

STORMWATER POLLUTION PREVENTION PLAN

Flat Run Solar, LLC

Taylor County, Kentucky

FEBRUARY 2026

UPDATED AUGUST 4, 2026

PREPARED FOR:

Discovery A GS COMPANY

PREPARED BY:

Westwood

Stormwater Pollution Prevention Plan (SWPPP) Narrative

Flat Run Solar, LLC

Taylor County, Kentucky
Operator Name: Discovery
Associated KPDES Identification Number: KYR10U489

Prepared For:

Discovery
18838 Hwy 3235
Galliano, LA 70354

Prepared By:

Westwood Professional Services
12701 Whitewater Drive, Suite 300
Minnetonka, MN 55343

Project Number: R0040890.01
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Westwood

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Appendix A: KYR10: Construction General Permit
Appendix B: Permitting Documentation (NOI, Permit Authorization, Site Notices)
Appendix C: Soil Maps
Appendix D: Vicinity, USGS Map/Topography Map, Pre and Post Drainage Maps, Impaired Waters Map
Appendix E: Site Plans, Erosion and Sediment Control Plans, Details, Spill Reporting Guide
Appendix F: Training Documentation
Appendix G: Delegated Signatory Page and Inspection and Maintenance Forms, Contractor Authorization Forms
Appendix H: Endangered Species, Cultural Resource (Information, Correspondence)

1.0 Introduction and Purpose

This Stormwater Pollution Prevention Plan (SWPPP) is prepared in accordance with the Kentucky Pollutant Discharge Elimination System (KPDES) regulations as established by the Clean Water Act and guided by the Commonwealths of Kentucky. The KPDES Permit for Authorization of Stormwater Discharges Associated with Construction Activities, KYR100000, (KYR10; expiration date: December 31, 2029) provides the framework of requirements for compliance to discharge stormwater from a construction site.

This SWPPP is for implementation by the Operator, as listed in Section 5.1 of this SWPPP, at Flat Run Solar, LLC in Taylor County, Kentucky, with the project location as defined in Section 4.0 of this SWPPP. The Project consists of the construction of laydown yards, access road(s), tree clearing activities, substation, switchyard, and solar array to support a solar power facility. This plan shall be on the site at all times during construction.

The following are outlined in this site specific SWPPP:

- Control measures for stormwater pollution prevention during each phase of construction;
- Control measures for stormwater pollution prevention after construction;
- Sources of stormwater and non-stormwater pollution; and
- Inspection and maintenance procedures.

2.0 Owner SWPPP Certification and Signature

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

	Senior Project Manager	
Signature	Title	Date
Ozgun Danaci	(985) 325-1078	Discovery
Printed Name	Contact Number	Company

3.0 SWPPP Amendments

This SWPPP and its attachments must be revised within seven (7) calendar days when any of the following occur:

1. Erosion prevention measures, sediment control measures, or other site management practices are significantly modified in response to a change in design, construction method, operation, maintenance procedure, etc. that may cause a significant effect on the discharge of pollutants to receiving waters.
2. Inspections or investigations by site staff or by local, state, or federal officials determine that the existing sediment control measures, erosion control measures, or other site management practices are ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site.
3. Inspections reveal design inadequacies that require revision of the site description and sediment control measures, erosion control measures, or other site management practices.

Complete the following table as necessary during construction to record changes and amendments to this document. Write the Amendment Number next to all application changes, redlines, and information in the document to reference the changes summarized below. If an additional sheet is necessary, attach the additional sheet to the SWPPP.

Table 1: Amendment Log

Amendment #	Date	Reason, location, and brief description of change of amendment	Authorized by (name and title)
001	04/28/2026	Inclusion of full solar project construction activities, with updates to several sections of the project SWPPP Narrative document and Appendices B, C, D, and E.	Ozgun Danaci, Sr. PM, Discovery
002	08/04/2026	• Section 5.3, Table 5: Updated project acreages. • Section 8.1.1, Table 11: Updated basin calculations. • Appendix D: Updated Drainage Map. • Appendix E: Updated civil plans to IFC rev 0.	Ozgun Danaci, Sr. PM, Discovery

4.0 Site Information and Description

4.1 Site Location and Vicinity Map

The Flat Run Solar, LLC site is located in Taylor County. The nearest census-designated place, Greensburg, is located to the northeast, approximately 10 miles away. The nearest intersection is Hobson Road and Saloma Road. The site is bordered on the north by Hobson Road, the west by Saloma Road, and the south and east by agricultural fields. Refer to Attachment D of this SWPPP for the full vicinity map. 1040 Hobson Rd, Saloma, KY 42718.

Table 2: Project Location

Latitude and Longitude (Decimal)	
Latitude	37.411961
Longitude	-85.382633

4.2 Existing Conditions

The majority of the Project drains southwest through Flat Run which originates in the northern portion of the Site, eventually exiting the Site to the south. A small area in the northwest portion of the Site drains northwest through unnamed flow paths. There are a few small low-lying areas throughout the site that may experience localized ponding. In general, the Site is located on varying terrain with slopes of 1-4% though there are locations surrounding existing channels where the slopes exceed 8%.

The project area is located in non-arid areas with an average yearly precipitation amount of 54.1 inches as recorded in the nearest city of Campbellsville. https://www.usclimatedata.com/climate/campbellsville/kentucky/united-states/usky0756.

4.2.1 Non-vegetative Cover

Non-vegetative cover on site consists of gravel roads and farmstead buildings.

4.2.2 Vegetative Cover

Prior to construction, vegetative cover consists of agricultural fields, primarily corn, forest and shrubland.

(Source: https://croplandcros.scinet.usda.gov/; accessed 02/20/2026)

4.2.3 Land Use

Prior to construction, the site area was primarily used as agricultural land. Secondary uses include forested land. A Phase I Environmental Site Assessment (ESA) was conducted by Linebach Funkhouser, Inc, with a report dated 06/14/2024. In the report there were no Recognized Environmental Conditions (RECs) found. A small pond utilized as a manure holding lagoon is located on the Obanion property. This type of feature is not regulated; however, LFI recommends capping the pond with a cohesive soil as part of the site redevelopment activities, if necessary. See the full report for additional recommendations from Linebach Funkhouser, Inc.

4.3 Soil Information

The soil types on site primarily consist of silt loams. The primary Hydrologic Soil Groups represented are C/D and B. K Factors reach values of 0.43 which means there may be slowed infiltration rates on site in areas where those soils are present. The tables below represent soils that make up more than 2% of the site.

Table 3: Soil K Factors and Erosivity Hazards

Soil Name / Type	K Factor	Erosivity Hazard				Reason(s) for Erosivity Rating
		Slight	Moderate	Severe	Very Severe	
Dickson silt loam, 2 to 6 percent slopes	0.43		X			Surface kw times slope times R index (0.53)
Frederick silt loam, 6 to 12 percent slopes	0.37		X			Surface kw times slope times R index (0.69)
Newark silt loam	0.37	X				Lack of slope
Pricetown silt loam, 2 to 6 percent slopes	0.43		X			Surface kw times slope times R index (0.53)

Table 4: Soil Particle Sizes

Soil Types	% Sand	% Silt	% Clay	% Site Area
Dickson silt loam, 2 to 6 percent slopes	11.4	68.1	20.5	41.6
Frederick silt loam, 6 to 12 percent slopes	21.0	57.0	22.0	13.2
Newark silt loam	13.7	69.3	17.0	3.6
Pricetown silt loam, 2 to 6 percent slopes	13.0	72.0	15.0	38.0

5.0 Project Information

5.1 Owner or Operator(s) and Site Contact Information

Operator/Permittee Contact Information			
Company Name	Flat Run Solar, LLC	Phone Number	985-325-1078
Contact Name	Ozgun Danaci	Email	odanaci@discoveryindustries.com
Title	Senior Project Manager	Address	18838 Hwy 3235 Galliano, LA 70354

5.1.1 Operator Responsibilities (with control over construction plans and specifications)

The operator's responsibilities (with control over construction plans and specifications) include:

- Developing a SWPPP prior to submittal of the NOI;
- Submitting a complete and accurate NOI at least seven (7) days prior to construction via the eNOI-SWCA online system;
- Ensuring the project specifications allow or provide for development of adequate BMPs to meet requirements of permit;
- Providing indications within this SWPPP for areas of the project where they have control and the ability to make modifications;
- Ensuring other operators affected by modifications in project specifications are notified in a timely manner to modify their BMPs as necessary; and
- Meeting requirements of the KYR10 for the portions of the project where they are operators.

5.2 Project Type and Proposed Conditions

5.2.1 Non-vegetative Cover

Following construction, non-vegetative cover will consist of gravel laydown yards and access roads.

5.2.2 Vegetative Cover

Following construction, disturbed area will be restored with an approved native seed mix determined by the owner. Seed mix options are included in Section 9.4.2 and 9.4.3.

5.2.3 Land Use

The land will be used for a solar power generation facility, including the associated substation and switchyard infrastructure.

5.3 Pre and Post Project Estimates

Table 5: Project Area Estimates

Project Area	Disturbed Area	Existing Impervious Area	Post Construction Impervious Area	Maximum Disturbance at One Time
468 Acres	389.24 Acres	3.01 Acres	15.20 Acres	100 Acres

5.4 Project Site Map

Please refer to Attachment E for the site plans, which show the following elements Property boundary of project;

- Anticipated drainage patterns and slopes after major grading areas, including impervious structures;
- Area of soil disturbance and areas that will not be disturbed, including fill and borrow areas;
- Locations and types of erosion and sediment control measures, planned stabilization measures, and other site management practices;
- Locations of surface waters, including wetlands and riparian zones;
- Locations of karst features, such as sinkholes, springs, etc.;
- Locations of discharge points;
- Locations of equipment storage areas, materials storage areas;
- Locations of concrete washout areas, waste management areas, and areas of site egress;
- Locations where final stabilization has been accomplished and no further construction-phase permit requirements apply; and
- Other major features and potential pollutant sources.

5.5 Construction Activity Description

NOTE to Operator: Mark all sensitive areas prior to start of earth disturbance activities. If any subsurface and/or surface drainage features are altered during construction restore to pre-construction conditions and drainage patterns. Coordinate the work with the Landowner.

The Project will be constructed in a phased sequence of operations. The project has been preliminarily divided into three (3) phases. Each phase will commence with initial construction activities consisting of, but not limited to, delineation of sensitive areas, stormwater storage features, sediment control BMPs, and perimeter controls as necessary prior to upgradient soil disturbing activity. The Operator must apply and phase temporary stabilization measures to disturbed areas according to the timelines outlined in the KPDES Permit.

The project will utilize a rolling phase method with the intent to limit earth disturbance as a result of construction activity to a maximum of 100 acres per phase disturbed at one time. Allowable disturbed acreage is directly associated with the capabilities of the Operator/EPC's ability to stabilize disturbed areas in accordance with the timeframes outlined in the KPDES Permit. Refer to the Overall Phasing sheet in the plans in Appendix E.

Additional grading will be performed to allow for tracker installation to meet requirements for even grade. Solar panels will be installed on piles that will be driven into the ground. Inverter skids will be mounted on drive posts or concrete pads, and trenching will be done to install conduits and the underground collection system. A fence will be installed around the perimeter. The project is expected to be constructed primarily with wheeled equipment, but tracked vehicles will be used for pile driving and possibly some other activities depending on ground conditions at the time of construction.

Table 6: Project Phase, Activity and Schedule Considerations

Phase/Sequence: Pre-Mobilization

Construction Activity	Schedule Considerations and BMP References
Crew / Team Orientation	Plan page turn, scope clarification, work instructions, and crew orientation. Contractors and landowner coordination or landowner liaison coordination is recommended.

Phase/Sequence: 1

Construction Activity	Schedule Considerations and BMP References
Identification of Clearing and Grading limits, Sensitive Areas, and Wetlands prior to Construction	Flag, delineate, and install barriers and/or signage for areas of interest, sensitive areas, buffer setbacks, and vegetated areas to be preserved (do not disturb areas).

Phase/Sequence: 2

Construction Activity	Schedule Considerations and BMP References
Construction Access – Installation of Entrances to the Site and Initial Construction	This is the first land disturbing activity. Clear and grub areas to complete construction activity and install perimeter sediment controls as shown in the plan and as deemed

Routes (Access Roads), Laydown, Storage, and Parking Areas	necessary by a certified or knowledgeable inspector on site. Minimal clearing/grading should take place in preparation for access installation as indicated on site drawings. Install geotextile liners and rock exit pads to minimize track out. Clear topsoil and stockpile material for reapplication, as necessary. Stockpiles should be tracked, seeded, and temporarily stabilized. Limit areas of disturbance by concurrently stabilizing laydown yards, storage, or parking areas with aggregate base.

Phase/Sequence: 3

Construction Activity	Schedule Considerations and BMP References
Sediment Traps, Basins, Outlet Locations, and Perimeter Sediment Control BMP Installation	Continue to install perimeter sediment controls. ID temporary sediment basin/trap locations and clearing/grubbing locations. Grade and construct basins prior to additional upgradient work where feasible. Limit areas of disturbance upgradient from basins until basins are constructed. Plan temporary seeding and permanent seeding with temporary stabilization of basins and perimeter slopes; install temporary seed and permanent seed and temporary stabilization within the timeframes of the Construction General Permit.

Phase/Sequence: 4

Construction Activity	Schedule Considerations and BMP References
Runoff and Run-on Controls – Diversion Ditches and/or Berms, Perimeter Berms, and/or Dikes; Soil Sampling	Install controls to divert clean water run-on around site disturbances and install ditches and diversions to sediment basins as designed. Additional runoff controls may be necessary during grading activities. Ensure controls are installed as feasible, prior to disturbing upgradient areas. Installation of rock checks, fiber logs and rock aprons needed to minimize scour per erosion control plan. Contractor should have soil samples taken and sent to lab for fertilizer, soil amendments, or other additives for restoration.

Phase/Sequence: 5

Construction Activity	Schedule Considerations and BMP References
Initiation of Temporary Stabilization and Permanent Seeding	Order and schedule temporary seeding (annual species) and permanent seeding (perennial species). Order and schedule temporary stabilization such as straw mulch, hydrologically applied products (hydromulch), erosion control blankets, and other soil stabilizers. Ensure equipment and materials are available for application of disturbed areas within the timeframes of the Construction General Permit and SWPPP. Concentrating on stabilization of perimeters, buffer areas, pond slopes, diversions, ditches, and other conveyances is important.

Phase/Sequence: 6

Construction Activity	Schedule Considerations and BMP References
Land Clearing and Grading – Site Preparation (Cutting, Filling, Grading, Additional Basins, and Runoff Controls)	Major clearing and grading will begin after installation of principal sediment and runoff control measures. Additional control measures will be installed as grading continues. During grading and site preparation topsoil shall be separated from subsoils. Topsoil shall be applied during final grading for vegetation establishment. Cross-contamination of topsoil and subsoils shall be prevented. Identify stockpile locations on site plan to reflect placement as grading activity continues. Soil samples should be taken and sent to laboratory to confirm need for fertilizer and soil amendments during seeding. Limit number of disturbed acres according to state and local permits, the SWPPP, and the adequacy of BMPs.

Phase/Sequence: 7

Construction Activity	Schedule Considerations and BMP References
Access Road Base	Apply underlayment and aggregate road base.

Phase/Sequence: 8

Construction Activity	Schedule Considerations and BMP References
Surface Stabilization, Temporary and Permanent Seeding, Mulching, Riprap, and Erosion Control Blankets	All plant materials must be installed as outlined, at the correct time and as described in the VMP. Reserve seed tags for record keeping and record date and locations of application. Application of fertilizer, soil amendments. Apply mulch material per manufacturer's recommendations. Apply erosion control blankets for steep slopes and areas of concentrated flow.

Phase/Sequence: 9

Construction Activity	Schedule Considerations and BMP References
Pile Driving	Identify access paths and minimize travel across temporary stabilization measures and seeding. Temporary matting may be necessary to cross drainage ditches or conveyances. Minimize activity during wet soil periods. Saturated soils will rut, and additional disturbance is more likely to occur.

Phase/Sequence: 10

Construction Activity	Schedule Considerations and BMP References
Racking and Panel Installation	Continue identification of access paths and manage personnel driving equipment during rack and panel installation activities. Minimize activity during wet soil periods. Saturated soils will rut, and additional disturbance is more likely to occur.

Phase/Sequence: 11

Construction Activity	Schedule Considerations and BMP References
Inverters and Electrical Components Installation and Trenching	Installation of electrical collection through trenching. Plan to open trench what can be completed and backfilled within the same working day. Minimize activity during wet soil periods. Saturated soils will rut, and additional disturbance is more likely to occur.

Phase/Sequence: 12

Construction Activity	Schedule Considerations and BMP References
Restoration of Disturbed Areas after Construction Access, Trenching, and Other Grading Activities	Apply temporary (annual) seed and permanent (perennial) seed separately at approximately 90- degree angles from each other to minimize competition and promote better establishment. Reserve seed tags for recordkeeping and record date and locations of application. Apply fertilizer and/or soil amendments as necessary. Apply mulch material per manufacturer's recommendations. Use erosion control blankets on steep slopes and in areas of concentrated flow.

Phase/Sequence: 13

Construction Activity	Schedule Considerations and BMP References
Final Reclamation and Restoration	All remaining disturbed areas shall be stabilized with perennial seeding and temporary stabilization and non-vegetative stabilization controls as indicated on site drawings and as recommended by the certified or knowledgeable site inspector. Temporary BMPs should be removed where permanent stabilization has been achieved. Clean out accumulated sediment from BMPs and clean up and remove all construction related materials and equipment.

Phase/Sequence: 14

Construction Activity	Schedule Considerations and BMP References
Continuation of BMP Maintenance and Routine Inspections.	Continue routine inspections until final perennial vegetative or non-vegetative cover is achieved per the requirements of the Construction General Permit. Maintain all BMPs in working and effective order until final stabilization has been achieved. Confirm the timing of the Notice of Termination with the site inspector to close the NPDES permit.

Phase/Sequence: Post Construction

Construction Activity	Schedule Considerations and BMP References
Submission of the Notice of Termination and Record Retention	Submit the NOT to the state agency and local jurisdiction as necessary. Retain all records, inspection reports, and other documentation for at least 3 years after the NOT is authorized.

5.6 Construction Activity Sequence and Estimated Dates

Table 7: Project Schedule

Activity	Start Date	End Date
Permitted Project Activity	09/22/2025	05/14/2027
Installation of Stormwater Controls / BMPs	09/22/2025	10/31/2025
Temporary Laydown Yard	05/19/2026	06/01/2026
Grading Activity	05/03/2026	08/26/2026
Tree Clearing and Grubbing	05/25/2026	07/20/2026
Access Roads	08/04/2026	09/14/2026
PV Array	07/01/2026	02/10/2027
Substation	07/27/2026	02/15/2027
Switchyard	11/17/2026	02/18/2027
Underground Collection	07/01/2026	02/24/2027
Restoration	02/24/2027	05/14/2027
Notice of Termination	05/14/2027	

5.7 Storm Water Team and Project Contacts

Table 8: Stormwater Team and Project Contacts

Company	Name or Position	Responsibility	Contact Number
Flat Run Solar, LLC		Site Development	
Discovery	Ozgun Danaci	Dirt Work / Grading Activity	985-325-1078
Discovery	Ozgun Danaci	Temporary Laydown Yard	985-325-1078
Discovery	Ozgun Danaci	Grading Activity	985-325-1078
Discovery	Ozgun Danaci	Tree Clearing and Grubbing	985-325-1078
Discovery	Ozgun Danaci	Access Roads	985-325-1078
Discovery	Ozgun Danaci	PV Array	985-325-1078
Discovery	Ozgun Danaci	Substation	985-325-1078
Discovery	Ozgun Danaci	Switchyard	985-325-1078
Discovery	Ozgun Danaci	UG Collection	985-325-1078
Discovery	Ozgun Danaci	Project Environmental Contact	985-325-1078
Discovery	Ozgun Danaci	Routine SWPPP Inspections	985-325-1078
Westwood Professional Services	Aaron Mlynek, CPESC	SWPPP Development	612-363-6146
Discovery	Ozgun Danaci	Restoration	985-325-1078
Discovery	Ozgun Danaci	BMP Installation	985-325-1078
Discovery	Ozgun Danaci	BMP Maintenance	985-325-1078

6.0 Additional Site and Project Considerations

6.1 Chemical Treatments

At the time of SWPPP completion the use of chemical additives or polymers for purposes of sediment flocculation is not anticipated for this project. If flocculation is used based on inspection results, contractor methods, or climatic conditions, the inspector should complete the table below for documentation.

Table 9: Flocculation Plan Summary

Flocculation Chemical	Application Location	Primary Soil Types	Settling BMPs Used	Application Method	Receiving Water	Manufacturer Dosing Rate

6.2 Environmental Review Documents

Several environmental review documents were provided and reviewed for this SWPPP. Their findings are summarized in this section.

An IPaC list of threatened and endangered species includes potential habitat for several endangered species, but no critical habitats. Tree clearing is unlikely to affect bat species, as tree coverage on site is relatively sparse.

A Wetland and Stream Delineation Report dated 01/26/2021 was completed by Copperhead Environmental Consulting. The delineation identified 13 wetland areas totaling approximately 4.82 acres, seven intermittent streams and six ephemeral streams were identified. The seven intermittent streams are considered Waters of the United States. The six ephemeral streams are considered isolated waters.

6.3 Karst Areas

The Geotechnical Engineering Report completed on May 11, 2022, by Terracon confirmed the presence of limestone bedrock. The site is reported by the KGS to have a low to moderate karst potential and there are multiple previously mapped sinkholes within ½ mile of the site. Potential indications of karst activity, such as soil softening was observed at 13 boring locations below approximately 6 to 18 feet. Refer to Terracon's Karst Survey and Assessment report dated November 30, 2021, for detailed information about the geology and karst potential locations. There are potential karst features onsite that are designed to be avoided with 50-foot setbacks detailed in the civil plans.

7.0 Receiving Waters

The table below summarizes the immediate receiving waters (Waters of the United States) from the site discharge points. Where necessary, the receiving waters have been designated Immediate (for the first surface water in the state receiving drainage from the site) and Ultimate (for the surface water in the state receiving runoff from site after the immediate receiving waters). The receiving waters listed are located within a mile and receive water from the site discharge location(s).

Big Pitman Creek originates in the eastern portion of the watershed and flows west/northwest, eventually turning southwest and exiting the watershed to the west. Middle Pitman Creek begins in the central portion of the modeled watershed and drains south, then southwest, exiting the southwest corner of the watershed. Owl Creek and Flat Run both drain south into Middle Pitman Creek. Refer to Attachment D for drainage maps.

Table 10: Receiving Waters

Name of Receiving Waterbody	Immediate (I) or Ultimate (U)	Type (wetland, lake, stream, ditch)	Impaired? Y/N	OSRW? Y/N	MS4? Y/N	Approved TMDL?
Flat Run	I	stream	N	N	N	N
Middle Pitman Creek	U	stream	Y	N	N	Y

7.1 Impaired and/or TMDL Waters

According to the Kentucky Water Health Portal (https://watermaps.ky.gov/WaterHealthPortal/, accessed 02/17/2026) and EPA-approved Kentucky Integrated Report to Congress on the Condition of Water Resources in Kentucky, 2016, Middle Pitman Creek is impaired for fecal coliform. There is an approved Total Maximum Daily Load (TMDL) and Waste Load Allocation (WLA) plan for this waterbody and impairment. It is not anticipated that construction activities associated with this project will have any impacts or contributions to the TMDL.

7.2 Outstanding State Resource Waters

There are no Outstanding State Resource Waters (OSRWs) which receive stormwater discharge within one mile of the site disturbed area according to the Kentucky Water Health Portal (https://watermaps.ky.gov/WaterHealthPortal/, accessed 02/17/2026).

7.3 Municipal Separate Storm Sewer System Waters

The site does not discharge into any MS4 receiving waters; there are no additional requirements for construction stormwater permitting relating to MS4s.

8.0 Stormwater Management

8.1 Temporary Practices

The project will require temporary traps and basins due to contiguous disturbance of greater than 10-acre areas. Refer to civil plans and details DN-40, DN-41, and SW-26 for basin and trap information. The project will utilize 2 sediment traps and 8 sediment basins.

8.1.1 Calculations

Table 11: Temporary Sediment Trap and Basin Calculations

Basin #	Storm Frequency	Rainfall Amount	Runoff Area (Acres)	Required Storage Volume (ac-ft)	Provided Storage Volume (ac-ft)
A	2 yr. / 24 hr.	3.41"	4.38	0.36	0.449
B (trap)	2 yr. / 24 hr.	3.41"	3.58	0.30	0.300
C (trap)	2 yr. / 24 hr.	3.41"	2.74	0.23	0.333
D	2 yr. / 24 hr.	3.41"	7.93	0.66	0.910
E	2 yr. / 24 hr.	3.41"	6.57	0.54	1.737
F	2 yr. / 24 hr.	3.41"	5.70	0.47	0.900
G	2 yr. / 24 hr.	3.41"	17.81	1.47	2.931
H	2 yr. / 24 hr.	3.41"	5.13	0.42	0.630
I	2 yr. / 24 hr.	3.41"	15.64	1.29	1.670
J	2 yr. / 24 hr.	3.41"	4.60	-	-

8.2 Permanent Practices

Basin J will be implemented as a permanent detention basin for final conditions. Basin J is located at the southern end of the substation pad to treat runoff from the increased impervious area.

8.2.1 Calculations

Refer to the Temporary BMP Memo prepared by Westwood for Trap and Basin calculations.

9.0 Temporary and Permanent BMPS

The BMPs included in this SWPPP have been selected and designed to be in compliance with the Kentucky "Best Management Practices (BMPs) for Controlling Erosion, Sediment, and Pollution Runoff from Construction Sites" (Kentucky BMP Manual) unless otherwise noted.

9.1 Soil Management and Compaction Minimization

During grading, cut/fill, and infrastructure installation, the subsoils will be compacted as necessary for construction using typical excavation and backfill techniques for areas intended to be compacted for access roads, pads, bases, or electrical components. Areas which will be vegetated or returned to an agricultural use will be decompacted and prepared for seeding and restoration. The operator(s) should restrict vehicle and equipment use to avoid soil compaction where feasible. Techniques such as ripping the soil for decompaction should be completed following final grade, topsoil placement and prior to reseeding or other restoration activity.

9.2 Soil and Material Stockpile

After clearing and grubbing, the operator(s) should strip and stockpile topsoil material for reapplication on all future permanent pervious surfaces. Topsoil (the soil which is on the surface prior to construction) varies in depth and must be separated from subsoils during clearing, grading and excavations or fill. Contractor shall avoid mixing or contaminating topsoil with subsoils for all future pervious areas. Temporarily stabilize topsoil stockpiles, as required. During final grading, reapplication of the preserved topsoil should be completed by a wide-pad dozer and other equipment to minimize compaction of the topsoil material. Stockpile placement should be considered and planned by the contractor and updated in the plan set as construction progresses. Place stockpiles in areas to minimize rework. Never place stockpiles in swales, ditches, surface waters, buffer zones or outside of permitted disturbed limits of the project area.

Table 12: Stockpile Material and Stabilization BMPs

Stockpile Material	Potential Temporary Stabilization BMP
Topsoil	Track-walking and straw mulch or hydromulch and temporary seed
Subsoils (nonstructural backfill))	Track-walking and straw mulch or hydromulch and temporary seed
Subsoils (structural backfill)	Track-walking and soil stabilizers or tackifiers and/or poly sheeting or tarps
Aggregate or Rock	Unnecessary. Temporary perimeter controls needed if material contains "fines" which could contribute sediment runoff.

9.3 Natural Buffers and No-disturbance Areas

9.3.1 Natural Buffers

KYR10 requires that natural buffers are maintained for discharges to receiving waters with special designations:

- High Quality Waters or Impaired Waters (for non-construction related impairments): Permittees are required to maintain a minimum 25-foot buffer zone between disturbances and edges of receiving waters.
- Coldwater Aquatic Habitat, Outstanding State Resource Waters (OSRWs), or water listed in 305(b) Report without a TMDL: An undisturbed fifty-foot buffer zone must be preserved between disturbances and edges of the receiving waters.
- For all other received waters: Natural buffers shall be provided and maintained around receiving water wherever possible, and stormwater discharges should be directed to vegetated areas.

A 25-foot buffer will be maintained for unnamed wetlands on site. The use of linear sediment controls will be installed upgradient to provide sediment control and delineate the buffer. Refer to the site erosion and sediment control plan for the location of the buffer. The following activities are prohibited from taking place within the buffer area:

- Placing stockpiles;
- Disturbing vegetation;
- Placing construction material; and
- Storing gas, oils, or other potentially polluting material.

9.3.2 No-disturbance Areas

Potential karst features, some existing wetlands, and exclusion zones are listed as no-disturbance areas and marked in the civil plans. These areas should be clearly identified and delineated in the field to keep foot traffic and vehicle traffic out of these areas.

9.4 Erosion Prevention Practices

The following controls are anticipated to minimize soil loss from the construction site area. The controls should help to minimize soil from being transported by water and wind as well as aid in establishment of temporary and permanent vegetation. Prior to grading and during clearing and grubbing, the areas of vegetation preservation, buffers and other areas of no-disturbance should be flagged, staked, or otherwise delineated. The erosion prevention practices also include BMPs to control stormwater discharges, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.

Table 13: Erosion Controls

Potential BMPs	Construction Phase or Activity						Application Notes	
	Initial BMP Installation	Laydown / Access Roads	Grading Activity	PV Array	UG Collection	Substation/ Switchyard		
Construction Phasing	T	T	T	T	T	T	Minimize soil disturbance, as feasible, per phase. Stake/flag areas that are to be left undisturbed.	
Buffer Strips	T	T	T	T	T	T	See Section 9.3 for more information.	
Slope Roughing	T	T	T	T	T	T	Use tracked equipment perpendicular to contour on steep slopes for temp/short term erosion control. See civil plan detail SW-03.	
Temporary Rock Check Dam	T	T	T	T	T	T	Install where needed as a filter media or where erosion control blankets and/or fiber logs do not provide adequate erosion and sediment control. See civil plan detail SW-31.	
Straw Mulch	T	T	T	T	T	T	Apply at two tons / acre. Crimp or otherwise secure to soil. Weed-free mulch should be used.	
Erosion Control Blanket	T	T	T	T	T	T	Install per manufacturer's recommendations. See civil plan details SW-01 and SW-02.	
Hydroseed	T	T	T	T	T	T	Apply at a rate defined by manufacturer or supplier from two directions to prevent shadowing. May be used instead of mulch. See civil plan detail SW-04.	
Temporary Seeding	T	T	T	T	T	T	See Section 9.4.2.	Prepare soil prior to seeding.
Permanent Seeding	P	P	P	P	P	P	See Section 9.4.3.	Broadcast and rake seed into soil prior to mulch or blanket.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative or non-vegetative stabilization or will not be removed following completion of construction.

9.4.1 Soil Stabilization Timing

In critical areas (defined as areas within 25 feet of a waterway), stabilization measures should be employed within 24 hours or as soon as practical after completion of disturbed/grading activities.

Temporary erosion prevention practices should be initiated as soon as practicable, but no later than fourteen (14) days after construction activities have temporarily or permanently ceased. Final stabilization practices shall be implemented as soon as possible but no later than fourteen (14) days after the 180th day of suspended construction activities.

9.4.2 Temporary (Annual) Seeding

Temporary seeding shall be applied for all areas of disturbance within the site intended to be pervious. Additional areas where temporary seeding should be applied include topsoil stockpiles and non-structural soil material. Multiple applications will be necessary during the construction process to meet the requirements of temporary stabilization.

Temporary seeding should be no-till grass drill seeded where possible. If drill seeding is not feasible: broadcast seeding should be completed and raked into the soil. If temporary seed is used alongside permanent seed, a drop seeder should be used for a one-step application or the temporary seed should be applied at a 90-degree angle to the permanent seed to maximize germination. Contractor shall record which seed is used, the application rate, and the dates of application. Contractor shall document seed tags for reference.

Seed species and mixes are subject to landowner agreements and preferences, local requirements, and availability. Please see below for recommended seed mixes for this project. If the proposed seed mixes are not used, the contractor shall submit a Request for Information (RFI) to the SWPPP developer or Engineer of Record (EOR) and amend this section in accordance with Section 3 of this document. Refer to the Vegetation Management Plan prepared by Conservation Blueprint, LLC dated February 2025.

Temporary Seed Mix		
Timeframe	Seed/Mix	Application Rate (PLS/ac)
March – August	Annual Rye Seed Mix	100
September – February	Winter Wheat or Rye Grain	100

9.4.3 Permanent (Perennial) Seeding

Permanent seeding shall be applied for all areas that will be revegetated for final stabilization. Permanent seeding will require multiple applications throughout the construction process. Pre-seeding is the first application, with the aim of restoring and providing vegetative cover for agricultural land.

Seed mixes shall be chosen and applied based upon mature plant growth height, the moisture content of the areas to be seeded, and plant shade/sun tolerance. Permanent seed shall be applied prior to pile driving and solar racking and solar panel installation.

No-till Grass Drill seeding is the recommended application method for gradients suitable to drill seeding equipment. Permanent seed should be applied at a 90-degree angle to the temporary seed to maximize germination. If gradients or areas of the project are not suitable for drill seeding, alternative methods such as broadcasting and raking or hydroseeding should be implemented.

Subsequent reseeding to restore disturbed soil after pile driving and solar racking and panel installation may be applied with a broadcaster or a hydroseeder. Contractor shall record which seed is used, the application rate, and the dates of application. Contractor shall document seed tags for reference.

Seed species and mixes are subject to landowner agreements and preferences, local requirements, and availability. Please see below for recommended seed mixes for this project. If the proposed seed mixes are not used, the contractor shall submit a Request for Information (RFI) to the SWPPP developer or Engineer of Record (EOR) and amend this section in accordance with Section 3 of this document. Refer to the Vegetation Management Plan prepared by Conservation Blueprint, LLC dated February 2025. There are seed mixes in Appendix A and B of the VMP, below is the Array Seed Mix from Appendix A.

Species	Scientific Name	PLS lbs per acre	Seeds per sq ft	% of Mixture	Bloom Period	Pollinator Value
Autumn Bentgrass	*Agrostis perennans*	0.350	64.28	11.28%	–	–
Bermuda Grass	*Cynodon dactylon*	2.000	68.87	12.08%	–	–
Chewings Fescue	*Festuca rubra*	4.000	36.73	6.44%	–	–
Creeping Red Fescue	*Festuca rubra*	4.000	41.70	7.32%	–	–
Fox Sedge	*Carex vulpinoidea*	0.500	16.53	2.90%	–	–
Hard Fescue	*Festuca ovina*	4.000	45.91	8.05%	–	–
Kentucky Bluegrass	*Poa pratensis*	3.000	95.72	16.79%	–	–
Path Rush	*Juncus tenuis*	0.080	29.38	5.16%	–	–
Sheep Fescue	*Festuca ovina sp.*	3.500	40.17	7.05%	–	–
Winter Bentgrass	*Agrostis hyemalis*	0.150	29.27	5.13%	–	–
Birdsfoot Trefoil	*Lotus corniculatus*	3.000	25.47	4.47%	2	5
Ladino or White Clover	*Trifolium repens*	2.200	35.95	6.31%	2	5
White Dutch Clover	*Trifolium repens*	2.000	40.02	7.02%	2	5
	Grasses Total:	21.580	468.569	82.20%		
	Wildflower/Forb/Legume Total:	7.200	101.445	17.80%		
	Filler Total:	0.000	0.000	0.00%		
	Total Mixture:	**28.780**	**570.014**	**100.00%**		

9.4.4 Fertilizer and Weed Control

Fertilizer

Fertilizer may be used to assist vegetation growth on-site with approval from the EOR. Fertilizer used on-site should comply with all local, state, and federal regulations regarding content, use, and storage. Contractors should follow the manufacturer's specifications for application on site. Fertilizer may be used prior to seeding and after final grade by preparing the seedbed and applying at 500 lbs. per acre. For maintenance fertilization after vegetation has been established, fertilizer may be applied at 300 lbs. per acre. Contractor shall retain all bag stickers/tags and document when and where fertilizer was used on site, as well as any soil testing reports.

Weed Control

Establishing annual and perennial uniform vegetative covers with the proposed seed mixes is the most effective means of weed suppression. If weed control and suppression is necessary 2-4-D (i.e., Roundup ®) may be applied without a license. 2-4-D is best applied in the juvenile plant stage; fully mature plants are prone to resistance. More robust or alternative herbicides will likely

require a licensed application professional with a third-party company, typically for spot treatment or consolidated areas and for particularly troublesome species.

