to approximately 200 FTEs. Please see Bobwhite's response to Harvey Economics' Question I.A.1.*

Witness: Karen Thompson

4. **The Applicant's response to RFI #1 Question V-A-12-C explains the apparent discrepancy between the 250 workers and 400 FTEs as due to construction workers working overtime (more than full time) and construction workers working only partial periods of the 18 month construction phase.**

    a. **HE agrees that it is possible for a single worker to account for more than 1 FTE (due to working overtime); however, the amount of work accomplished by 250 workers to justify a 400 FTE estimate would be extraordinary. Typically, FTE estimates are lower than the number of estimated laborers required for a Project, because many workers are on site only a limited time. Please explain.**

    Response:

    400 FTE was estimated based on solar sites of a smaller size that were scaled to accommodate this larger Project; however, as the construction schedule has been developed, Bobwhite now believes the construction workforce will correspond to approximately 200 FTEs. Please see Bobwhite's response to Harvey Economics' Question I.A.1.

    Witness: Scott Wentzell

XII. Decommissioning

A. HE has no follow-up questions related to decommissioning

Response: *No response is required.*

EXHIBITS TO BOBWHITE'S RESPONSES TO HARVEY ECONOMICS' SECOND REQUEST

I. Construction Phase Activities

Exhibit A	Preliminary Schedule by Week
Exhibit B	Preliminary Schedule by Month
Exhibit C	Anticipated Construction Process

II. Site Development Plan

Exhibit D	Revised Site Overview Map
Exhibit E	Revised Updated Land Control Map

VII. Noise

Exhibit F	Manufacturer Datasheet
Exhibit G	RSG Solar Sound Study, Table 5

Exhibit A

Preliminary Schedule by Week

Northern Bobwhite - Preliminary Engineering and Construction Timeline

TASK	START	END	DAYS
Engineering			
30% Design and Review	2/7/22	5/2/22	84
60% Design and Review	5/4/22	7/13/22	70
90% Design and Review	7/13/22	8/31/22	49
Final Construction Set	8/31/22	9/21/22	21
Procurement			
Modules	7/13/22	6/8/23	330
Piles, Racking and Trackers	5/4/22	7/28/22	85
Inverters	7/13/22	11/10/22	120
Balance of System	7/13/22	12/20/22	160
Construction Schedule			
Mobilization and Civil Construction			256
Mobilization/Training	12/20/22	1/9/23	20
Clearing and Grubbing	12/20/22	1/4/23	15
Grading and Sitework	12/30/22	3/5/23	65
Roads	1/9/23	4/4/23	85
Site Fencing	12/23/22	2/1/23	40
Final Seeding and Clean-up	8/8/23	9/2/23	25
Racking &Tracker Construction			179
Racking Foundations - Driving	1/16/23	5/31/23	135
Tracker Installation	1/30/23	6/14/23	135
PV Module Installation	3/1/23	7/14/23	135
Electrical Construction			204
PV Wiring	3/11/23	7/24/23	135
DC Collection	1/26/23	6/10/23	135
AC Collection	6/10/23	8/4/23	55
Tracker Power & Communica	1/26/23	6/10/23	135
Inverters	3/1/23	7/14/23	135
SCADA System	4/30/23	7/24/23	85
Testing and Commissioning	5/25/23	8/18/23	85
Substation Construction			143
Site Grading	3/5/23	3/26/23	21
Foundations	3/19/23	4/9/23	21
Below Grade Electrical Work	3/26/23	5/10/23	45
Steel Supports	4/25/23	5/10/23	15
Control and Station Equipme	5/2/23	5/22/23	20
Main Power Transformer	5/22/23	6/1/23	10
Bus and Hardwear	5/29/23	6/13/23	15
Above Grade Electrical Work	6/1/23	6/16/23	15
Cable Installation, Testing an	6/16/23	7/21/23	35
Backfeed Available	7/21/23	7/26/23	5
Completion			
Construction Contingency	9/2/23	12/1/23	90
Target COD	11/24/23	12/1/23	7

Exhibit B

Preliminary Schedule by Month

Northern Bobwhite - Preliminary Engineering and Construction Timeline

	Days
Engineering	**226**
Procurement	**400**
Construction Schedule	**256**
Mobilization and Civil Construction	256
Racking &Tracker Construction	179
Electrical Construction	204
Substation Construction	143
Completion	**90**
Construction Contingency	90
Target COD	7

Exhibit C

Anticipated Construction Process

Bobwhite Anticipated Construction Process

Bobwhite has prepared an estimated Project schedule based on experience with other similar sized solar projects. While this schedule is the best available estimate, the exact schedule will be set in conjunction with the selected engineering, procurement, and construction ("EPC") contractor. The EPC contractor will be selected through a competitive bidding process.

Based on prior experience, Bobwhite expects a 37 to 52-week construction schedule assuming continuous progress; significant delays due to staffing shortages, winter or wet weather, or supply chain delays could extend the duration of construction. Likely, these disruptions would limit construction activities and minimize any localized impact on those days. As such, Bobwhite expects the cumulative impact of the eventual construction schedule will be substantively similar to the schedule presented here.

