APPENDIX A. DOCUMENTED CATEX

Airport sponsors may use this form for projects eligible for a categorical exclusion (CATEX) that have greater potential for extraordinary circumstances or that otherwise require additional documentation, as described in the Environmental Orders (FAA Order 1050.1F and FAA Order 5050.4B).

To request a CATEX determination from the FAA, the sponsor should review potentially affected environmental resources, review the requirements of the applicable special purpose laws, and **consult with the Airports District Office or Regional Airports Division Office staff** about the type of information needed. The form and supporting documentation should be completed in accordance with the provisions of FAA Order 5050.4B, paragraph 302b, and submitted to the appropriate FAA Airpor5ts District/Division Office. The CATEX cannot be approved until all information/documentation is received and all requirements have been fulfilled.

Name of Airport, LOC ID, and location:

Airport: St. Louis Lambert International Airport

LOC ID: KSTL

Location: St. Louis, Missouri

Project Title:

Ameren Lambert Community Solar Energy Center

Give a brief, but complete description of the proposed project, including all project components, justification, estimated start date, and duration of the project. Include connected actions necessary to implement the proposed project (including but not limited to moving NAVAIDs, change in flight procedures, haul routes, new material or expanded material sources, staging or disposal areas). Attach a sketch or plan of the proposed project. Photos can also be helpful.

The Union Electric Company (dba Ameren Missouri) proposes to construct a solar farm capable of generating 1-megawatt of electricity at St. Louis Lambert International Airport. (see Exhibit A project narrative)

The proposed project is independent of any other airport action. The airport will not be a recipient of the energy produced by the installation nor is there a proposed airport tenant project that would be dependent on the energy.

The project is responsive to 4 CSR 240-20.100 Missouri Renewable Energy Standard. The Missouri Department of Energy requires electric utilities to produce a minimum of 2% generated by solar power to be made available for retail energy sales.

The project would include three (3) sub-arrary fields comprised of 80 racks with 2,800 solar modules and associated inverters and condutors. The sub-array racks would be fixed and ground mounted on metal pilings.

The electrricity produced by the system would connect to the energy grid via an existing Ameren Missouri elecricity line adjacent to the project site.

The solar farm would be bounded by chain-link fencing with lighting and security monitoring equipment.

There are no connected actions necessary for implementation. An access road, storm water drainage features, and suitable means for connecting to the energy power grid exist at the site.

Project start would occur second quarter 2018 with substantial completion in the third quarter and commissioning fourth quarter.

Give a brief, but complete, description of the proposed project area. Include any unique or natural features within or surrounding airport property.

The project area is a 2.99 acre site (as measured by the fence line) in the north quadrant of the St. Louis Lambert International Airport. The site is located outside the Airport Operations Area. (see Exhibit A project narrative).

The area is bounded by rights-of-way for the Missouri Bottom Road (south) and the Norfolk Southern Rail Road (north). To the west is an existing Ameren Missouri easement containing a 34kV electricity line. To the east is an electricity sub-station that energies airfield lighting and FAA equipment.

The topography consists of two (2) terraces with slopes of about 5:1. The upper terrace is heavily vegetated and shared with the Norfolk Southern right-of-way. The slopes and lower terrace are open and grass covered.

General elevations range from 609 feet MSL at the upper terrace, 585 feet MSL at the lower terrace and 556 feet MSL at Missouri Bottom Road.

Identify the appropriate CATEX paragraph(s) from Order 1050.1F (paragraph 5-6.1 through 5-6.6) or 5050.4B (Tables 6-1 and 6-2) that apply to the project. Describe if the project differs in any way from the specific language of the CATEX or examples given as described in the Order.

Order 1050.1F (paragraph 5-6.4) for Facility Siting, Construction, and Maintenance.

Federal release of airport land for non-aeronautical purpose.

Proposed action having little or no potential for extraordinary circumstances.

The circumstances one must consider when documenting a CATEX are listed below along with each of the impact categories related to the circumstance. Use FAA Environmental Orders 1050.1F, 5050.4B, and the Desk Reference for Airports Actions, as well as other guidance documents to assist you in determining what information needs to be provided about these resource topics to address potential impacts. Keep in mind that both construction and operational impacts must be included. Indicate whether or not there would be any effects under the particular resource topic and, **if needed**, cite available references to support these conclusions. Additional analyses and inventories can be attached or cited as needed.

5-2.b(1) National Historic Preservation Act (NHPA) resources

	YES	NO
Are there historic/cultural resources listed (or eligible for listing) on the National Register of Historic Places located in the Area of Potential Effect? If yes, provide a record of the historic and/or cultural resources located therein and check with your local Airports Division/District Office to determine if a Section 106 finding is required. The National Park Service registry of historic places and the MDNR SHPO registry do not identify any historic places on or near the proposed project site. The closest registry site is the Curtiss Wright Aeroplane Facility located at 130 Banshee Road, which is approximately 3,600 linear feet east of the project site.	☐	☒
Does the project have the potential to cause effects? If yes, describe the nature and extent of the effects.	☐	☒
Is the project area undisturbed? If not, provide information on the prior disturbance (including type and depth of disturbance, if available) The City of St. Louis acquired the project area in 1969. At the time, the area was relatively vacant and open. From 2002 through 2005, US Highway 67 and Missouri Bottom Road were relocated as part of the airport W1W Expansion Program. Spoil from the roadway cuts was deposited in the project area and the current slopes and terraces were formed. Depth of the fill varies across the site and generally ranges between 20 and 30 feet. (see Exhibit B aerial history and Exhibit G soil report and ground water sampling).	☐	☒
Will the project impact tribal land or land of interest to tribes? If yes, describe the nature and extent of the effects and provide information on the tribe affected. Consultation with their THPO or a tribal representative along with the SHPO may be required.	☐	☒

5-2.b(2) Department of Transportation Act Section 4(f) and 6(f) resources

	YES	NO
Are there any properties protected under Section 4(f) (as defined by FAA Order 1050.1F) in or near the project area? This includes publicly owned parks, recreation areas, and wildlife or waterfowl refuges of national, state or local significance or land from a historic site of national, state or local significance. The project site is owned by the City of St. Louis and located within the municipal boundary of the City of Bridgeton, Missouri. The nearest public park is the Berry Hill Golf Couse owned by the City of Bridgeton, which is located 4,200 linear feet west of the project site.	☐	☒
Will project construction or operation physically or constructively "use" any Section 4(f) resource? If yes, describe the nature and extent of the use and/or impacts, and why there are no prudent and feasible alternatives. See 5050.4B Desk Reference Chapter 7.	☐	☒
Will the project affect any recreational or park land purchased with Section 6(f) Land and Water Conservation Funds? If so, please explain, if there will be impacts to those properties.	☐	☒

5-2.b(3) Threatened or Endangered Species

	YES	NO
Are there any federal or state listed endangered, threatened, or candidate species or designated critical habitat in or near the project area? This includes species protected by individual statute, such as the Bald Eagle. The US Fish & Wildlife Service Information, Planning and Conservation system identified three species of endangered bats that may be present at or near the project area: Indiana bat, gray bat, and northern long-eared bat. Also identified was the flora species decurrent false aster.	☐	☒

	YES	NO
Does the project affect or have the potential to affect, directly or indirectly, any federal or state-listed, threatened, endangered or candidate species, or designated habitat under the Endangered Species Act? If yes, Section 7 consultation between the FAA and the US Fish & Wildlife Service, National Marine Fisheries Service, and/or the appropriate state agency will be necessary. Provide a description of the impacts and how impacts will be avoided, minimized, or mitigated. Provide the Biological Assessment and Biological Opinion, if required. The project site is cleared and contains no designated habitat that would be suitable for supporting the endangered bat species. The site is primarily a maintained and manicured turf grass field. In contrast the endangered bat species require wood thickets that are typical of an eastern Missouri forest. The decurrent false aster is a perennial plant found in moist, sand floodplains and wetlands associated with rivers that provide periodic flooding. The habitat for this flower is not found at the project site.	☐	☒
Does the project have the potential to take birds protected by the Migratory Bird Treaty Act? Describe steps to avoid, minimize, or mitigate impacts (such as timing windows determined in consultation with the US Fish & Wildlife Service).	☐	☒

5-2.b (4) Other Resources

Items to consider include:

a. Fish and Wildlife Coordination Act	YES	NO
Does the project area contain resources protected by the Fish and Wildlife Coordination Act? If yes, describe any impacts and steps taken to avoid, minimize, or mitigate impacts.	☐	☒
b. Wetlands and Other Waters of the U.S.	**YES**	**NO**
Are there any wetlands or other waters of the U.S. in or near the project area?	☐	☒
Has wetland delineation been completed within the proposed project area? If yes, please provide U.S. Army Corps of Engineers (USACE) correspondence and jurisdictional determination. If delineation was not completed, was a field check done to confirm the presence/absence of wetlands or other waters of the U.S.? If no to both, please explain what methods were used to determine the presence/absence of wetlands. Delineation with the USACE was not undertaken. Field check of the site verified no standing water or vegetation common to wetlands. The USFWS National Wetland Inventory suggested a small wetland of less than one-half acre located 900 linear feet northeast of the site. Field check found no evidence of the wetland and the area occupied by a large industrial building (see Exhibit C USFWS wetland inventory).	☐	☒
If wetlands are present, will the project result in impacts, directly or indirectly (including tree clearing)? Describe any steps taken to avoid, minimize or mitigate the impact.	☐	☒
Is a USACE Clean Water Act Section 404 permit required? If yes, does the project fall within the parameters of a general permit? If so, which general permit? The project does not involve grading, filling, or dredging operations within stream channels or wetlands. Adjacent to the project site is an existing man-made, drainage channel lined with rip-rap and stablised by shrubs. The channel drains storm water runoff from the project site and elsewhere to the Airport's north stormwater detention basin.	☐	☒

c. Floodplains	YES	NO
Will the project be located in, encroach upon or otherwise impact a floodplain? If yes, describe impacts and any agency coordination or public review completed including coordination with the local floodplain administrator. Attach the FEMA map if applicable and any documentation.	☐	☒
d. Coastal Resources	**YES**	**NO**
Will the project occur in or impact a coastal zone as defined by the State's Coastal Zone Management Plan? If yes, discuss the project's consistency with the State's CZMP. Attach the consistency determination if applicable.	☐	☒
Will the project occur in or impact the Coastal Barrier Resource System as defined by the US Fish and Wildlife Service?	☐	☒
e. National Marine Sanctuaries	**YES**	**NO**
Is a National Marine Sanctuary located in the project area? If yes, discuss the potential for the project to impact that resource.	☐	☒
f. Wilderness Areas	**YES**	**NO**
Is a Wilderness Area located in the project area? If yes, discuss the potential for the project to impact that resource.	☐	☒
g. Farmland	**YES**	**NO**
Is there prime, unique, state, or locally important farmland in/near the project area? Describe any significant impacts from the project.	☐	☒
Does the project include the acquisition and conversion of farmland? If farmland will be converted, describe coordination with the US Natural Resources Conservation and attach the completed Form AD-1006.	☐	☒

h. Energy Supply and Natural Resources	YES	NO
Will the project change energy requirements or use consumable natural resources either during construction or during operations? Construction of the project will have little impact on energy supplies or natural resources. Consumable energy (diesel fuel and electricity) will be required during construction, but the consumption is not anticipated to cause a significant impact to supply. The final product will be a net energy producer.	☒	☐
Will the project change aircraft/vehicle traffic patterns that could alter fuel usage either during construction or operations?	☐	☒
i. Wild and Scenic Rivers	**YES**	**NO**
Is there a river on the Nationwide Rivers Inventory, a designated river in the National System, or river under State jurisdiction (including study or eligible segments) near the project?	☐	☒
Will the project directly or indirectly affect the river or an area within ¼ mile of its ordinary high water mark?	☐	☒
j. Solid Waste Management	**YES**	**NO**
Does the project (either the construction activity or the completed, operational facility) have the potential to generate significant levels of solid waste? If so, discuss how these will be managed. Solid waste produced during construction is expected to be nominal and will consist of left-over concrete from cassion footings, waste wire and metal. The amount of soild waste is expected to be nominal and will be disposed of in an appropriate landfill. Post construction the project is not expected to produce any solid waste.	☐	☒

5-2.b(5) Disruption of an Established Community

	YES	NO
Will the project disrupt a community, planned development or be inconsistent with plans or goals of the community? The project site is within the municipal jurisdiction fo the City of Bridgeton, MO. It is zoned M-1 Manufacturing District Limited and the proposed solar farm conforms to the zoning designation. (see Exhibit D zoning)	☐	☒
Are residents or businesses being relocated as part of the project?	☐	☒