Noxious weed seeds are limited as per the Kentucky Seed Law. As a part of weed control, ensure that mulch materials, ECB, seed mixes, etc. do not contain more than the maximum permitted rate of occurrence per pound of noxious weed seeds. Noxious weed seed restrictions can be found in 12 KAR 1:120. Refer to the VMP for more specific scenarios of weed control and recommendations.

9.4.5 Dust Control / Wind Erosion Controls

Generation of dust should be minimized by use of BMPs. The application of the BMPs should be performed at a frequency that minimizes dust. The frequency will be subject to moisture levels from rain events. BMPs to control dust include, but are not limited to:

- Restricting traffic and equipment to travel at low speeds;
- Application of water;
- Application of soil stabilizers; and
- Application of hydromulch.

9.5 Records for Rainfall, Grading and Stabilization Activity Dates

The contractor and/or site inspectors should update tables below as information becomes known.

NOTE: Contractor and/or site inspector to check this box if information for the tables below is recorded in another source or format. Provide reference to the documentation where information can be found and retain with Project records per requirements of "Record Retention" section.

Records Retained Elsewhere? ☐ YES ☐ NO

Location of Records / Source:

_____

Table 14: Rainfall Log

Date	Time	Duration	Rainfall Depth (Record all amounts > 0.25")	Notes

Table 15: Date of Major Grading Activities

Grading Activity	Location	Dates Scheduled	
		Start Date:	End Date:
		Start Date:	End Date:
		Start Date:	End Date:
		Start Date:	End Date:
		Start Date:	End Date:

Table 16: Dates When Construction Activity Ceases

Site Location	Dates Activity Ceased	Temporary or Permanent?
		☐ Temporary ☐ Permanent
		☐ Temporary ☐ Permanent
		☐ Temporary ☐ Permanent
		☐ Temporary ☐ Permanent
		☐ Temporary ☐ Permanent

Table 17: Stabilization Practices, Locations and Dates

Stabilization BMPs	Location On-Site	Implementation Date	Temporary or Permanent?
			☐ Temporary ☐ Permanent
			☐ Temporary ☐ Permanent

			☐ Temporary ☐ Permanent
			☐ Temporary ☐ Permanent
			☐ Temporary ☐ Permanent

9.6 Sediment Control Practices

The following controls are anticipated to minimize sediment discharge, capture sediment in suspension, and minimize sedimentation off site.

Table 18: Sediment Controls

Potential BMPs	Construction Phase or Activity						Application Notes
	Initial BMP Installation	Laydown / Access Roads	Grading Activity	PV Array	UG Collection	Substation/ Switchyard	
Silt Fence	T	T	T	T	T	T	Machine sliced install w/ wood posts at six foot spacing. Install perimeter silt fence prior to grading. See civil plan detail SW-11.
Stacked Fiber Log Overflow for Silt Fence	T	T	T	T	T	T	Position fiber logs to abut silt fence. See civil plan detail SW-21.
Sediment Control Logs	T	T	T	T	T	T	Install on contour, minimum of nine-inch roll; wood or straw fiber. Secure with two inch posts every two feet on center. See civil plan details SW-05, SW-06, and SW-07.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative or non-vegetative stabilization or will not be removed following completion of construction.

9.7 Run-on and Runoff Controls

The following controls are anticipated to minimize scour, transport water across or down steep slopes or critical areas, divert clean water, and / or provide temporary conveyances to maintain drainage.

Table 19: Run-on and Runoff Controls

Potential BMPs	Construction Phase or Activity						Application Notes
	Initial BMP Installation	Laydown / Access Roads	Grading Activity	PV Array	UG Collection	Substation/ Switchyard	
Riprap Apron / Energy Dissipation	T/P	T/P	T/P	T/P	T/P	T/P	Install within twenty-four hours of connection to surface waters. See civil plan details DN-30 and DN-31.
Culvert Protection	T/P	T/P	T/P	T/P	T/P	T/P	Install within twenty-four hours of culvert installation. See civil plan detail DN-03.
Temporary Sediment Basin/Trap	T	T	T	T	T	T	See Section 9.1 of this SWPPP and civil plan detail DN-40.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative or non-vegetative stabilization or will not be removed following completion of construction.

9.8 Tracking Controls

The following controls are anticipated to minimize or prevent sediment track-out from construction site exits to paved surfaces, retrieve material tracked onto paved surfaces, and minimize or prevent the material from being washed into surface water in the state or stormwater inlets.

Table 20: Tracking Controls

Potential BMPs	Construction Phase or Activity						Application Notes
	Initial BMP Installation	Laydown / Access Roads	Grading Activity	PV Array	UG Collection	Substation/ Switchyard	
Rock Exit	T	T	T	T	T	T	Install at all site exits prior to grading. Maintain for duration of project. See civil plan detail SW-40.
Gravel or Aggregate Road Base	T/P	T/P	T/P	T/P	T/P	T/P	See civil plan detail RD-06.
Street Scraping	T	T	T	T	T	T	Scrape large clumps/amounts of material with soft tracked or wheeled equipment prior to sweeping.
Street Sweeping	T	T	T	T	T	T	Sweep paved surfaces within twenty-four hours of discovery.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative or non-vegetative stabilization or will not be removed following completion of construction.

9.9 Dewatering and Basin Draining Practices

Turbid water (water that is visibly cloudy or brown in color) should be discharged via a pump and hose or overland flow (via temporary ditch or grade cuts) to a temporary sediment basin for pretreatment. A riprap apron (energy dissipation) should be used for the discharge location. If riprap is not used, an alternative form of energy dissipation should be used to prevent scouring and re-suspension of soil at the discharge point of the hose.

If discharge to a temporary sediment basin is not feasible, dewatering dumpsters, dewatering bags, or other prefabricated products should be used. The use of rock checks, erosion control

blankets, sumps, or traps should be considered for overland flow dewatering. After the use of BMPs, the water may be discharged through a vegetated buffer and energy dissipation devices. The discharge of water from the site should be visibly clear in appearance.

The discharge of accumulated water should not:

- Contain oil, grease, a sheen, odor, or concrete washout (use an oil-water separator or suitable filtration device if these conditions are found),
- Adversely impact adjacent properties with water or sediment,
- Adversely impact waters of the state,
- Cause erosion of slopes and channels,
- Cause nuisance conditions, or
- Contribute to inundation of wetlands which negatively impact the wetlands.

9.10 Alternate Practices

The BMPs and stormwater practices proposed in this SWPPP are in compliance with the Kentucky BMP Manual. No alternate practices are proposed.

10.0 Pollution Prevention Management

Potential pollutant sources, including construction and waste materials that are used or stored at the site, are described below. Upon proper implementation of the BMPs, potential pollutant sources are not reasonably expected to affect the stormwater discharges from the site. Construction materials and chemicals used or stored on site should be kept in small quantities whenever possible. Materials should only be stored in non-sensitive areas and not in close proximity to watercourses, wetlands, or floodplains. Additionally, the building materials, waste, trash, and other materials present on the site should be stored in areas which limit exposure to precipitation and stormwater.

A Spill Prevention, Control, and Countermeasure (SPCC) Plan will be needed if materials or tanks present on site contain more than or have the ability to contain more than 1,320 gallons of petroleum products. When not in use, petroleum products should be stored in sealed containers and out of contact with the elements to prevent direct contact with stormwater. Inadvertent spills should be cleaned up immediately upon discovery, and the materials should be disposed of in accordance with local, state, and federal requirements. Contractors should have spill kits available on site for rapid deployment to contain and clean up spills.

Table 21: Potential Pollutants List

Potential Pollutant	Location	Control Measure*
Antifreeze	Vehicle/Equipment	S.C./Drip pan
Diesel Fuel	Vehicle/Equipment/Fuel Tank	S.C./Drip pan
Gasoline	Vehicle/Equipment/Fuel Tank	S.C./Drip pan
Hydraulic Oils/Fluids	Vehicle/Equipment	S.C./Drip pan
Grease	Vehicle/Equipment	S.C./Drip pan
Sanitary Waste Restrooms	Portable	Service Provider to secure units against tipping
Trash And Construction Debris	Various	Dumpster
Paints	Contractor	S.C. and secure/covered storage.
Glue/Adhesives/Curing Compounds	Contractor	S.C. and secure/covered storage.
Soil Amendments	Various	S.C. and secure/covered storage.
Landscaping Materials Fertilizer	Various	S.C. and secure/covered storage.
Concrete Mortar	Mobile Mixer	S.C./Washout Area and secure/covered storage
Concrete	Trucks/Washout	Washout Area/S.C.
Bentonite	Directional Boring/Utility Contractor	S.C./Sump area
Sediment	Exposed soils/Disturbed Areas	Sediment, Erosion, Tracking, and Runoff Controls

*S.C. refers to secure secondary containment unit or area.

10.1 Storage, Handling and Disposal of Construction Materials

10.1.1 Storage and Handling

Implement the following storage, handling, and disposal methods and requirements.

- Keep all products in their original container with original labels still attached unless the container is not re-sealable.
- Return hazardous materials to the hazardous material storage area at the end of each day.
- Store only enough products to do the required job.
- Provide tanks or barrels to collect liquid byproducts that pose a pollution hazard.
- Remove pollutants from the site on a weekly basis and dispose of them in accordance with federal, state, and local regulations.
- Clean up all spills immediately after discovery in accordance with the manufacturer's recommended methods.
- Properly store hazardous materials to prevent vandalism and unauthorized access.
- Install containment units in accordance with federal, state, and local regulations.
- No hazardous material may be stored within 200 feet of an identified critical area.
- If building materials, chemicals, or general refuse are being used, stored, disposed of, or otherwise managed inappropriately, correct such defects within twenty-four hours of detection or notification.
- Secondary containment is required to have 110 percent of the capacity of the largest quantity of material stored within.
- All storage and handling must meet SPCC regulations and guidance in the SPCC plan.

10.1.2 Disposal (Dumpsters)

Implement the following storage, handling, and disposal methods.

- Locate dumpsters away from watercourses, streams, creeks, and other surface waters in the state or conveyances.
- The site inspector should regularly look for and report excess litter and solid waste and request pickup and retrieval of waste.
- Deposit waste, litter, and debris into dumpsters in a central location and/or in various satellite locations where work is active.
- Dumpsters should be supplied, regularly maintained, emptied, and removed by a waste management company.
- Dumpsters shall have lids closed when not in use and at the end of the workday. If dumpsters do not have lids, plastic sheeting, tarps, or temporary roofs shall be used.

10.2 Fueling and Maintenance of Equipment and Vehicles; Spill Response

Implement the following fueling, maintenance, and spill response methods:

- Routine maintenance of vehicles may occur in staging areas only if necessary;
- Avoid maintenance of equipment and vehicles on site, and perform maintenance off site if feasible;

- If fueling is done by mobile tank and dispenser, provide close supervision for the transfer of fuel and make drip pans, spill containment, and cleanup materials readily available;
- If fueling is done via temporary tank, store the tank within a bermed area, away from surface waters in the state;
- Provide spill kits with absorbent materials for use in cleaning up small spills; and
- In the event of a spill or discharge of hazardous material of reportable quantity, contact the State of Kentucky Emergency Response Branch at 1-800-928-2380 or 502-564-2380 immediately. If the hazardous condition involves the release of an EPA regulated material or an oil, as defined by the EPA, the release may also need to be reported to the National Response Center (NRC). Federal reporting is required within fifteen minutes of event occurrence or discovery. Contact the NRC at (800) 424-8802. The NRC is staffed twenty-four hours a day. For more information refer to the following website: https://eec.ky.gov/Environmental-Protection/Waste/Pages/EmergencyResponseBranch.aspx

Table 22: Reportable Spill Quantities

Material	Discharge Location	Reportable Spill Quantities
Petroleum Material	Land	25 gallons within 24 hours
Petroleum Products	Water	Any
Diesel Fuel	Land	75 gallons within 24 hours
Other Products	Land or Water	A Reportable Quantity as defined in KRS 224.1-400

10.3 Vehicle and Equipment Washing

If it is necessary to wash vehicles and equipment on site, develop a designated wash area with basin containment to prevent untreated water from discharging from the site to surface waters in the state. BMPs include temporary basins, inspecting the vehicles and equipment for leaks prior to washing, and prohibiting washing until discovered leaks are repaired and maintenance on the equipment or vehicle is completed. Identify the location of the wash area on the site plan. Contain and pump the water from the site into a truck for proper disposal at a wastewater facility. No engine degreasing may be done on site.

10.4 Concrete Washout and Other Washout

The direct discharge of concrete truck washout water to surface waters in the state, including storm sewers and other stormwater treatment facilities, is prohibited. All concrete washout activities must take place within structural controls to prevent discharge to surface waters or into areas of minimal slope (such as less than 3% gradient) to allow for infiltration and filtering.

10.4.1 Mobile Concrete and Mortar Mixers

The following BMPs should be considered with the use of mortar or concrete mixers:

- Store bags of concrete and mortar in dry storage;
- Position mixers on a flat gradient and at least 100 feet from the nearest watercourse or conveyance;
- If mixers must be positioned less than 100 feet from a conveyance, install a temporary berm to prevent runoff from the mixer from discharging into the conveyance;
- Use buckets to contain washout / rinse water when cleaning the mobile mixer; and
- Dump buckets of washout water in a designated concrete washout area.

10.4.2 Concrete Washout

The following BMPs and considerations should be implemented for concrete washout areas:

- Washout water from the tools, equipment, and chutes of concrete trucks, mobile mixers, or other containers with concrete material must be contained and not allowed to discharge into waters of the state or drain onto adjacent properties.
- The washout area should be a defined area with signage notifying the contactors of the location and use.
- The washout area should be sufficient to contain the expected washout material. A 10'x10'x3' volume should suffice for most activities.
- The placement of the washout area shall be on a flat gradient (such as less than 5% gradient where feasible).
- Multiple washout areas may be needed. Washout locations should be noted on the construction plans by the contractor.
- When documenting the location of the concrete washout areas, include the date of installation, date of last maintenance, and date of removal.

Once the material is hardened, it can be disposed of in a dumpster. Material which will not harden must be contained and prevented from discharging to surface waters or groundwater. The washout water shall be disposed of in areas with structural controls (such as a washout pit) which prevent discharge and allow for infiltration and filtering. Some sites will not need a separate washout area if a truck chute washout is available from the concrete supplier.

10.4.3 Truck Chute Washout

Where available, trucks with self-contained washout and water recycle systems must be used for every truck chute, tool and equipment rinse, and washout. The truck should be positioned in a flat area away from inlets and surface waters. The washout of trucks during rain events should be minimized.

10.5 Portable Sanitary Facilities

Manage and maintain all temporary portable sanitary facilities considering, at minimum, the following.

- Locate facilities away from watercourses, streams, creeks, and other surface water in the state or conveyances.
- Place facilities upgradient of perimeter sediment controls, and not on paved or other impervious surfaces.
- Secure the facilities to the soil with stakes or tether to a non-movable structure to prevent tipping from wind or other factors.
- Schedule routine cleanout and maintenance of facility by a reliable company.

10.6 Potential Non-Stormwater Pollutant Sources and BMPs

Eliminate or reduce, to the extent feasible, non-stormwater discharges, with the exception of those necessary for the completion of certain construction activities. A list of allowable non-stormwater discharges includes the items below.

Table 23: Non-stormwater Discharges and Potential BMPs

Type of Allowable Non-Stormwater Discharge	Potential to Occur on Site?
Discharges from fire-fighting activities	☒ YES ☐ NO
Fire hydrant flushing discharges	☐ YES ☒ NO
Water used for vehicle washing where detergents are not used	☐ YES ☒ NO
Pavement wash water, where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used	☐ YES ☒ NO
Routine external building wash down that does not use detergents	☐ YES ☒ NO
Water used to control dust	☒ YES ☐ NO
Potable water including uncontaminated waterline flushing discharges	☐ YES ☒ NO
Landscape irrigation	☐ YES ☒ NO
Clean, non-turbid water-well discharges of groundwater	☐ YES ☒ NO
Construction dewatering (including discharges from dewatering of trenches and excavations) provided it is managed by appropriate controls, and the requirements of the permit are met	☐ YES ☒ NO

Conduct these authorized non-stormwater discharges in accordance with the requirements of the Construction General Permit (CGP) and make every effort to minimize non-stormwater runoff from these activities. The operators are responsible for implementing the following BMPs and management for non-stormwater discharges.

- Emergency Fire Fighting: Due to the emergency nature of this activity the use of BMPs is not expected. Make reasonable efforts to repair, clean up, and reinstall sediment and erosion control BMPs after the emergency is resolved.
- Water used for Dust Control: This is not anticipated to be a contamination/pollution issue. During the dry periods when dust control is needed the minimal amount of water used is anticipated to be absorbed into the soil. If any runoff does occur, the standard BMPs (such as silt fence, mulch, erosion control blanket, inlet controls, and stormwater traps) should adequately control the runoff from reaching off site surface water in the state.

11.0 Inspection, Maintenance and Corrective Actions

Construction activities and all support activities must be inspected (using the inspection form found in Attachment G or an alternative form) within the parameters of the schedules below. The inspections should determine whether erosion prevention measures, sediment control measures, and other site management practices are properly installed, properly maintained, and effective in minimizing discharges to the receiving water, and whether excessing pollutants are entering the drainage system.

The inspector must be a person knowledgeable and skilled in assessing conditions at the construction site that could impact stormwater quality and assessing the effectiveness of erosion prevention measures, sediment control measures, and other site management practices chose to control the quality of stormwater discharges.

Inspectors shall have training in stormwater construction management such as KEPSC, CEPSC, CPSWQ, TNEPSC, CESSWI, or similar training.

The inspections should include the following areas:

- Areas with erosion and sediment control BMPs;
- Disturbed areas;
- Locations where vehicles are exiting the site for evidence of off-site tracking;
- Areas used to store materials that are exposed to precipitation;
- Observations of erosion and sediment control BMPs, including corrective actions needed and where BMPs need maintenance;
- Discharge points off-site or to surface waters. Discharge points off-site or to surface water should be inspected for evidence of new erosion, newly deposited sediment, or other pollutants.

Inspection documentation* should include the following elements:

- Date and time of inspections;
- Inspector's name and title;
- Date and amount of most recent rainfall**;
- Weather conditions and a description of discharges with color, odor, floating, settled, solids, foam, and oil sheen;
- Locations of discharges of sediment or other pollutants;
- Locations of erosion and sediment control measure BMPs that require maintenance;
- Locations of erosion and sediment control measure BMPs that have failed to operate as designed or are inadequate;
- Locations where BMPs have failed or proved inadequate for their location;
- Locations where additional BMPs are needed;

- Corrective actions required based on inspection findings;
- Incidents of non-compliance with the SWPPP;
- If no incidents of non-compliance with the SWPPP are identified, the report shall contain a certification that the site is in compliance with the SWPPP.
- Signature of an approved signatory.

Amendments from inspections need to be completed within seven days (see SWPPP section 3.1).

*All inspections should be documented within twenty-four (24) hours after completing the field inspection and available in paper or electronic form on site. If the inspection does not have incidents of non-compliance the report should contain a certification that the site is in compliance with the SWPPP and KYR10.

**Rainfall amounts should be taken from an onsite rain gauge. If a rain gauge is not feasible, the rainfall data should be obtained from the following website: (https://forecast.weather.gov/MapClick.php?lat=37.412059&lon=-85.392766).

11.1 Inspection Schedule

Table 24: Inspection Schedule

If the site is:	Then an inspection is needed:	Notes and Information
Active	☒ Once every seven calendar days ☐ Once every fourteen calendar days and within 24 hours of a rainfall ≥ 0.5"	A rain gauge should be used, or rain data should be taken from the link listed above.
Inactive areas that have undergone temporary or final stabilization	Once every month until permit coverage is terminated.	Allowed in areas where work is completed and vegetation is established, or where temporary stabilization is applied (such as mulch and seed, hydro-seeding, and erosion control and seed). Other/active areas must follow above.

11.2 Maintenance Schedule

Table 25: Maintenance Schedule

BMP	Observed Condition for Maintenance	Maintenance Interval
All non-functional BMPs	Sediment overtopping, under water, scoured ends, undermined, destroyed, non-functional as designed, intentionally removed, and run over by vehicles	Maintenance or replacement should be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation should be documented in the SWPPP, and the changes shall be implemented as soon as practicable.
Perimeter Sediment Control (silt fence, fiber logs, berms, etc.)	One-third full of sediment or flattened to one-half height	
Inlet protection BMPs, conveyances, surface water in the state	Sediment deposition, sediment deltas, and accumulation of sediment material	
Temporary sedimentation basins and traps, and permanent sediment basins	Sediment deposition and accumulation to one-half of the storage volume	
Site exit locations, rock exit pads, and other anti-tracking practices	Accumulated sediment in rock or other anti-tracking BMP or tracking of sediment from the site onto paved surfaces	
Paved surfaces/adjacent streets	Tracked sediment and soil material from the site hauling or access	

12.0 Final Stabilization

Final stabilization is achieved for the project when permanent erosion control BMPs are applied and functioning on the site. The permanent erosion control BMPs may be a combination of vegetative and non-vegetative cover types. Additional requirements for achieving final stabilization include:

- All soil disturbing activity is complete;
- A permanent stormwater treatment system (if required) is constructed and accumulated sediment from construction activity has been removed;
- All temporary, synthetic BMPs have been removed from the site;
- In agricultural areas (as applicable), the construction activity area has been restored to pre-construction agricultural use; and
- The vegetative cover for the site is at a density of seventy percent of the pre-construction conditions, with a uniform (without large bare areas) perennial cover.

13.0 Notice of Termination

When one or more of the following conditions have been met, operators shall submit a completed Notice of Termination:

1. Final stabilization has been achieved on all portions of the site for which the permittee is responsible;
2. Another permittee has assumed control over all areas of the site that have not been finally stabilized;
3. Converge under and individual KPDES permit has been obtained.

For projects that do not submit an NOT as described above, termination of permit coverage will automatically occur two (2) years after the date of authorization to discharge is granted, unless the operator submits a Coverage Extension Form. Please refer to Attachment B for permit coverage forms.

14.0 Record Retention

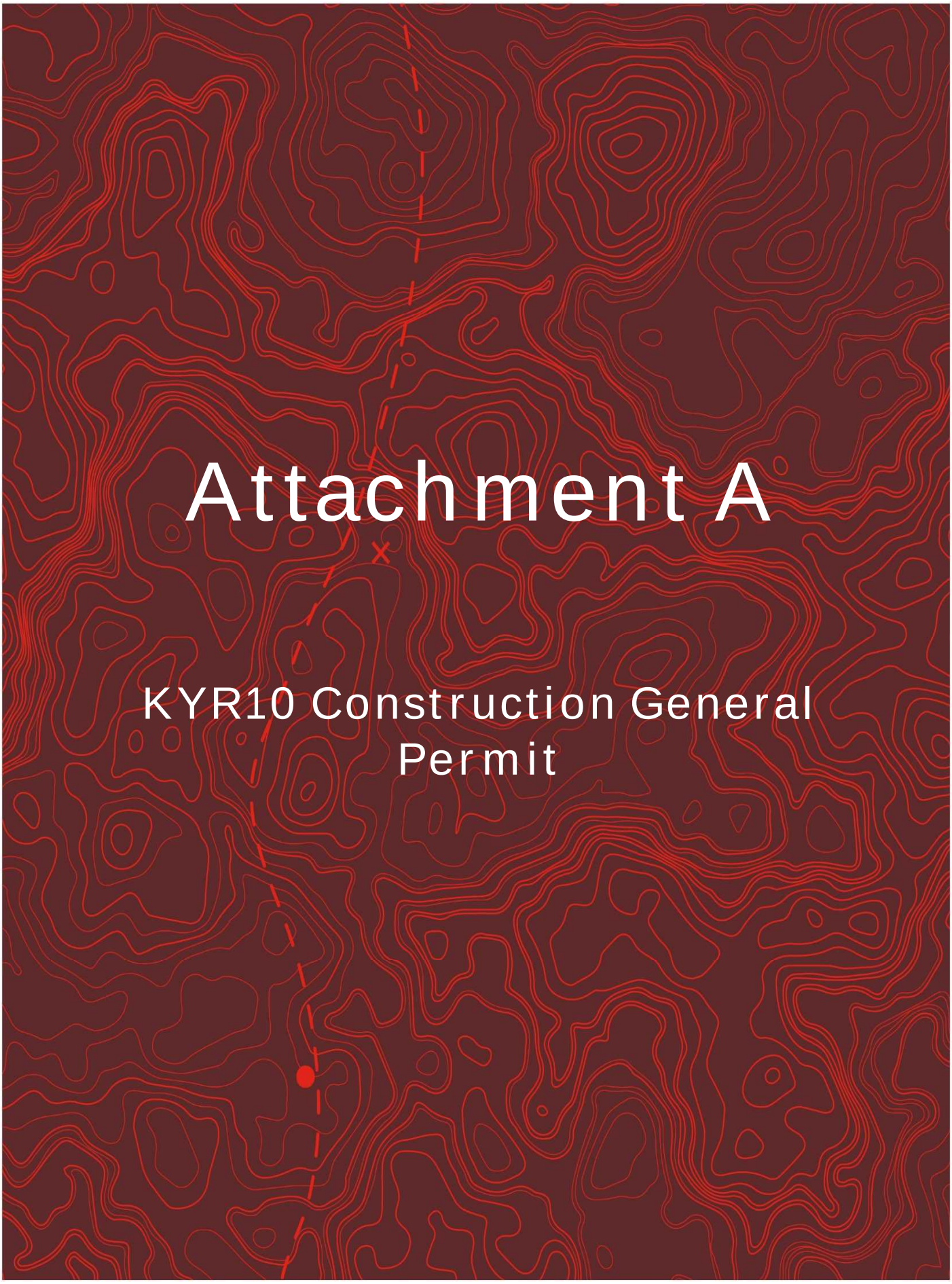
14.1 During Construction

This report, amendments and attachments, inspection reports, and maintenance records should be kept on site during normal business hours. The records should be kept by the operator listed on the permit application. The records should be in a mailbox, a vehicle, or an on-site office trailer.

14.2 Post Construction / Notice of Termination (NOT)

The site operator must retain all the following records for a period of at least three (3) years after the submittal of the NOT.

- The final SWPPP with all field notes/amendments,
- All reports and actions required by the KYR10 permit, including a copy of the construction site notice,
- All data used to complete the NOI,
- Inspection and maintenance records, and
- All records of submittal of forms submitted to the Operator of any MS4 receiving the stormwater discharge, and to the secondary operator of a large construction site (if applicable).



Attachment A

KYR10 Construction General Permit

KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

AUTHORIZATION TO DISCHARGE UNDER THE

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT NO.: KYR100000

AGENCY INTEREST NO.: 35050

Pursuant to Authority in KRS 224,

Stormwater Discharges Associated with Construction Activities

are authorized to discharge from a facility located

Within any of the 120 counties of the Commonwealth of Kentucky

to receiving waters named

Those water bodies of the Commonwealth that comprise the Mississippi and Ohio River basins and sub-basins within the political and geographic boundaries of Kentucky

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on January 3, 2025.

This permit and the authorization to discharge shall expire at midnight, December 31, 2029.

Date Signed: January 2, 2025

Sarah Jon Gaddis, PG
Director, Division of Water

THIS KPDES PERMIT CONSISTS OF THE FOLLOWING SECTIONS.

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SECTION 1

COVERAGE

1. COVERAGE

This permit covers both large and small sites with stormwater discharges associated with construction activities that meet the eligibility requirements of this permit. Construction and construction-related activities refer to the actual earth disturbing construction activities and those activities supporting the construction project such as construction materials or equipment storage, or equipment maintenance. Examples of supporting activities include, but are not limited to, fill piles, borrow areas, concrete truck washouts, fueling, measures used to control stormwater associated with construction activity, or other activities that generate industrial stormwater that is directly related to the construction process (e.g., concrete or asphalt batch plants).

1.1. Eligibility

This permit applies to stormwater discharges associated with construction activities at sites that have a disturbance of one (1) acre or more, including, in the case of a common plan of development, contiguous construction activities that cumulatively disturb one (1) acre or more. Non-contiguous construction activities (i.e., activities separated by at least 0.25 mile) that disturb one (1) acre or more shall be considered independent activities. This permit is also available for stormwater discharges from other construction activities, including those disturbing less than one acre, those designated by the Kentucky Division of Water (DOW) based on the potential for contribution to a violation of a water quality standard, or for those that involve a significant contribution of pollutants to waters of the Commonwealth.

1.2. Exclusions

The following are excluded from coverage under this general permit:

1) Any construction activity conducted at or on properties that have obtained an individual or general KPDES permit that requires the development and implementation of a Best Management Practices (BMP) plan;
2) Any operation that the DOW determines an individual permit would better address the discharges from that operation;
3) Any construction activity where external building washdown waters containing hazardous substances, such as paint or caulk containing polychlorinated biphenyls (PCBs) are discharged;
4) Any construction project that plans to use any treatment chemicals (polymers, flocculants, coagulants); and
5) Any project that discharges to an Impaired Water listed in the most recent Integrated Report, §305(b) as impaired for sediment and for which an approved sediment TMDL has been developed.

1.3. Permitting Action

This is a reissuance of a general KPDES permit to address stormwater runoff associated with construction activities.

This KYR100000 replaces all previous versions of KYR100000 issued by the DOW. The conditions and requirements contained herein supersede the conditions and requirements of all previous versions except for the extension of existing coverages as described within this permit.

Existing coverages are extended and remain in effect until two (2) years after the issuance date of the coverage. A new NOI-SWCA application requesting coverage under this renewal of the general permit will be required for projects requiring coverage beyond the extension outlined here. See Section 5.5 of the Fact Sheet for additional information.

SECTION 2

PERMIT REQUIREMENTS

2. PERMIT REQUIREMENTS

This section of the permit establishes the non-numeric requirements that are applicable to exposed areas associated with construction activity for all facilities authorized to discharge by this permit. The non-numeric requirements should minimize the discharge of pollutants resulting from precipitation events.

2.1. Notice of Permit Coverage

The permittee shall post signage or other notice of permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so that it is visible from the public road that is nearest the construction site. If the construction site is not visible from a public road, then the notice of permit coverage may be placed in a safe, publicly accessible location that is visible from the nearest public road and as close as possible to the construction site. This notice (signage) must include the KPDES Permit Number, contact name and phone number for obtaining additional construction site information such as a copy of the SWPPP. The signage must include information apprising the public on how to contact the DOW if stormwater pollution is observed in the discharge.

2.2. Stormwater Pollution Prevention Plan (SWPPP)

Each permittee shall develop a Stormwater Pollution Prevention Plan (SWPPP) and implement the SWPPP at the commencement of construction disturbance. All operators working on this project must comply with the SWPPP or obtain separate coverage under this permit. For KYTC projects, the Best Management Practices Plan shall serve as the SWPPP.

The SWPPP shall include erosion prevention measures, sediment control measures, and other site management practices necessary to prevent the discharge of sediment and other pollutants that would result in the degradation of waters of the Commonwealth. These erosion prevention and sediment control measures and other site management practices must be properly designed and selected based on site-specific conditions. The control measures and management practices must be installed and maintained to effectively minimize the discharge of pollutants for storm events up to and including a 2-year, 24-hour event. The discharges to waters of the Commonwealth shall not produce floating solids, visible foam or a visible sheen on the surface of receiving waters.

Permittees are encouraged to design the site, the erosion prevention measures, sediment control measures, and other site management practices to minimize post-construction stormwater runoff, including facilitating the use of low-impact technologies. Permittees shall minimize soil compaction and, unless infeasible, preserve topsoil except in specific site areas where the intended function dictates compaction or removal/disturbance of topsoil.

KYTC projects shall, at a minimum, utilize the most recent Kentucky Standards Specifications for Road and Bridge Construction published by the Transportation Cabinet, Department of Highways, as a means of establishing sediment control measures, erosion control measures, and other site management practices for this permit coverage.

The Stormwater Pollution Prevention Plan (SWPPP) shall contain the following:

1. A site description that identifies sources of pollution to stormwater discharges associated with construction activity on site; and
2. A description of the erosion prevention measures, sediment control measures, and other site management practices used at the site to prevent or reduce pollutants in stormwater discharges to ensure compliance with the terms and conditions of this permit. All stormwater controls shall be developed and implemented in accordance with sound practices and shall be developed specific to the site. The goal of these devices is 80% removal of Total Suspended Solids that exceed predevelopment levels. (For purposes of guidance/technical assistance, the reader is referred to

the Kentucky Erosion Prevention and Sediment Control Field Guide and the Kentucky Best Management Practices Technical Manual located on DOW's Stormwater Webpage at: https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/SWPPPPermitPage.pdf.

3. For a common plan of development a comprehensive SWPPP shall be prepared that addresses all construction activities within the common plan of development. Each individual site operator shall be a signatory of the SWPPP and shall not conduct activities that are not consistent with the SWPPP or result in the failure or ineffectiveness of the sediment control measures, erosion control measures, and other site management practices. Otherwise, an operator not utilizing the SWPPP for the common plan of development shall seek coverage under this permit or an individual permit and develop a SWPPP for those separate activities.
4. The signature of the construction site operator or authorized representative who signed the Notice of Intent. This insures that the SWPPP was developed and/or reviewed by a responsible party with the ability to implement the BMPs and other commitments described in the SWPPP.

2.2.1. Site Description

The SWPPP shall be based on an accurate assessment of the potential for generating and discharging pollutants from the site. Hence, this permit requires a description of the site and intended construction activities in the SWPPP in order to provide a better understanding of the characteristics of the site runoff. At a minimum, the SWPPP shall describe the nature of the construction activity, including:

1. The function of the project (e.g., box store, strip mall, shopping mall, school, electrical transmission line, oil or natural gas pipeline, factory, industrial park, residential development, transportation construction, grading and clearing, etc.);
2. The intended significant activities, presented sequentially, that will disturb soil over major portions of the site (e.g., grubbing, excavation, grading);
3. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading or other activities, including off-site borrow/fill areas; and
4. Identify the receiving water(s) and describe the water quality classification of the receiving water(s).

2.2.2. Site Map

The SWPPP shall contain a legible site map of sufficient scale to depict the following:

1. Property boundary of the project. If subdivided, show all lots and indicate on which lots construction activities will occur;
2. Anticipated drainage patterns and slopes after major grading activities including impervious structures;
3. Areas of soil disturbance and areas that will not be disturbed including fill and borrow areas;
4. Locations and types of sediment control measures, erosion control measures, planned stabilization measures, and other site management practices;
5. Locations of waters of the Commonwealth, including wetlands, and riparian zones;
6. Locations of karst features such as sinkholes, springs, etc.;
7. Locations of discharge points;
8. Locations of equipment storage areas, materials storage areas including but not limited to top soil, fuels, fertilizers, herbicides, etc.;
9. Location of concrete wash out areas, waste management areas;

10. Area of site egress;
11. If applicable, locations where final stabilization has been accomplished and no further construction-phase permit requirements apply; and
12. Other major features and potential pollutant sources.

For KYTC projects which have Roadway Plans, locations of BMPs may be recorded and documented as the BMPs are installed.

2.2.3. Other Industrial Activities

The SWPPP shall provide a description and KPDES permit number, if applicable, of any discharge associated with industrial activity other than construction (including stormwater discharges from dedicated asphalt plants, concrete plants, etc.) and the location of that activity on the construction site.

2.2.4. Documentation of Stormwater Controls to Reduce Pollutants

The SWPPP shall include:

1. Documentation of the erosion prevention measures, sediment control measures, and other site management practices designed to site-specific conditions that will be implemented to reduce the pollutants in stormwater discharges from the site and assure compliance with the conditions of the permit. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on site.
2. Provisions that stabilization be employed as soon as practicable, but not longer than allowed in Section 2.4 of this permit, in critical areas. Erosion prevention measures, sediment control measures, and other site management practices shall be properly selected based on site-specific conditions and installed and maintained in accordance with sound sediment controls, erosion prevention, or other site management practices and relevant manufacturers' specifications.
3. A selection of erosion control measures based on site-specific conditions (e.g., topography, soil types). The SWPPP shall include a description of the general location of, and how and where the following erosion controls measures will be implemented:
    a. The plan to minimize disturbance and the period of time the disturbed area is exposed without stabilization practices, including:
        i. Minimizing the overall area of disturbed acreage;
        ii. Phasing construction so that only a portion of the site is disturbed at any one time; or
        iii. Scheduling clearing and grading events to reduce the probability that bare soils will be exposed to rainfall.
    b. Managing stormwater flows on the site to avoid stormwater contact with disturbed areas through use of:
        i. Diversion berms;
        ii. Conveyance channels;
        iii. Vegetated buffers;
        iv. Slope drains; or
        v. Other adequately protective practices.
    c. Using energy dissipation approaches to prevent high velocity runoff and concentrated flows that are erosive, by:

i. Use of vegetated filter strips; or
ii. Other adequately protective practices.

d. The practices to be used to minimize exposure of bare soils by covering and stabilization, including:
   i. Vegetative stabilization with annual grasses or other plants;
   ii. Geotextiles;
   iii. Straw;
   iv. Rolled erosion control mats;
   v. Mulch; or
   vi. Other adequately protective practices.