During the construction phase, onsite construction personnel will consist of laborers, craftspeople, supervisory personnel, construction management personnel, civil and construction trades, delivery, and logistics personnel, as well as administrative and support staff. The EPC contractor selected will staff the Project with local and non-local workers, and work with local subcontractors, and other vendors to implement a Project construction staffing model that maximizes local hiring and local economic benefits for the Project, while ensuring the Project is safely built on time and on budget. Typical onsite construction staff levels will depend on the number of concurrent tasks being performed and the phasing of the Project. The Project will create approximately 200 jobs (FTEs) during the construction and installation phases, with a peak on-site workforce of approximately 250 individuals.

Engineering and Procurement:

Upon receiving a Construction Certificate from the Kentucky State Board on Electronic Generation and Transmission Siting, Bobwhite will initiate design engineering work with the selected EPC contractor. This design engineering work will incorporate specific design considerations that are specifically relevant for the project's power off-taker. By way of example, and not of limitation, such considerations might include reactive power requirements, an emphasis on performance during certain periods of the day or year, asset life expectancy, performance guarantees, etc. These criteria will influence technology selection, including modules, trackers, and inverters.

Engineering work will take place in three main phases (30%, 60% and 90%), with each step producing more detailed designs. These detailed designs are required to advance procurement negotiations with the suppliers of major components including modules, racking and inverters. It is expected that approximately 32 weeks of engineering and design work will be required to deliver final construction plans.

It is expected that piles and trackers will be the first major components to be procured as they will be required shortly after construction commences. Modules, inverters, and the remaining balance of system components will be procured on a rolling basis over the course of several months and generally will be procured during the 60% or 90% design work period.

Once supply contracts are signed, the selected suppliers will begin manufacturing the components according to Bobwhite's design specifications. Equipment may be warehoused by the supplier for a period of time prior to being delivered to the Project's main laydown yard. During procurement negotiations, a delivery schedule will be set with the supplier to deliver components to roughly match the anticipated construction timeline. This way, components will be available when they are needed for construction activities without spending considerable time staged in the Project's main laydown area.

It is expected that suppliers will begin delivering components shortly after the main laydown area is prepared. Bobwhite estimates that there will be approximately 10-20 semi-trucks used weekly for equipment delivery, and up to 25 deliveries per week during the peak of construction deliveries. Bobwhite will make efforts to spread out deliveries to the extent it is feasible. For planning purposes, a maximum of 10 semi-trucks could arrive in a single day, but this would not be expected or a frequent occurrence. A total of approximately 300 delivery trucks are expected over the duration of the construction timeline. The volume of truck traffic will ebb and flow as different phases of construction progress; truck traffic will decrease once major components are delivered.

Component	# of Delivery Trucks	Duration	Start of Delivery
Piles	~90	12 Weeks	Several weeks prior to installation
Trackers	~86	12 Weeks	Several weeks prior to installation
Modules	~35	12 Weeks	Several weeks prior to installation
Inverters	~42	12 weeks	Several weeks prior to installation
AC/DC Cabling & Misc.	~20	On-going	Several weeks prior to pile installation
Total	**Approx. 270-300**	**6 months+**	**Start with pile delivery**

Construction:

There are four main phases of construction on the site, which will overlap in timing as different geographic sections of the site are constructed. The precise sequencing of activities from one portion of the site to the next is not known at this time and will be developed in coordination with the EPC contractor. The sequencing will take into account site and weather conditions and the availability of necessary supply components, staffing, and construction equipment. The main laydown area will be constructed first, and Bobwhite expects that the areas adjacent to the laydown area will be constructed next. Construction will be sequenced outward from there, with more remote sections of the site initiating construction later. This sequencing may or may not continue in that fashion depending on the above listed criteria.

Mobilization and Civil Construction:

Once an EPC contractor is selected, they will begin to staff the Project with local and regional construction, electrical, and other skilled and unskilled laborers. Bobwhite is committed to working with our EPC partner to maximize local workforce opportunities.

Construction activities will commence with site clearing, including the removal of agricultural fences, outbuildings, trash, and the clearing of trees and stumps. The applicant expects this initial site work will take approximately two weeks to complete. During that time, additional equipment and personnel will begin mobilizing to the site. Initial site safety training and other protocols will take place at this time, although safety training will remain a core activity throughout the course of construction as additional staff are brought on site and new phases commence.

Grading and site preparation work will begin on the main Project laydown and parking area once it has been cleared. Topsoil will be stripped and segregated from the underlying subsoil. Typical earthmoving equipment such as bulldozers, scrapers, graders, front-end loaders, and excavators may be used to level the site to an even grade and compacted. A geotextile fabric may be applied to provide stability prior to applying crushed stone and compacting. Temporary office trailers, sanitary facilities and storage containers will be installed in the laydown area. Distribution voltage electricity will be wired and provided to the office trailers and supporting facilities.

Site access roads and access points as well as site fence installation will follow closely behind grading activities. Priority will be given to constructing the access road servicing the main laydown area and installing fencing to enclose the section of the Project encompassing the main laydown and parking area. Access control gates will be then installed. Once the laydown yard has been constructed, equipment deliveries will commence.

Some areas of the site will require little or no grading and will be fenced while grading activities continue elsewhere. Grading can also continue inside fenced areas once the fence has been installed.

Approximately 15-20 weeks of civil construction, including grading, fencing and road construction, are anticipated. Some civil construction equipment and crew will remain on site beyond 20 weeks to support final grading, access road maintenance and site revegetation.