5-2.b(6) Environmental Justice

	YES	NO
Are there minority and/or low-income populations in/near the project area? The project site is in an industrial locale. The nearest residential sub-divisons are one mile distant, north and south, from the site in the cities of Hazelwood and Bridgeton.	☐	☒
Will the project cause any disproportionately high and adverse impacts to minority and/or low-income populations? Attach census data if warranted.	☐	☒

5-2.b(7) Surface Transportation

	YES	NO
Will the project cause a significant increase in surface traffic congestion or cause a degradation of level of service provided?	☐	☒
Will the project require a permanent road relocation or closure? If yes, describe the nature and extent of the relocation or closure and indicate if coordination with the agency responsible for the road and emergency services has occurred.	☐	☒

5-2.b(8) Noise

	YES	NO
Will the project result in an increase in aircraft operations, nighttime operations, or change aircraft fleet mix?	☐	☒
Will the project cause a change in airfield configuration, runway use, or flight patterns either during construction or after the project is implemented?	☐	☒
Does the forecast exceed 90,000 annual propeller operations, 700 annual jet operations or 10 daily helicopter operations or a combination of the above? If yes, a noise analysis may be required if the project would result in a change in operations.	☐	☒
Has a noise analysis been conducted, including but not limited to generated noise contours, a specific point analysis, area equivalent method analysis, or other screening method. If yes, provide that documentation.	☐	☒
Could the project have a significant impact (DNL 1.5 dB or greater increase) on noise levels over noise sensitive areas within the 65+ DNL noise contour?	☐	☒

5-2.b(9) Air Quality

	YES	NO
Is the project located in a Clean Air Act non-attainment or maintenance area? As of September 30, 2017, St. Louis County is designated a marginal non-attainment area for 8-hour ozone and a moderate non-attainment area for PM-2.5.	☒	☐

	YES	NO
If yes, is it listed as exempt, presumed to conform or will emissions (including construction emissions) from the project be below *de minimis* levels (provide the paragraph citation for the exemption or presumed to conform list below, if applicable) Is the project accounted for in the State Implementation Plan or specifically exempted? Attach documentation. Exempt -- a renewable energy -- and presumed to conform. The proposed project will create no greenhouse gas emissions. Calculations indicate the project is anticipated to offset 1,072.9 tonnes of carbon dioxide per annum. (see Exhibit E greenhouse gas reduction)	☒	☐
Does the project have the potential to increase landside or airside capacity, including an increase of surface vehicles?	☐	☒
Could the project impact air quality or violate local, State, Tribal or Federal air quality standards under the Clean Air Act Amendments of 1990 either during construction or operations? The project is expected to produce a positive impact on air quality via reduction of greenhouse gas emissions.	☐	☒

5-2.b (10) Water Quality

	YES	NO
Are there water resources within or near the project area? These include groundwater, surface water (lakes, rivers, etc.), sole source aquifers, and public water supply. If yes, provide a description of the resource, including the location (distance from project site, etc.).	☐	☒
Will the project impact any of the identified water resources either during construction or operations? Describe any steps that will be taken to protect water resources during and after construction.	☐	☒
Will the project increase the amount or rate of stormwater runoff either during construction or during operations? Describe any steps that will be taken to ensure it will not impact water quality.	☐	☒

	YES	NO
Does the project have the potential to violate federal, state, tribal or local water quality standards established under the Clean Water and Safe Drinking Water Acts?	☐	☒
Are any water quality related permits required? If yes, list the appropriate permits. The project is within the municipal boundary of Bridgeton, MO. The City has determined that the project will not have to be responsive to the City MS-4 permit. (see Exhibit F MS4 and soil disturbance determination).	☐	☒

5-2.b(11) Highly Controversial on Environmental Grounds

	YES	NO
Is the project highly controversial? The term "highly controversial" means a substantial dispute exists as to the size, nature, or effect of a proposed federal action. The effects of an action are considered highly controversial when reasonable disagreement exists over the project's risks of causing environmental harm. Mere opposition to a project is not sufficient to be considered highly controversial on environmental grounds. Opposition on environmental grounds by a federal, state, or local government agency or by a tribe or a substantial number of the persons affected by the action should be considered in determining whether or not reasonable disagreement exists regarding the effects of a proposed action.	☐	☒

5-2.b(12) Inconsistent with Federal, State, Tribal or Local Law

	YES	NO
Will the project be inconsistent with plans, goals, policy, zoning, or local controls that have been adopted for the area in which the airport is located?	☐	☒
Is the project incompatible with surrounding land uses?	☐	☒

5-2 .b (13) Light Emissions, Visual Effects, and Hazardous Materials

a. Light Emissions and Visual Effects	YES	NO
Will the proposed project produce light emission impacts?	☐	☒
Will there be visual or aesthetic impacts as a result of the proposed project and/or have there been concerns expressed about visual/aesthetic impacts? The solar arrays were modeled for potential glare. Using Solar Forge, an approved derivation of the SGHAT model, it was determined that glare emenating from the project would not produce adverse impacts. (see Exhibit G glare report).	☒	☐
b. Hazardous Materials	**YES**	**NO**
Does the project involve or affect hazardous materials?	☐	☒
Will construction take place in an area that contains or previously contained hazardous materials? Soil borings and ground water samples were taken across the site. Testing was performed for polychlorinated biphenyls, metals and dissolved metals, volatile organic compounds, and polycyclic aromatic hydrocarbons. No sample result(s) exceeded the threshold limit for the material tested. (see Exhibit H soil report and ground water sampling)	☐	☒
If the project involves land acquisition, is there a potential for this land to contain hazardous materials or contaminants?	☐	☒
Will the proposed project produce hazardous and/or solid waste either during construction or after? If yes, how will the additional waste be handled? Solid waste produced during construction is expected to be nominal and will consist of left-over concrete from piling footings, waste wire and metal. The waste will be recycled wherever possible and the remainder disposed of in an appropriate landfill. Post construction the project is not expected to produce solid waste.	☒	☐

5-2 .b (14) Public Involvement

	YES	NO
Was there any public notification or involvement? If yes, provide documentation.	☐	☒

5-2 .b (15) Indirect/Secondary/Induced Impacts

	YES	NO
Will the project result in indirect/secondary/induced impacts?	☐	☒
When considered with other past, present, and reasonably foreseeable future projects, on or off airport property and regardless of funding source, would the proposed project result in a significant cumulative impact?	☐	☒

Permits

List any permits required for the proposed project that have not been previously discussed. Provide details on the status of permits.

Construction Permit: to be issued by the City of Bridgeton upon submission of detailed design drawings.

Tenant Construction Permit: to be issued by St. Louis Lambert Airport.

SWPPP: the City of Bridgeton has requested construction documents include a storm water pollution prevention plan that demonstrates how silt will be controlled during construction.

Environmental Commitments

List all measures and commitments made to avoid, minimize, mitigate, and compensate for impacts on the environment, which are needed for this project to qualify for a CATEX.

The project site area will be limitied to less than three acres as delineated by the site fence line.

Surface cover for the project site will remain grass and be maintained on a routine basis.

Surface grading will be less than 3,000 square feet and any surface graded will be re-seeded.

No impervious surface will be created. Site access will use an existing gravel driveway.

A project specific SWPPP will implemented for the control of silt and stormwater runoff.

Preparer Information

Point of Contact: same as below			
Address:			
City:		**State:**	**Zip Code:**
Phone:	**Email Address:**		

Signature: _____ Date:

Airport Sponsor Information and Certification (may not be delegated to consultant)

Provide contact information for the designated sponsor point of contact and any other individuals requiring notification of the FAA decision.

Point of Contact: Dana Ryan, Airport Planning Manager		
Address: St. Louis Lambert International Airport, P.O. Box 10212		
City: St. Louis	**State:** MO	**Zip Code:** 63145
Phone Number: 314-551-5027	**Email Address:** dlryan@flystl.com	
Additional Name(s):	**Additional Email Address(es):**	

I certify that the information I have provided above is, to the best of my knowledge, correct. I also recognize and agree that no construction activity, including but not limited to site preparation, demolition, or land disturbance, shall proceed for the above proposed project(s) until FAA issues a final environmental decision for the proposed project(s) and until compliance with all other applicable FAA approval actions (e.g., ALP approval, airspace approval, grant approval) has occurred.

Signature: Dana Ryan Date: January 18, 2018

FAA Decision

Having reviewed the above information, it is the FAA's decision that the proposed project (s) or development warrants environmental processing as indicated below.

Name of Airport, LOC ID, and location:

St. Louis Lambert International Airport (KSTL), St. Louis Missouri

Project Title:

Ameren Lambert Community Solar Energy Center

☒ No further NEPA review required. Project is categorically excluded per (cite applicable 1050.1.F CATEX that applies:) ***5-6.3i - See Below Conditions***

☐..An Environmental Assessment (EA) is required.

☐..An Environmental Impact Statement (EIS) is required.

☐..The following additional documentation is necessary for FAA to perform a complete environmental evaluation of the proposed project.

Name: Scott Tener Title: Environmental Specialist

Responsible FAA Official

Signature: _____ Date: 1/26/18

Conditions:

- Incorporate mitigation measures to avoid construction impacts as required by the State.
- Incorporate into the project design specifications, Best Management Practices as recommended in FAA Advisory Circular 150/5370-10, Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control.
- If archeological remains are uncovered during construction, immediately stop construction and notify us and the State Historic Preservation Office (SHPO). An evaluation of remains may be made along with recommendations for further action.
- If listed species or rare communities are found during the planning or construction phases, contact us and the State. Additional studies and/or mitigation may be required.

Exhibit A Project Narrative

ATTACHMENT C

ST. LOUIS LAMBERT INTERNATIONAL AIRPORT™

Ameren Lambert Community Solar Energy Center

St. Louis Airport Authority
Planning and Development
October 2, 2017
January 4, 2018 Revised

Ameren Lambert Community Solar Energy Center

Purpose and Need

Ameren Missouri, a public utility provider, seeks to construct and operate a solar energy farm at St. Louis Lambert International Airport. The State of Missouri has a Renewable Portfolio Standard for investor-owned utilities to produce renewable energy based on an escalating percentage of retail sales. By 2021 and thereafter the renewable component will be 15%.

Renewable solar energy is included in the Portfolio Standard. The proposed facility at St. Louis Lambert Airport would be a technology demonstrator project. It would be a first-of-kind in St. Louis and would be responsive to State expectations for renewable energy production (4 CSR 240-20.100).

Solar Array (typical)

Project Proposal

The project scope is to design and commission a community solar program for residential and small retail customers. The project envisions a solar installation that would be capable of producing one-megawatt of electricity per annum – enough to power about 100 houses.

Energy would be sold by subscription to individuals and/or companies that seek to display their commitment to sustainability. The energy produced by the facility would go out onto the electricity grid from which blocks of energy would be purchased by the subscribers.

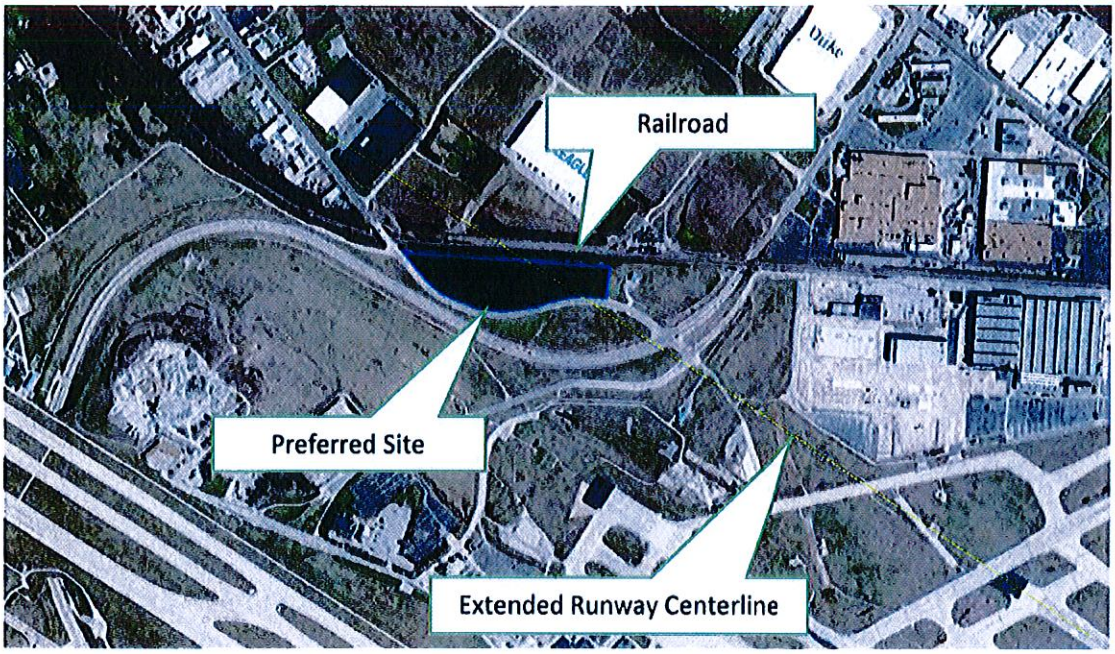
The technology power source would employ a field of photovoltaic modules. Each module would convert sunlight directly to electricity.