4. Sediment control measures are used to control and trap sediment that is entrained in stormwater runoff. The SWPPP shall include a description of how and where the following sediment control measures will be implemented:
   a. Sediment Barriers
      i. Silt fences constructed with filter fabric;
      ii. Fiber rolls; or
      iii. Other adequately protective practices
   b. Slope Protection
      i. Tread tracking;
      ii. Erosion blankets;
      iii. Mulching; or
      iv. Other adequately protective practices
   c. Conduit/Ditch Protection
      i. Inlet protection;
      ii. Outlet protection;
      iii. Other adequately protective practices
   d. Stabilizing Drainage Ditches
      i. Check dams;
      ii. Lining deep ditches; or
      iii. Other protective equivalent practices
   e. Sediment trapping devices used to settle out sediment eroded from disturbed areas, including:
      i. Sediment traps;
      ii. Basins (unless infeasible, discharges from basins and impoundments must utilize outlet structures that withdraw water from the surface); or
      iii. Any performance enhancement practices that will be used, such as:
         1. Baffles;
         2. Skimmers;
         3. Electro coagulation;
         4. Filtration; or
         5. Other adequately protective practices; or
      iv. Other adequately protective practices.
   f. Perimeter controls, such as:
      i. Silt fences;
      ii. Berms;
      iii. Swales; or
      iv. Other adequately protective practices.

5. Other Construction and Development Site Management Practices and Construction activities that generate a variety of wastes and wastewater, including concrete truck rinsate, municipal solid waste, trash, and other pollutants.
    a. Construction materials shall be handled, stored, maintained, and disposed of properly to avoid contamination of runoff to the maximum extent practicable and as noted below.
    b. The SWPPP shall describe which practices will be implemented to manage Construction and Development Site wastes and prevent or minimize discharges to surface water, including:
        i. Protecting construction materials, chemicals, and lubricants from exposure to rainfall;
        ii. Preventing litter, construction debris, and construction chemicals from entering receiving water;
        iii. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge. Soaps or solvents used in vehicle washing are prohibited;
        iv. Limiting exposure of freshly placed concrete to rainfall that results in runoff;
        v. Segregating stormwaters and other wastewaters from fuels, lubricants, sanitary wastes, and other chemicals such as pesticides, herbicides, and fertilizers to prevent runoff being contaminated. Discharges of fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance are prohibited;
        vi. Neat and orderly storage of chemicals, pesticides, herbicides, fertilizers and fuels that are being stored on the site;
        vii. Prompt collection and management of trash and sanitary waste which includes maintaining waste container lids closed when not in use and at the end of the business day for those containers that are actively used throughout the day, or, for waste containers that do not have lids, provide either (1) cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or (2) a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment);
        viii. Prompt cleanup of spills of liquids and solid materials that could pose a pollutant risk and implement a chemical spill and leak prevention and response procedure;
        ix. Regular removal of accumulations of sediment to minimize the potential for discharge; and
        x. Wastewater from washout of concrete is prohibited, unless managed by an appropriate control (i.e., develop safe concrete disposal area for removal off-site, etc.);
        xi. Wastewater from washout and cleanout of stucco, paint, form release oils, and curing compounds are prohibited; or
        xii. Other adequately protective practices.
6. A description of all intended protective practices substituting for those practices required by the permit and a demonstration that the substitute practices are adequately protective, including how the substitute practices implement acceptable mitigation measures.
7. A description of the intended sequence of major stormwater controls and an implementation schedule in relation to the construction process.
8. A description of interim and permanent stabilization practices (to comply with the requirements of Section 2.4 of this permit), including a schedule of their implementation.
9. The proposed location(s) of off-site equipment storage, material storage, waste storage and

borrow/fill areas.

10. A proposed construction schedule as a means for the operator(s) and KDOW to determine applicability and implementation status of SWPPP requirements.
11. An explanation of practices employed to reduce pollutants from construction-related materials that are stored on site, including:
    a. A description of said construction materials (with updates as appropriate);
    b. A description of pollutant sources from areas untouched by construction; and
    c. A description of stormwater controls that will be implemented in those areas.
12. Provisions for construction dewatering controls to minimize the discharge of pollutants, such as:
    a. Routing dewatering water through a sediment control designed to prevent discharges with visual turbidity;
    b. To the extent feasible, using well-vegetated (e.g. grassy or wooded), upland areas of the site to infiltrate dewatering water before discharge;
    c. Using an oil-water separator or suitable filtration device designed to remove oil, grease, or other products if dewatering water is found to or expected to contain these materials; or
    d. Other adequately protective measures.

2.2.5. Maintenance of Stormwater Controls

Erosion prevention measures, sediment control measures, and other site management practices must be maintained in an effective, operating condition. The permittee shall develop a schedule of maintenance activities to ensure the proper function of these devices. The EPA recommends that sediment control devices be maintained at below 1/2 capacity to allow for sediment capture.

If site inspections identify sediment control measures, erosion control measures, and other site management practices that are not operating effectively or otherwise require maintenance, maintenance shall be performed, before the next storm event. If maintenance before the next storm event is impracticable, the required maintenance shall be completed as soon as possible.

2.2.6. Non-Stormwater Discharge Management

The SWPPP shall identify appropriate pollution prevention measures for each of the following eligible non-stormwater wastestreams. The non-stormwater waste streams authorized under this permit include:

1. Discharges from emergency fire-fighting activities;
2. Fire hydrant flushing if accompanied by temporal or chemical de-chlorination;
3. Waters used for vehicle washing where detergents are not used;
4. Water used for dust control;
5. Potable water including uncontaminated water-line flushing;
6. External building wash down, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances;
7. Pavement wash waters where spills or leaks or toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
8. Landscape irrigation;
9. Clean, non-turbid water-well discharges of groundwater;
10. Construction dewatering (including discharges from dewatering of trenches and excavations) provided it is managed by appropriate controls and the requirements of this permit are met; and

11. Uncontaminated air conditioning or compressor condensate.

2.2.7. Inspections – Permittee Conducted

1. Permittees shall provide for regular inspections of the site. For purposes of this part, DOW defines "regularly" to mean either
    a. At least once every seven (7) calendar days, or
    b. At least once every fourteen (14) calendar days, and within 24 hours after any storm event of 0.5 inch or greater. (DOW recommends that the permit holder perform a "walk through" inspection of the construction site before anticipated storm events.)
2. For areas of the site that have undergone temporary or final stabilization, inspections shall be conducted at least once a month until final stabilization is achieved and the coverage is terminated.
3. Inspections shall be performed by personnel knowledgeable and skilled in assessing conditions at the construction site that could impact stormwater quality and assessing the effectiveness of erosion prevention measures, sediment control measures, and other site management practices chosen to control the quality of the stormwater discharges. Personnel conducting inspections shall have training in stormwater construction management such as KEPSC, CEPSC, CPSWQ, TNEPSC, CESSWI, or other similar training.
4. Personnel conducting inspections shall conduct visual inspections to determine:
    a. Whether erosion prevention measures, sediment control measures, and other site management practices are:
        i. properly installed;
        ii. properly maintained;
        iii. effective in minimizing discharges to the receiving water; and
    b. Whether excessive pollutants are entering the drainage system.
5. Visual inspections shall comprise, at a minimum:
    a. Erosion prevention measures;
    b. Sediment control measures;
    c. Other site management practices and points of site egress;
    d. Disturbed areas;
    e. Areas used for storage of materials exposed to precipitation;
    f. Discharge points shall be inspected to ascertain whether erosion prevention measures, sediment control measures, other site management practices and points of site egress are effective in preventing impacts to waters of the Commonwealth. This can be done by inspecting the receiving water bodies for evidence of new erosion and/or the introduction of newly deposited sediment or other pollutants; and
    g. If discharge points are inaccessible, then nearby downstream locations shall be inspected.
    h. For linear construction activities (e.g., utility line installation, pipeline construction), representative inspections are acceptable. This permit allows for inspection of the project 0.25 miles above and below each point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the construction site.
6. Inspection reports shall be prepared for each inspection and shall be retained with the SWPPP. Inspection reports should include:

a. The date and time of inspection;
b. The name and title of the personnel conducting the inspection;
c. A synopsis of weather information for the period since the last inspection (or since commencement of construction activity of the initial inspection performed) including a best estimate of the beginning of each storm event, the duration of each storm event, and the approximate amount of rainfall for each storm event (in inches);
d. Weather conditions and a description of any discharges occurring at the time of the inspection;
e. Location(s) of discharges of sediment or other pollutants from the site;
f. Location(s) of sediment control measures, erosion control measures, or other site management practices that require maintenance;
g. Location(s) of any erosion prevention measures, sediment control measures, or other site management practices that failed to operate as designed or proved inadequate for a particular location;
h. Location(s) where additional erosion prevention measures, sediment control measures, or other site management practices are needed that did not exist at the time of the inspection;
i. Identify any actions taken in response to inspection findings; and
j. Identify any incidents of non-compliance with the SWPPP.
k. If no incidents of non-compliance with the SWPPP were identified, the report shall contain a certification that the site is in compliance with the SWPPP.
l. The inspection report shall be signed in accordance with the signatory requirements in 401 KAR 5:060, Section 4.

2.2.8. Maintaining an Updated Plan

1. Stormwater Pollution Prevention Plans (SWPPPs) shall be revised whenever erosion prevention measures, sediment control measures, or other site management practices are significantly modified in response to a change in design, construction method, operation, maintenance procedure, etc., that may cause a significant effect on the discharge of pollutants to receiving waters or municipal separate storm sewer systems.
2. For KYTC projects, the BMP Plan shall be revised whenever erosion prevention measures, sediment control measures, or other site management practices are modified in response to a change in design, construction method, operation, maintenance procedure, etc., that may cause a significant effect on the discharge of pollutants to receiving waters or municipal separate storm sewer systems. The location of BMPs shall be documented in the daily work report for the highway construction project.
3. The SWPPP shall be amended if inspections or investigations by site staff or by local, state, or federal officials determine that the existing sediment control measures, erosion control measures, or other site management practices are ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site.
4. If an inspection reveals design inadequacies, the site description and sediment control measures, erosion control measures, or other site management practices identified in the SWPPP shall be revised.
5. All necessary modifications to the SWPPP shall be made within seven (7) calendar days following the inspection unless granted an extension of time by DOW.

6. If existing sediment control measures, erosion control measures, or other site management practices need to be modified or if additional sediment control measures, erosion control measures, or other site management practices are necessary, implementation shall be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation should be documented in the SWPPP and the changes shall be implemented as soon as practicable.

2.2.9. Signature, Plan Review, and Making Records Available

1. The SWPPP shall be signed and certified by a person described in 401 KAR 5:060, Section 4 [40 CFR 122.22] or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described in 401 KAR 5:060, Section 4 [40 CFR 122.22];
    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
    c. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to DOW, if requested.
2. For KYTC projects, the BMP Plan shall be signed and certified by a person described in 401 KAR 5:060, Section 4 [40 CFR 122.22] or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described in 401 KAR 5:060, Section 4 [40 CFR 122.22];
    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
    c. The signed and dated written authorization is included in the BMP. A copy must be submitted to DOW, if requested.
3. A current copy of the SWPPP shall be readily available on the construction site from the date of project initiation to the date of Notice of Termination.
4. The person with day-to-day operational control over the plan's implementation shall keep a copy of the SWPPP readily available whenever on site (a central location accessible by all on-site operators is sufficient for sites that are part of a common plan of development).
5. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location shall be posted near the main entrance at the construction site.
6. The permittee shall make the SWPPP available to DOW or its authorized representative for review and copying during on-site inspection.
7. The permittee shall make the SWPPP available, upon request, to the Environmental Protection Agency and other federal agencies or their contractor, and local governmental agencies and officials approving sediment and erosion plans, grading plans or stormwater management plans, including the operator of a MS4 receiving discharges from the site.
8. Inspection reports and SWPPPs may be prepared, signed, and kept electronically, rather than in paper form, if the records are: (a) in a format that can be read in a similar manner as a paper record; (b) legally dependable with no less evidentiary value than their paper equivalent; and (c)

immediately accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form.

2.3. Minimize Size and Duration of Disturbance

The permittee shall at all times minimize disturbance and the period of time that the disturbed area is exposed without stabilization practices. In critical areas, erosion prevention measures such as erosion control mats/blankets, mulch, or straw blown in and stabilized with tackifiers or by treading, etc. shall be implemented on disturbed areas within 24 hours or as soon as practical after completion of disturbance/grading or following cessation of activities.

2.4. Stabilization Requirements

Temporary stabilization practices on those portions of the project where construction activities have temporarily ceased shall be initiated within fourteen (14) days of the date of activity cessation.

Final stabilization practices on those portions of the project where construction activities have permanently ceased shall be initiated within fourteen (14) days of the date of activity cessation.

Final stabilization shall be initiated on any site where construction activities have been suspended or have otherwise stopped for more than 180 days. In such cases final stabilization practices shall be implemented as soon as practical but not later than 14 days after the 180th day of suspended or stopped activities.

2.5. Buffer Zones

2.5.1. Minimum Buffer Zone

The minimum buffer zone applies to:

- Discharges to receiving waters categorized as High Quality Waters (except those designated an Outstanding State Resource Water)
- Impaired Waters that are impaired for non-sediment related impairment

Except as provided elsewhere in this section, permittees are required to maintain at least a 25-foot buffer zone between any disturbance and all edges of the receiving water as one of the means of providing adequate protection to receiving waters.

2.5.2. Enhanced Buffer Zone for Sensitive or Sediment-Related-Impaired Waters

The enhanced buffer zone applies to discharge to:

- Receiving waters designated as Coldwater Aquatic Habitat or Outstanding State Resource Water
- Receiving waters categorized as an Outstanding National Resource Water or Exceptional Water,
- Receiving waters that are listed in the most recently approved Integrated Water Quality 305(b) Report to Congress as an Impaired Water for which the impairment is sediment related and an approved TMDL has not been developed for pollutants of concern that may be discharged from the facility.

Permittees subject to an enhanced buffer zone must maintain at a minimum a 50-foot buffer zone between any disturbance and all edges of the receiving water as one of the means of providing adequate protection to receiving waters.

2.5.3. Alternatives to Minimum Buffer Zone

If the buffer zone between any disturbance and the edge of the receiving water on all edges of the water body cannot be maintained, adequately protective alternative practices may be employed. The SWPPP shall explain any alternative practices and how these practices are adequately protective. Such cases include but

are not limited to stream crossings and dredge and fill areas. In these cases, the permittee shall minimize disturbances in the buffer zones by using handheld or other low-impact equipment.

2.5.4. Use of Natural Buffers and Conditions

Unless infeasible, natural buffers should be provided and maintained around receiving waters, stormwater should be directed to vegetated areas, and infiltration of stormwater should be maximized to reduce pollutant discharges.

SECTION 3

NOTICE OF INTENT – STORMWATER CONSTRUCTION ACTIVITIES (NOI-SWCA)

REQUIREMENTS

3. Notice of Intent (NOI-SWCA) Requirements

An electronic NOI-SWCA shall be submitted by all operators who seek authorization under this permit for the discharge of stormwater related to construction activity. If the project is part of a larger common plan of development, each operator is required to obtain coverage for each site, individually or collectively, unless a single operator is developing the entire project. Those persons or activities requiring an individual stormwater permit shall not use the NOI-SWCA. Those persons seeking an individual permit must use the KPDES program Form 1 and Form F. Forms are located at**:**

https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Pages/default.aspx

3.1. Contents

Form NOI-SWCA requires the following information:

1. Facility Operator Information
    a. Names of All Operators under this NOI
    b. Contact information for all operators, including:
        i. Mailing Address
        ii. Telephone Number
        iii. Status of Operators (federal, state, public, or private)
        iv. Contact Person's Name
    c. Contact Person's Email address
    d. Additional Operator Information for Co-Permittee, if applicable
2. Facility/Site Location Information
    a. Name of Project
    b. Physical Location/Address
    c. Site Latitude (decimal degrees)
    d. Site Longitude (decimal degrees)
    e. County
3. Site Activity Information
    a. Pre-development land use
    b. Type of Construction site as a project description
    c. If project will demolish 10,000 square feet or more of space built or renovated prior to January 1, 1980.
    d. For single projects provide following information:
        i. Total number of acres in project
        ii. Total number of acres to be disturbed
        iii. Anticipated start date
        iv. Anticipated completion date
    e. For common plan of development projects provide following information:
        v. Total number of acres in applicant's project
        vi. Total number of acres to be disturbed by applicant
        vii. Total number of lots (if applicable) in the common plan of development
        viii. Total number of lots (if applicable) that the applicant plans to develop
        ix. Total acreage that the applicant will disturb at one time
        x. Anticipated start date
        xi. Anticipated completion date
        xii. Contractors known at the time of application.

4. Information on the receiving water body and discharge points leading to the water body is required:

    a. Name of Receiving Water(s)
    b. Anticipated number of discharge points
    c. Location (Latitude and Longitude in decimal degrees) of anticipated discharge points

5. If the permitted site discharges within a regulated MS4 area, the following information is required:

    a. Name of regulated MS4
    b. Date of application or notification to the MS4 for construction site permit coverage

6. Construction activities in or along a water body

    Will the project require construction activities in a water body or the riparian zone?

    a. If yes, describe the scope of the activity including how many linear feet of water body and acres of riparian zone will be impacted?
    b. Is a Clean Water Act §404 permit (individual or nationwide) required?
    c. Is a Clean Water Act §401 Water Quality Certification? (Individual or general) required?

7. NOI Preparer Information

    a. Name of the person who completed the NOI
    b. Contact information of the person who completed the NOI, including:
        i. Mailing Address
        ii. Telephone Number
        iii. Email address

8. Attachments – Site Map

    A legible map of appropriate scale sufficient to clearly illustrate the following:

    a. Property boundary of the project including entrances;
    b. Areas to be disturbed;
    c. Location of anticipated discharge points; and
    d. Location of receiving waters.
    e. Label nearby roads

    For KYTC projects, the roadway plan shall substitute for the site map.

9. Certification

    The NOI-SWCA contains a certification that all information provided on the NOI and the attachments is correct and accurate. Following the certification is a signature block for the authorized agent, including the agent's name and title, telephone number and date. Note the signature requirements of the NOI-SWCA shall be consistent with the requirements of 401 KAR 5:060, Section 4 [40 CFR 122.22].

3.2. NOI Submission Requirements and Deadlines

Applicants shall use the electronic web based NOI submission system that allows the applicant to complete and submit the NOI-SWCA form online. Applicants can access this system at the following web address: https://dep.gateway.ky.gov/eForms/Home/Forms?FormId=48. The applicant shall complete and

submit the NOI-SWCA a minimum of (7) days before the proposed date for commencement of construction activities and shall receive authority to discharge as detailed in Section 3.3.

For ongoing projects, DOW will extend coverage for a period of two (2) years from the issuance date of the coverage. Projects that will not achieve final stabilization by this date must submit a new eNOI-SWCA application requesting coverage under this renewal of the general permit. Ongoing Projects include only those that obtained coverage under the KYR10 prior to December 1, 2024.

DOW will not process any NOI that is incomplete, inaccurate, or in an incorrect format.

3.3. Authorization to Discharge by Coverage Letter

Submittal of a Notice of Intent for permit coverage does not ensure authorization to discharge. Authorization for each operator to discharge under the terms of this general permit shall be effective upon the issuance of written notification of coverage by the DOW. DOW will provide this written notification electronically to the operator via the email address provided on the NOI-SWCA.

SECTION 4

STANDARD CONDITIONS

4. Standard Conditions

4.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of KRS Chapter 224 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Any person who violates applicable statutes or who fails to perform any duty imposed, or who violates any determination, permit, administrative regulation, or order of the cabinet promulgated pursuant thereto shall be liable for a civil penalty as provided at KRS 224.99.010.

4.2. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain authorization as required by the new permit once DOW issues it.

4.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4.5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

4.6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

4.7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

4.8. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

4.9. Inspection and Entry

The permittee shall allow the Director or an authorized representative (including an authorized contractor acting as a representative of the Director), upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by KRS 224, any substances or parameters at any location.

4.10. Signatory Requirement

1. All applications, reports, or information submitted to the Director shall be signed and certified pursuant to 401 KAR 5:060, Section 4.
2. KRS 224.99-010 provides that any person who knowingly provides false information in any document filed or required to be maintained under KRS Chapter 224 shall be guilty of a Class D felony and upon conviction thereof, shall be punished by a fine not to exceed twenty-five thousand dollars ($25,000), or by imprisonment, or by fine and imprisonment, for each separate violation. Each day upon which a violation occurs shall constitute a separate violation.

4.11. Reporting Requirements

4.11.1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in KRS 224.16-050;
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under KRS 224.16-050; or
3. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

4.11.2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

4.11.3. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under KRS 224; see 401 KAR 5:050, Section 6; in some cases, modification or revocation and reissuance is mandatory.

4.11.4. Twenty-Four Hour Reporting

1. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written

submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2. The following shall be included as information which must be reported within twenty-four (24) hours under this paragraph.
    a. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    b. Any upset which exceeds any effluent limitation in the permit.
    c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.
3. The Director may waive the written report on a case-by-case basis for reports under paragraph ii of this section if the oral report has been received within twenty-four (24) hours.
4. Notifying the Regional Field Office:
    a. Reporting shall be as required in paragraphs 1 through 3 of this subsection except if a spill or release of pollutants or contaminants, bypass, upset, or other event of non-compliance occurs that may present an imminent or substantial danger to the environment or the public health or welfare. The permittee shall immediately notify their local Regional Field Office as follows; Bowling Green (270) 746-7475; Columbia (270) 384-4734; Florence (859) 525-4923; Frankfort (502) 564-3358; Hazard (606) 435-6022; London (606) 330-2080; Louisville (502) 429-7122; Madisonville (270) 824-7529; Morehead (606) 783-8655; and Paducah (270) 898-8468.
    b. If a report required by this subsection is made during other than normal business hours, it shall be made through the twenty-four (24) hour environmental emergency telephone number at (800) 928-2380.
    c. The reporting requirements of this subsection does not relieve the permittee of reporting required under other laws, regulations, programs, or emergency response plans.

4.11.5. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

SECTION 5

OTHER CONDITIONS

5. OTHER CONDITIONS

5.1. Authorization to Discharge

Authorization for each permittee to discharge under the terms of this general permit shall be effective upon the issuance of written notification of coverage by the DOW. Upon approval of coverage, DOW will provide written notification electronically to the operator via the email address provided on the NOI-SWCA.

5.2. Termination of Coverage

All existing coverages in effect on the effective date of this permit shall be terminated by DOW effective two (2) years after the issuance date of the coverage. The permittee shall submit a NOI-SWCA application requesting renewal of coverage under this renewal of the general permit if coverage is needed beyond this time frame.

When one or more of the following conditions have been met, operators shall submit a completed electronic Notice of Termination (NOT) to DOW:

1. Final stabilization has been achieved on all portions of the site for which the permittee is responsible;
2. Another permittee has assumed control over all areas of the site that have not been finally stabilized;
3. Coverage under an individual or other general KPDES permit, which covers the discharge, has been obtained.

For new projects that do not submit a Notice of Termination (NOT), termination of coverage occurs automatically two (2) years after authorization to discharge is granted unless the operator submits a new NOI-SWCA to extend or renew coverage.

5.3. In-Stream Treatment or Disposal Facilities

This permit does not authorize the construction or use of in-stream treatment or disposal facilities (sediment ponds, hollow fills, valley fills, etc.). Such authorization is within the jurisdiction of the U.S. Army Corps of Engineers and is implemented through the Clean Water Act §404 permitting program. A §404 permit action also requires the issuance of a Clean Water Act §401 Water Quality Certification by the Kentucky Division of Water. This certification shall be obtained on a site-specific basis as the U.S. Army Corps of Engineers §404 Nationwide permit does not provide automatic Clean Water Act §401 Water Quality Certification coverage for areas that impact more than 200 linear feet of stream or one (1) acre of wetlands. The conditions of the Clean Water Act §404 permit and the §401 Water Quality Certification shall be incorporated into the SWPPP.

5.4. Schedule of Compliance

For new projects, the covered facility must comply with the requirements of this permit by the date of authorization to discharge granted under the DOW's issuance of a coverage letter.

For ongoing projects, existing SWPPPs and BMPs shall be deemed in compliance with the requirements of this permit. However, should DOW take enforcement action regarding the failure of a SWPPP and/or BMPs to protect water quality, the permit holder may be required to make changes to the SWPPP and/or BMPs.

5.5. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

5.6. Retention of Records

The permit requires that all required records and reports be retained, including SWPPPs and information used to complete the NOI, for at least three (3) years from the termination of coverage or expiration of the permit.

5.7. Antidegradation

For those discharges subject to the provisions of 401 KAR 10:030, Section 1(3)(b)5, the permittee shall install, operate, and maintain buffer zones and stormwater controls consistent with those required by Section 2.4.

5.8. Continuation of Expiring Permit

In the event the permit expires prior to reissuance by DOW, the conditions and requirements of this version of KYR10 shall continue in effect until DOW reissues the permit. However, new or expanded coverages cannot be authorized until the permit is reissued.

5.9. Other Permits

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

Attachment B

Permitting Documentation

(NOI, Permit Card, Permit Letters, Blank NOT/MOD)

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

John S. Lyons
SECRETARY

Anthony R. Hatton
COMMISSIONER

May 1, 2026

Ozgun Danaci
Discovery Industries Inc
18838 Hwy 3235
Galliano, LA 70354

Re: KYR10 Coverage Change Acknowledgment
KPDES No.: KYR10U489
Flat Run Solar
Permit Type: Construction Stormwater
AI ID: 172009
Taylor County, Kentucky

Dear Ozgun Danaci:

The discharges associated with the Notice of Intent you submitted have been approved for a CHANGE IN COVERAGE under the "Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Storm Water Discharges Associated with Construction Activities (KYR100000)" master general permit. Your change in coverage becomes effective on the date of this letter. **This coverage automatically terminates April 13, 2028,** unless an extension is requested prior to the termination date, or the Division of Water revokes coverage, whichever comes first. During this period of coverage all discharges shall comply with the conditions of the KYR100000 master general permit. This permit and links to the eNOI (and permit coverage extension) and eNOT forms can be found on our website: https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/KYR10PermitPage.pdf.

Any person aggrieved by the issuance of a permit final decision may demand a hearing pursuant to KRS 224.10-420(2) within thirty (30) days from the date of the issuance of this letter. Any demand for a hearing on the permit shall be filed in accordance with the procedures specified in KRS 224.10-420, 224.10-440, 224.10-470, and the regulations promulgated thereto. The request for hearing should be submitted in writing to the Energy and Environment Cabinet, Office of Administrative Hearings, 211 Sower Boulevard, Frankfort, Kentucky 40601 and the Commonwealth of Kentucky, Energy and Environment Cabinet, Division of Water, 300 Sower Boulevard, Frankfort, Kentucky 40601. For your record keeping purposes, it is recommended that these requests be sent by certified mail. The written request must conform to the appropriate statutes referenced above.

Any questions concerning the general permit and its requirements should be directed to me at 502-782-4213 or email me at sam.burns@ky.gov

Construction Site GPS Coordinates: 37.411961, -85.382633
Receiving Waters: Unnamed Tributaries to Middle Pitman Creek
Ferrill Reservoir
Flat Run

Sincerely,

Sam Burns
Surface Water Permits Branch
Division of Water

cc: Alex Smith, eNOI Preparer
Jason Stephens, Columbia Regional Office

Attachment C

Soil Maps

United States Department of Agriculture

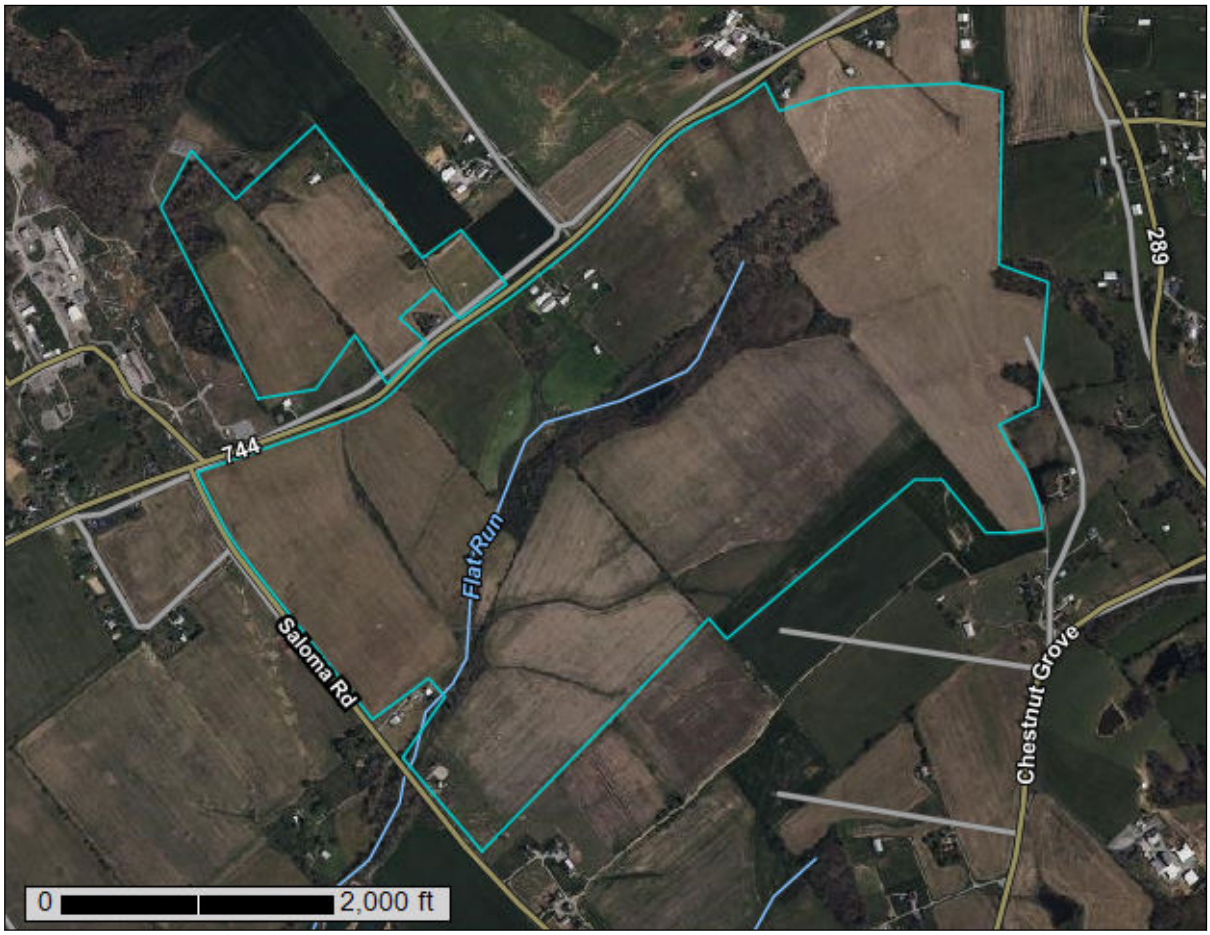
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Green and Taylor Counties, Kentucky

Flat Run Solar, LLC



February 19, 2026

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

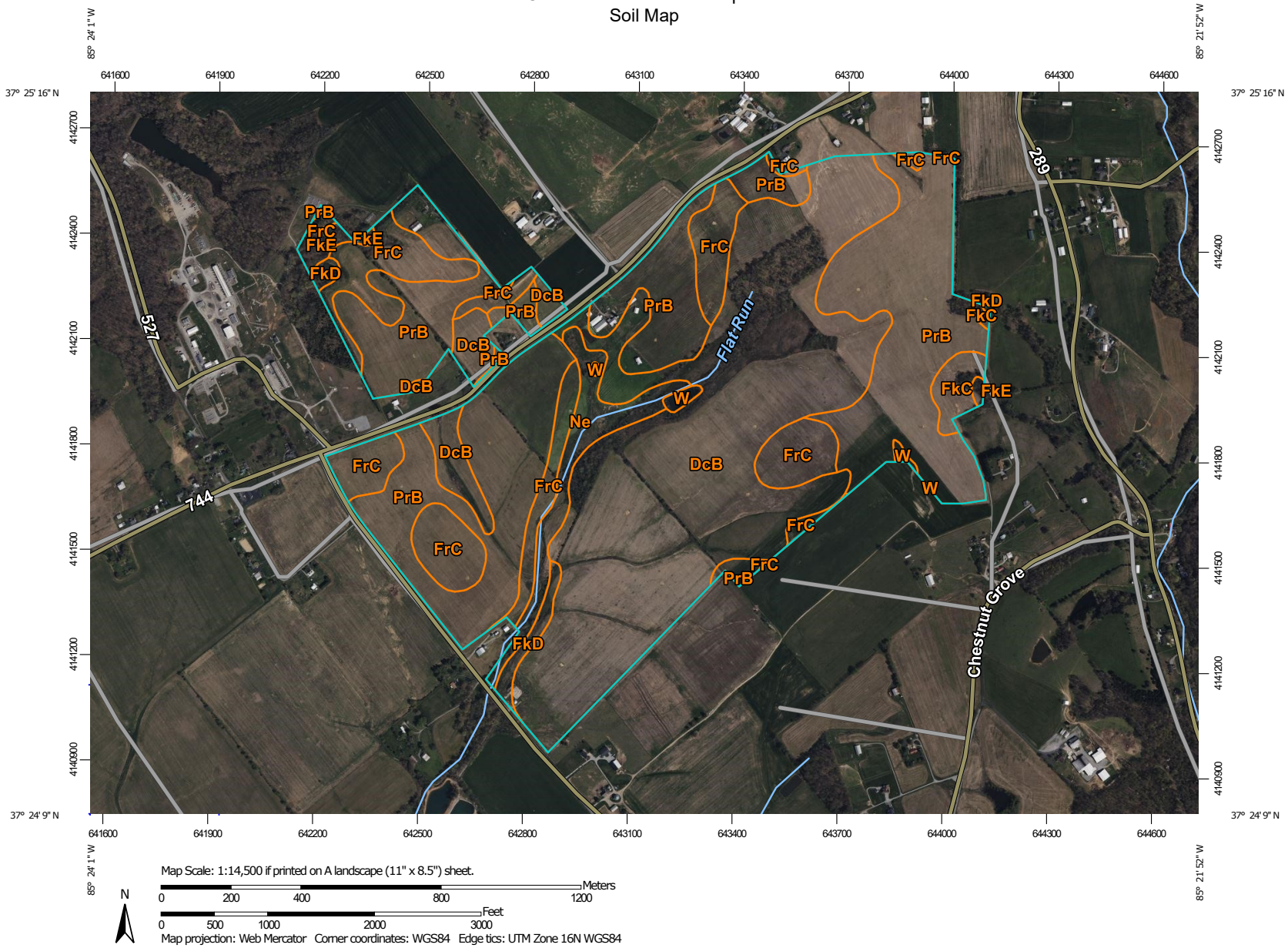
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Green and Taylor Counties, Kentucky
Survey Area Data: Version 21, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 9, 2023—Apr 10, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DcB	Dickson silt loam, 2 to 6 percent slopes	194.7	41.6%
FkC	Frankstown silt loam, 6 to 12 percent slopes	6.2	1.3%
FkD	Frankstown silt loam, 12 to 20 percent slopes	5.0	1.1%
FkE	Frankstown silt loam, 20 to 30 percent slopes	3.7	0.8%
FrC	Frederick silt loam, 6 to 12 percent slopes	62.0	13.2%
Ne	Newark silt loam	16.8	3.6%
PrB	Pricetown silt loam, 2 to 6 percent slopes	177.6	38.0%
W	Water	1.9	0.4%
Totals for Area of Interest		**467.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Green and Taylor Counties, Kentucky