Racking and Tracker Construction:

Approximately 3-4 weeks after grading activities start, and after the main laydown area has begun accepting component deliveries, the EPC contractor will begin installing racking foundations. These foundations are driven piles. Multiple pile drivers will be deployed on the site and may operate in one or more Project sections concurrently. Bobwhite currently anticipates approximately nineteen weeks of pile driving activity. However, pile driving may move more or less quickly depending on site conditions including the presence of shallow bedrock and wet weather issues, as well as the number of pile drivers deployed to the site.

Once a section of racking foundation has been installed, tracker installation will begin. Trackers are bolted onto the piles through pre-drilled holes in the piles and tracker structure. Additional steps include installing the motors and drive shafts, and cable management system.

Bobwhite expects that tracker installation will commence approximately two weeks after pile driving starts and will span a similar nineteen-week timeline. Staffing, weather delays and equipment deliveries can influence this schedule.

Finally, solar panel modules will be installed onto the completed trackers. Teams of two individuals will lift the modules onto the trackers where they will be fastened to the tracker. Modules will later be wired together and connected in series to an inverter. Bobwhite expects that module installation will commence approximately one month after the start of tracker installation and take approximately nineteen weeks to complete.

Throughout this phase of construction, components will be loaded onto flatbed trucks or into wagon trailers by forklift in the main laydown yard. They will be driven to the portion of the site under construction at that time and unloaded using a forklift, by hand or using other specialized equipment. Components may be temporarily staged in a temporary staging area before being installed. Transport vehicles will utilize the Project's internal access roads to the extent feasible, or traverse public roads to an access point in a different section of the site.

Electrical Construction:

Shortly after the commencement of pile driving, Bobwhite will begin installing DC collection cabling and racker power and communications cables. The DC collection system is typically suspended above ground, underneath the tracker; DC cables may also be trenched underground. DC collection cables will gather to a central inverter pad location through a conduit and ultimately be wired to the inverter. This electrical work will be staged to follow behind the racking foundation installation and thus is expected to also take approximately nineteen weeks to complete.

Inverter installation will begin next with topsoil removal; the location will be scraped, and soil segregated as elsewhere. Underground conduit and junction boxes will be installed along with the DC cabling as described previously and will gather at the inverter equipment. The inverter units will be placed on frost-footing supported concrete pads or on driven/helical screw pier foundations that will be designed to specifications necessary to meet the local geotechnical conditions. A truck with a flatbed trailer will deliver the premanufactured skids with an inverter, transformer, and SCADA equipment to each inverter foundation. They will typically be set in place using a rough-terrain type hydraulic crane. Inverters will be installed as the electrical work progresses throughout the site. As a result, these installations will also take place periodically over the course of approximately nineteen weeks.

The next step will be wiring the panels together in series to the DC collection system and ultimately to the inverters. This wiring will begin one to two weeks after the first panels are installed and will continue until all the panels are in place.

The SCADA control system will be wired and established to connect the inverters and trackers back to the Project's Power Plant Controller System. This system will control all facility operations such as inverter control, tracker control and other automatic systems.

The AC Collection system will be installed next. This involves trenching cables below grade using a trencher and or excavator. Topsoil will be segregated from subsoil and a trench approximately four feet in depth will be opened. Cabling will be buried in the trench. Clean fill may be added before closing the trench with subsoil and then topping with topsoil These cables will deliver power from the inverters to the Project's substation at 34.5kV. In addition to trenching, sections of the AC collection system may be hung above ground on wooden or metal utility poles, which would be similar to the poles used to distribute power to residential customers. Bobwhite expects the AC collection system will take approximately eight weeks to construct.

Finally, as blocks of the solar plant are fully constructed, technicians will begin testing and commissioning the system. This involves visual inspection of all components of the plant. Input settings on the inverter will be verified and they will be energized. DC cabling will be tested, trackers will be energized, inspected, and adjusted for proper alignment and operation. The meteorological stations will be field verified and tested for proper function and communication with the plant's control system.

Substation Construction:

The final phase of construction consists of building and commissioning the project substation. Construction of the Project substation will take place nearly simultaneously with the solar arrays. Grading for the substation foundation will take place at approximately the same time as grading activities on the remainder of the site. Given the substation's proximity to the laydown yard, Bobwhite expects grading for the substation may commence shortly after the laydown area is completed. Ultimately, the EPC contractor will determine the appropriate sequencing of grading activities.

Grounding grid and underground conduit will be installed in conjunction with the foundations for the transformer, control housing, and high voltage structures. The substation equipment will then be delivered to the site and installed on the prepared foundations. Secondary containment areas for the transformer will be constructed as necessary and finish grading will occur around the substation. The last construction activities associated with the Project substation include stringing the electrical wires, installing the perimeter fence, and placing course, clear crushed rock throughout the interior of the fenced area and three feet outside the fence.

Final Seeding and Clean-up

After the piles, trackers, modules, and wiring are installed in each section of the Project, the area will be seeded with low-growing grass to provide a complete vegetative cover to limit erosion and run-off. Construction equipment will be removed from site after it is no longer needed. Temporary storage containers, sanitary facilities and construction trailers will be removed from the site. Any remaining waste will be separated and hauled away for proper disposal or recycling.