Site Selection

An overall site of under 3.0 acres was sought to support the solar project. The array field would occupy less than 2.5 acres and the remaining area would be interstitial space between the arrays.

Ameren Missouri investigated six sites for the installation. A preferred site was found west of the intersection at Missouri Bottom Road and North Lindbergh Blvd. The site is adjacent to an existing Ameren Missouri easement that contains a 34 kV electricity line and will afford direct connection to the energy grid.

Development of the site for uses other than energy production is limited due to topography and slope, and noise intrusion from overflights.



Preferred Site

Airport Layout Plan

The preferred site was acquired by the City of St. Louis in 1969 and has been vacant since being purchased. The acquisition was spurred by threat of sub-development for residential use, which would have been incompatible with airplane activity.

The airport layout plan land use (sheet 35 of 37) describes the site as open/other. There is no prescribed aeronautical or non-aeronautical use identified for the property.

Site Attributes

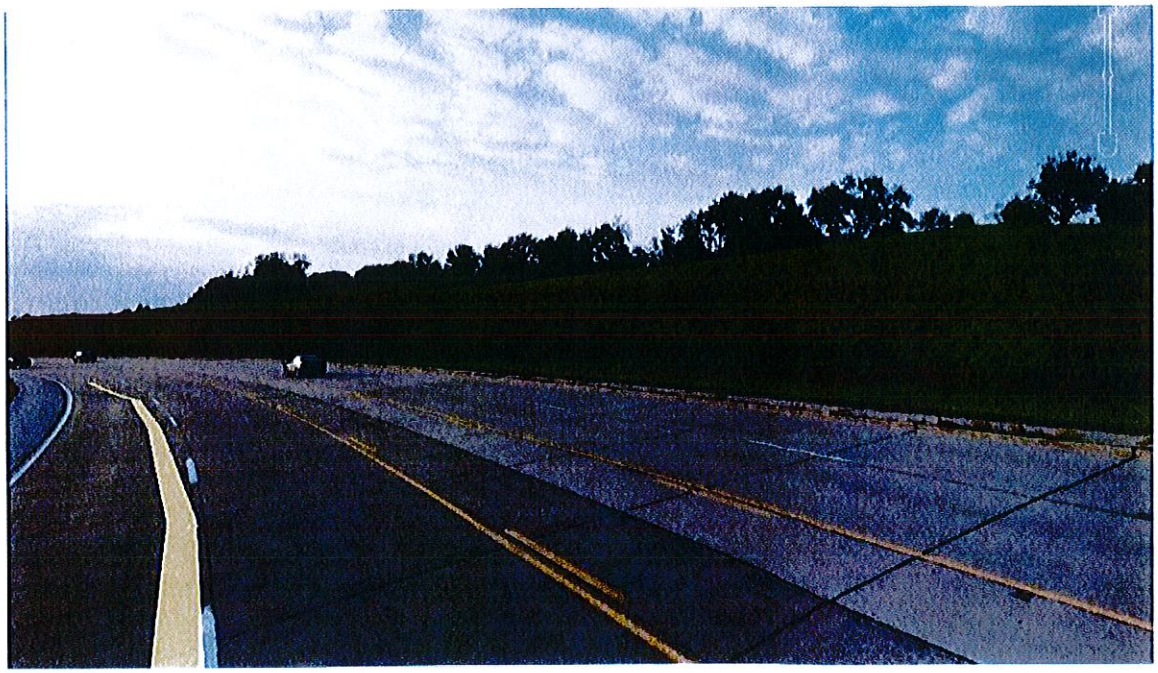
The site is within the City of Bridgeton municipal jurisdiction. Zoning is M-1 Manufacturing, which allows use for public utilities.

The topography is terraced with steep slopes. The ground rises sharply from Missouri Bottom Road at a slope of ±6:1 or 17%. At the midpoint is a narrow, linear, terrace of three acres capable of supporting

the array field. From the mid-terrace the ground again rises at a slope of 6:1 to a summit terrace. The Norfolk-Southern railway lies immediately north of the summit in a cut with a sharp decline of about 30 feet vertically.

From Missouri Bottom Road the site has a maximum vertical rise of 55 feet and the summit elevation is 609 feet (MSL). The mid-terrace elevations range from 570 feet on the west up to 585 feet on the east. Vegetation on the slopes and midpoint terrace is mowed grass, while the summit is trees and shrubs.

Project Site Looking West from Missouri Bottom/N. Lindbergh Intersection



Project Site Looking West from Missouri Bottom Road

The site is located under the extended centerline to Runway 12L/30R and is exposed to direct overflights by commercial jets and Boeing military jets. Landing aircraft routinely fly over the site at heights of roughly 150 to 200 feet above ground level. Noise exposure from jet overflights range 85 to 90 decibels or louder when the military jets are engaged in afterburner.

Project Site Looking East from Missouri Bottom Road

Array/Site Layout

The solar facility will be installed on the mid-level terrace and all structures will be below the summit elevation. The site layout plan is illustrated on the exhibit that follows.

There will be three ground-mount, fixed arrays oriented at three different azimuths. Renewable energy production will utilize approximately 2,800 solar photovoltaic (PV) panels mounted in 80 racks. The energy generated will connect directly to the Ameren Missouri distribution system and support renewable energy production goals.

PV Name	Tilt	Bearing Degrees
West Sub-Array 1	25.0 degrees	202.0 degrees
Central Sub-Array 2	25.0 degrees	165.5 degrees
East Sub-Array 3	25.0 degrees	175.0 degrees

Individual photovoltaic panels will be rack mounted to a frame. The frame will be attached to caissons that will be directly embedded in the ground and the entire system interconnected by cable.

Ground cover would be grass and/or other low growing vegetation.

There will be no changes to the topography. Minor clearing and grubbing of invasive honey suckle shrub will occur and the cleared area will be reseeded with grass.

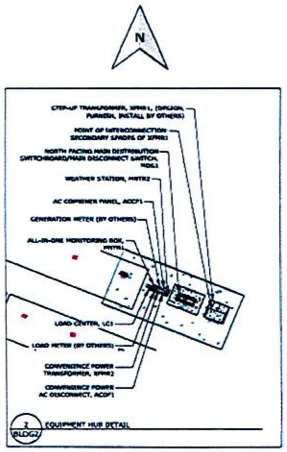
Assets will be protected by an 8-foot chain link fence that will surround the array field with a gate located near the West Sub-Array 1. Security cameras will be also be utilized. Access from Missouri Bottom Road will be via an existing concrete curb cut and rock/gravel driveway.

Final size of the solar field will be 2.99 acres as measured at the fence.

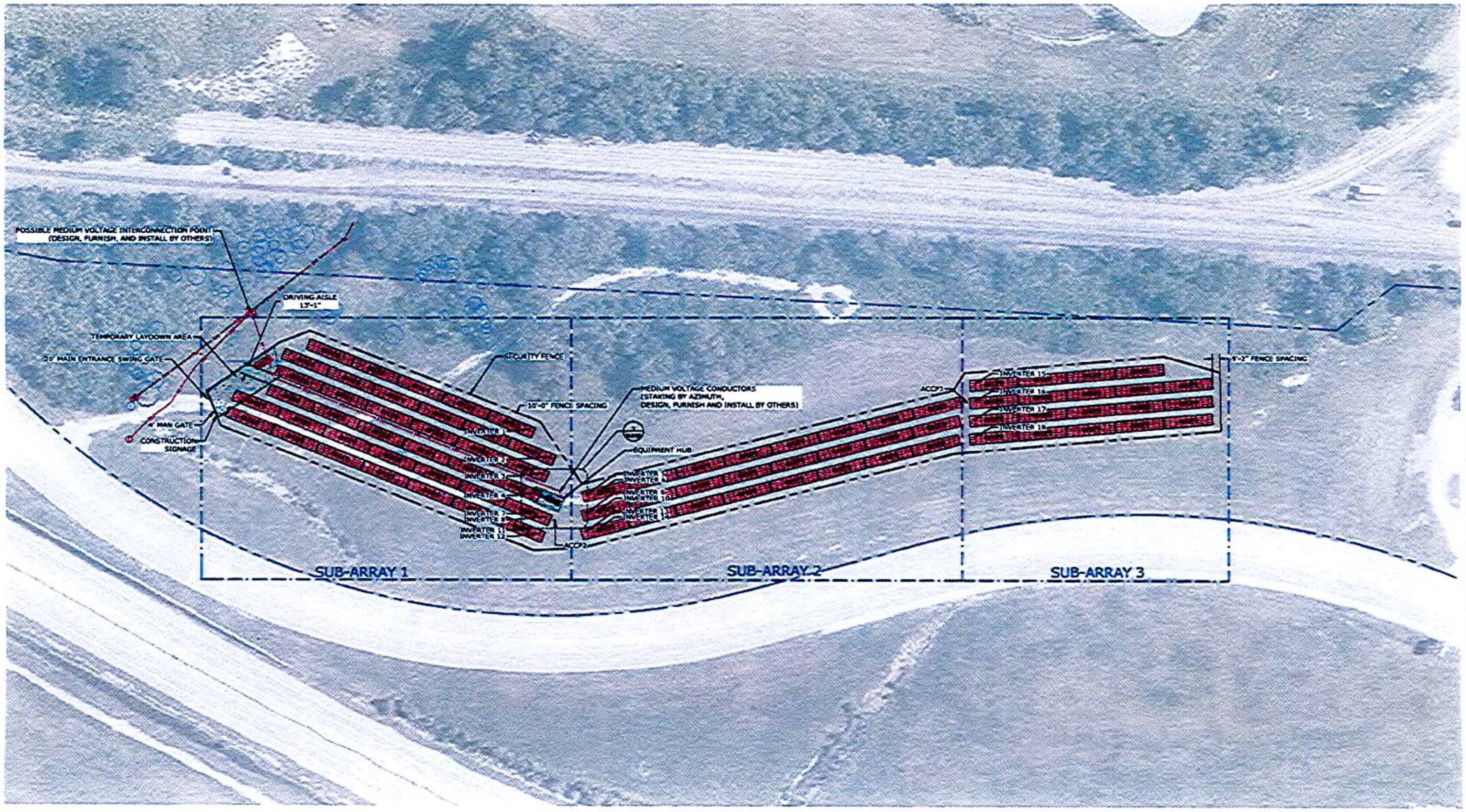
Schedule

- Missouri regulatory activities 4th quarter 2017
- Design 4th quarter 2017 / 1st quarter 2018
- Construction start 2st quarter 2018
- Commissioning 4nd quarter 2018

ATTACHMENT C



2 BLDG2 EQUIPMENT HUB DETAIL



ARRAY SUMMARY	
DC SYSTEM SIZE:	979,200 [kW-DC (STC)]
AC SYSTEM SIZE:	942,000 [KW-AC]
MODULES:	(2,880) 340 WATT MODULE
INVERTERS:	(7) SOLECTRIA PVI-60TL-480
	(9) SOLECTRIA PVI-50TL-480
	(2) SOLECTRIA PVI-36TL-480
STRINGS:	(160) STRINGS OF (18) MODULES
RACKING:	(80) SOLAR FLEX RACK G3L-X 4HX9
TILT ANGLE:	25°

SUB-ARRAY: 1	
DC SYSTEM SIZE:	452,880 [kW-DC (STC)]
AC SYSTEM SIZE:	412,000 [KW-AC]
MODULES:	(1,332) 340 WATT MODULE
INVERTERS:	(4) SOLECTRIA PVI-60TL-480
	(2) SOLECTRIA PVI-50TL-480
	(2) SOLECTRIA PVI-36TL-480
STRINGS:	(74) STRINGS OF (18) MODULES
RACKING:	(37) SOLAR FLEX RACK G3L-X 4HX9
AZIMUTH:	202°

SUB-ARRAY: 2	
DC SYSTEM SIZE:	293,760 [kW-DC (STC)]
AC SYSTEM SIZE:	300,000 [KW-AC]
MODULES:	(864) 340 WATT MODULE
INVERTERS:	(6) SOLECTRIA PVI-50TL-480
STRINGS:	(48) STRINGS OF (18) MODULES
RACKING:	(24) SOLAR FLEX RACK G3L-X 4HX9
AZIMUTH:	165.5°