DcB—Dickson silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: ljz4
Landscape: Uplands
Elevation: 500 to 1,100 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dickson and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dickson

Setting

Landscape: Uplands
Landform: Broad ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-silty noncalcareous loess over clayey residuum weathered from limestone

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 26 inches: silty clay loam
H3 - 26 to 38 inches: silty clay loam
H4 - 38 to 65 inches: silty clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 24 to 30 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 20 to 29 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F122XY023TN - Loess Veneered Thermic Uplands
Hydric soil rating: No

Minor Components

Newark

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: No

Mountview

Percent of map unit: 5 percent
Hydric soil rating: No

Taft

Percent of map unit: 5 percent
Hydric soil rating: No

FkC—Frankstown silt loam, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: ljz8
Landscape: Uplands
Elevation: 500 to 1,170 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Frankstown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frankstown

Setting

Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Fine-loamy residuum weathered from limestone and siltstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 34 inches: gravelly silty clay loam
H3 - 34 to 45 inches: gravelly silty clay loam
R - 45 to 55 inches: bedrock

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F122XY003KY - Deep Well Drained Loamy Uplands
Hydric soil rating: No

Minor Components

Frederick

Percent of map unit: 10 percent
Hydric soil rating: No

Caneyville

Percent of map unit: 5 percent
Hydric soil rating: No

FkD—Frankstown silt loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: ljz9
Landscape: Uplands
Elevation: 500 to 1,150 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition

Frankstown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frankstown

Setting

Landscape: Uplands
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Fine-loamy residuum weathered from limestone and siltstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 34 inches: gravelly silty clay loam
H3 - 34 to 45 inches: gravelly silty clay loam
R - 45 to 55 inches: bedrock

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F122XY003KY - Deep Well Drained Loamy Uplands
Hydric soil rating: No

Minor Components

Frederick

Percent of map unit: 10 percent
Hydric soil rating: No

Caneyville

Percent of map unit: 5 percent
Hydric soil rating: No

FkE—Frankstown silt loam, 20 to 30 percent slopes

Map Unit Setting

National map unit symbol: ljzb
Landscape: Uplands
Elevation: 500 to 1,100 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition

Frankstown and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frankstown

Setting

Landscape: Uplands
Landform: Steep hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Parent material: Fine-loamy residuum weathered from limestone and siltstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 34 inches: gravelly silty clay loam
H3 - 34 to 45 inches: gravelly silty clay loam
R - 45 to 55 inches: bedrock

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F122XY003KY - Deep Well Drained Loamy Uplands
Hydric soil rating: No

Minor Components

Caneyville

Percent of map unit: 5 percent
Hydric soil rating: No

Frederick

Percent of map unit: 5 percent
Hydric soil rating: No

Garmon

Percent of map unit: 5 percent
Hydric soil rating: No

FrC—Frederick silt loam, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: 2v5b4
Landscape: Karst uplands
Elevation: 510 to 1,530 feet
Mean annual precipitation: 42 to 61 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 154 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Frederick and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frederick

Setting

Landscape: Karst uplands
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone and sandstone

Typical profile

Ap - 0 to 10 inches: silt loam
Bt1 - 10 to 16 inches: silty clay loam
Bt2 - 16 to 70 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Minor Components

Pricetown

Percent of map unit: 7 percent
Landscape: Karst uplands
Landform: Undulating ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Frankstown

Percent of map unit: 3 percent
Landscape: Karst uplands
Landform: Broad ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Concave
Hydric soil rating: No

Canmer

Percent of map unit: 1 percent
Landscape: Karst uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Caneyville

Percent of map unit: 1 percent
Landscape: Karst uplands
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Ne—Newark silt loam

Map Unit Setting

National map unit symbol: ljzt
Landscape: Uplands, valleys
Elevation: 500 to 1,100 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F

Frost-free period: 159 to 199 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Newark, occasionally flooded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Newark, Occasionally Flooded

Setting

Landscape: Uplands, valleys
Landform: Depressions, Flood plains
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Mixed fine-silty alluvium

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 28 inches: silt loam
H3 - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F122XY017KY - Moist Alluvium
Hydric soil rating: No

Minor Components

Nolin

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: No

Tyler

Percent of map unit: 5 percent
Hydric soil rating: No

PrB—Pricetown silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2zs5w
Landscape: Uplands
Elevation: 540 to 1,410 feet
Mean annual precipitation: 42 to 62 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 145 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Pricetown and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pricetown

Setting

Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-silty noncalcareous loess over clayey residuum weathered from cherty limestone

Typical profile

Ap - 0 to 7 inches: silt loam
BA - 7 to 13 inches: silt loam
Bt1 - 13 to 29 inches: silty clay loam
2Bt2 - 29 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Minor Components

Frederick
Percent of map unit: 4 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Frankstown
Percent of map unit: 3 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Teddy
Percent of map unit: 3 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F122XY006KY - Moderately Well Drained Fragipan Uplands
Hydric soil rating: No

W—Water

Map Unit Setting
National map unit symbol: lk08
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition
Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Custom Soil Resource Report

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Erosion Hazard (Off-Road, Off-Trail)

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope, soil erosion factor K, and an index of rainfall erosivity (R). The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

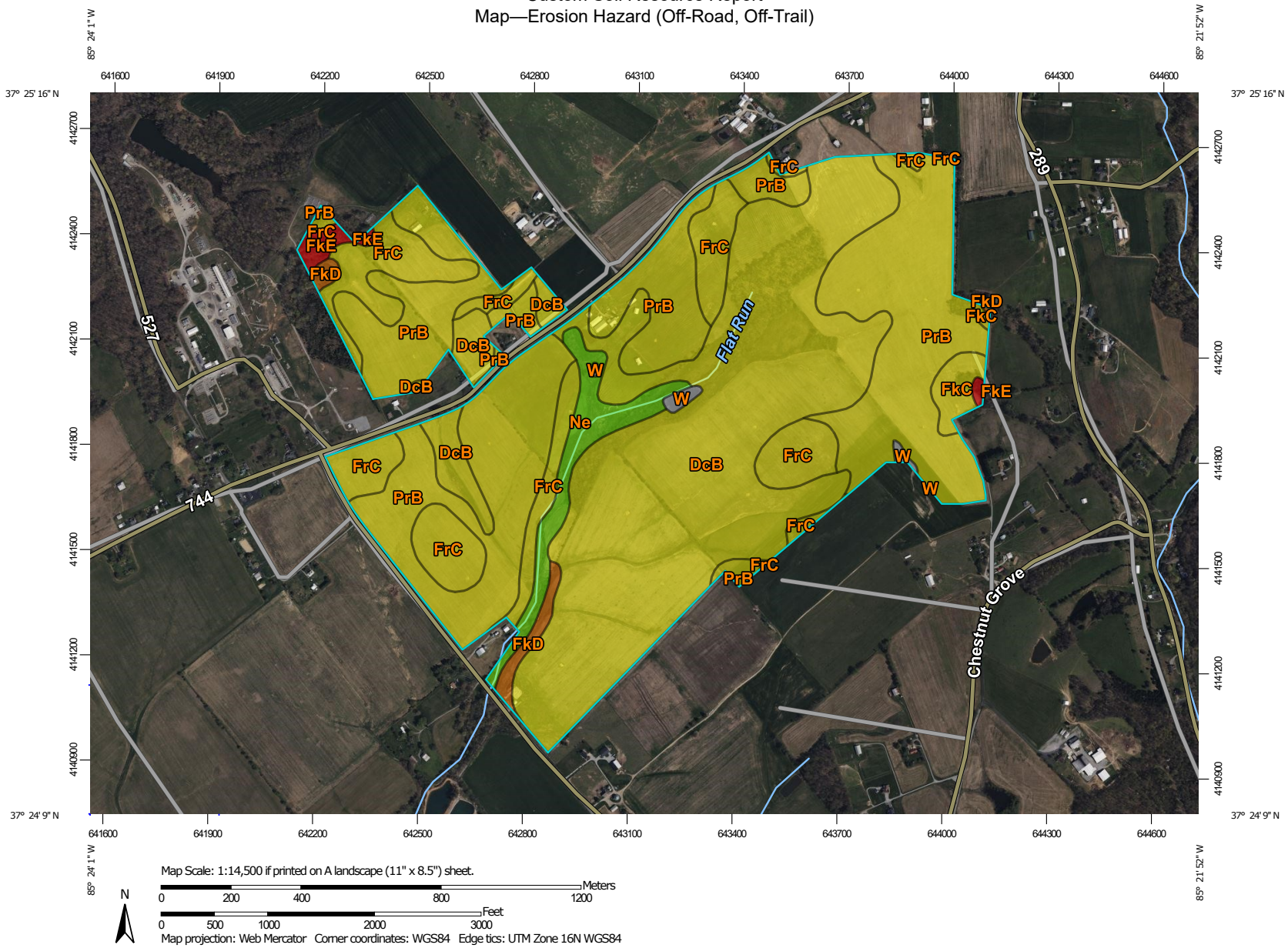
The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—Erosion Hazard (Off-Road, Off-Trail)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Green and Taylor Counties, Kentucky
Survey Area Data: Version 21, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 9, 2023—Apr 10, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Erosion Hazard (Off-Road, Off-Trail)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
DcB	Dickson silt loam, 2 to 6 percent slopes	Moderate	Dickson (85%)	Surface kw times slope times R index (0.53)	194.7	41.6%
FkC	Frankstown silt loam, 6 to 12 percent slopes	Moderate	Frankstown (85%)	Surface kw times slope times R index (0.66)	6.2	1.3%
FkD	Frankstown silt loam, 12 to 20 percent slopes	Severe	Frankstown (85%)	Surface kw times slope times R index (0.81)	5.0	1.1%
FkE	Frankstown silt loam, 20 to 30 percent slopes	Very severe	Frankstown (85%)	Surface kw times slope times R index (1.00)	3.7	0.8%
FrC	Frederick silt loam, 6 to 12 percent slopes	Moderate	Frederick (88%)	Surface kw times slope times R index (0.69)	62.0	13.2%
			Pricetown (7%)	Surface kw times slope times R index (0.69)		
			Frankstown (3%)	Surface kw times slope times R index (0.66)		
			Canmer (1%)	Surface kw times slope times R index (0.72)		
			Caneyville (1%)	Surface kw times slope times R index (0.63)		
Ne	Newark silt loam	Slight	Newark, occasionally flooded (90%)		16.8	3.6%
PrB	Pricetown silt loam, 2 to 6 percent slopes	Moderate	Pricetown (90%)	Surface kw times slope times R index (0.53)	177.6	38.0%
			Frederick (4%)	Surface kw times slope times R index (0.44)		
			Frankstown (3%)	Surface kw times slope times R index (0.33)		
			Teddy (3%)	Surface kw times slope times R index (0.44)		
W	Water	Not rated	Water (100%)		1.9	0.4%
Totals for Area of Interest					**467.8**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Moderate	440.4	94.1%
Slight	16.8	3.6%
Severe	5.0	1.1%
Very severe	3.7	0.8%
Null or Not Rated	1.9	0.4%
Totals for Area of Interest	**467.8**	**100.0%**

Rating Options—Erosion Hazard (Off-Road, Off-Trail)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Soil Erosion

This folder contains a collection of tabular reports that present soil erosion factors and groupings. The reports (tables) include all selected map units and components for each map unit. Soil erosion factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factor Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic layer.

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed or the first mineral horizon below an organic surface horizon. Organic horizons are not displayed.

RUSLE2 Related Attributes–Green and Taylor Counties, Kentucky

Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
DcB—Dickson silt loam, 2 to 6 percent slopes								
Dickson	85	174	C/D	.43	4	11.4	68.1	20.5
FkC—Frankstown silt loam, 6 to 12 percent slopes								
Frankstown	85	151	B	.32	3	22.4	55.1	22.5

Custom Soil Resource Report

RUSLE2 Related Attributes–Green and Taylor Counties, Kentucky								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
FkD—Frankstown silt loam, 12 to 20 percent slopes								
Frankstown	85	98	B	.32	3	22.4	55.1	22.5
FkE—Frankstown silt loam, 20 to 30 percent slopes								
Frankstown	85	98	B	.32	3	22.4	55.1	22.5
FrC—Frederick silt loam, 6 to 12 percent slopes								
Frederick	88	151	B	.37	5	21.0	57.0	22.0
Ne—Newark silt loam								
Newark, occasionally flooded	90	108	B/D	.37	5	13.7	69.3	17.0
PrB—Pricetown silt loam, 2 to 6 percent slopes								
Pricetown	90	174	B	.43	5	13.0	72.0	15.0

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United States Department of Agriculture

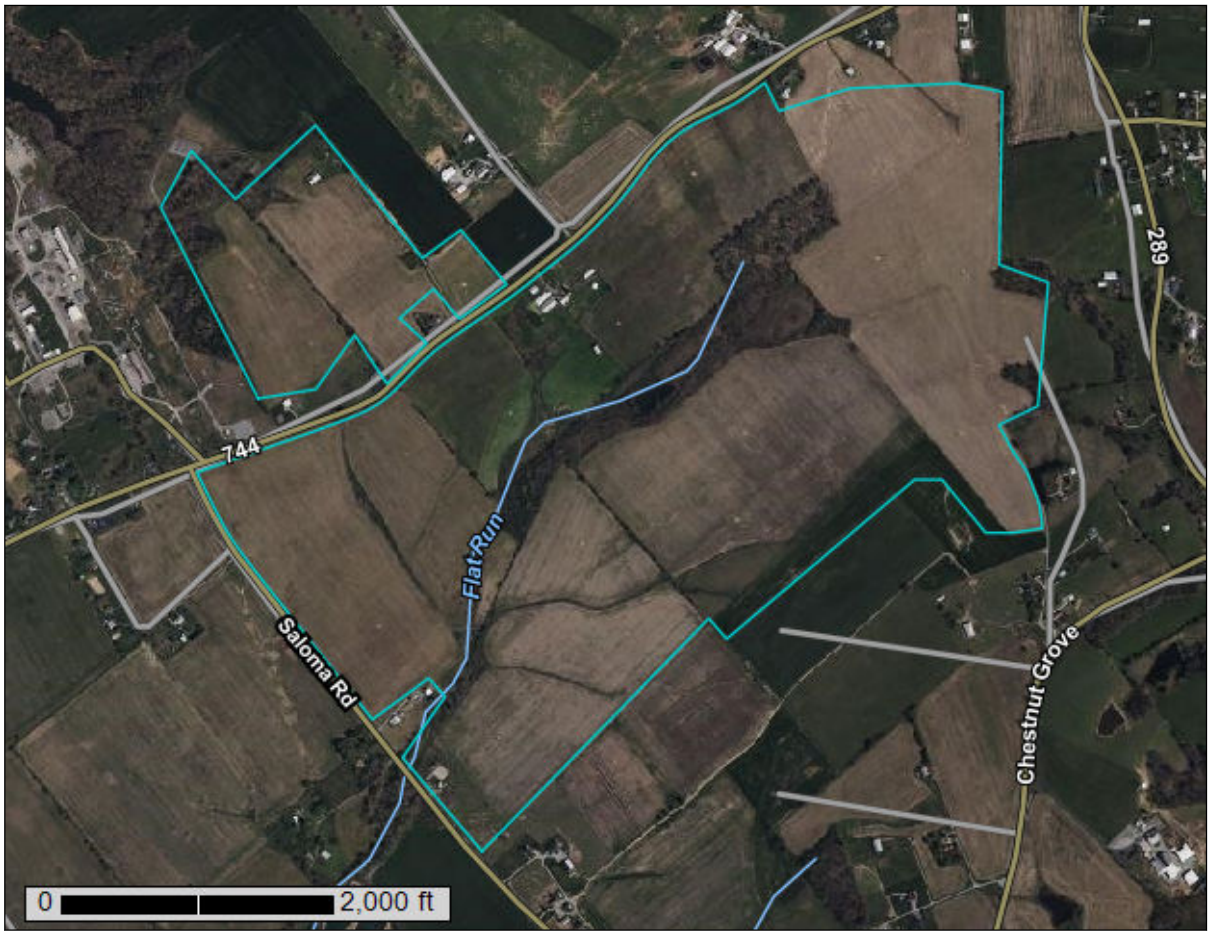
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Green and Taylor Counties, Kentucky

Flat Run Solar



March 5, 2026

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

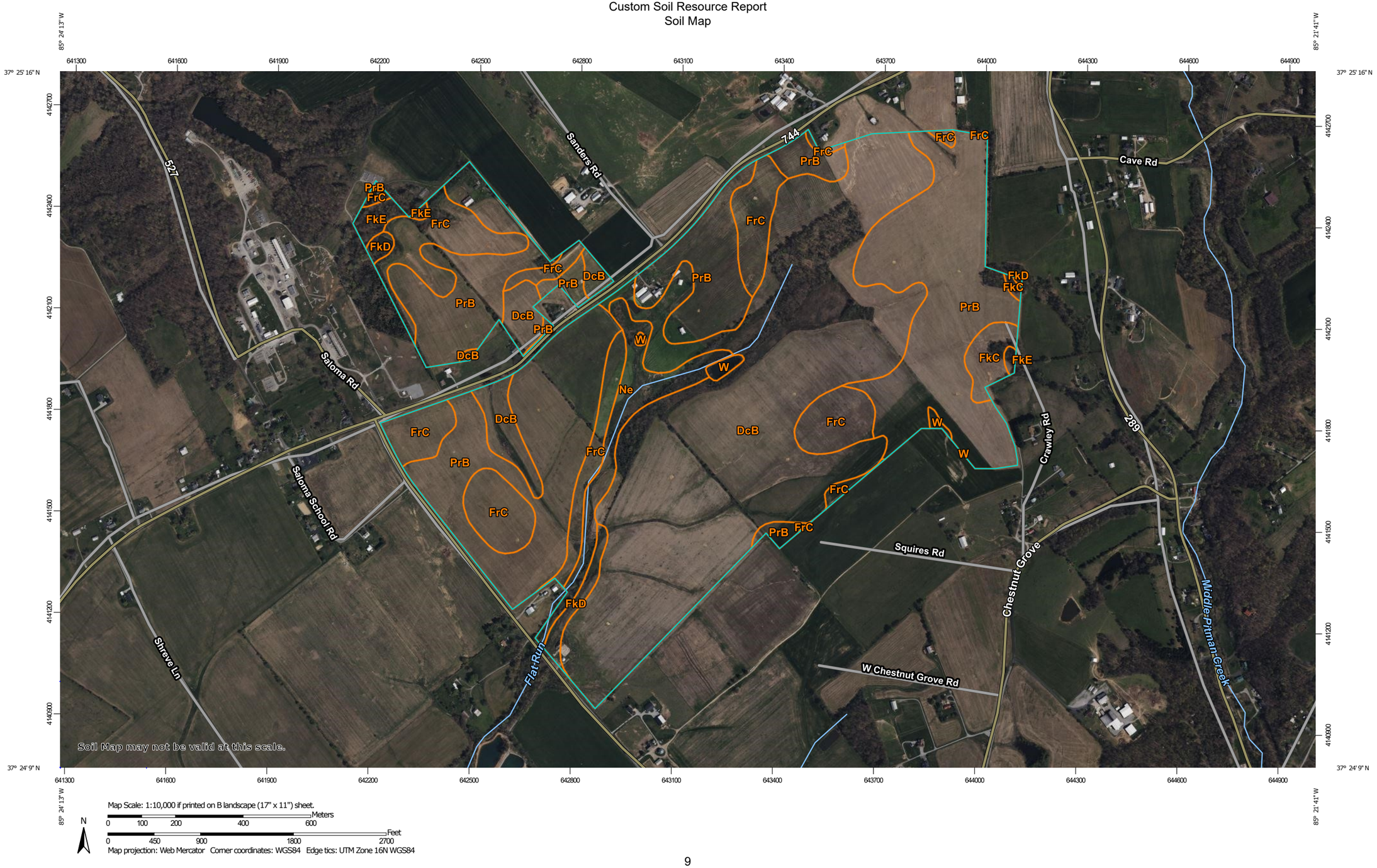
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Green and Taylor Counties, Kentucky
Survey Area Data: Version 21, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 9, 2023—Apr 10, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DcB	Dickson silt loam, 2 to 6 percent slopes	194.7	41.6%
FkC	Frankstown silt loam, 6 to 12 percent slopes	6.2	1.3%
FkD	Frankstown silt loam, 12 to 20 percent slopes	5.0	1.1%
FkE	Frankstown silt loam, 20 to 30 percent slopes	3.7	0.8%
FrC	Frederick silt loam, 6 to 12 percent slopes	62.0	13.2%
Ne	Newark silt loam	16.8	3.6%
PrB	Pricetown silt loam, 2 to 6 percent slopes	177.6	38.0%
W	Water	1.9	0.4%
Totals for Area of Interest		**467.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Green and Taylor Counties, Kentucky

DcB—Dickson silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: ljz4
Landscape: Uplands
Elevation: 500 to 1,100 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dickson and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dickson

Setting

Landscape: Uplands
Landform: Broad ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-silty noncalcareous loess over clayey residuum weathered from limestone

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 26 inches: silty clay loam
H3 - 26 to 38 inches: silty clay loam
H4 - 38 to 65 inches: silty clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 24 to 30 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 20 to 29 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F122XY023TN - Loess Veneered Thermic Uplands
Hydric soil rating: No

Minor Components

Newark
Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: No

Mountview
Percent of map unit: 5 percent
Hydric soil rating: No

Taft
Percent of map unit: 5 percent
Hydric soil rating: No

FkC—Frankstown silt loam, 6 to 12 percent slopes

Map Unit Setting
National map unit symbol: ljz8
Landscape: Uplands
Elevation: 500 to 1,170 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Frankstown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frankstown

Setting
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Fine-loamy residuum weathered from limestone and siltstone

Typical profile
H1 - 0 to 9 inches: silt loam
H2 - 9 to 34 inches: gravelly silty clay loam
H3 - 34 to 45 inches: gravelly silty clay loam
R - 45 to 55 inches: bedrock

Properties and qualities
Slope: 6 to 12 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F122XY003KY - Deep Well Drained Loamy Uplands
Hydric soil rating: No

Minor Components

Frederick

Percent of map unit: 10 percent
Hydric soil rating: No

Caneyville

Percent of map unit: 5 percent
Hydric soil rating: No

FkD—Frankstown silt loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: ljz9
Landscape: Uplands
Elevation: 500 to 1,150 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition

Frankstown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frankstown

Setting

Landscape: Uplands
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Fine-loamy residuum weathered from limestone and siltstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 34 inches: gravelly silty clay loam
H3 - 34 to 45 inches: gravelly silty clay loam
R - 45 to 55 inches: bedrock

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F122XY003KY - Deep Well Drained Loamy Uplands
Hydric soil rating: No

Minor Components

Frederick

Percent of map unit: 10 percent
Hydric soil rating: No

Caneyville

Percent of map unit: 5 percent
Hydric soil rating: No

FkE—Frankstown silt loam, 20 to 30 percent slopes

Map Unit Setting

National map unit symbol: ljzb
Landscape: Uplands
Elevation: 500 to 1,100 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition

Frankstown and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frankstown

Setting

Landscape: Uplands
Landform: Steep hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Concave
Parent material: Fine-loamy residuum weathered from limestone and siltstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 34 inches: gravelly silty clay loam
H3 - 34 to 45 inches: gravelly silty clay loam
R - 45 to 55 inches: bedrock

Properties and qualities

Slope: 20 to 30 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F122XY003KY - Deep Well Drained Loamy Uplands
Hydric soil rating: No

Minor Components

Caneyville

Percent of map unit: 5 percent
Hydric soil rating: No

Frederick

Percent of map unit: 5 percent
Hydric soil rating: No

Garmon

Percent of map unit: 5 percent
Hydric soil rating: No

FrC—Frederick silt loam, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: 2v5b4
Landscape: Karst uplands
Elevation: 510 to 1,530 feet
Mean annual precipitation: 42 to 61 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 154 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Frederick and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Frederick

Setting

Landscape: Karst uplands
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone and sandstone

Typical profile

Ap - 0 to 10 inches: silt loam
Bt1 - 10 to 16 inches: silty clay loam
Bt2 - 16 to 70 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Minor Components

Pricetown

Percent of map unit: 7 percent
Landscape: Karst uplands
Landform: Undulating ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Frankstown

Percent of map unit: 3 percent
Landscape: Karst uplands
Landform: Broad ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Concave
Hydric soil rating: No

Canmer

Percent of map unit: 1 percent
Landscape: Karst uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Caneyville

Percent of map unit: 1 percent
Landscape: Karst uplands
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Ne—Newark silt loam

Map Unit Setting

National map unit symbol: ljzt
Landscape: Uplands, valleys
Elevation: 500 to 1,100 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F

Frost-free period: 159 to 199 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Newark, occasionally flooded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Newark, Occasionally Flooded

Setting

Landscape: Uplands, valleys
Landform: Depressions, Flood plains
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Mixed fine-silty alluvium

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 28 inches: silt loam
H3 - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F122XY017KY - Moist Alluvium
Hydric soil rating: No

Minor Components

Nolin

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: No

Tyler

Percent of map unit: 5 percent
Hydric soil rating: No

PrB—Pricetown silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2zs5w
Landscape: Uplands
Elevation: 540 to 1,410 feet
Mean annual precipitation: 42 to 62 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 145 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Pricetown and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pricetown

Setting

Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-silty noncalcareous loess over clayey residuum weathered from cherty limestone

Typical profile

Ap - 0 to 7 inches: silt loam
BA - 7 to 13 inches: silt loam
Bt1 - 13 to 29 inches: silty clay loam
2Bt2 - 29 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Minor Components

Frederick
Percent of map unit: 4 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Frankstown
Percent of map unit: 3 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F122XY001KY - Deep Well Drained Cherty Uplands
Hydric soil rating: No

Teddy
Percent of map unit: 3 percent
Landscape: Uplands
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F122XY006KY - Moderately Well Drained Fragipan Uplands
Hydric soil rating: No

W—Water

Map Unit Setting
National map unit symbol: lk08
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 44 to 68 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition
Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Custom Soil Resource Report

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Soil Rutting Hazard (Flat Run Solar)

FOR - Forestry

The ratings in this interpretation indicate the hazard of surface rut formation through the operation of forestland equipment. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with rutting.

Ratings are based on depth to a water table, rock fragments on or below the surface, the Unified classification of the soil, depth to a restrictive layer, and slope. The hazard is described as slight, moderate, or severe. A rating of "slight" indicates that the soil is subject to little or no rutting. "Moderate" indicates that rutting is likely. "Severe" indicates that ruts form readily.

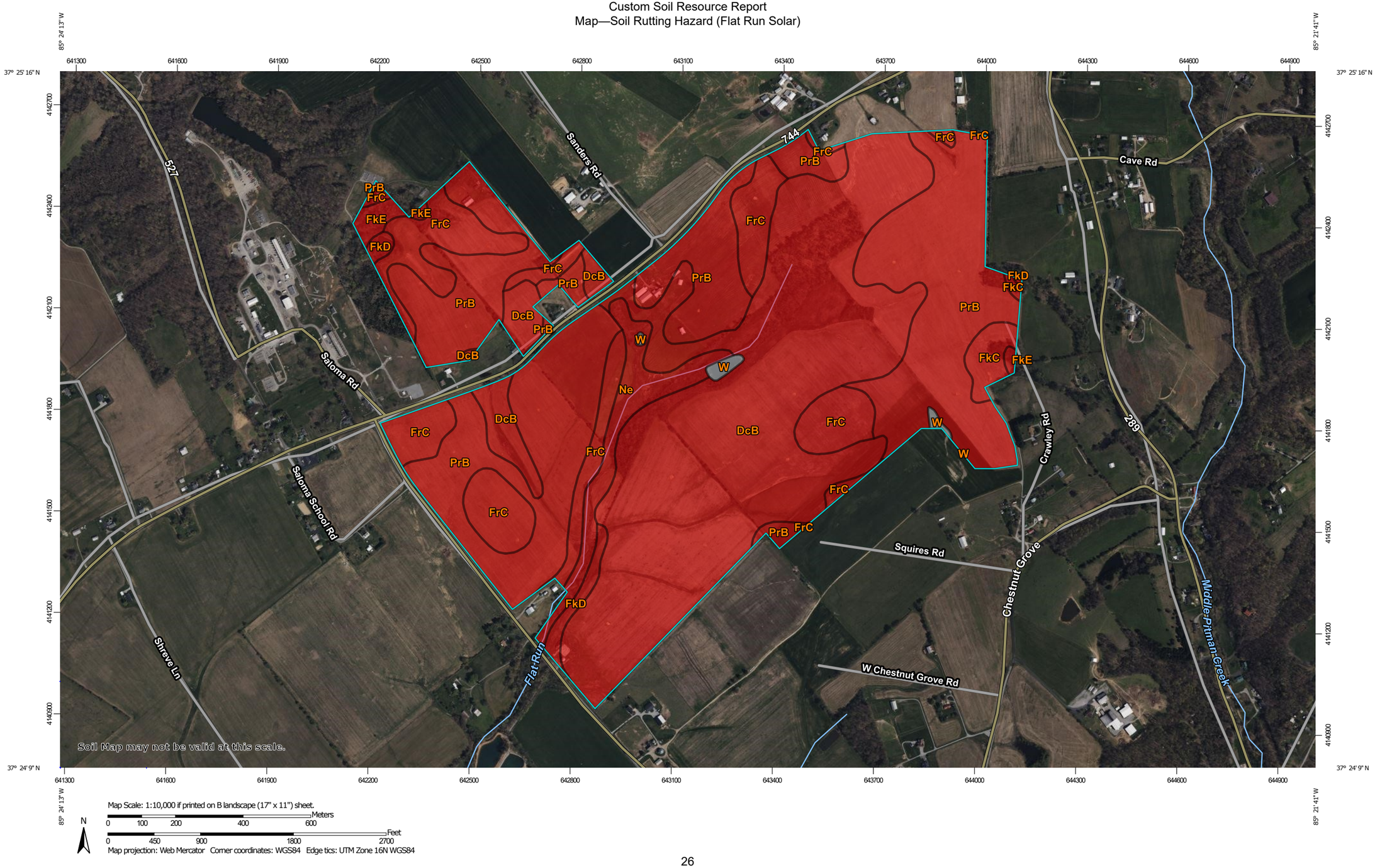
Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the

specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—Soil Rutting Hazard (Flat Run Solar)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Green and Taylor Counties, Kentucky
Survey Area Data: Version 21, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 9, 2023—Apr 10, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Soil Rutting Hazard (Flat Run Solar)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
DcB	Dickson silt loam, 2 to 6 percent slopes	Severe	Dickson (85%)	Low strength (1.00)	194.7	41.6%
FkC	Frankstown silt loam, 6 to 12 percent slopes	Severe	Frankstown (85%)	Low strength (1.00)	6.2	1.3%
FkD	Frankstown silt loam, 12 to 20 percent slopes	Severe	Frankstown (85%)	Low strength (1.00)	5.0	1.1%
FkE	Frankstown silt loam, 20 to 30 percent slopes	Severe	Frankstown (85%)	Low strength (1.00)	3.7	0.8%
FrC	Frederick silt loam, 6 to 12 percent slopes	Severe	Frederick (88%)	Low strength (1.00)	62.0	13.2%
			Pricetown (7%)	Low strength (1.00)		
			Frankstown (3%)	Low strength (1.00)		
			Canmer (1%)	Low strength (1.00)		
			Caneyville (1%)	Low strength (1.00)		
Ne	Newark silt loam	Severe	Newark, occasionally flooded (90%)	Low strength (1.00)	16.8	3.6%
PrB	Pricetown silt loam, 2 to 6 percent slopes	Severe	Pricetown (90%)	Low strength (1.00)	177.6	38.0%
			Frederick (4%)	Low strength (1.00)		
			Frankstown (3%)	Low strength (1.00)		
			Teddy (3%)	Low strength (1.00)		
W	Water	Not rated	Water (100%)		1.9	0.4%
Totals for Area of Interest					**467.8**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Severe	465.9	99.6%
Null or Not Rated	1.9	0.4%
Totals for Area of Interest	**467.8**	**100.0%**

Rating Options—Soil Rutting Hazard (Flat Run Solar)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Rutting Hazard by Month (Flat Run Solar)

FOR - Forestry

Soil rutting occurs when the soil cannot support the weight of the machinery being driven across it. The degree of rutting depends upon the interaction of the contact pressure of the machine, the strength of the soil (as inferred by the AASHTO group index), and soil wetness. The soil interpretations for soil rutting hazard are used as a tool in timing heavy equipment use, evaluating soil suitability for traffic, and identifying soil limitations for operations.

The ratings in this interpretation indicate the hazard of surface rut formation through the operation of forestland equipment during the indicated month. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with rutting.

Rutting involves the displacement and movement of soil. It changes the structure of the soil and can adversely affect lateral flow of water through the landscape. Near-surface plant roots can also be damaged. Soil water content is a major factor in soil rutting because of the influence of water on the grain-to-grain cohesion of soil. The effect is most strongly pronounced in clayey soils. The deformation of soil under stress is a relatively complex process that depends on the amount and type of clay and the shapes of the various soil size separates. The process can be understood by application of the Atterberg limits. When the water content of a soil layer exceeds its plastic limit, application of a load will cause deformation. The water content at the plastic limit is generally less than the 1/3-bar water-holding capacity. It is important in timing heavy equipment usage during a rainy season, even if the soil is not saturated.

The AASHTO group index is a convenient way to rate the strength of soils because it accounts for both the fine-earth fraction of the soil and rock fragment content. The Group Index numbers are diagnostic in the range from 0 to 20; in terms of strength, soils with an index of 0 are not limited and soils with index 20 are very limited. Rock fragment content and bulk density have an effect on bearing capacity but are not considered individually in this rating.