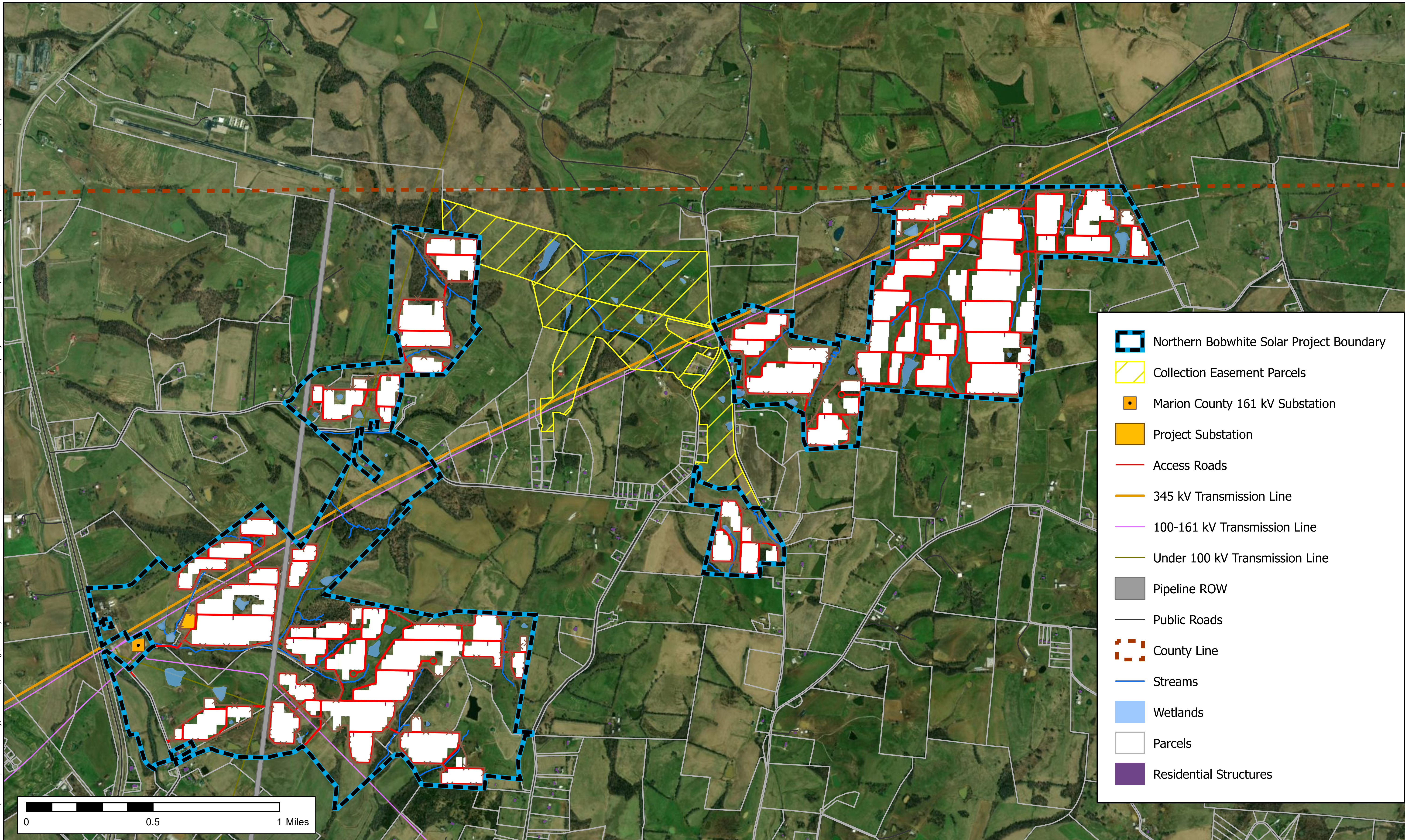
If the site design requires that the laydown area and parking lot be constructed over, the laydown area will be decommissioned first. Crushed rock and geotextile fabric will be removed, subsoil will be decompacted and topsoil will be reapplied. Piles, trackers, and panels will be installed as previously discussed and a final seed mix will be spread. If the layout does not require constructing solar equipment over the laydown area, it will be restored to its previous state as described previously.

Construction Contingency

The estimated schedule includes a three-month construction contingency to account for schedule delays due to weather, staffing, and supply chain issues. The inclusion of contingency time in the construction schedules helps to ensure that the Project can meet milestones for interconnection and power delivery. Additional contingency may be included at the recommendation of the EPC contractor to account for Project and site-specific conditions.