SUB-ARRAY: 3	
DC SYSTEM SIZE:	232,560 [kW-DC (STC)]
AC SYSTEM SIZE:	230,000 [KW-AC]
MODULES:	(684) 340 WATT MODULE
INVERTERS:	(3) SOLECTRIA PVI-60TL-480
	(1) SOLECTRIA PVI-50TL-480
STRINGS:	(38) STRINGS OF (18) MODULES
RACKING:	(19) SOLAR FLEX RACK G3L-X 4HX9
AZIMUTH:	175°

SHEET LEGEND	
— — —	NEW FENCE
— · —	SUB-ARRAY
— - —	EXISTING OVERHEAD POWER
——	PROPERTY LINE
——	EXISTING GRAVEL ROADWAY
⁚⁚⁚	FABRIC AND ROCK
——	MEDIUM VOLTAGE CONDUCTOR BY OTHERS

OPERATING DIAGRAM

NOTICE OF LIMITED RESPONSIBILITY [illegible]

SCALE	1" = 60'-0"
UNIT NO.	—
DWG. SIZE	"I" ARCH D (24X36)
SUB CLASS	—

MARK UP DRAWING NO. —

SITE LAYOUT PLAN

SITE: AMEREN LAMBERT COMMUNITY SOLAR ENERGY CENTER

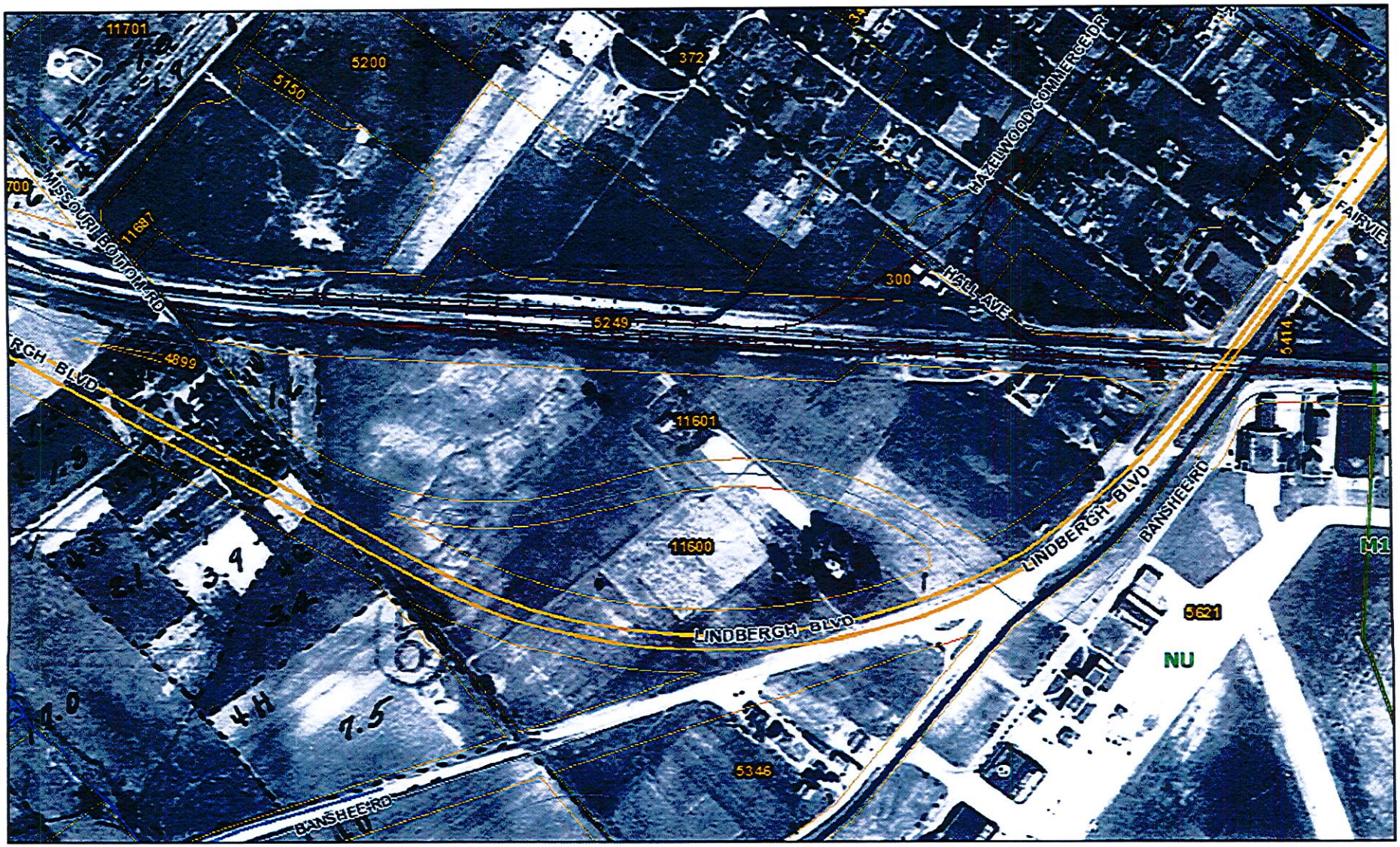
DRAWING NO. XX-DWG-BLDG-000002

REVISION NO. 0

REV.	DATE	PROJECT NO.	DRAFTING DRN	CHK'D	SUPV	ENGR	DESCRIPTION
A	1/30/2017	17841811	CJB	DEB	DAS	ML	PRELIMINARY DESIGN DRAWINGS

Exhibit B Aerial History

11601 Mo Bottom Rd 1937



December 7, 2017

Sales (Last 2 Years)

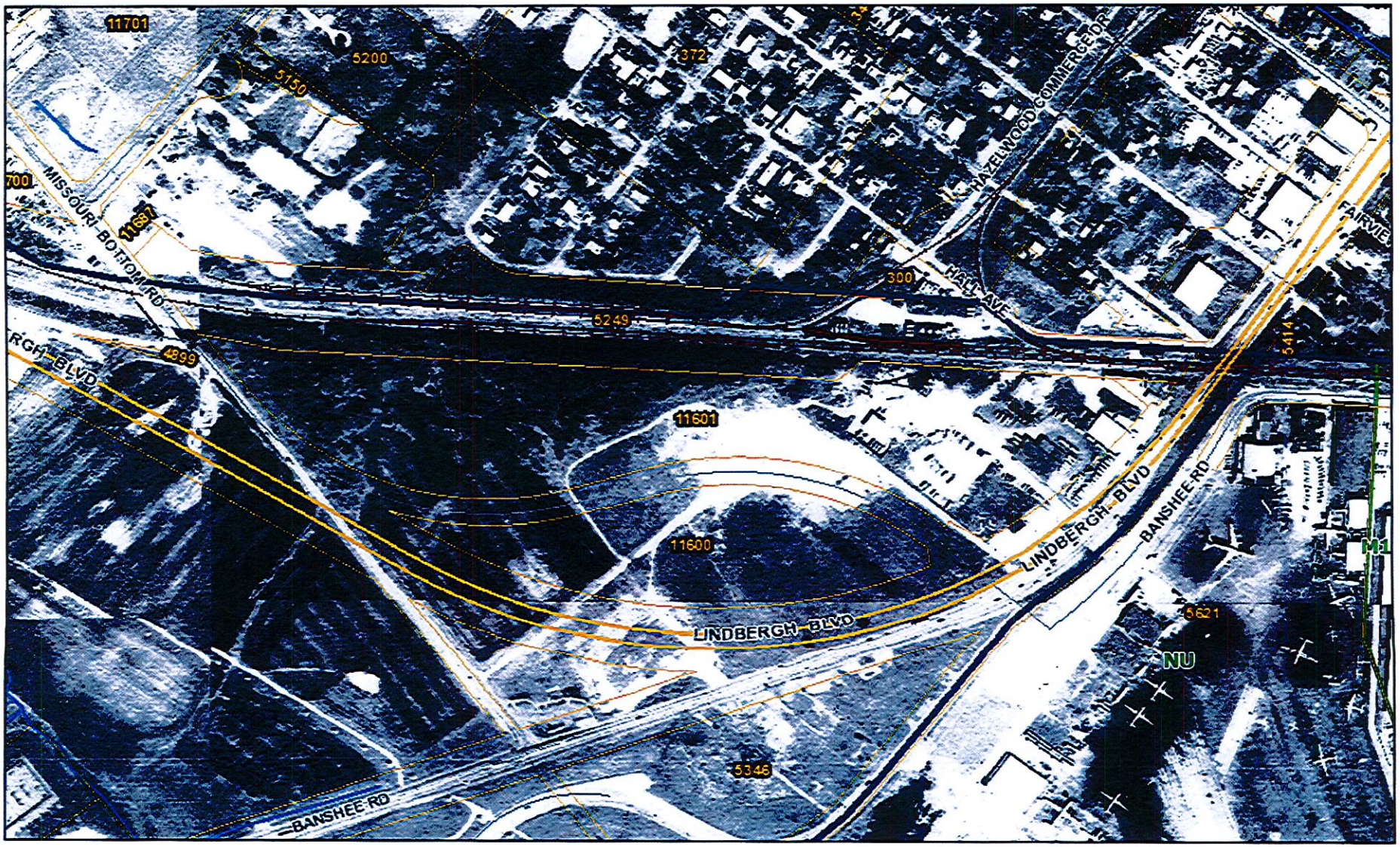
1:4,800

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

ATTACHMENT C

11601 Mo Bottom Rd 1981



December 7, 2017

Sales (Last 2 Years)

1:4,800

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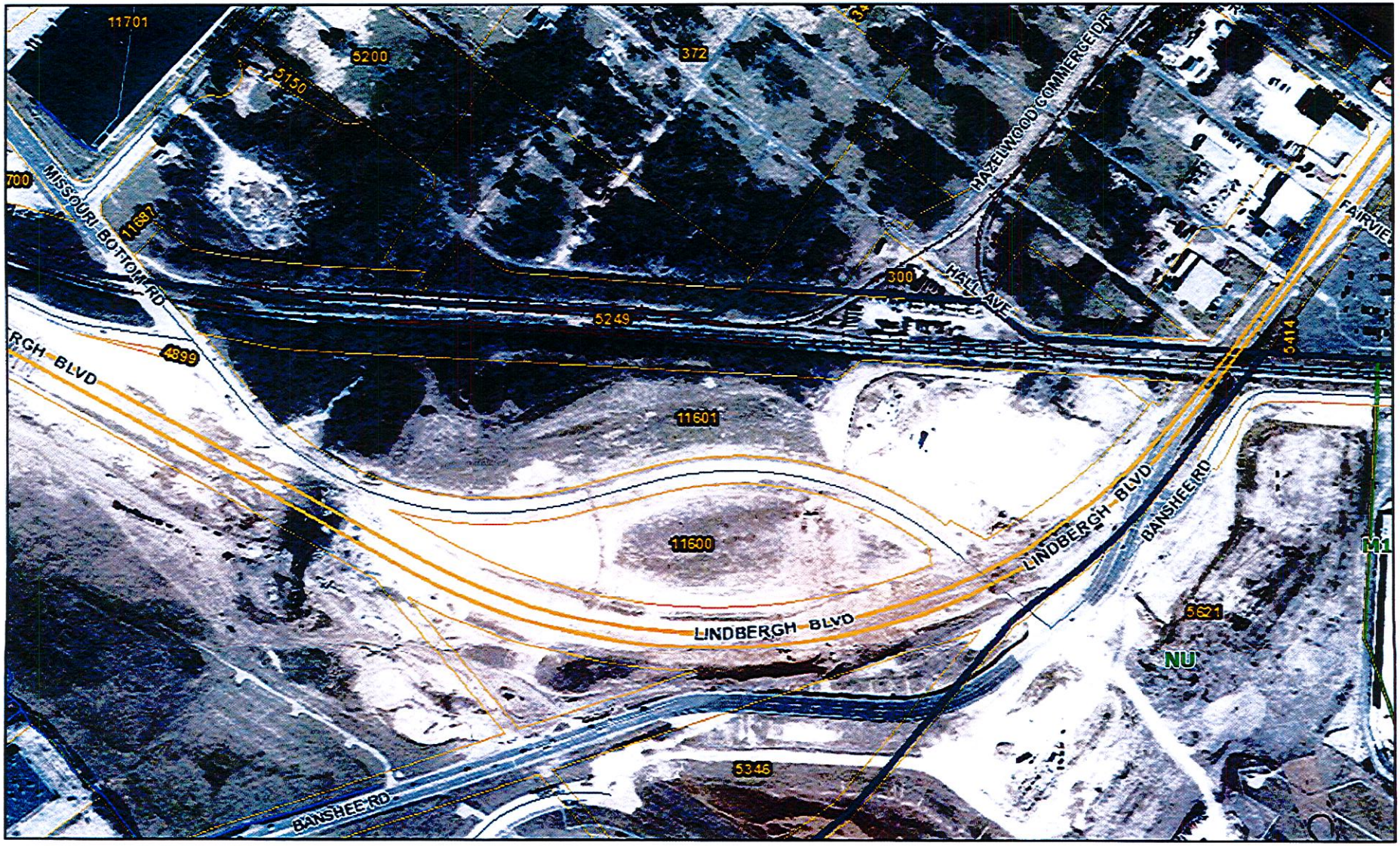
0 0.05 0.1 0.2 km