Ratings are based on depth to a water table by month, since the depth to saturation of a soil can change monthly and it has a profound effect on soil strength. The soil conditions that affect rutting are evaluated for each month. The AASHTO group index and the depth to a restrictive layer are considered. A cemented layer close to the surface will limit the depth to which a tire or track can sink into the soil.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by the soil features that affect rutting. The hazard is described as slight, moderate, or severe. A rating of "Slight" indicates that the soil is subject to little or no rutting. "Moderate" indicates that rutting is likely. "Severe" indicates that ruts form readily.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

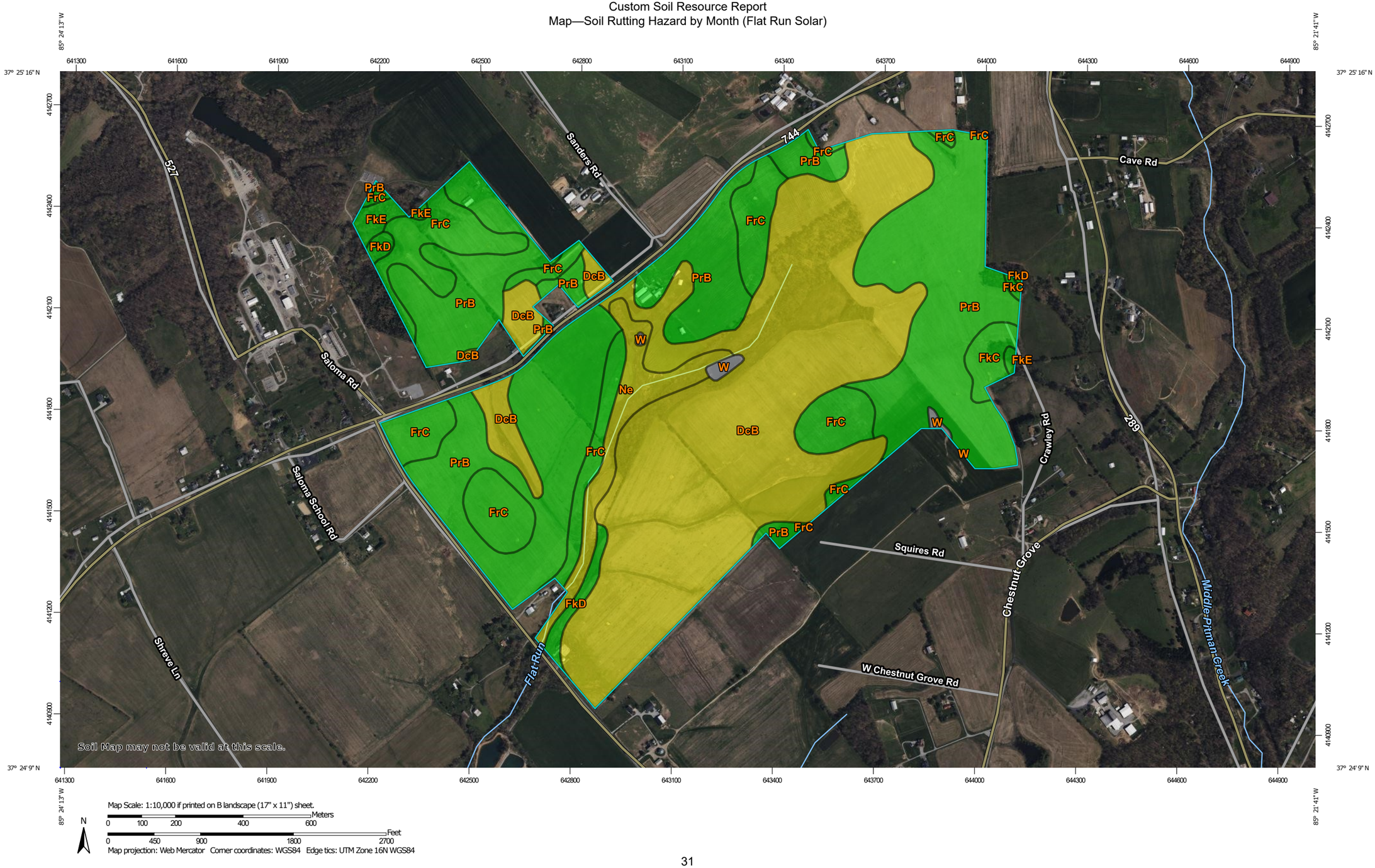
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Custom Soil Resource Report
Map—Soil Rutting Hazard by Month (Flat Run Solar)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Green and Taylor Counties, Kentucky
Survey Area Data: Version 21, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 9, 2023—Apr 10, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Soil Rutting Hazard by Month (Flat Run Solar)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
DcB	Dickson silt loam, 2 to 6 percent slopes	Somewhat limited	Dickson (85%)	Rutting in January (0.50)	194.7	41.6%
				Rutting in February (0.50)		
				Rutting in March (0.50)		
				Rutting in April (0.17)		
FkC	Frankstown silt loam, 6 to 12 percent slopes	Not limited	Frankstown (85%)		6.2	1.3%
FkD	Frankstown silt loam, 12 to 20 percent slopes	Not limited	Frankstown (85%)		5.0	1.1%
FkE	Frankstown silt loam, 20 to 30 percent slopes	Not limited	Frankstown (85%)		3.7	0.8%
FrC	Frederick silt loam, 6 to 12 percent slopes	Not limited	Frederick (88%)		62.0	13.2%
			Pricetown (7%)			
			Frankstown (3%)			
			Canmer (1%)			
			Caneyville (1%)			
Ne	Newark silt loam	Somewhat limited	Newark, occasionally flooded (90%)	Rutting in January (0.10)	16.8	3.6%
				Rutting in February (0.10)		
				Rutting in March (0.10)		
				Rutting in April (0.10)		
				Rutting in May (0.10)		
PrB	Pricetown silt loam, 2 to 6 percent slopes	Not limited	Pricetown (90%)		177.6	38.0%
			Frederick (4%)			
			Frankstown (3%)			
W	Water	Not rated	Water (100%)		1.9	0.4%
Totals for Area of Interest					**467.8**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Not limited	254.4	54.4%

Rating	Acres in AOI	Percent of AOI
Somewhat limited	211.5	45.2%
Null or Not Rated	1.9	0.4%
Totals for Area of Interest	**467.8**	**100.0%**

Rating Options—Soil Rutting Hazard by Month (Flat Run Solar)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Rutting Hazard by Season (Flat Run Solar)

FOR - Forestry

Soil rutting occurs when the soil cannot support the weight of the machinery being driven across it. The degree of rutting depends upon the interaction of the contact pressure of the machine, the strength of the soil (as inferred by the AASHTO group index), and soil wetness. The soil interpretations for soil rutting hazard are used as a tool in timing heavy equipment use, evaluating soil suitability for traffic, and identifying soil limitations for operations.

The ratings in this interpretation indicate the hazard of surface rut formation through the operation of forestland equipment during the indicated season. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with rutting.

Rutting involves the displacement and movement of soil. It changes the structure of the soil and can adversely affect lateral flow of water through the landscape. Near-surface plant roots can also be damaged. Soil water content is a major factor in soil rutting because of the influence of water on the grain-to-grain cohesion of soil. The effect is most strongly pronounced in clayey soils. The deformation of soil under stress is a relatively complex process that depends on the amount and type of clay and the shapes of the various soil size separates. The process can be understood by application of the Atterberg limits. When the water content of a soil layer exceeds its plastic limit, application of a load will cause deformation. The water content at the plastic limit is generally less than the 1/3-bar water-holding capacity. It is important in timing heavy equipment usage during a rainy season, even if the soil is not saturated.

The AASHTO group index is a convenient way to rate the strength of soils because it accounts for both the fine-earth fraction of the soil and rock fragment content. The Group index numbers are diagnostic in the range from 0 to 20; in terms of strength, soils with an index of 0 are not limited and soils with index 20 are very limited. Rock fragment content and bulk density have an effect on bearing capacity but are not considered individually in this rating.

Ratings are based on depth to a water table by season, since the depth to saturation of a soil can be seasonal and it has a profound effect on soil strength. The soil conditions that affect rutting are evaluated for the spring (March, April, and May), summer (June, July, and August), fall (September, October, and November), and winter (December, January, and February). The AASHTO group index and the depth to a restrictive layer are considered. A cemented layer close to the surface will limit the depth to which a tire or track can sink into the soil.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by the soil features that affect rutting. The hazard is described as slight, moderate, or severe. A rating of "Slight" indicates that the soil is subject to little or no rutting. "Moderate" indicates that rutting is likely. "Severe" indicates that ruts form readily.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

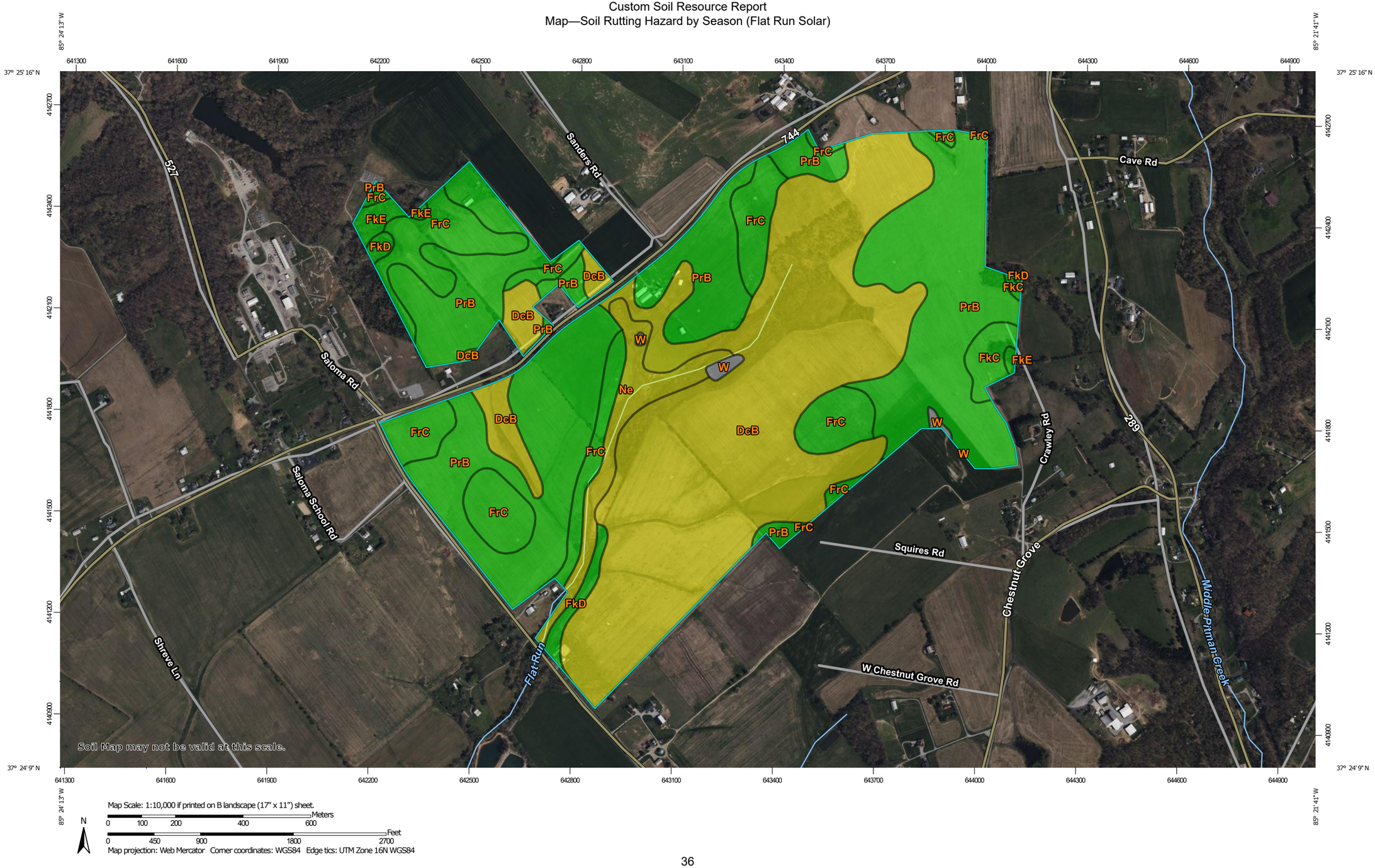
References:

Hambleton, J.P., and A. Drescher. 2009. Modeling wheel-induced rutting in soils: Rolling. Journal of Terramechanics 46(2):35—47.

Raper, R.L. 2005. Agricultural traffic impacts on soil. Journal of Terramechanics 42:259—280.

Sutherland, B.J. 2003. Preventing Soil Compaction and Rutting in the Boreal Forest of Western Canada: A Practical Guide to Operating Timber-Harvesting Equipment. Forest Engineering Research Institute of Canada. Advantage Volume 4, No. 7.

Custom Soil Resource Report
Map—Soil Rutting Hazard by Season (Flat Run Solar)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Green and Taylor Counties, Kentucky
Survey Area Data: Version 21, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 9, 2023—Apr 10, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Soil Rutting Hazard by Season (Flat Run Solar)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
DcB	Dickson silt loam, 2 to 6 percent slopes	Somewhat limited	Dickson (85%)	Rutting hazard in winter (0.50)	194.7	41.6%
				Rutting hazard in spring (0.50)		
FkC	Frankstown silt loam, 6 to 12 percent slopes	Not limited	Frankstown (85%)		6.2	1.3%
FkD	Frankstown silt loam, 12 to 20 percent slopes	Not limited	Frankstown (85%)		5.0	1.1%
FkE	Frankstown silt loam, 20 to 30 percent slopes	Not limited	Frankstown (85%)		3.7	0.8%
FrC	Frederick silt loam, 6 to 12 percent slopes	Not limited	Frederick (88%)		62.0	13.2%
			Pricetown (7%)			
			Frankstown (3%)			
			Canmer (1%)			
			Caneyville (1%)			
Ne	Newark silt loam	Somewhat limited	Newark, occasionally flooded (90%)	Rutting hazard in winter (0.10)	16.8	3.6%
				Rutting hazard in spring (0.10)		
PrB	Pricetown silt loam, 2 to 6 percent slopes	Not limited	Pricetown (90%)		177.6	38.0%
			Frederick (4%)			
			Frankstown (3%)			
W	Water	Not rated	Water (100%)		1.9	0.4%
Totals for Area of Interest					**467.8**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Not limited	254.4	54.4%
Somewhat limited	211.5	45.2%
Null or Not Rated	1.9	0.4%
Totals for Area of Interest	**467.8**	**100.0%**

Rating Options—Soil Rutting Hazard by Season (Flat Run Solar)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

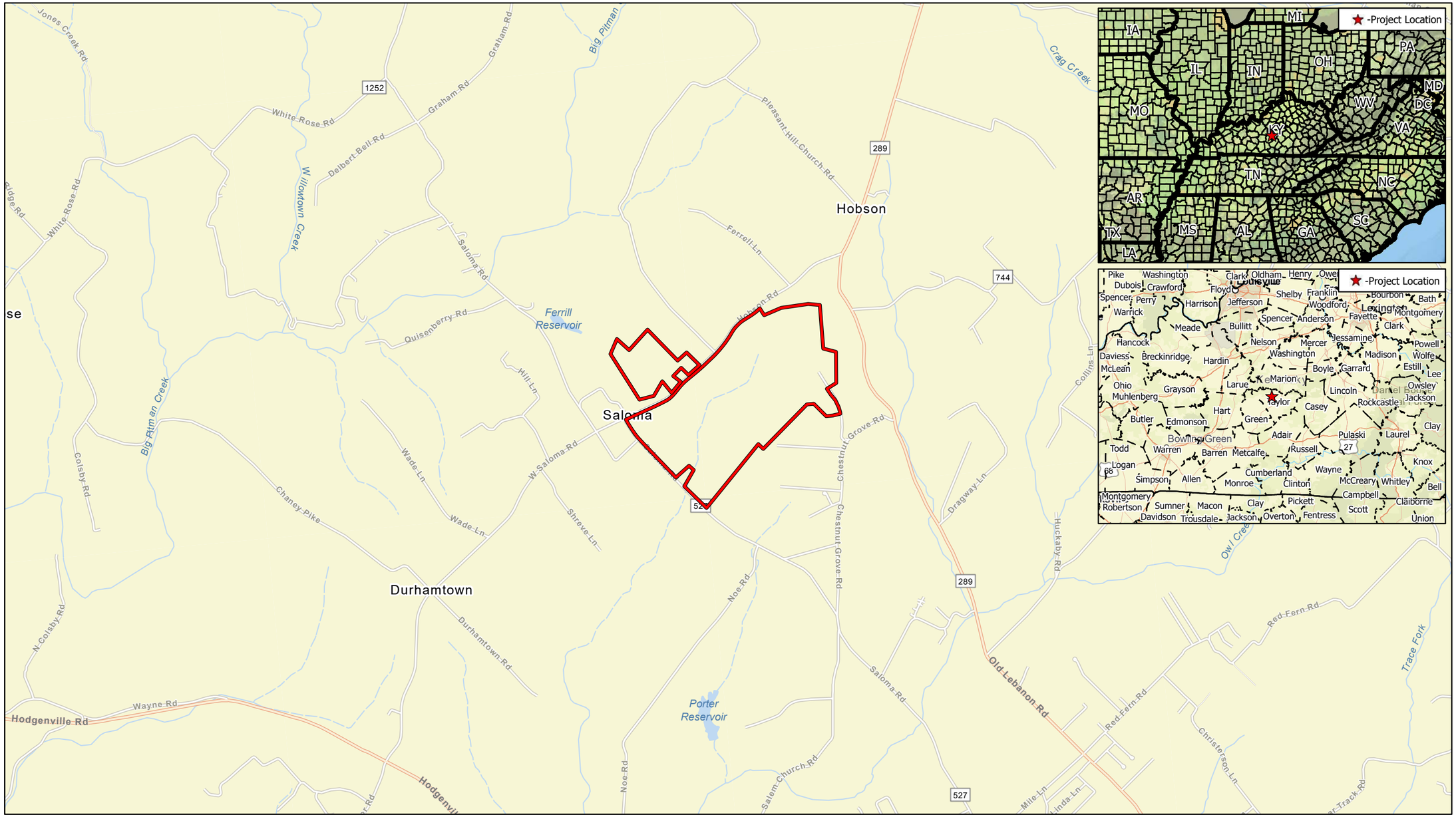
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Attachment D

Vicinity Map, USGS Topography Map, and Drainage Maps

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Data Source(s): Westwood (2026); Esri WMS Basemap Imagery (Accessed 2026); USGS (2026); FEMA (2026); USDA (2026)

Westwood

Toll Free (888) 937-5150 westwoodps.com

Legend

- Project Boundary
- County Boundary

N

0 0.25 0.5 Miles

Flat Run Solar, LLC

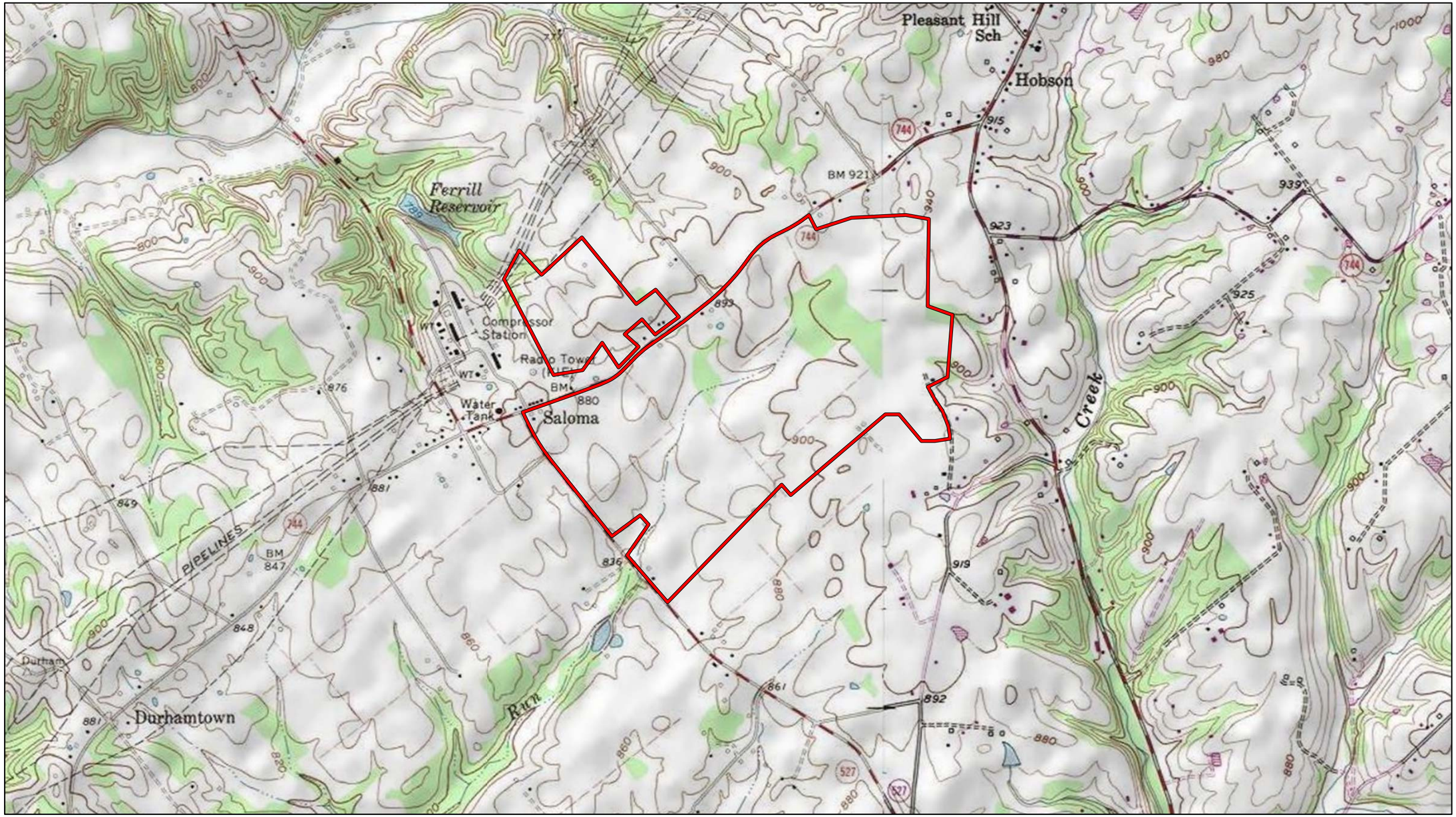
Taylor County, KY

Vicinity Map

April 27, 2026

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Vicinity Map - Vicinity Map | 4/27/2026 2:43 PM | EKeith

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Data Source(s): Westwood (2026); Esri WMS Basemap Imagery (Accessed 2026); USGS (2026); FEMA (2026); USDA (2026)

Legend

- Project Boundary
- County Boundary

N

0 0.125 0.25 Miles

Flat Run Solar, LLC

Taylor County, KY

USGS Topographic Map

April 27, 2026

Westwood
Toll Free (888) 937-5150 westwoodps.com

N:\0040890.01_GIS_ArcPro\R0040890.01_070_SWPPP\Flat Run Solar, LLC.aprx
USGS Topo Map - USGSTopoMap | 4/27/2026 2:44 PM | EKeith

© 2026 Westwood

ID #	Latitude	Longitude
1	37.40886	-85.38604
2	37.413629	-85.380682
3	37.412841	-85.383448
4	37.412082	-85.384722
5	37.407685	-85.386081
6	37.40669	-85.387219
7	37.417304	-85.390975
8	37.415673	-85.371405
9	37.414282	-85.37155
10	37.410072	-85.391668
11	37.416876	-85.392232

Name: Willowtown Creek-Big Pitman Creek
HUC 12: 051100010501
Drains to: 051100010502

Name: Middle Pitman Creek
HUC 12: 051100010503
Drains to: 051100010505

Sanders Rd
Hobson Rd
Cave Rd
Caloma Rd
Hobson Rd
Old Lebanon Rd
Crawley Rd
Middle Pitman Creek
W Saloma Rd
Shreve Ln
Squires Rd
Chestnut Grove Rd
Flat Run
289
527

Data Source(s): Westwood (2026); Esri WMS Basemap Imagery (Accessed 2026); USGS (2026); FEMA (2026); USDA (2026)

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Toll Free (888) 937-5150 westwoodps.com

Legend

- Discharge Locations
- Inverters
- Swales
- UG Collection
- Security Fence
- NHD Flowlines
- Access Roads
- Switchyard
- Substation
- PV Array
- Permanent Detention Basins
- Temporary Sediment Basins
- Temporary Sediment Traps
- Laydown Yard
- NHD Waterbodies
- NWI Wetlands
- Disturbance Limits
- Project Boundary
- HUC12 Boundary
- County Boundary

N

0 400 800 Feet

Flat Run Solar, LLC

Taylor County, KY

Drainage Map

August 4, 2026

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Drainage Map - DrainageMap | 2026-08-04 11:01 | ASmith

Attachment E

Site Plans, Erosion and Sediment Control Plans, Details

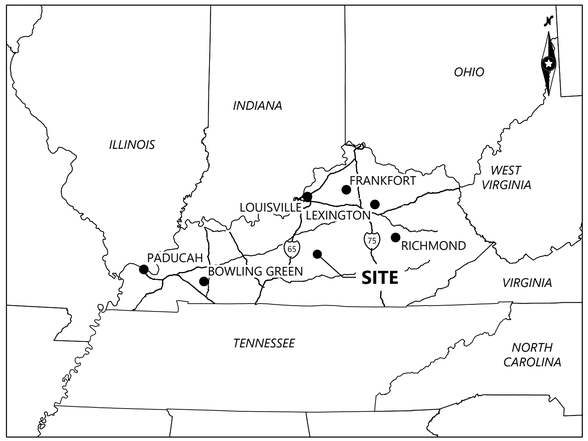
811 Know what's **below.** **Call** before you dig.

Flat Run Solar, LLC

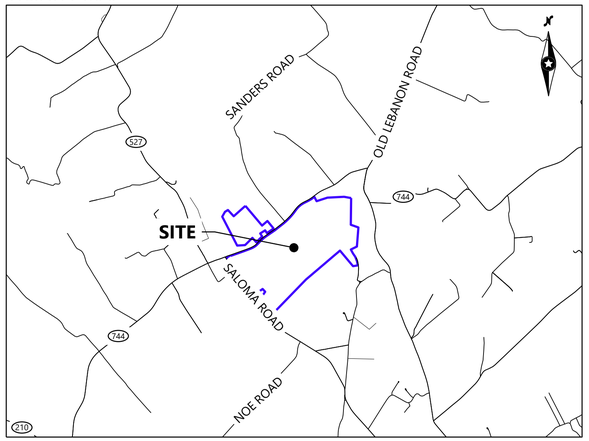
Taylor County, Kentucky

IFC Civil Design Plans

REGIONAL MAP



VICINITY MAP



DATA SET INFORMATION			
Coordinate System	NSRS 2011 KENTUCKY STATE PLANES, SOUTH ZONE, US FOOT		
BASE FILE	**FILE NAME / NOTES**	**PROVIDER**	**DATE**
AERIAL IMAGE	0040890.01V-AERIAL	NAIP	1/2/2026
LAND CONTROL/PLANIMETRICS	KY03 - FLAT RUN - CONSTRAINTS WITH ADDITIONAL ACREAGE.KMZ	ENGIE	1/12/2026
ALTA SURVEY	200021 - FLAT RUN SurveyBase - ENGIE 90 Percent 12-15-22.pdf	BTM ENGINEERING	12/15/2022
TOPOGRAPHY	0040890.01V-ECON	ENGIE	1/22/2026
ELECTRICAL COLLECTION DESIGN	0040890.01E-WIRE	WESTWOOD	2/2/2026
GEN-TIE	AF1-083-FLAT-RUN---W139-02-1	BURNS AND MCDONNELL	12/12/2025
FEMA INFO	0040890.01V-FEMA	FEMA	12/29/2026
STREAMS/WETLANDS	899 Flat Run Solar Updated Delineation Report 20210126.pdf	COPPERHEAD ENVIRONMENTAL CONSULTING	1/26/2021
CULTURAL RESOURCES	USACE Flat Run Solar. Cultural Resource Review 1-5-2023.pdf	LEIELLEN ATZ	1/5/2023
GEOTECHNICAL REPORT	Exhibit B2B1A-Geotech Report_57215083 Flat Run Solar-Final Revision (Geotech) 1.pdf	TERRACON	5/11/2022

CONTACT INFORMATION			
PROJECT ROLE	**CONTACT NAME**	**COMPANY**	**NUMBER**
SENIOR PROJECT MANAGER	MARK KOIVISTO	WESTWOOD	612-581-3661
PROJECT MANAGER	TEDDY LARRABEE	WESTWOOD	952-937-5150
SITE DESIGN LEAD ENGINEER	MATTHEW HEIMERMAN	WESTWOOD	MATT.HEIMERMAN@WESTWOODPS.COM
DISCOVERY PROJECT MANAGER	OZGUN DANACI	DISCOVERY	ODANACI@DISCOVERYINDUSTRIES.COM
ENGIE PROJECT MANAGER	TORREY QUERIN	ENGIE	TORREY.QUERIN@ENGIE.COM

Westwood
Phone (952) 937-5150 | 12701 Whitewater Drive, Suite #300
Toll Free (888) 937-5150 | Minnetonka MN, 55343
westwoodps.com
Westwood Professional Services, Inc.



PREPARED FOR:

Discovery A GTS COMPANY

3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

Flat Run Solar, LLC
Taylor County, KY

Civil Cover Sheet

ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-000-01 REV: 0

M:\0040890.01N_CAD_Civil\000\NCIV_01.dwg, 7/15/2026 4:15 PM, Marcus Nickels

Sheet List Table	
SHEET NUMBER	SHEET TITLE
C-000-01	Civil Cover Sheet
C-000-02	Sheet Index
C-100-01	Overall Site Plan
C-100-02	Overall Phasing Plan
C-101-01	Existing Conditions - 1
C-101-02	Existing Conditions - 2
C-102-01	Civil Construction Notes - 1
C-102-02	Civil Construction Notes - 2
C-110-01	Demolition and Removal Plan - 1
C-110-02	Demolition and Removal Plan - 2
C-111-01	Overall Haul Route Plan
C-120-01	Fencing Plan - 1
C-120-02	Fencing Plan - 2
C-120-03	Fencing Plan - 3
C-130-01	Site Plan Overlay with Flow Depths
C-132-00	Overall Grading Analysis
C-132-01	Site Grading Plan - 1
C-132-02	Site Grading Plan - 2
C-132-03	Site Grading Plan - 3
C-132-04	Site Grading Plan - 4
C-132-05	Site Grading Plan - 5
C-132-06	Site Grading Plan - 6
C-132-07	Site Grading Plan - 7
C-132-08	Site Grading Plan - 8
C-132-09	Site Grading Plan - 9
C-132-10	Site Grading Plan - 10
C-132-11	Site Grading Plan - 11
C-132-12	Site Grading Plan - 12
C-133-01	Substation Grading Plan
C-141-01	Erosion and Sediment Control Plan - 1
C-141-02	Erosion and Sediment Control Plan - 1
C-141-03	Erosion and Sediment Control Plan - 1
C-141-04	Erosion and Sediment Control Plan - 1
C-141-05	Erosion and Sediment Control Plan - 1
C-141-06	Erosion and Sediment Control Plan - 1
C-141-07	Erosion and Sediment Control Plan - 1
C-141-08	Erosion and Sediment Control Plan - 1
C-141-09	Erosion and Sediment Control Plan - 1
C-141-10	Erosion and Sediment Control Plan - 1
C-141-11	Erosion and Sediment Control Plan - 1

Sheet List Table	
SHEET NUMBER	SHEET TITLE
C-141-12	Erosion and Sediment Control Plan - 1
C-150-01	Plan & Profile Road A Sta. 0+00.00 to 14+86.15
C-150-02	Plan & Profile Road C Sta. 0+00.00 to 17+00.00
C-150-03	Plan & Profile Road C Sta. 17+00 to 26+46
C-150-04	Plan & Profile Road D Sta. 0+00.00 to 5+51.97
C-150-05	Plan & Profile Road G Sta. 0+00.00 to 7+78.83
C-150-06	Plan & Profile Road H Sta. 0+00.00 to 7+79.27
C-150-07	Plan & Profile Road I Sta. 0+00.00 to 17+00.00
C-150-08	Plan & Profile Road I Sta. 17+00.00 to 34+00.00
C-150-09	Plan & Profile Road I Sta. 34+00.00 to 51+00.00
C-150-10	Plan & Profile Road I Sta. 51+00.00 to 68+00.00
C-150-11	Plan & Profile Road I Sta. 68+00.00 to 80+46.94
C-150-12	Plan & Profile Road K Sta. 0+00.00 to 3+93.81
C-150-13	Plan & Profile Road N Sta. 0+00.00 to 13+29.41
C-150-14	Plan & Profile Road P Sta. 0+00.00 to 17+00.00
C-150-15	Plan & Profile Road P Sta. 17+00.00 to 34+00.00
C-150-16	Plan & Profile Road P Sta. 34+00.00 to 38+09.65
C-150-17	Plan & Profile Sub-Road-N Sta. 0+00.00 to 1+57.66
C-150-18	Plan & Profile Sub-Road-S Sta. 0+00.00 to 1+79.21
C-155-01	Construction Entrance Exhibits - 1
C-155-02	Construction Entrance Exhibits - 2
C-155-03	Construction Entrance Exhibits - 3
C-155-04	Construction Entrance Exhibits - 4
C-155-05	Construction Entrance Exhibits - 5
C-171-01	Landscape Screening Notes & Details
C-180-01	Construction Details - 1
C-180-02	Construction Details - 2
C-180-03	Construction Details - 3
C-180-04	Construction Details - 4
C-180-05	Construction Details - 5
C-180-06	Construction Details - 6
C-180-07	Construction Details - 7
C-180-08	Construction Details - 8
C-180-09	Construction Details - 9
C-180-10	Construction Details - 10
C-180-11	Construction Details - 11
C-180-12	Construction Details - 12
C-180-13	Construction Details - 13
C-900-01	Bill of Material

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PREPARED FOR:

Discovery A GTS COMPANY

3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

Flat Run Solar, LLC

Taylor County, KY

Sheet Index

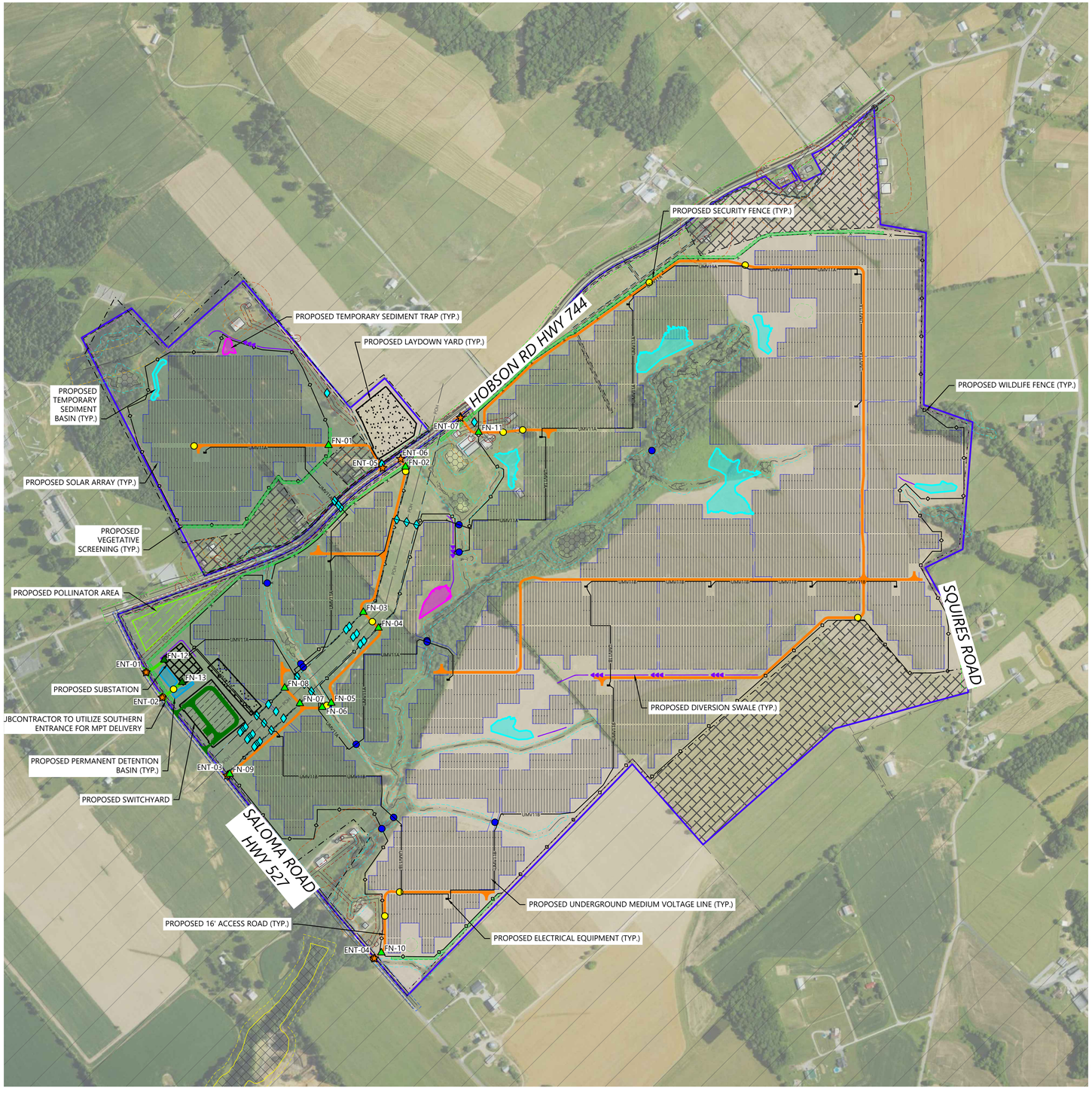
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LEGEND:

- PROJECT BOUNDARY
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- LEASE LINES
- EASEMENT LINES
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- EXCLUSION AREA
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- PROPOSED 16' SOLAR ARRAY ACCESS ROAD
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- PROPOSED 20' SWITCHYARD ACCESS ROAD
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- PROPOSED PERMANENT DETENTION BASIN
- PROPOSED POLLINATOR AREA
- PROPOSED LAYDOWN YARD
- PROPOSED SUBSTATION
- PROPOSED SWITCHYARD (*DESIGNED BY OTHERS*)
- PROPOSED ENTRANCE
- PROPOSED DRAINAGE CROSSING
- PROPOSED ENTRANCE CROSSING
- PROPOSED 20', 24' ACCESS GATE
- PERMITTED UTILITY CROSSING
- PERMITTED STREAM CROSSING

SETBACK TABLE:

- 25' NONPARTICIPATING PARCEL SETBACK
- 25' DELINEATED WATER BODY SETBACK
- 50' ADJACENT ROADWAY SETBACK
- 5' EXISTING EASEMENT SETBACK
- 50' PARTICIPATING BUILDING SETBACK
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- 25' OVERHEAD POWER DISTRIBUTION LINE SETBACK
- 100' GAS LINE SETBACK
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- 50' FEMA FLOOD ZONE A SETBACK