Exhibit D

Revised Site Overview Map



Source: Esri, Geenex, Marion County, Olsson Engineering | G:\Projects\USA_North\Northern_Bobwhite_Geenex\05_GIS\Northern_Bobwhite.aprx | Layout: Site_Plan_Map_Overview_Tabloid | Last Updated 3/8/2021 by jessica.leonard

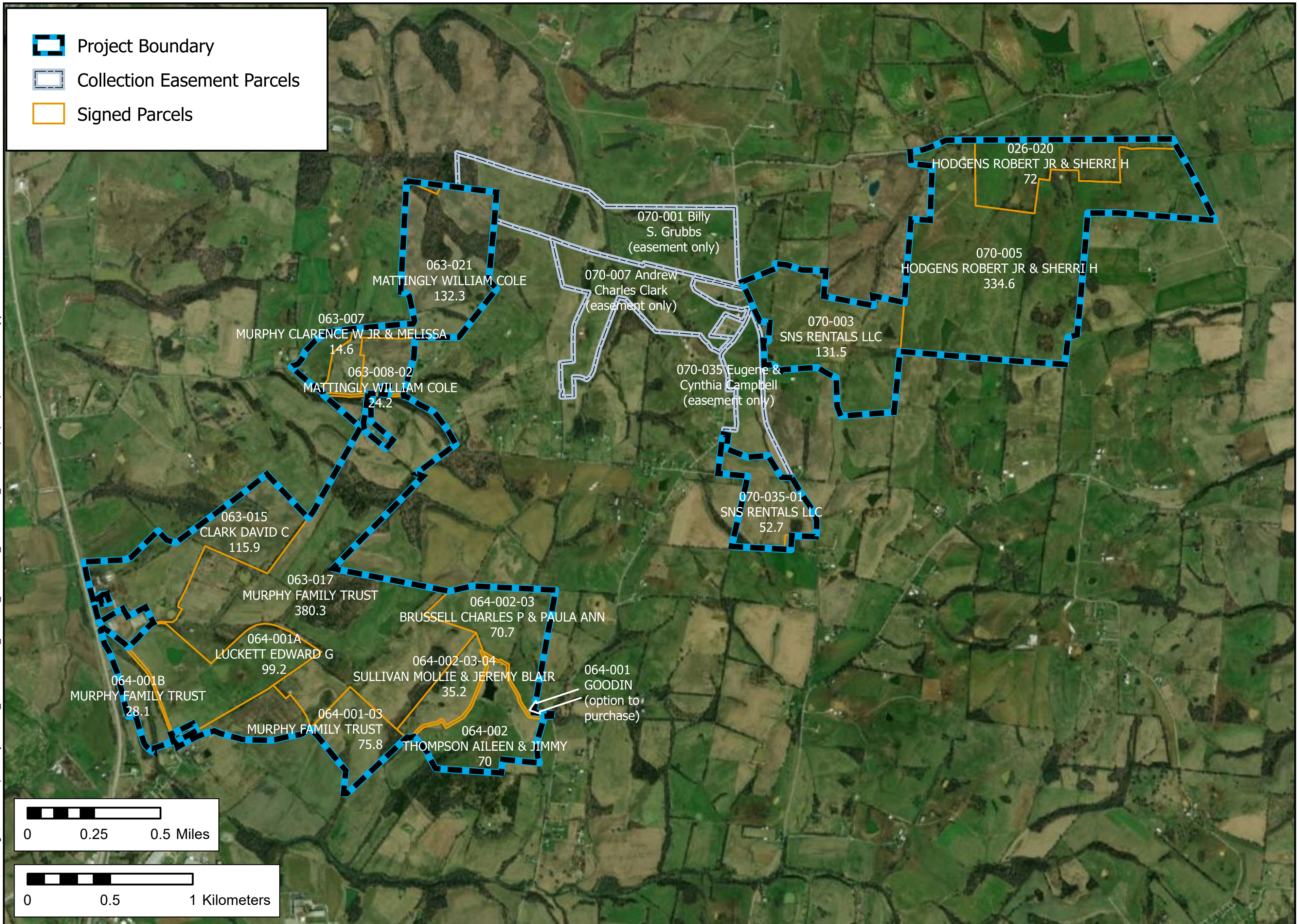
edf renewables

SITE PLAN OVERVIEW

Northern Bobwhite Solar | Marion County, Kentucky

Exhibit E

Revised Updated Land Control Map



Source: Esri, CoreLogic, EDF 2020 | G:\Projects\USA_North\Northern_Bobwhite_Geenex\05_GIS\Northern_Bobwhite.aprx | Last Updated 3/8/2021 by jessica.leonard