Created by: St. Louis County GIS Service Center

ATTACHMENT C

11601 Mo Bottom Rd 2004



December 7, 2017

Sales (Last 2 Years)

1:4,800

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

ATTACHMENT C

11601 Mo Bottom Rd 2006

December 7, 2017

Sales (Last 2 Years)

1:4,800

0 0.04 0.08 0.16 mi

0 0.05 0.1 0.2 km

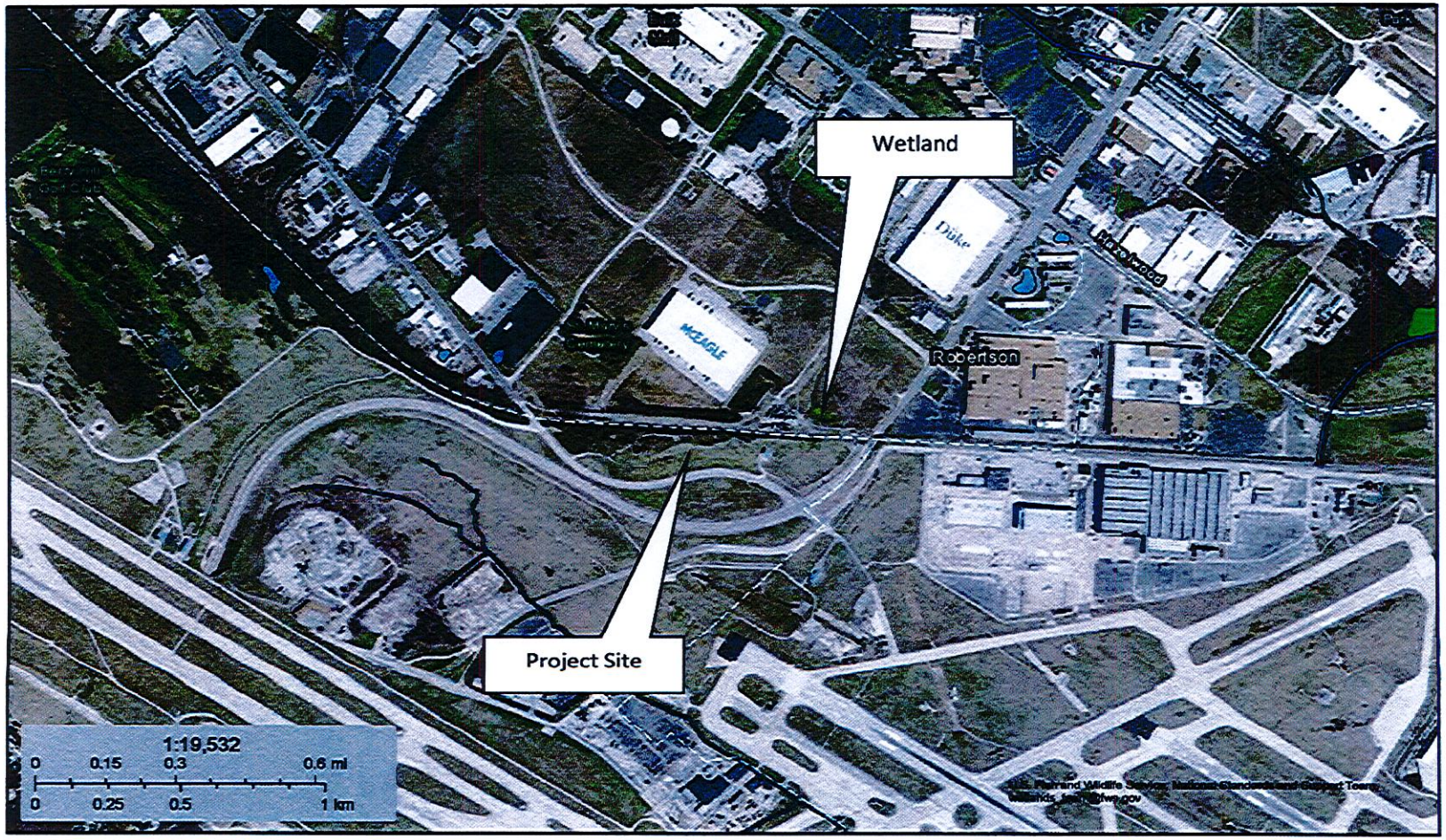
ATTACHMENT C

Exhibit C Wetland Inventory

U.S. Fish and Wildlife Service

National Wetlands Inventory

Ameren Missouri Community Solar



January 12, 2018

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

ATTACHMENT C

Exhibit D Bridgeton Zoning

ATTACHMENT C

CITY OF BRIDGETON ZONING MAP

	A	RURAL DISTRICT
	R-1	SINGLE FAMILY DWELLING DISTRICT
	R-1A	SINGLE FAMILY DWELLING DISTRICT
	R-2	SINGLE FAMILY DWELLING DISTRICT
	R-3	SINGLE FAMILY DWELLING DISTRICT
	R-4	SINGLE FAMILY DWELLING DISTRICT
	R-4A	SINGLE FAMILY DWELLING DISTRICT
	R-5	TWO-FAMILY DWELLING DISTRICT
	R-6	MULTIPLE-FAMILY DWELLING DISTRICT
	CUP	COMMUNITY UNIT PLAN
	PUD	PLANNED UNIT DEVELOPMENT
	B-1	LOCAL BUSINESS DISTRICT
	B-2	COMMUNITY BUSINESS DISTRICT
	B-3	TRAVEL / ENTERTAINMENT SERVICES DISTRICT
	B-4	GENERAL COMMERCIAL DISTRICT
	B-5	PLANNED COMMERCIAL DISTRICT
	M-1	MANUFACTURING DISTRICT, LIMITED
	M-2	MANUFACTURING DISTRICT
	M-3	PLANNED MANUFACTURING DISTRICT

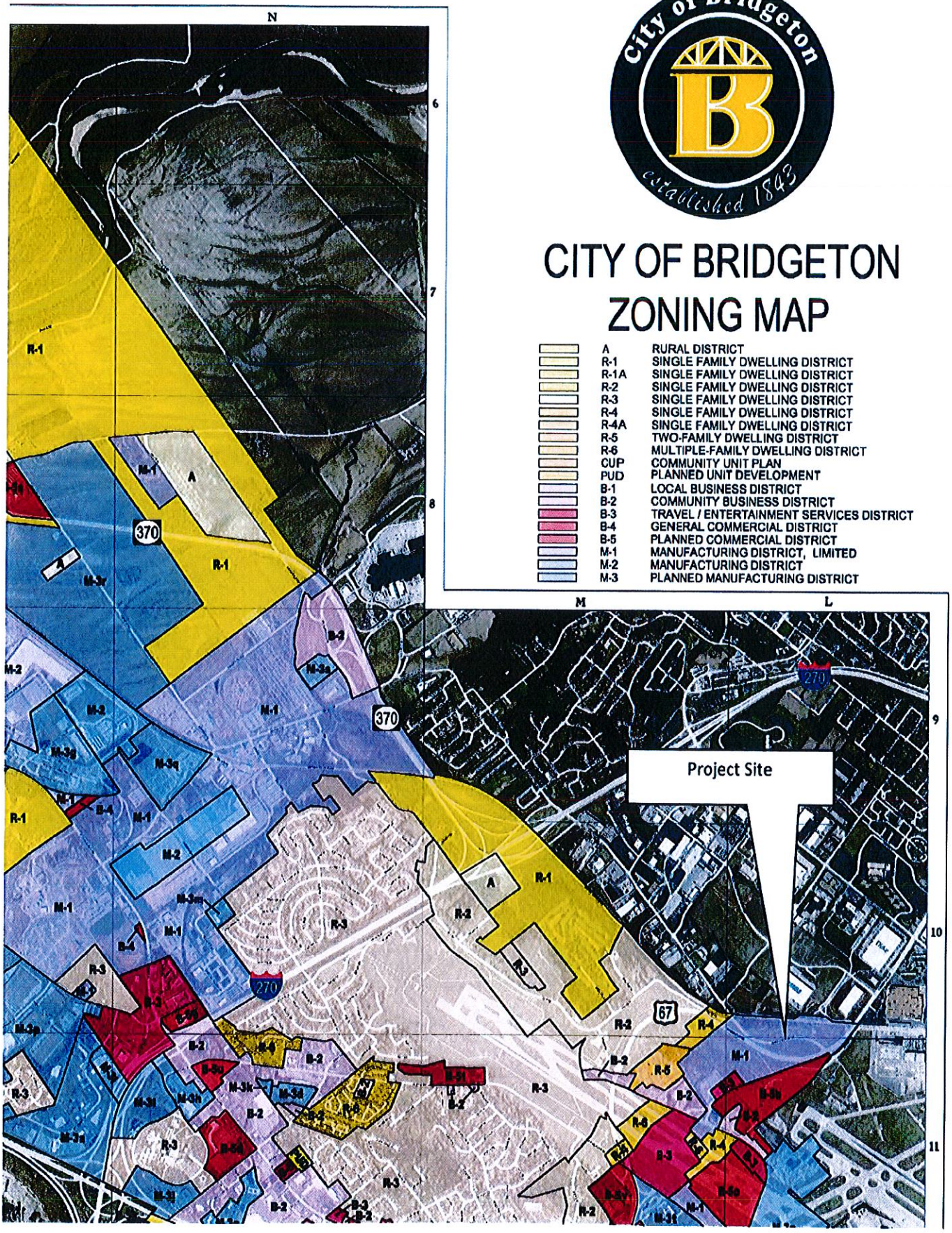


Exhibit E Greenhouse Gas Reduction

Ryan, Dana L.

From: Daniel Stroh <Daniel@azimuth.energy>
Sent: Wednesday, August 16, 2017 9:29 AM
To: Ryan, Dana L.
Cc: Raley, Chad; Cory Brennan
Subject: RE: Community Solar - Project Narrative

Quick update from email..

Annual Total Output Emission Rate for SERC Midwest: CO^2 = 1,606.8 lb/MWh

Final numbers for CO^2 reductions stay the same.

Thanks,
Daniel Stroh
Director of Engineering
C: 618.889.7205

AZIMUTH ENERGY

From: Daniel Stroh
Sent: Wednesday, August 16, 2017 9:26 AM
To: 'Ryan, Dana L.' <dlryan@flysti.com>
Cc: 'Raley, Chad' <CRaley@ameren.com>; Cory Brennan (Cory@azimuth.energy) <Cory@azimuth.energy>
Subject: FW: Community Solar - Project Narrative

Chad/Dana,

We've dug in a bit to answer the question utilizing EPA data and our preliminary energy estimate for the project.

Given we have

- Approximate first year solar energy production: 1.335 MWh/year
- Annual Total Output Emission Rate for SERC Midwest: CO^2 = 1,846.3 lb/MWh
    - See EPA eGRID Report (attached)

CO^2 reduction due to Solar Electricity Generation

- First Year: 2,145,774 lb CO^2/year
- Lifetime: 49,082,863 lb CO^2

Feel free to reach out with questions.

Thanks,
Daniel Stroh
Director of Engineering
C: 618.889.7205

AZIMUTH ENERGY

Exhibit F Bridgeton MS4 and Soil Disturbance Determinations

Ryan, Dana L.