NOTES:

1. PROJECT COORDINATE SYSTEM IS NSRS 2011, KENTUCKY STATE PLANES, SOUTH ZONE, US FOOT.
2. GRADING QUANTITIES PROVIDED ARE FOR ESTIMATE ONLY. QUANTITIES ARE SUBJECT TO CHANGE BASED ON RECEIPT OF DIFFERENT LAYOUT, CONSTRAINTS, EQUIPMENT, ETC.
3. CUT/FILL QUANTITIES LISTED ARE RAW QUANTITIES AND DO NOT ACCOUNT FOR SITE EXCAVATIONS OR ANY UTILITY EXCAVATIONS. THE QUANTITIES SHOWN WERE DETERMINED USING THE ANTICIPATED GRADES AS SHOWN ON THE SITE PLAN AND ARE FOR ESTIMATING PURPOSES ONLY.
4. IN THE EVENT OF EXCESS CUT, QUANTITY TO BE SPREAD EVENLY OVER SITE.
5. REFER TO SHEET C003 FOR ALL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
6. GAMECHANGE TERRAIN FOLLOWING SYSTEM SPECS:
   - 6.1. 0.75' GRADING WINDOW FOR ARRAY GRADING.
   - 6.2. 9.5% MAX SLOPE FOR NORTH FACING SLOPES.
   - 6.3. 9.5% MAX SLOPE FOR SOUTH FACING SLOPES.
   - 6.4. 10% MAX SLOPE BETWEEN ROWS EAST-WEST.
   - 6.5. 10% MAX SLOPE BETWEEN ROWS NORTH-SOUTH.
   - 6.6. 1.5 DEGREE ARTICULATION FROM PILE TO PILE.
   - 6.7. GCR = 36%

SETBACK TABLE		
ITEM	MINIMUM REQUIRED DISTANCE (FT)	SOURCE
NON-PARTICIPATING ADJOINING PARCELS**	25	COMMONWEALTH OF KENTUCKY STATE BOARD HEARING CASE NO 2020-00272, PG 21
NON-PARTICIPATING RESIDENCES**	150	
EXISTING CEMETARIES*	N/A	
EXISTING ADJACENT ROADWAYS**	50	
PARTICIPATING STRUCTURE*	50	ENGIE TYPICAL
TELECOMMUNICATION LINE*	25	
POWER DISTRIBUTION LINE*	25	
POWER TRANSMISSION LINE*	75	
OIL/GAS TRANSMISSION PIPELINE*	100	
WATER PIPELINE*	25	
EXISTING EASEMENT*	5	
FEMA 100-YEAR FLOOD ZONE*	50	
EXISTING TREE LINE**	75	
DELINEATED WETLANDS AND WATERBODIES*	25	
KARST AREA*	50	

* APPLIES TO FENCE LINE
** APPLIES TO MODULE

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COMMONWEALTH OF KENTUCKY
DAVID KELLEHER
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07/15/26
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0' 400' 800' 1200'

Flat Run Solar, LLC

Taylor County, KY

Overall Site Plan

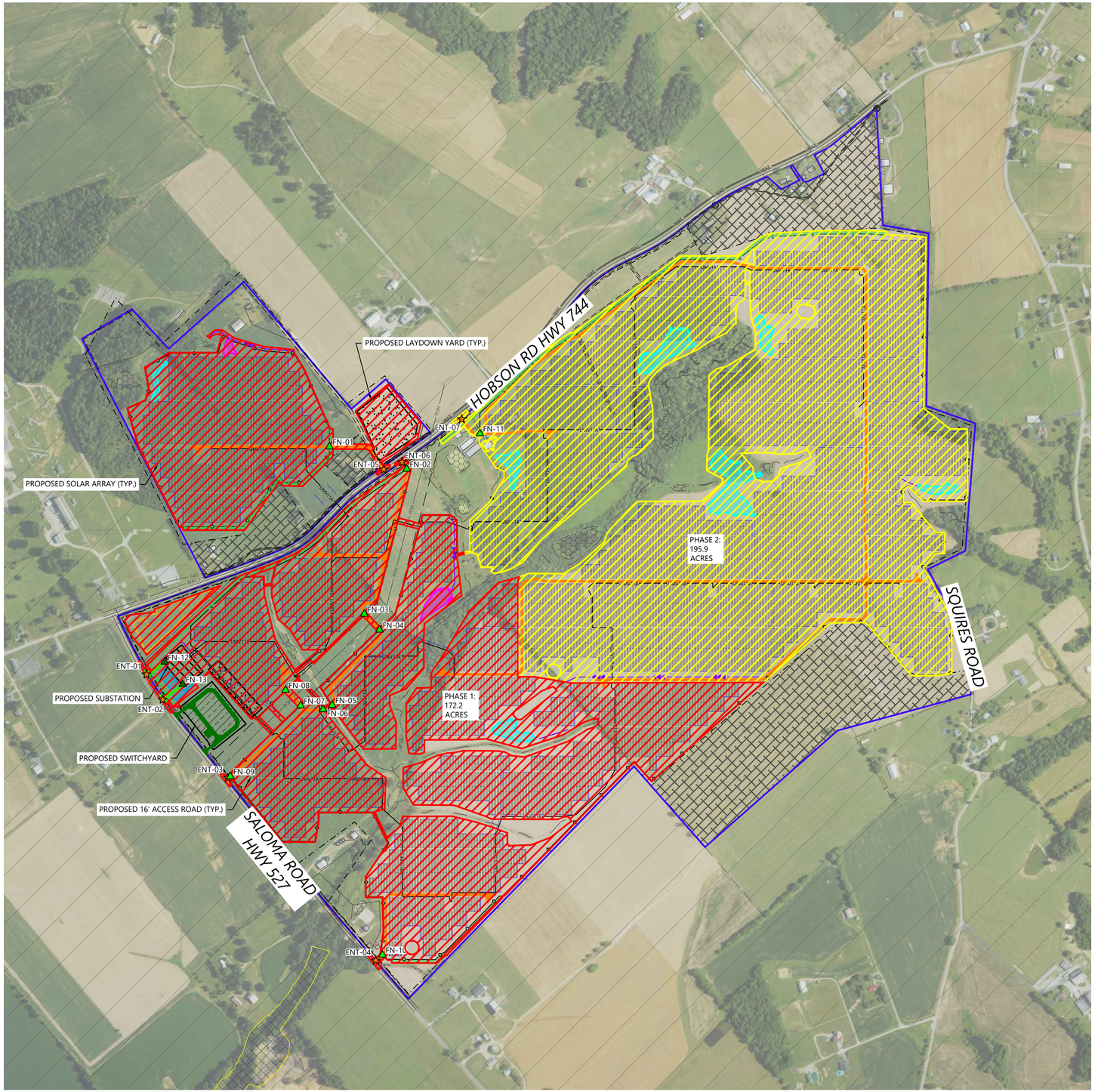
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- PROPOSED 24' ACCESS GATE

EARTHWORK PHASING LEGEND:

- PHASE 1 BOUNDARY
- PHASE 2 BOUNDARY

PHASING SCHEDULE	
PHASE BOUNDARY	APPROXIMATE PHASE ACREAGE
1	175.7
2	195.1

PROJECT PHASING NOTES:

1. REFER TO THE FLAT RUN SOLAR SWPPP FOR CONSTRUCTION SEQUENCING PER AREA
2. ADDITIONAL ZONING FOR EXTERIOR MV ROUTING MAY BE EXECUTED DURING CONSTRUCTION SEQUENCING; REFER TO THE HORSESHOE BEND SOLAR SWPPP.
3. MAXIMUM OF 200 ACRES CAN BE DISTURBED AT ONE TIME
4. DRAINAGE AREAS AND BASIN STORAGE WILL DETERMINE BUILDING PERCENTAGE FOR EACH ZONE
5. MINOR SURFACE SMOOTHING MAY OCCUR IN AREAS WHERE GRADING IS NOT PROPOSED FOR SAFETY OR SOLAR ARRAY INSTALLATION

THE FLAT RUN SOLAR PROJECT ZONE 1 THROUGH 2 WILL NOT EXCEED 200 ACRES OF DISTURBANCE AT ONE TIME. WORK IN ZONE X WILL INCLUDE CONCURRENT STABILIZATION FOLLOWING GRADING ACTIVITY WITH TEMPORARY EROSION PRACTICES AND SEEDING TO LIMIT DISTURBED AREA IN ORDER TO START WORK IN ZONE X+1. THE DISTURBANCE IN ZONE X+1 WILL NOT EXCEED THE STABILIZED AREA IN ZONE X. STABILIZATION IS DEFINED BY 70% ESTABLISHED VEGETATIVE COVER PER STATE OF KENTUCKY. THUS ALLOWING FOR CERTAIN EARTH MOVING EQUIPMENT (SUCH AS DOZERS AND GRADERS) NOT SITTING IDLE AS THEY APPROACH THE COMPLETION OF THE PREVIOUS ZONE. SUBSEQUENT ZONES X+2 AND X+3 WILL FOLLOW THE SIMILAR APPROACH. DURING EACH PHASE THERE ARE FOUR MAIN CONSTRUCTION ACTIVITIES CATEGORIES OF INTEREST:

CONSTRUCTION ACTIVITY A: BMP INSTALL, DEMARCATION OF SENSITIVE AREAS, CLEARING AND GRADING, AND CONTINUOUS BMP MAINTENANCE;
CONSTRUCTION ACTIVITY B: SEEDING AND TEMPORARY STABILIZATION OF SOILS AND NONVEGETATIVE STABILIZATION OF SITE ACCESS ROADS;
CONSTRUCTION ACTIVITY C: PILE INSTALLATION, RACKING AND PANEL INSTALL, AND ELECTRICAL TRENCHING
CONSTRUCTION ACTIVITY D: RESEEDING AND TEMPORARY STABILIZATION

DOCUMENTATION AND RECORDS WILL BE AN IMPORTANT COMPONENT OF TRACKING EARTH DISTURBANCE IN EACH ZONE. WE RECOMMEND THE CONTRACTOR TRACK AND LOG THE TOTAL DISTURBED AREA DAILY AS NOT TO EXCEED THE MAXIMUM DISTURBANCE OF EACH ZONE

TRACKING OF EARTH DISTURBANCE COULD BE PROVIDED THROUGH THE FOLLOWING QUALITY CONTROL DOCUMENTATION FIELD IDENTIFICATION AND VERIFICATION PROCESSES:

- SITE REQUIRED ORIENTATIONS
- DEDICATED ONSITE ENVIRONMENTAL SUPERVISOR
- ON SITE PLAN OF THE DAY MEETINGS
- TAILGATE MEETINGS AND JOB SAFETY ASSESSMENT (JSA) DOCUMENTATION
- DISTURBED EARTH TRACKER
- SWPPP INSPECTIONS
- CONSULTANT INSPECTIONS

CONTRACTORS SHALL REFER TO THE FLAT RUN SOLAR SWPPP (SECTION 5.4-5.6) FOR ADDITIONAL PHASING AND SEQUENCING CONSIDERATIONS AND BMPS FOR EACH PROJECT ZONE.

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0' 400' 800' 1200'

Flat Run Solar, LLC

Taylor County, KY

Overall Phasing Plan

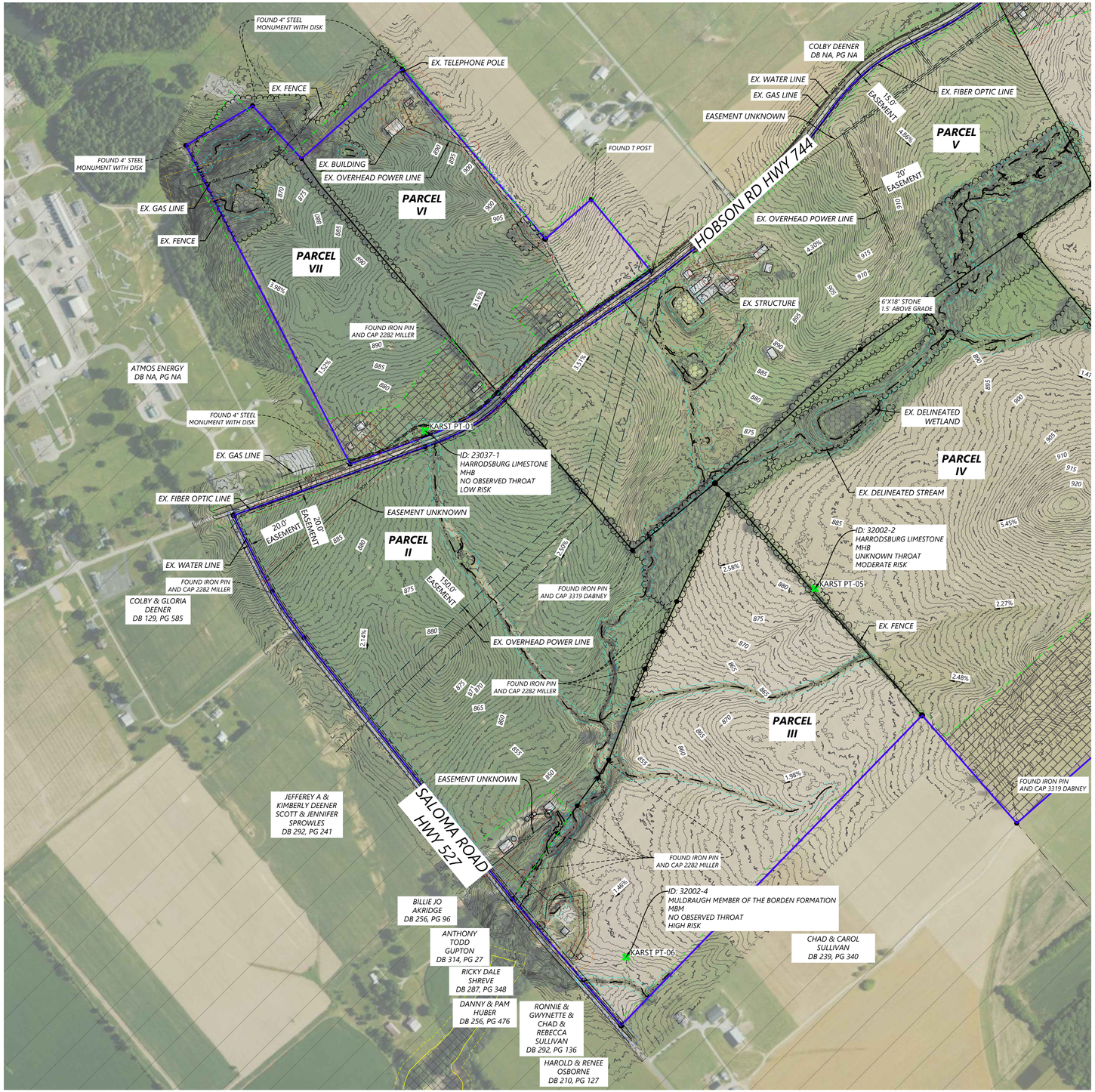
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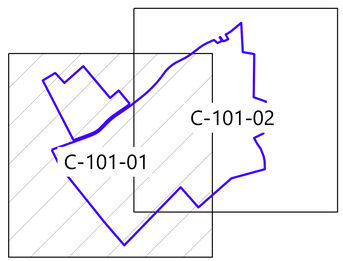
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KEY MAP:



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0' 300' 600' 900'

Flat Run Solar, LLC

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Existing Conditions - 1

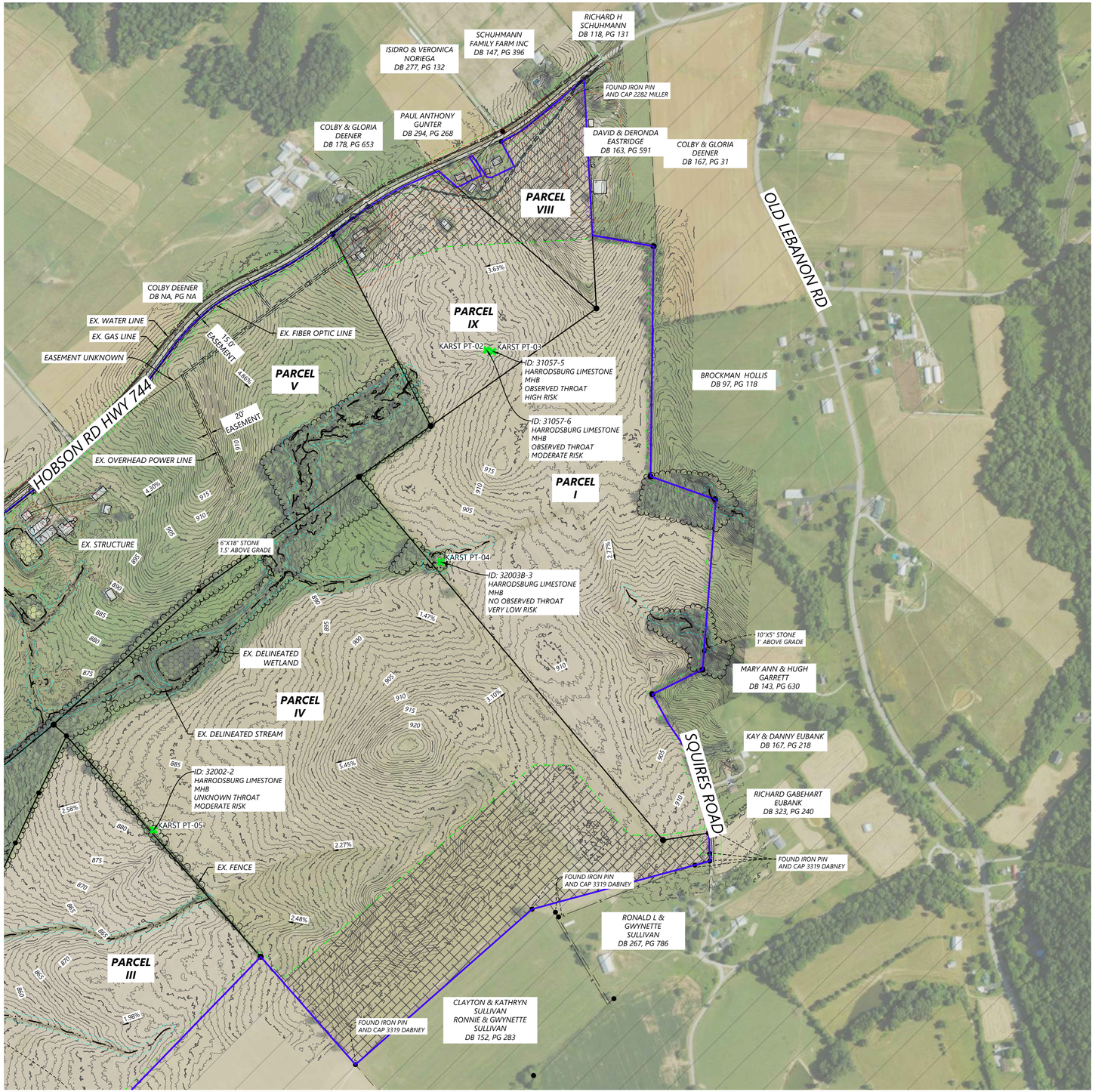
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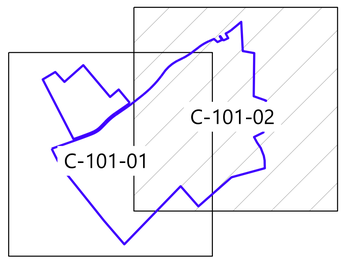
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Flat Run Solar, LLC

Taylor County, KY

Existing Conditions - 2

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REV: 0

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EROSION AND SEDIMENT CONTROL CONSTRUCTION NOTES:

REFERENCE INFORMATION

1. CONSTRUCTION STORMWATER AUTHORITY HAVING JURISDICTION: KENTUCKY DIVISION OF WATER
2. CONSTRUCTION STORMWATER GENERAL PERMIT:
   - KPDES PERMIT FOR AUTHORIZATION OF STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, KYR10.
   - https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/KYR10Permit.pdf
3. STATE-SPECIFIC BEST MANAGEMENT PRACTICE (BMP) MANUAL AND GUIDANCE:
   - https://eec.ky.gov/Environmental-Protection/Forms%20Library/09BMPManual_Final.pdf
4. REFER TO STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED BY WESTWOOD FOR ADDITIONAL AND DETAILED INFORMATION.

PERMIT COVERAGE FOR CONSTRUCTION ACTIVITIES

1. CONSTRUCTION GENERAL STORMWATER PERMIT COVERAGE APPLIES TO ALL CONSTRUCTION ACTIVITIES FROM ANY PARTY/CRAFT/SUBCONTRACTOR.
2. CONTRACTOR IS RESPONSIBLE TO IMPLEMENT AND MAINTAIN BMPS AND CONDUCT REGULAR INSPECTIONS DURING ALL CONSTRUCTION WORK.

EXISTING SITE DRAINAGE

1. EXISTING ON-SITE DRAINAGE INCLUDES OVERLAND SHEET FLOW, CONCENTRATED FLOWS, AND CHANNELIZED FLOWS. CHANNELIZED FLOW OCCURS WITHIN EXISTING/ERODED/BROAD/VEGETATED DRAINAGE PATHS.
2. CONCENTRATED FLOWS OVER LONG DISTANCES OR WITHIN DEFINED DRAINAGE PATHS CAN CAUSE EROSION.
3. THE EXISTING VEGETATED CHANNELS WERE ESTABLISHED TO REDUCE EROSION FROM CONCENTRATED FLOWS.
4. AGRICULTURAL SLOPE TERRACING EXISTS TO REDUCE STORMWATER FLOW VELOCITY AND EROSION.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR/PRIMARY OPERATOR IS TO PROVIDE EROSION AND SEDIMENT CONTROL MEASURES AS PLANNED AND SPECIFIED FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) OUTLINED IN THESE PLANS AND BY THE KENTUCKY DEPARTMENT OF ENVIRONMENTAL QUALITY AND BEING IN CONFORMANCE WITH THE KPDES PERMIT, KYR10.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND PERMITEE TO MAINTAIN PERMIT COMPLIANCE.
3. SEE THE PROJECT SITE PLANS AND ASSOCIATED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES AND RESTORATION INFORMATION. UNLESS OTHERWISE NOTED OR MODIFIED IN THE SWPPP/HEREIN, ALL SECTIONS OF THE GENERAL PERMIT SHALL APPLY.
4. THE CONTRACTOR/PRIMARY OPERATOR IS RESPONSIBLE FOR MAINTAINING THE SWPPP'S AVAILABILITY ONSITE AND AS REQUIRED.
5. QUALIFIED, TRAINED, AND COMPETENT PERSONNEL MUST BE PRESENT ON-SITE TO MANAGE THE IMPLEMENTATION OF BMPS, INSPECTIONS, AND COMPLIANCE.
6. ALL CONSTRUCTION CONTRACTORS AND SUBCONTRACTOR PERSONNEL ARE TO BE TRAINED IN THE IMPLEMENTATION AND USE OF THE REQUIRED BMPS AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE. TRAINING DOCUMENTATION SHALL BE MAINTAINED IN THE SWPPP.
7. THE PROJECT SITE IS TO BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. NON-STORMWATER POLLUTANT DISCHARGES ARE PROHIBITED. PROHIBITED DISCHARGES INCLUDE, BUT ARE NOT LIMITED TO: WASTEWATER FROM WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS, FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE, SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING AND MAINTENANCE, AND OTHER HAZARDOUS SUBSTANCES OR WASTES. DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON-SITE PHYSICALLY SEPARATE FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
8. DISCHARGING CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED.
9. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS PROHIBITED.
10. RUNOFF FROM EQUIPMENT AND VEHICLE WASHING IS TO BE CONTAINED ON-SITE AND NOT DISCHARGED TO RECEIVING WATERS OR LOCAL DRAINAGE SYSTEM.
11. APPROPRIATE BMPS FOR CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS OR RESIDUES ARE TO BE IMPLEMENTED TO ELIMINATE OR REDUCE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTIES BY WIND OR STORMWATER RUNOFF.
12. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS ARE TO BE COLLECTED AND PROPERLY DISPOSED OF IN TRASH OR RECYCLE BINS.
13. REFER TO SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN FOR SPILL CONTAINMENT AND CLEANUP REQUIREMENTS FOR CONTAMINATED SOILS DUE TO SPILLS.
14. ALL DRAINAGE SWALES, DITCHES, AND AREAS OF CONCENTRATED FLOW DISTURBED DURING CONSTRUCTION ARE TO BE REWORKED AND STABILIZED PRIOR TO NEXT PRECIPITATION EVENT OR WITHIN 24 HOURS, WHICH EVER IS SOONER, IN ACCORDANCE WITH THE SWPPP.
15. MAINTAIN EXISTING DRAINAGE WHEN PLACING STOCKPILES AND WINDROWS TO AVOID FLOODING WORK AREA AND ADJACENT FIELDS.
16. TOPSOIL SHALL BE STRIPPED, SEGREGATED, AND STOCKPILED SEPARATELY FROM SUBSOIL. DO NOT MIX TOPSOIL WITH SUBSOIL.

CONSTRUCTION PHASING/SEQUENCING

1. CONSTRUCTION PHASING AND SEQUENCING IS A BMP THAT IS RECOMMENDED TO BE IMPLEMENTED ACROSS THE SITE TO REDUCE THE AREA OF ACTIVE CONSTRUCTION, MINIMIZING AMOUNT OF ACTIVELY DISTURBED SOIL AND ACHIEVING SOIL STABILIZATION, AND PRESERVING NATURAL RESOURCES, WETLANDS, WATER BODIES, AND WILDLIFE HABITATS.
2. GENERAL SEQUENCING WITHIN EACH PHASE AND WORK AREA: INSTALL PERIMETER SEDIMENT CONTROLS (PSC), CLEAR AND GRUB, STRIP AND STOCKPILE TOPSOIL, MASS GRADING, RESPREAD TOPSOIL, SOIL STABILIZATION, TEMPORARY/PERMANENT EROSION AND SEDIMENT CONTROLS, BMP MAINTENANCE, FINAL STABILIZATION, AND REMOVE PSC. REFER TO THE SWPPP FOR ADDITIONAL INFORMATION.
3. MINIMIZE DURATION OF EXPOSED SOILS AND PREVENT ADDITIONAL DISTURBANCE IN AREAS PREVIOUSLY STABILIZED.

BMP PHASING/IMPLEMENTATION

1. EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) WILL BE IMPLEMENTED IN THREE PHASES: INITIAL, CONSTRUCTION (INTERMITTENT), AND FINAL.
2. INITIAL PHASE BMPS INCLUDE BARE SOIL STABILIZATION, PERIMETER SEDIMENT CONTROLS, TEMPORARY STORMWATER BASINS, AND OTHER BMPS TO CAPTURE AND TREAT STORMWATER RUNOFF. THESE ARE TO BE INSTALLED AT THE BEGINNING OF CONSTRUCTION, PRIOR TO UP-GRADIENT CONSTRUCTION ACTIVITY/DISTURBANCE.
3. BMPS DURING THE CONSTRUCTION PHASE INCLUDE STABILIZATION/RE-STABILIZATION OF DISTURBED SOILS; INSTALLING ANY DRAINAGE NETWORKS, GRADE BREAKS, DIVERSIONS, SEDIMENT CONTROL LOGS, AND OTHER RUNOFF/VELOCITY CONTROLS; AND REGULAR MAINTENANCE OF THE INSTALLED BMPS. THESE BMPS ARE TO BE IMPLEMENTED/INSTALLED THROUGHOUT ALL CONSTRUCTION ACTIVITIES IN SEQUENCE WITH THE INITIAL BMPS.
4. FINAL PHASE BMPS INCLUDE STABILIZATION/RE-STABILIZATION OF DISTURBED SOILS; ACHIEVING FINAL STABILIZATION OF THE SITE, AND REMOVAL OF THE TEMPORARY CONSTRUCTION BMPS. FINAL STABILIZATION IS REQUIRED PRIOR TO SUBMITTING A NOTICE OF TERMINATION FOR THE GENERAL PERMIT.
5. ALL BMPS FOR EACH PHASE TO BE INSPECTED, MAINTAINED, AND REPAIRED TO ENSURE CONTINUOUS FUNCTIONALITY.
6. PERSISTENT APPLICATIONS OF SOIL STABILIZATION TO BE APPLIED TO DISTURBED AREAS THROUGHOUT CONSTRUCTION.

INSPECTION SCHEDULE

INSPECTIONS ARE TO BE CONDUCTED REGULARLY TO ENSURE COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS AND IDENTIFY ANY POTENTIAL ISSUES AT THE FOLLOWING INTERVALS:

1. AT LEAST ONCE EVERY 7 CALENDAR DAYS
2. AT LEAST ONCE EVERY 14 CALENDAR DAYS, AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF 0.5 INCH OR GREATER.
3. FOR AREAS OF THE SITE THAT HAVE UNDERGONE TEMPORARY OR FINAL STABILIZATION, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE A MONTH UNTIL FINAL STABILIZATION IS ACHIEVED AND THE COVERAGE IS TERMINATED.

STABILIZATION SCHEDULE

1. OPERATORS MUST, AT A MINIMUM, INITIATE SOIL STABILIZATION MEASURES IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS (7 DAYS FOR SITES DISCHARGING TO SPECIAL OR IMPAIRED WATERS).
2. TEMPORARY AND PERMANENT SOIL STABILIZATION MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION PROCESSES UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED AND NO FURTHER DISTURBANCE ACTIVITIES ARE PLANNED.

MAINTENANCE SCHEDULE

1. EROSION AND SEDIMENT CONTROLS THAT HAVE BEEN INTENTIONALLY DISABLED, RUN-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY UPON DISCOVERY.
2. MAINTENANCE MUST BE COMPLETED PRIOR TO THE NEXT ANTICIPATED RAINFALL EVENT.
3. MAINTENANCE MUST BE COMPLETED PER THE SCHEDULE SPECIFIED IN THE PROJECT SWPPP.

EROSION AND SEDIMENT CONTROL RECOMMENDED PRACTICES

1. CONTACT ENGINEER FOR ALTERNATIVE RECOMMENDATIONS OR ADDITIONAL DETAILS.
2. REFER TO SHEETS C-180-01-C-180-09 FOR BMP DETAILS.
3. SELECT BMP LOCATIONS ARE SHOWN ON THE PLANS AND ARE BASED ON THE KNOWN DISTURBANCE AREAS. FIELD ADJUSTMENTS, ALTERNATIVES, OR ADDITIONAL BMPS MAY BE IMPLEMENTED TO ALIGN WITH THE CONTRACTOR'S MEANS AND METHODS, FIELD CONDITIONS, INSPECTIONS, AND ACTIVE CONSTRUCTION ACTIVITIES. MULTIPLE APPLICATIONS MAY BE NECESSARY.
4. DUST CONTROL MEASURES TO BE IMPLEMENTED TO MINIMIZE AIRBORNE DUST EMISSIONS AND PROTECT AIR QUALITY.
5. NATIVE/EXISTING VEGETATION AND BUFFERS TO BE PRESERVED AND PROTECTED TO THE EXTENT POSSIBLE AND REVEGETATED AS REQUIRED.
6. INCORPORATE CONTOUR FARMING PRACTICES DURING GRADING AND STABILIZATION OPERATIONS. CONSERVATION PRACTICE STANDARD CONTOUR FARMING (CODE 330) (USDA.GOV)
7. IMPLEMENT A CONSTRUCTION TRAFFIC CONTROL PLAN TO MINIMIZE ADDITIONAL IMPACTS TO STABILIZED AREAS AND AREAS OF CONCENTRATED FLOW.
8. PRESERVE 25' BUFFER FOR ALL JURISDICTIONAL PERENNIAL OR INTERMITTENT STREAMS, CREEKS, RIVERS OR LAKES. REDUNDANT SEDIMENT CONTROLS ARE REQUIRED WHEN WORK IS WITHIN EACH BUFFER.
9. ALL SOIL STOCKPILES AND WINDROWS TO HAVE TEMPORARY EROSION CONTROL MEASURES APPLIED.
10. ALL DISTURBED AREAS DURING CONSTRUCTION TO BE STABILIZED OR RE-STABILIZED PER THE SWPPP.

EROSION AND SEDIMENT CONTROL TYPE/SITUATION	BEST MANAGEMENT PRACTICE (BMP)			DETAIL REFERENCE
GENERAL BEST PRACTICES	DELINEATION OR FENCING OF NO DISTURBANCE AREAS AND SENSITIVE OR PROTECTED FEATURES			
	LIMIT DISTURBANCE AND PRESERVE EXISTING VEGETATION WHERE FEASIBLE			
NON-STRUCTURAL CONTROLS	CONSTRUCTION PHASING/SEQUENCING			
	AREAS OF PLANNED DISTURBANCE			
	TRAFFIC CONTROL			
SITE ENTRANCE / EXIT	VEHICLE TRACKOUT CONTROL			SW-40
CONSTRUCTION PERIMETER	DELINEATION OR FENCING OF NO DISTURBANCE AREAS AND SENSITIVE OR PROTECTED FEATURES			
	PRESERVE EXISTING VEGETATION AT CONSTRUCTION PERIMETER			
	REDUNDANT SEDIMENT CONTROLS WITHIN 50' OF WETLANDS, STREAMS, WATER BODIES, AND SENSITIVE AREAS			SW-91
	PERIMETER SEDIMENT CONTROLS (PSC)	SILT FENCE		SW-11
		J-HOOKS *PSC UP/DOWN CONTOURS*		SW-18
		STRUCTURAL OVERFLOW / DRAINAGE OUTLETS *PSC LOW POINTS*		SW-21 AND SW-22
		TEMPORARY SEDIMENTATION BASINS		DN-40
		TEMPORARY SEDIMENT TRAP *DRAINAGE AREAS ≤ 5 ACRES*		C/D SOILS: SW-26
		PERMANENT DETENTION BASIN		DN-41
		VEGETATED DRAINAGE SWALE		DN-20
DISTURBED SOIL AREAS (SOIL STABILIZATION)	SEEDING TO INCLUDE ANNUAL AND PERENNIAL SEEDS *UNLESS STABILIZED WITH ROCK*			
	SLOPES ≤ 6%	*STABILIZATION*	ANCHORED STRAW MULCH *WITH SEEDING*	SW-80
	SLOPES 6% ≤ 25%	*STABILIZATION*	ANCHORED STRAW MULCH *WITH SEEDING*	SW-80
			SEDIMENT CONTROL LOGS ON SLOPES *SEE DETAIL FOR SPACING*	SW-05
	SLOPES > 25%	*STABILIZATION*	EROSION CONTROL BLANKET FOR SLOPES *WITH SEEDING*	SW-01
			HYDRAULICALLY APPLIED MATERIAL *WITH SEEDING*	SW-04
		VELOCITY AND SEDIMENT CONTROL	SLOPE TRACKING / ROUGHENING *TEMPORARY CONDITIONS*	SW-03
			SEDIMENT CONTROL LOGS ON SLOPES *SEE DETAIL FOR SPACING*	SW-05
	EXISTING DRAINAGE PATHS AND PROPOSED SWALES, DITCHES, AND BERMS	*STABILIZATION (IF NOT ROCK LINED)*	EROSION CONTROL BLANKET FOR CHANNEL *WITH SEEDING*	SW-02
		VELOCITY AND SEDIMENT CONTROL	FIBER LOGS IN DITCH *SEE DETAIL FOR SPACING*	SW-06
LINEAR DISTURBANCE UP/DOWN SLOPES	VELOCITY CHECKS FOR ACCESS ROADS OR COLLECTION UP/DOWN SLOPES			SW-07
ACCESS ROADS	GRAVEL SURFACING			
DRAINAGE CROSSINGS	PERMANENT CROSSINGS	STANDARD LOW WATER CROSSING		DN-01
		CULVERT		DN-03
		STANDARD LOW WATER CROSSING WITH CULVERT		DN-08
		RIPRAP AT CULVERT ENDS		DN-30 AND DN-31
ELECTRICAL COLLECTION	BORINGS			SW-65 AND SW-67
	TRENCH THROUGH DRAINAGE PATH			SW-66
SOIL STOCKPILES	SOIL STOCKPILE PROTECTION			SW-10

Westwood
Phone (952) 937-5150 | 12701 Whitewater Drive, Suite #300
Toll Free (888) 937-5150 | Minnetonka MN, 55343
westwoodps.com
Westwood Professional Services, Inc.