EDF renewables

LAND CONTROL

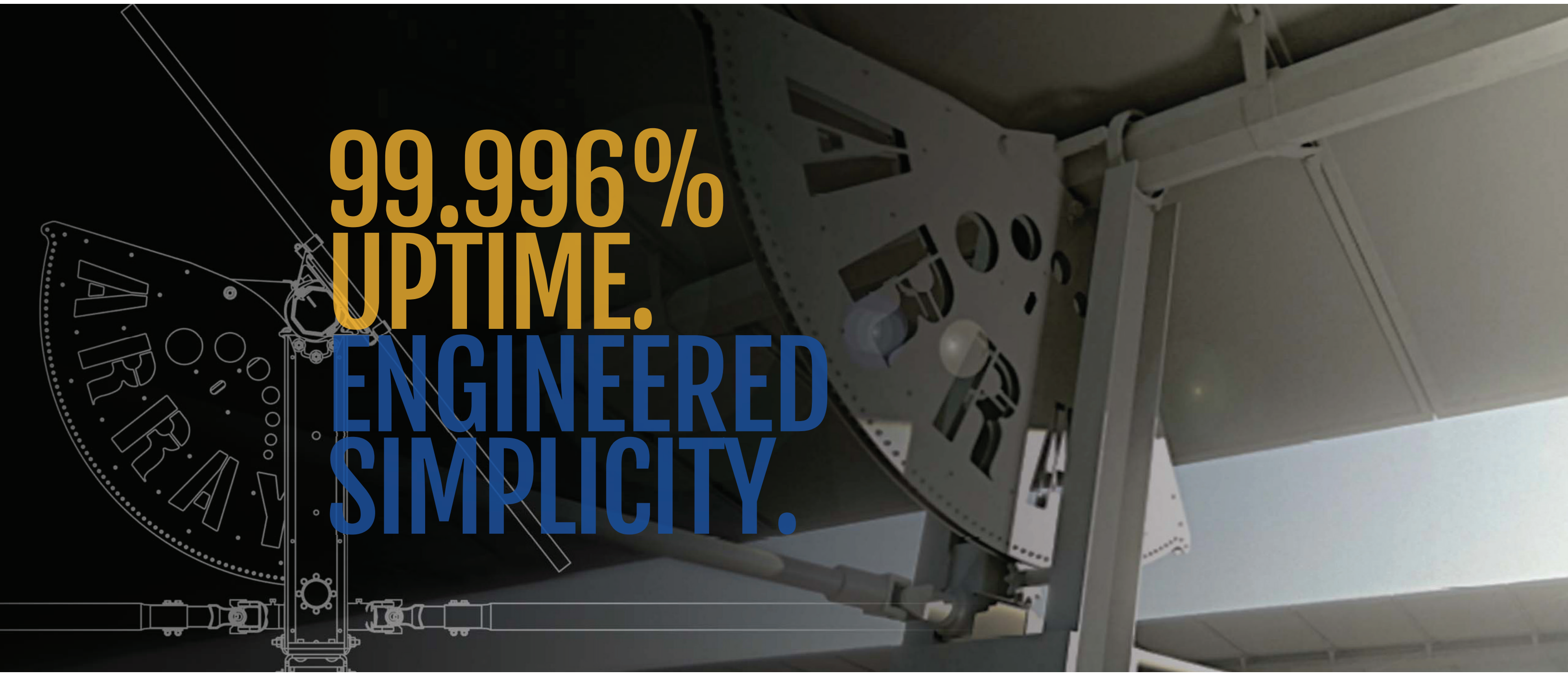
Northern Bobwhite Solar | Marion County, Kentucky

Exhibit F

Manufacturer Datasheet

ARRAY TECHNOLOGIES

FOLLOW THE SUN.
FOLLOW THE LEADER.



7% LOWER LCOE

31% LOWER LIFETIME O&M

DuraTrack® HZ v3

Three decades of field-tested design improvements have resulted in the DuraTrack® HZ v3 — the most durable, reliable tracking system under the sun. While our single-bolt module clamp and forgiving tolerances streamline installation, and our flexibly linked architecture maximizes power density, it's our innovative use of fewer components and a failure-free wind management system that makes Array Technologies the best choice for solar trackers. **Better. Stronger. Smarter.**

HIGHEST POWER DENSITY.

Higher density means more power and more profit. DuraTrack HZ v3 offers the unique ability to maximize the power density of each site, boasting 100 modules per row and higher density than our closest competition.

LEADING TERRAIN ADAPTABILITY.

Our flexibly linked architecture, with articulating driveline joints and forgiving tolerances, creates the most adaptable system on the market for following natural land contours while creating the greatest power generation potential from every site.

FEWER COMPONENTS. GREATER RELIABILITY.

Array was founded on a philosophy of engineered simplicity. Minimizing potential failure points (167 times fewer components than competitors), DuraTrack HZ v3 consistently delivers higher reliability and superior uptime.

FAILURE-FREE WIND DESIGN.

DuraTrack HZ v3 was designed and field tested to withstand some of the harshest conditions on the planet. It is the only tracker on the market that reliably handles wind events with a fully integrated, fully mechanical, passive wind-load mitigation system without the need for complex communication systems, batteries, or power.

ZERO SCHEDULED MAINTENANCE.

Maintenance-free motors and gears, fewer moving parts, and industrial-grade components—what does this mean for our customers? No scheduled maintenance required. While our competitors average two unscheduled maintenance events per day, we average only one per year.

ARRAY TECHNOLOGIES

FOLLOW THE SUN. FOLLOW THE LEADER.

COST VERSUS VALUE

We believe value is more than the cost of a tracking system. It's about building with forgiving tolerances and fewer parts so construction crews can work efficiently. It means protecting your investment with a failure-free wind management system. It also includes increasing power density. But most of all, value is measured in operational uptime, or reliability.

THE GLOBAL LEADER IN RELIABILITY

Array has spent decades designing and perfecting the most reliable tracker on the planet. Fewer moving parts, stronger components and intelligent design that protects your investment in the harshest weather are but a few of the innovative differences that keep your system running flawlessly all day and you resting easy at night.

ARRAY TECHNOLOGIES, INC.