From: Frank Robbins <Frank@azimuth.energy>
Sent: Monday, December 04, 2017 1:55 PM
To: Daniel Stroh
Subject: Fwd: Solar Install - 11519 Missouri Bottoms Road

Frank Robbins, LEED AP
(314)717-8448

Begin forwarded message:

From: Craig George <CGeorge@bridgetonmo.com>
Date: December 4, 2017 at 1:52:59 PM CST
To: Frank Robbins <Frank@azimuth.energy>
Subject: RE: Solar Install - 11519 Missouri Bottoms Road

Frank,

Per our discussion, the City of Bridgeton will not require a MS4 study on this project because the MS4 is basically the same thing as a Site Disturbance Permit. The MS4 is an agreement that was put in place between the Metropolitan St. Louis Sewer District (MSD) and all of the municipalities that make up St. Louis City and County, including Bridgeton. The MS4 requirements are included in the ordinances of each municipality and are intended to ensure that no impacts are being made to stormwater and its conveyances within each municipality. This applies to the control of runoff, land disturbance activities, and discharges into municipal separate storm sewer systems. The City of Bridgeton meets its MS4 obligations by issuing what we call Site Disturbance Permits. According to our City ordinances the Site Disturbance Permits are only issued when 3,000 SF or more of land is disturbed. We constitute "disturbed" as meaning anything that alters the surface of the land. According to the discussions I've had with you, there will be minimal surface altering work on this project; specifically the 2,350 SF of ground in the center of the site that will be re-graded to a flatter surface. The other site work only includes brush-hogging some honeysuckle, which you mentioned will not include fine grading the surface with a blade. So, as stated in my previous email from September, as long as there's no grading work that's over 3,000 SF the City will not require a Site Disturbance/MS4 Permit. We do however, still want to see a SWPPP plan included in the plans. The SWPPP should show the construction entrance of the site and any silt fence that will be installed to keep sediment from leaving the site. There should be details of all BMP's used around the site within the plans.

Thanks,

Craig R. George, P.E.
Civil Engineer
City of Bridgeton
12355 Natural Bridge Road
Bridgeton, MO 63044
P: (314) 373-3819
cgeorge@bridgetonmo.com

From: Frank Robbins [mailto:Frank@azimuth.energy]
Sent: Monday, December 04, 2017 10:33 AM
To: Craig George
Subject: RE: Solar Install - 11519 Missouri Bottoms Road

Craig,

Sorry to bother you again. We are moving forward with this project, though with a 3 acre instead of a 5 acre footprint. The FAA needs to have me provide them with a confirmation that we will not have to perform an MS4 study on this particular site.

Could you send a one line e-mail confirming that this is so? You state below that it does not require a site disturbance permit, which does assume that it wouldn't need an MS4, but they wanted to have that confirmation specifically.

Thanks in advance,

Frank Robbins

From: Craig George [mailto:CGeorge@bridgetonmo.com]
Sent: Wednesday, September 27, 2017 11:49 AM
To: Frank Robbins <Frank@azimuth.energy>
Cc: Cory Brennan <Cory@azimuth.energy>
Subject: RE: Solar Install - 11519 Missouri Bottoms Road

Frank,

I talked to a few people here in the office about this project and here's what I've got for you:

1. I don't believe this project will require what the City calls a Site Disturbance Permit. If what you say is true, and the clearing only involves brush removal, and there's no grading that's greater than 3,000 SF then we're fine not issuing a Site Disturbance Permit.

2. I talked to our Planning and Zoning Officer, Zach Greatens, and he confirmed that he talked or emailed with you several months ago about this project. He said the current zoning is fine for this use.

3. Although this project won't require a Site Disturbance Permit it will require a Building Permit to install the new solar arrays, fencing, and parking lot. According to City ordinances the fence and solar arrays will have to go before the City's Design & Review Board for approval. They'll want to see construction details, colors, elevations, etc of the fence and solar arrays. I don't handle the Building Permits and Design & Review Board meetings, so you'll want to contact the City's Deputy Code Official, Bill Dempski (314-373-3813 or bdempski@bridgetonmo.com) for all questions regarding these 2 reviews.

4. Although the ground disturbance will be limited on this project the City would still like to see a SWPPP plan included with the Building Plans. The SWPPP should show the construction entrance of the site and any silt fence that will be installed to keep sediment from leaving the site. There should also be details of these two items on the SWPPP sheet.

5. When submitting plans for the Building Permit review please offer more detail on the proposed parking lot. Will this be gravel, asphalt, or concrete? Add a pavement detail to explain.

Let me know if you have any other questions or concerns. I believe most of your correspondence from here on out will be with Bill Dempski.

Thanks,

Craig R. George, P.E.
Civil Engineer
City of Bridgeton
12355 Natural Bridge Road
Bridgeton, MO 63044
P: (314) 373-3819
cgeorge@bridgetonmo.com

From: Frank Robbins [mailto:Frank@azimuth.energy]
Sent: Tuesday, September 26, 2017 3:50 PM
To: Craig George
Cc: Cory Brennan
Subject: Solar Install - 11519 Missouri Bottoms Road

Craig,

Per our conversation, I've attached a drawing of the site clearing activities and small grading area for the Ameren site at 11519 Missouri Bottom Road. As you'll see, we plan to clear out some honeysuckle and other brush (no trees) in the hashed yellow areas. We will also be putting in a temporary laydown area, and will be using the rock from that area add more gravel to the existing access road.

I would greatly appreciate it if you could confirm the following:

- Whether we will need to apply for a site clearing permit with the City of Bridgeton
- Confirm from earlier conversations I've had with the City of Bridgeton that the current zoning is sufficient for the intended use of the site.
- Whether we will need to have a SWPP or NPDES for the site

Thank you in advance,

Frank Robbins

Frank Robbins, LEED AP

Project Manager

Exhibit G Glare Study

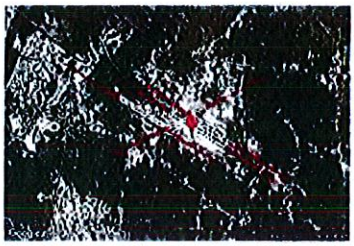
ATTACHMENT C

ForgeSolar

GlareGauge Glare Analysis Results

Site Configuration: Ameren Lambert Lightly wo ARC Lambert Threshold

Project site configuration details and results.



Created **Sept. 29, 2017 5:28 p.m.**
DNI varies and peaks at **1,000.0 W/m^2**
Analyze every **1** minute(s)
0.5 ocular transmission coefficient
0.0066 ft pupil diameter
0.056 ft eye focal length
9.3 mrad sun subtended angle
Site Configuration ID: 10401.1594

Summary of Results Glare with low potential for temporary after-image predicted

PV name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
Central Array	25.0	165.5	1,862	0	-
East Array	25.0	175.0	2,666	0	-
West Array	25.0	202.0	6,474	0	-

Component Data

PV Array(s)

Name: Central Array
Axis tracking: Fixed (no rotation)
Tilt: 25.0 deg
Orientation: 165.5 deg
Rated power: -
Panel material: Light textured glass without AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 9.7 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	38.758484	-90.382251	577.14	8.00	585.14
2	38.758811	-90.380646	582.64	8.00	590.64
3	38.758973	-90.380652	584.74	8.00	592.74
4	38.758648	-90.382258	583.54	8.00	591.55

Name: East Array
Axis tracking: Fixed (no rotation)
Tilt: 25.0 deg
Orientation: 175.0 deg
Rated power: -
Panel material: Light textured glass without AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 9.7 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	38.758809	-90.380603	582.70	8.00	590.70
2	38.758908	-90.379157	587.65	8.00	595.65
3	38.758943	-90.379161	587.68	8.00	595.68
4	38.759086	-90.379782	590.32	8.00	598.32
5	38.759029	-90.380607	587.72	8.00	595.72

ATTACHMENT C

Name: West Array
Axis tracking: Fixed (no rotation)
Tilt: 25.0 deg
Orientation: 202.0 deg
Rated power: -
Panel material: Light textured glass without AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 9.7 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	38.758901	-90.383772	567.62	8.00	575.63
2	38.758475	-90.382431	577.37	8.00	585.37
3	38.758623	-90.382354	583.05	8.00	591.05
4	38.758771	-90.382368	586.17	8.00	594.17
5	38.758864	-90.382455	587.34	8.00	595.34
6	38.759167	-90.383414	570.66	8.00	578.66
7	38.759136	-90.383520	569.82	8.00	577.82
8	38.758993	-90.383729	568.70	8.00	576.70

Flight Path Receptor(s)

Name: FP 1-12L
Description:
Threshold height: 50 ft
Direction: 302.9 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.751603	-90.366323	528.52	50.00	578.52
2-mile point	38.767508	-90.397487	561.94	570.04	1131.97

Name: FP 2-30R
Description:
Threshold height: 50 ft
Direction: 122.9 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.738617	-90.339562	604.91	50.00	654.91
2-mile point	38.722912	-90.306404	568.72	639.65	1208.37

Name: FP 3-12R
Description:
Threshold height: 50 ft
Direction: 302.9 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.753911	-90.379158	541.94	50.00	591.94
2-mile point	38.769516	-90.410324	551.65	593.74	1145.39

Name: FP 4-30L
Description:
Threshold height: 50 ft
Direction: 122.9 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.737792	-90.346464	586.19	50.00	636.19
2-mile point	38.722087	-90.315305	612.36	577.29	1189.65

Name: FP 5-11
Description:
Threshold height: 50 ft
Direction: 302.9 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.759955	-90.409876	617.95	50.00	667.95
2-mile point	38.775670	-90.441044	446.82	774.59	1221.41

Name: FP 6-29
Description:
Threshold height: 50 ft
Direction: 122.9 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.746799	-90.383162	555.98	50.00	605.98
2-mile point	38.731094	-90.351999	574.85	584.59	1159.43

ATTACHMENT C

Name: FP 7- 6
Description:
Threshold height: 50 ft
Direction: 243.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.746691	-90.381220	551.34	50.00	601.34
2-mile point	38.733790	-90.414435	548.95	605.85	1154.79

Name: FP 8- 24
Description:
Threshold height: 50 ft
Direction: 63.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 120.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	38.756230	-90.367509	533.78	50.00	583.78
2-mile point	38.769130	-90.324289	609.38	527.85	1137.23

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
1	38.743225	-90.366139	557.03	189.01	746.04

ATTACHMENT C

PV Array Results

Central Array low potential for temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1-12L	0	0
FP: FP 2-30R	0	0
FP: FP 3-12R	1251	0
FP: FP 4-30L	0	0
FP: FP 5-11	0	0
FP: FP 6-29	0	0
FP: FP 7- 6	0	0
FP: FP 8- 24	611	0
OP: 1	0	0

Central Array - Flight Path Receptor (FP 1-12L)

No glare found

Central Array - Flight Path Receptor (FP 2-30R)

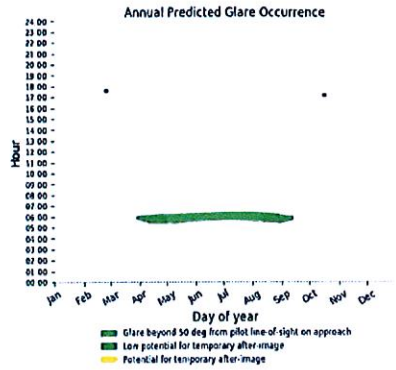
No glare found

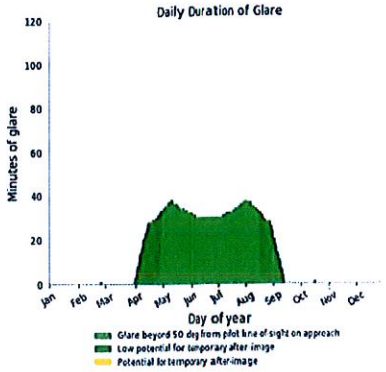
ATTACHMENT C

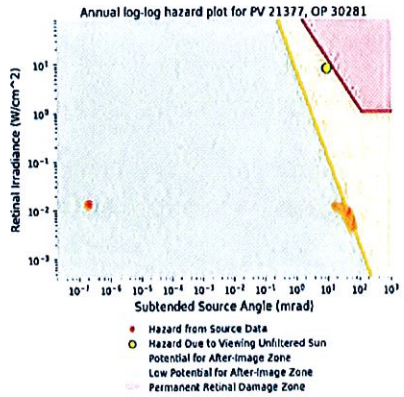
Central Array - Flight Path Receptor (FP 3-12R)

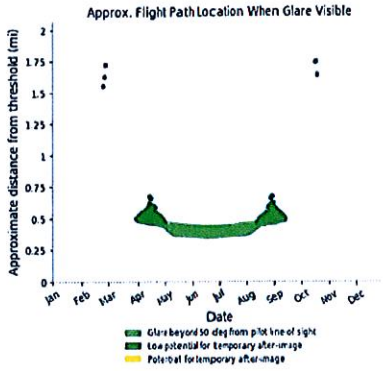
PV array is expected to produce the following glare for observers on this flight path:

- 1,251 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









Central Array - Flight Path Receptor (FP 4-30L)

No glare found

Central Array - Flight Path Receptor (FP 5-11)

No glare found

Central Array - Flight Path Receptor (FP 6-29)