STATE OF KENTUCKY
DAVID KELLEHER
35445
07/15/26
LICENSED PROFESSIONAL ENGINEER

PREPARED FOR:

Discovery A GTS COMPANY
3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

Flat Run Solar, LLC
Taylor County, KY

Civil Construction Notes - 1

ISSUED FOR CONSTRUCTION
DATE: 07/15/2026
SHEET: C-102-01
REV: 0

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ROAD DESIGN PARAMETERS

1. THE ROAD HAS BEEN DESIGNED TO ACCOMMODATE LOADS DURING CONSTRUCTION AND LIGHT DUTY TRUCKS FOR LOW VOLUME USE IN NORMAL OPERATING CONDITIONS. THE ROAD DESIGN SPECIFIED IS NOT INTENDED FOR ALL WEATHER USE FOR HEAVY DUTY, HIGH VOLUME CONSTRUCTION LOADS.
2. ROAD MAINTENANCE CAN BE EXPECTED DURING CONSTRUCTION AND OVER THE LIFE OF THE PERMANENT FACILITY.
3. ROAD DESIGN HAS BEEN PROVIDED BY WORLEY. SEE MOUNT OLIVE CREEK IFC DESIGN PLANS, SHEET MOC-PV-C-155-01 FOR DETAILS.

EARTHWORK

1. GENERAL
   a. THIS SECTION DESCRIBES WORK RELATED TO EARTHWORK AND MAY INCLUDE CLEARING AND GRUBBING, EXCAVATIONS, SUBGRADE, AGGREGATE PLACEMENT, GENERAL FILL, STABILIZATION, ANY ASSOCIATED INSPECTIONS AND TESTING OF EARTHWORK, AND ALL OTHER WORK NECESSARY TO COMPLETE EARTHWORK FOR THE PROJECT.

2. SUBMITTALS
   a. THE FOLLOWING MATERIAL SUBMITTALS ARE REQUIRED FOR REVIEW BY THE CIVIL ENGINEER OF RECORD (EOR) PER SPECIFIC PRODUCT AND PRE-PLACEMENT:
      a.1. ON-SITE BORROW SOURCE
      a.2. IMPORTED FILL MATERIAL
      a.3. AGGREGATE
      a.4. RIPRAP
      a.5. GEOSYNTHETIC FABRIC
      a.6. CULVERTS
      a.7. LOW WATER CROSSINGS
   b. EROSION AND SEDIMENT CONTROL (BMP) PRODUCT SUBMITTALS ARE NOT REQUIRED. REFER TO THE NPDES PERMIT FOR INFORMATION.
   c. REFER TO TABLE 5 FOR REQUIRED TESTS FOR EACH SUBMITTAL.

3. MATERIALS
   a. GENERAL FILL
      a.1. GENERAL FILL MATERIAL SHALL CONSIST OF NATIVE FAT CLAY, FAT CLAY WITH SAND (CH), LEAN CLAY, AND LEAN CLAY WITH SAND (CL). NATIVE MATERIALS USED IN GENERAL FILL ARE TO BE FREE OF FOREIGN DEBRIS, ORGANICS, FROZEN MATERIAL, AND PARTICLES/CLODS GREATER THAN 3".
      a.2. GENERAL FILL SHALL BE USED FOR MASS GRADING ASSOCIATED WITH ACCESS ROADS, EMBANKMENTS, AND LAYDOWN AREAS.
   b. AGGREGATE MATERIAL
      b.1. ROAD AGGREGATE MATERIAL SHALL CONSIST OF KYTC DENSE GRADED AGGREGATE. SEE TABLE 2 FOR GRADATION.
      b.2. ROAD AGGREGATE MATERIAL SHALL BE USED FOR ACCESS ROADS, EQUIPMENT APRONS, AND LAYDOWN AREAS.
      b.3. BASE AGGREGATE SHALL CONSIST OF OF #3 STONE PER KYTC SECTION 805. SEE TABLE 3 FOR GRADATION.
      b.4. BASE AGGREGATE SHALL BE USED FOR ACCESS ROAD AND LAYDOWN AREA.
   c. GEOTEXTILE
      c.1. ROAD APPLICATIONS
         c.1.1. GEOTEXTILE SHALL CONSIST OF MIRAFI HP270 GEOTEXTILE FABRIC OR CIVIL ENGINEER APPROVED EQUAL.
         c.1.2. GEOTEXTILE SHALL BE USED FOR ACCESS ROADS AND SUBSTATION AREA AS SHOWN ON THE DRAWINGS.
      c.2. DRAINAGE APPLICATIONS
         c.2.1. GEOTEXTILE SHALL CONSIST OF MIRAFI 140N GEOTEXTILE FABRIC OR CIVIL ENGINEER APPROVED EQUAL.
         c.2.2. GEOTEXTILE SHALL BE USED FOR RIPRAP AREAS AND AS SHOWN ON THE DRAWINGS.

4. CONSTRUCTION
   a. CLEARING AND GRUBBING
      a.1. THE CONTRACTOR SHALL (PRIOR TO SITE GRADING ACTIVITIES) REMOVE ALL EXISTING VEGETATION, ROOTS, BOULDERS, COBBLES, OLD FOUNDATIONS, UNCONTROLLED FILL, AND ABANDONED UNDERGROUND UTILITIES SHOULD BE REMOVED FROM THE PROPOSED CONCRETE FOUNDATION AND PV ARRAY AREAS, AS WELL AS AREAS TO RECEIVE FILL. THE CONTRACTOR IS TO REMOVE ONLY THOSE TREES WHICH ARE DESIGNATED BY THE OWNER'S REPRESENTATIVE FOR REMOVAL, AND SHALL EXERCISE EXTREME CARE AROUND EXISTING TREES TO BE SAVED.
   b. EXCAVATIONS
      b.1. TOPSOIL SHALL BE STRIPPED FROM ALL ROADWAY AREAS. TOPSOIL SHALL NOT BE STRIPPED OUTSIDE OF THE DESIGNATED DISTURBANCE AREAS.
      b.2. TOPSOIL, IF ENCOUNTERED, OR ORGANIC MATERIAL ENCOUNTERED SHOULD NOT BE USED FOR GENERAL OR STRUCTURAL FILL AND SHALL BE STOCKPILED AWAY FROM NATIVE EXCAVATED SOIL. THIS MATERIAL MAY BE USED AS FILL IN NON-STRUCTURAL AREAS OUTSIDE OF THE ARRAY AREA WHERE SOIL STRENGTH AND COMPRESSIBILITY WOULD NOT IMPACT SITE INFRASTRUCTURE.
      b.3. ANY TOPSOIL THAT HAS BEEN STRIPPED SHALL BE RE-SPREAD OR STOCKPILED WITHIN GRADING AREAS AND/OR USED AS FILL OUTSIDE OF THE DISTURBANCE AREAS, AS DIRECTED BY THE CIVIL ENGINEER. TOPSOIL SHALL BE STOCKPILED AND REDISTRIBUTED TO DISTURBED AREAS PRIOR TO SEEDING OF WHERE IT ORIGINATED FROM. SEEDING AND MULCHING TO BE UNDER THE DIRECTION OF THE PROPERTY OWNER.
   c. SUBGRADE
      c.1. SUBGRADE SOIL BELOW FILL SHALL BE COMPACTED AND PROOF-ROLLED IN ACCORDANCE WITH TABLE 5.
      c.2. WHERE APPLICABLE, GEOTEXTILE FABRIC SHALL BE PLACED AFTER SUBGRADE TESTING REQUIREMENTS AS SPECIFIED IN TABLE 5. GEOTEXTILE FABRIC SHALL BE INSTALLED PER MANUFACTURE RECOMMENDATION.
   d. GENERAL FILL
      d.1. GENERAL FILL AND FOUNDATION BACKFILL MAY BE PLACED ABOVE GRADE AFTER TOPSOIL STRIPPING, IN LOOSE LIFTS NOT EXCEEDING 9 INCHES, AND COMPACTED IN ACCORDANCE WITH TABLE 5.
      d.2. SIDE SLOPES GREATER THAN 4:1 WILL NOT BE PERMITTED, UNLESS OTHERWISE NOTED ON THE PLAN.
      d.3. FILL SLOPES GREATER THAN 5 FEET IN HEIGHT SHOULD BE BENCHED INTO THE EXISTING SLOPE TO PREVENT MOVEMENT BETWEEN THE FILL AND NATIVE SOILS.
   e. AGGREGATE PLACEMENT
      e.1. SUBSEQUENT TO THE SUBGRADE PREPARATION, THE AGGREGATE BASE SHALL BE PLACED, COMPACTED, AND TESTED TO THE SPECIFICATIONS IDENTIFIED IN TABLE 5.
   f. SEEDING, MULCHING, AND STABILIZATION
      f.1. PRIOR TO FINAL STABILIZATION, TOPSOIL SHALL BE DISTRIBUTED OVER THE EXPOSED DISTURBED AREAS, EXCLUDING THE AGGREGATE DRIVING SURFACE.
      f.2. FOLLOWING ROUGH GRADING OPERATIONS, TOPSOIL CAN BE USED TO BRING THE GROUND ELEVATIONS UP TO THE DESIGNED FINISHED GRADE ELEVATIONS IN NON-STRUCTURAL AREAS.
      f.3. ALL DISTURBED AREAS SHALL HAVE TEMPORARY AND PERMANENT STABILIZATION MEASURES ESTABLISHED IN ACCORDANCE WITH THE NPDES PERMIT.

5. INSPECTIONS AND TESTING
   a. TESTING SHALL BE PERFORMED BY A DESIGNATED INDEPENDENT TESTING AGENCY
   b. TESTING AND INSPECTION RECORDS SHALL BE MAINTAINED BY THE CONTRACTOR AND MADE ACCESSIBLE TO THE CIVIL EOR AT THEIR REQUEST
      b.1. THE CIVIL ENGINEER MAY REVIEW THE TESTING AND INSPECTION RECORDS TO CHECK CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS. THE CIVIL ENGINEER'S REVIEW DOES NOT RELIEVE THE CONSTRUCTION CONTRACTOR FROM THE RESPONSIBILITY FOR CORRECTING DEFECTIVE WORK.
   c. REFER TO TABLE 5 FOR PROJECT TESTING SPECIFICATIONS
   d. PROOF ROLLING: PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER OR QUALIFIED GEOTECHNICAL REPRESENTATIVE
      d.1. UNSTABILIZED SUBGRADE AND AGGREGATE BASE SHALL BE PROOF ROLLED USING A FULLY LOADED TANDEM AXLE DUMP TRUCK WITH A MINIMUM GROSS WEIGHT OF 25 TONS AND MINIMUM AXLE LOADING OF 10 TONS OR A FULLY LOADED WATER TRUCK WITH AN EQUIVALENT AXLE LOADING.

TABLE 5: MATERIAL TESTING SCHEDULE

	Location	Required Test	ASTM Standard	Frequency	Specified Criteria
Subgrade (Non-cement Stabilized)	Access Roads Equipment Skid Backfill	Modified Proctor	ASTM D-1557	1 per soil type as determined by independent testing agency	N/A
		Nuclear Density	ASTM D-6938	Roads: 1 test per 2,500 LF (minimum 1 per road) Areas: 1 test per 5,000 SF (minimum 1 per area)	90% of Standard Proctor Maximum Dry Density typical, 95% of Standard Proctor Maximum Dry Density for existing road upgrade -3% to +3% of Optimum Moisture Content
		Proof Roll	N/A	Entire Length / Area	No rutting greater than 1.5" and no "pumping" of the soil beneath/behind the loaded truck. See testing requirements for additional information.
	Laydown Areas	Proof Roll	N/A	Entire Length / Area	No rutting greater than 1.5" and no "pumping" of the soil beneath/behind the loaded truck. See testing requirements for additional information.
General Fill (for Mass Grading)	Source (On -Site Borrow) (Imported Fill) (Common Excavation)	Modified Proctor	ASTM D-1557	1 per soil type/source as determined by independent testing agency	N/A
	Access Roads PV Array Equipment Skid Backfill Foundation Backfill Embankments	Nuclear Density	ASTM D-6938	1 test per 20,000 SF per lift (PV Array only)	90% of Standard Proctor Maximum Dry Density -3% to +3% of Optimum Moisture Content
		Proof Roll	N/A	Entire Length / Area (Final Surface)	No rutting greater than 1.5" and no "pumping" of the soil beneath/behind the loaded truck. See earthwork specifications for additional information.
Structural Fill	Shallow Foundations	Nuclear Density	ASTM D-6938	1 test per 2,500 SF per lift.	95% of Standard Proctor Maximum Dry Density +/-3% of Optimum Moisture Content Material in accordance with KYTC DGA (or approved alternative)
		Modified Proctor	ASTM D-1557	1 per soil type/source as determined by independent testing agency	N/A
Aggregate Material	Quarry Testing (Pre-Placement)	Grain Size Analysis	ASTM C-136	Per source from quarry. Sample from site every 5,000CY (6,500 tons).	See Table 2
		Modified Proctor	ASTM D-1557		N/A
		Moisture Content	ASTM D-2216		
	Access Roads	Proof Roll	N/A	Entire Length / Area	No rutting greater than 1.5" and no "pumping" of the soil beneath/behind the loaded truck. See earthwork specifications for additional information.
		Moisture Density Test (Nuclear Density)	ASTM D-6938	1 test per 1,000 LF per lift.	Base Aggregate: 95% of Standard Proctor Maximum Dry Density Road Aggregate: 95% of Standard Proctor Maximum Dry Density -3% to +3% of Optimum Moisture Content
Trench	Trench Backfill	Moisture Density Test (Nuclear Density)	ASTM D-6938	1 every 1,000 LF of trench, with 12" cover over cables/conduit and every 2,000 LF of trench at grade	90% of Standard Proctor Maximum Dry Density (Non-Structural Areas) 90% of Standard Proctor Maximum Dry Density (Structural Areas) +/-3% of Optimum Moisture Content
		Modified Proctor	ASTM D-1557	1 per major soil type	N/A
		Sieve Analysis	ASTM D-422	1 per major soil type	No particles greater than 3/8" within 3" of cables
	Imported Trench Backfill	Moisture Density Test (Nuclear Density)	ASTM D-6938	1 every 1,000 LF of trench, with 12" cover over cables/conduit and every 2,000 LF of trench at grade	90% of Standard Proctor Maximum Dry Density (Non-Structural Areas) 90% of Standard Proctor Maximum Dry Density (Structural Areas) +/-3% of Optimum Moisture Content
		Modified Proctor	ASTM D-1557	1 per major soil type	N/A
		Sieve Analysis with Hydrometer	ASTM D-422	1 per major soil type	Submit to EOR for review/approval
		Thermal Resistivity Dryout Curve	ASTM D-5334	1 per major soil type	Submit to EOR for review/approval

TESTING SCHEDULE PROVIDED FOR REFERENCE ONLY. REFER TO TERRACON GEOTECHNICAL REPORT FOR FINAL TESTING SPECIFICATIONS.

GENERAL NOTES

1. CONSTRUCTION PLANS ARE BASED OFF THE COORDINATE SYSTEM NSRS11 KENTUCKY STATE PLANES, SOUTH ZONE, US SURVEY FOOT.
2. SITE DRAINAGE INFRASTRUCTURE INCLUDING SWALES, ACCESS ROAD SWALE CROSSINGS, AND OUTLET FEATURES ARE SIZED FOR A 100 YEAR 24HR RAIN EVENT.
3. THE ALTA SURVEY AND EXISTING PLANIMETRIC DATA IS FROM BTM ENGINEERING, DATED 12/15/2022.
4. THE ELEVATIONS AND CONTOURS SHOWN ON THESE CONSTRUCTION DRAWINGS WERE PREPARED FROM SENSEHAWK.
5. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE OWNER SHALL BE NOTIFIED AND ARE NOT TO BE REMOVED WITHOUT PERMISSION FROM THE OWNER. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONSTRUCTION ACTIVITIES SHALL NOT BLOCK THE NATURAL DRAINAGE SWALES CAUSING RAINWATER TO POND. IF CULVERTS ARE NEEDED, THE CIVIL ENGINEER MUST BE CONTACTED FOR APPROPRIATE SIZING OF STRUCTURE. WHEN INSTALLING DRAINAGE CROSSINGS, THE CONTRACTOR SHALL USE JUDGMENT IN SETTING THE FLOW LINE ELEVATIONS TO PROVIDE POSITIVE DRAINAGE. WHEN POSSIBLE, ALL CULVERTS SHOULD BE PLACED AT A MINIMUM 0.5% GRADE.
7. ANY FACILITIES REMOVED TO ALLOW FOR CONSTRUCTION (MAILBOXES, SIGNS, FENCES, ETC.) SHALL BE REPLACED BY THE CONTRACTOR IN A CONDITION AS GOOD AS PRE-EXISTING UNLESS INDICATED FOR REMOVAL.
8. THE CONTRACTOR SHALL NOTIFY KENTUCKY 811 AT LEAST 48 HOURS BEFORE EXCAVATION ACTIVITIES COMMENCE.
9. ALL CONSTRUCTION PERFORMED SHALL CONFORM WITH THE CURRENT STANDARDS AND SPECIFICATION OF TAYLOR COUNTY, KENTUCKY. WHERE DISCREPANCIES EXIST BETWEEN THE PROJECT SPECIFICATIONS AND THE COUNTY SPECIFICATIONS OR STANDARD, THE CONTRACTOR SHALL ABIDE BY THE GREATER OR MORE RESTRICTIVE REQUIREMENTS.
10. ELECTRONIC FILES ARE AVAILABLE FOR CONSTRUCTION OPERATIONS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGGERS, AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE COUNTY/MUNICIPALITY AND CIVIL ENGINEER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. TEMPORARY FEATURES SHALL, UPON COMPLETION OF ALL PROJECT CONSTRUCTION OR UPON NOTIFICATION OF THE CIVIL ENGINEER, BE REMOVED AND THE AREA RESTORED TO APPROXIMATELY ORIGINAL LINES AND GRADES WITH TOPSOIL REPLACED, EXCEPT WHERE REQUESTED BY THE TOWNSHIP OR COUNTY TO PERMANENTLY REMAIN.
13. ELECTRICAL INFORMATION SHOWN ON THE PLANS IS FOR REFERENCE ONLY. REFER TO ELECTRICAL PLANS FOR SPECIFIC LOCATIONS AND CONSTRUCTION DETAILS.
14. JURISDICTIONAL WATERS HAVE BEEN PROVIDED BY ENGIE, PREPARED BY COPPERHEAD CONSULTING. ALL WETLAND DELINEATIONS AND PERMITTING SHALL BE THE RESPONSIBILITY OF OTHERS. THE CONTRACTOR SHALL AVOID ALL POTENTIALLY JURISDICTIONAL WATERS INCLUDING BUT NOT LIMITED TO WETLANDS, STREAMS, PONDS ETC. IF CONTRACTOR IMPACTS ANY POTENTIALLY JURISDICTIONAL WATERS, CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS AND THEIR ASSOCIATED CONDITIONS.

TABLE 2: KYTC GRADATION - DENSE GRADED AGGREGATE

SIEVE SIZE	PERCENT PASSING
1"	100
¾"	70-100
⅜"	50-80
#4	30-65
#30	10-40
#200	4-12
FINES MUST BE NON-PLASTIC	

TABLE 3: KYTC GRADATION - #3 STONE

SIEVE SIZE	PERCENT PASSING
2-½"	100
2"	90-100
1-½"	35-70
1"	0-15
½"	0-5

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COMMONWEALTH OF KENTUCKY
DAVID KELEHER
35445
07/15/26
LICENSED PROFESSIONAL ENGINEER

PREPARED FOR:
Discovery A GZS COMPANY
3401 Ridgewood Dr.
Edmond, OK 73013

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Flat Run Solar, LLC
Taylor County, KY

Civil Construction Notes - 2

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SHEET: C-102-02
REV: 0

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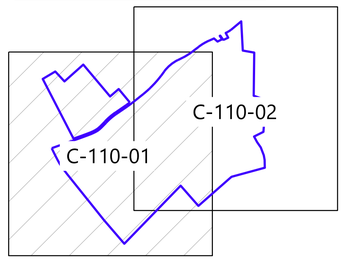
- PROJECT BOUNDARY
- PARCEL LINES
- ADJACENT PARCEL LINES
- LEASE LINES
- EASEMENT LINES
- 900 EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. TREELINE
- EX. PAVED ROAD
- EX. GRAVEL ROAD
- X EX. FENCE
- EX. STRUCTURE
- POH EX. OVERHEAD POWER
- FO EX. FIBER OPTIC LINE
- GAS EX. GAS PIPELINE
- WAT EX. WATER LINE
- EX. DELINEATED STREAM CHANNEL
- EX. DELINEATED WETLAND
- EX. FEMA FLOOD ZONE A
- EXCLUSION AREA
- TREE CLEARING AND GRUBBING
- TREE FELLING (NON-STUMP REMOVAL)
- REMOVAL AREAS
- DB DISTURBANCE AREAS
- EX. MONUMENT
- EX. KARST AREA

EXISTING AND REMOVAL PLAN NOTES:

1. EXISTING INFORMATION IS IN REFERENCE TO THE 20021 - FLAT RUN SURVEYBASE - ENGIE 90 PERCENT 12-15-22.PDF
2. CLEARING AND GRUBBING AREAS MAY VARY BASED ON INFIELD CONDITIONS.
3. FOR CLEARING, GRUBBING, AND THE REMOVAL OF ALL EXISTING STRUCTURES, THE CONTRACTOR SHALL REFER TO THE FLAT RUN SOLAR SWPPP FOR EROSION AND SEDIMENT CONTROL MEASURES.
4. ANY ADDITIONAL REMOVAL/DEMOLISHMENT OF EXISTING STRUCTURES SHALL BE IN ACCORDANCE WITH THE FLAT RUN SOLAR SWPPP.
5. ANY STRUCTURES, UTILITIES, OR OTHER ITEMS ASSUMED TO BE REMOVED OR ABANDONED SHOULD BE DONE SO FOLLOWING AHJ REQUIREMENTS.
6. ALL BUILDINGS IDENTIFIED FOR REMOVAL MUST INCLUDE REMOVAL OF ANY EXISTING FOUNDATIONS AND UTILITIES.
7. ALL REMOVAL MATERIAL TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL FACILITY.
8. FOR ANY UTILITIES THAT ARE BEING REMOVED, COORDINATE WITH AHJ AND UTILITY OWNER FOR PROPER REMOVAL PROCEDURES.
9. EXISTING STRUCTURES WITHIN THE BOUNDARY ARE ASSUMED TO REMAIN UNLESS NOTED OTHERWISE. IF THE CONSTRUCTION TEAM DISCOVERS ITEMS WITHIN THE PROJECT AREA THAT WERE NOT DEPICTED ON THE SHEETS, THEN IT IS ASSUMED THOSE ITEMS WOULD BE ABANDONED OR REMOVED AS NEEDED.
10. EXISTING GRAVEL PATHS WITHIN BOUNDARY TO BE ABANDONED IN PLACE.
11. TREE CLEARING WITHIN JURISDICTIONAL WETLANDS TO BE LIMITED TO CUTTING OF AND REMOVAL OF THE VEGETATION BUT LEAVING THE STUMP AND ROOT STRUCTURE IN PLACE. IT IS RECOMMENDED TO PERFORM VEGETATION REMOVAL WITH LIGHTER EQUIPMENT TO AVOID MAJOR DISTURBANCE TO THE INSITU SOILS. ANY DISTURBANCE CAUSED FROM VEGETATION REMOVAL SHALL BE REPAIRED AND STABILIZED IN ACCORDANCE WITH THE TIMELINE REQUIREMENTS OUTLINED IN THE GENERAL PERMIT.
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REMOVAL QUANITITIES	
BUILDINGS	3 EA, 7,010 SF
OVERHEAD POWER LINE	2,230 LF
OVERHEAD POWER STRUCTURES	2 EA
TREE CLEARING AND GRUBBING	10.3 AC
TREE FELLING	3.4 AC
FENCE	10,180 LF

KEY MAP:



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Discovery A GTS COMPANY

3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

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Flat Run Solar, LLC

Taylor County, KY

Demolition and Removal Plan - 1

ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-110-01

REV: 0

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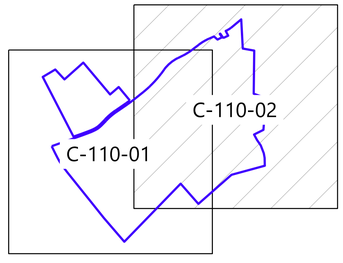
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- LEASE LINES
- EASEMENT LINES
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KEY MAP:



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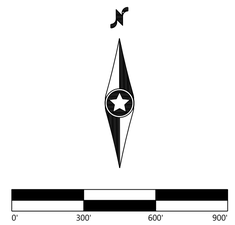
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Flat Run Solar, LLC

Taylor County, KY

Demolition and Removal Plan - 2

ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-110-02

REV: 0

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LEGEND:

- PROJECT BOUNDARY
- EX. FEMA FLOOD ZONE A
- PROPOSED SOLAR ARRAY
- PROPOSED ELECTRICAL EQUIPMENT
- PROPOSED 16' SOLAR ARRAY ACCESS ROAD
- PROPOSED 20' SUBSTATION ACCESS ROAD
- PROPOSED 20' SWITCHYARD ACCESS ROAD
- PROPOSED SECURITY FENCE
- PROPOSED WILDLIFE FENCE
- PROPOSED LAYDOWN YARD
- PROPOSED SUBSTATION
- PROPOSED SWITCHYARD (*DESIGNED BY OTHERS*)
- PROPOSED ENTRANCE
- PROPOSED HAUL ROUTE (INGRESS)

NOTES:

SEE SHEET C-180-10 FOR TRAFFIC CONTROL PLANS/DETAILS.

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0' 1000' 2000' 3000'

Flat Run Solar, LLC

Taylor County, KY

Overall Haul Route Plan

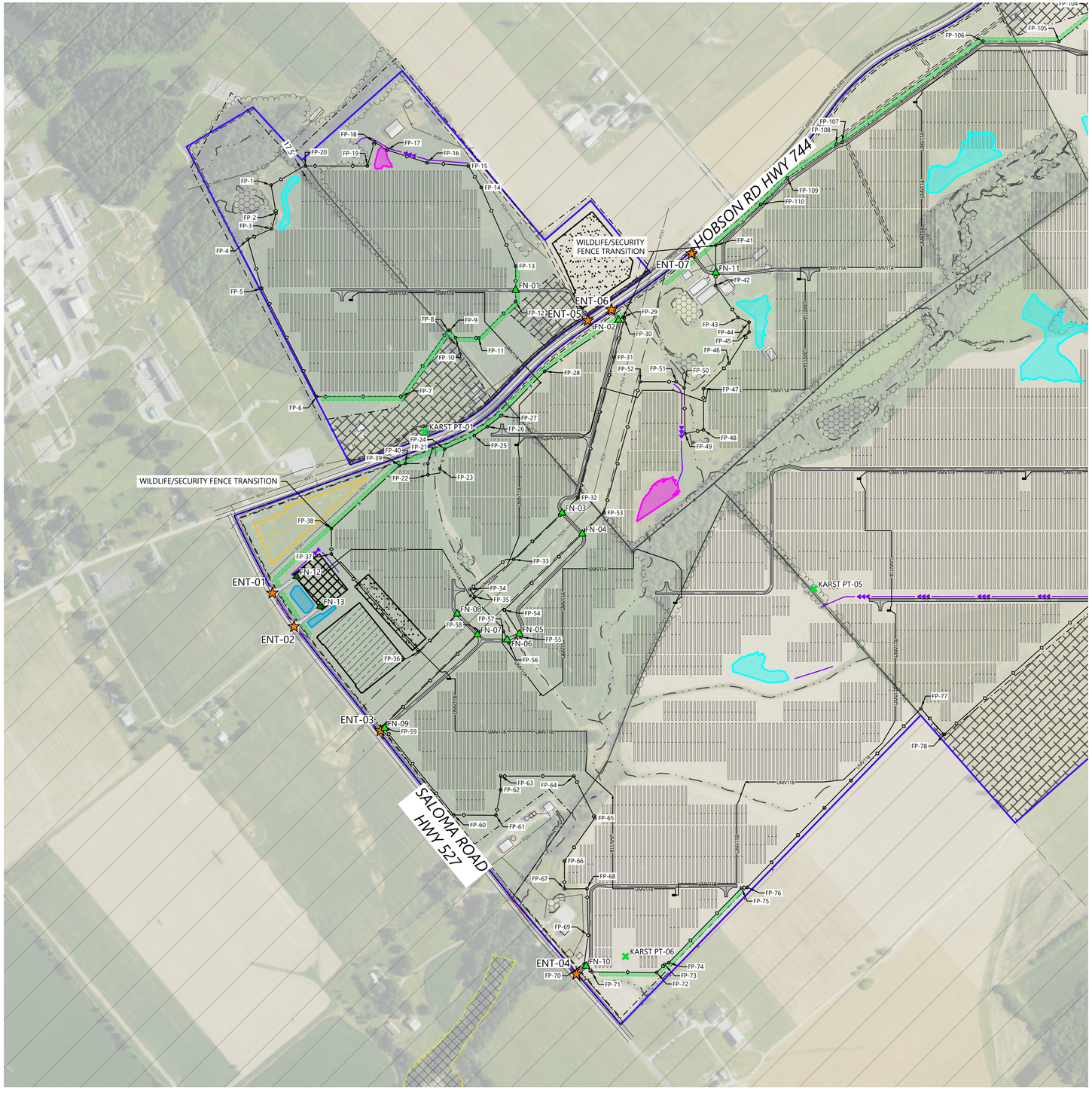
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SHEET: C-111-01

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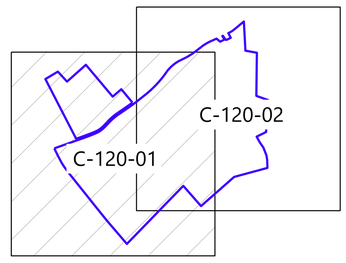


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- PROPOSED DIVERSION SWALE
- PROPOSED TEMPORARY SEDIMENT BASIN
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- PROPOSED PERMANENT DETENTION BASIN
- PROPOSED LAYDOWN YARD
- PROPOSED SUBSTATION
- PROPOSED SWITCHYARD (*DESIGNED BY OTHERS*)
- EX. KARST AREA
- PROPOSED ENTRANCE
- FN-XX PROPOSED 20' ACCESS GATE
- FN-XX PROPOSED 24' ACCESS GATE

SEE SHEET C-120-03
FOR POINT TABLE

KEY MAP:



0' 300' 600' 900'

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Flat Run Solar, LLC

Taylor County, KY

Fencing Plan - 1

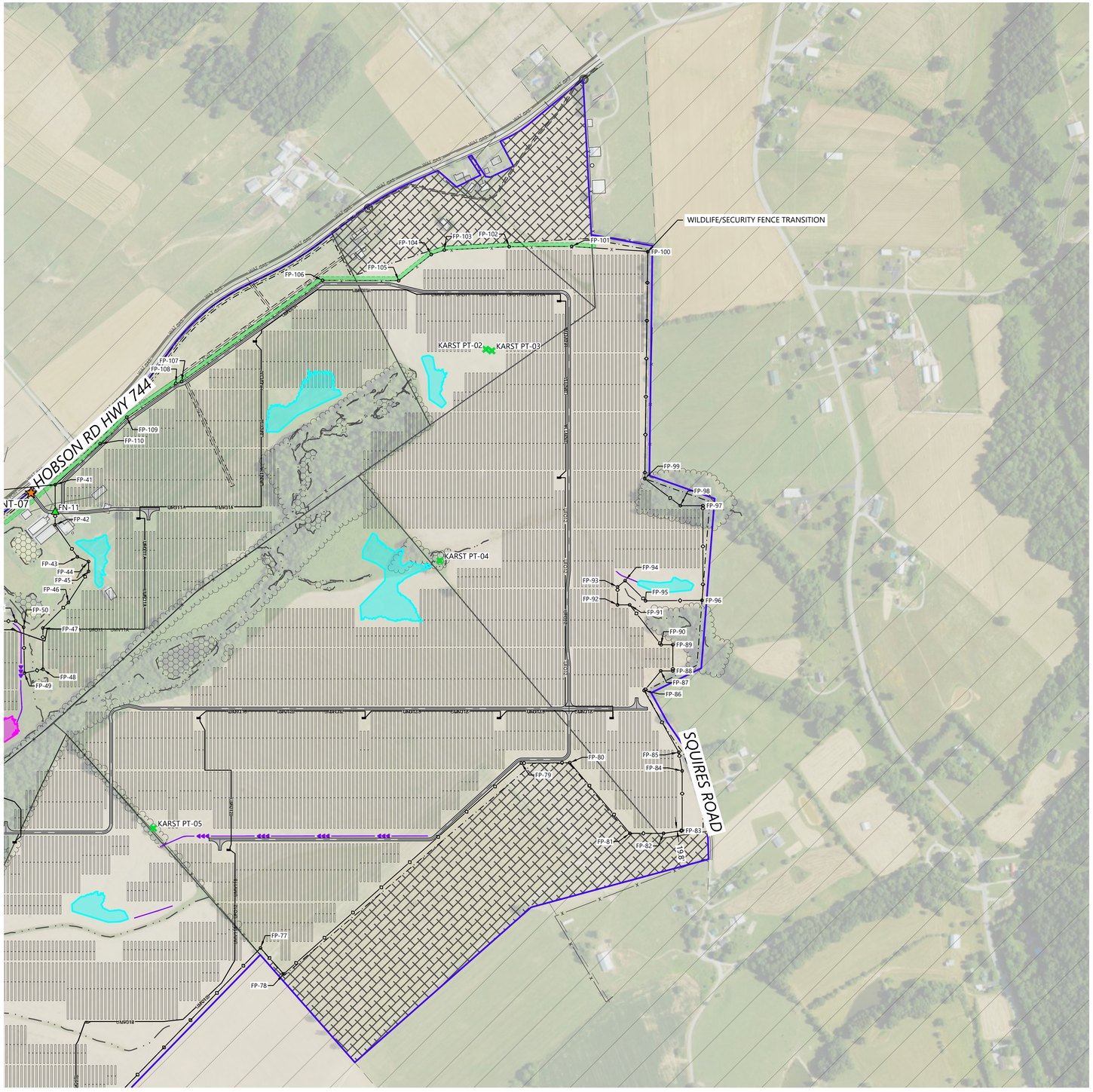
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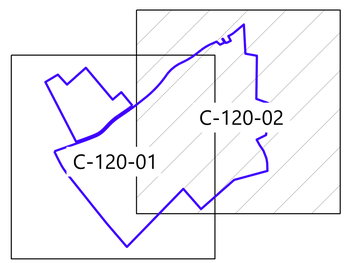


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SEE SHEET C-120-03
FOR POINT TABLE

KEY MAP:



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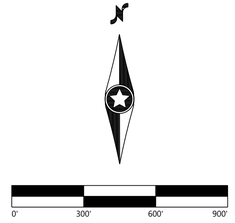
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Flat Run Solar, LLC

Taylor County, KY

Fencing Plan - 2

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DATE: 07/15/2026

SHEET: C-120-02

REV: 0

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Point Table		
Point #	Northing	Easting
FP-1	2035131.830	1744287.514
FP-2	2034977.081	1744315.139
FP-3	2034889.677	1744290.435
FP-4	2034830.703	1744158.501
FP-5	2034560.729	1744235.481
FP-6	2033961.737	1744539.527
FP-7	2033962.413	1745005.472
FP-8	2034328.419	1745265.759
FP-9	2034328.419	1745276.707
FP-10	2034288.231	1745308.863
FP-11	2034286.164	1745436.548
FP-12	2034488.390	1745640.969
FP-13	2034683.713	1745640.804
FP-14	2035119.038	1745450.671
FP-15	2035237.832	1745378.597
FP-16	2035255.594	1745150.304
FP-17	2035325.884	1744930.342
FP-18	2035370.141	1744859.734
FP-19	2035237.735	1744820.137
FP-20	2035237.767	1744477.405
FP-21	2033591.597	1745154.632
FP-22	2033528.922	1745155.196
FP-23	2033563.197	1745221.876
FP-24	2033671.008	1745247.452
FP-25	2033746.041	1745412.315
FP-26	2033795.609	1745484.942
FP-27	2033855.472	1745559.463
FP-28	2034101.428	1745801.505