3901 Midway Place NE
Albuquerque, NM 87109 USA

+1 505.881.7567
+1 855.TRACKPV (872.2578)
+1 505.881.7572

sales@arraytechinc.com

arraytechinc.com

30 GW YEARS OF OPERATION

167× FEWER COMPONENTS THAN COMPETITIVE TRACKERS

STRUCTURAL & MECHANICAL FEATURES/SPECIFICATIONS

Tracking Type	Horizontal single axis
MW per Drive Motor	Up to 1.152 MW DC using 360W crystalline
String Voltage	Up to 1,500V DC
Maximum Linked Rows	32
Maximum Row Size	100 modules crystalline, and bifacial; 240 modues First Solar 4; 78 modules First Solar 6
Drive Type	Rotating gear drive
Motor Type	2 HP, 3 PH, 480V AC
Motors per 1 MW DC	Less than 1
East-West/North-South Dimensions	Site / module specific
Array Height	54" standard, adjustable (48" min height above grade)
Ground Coverage Ratio (GCR)	Flexible, 28–45% typical, others supported on request
Terrain Flexibility	N-S tolerance: 0° - 8.5° standard, 15° optional; Driveline: 40° in all directions
Modules Supported	Most commercially available, including frameless crystalline, thin film, and bifacial
Tracking Range of Motion	± 52° standard, ± 62° optional
Operating Temperature Range	-30°F to 140°F (-34°C to 60°C)
Module Configuration available.	Single-in-portrait standard, including bifacial. Four-in-landscape (thin film) also
Module Attachment	Single fastener, high-speed mounting clamps with integrated grounding. Traditional rails for crystalline in landscape, custom racking for thin film and frameless crystalline and bifacial per manufacturer specs.
Materials	Pre-galv steel, HDG steel and aluminum structural members, as required
Allowable Wind Load (ASCE 7-10)	140 mph, 3-second gust exposure C
Wind Protection	Passive mechanical system protects against wind damage — no power required

ELECTRONIC CONTROLLER FEATURES/SPECIFICATIONS

Solar Tracking Method	Algorithm with GPS input
Control Electronics	MCU plus Central Controller
Data Feed	MODBUS over Ethernet to SCADA system
Night-time Stow	Yes
Tracking Accuracy	± 2° standard, field adjustable
Backtracking	Yes

INSTALLATION, OPERATION & MAINTENANCE

Software	SmarTrack optimization available
PE Stamped Structural Calculations & Drawings	Yes
On-site Training and System Commissioning	Yes
Connection Type	Fully bolted connections, no welding
In-field Fabrication Required	No
Dry Slide Bearings and Articulating Driveline Connections	No lubrication required
Scheduled Maintenance	None required
Module Cleaning Compatibility	Robotic, Tractor, Manual

GENERAL

Annual Power Consumption (kWh per 1 MW)	400 kWh per MW per year, estimated

Array Technologies, Inc. reserves the right to make changes without notice.

Exhibit G

RSG Solar Sound Study, Table 5

TABLE 5: DISCRETE SOUND PROPAGATION MODELING RESULTS

Receiver ID	Sound Pressure Level (dBA)		Relative Height (m)	Coordinates (UTM NAD83 Z16N)			Distance to inverter	Distance to Tracking Motor
	Day	Night		X (m)	Y (m)	Z (m)	ft	ft
R001	13	13	4	661698	4162376	296	10,757.12	10,757.12
R002	12	12	4	661919	4162324	290	11,256.70	11,256.70
R003	12	12	4	661959	4162286	289	11,432.01	11,432.01
R004	12	12	4	662174	4162212	286	12,007.05	12,007.05
R005	12	12	4	661964	4162215	291	11,641.19	11,641.19
R006	10	10	4	663102	4162408	272	13,437.03	13,437.03
R007	10	10	4	663159	4162786	277	12,736.70	12,736.70
R008	13	13	4	661625	4162146	300	11,332.27	11,332.27
R009	12	12	4	661464	4162010	290	11,440.65	11,440.65
R010	13	12	4	661391	4161918	299	11,435.91	11,435.91
R011	12	12	4	661624	4161965	292	11,872.77	11,872.77
R012	12	12	4	661376	4161832	295	11,578.32	11,578.32
R013	12	12	4	661493	4161818	286	11,904.50	11,904.50
R014	12	12	4	661376	4161758	290	11,736.55	11,736.55
R015	13	13	4	661277	4161825	297	11,346.54	11,346.54
R016	13	13	4	661257	4161808	297	11,333.63	11,333.63
R017	13	13	4	661240	4161790	297	11,333.69	11,333.69
R018	13	13	4	661216	4161771	298	11,318.60	11,318.60
R019	13	13	4	661200	4161756	298	11,311.75	11,311.75
R020	13	13	4	661180	4161742	298	11,296.27	11,296.27
R021	13	13	4	661157	4161722	299	11,285.82	11,285.82
R022	13	13	4	661138	4161710	299	11,270.47	11,270.47
R023	13	13	4	661118	4161695	299	11,256.34	11,256.34
R024	13	13	4	661094	4161675	298	11,248.42	11,248.42
R025	13	13	4	661071	4161656	297	11,238.13	11,238.13
R026	13	12	4	661041	4161614	296	11,269.19	11,269.19
R027	13	13	4	660874	4161716	298	10,651.59	10,651.59
R028	12	12	4	660993	4161557	293	11,298.98	11,298.98
R029	17	17	4	660801	4163169	298	7,234.28	7,234.28
R030	18	18	4	660628	4163232	297	6,896.01	6,896.01
R031	19	19	4	660454	4163394	297	6,271.70	6,271.70
R032	19	19	4	660470	4163453	297	6,087.20	6,087.20
R033	20	19	4	660474	4163511	298	5,903.23	5,903.23
R034	19	19	4	660473	4163485	297	5,986.63	5,986.63
R035	20	20	4	660463	4163593	297	5,631.94	5,631.94
R036	20	20	4	660414	4163542	299	5,773.19	5,773.19
R037	20	20	4	660389	4163545	298	5,752.60	5,752.60
R038	20	20	4	660363	4163548	297	5,734.15	5,734.15
R039	21	21	4	661011	4164178	291	4,528.26	4,528.26