No glare found

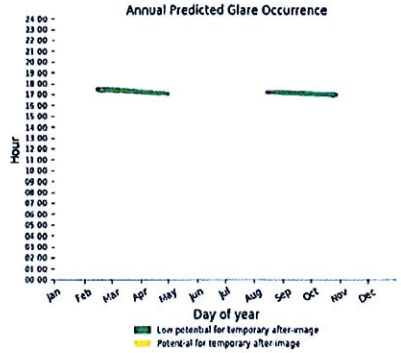
Central Array - Flight Path Receptor (FP 7- 6)

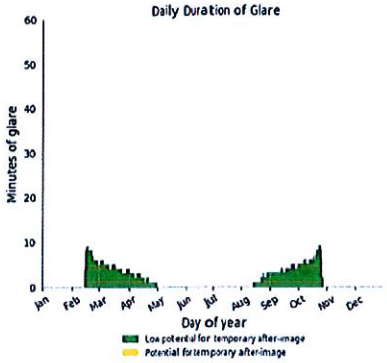
No glare found

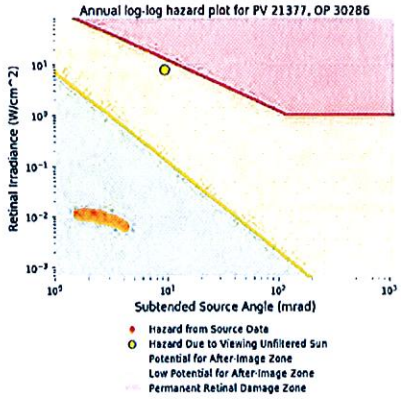
Central Array - Flight Path Receptor (FP 8- 24)

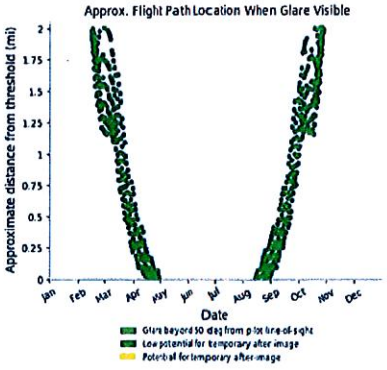
PV array is expected to produce the following glare for observers on this flight path:

- 611 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









Central Array - OP Receptor (1)

No glare found

ATTACHMENT C

East Array low potential for temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1-12L	0	0
FP: FP 2-30R	309	0
FP: FP 3-12R	2018	0
FP: FP 4-30L	221	0
FP: FP 5-11	0	0
FP: FP 6-29	0	0
FP: FP 7- 6	0	0
FP: FP 8- 24	118	0
OP: 1	0	0

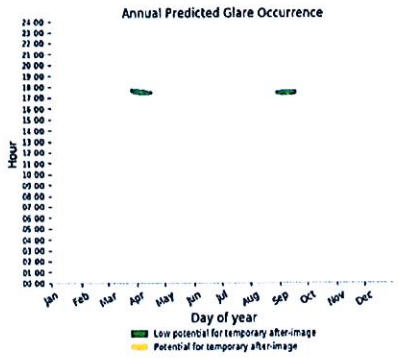
East Array - Flight Path Receptor (FP 1-12L)

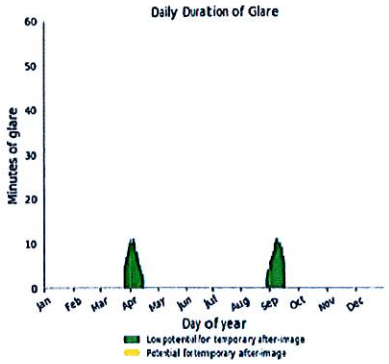
No glare found

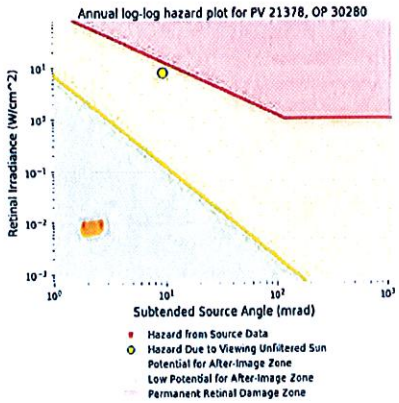
East Array - Flight Path Receptor (FP 2-30R)

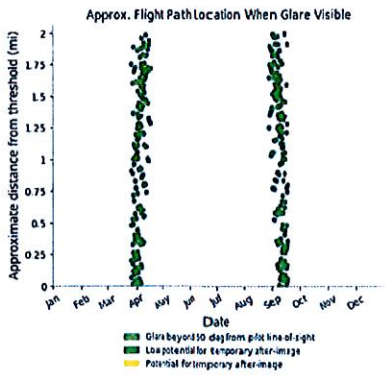
PV array is expected to produce the following glare for observers on this flight path:

- 309 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.







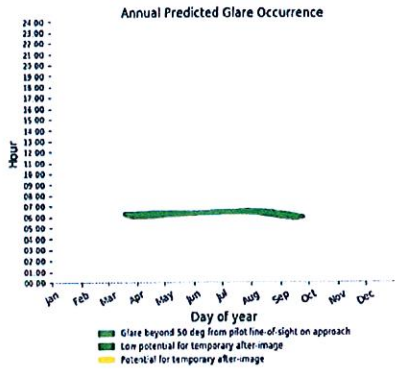


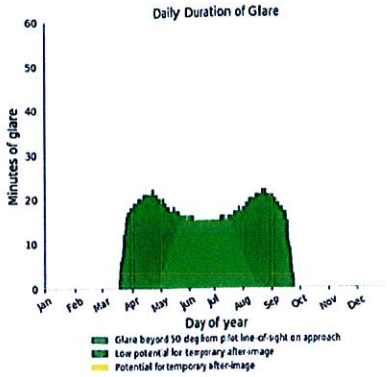
ATTACHMENT C

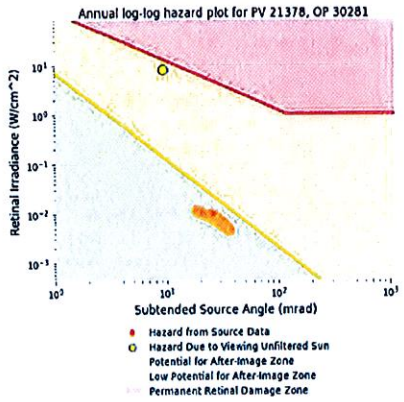
East Array - Flight Path Receptor (FP 3-12R)

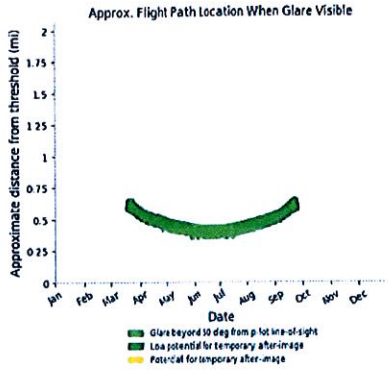
PV array is expected to produce the following glare for observers on this flight path:

- 2,018 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.







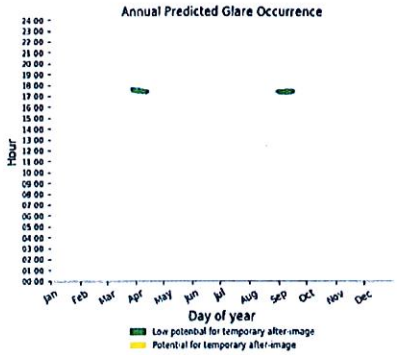


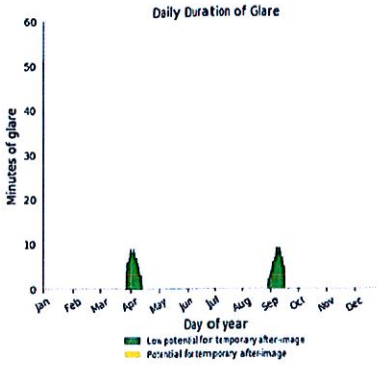
ATTACHMENT C

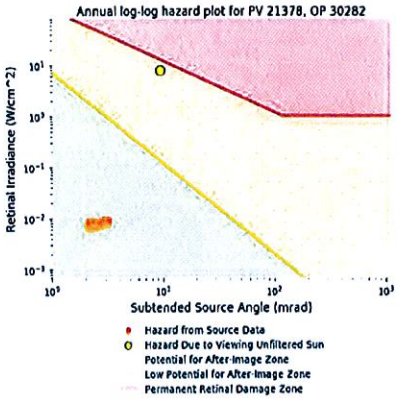
East Array - Flight Path Receptor (FP 4-30L)

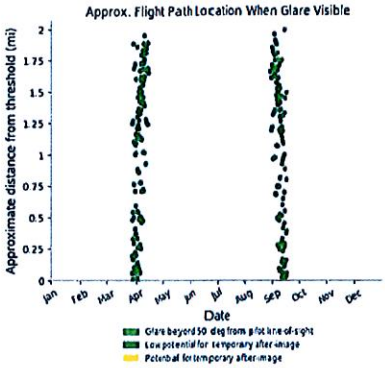
PV array is expected to produce the following glare for observers on this flight path:

- 221 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









East Array - Flight Path Receptor (FP 5-11)

No glare found

East Array - Flight Path Receptor (FP 6-29)

No glare found

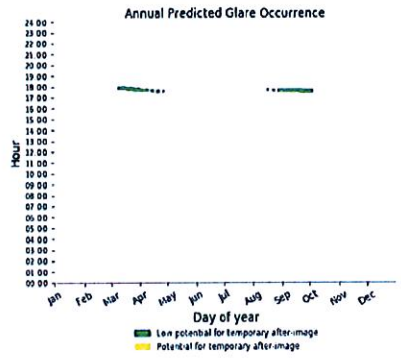
East Array - Flight Path Receptor (FP 7- 6)

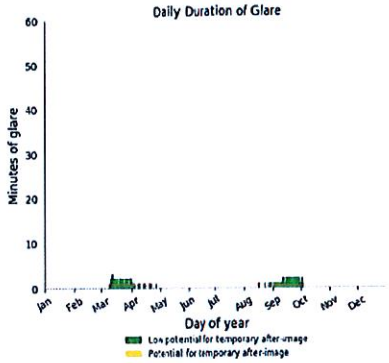
No glare found

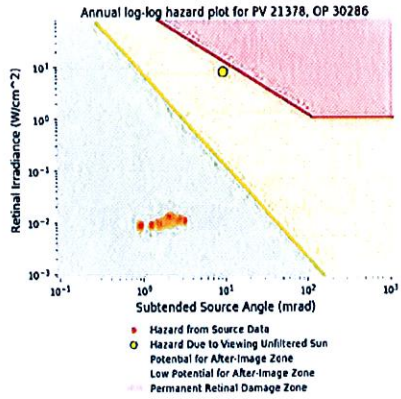
East Array - Flight Path Receptor (FP 8- 24)

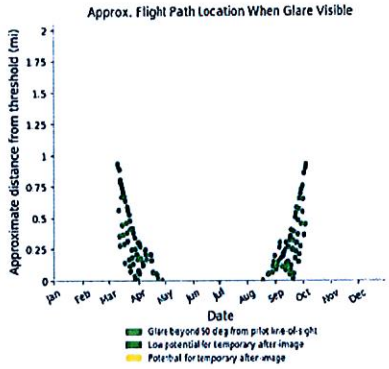
PV array is expected to produce the following glare for observers on this flight path:

- 118 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









East Array - OP Receptor (1)

No glare found

ATTACHMENT C

West Array low potential for temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: FP 1-12L	0	0
FP: FP 2-30R	0	0
FP: FP 3-12R	5358	0
FP: FP 4-30L	0	0
FP: FP 5-11	1116	0
FP: FP 6-29	0	0
FP: FP 7- 6	0	0
FP: FP 8- 24	0	0
OP: 1	0	0

West Array - Flight Path Receptor (FP 1-12L)

No glare found

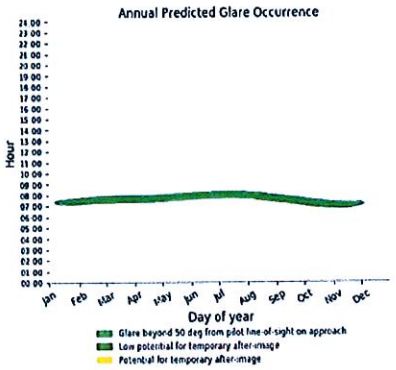
West Array - Flight Path Receptor (FP 2-30R)