R040	23	23	4	660642	4164349	291	3,418.59	3,418.59
R041	22	22	4	660869	4164353	285	3,790.80	3,790.80
R042	25	25	4	660393	4164424	296	2,909.03	2,909.03
R043	24	24	4	660310	4164355	297	3,085.16	3,085.16
R044	17	17	4	659274	4162172	260	6,643.21	6,643.21
R045	18	18	4	659198	4162153	265	6,633.68	6,633.68
R046	19	19	4	659189	4162500	289	5,533.80	5,533.80
R047	33	33	4	660755	4165691	277	1,396.78	1,396.78
R048	31	31	4	660733	4165584	277	1,726.97	1,726.97
R049	32	32	4	659000	4166192	278	1,559.51	1,559.51
R050	42	42	4	658380	4165295	293	496.56	496.56
R051	41	41	4	658353	4165226	289	463.89	463.89
R052	39	39	4	658427	4165019	291	557.43	557.43
R053	34	34	4	658243	4165396	291	757.39	757.39
R054	37	37	4	658427	4164969	291	714.48	714.48
R055	33	33	4	658419	4164871	288	1,031.90	1,031.90
R056	36	36	4	658587	4164401	278	852.11	852.11
R057	37	37	4	658686	4164319	279	669.28	669.28
R058	37	37	4	658882	4164126	280	671.36	671.36
R059	38	38	4	658831	4164008	280	597.38	597.38
R060	35	35	4	658684	4163894	268	697.16	697.16
R061	33	33	4	658770	4163823	267	977.95	977.95
R062	42	42	4	658213	4164357	292	377.51	377.51
R063	36	36	4	658122	4164506	292	756.93	756.93
R064	32	32	4	658064	4164436	289	862.38	862.38
R065	34	34	4	658205	4164666	293	971.69	971.69
R066	34	34	4	658109	4164605	292	986.23	986.23
R067	34	34	4	658079	4164566	291	982.37	982.37
R068	32	32	4	658051	4164552	290	1,031.83	1,031.83
R069	30	30	4	657953	4164492	291	1,257.65	1,257.65
R070	30	29	4	657961	4164407	290	1,192.28	1,192.28
R071	26	26	4	657666	4164031	283	2,454.85	2,454.85
R072	26	26	4	657545	4163889	282	2,641.11	2,641.11
R073	26	26	4	657623	4163648	278	2,596.65	2,596.65
R074	28	28	4	657410	4163576	279	1,867.75	1,867.75
R075	28	28	4	657369	4162869	279	2,597.85	2,597.85
R076	27	27	4	657333	4162691	273	2,400.21	2,400.21
R077	27	26	4	657278	4162522	268	2,268.18	2,268.18
R078	26	26	4	657258	4162445	268	2,269.20	2,269.20
R079	26	26	4	657223	4162344	267	2,294.05	2,294.05
R080	27	27	4	657194	4162260	267	2,350.17	2,350.17
R081	26	26	4	657189	4162229	267	2,397.24	2,397.24
R082	26	26	4	657188	4162191	266	2,470.14	2,470.14
R083	23	23	4	657316	4162028	253	3,137.67	3,137.67
R084	26	26	4	658694	4163586	263	1,709.44	1,709.44
R085	21	21	4	658593	4163008	262	3,616.10	3,616.10
R086	33	33	4	656901	4162578	273	1,022.49	1,022.49
R087	27	27	4	657026	4162493	258	1,500.81	1,500.81

R088	32	32	4	656634	4162338	261	1,074.44	1,074.44
R089	29	29	4	656268	4162231	253	1,787.81	1,787.81
R090	34	33	4	654884	4162763	242	976.53	976.53
R091	32	31	4	654929	4162662	242	1,223.47	1,223.47
R092	33	32	4	654838	4162696	241	1,246.45	1,246.45
R093	32	32	4	654809	4162690	240	1,312.36	1,312.36
R094	32	32	4	654818	4162676	240	1,335.11	1,335.11
R095	33	32	4	654385	4163562	243	1,922.26	1,922.26
R096	34	33	4	654436	4163578	245	1,754.05	1,754.05
R097	33	33	4	656070	4164609	280	1,187.65	1,187.65
R098	33	33	4	656042	4164601	280	1,240.24	1,240.24
R099	42	42	4	656098	4164864	256	381.74	381.74
R100	39	39	4	656311	4165013	263	487.30	487.30
R101	36	36	4	655611	4164963	250	525.69	525.69
R102	37	37	4	655510	4165045	248	682.30	682.30
R103	31	31	4	654957	4162610	242	1,365.49	1,365.49
R104	26	26	4	657126	4162129	258	2,457.37	2,457.37
R105	29	29	4	657928	4164330	292	1,314.47	1,314.47
R106	13	13	4	661885	4162408	294	10,962.46	10,962.46