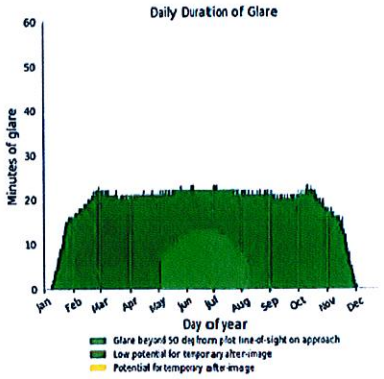
No glare found

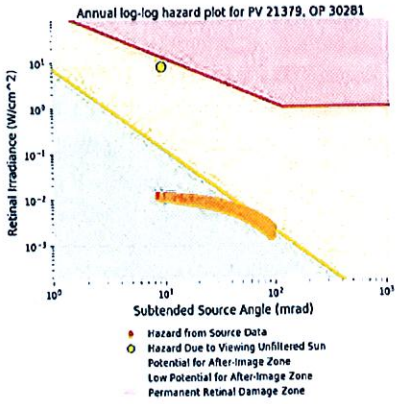
West Array - Flight Path Receptor (FP 3-12R)

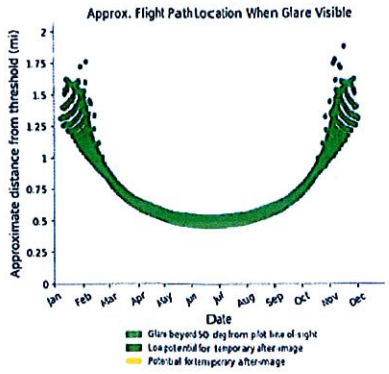
PV array is expected to produce the following glare for observers on this flight path:

- 5,358 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









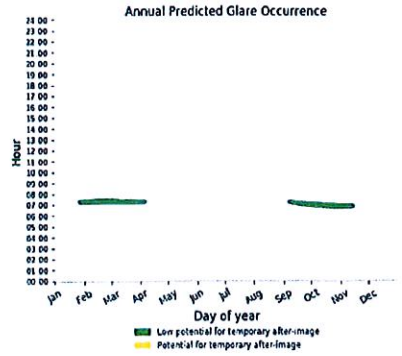
West Array - Flight Path Receptor (FP 4-30L)

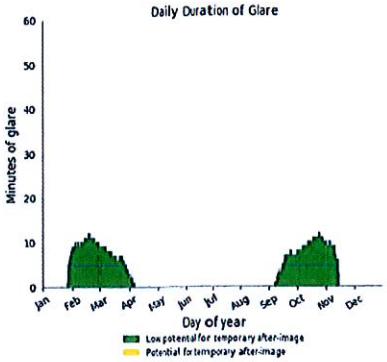
No glare found

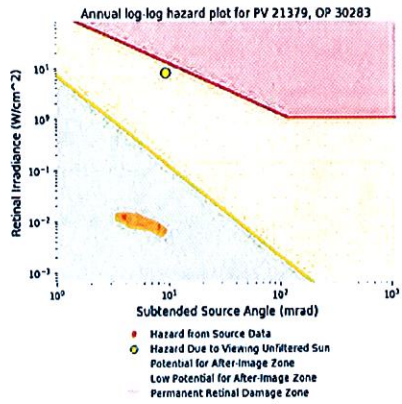
West Array - Flight Path Receptor (FP 5-11)

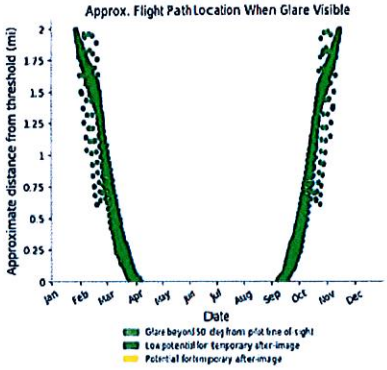
PV array is expected to produce the following glare for observers on this flight path:

- 1,116 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









West Array - Flight Path Receptor (FP 6-29)

No glare found

West Array - Flight Path Receptor (FP 7- 6)

No glare found

West Array - Flight Path Receptor (FP 8- 24)

No glare found

West Array - OP Receptor (1)

No glare found

ATTACHMENT C

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actu values may differ.
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.

Exhibit H Soil Report and Ground Water Sampling

Environmental Operations, Inc.
CLEARING THE WAY

June 2, 2017

EOI Project #8879

Ms. Jennifer Spalding
Ameren Services
1901 Choteau Ave.
P.O. Box 66149, MC 602
St. Louis, MO 63166-6149

RE: Ameren Airport Solar Site
11601 Missouri Bottom Road
St. Louis County, Missouri

Ms. Spalding:

Environmental Operations, Inc.'s (EOI) is submitting this report for probe services at the referenced site. The Site is located at 11601 Missouri Bottom Road in St. Louis County, Missouri as shown in Figure 1 (Attachment A). This report summarizes the results of the field activities.

BACKGROUND AND PURPOSE

Located in a mixed use area of St. Louis County, Missouri, the subject site, per Ameren, consists of approximately 11 acres of land. The subject property is bounded by a railroad right-of-way on the north, Missouri Bottom Road on the south and west, and a parcel on the east with two structures prior to reaching Lindbergh Boulevard. The subject site is primarily vegetated, with wooded portions to the west and north.

No Phase I Environmental Site Assessment (as defined by ASTM Practice E 1527-13) has been completed to identify recognized environmental conditions. Accordingly, the scope of services was not intended to be a Phase II Environmental Assessment, but aid in due diligence. Ameren ordered EDR Aerial and Radius reports for the subject area and provided copies to EOI. According to the aerials, the subject property appears to have remained undeveloped, and was used for agricultural purposes into the 1960s. Ameren indicated it had no radiological concerns for the site. Fill may also be present at the site.

FIELD WORK

This investigation included collecting soil and groundwater samples for laboratory analyses, and identifying fill on the property. The suitability of any subsurface material for construction purposes or other uses was not part of this scope.

Probe Services Results – Ameren Airport Solar Site
11601 Missouri Bottom Road
St. Louis County, Missouri

Prior to mobilizing to the site on May 2, 2017, the direct-push technology subcontractor initiated a search for buried public and private utilities in and around the areas of investigation on adjoining public right-of-way property. EOI met Ms. Spalding at the site on May 1, 2017, to discuss approach and pertinent logistics. This included contact personnel at the airport and use of a specialized Cortana flag on the rig. Given the wet weather and terrain at the site, a track rig was required to negotiate site access. Due to limited availability of the track rig, subsequent drilling to complete the site work was conducted on May 10 and May 18, 2017.

Using direct-push technology, 30 soil probes were advanced within accessible areas of the site. The soil borings were advanced to undisturbed natural material. Relatively undisturbed soil samples were collected continuously in these borings using 2-inch diameter acetate-lined Macrocore tubes on four-foot intervals. Boring identification begins with "SB" and was numbered sequentially SB-1 through SB-30 (Attachment A, Figure 1).

Reusable sampling equipment was decontaminated between boreholes and samples using an Alconox detergent and tap water rinse. Soil samples were scanned in the field for volatile organic compounds (VOCs) using a photoionization detector (PID) and field observations (e.g., odor, visual, etc.) noted. A description of the soils encountered and PID scan results were recorded on soil boring logs and are included in Attachment B. PID scans did not indicate VOCs, and no odors were observed. Borings penetrated up to four feet into the natural material underlying the fill.

In four locations, temporary piezometers were installed to obtain groundwater samples. The location/depth of these was dependent on field conditions. Since no field indicators of impact, such as PID response were observed, these locations were randomly selected to provide reasonable geographic distribution. The piezometers were constructed using one-inch diameter PVC sumps, screens and risers. Piezometers were installed at locations SB-3, 8, 17, and 26.

Per Ameren, two soil samples were collected from each boring for laboratory analysis. The criteria for selection included obtaining one sample from surface soils (0-3 feet), and one from subsurface soils (greater than 3 feet), resulting in 60 samples. Field indicators of impact, such as PID response or unusual color or odor, were used as criteria for selecting samples for laboratory analyses. Absent a field indicator, the depth for sample selection was varied to provide better representation. As no indicators were observed, ten of the samples were randomly selected and submitted for VOC testing.

Soil sample identification begins with the boring number followed by depth of collection. All soil samples were placed in sample containers provided by Teklab for the appropriate sampling method, placed in a cooler with ice, and delivered to Teklab under chain-of-custody protocols. Soil samples were analyzed for the following:

- VOCs using SW-846 Method 8260.
- Polynuclear aromatic hydrocarbons (PAHs) using SW-846 Method 8270 SIMM
- RCRA Metals using EPA Method 6010/7470

Probe Services Results – Ameren Airport Solar Site
11601 Missouri Bottom Road
St. Louis County, Missouri

- PCBs using EPA Method 8082

Four temporary piezometers for groundwater evaluation, at locations SB-3, SB-8, SB-17, and SB-26, were sampled on May 19 and 22, 2017. SB-3 did not have sufficient water on the first day, so field personnel returned the next available workday. Since dissolved metals were of interest, these samples were filtered in the field. Groundwater samples were placed in a cooler with ice and submitted for analytical testing under chain-of-custody procedures to Teklab for the following analyses:

- Volatile organic compounds (VOCs) using SW-846 Method 8260
- Polynuclear aromatic hydrocarbons (PAHs) using SW-846 Method 8270 SIMM
- RCRA Metals (dissolved) using EPA Method 6010/7470

SITE STRATIGRAPHY

As described in the boring logs, the soil at the site included fill, which was nearly identical in appearance to the underlying natural material. There was no sharp defining interface. The fill soil was generally brown, high plasticity silty clay that varied in moisture content and stiffness. The natural material was generally brown high plasticity clay, sometimes with silt, locally stiffer or with trace gravel near the interface with the fill. Fill thickness was in the range of 22-26 feet in the east end of the terrace closest to Missouri Bottom Road. At the west end, which was also at a lower elevation, fill was between 10-12 feet thick. For the three borings from the north-central portion of the site (SB-28-30), fill was between 24 and 29 feet thick.

ANALYTICAL RESULTS

The summarized analytical results are in tables in Attachment C, and complete laboratory analytical reports are presented in Attachment D. A discussion of the results for soil and groundwater follows.

Soil

PCBs - Analytical results from soil samples indicated no detectable concentrations of PCBs.

Total Metals – Except for arsenic and lead, no samples had detectable concentrations above the most stringent Missouri regulatory limits (Missouri Risk Based Corrective Action [MRBCA] Default Target Levels [DTL]). Some arsenic and lead detections were above the respective DTL, however they were below what is generally accepted as naturally occurring. The one exception was SB-2 from a depth 1-3 feet below ground surface (bgs), with 84.3 parts per million (ppm) lead. This is below the Tier 1 residential limit.

PAHs - No samples analyzed for PAHs exceeded their respective DTL. Typically, samples were reported as below detection limits, with only six samples having detectable levels.

Probe Services Results – Ameren Airport Solar Site
11601 Missouri Bottom Road
St. Louis County, Missouri

VOCs - Analytical results from soil samples indicated no detectable concentrations of VOCs.

Groundwater

Dissolved Metals – Barium was detected in each of the samples at concentrations below the MRBCA DTLs for groundwater. The only other metal detected was chromium in SB-3 and SB-17, also below the DTLs.

PAHs - No samples analyzed for PAHs exceeded their respective DTL, where laboratory detection limits were less than the DTLs. Typically sample concentrations were reported as below detection limits, with only one sample, SB-26 having detectable levels of anthracene and phenanthrene.

VOCs – None of the groundwater samples analyzed for VOCs had detectable concentrations above DTLs. The only detections were in SB-3 for acetone and tetrachloroethene, and both were "J" flagged. This indicates the very low concentrations were below the reporting limit and were estimated. It is likely that the acetone is laboratory sourced and the tetrachloroethene is carryover from another sample.

CONCLUSIONS AND RECOMMENDATIONS

Based upon results of the field work, fill is present across the site, averaging between 22 to 26 feet at the eastern end, 10 to 12 feet thick at the western end, and 24 to 29 feet thick in the north-central portion. Based on analytical results, no soil or groundwater sample result is above the respective DTL or background concentrations with the exception of SB-2, from a depth 1-3 feet bgs, with 84.3 ppm lead. This concentration is below the Tier I residential limit.

If you need additional information or have questions, you can reach me by phone at (314) 241-0900.

Sincerely,
ENVIRONMENTAL OPERATIONS, INC.

Lawrence C. Rosen, R.G.
Senior Project Manager

Eric Page, R.G.
Vice President

Attachments: A - Figure 1
B - Soil Boring Logs
C - Summarized Soil and Groundwater Analytical Results (Tables)
D - Laboratory Analytical Reports