Point Table		
Point #	Northing	Easting
FP-29	2034402.825	1746236.461
FP-30	2034394.720	1746241.872
FP-31	2034179.652	1746185.608
FP-32	2033403.095	1745985.682
FP-33	2033061.111	1745629.832
FP-34	2032895.352	1745388.439
FP-35	2032854.004	1745414.874
FP-36	2032550.100	1745101.355
FP-37	2033091.035	1744620.885
FP-38	2033231.330	1744620.843
FP-39	2033580.525	1744998.499
FP-40	2033591.597	1745031.073
FP-41	2034798.055	1746748.102
FP-42	2034576.819	1746748.102
FP-43	2034399.406	1746871.029
FP-44	2034373.391	1746932.706
FP-45	2034319.433	1746932.694
FP-46	2034147.116	1746821.523
FP-47	2034005.320	1746680.312
FP-48	2033778.116	1746680.312
FP-49	2033756.854	1746578.268
FP-50	2034009.934	1746573.852
FP-51	2034043.899	1746529.859
FP-52	2034043.899	1746329.605
FP-53	2033319.348	1746129.449
FP-54	2032780.678	1745577.374
FP-55	2032631.703	1745671.984
FP-56	2032600.012	1745601.861

Point Table		
Point #	Northing	Easting
FP-57	2032662.609	1745573.572
FP-58	2032662.609	1745447.373
FP-59	2032135.851	1744905.559
FP-60	2031647.327	1745297.681
FP-61	2031645.497	1745531.825
FP-62	2031786.926	1745557.547
FP-63	2031862.272	1745557.547
FP-64	2031862.272	1745963.465
FP-65	2031630.900	1746078.847
FP-66	2031392.761	1745910.788
FP-67	2031238.122	1745910.841
FP-68	2031239.367	1746035.843
FP-69	2030981.745	1746042.182
FP-70	2030822.448	1746019.907
FP-71	2030779.113	1746062.316
FP-72	2030776.040	1746421.440
FP-73	2030820.282	1746465.423
FP-74	2030829.858	1746488.135
FP-75	2031242.998	1746890.009
FP-76	2031247.400	1746922.931
FP-77	2032236.408	1747883.498
FP-78	2032093.054	1748011.698
FP-79	2033258.900	1749325.723
FP-80	2033261.412	1749593.544
FP-81	2032870.765	1749925.786
FP-82	2032870.091	1750111.887
FP-83	2032885.825	1750214.729
FP-84	2033215.730	1750214.684

Point Table		
Point #	Northing	Easting
FP-85	2033318.970	1750195.907
FP-86	2033660.387	1750004.323
FP-87	2033768.618	1750096.521
FP-88	2033768.618	1750163.168
FP-89	2033913.468	1750163.168
FP-90	2033913.468	1750098.255
FP-91	2034133.950	1749924.532
FP-92	2034133.950	1749857.553
FP-93	2034232.993	1749857.553
FP-94	2034267.507	1749899.229
FP-95	2034156.158	1750012.480
FP-96	2034158.961	1750324.739
FP-97	2034682.199	1750329.231
FP-98	2034682.199	1750204.788
FP-99	2034831.545	1750008.195
FP-100	2036086.394	1750024.630
FP-101	2036115.724	1749603.460
FP-102	2036114.480	1749258.340
FP-103	2036095.700	1748899.722
FP-104	2036071.130	1748827.185
FP-105	2035926.809	1748647.298
FP-106	2035928.164	1748226.406
FP-107	2035368.545	1747446.783
FP-108	2035358.936	1747415.188
FP-109	2035171.606	1747144.018
FP-110	2035025.220	1746996.918

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STATE OF KENTUCKY
DAVID KELLEHER
35445
07/15/26
LICENSED PROFESSIONAL ENGINEER

PREPARED FOR:

Discovery A GTS COMPANY

3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
A	02/10/2026	30% Civil Design Plans	MPH	ELS	ELS

Flat Run Solar, LLC

Taylor County, KY

Fencing Plan - 3

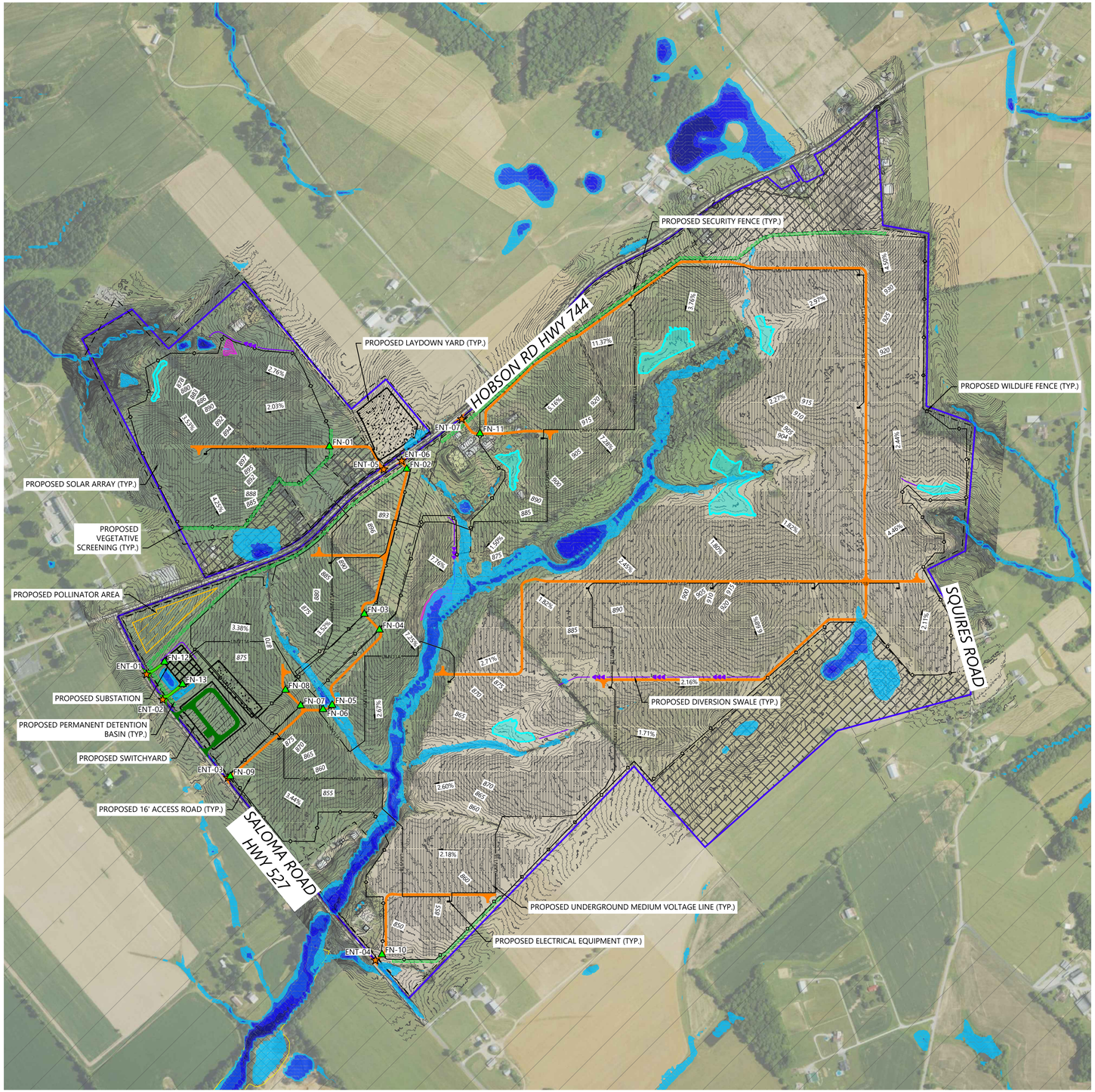
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DATE: 02/10/2026

SHEET: C-120-03

REV: A

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LEGEND:

- PROJECT BOUNDARY
- ADJACENT PARCEL LINES
- LEASE LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. PAVED ROAD
- EX. FENCE
- EX. OVERHEAD POWER
- EX. FIBER OPTIC LINE
- EX. GAS PIPELINE
- EX. WATER LINE
- EX. STREAM CHANNEL
- EX. BUILDINGS
- EX. WETLAND
- EX. FEMA FLOOD ZONE A
- EXCLUSION AREA
- PROPOSED SOLAR ARRAY
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- PROPOSED 20' SUBSTATION ACCESS ROAD
- PROPOSED 20' SWITCHYARD ACCESS ROAD
- PROPOSED SECURITY FENCE
- PROPOSED WILDLIFE FENCE
- PROPOSED VEGETATIVE SCREENING
- PROPOSED DIVERSION SWALE
- PROPOSED TEMPORARY SEDIMENT BASIN
- PROPOSED TEMPORARY SEDIMENT TRAP
- PROPOSED PERMANENT DETENTION BASIN
- PROPOSED POLLINATOR AREA
- PROPOSED LAYDOWN YARD
- PROPOSED SUBSTATION
- PROPOSED SWITCHYARD (*DESIGNED BY OTHERS*)
- PROPOSED ENTRANCE
- FN-XX PROPOSED ACCESS GATE

100-YR; 24-HR FLOOD DEPTH ANALYSIS FOR POST-CONSTRUCTION CONDITIONS

COLOR	MIN. DEPTH (FT)	MAX DEPTH (FT)
	1.00	2.00
	2.00	3.00
	3.00	5.00
	5.00	7.00
	7.00	10.00

FLOOD MODEL SOURCE:

"2026-07-15 Flat Run Solar Final Hydrology Study"

Westwood

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3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

0' 400' 800' 1200'

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Taylor County, KY

Site Plan Overlay with Flow Depths

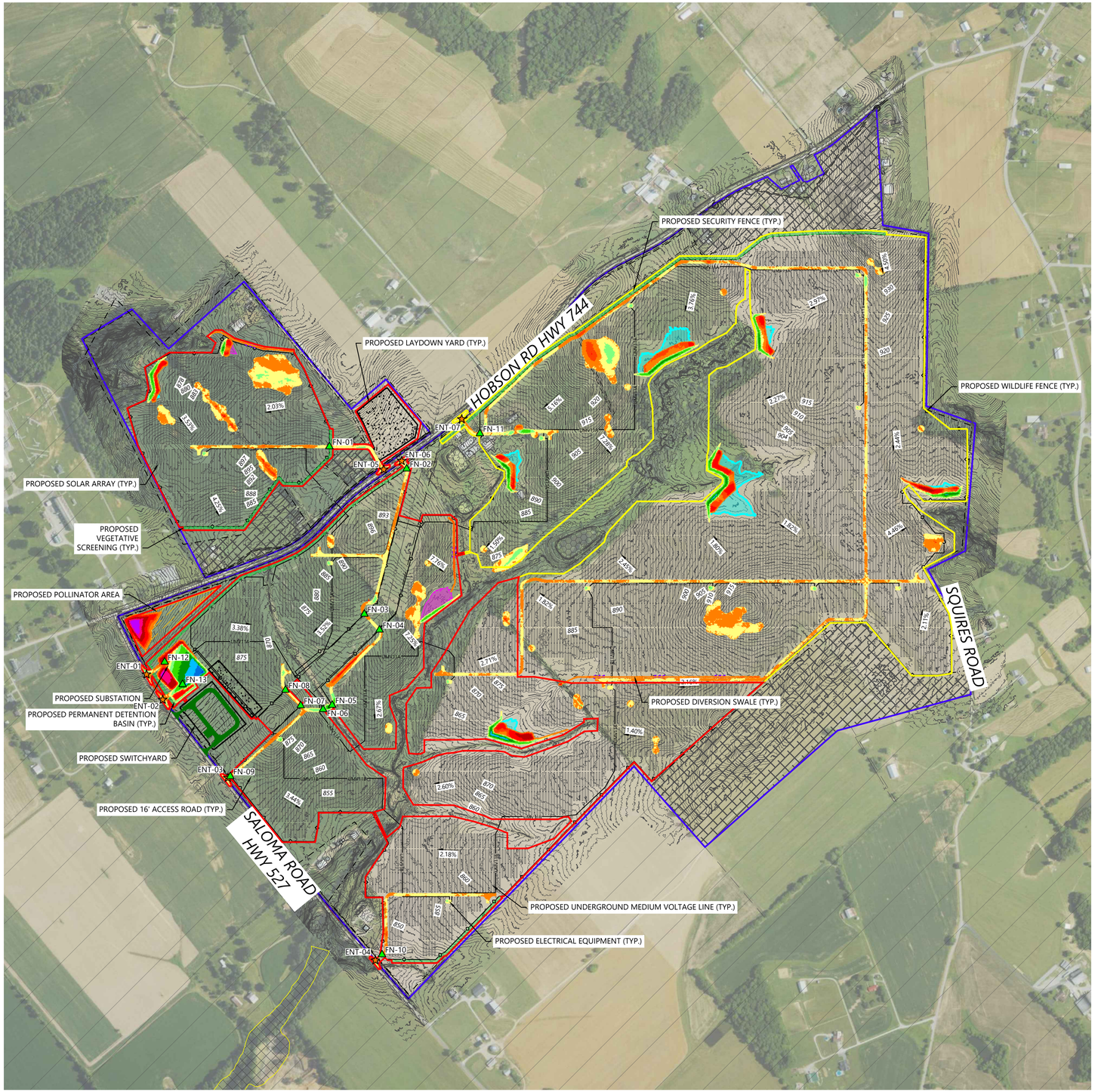
ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-130-01

REV: 0

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LEGEND:

- PROJECT BOUNDARY
- ADJACENT PARCEL LINES
- LEASE LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. PAVED ROAD
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- PROPOSED LAYDOWN YARD
- PROPOSED SUBSTATION
- PROPOSED SWITCHYARD (*DESIGNED BY OTHERS*)
- PHASE 1 BOUNDARY
- PHASE 2 BOUNDARY
- PROPOSED ENTRANCE (FN-XX)
- PROPOSED ACCESS GATE

EARTHWORK ELEVATIONS

EARTHWORK	COLOR	MIN. DEPTH (FT)	MAX DEPTH (FT)
CUT		-10.00	-8.00
		-8.00	-6.00
		-6.00	-4.00
		-4.00	-2.00
		-2.00	-1.00
		-1.00	0.00
		0.00	1.00
FILL		1.00	2.00
		2.00	4.00
		4.00	6.00
		6.00	7.00
		7.00	8.50
		8.50	10.5

ESTIMATED EARTHWORK QUANTITIES

ITEM	BANK CUT (CY)	ADJUSTED CUT (CY)	FILL (CY)	NET (CY)	NOTES
PHASE 1	17340	15764	14955	809	SHRINKAGE FACTOR: 10%
PHASE 2	9314	8467	8310	157	
TOTAL	26654	24231	23265	966	

Westwood

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REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

0' 400' 800' 1200'

Flat Run Solar, LLC

Taylor County, KY

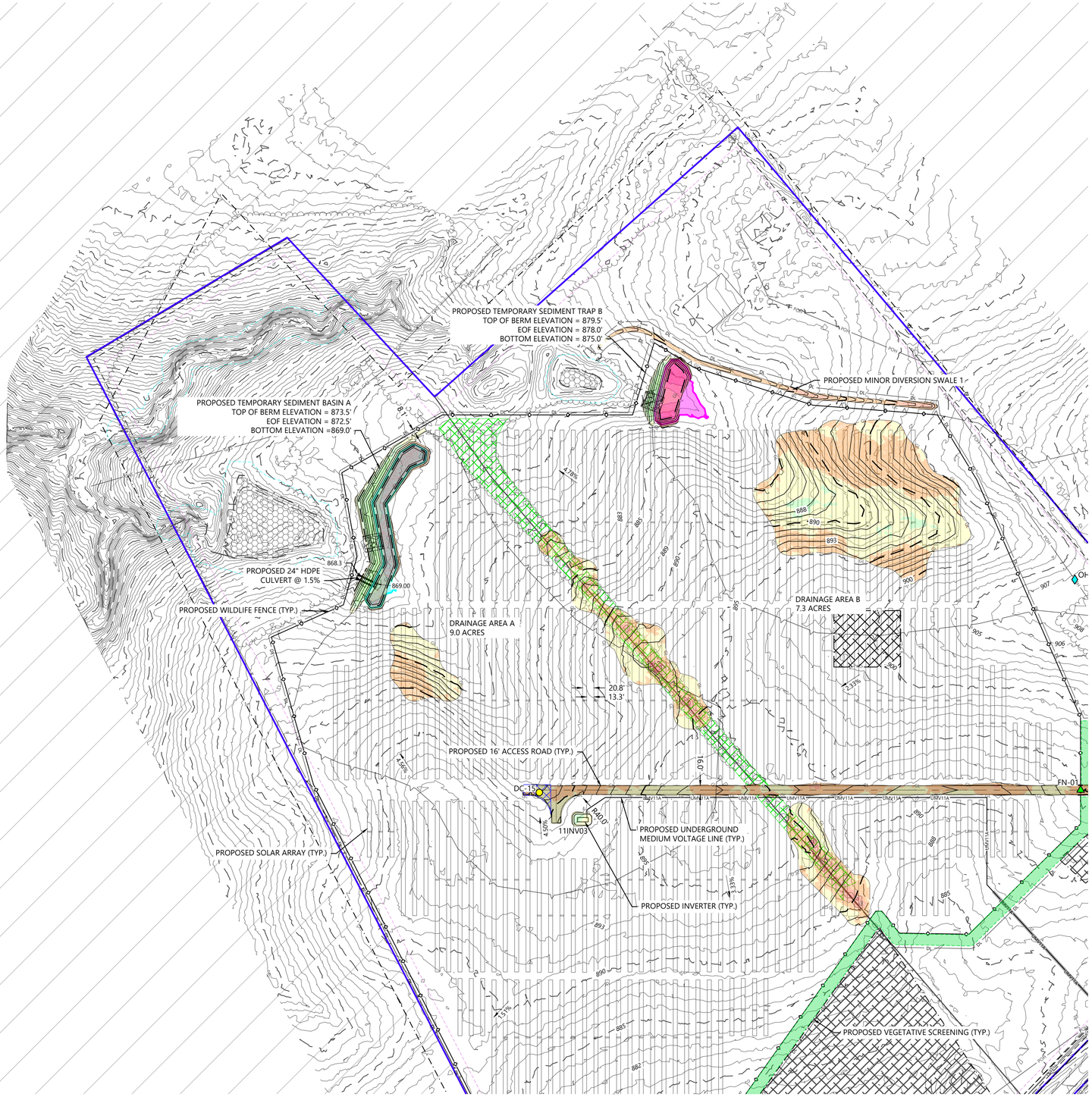
Overall Grading Analysis

ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-132-00 REV: 0

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LEGEND:

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- PARCEL LINES
- ADJACENT PARCEL LINES
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- PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- PROPOSED GRADING LIMITS
- PROPOSED DISTURBANCE LIMITS
- PROPOSED TEMPORARY SEDIMENT BASIN (SEE BASIN TABLE ON SHEET C-180-08)
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- PROPOSED PERMANENT DETENTION BASIN (SEE BASIN TABLE ON SHEET C-180-08)
- PROPOSED VEGETATIVE BUFFER
- PROPOSED TEMPORARY SOIL STOCKPILE
- PROPOSED LOW WATER CROSSING (SEE CROSSING TABLE ON SHEET C-180-05)
- PROPOSED CULVERT (SEE CROSSING TABLE ON SHEET C-180-05)
- PROPOSED TEMPORARY LAYDOWN YARD
- PROPOSED SUBSTATION
- PROPOSED POLLINATOR AREA
- PROPOSED SWITCHYARD (*DESIGNED BY OTHERS*)
- PROPOSED RIP RAP
- PROPOSED WATER BAR
- PROPOSED ENTRANCE
- DC-XX — PROPOSED DRAINAGE CROSSING
- EC-XX — PROPOSED ENTRANCE CROSSING
- FN-XX — PROPOSED 20' ACCESS GATE
- FN-XX — PROPOSED 24' ACCESS GATE
- XX-XX — PERMITTED UTILITY CROSSING (BY OTHERS)
- XX-XX — PERMITTED WATERBODY CROSSING (BY OTHERS)

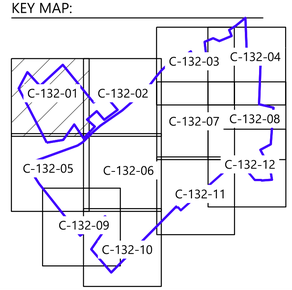
EARTHWORK ELEVATIONS

EARTHWORK	COLOR	MIN. DEPTH (FT)	MAX DEPTH (FT)
CUT		-10.00	-8.00
		-8.00	-6.00
		-6.00	-4.00
		-4.00	-2.00
		-2.00	-1.00
		-1.00	0.00
FILL		0.00	1.00
		1.00	2.00
		2.00	4.00
		4.00	6.00
		6.00	7.00
		7.00	8.50
		8.50	10.5

GRADING AND DRAINAGE NOTES:

1. ARRAY AND ELECTRICAL EQUIPMENT SHOWN ARE FOR REFERENCE ONLY. DETAILED INFORMATION CAN BE FOUND IN "FLAT RUN SOLAR IFC ELECTRICAL PLANS." SEE DETAIL SL-03 FOR TRACKER DIMENSIONS AND GRADING ASSUMPTIONS.
2. SITE PREPARATION INCLUDES CLEARING/GRUBBING, GRADING, COMPACTION, MOWING OF VEGETATION, AND RESTABILIZATION OF DISTURBED AREA.
3. MINOR SURFACE SMOOTHING MAY OCCUR IN AREAS WHERE GRADING IS NOT PROPOSED FOR SAFETY OR SOLAR ARRAY INSTALLATION.
4. MAINTAIN EXISTING DRAINAGE WHEN PLACING STOCKPILES AND WINDROWS TO AVOID FLOODING WORK AREA AND ADJACENT LAND.
5. IN THE CASE OF AN UNBALANCED SUBGRADE, THE CONTRACTOR MAY IMPORT GENERAL FILL MATERIAL OR BORROW FROM AN ADJACENT BORROW PIT IF SHORT ON MATERIAL. IN THE CASE OF EXCESS SUBGRADE MATERIAL, THE CONTRACTOR MAY CHOOSE TO STOCKPILE THE SUBGRADE MATERIAL OR EXPORT THE GENERAL FILL MATERIAL. THE CONTRACTOR WILL NEED TO COORDINATE WITH THE LANDOWNER(S) IF APPROPRIATE.
6. PROPOSED SEEDING SHOWN FOR MASS GRADING AND CONSTRUCTION PHASE DISTURBANCE. SEEDING FOR TREE CLEARING AND GRUBBING NOT SHOWN, BUT NEEDED UPON COMPLETION OF TREE CLEARING PHASE.
7. REFERENCE "2026-07-15 FLAT RUN SWMR" FOR BASIN AND CROSSING CALCULATION AND SIZING DETAILS.

KEY MAP:



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westwoodps.com
Westwood Professional Services, Inc.

COMMONWEALTH OF KENTUCKY
DAVID KELLEHER
35445
07/15/26
LICENSED PROFESSIONAL ENGINEER

PREPARED FOR:

Discovery A GES COMPANY
3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

0' 100' 200' 300'

Flat Run Solar, LLC

Taylor County, KY

Site Grading Plan - 1

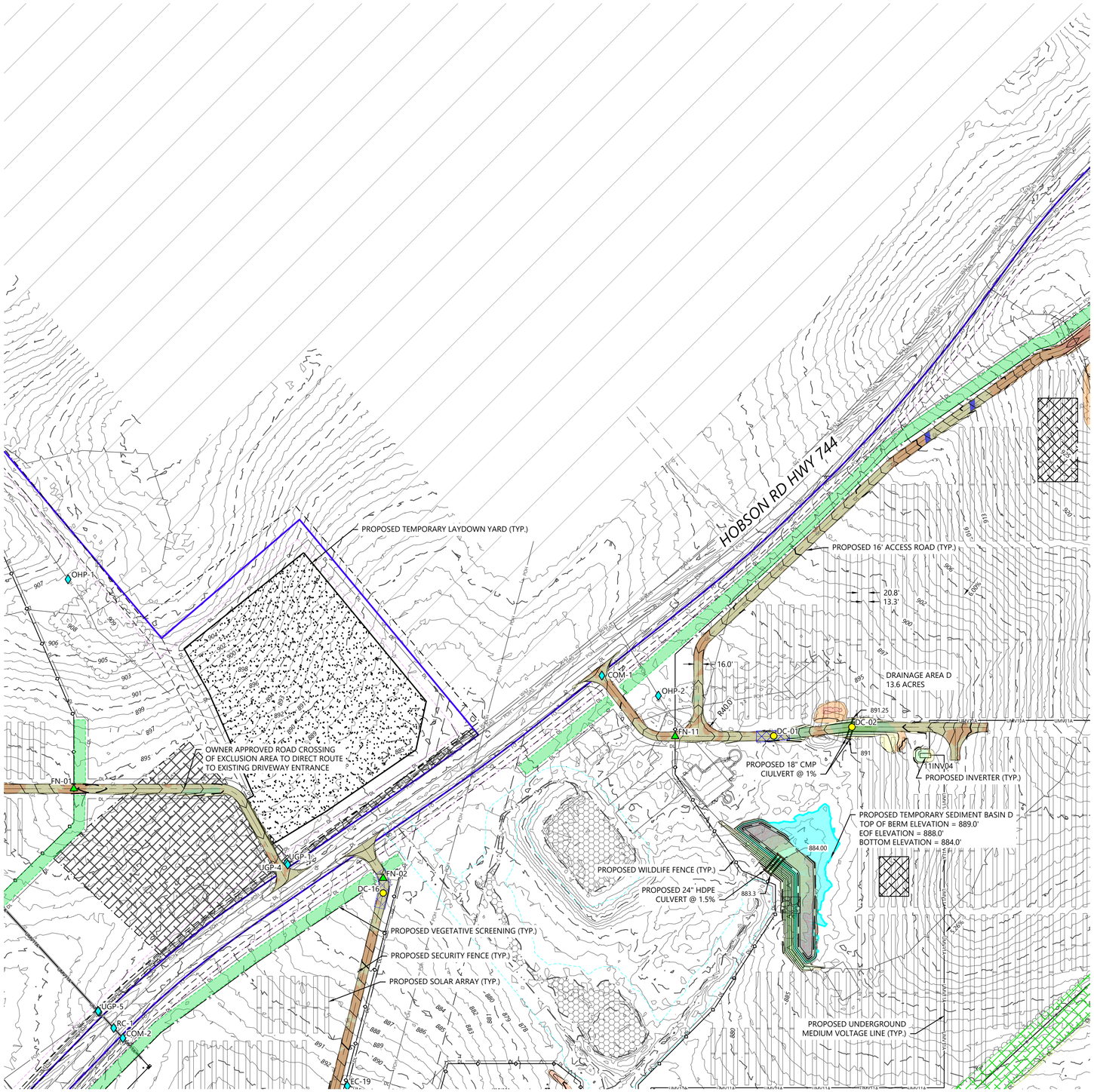
ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-132-01

REV: 0

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LEGEND:

- PROJECT BOUNDARY
- PARCEL LINES
- ADJACENT PARCEL LINES
- LEASE LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. TREELINE
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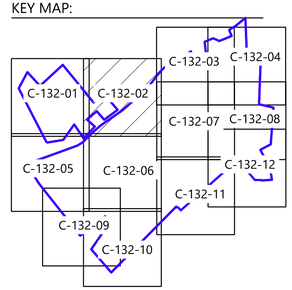
EARTHWORK ELEVATIONS

EARTHWORK	COLOR	MIN. DEPTH (FT)	MAX DEPTH (FT)
CUT		-10.00	-8.00
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		-2.00	-1.00
		-1.00	0.00
FILL		0.00	1.00
		1.00	2.00
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KEY MAP:



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REVISIONS:

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0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

0' 100' 200' 300'

Flat Run Solar, LLC

Taylor County, KY

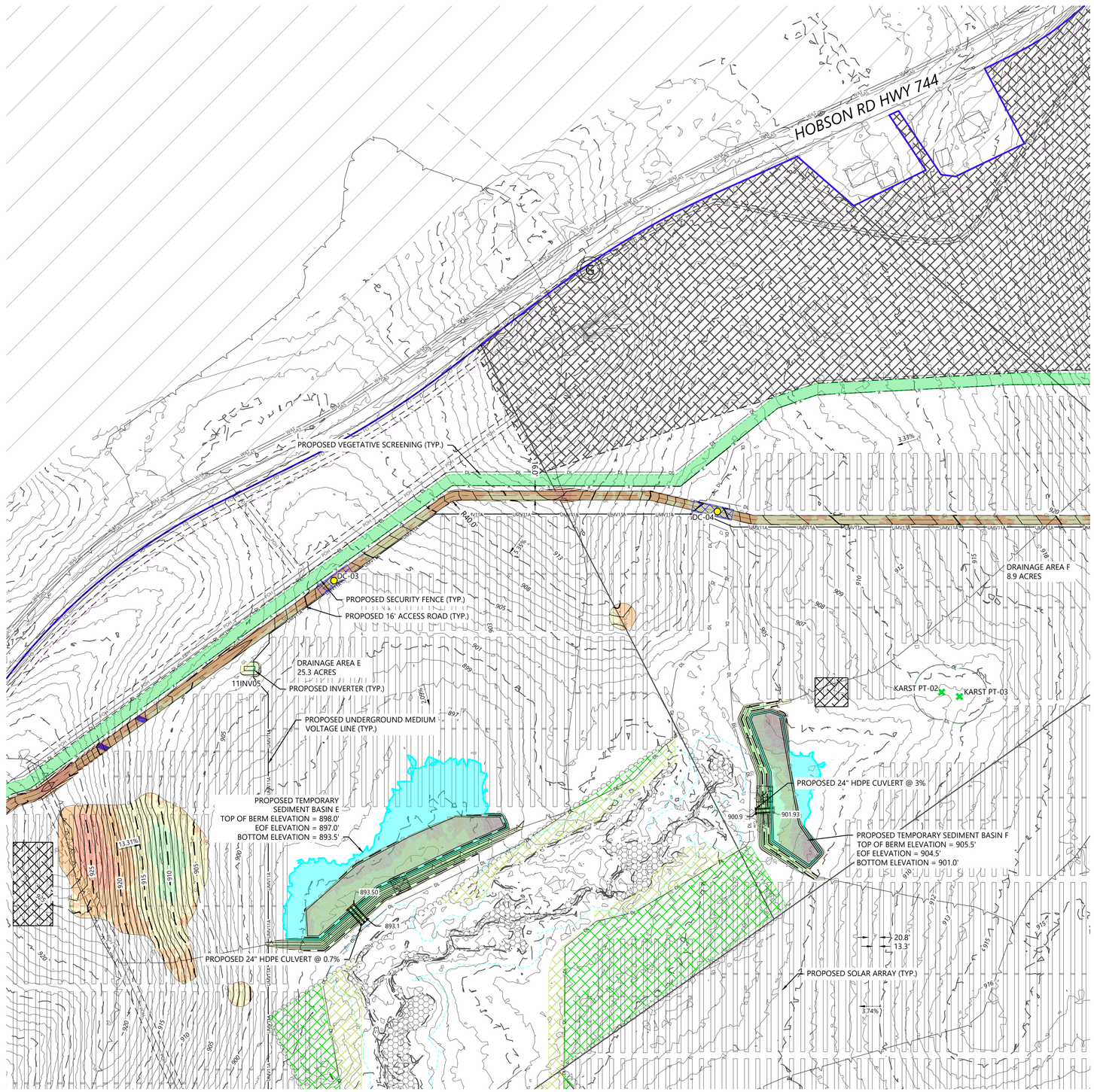
Site Grading Plan - 2

ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-132-02 REV: 0

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LEGEND:

- PROJECT BOUNDARY
- PARCEL LINES
- ADJACENT PARCEL LINES
- LEASE LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
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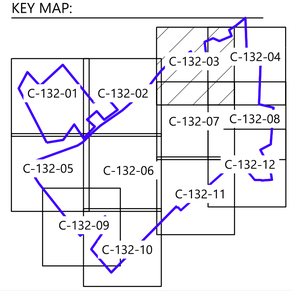
EARTHWORK ELEVATIONS

EARTHWORK	COLOR	MIN. DEPTH (FT)	MAX DEPTH (FT)
CUT		-10.00	-8.00
		-8.00	-6.00
		-6.00	-4.00
		-4.00	-2.00
		-2.00	-1.00
		-1.00	0.00
FILL		0.00	1.00
		1.00	2.00
		2.00	4.00
		4.00	6.00
		6.00	7.00
		7.00	8.50
		8.50	10.5

GRADING AND DRAINAGE NOTES:

1. ARRAY AND ELECTRICAL EQUIPMENT SHOWN ARE FOR REFERENCE ONLY. DETAILED INFORMATION CAN BE FOUND IN "FLAT RUN SOLAR IFC ELECTRICAL PLANS." SEE DETAIL SL-03 FOR TRACKER DIMENSIONS AND GRADING ASSUMPTIONS.
2. SITE PREPARATION INCLUDES CLEARING/GRUBBING, GRADING, COMPACTION, MOWING OF VEGETATION, AND RESTABILIZATION OF DISTURBED AREA.
3. MINOR SURFACE SMOOTHING MAY OCCUR IN AREAS WHERE GRADING IS NOT PROPOSED FOR SAFETY OR SOLAR ARRAY INSTALLATION.
4. MAINTAIN EXISTING DRAINAGE WHEN PLACING STOCKPILES AND WINDROWS TO AVOID FLOODING WORK AREA AND ADJACENT LAND.
5. IN THE CASE OF AN UNBALANCED SUBGRADE, THE CONTRACTOR MAY IMPORT GENERAL FILL MATERIAL OR BORROW FROM AN ADJACENT BORROW PIT IF SHORT ON MATERIAL. IN THE CASE OF EXCESS SUBGRADE MATERIAL, THE CONTRACTOR MAY CHOOSE TO STOCKPILE THE SUBGRADE MATERIAL OR EXPORT THE GENERAL FILL MATERIAL. THE CONTRACTOR WILL NEED TO COORDINATE WITH THE LANDOWNER(S) IF APPROPRIATE.
6. PROPOSED SEEDING SHOWN FOR MASS GRADING AND CONSTRUCTION PHASE DISTURBANCE. SEEDING FOR TREE CLEARING AND GRUBBING NOT SHOWN, BUT NEEDED UPON COMPLETION OF TREE CLEARING PHASE.
7. REFERENCE "2026-07-15 FLAT RUN SWMR" FOR BASIN AND CROSSING CALCULATION AND SIZING DETAILS.

KEY MAP:



Westwood

Phone (952) 937-5150
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka MN, 55343
westwoodps.com

Westwood Professional Services, Inc.



PREPARED FOR:

Discovery A GTS COMPANY

3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK



Flat Run Solar, LLC

Taylor County, KY

Site Grading Plan - 3

ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-132-03

REV: 0

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LEGEND:

- PROJECT BOUNDARY
- PARCEL LINES
- ADJACENT PARCEL LINES
- LEASE LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. TREELINE
- EX. PAVED ROAD
- EX. FENCE
- EX. STRUCTURE
- EX. KARST AREA
- EX. OVERHEAD POWER
- EX. FIBER OPTIC LINE
- EX. GAS PIPELINE
- EX. WATER LINE
- EX. DELINEATED STREAM CHANNEL
- EX. DELINEATED WETLAND
- EX. FEMA FLOOD ZONE A
- EXCLUSION AREA
- TREE CLEARING AND GRUBBING
- TREE FELLING
- PROPOSED SOLAR ARRAY
- PROPOSED ELECTRICAL EQUIPMENT
- PROPOSED 25' DELINEATED WATER BODY SETBACK
- PROPOSED 50' KARST AREA SETBACK
- PROPOSED 25' NONPARTICIPATING PARCEL SETBACK
- PROPOSED UNDERGROUND COLLECTION
- PROPOSED UNDERGROUND COLLECTION BORING
- PROPOSED 16' SOLAR ARRAY ACCESS ROAD
- PROPOSED 20' SUBSTATION ACCESS ROAD
- PROPOSED SECURITY FENCE
- PROPOSED WILDLIFE FENCE
- DRAINAGE AREA
- PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- PROPOSED GRADING LIMITS
- PROPOSED DISTURBANCE LIMITS
- PROPOSED TEMPORARY SEDIMENT BASIN (SEE BASIN TABLE ON SHEET C-180-08)
- PROPOSED TEMPORARY SEDIMENT TRAP (SEE TRAP TABLE ON SHEET C-180-09)
- PROPOSED PERMANENT DETENTION BASIN (SEE BASIN TABLE ON SHEET C-180-08)
- PROPOSED VEGETATIVE BUFFER
- PROPOSED TEMPORARY SOIL STOCKPILE
- PROPOSED LOW WATER CROSSING (SEE CROSSING TABLE ON SHEET C-180-05)
- PROPOSED CULVERT (SEE CROSSING TABLE ON SHEET C-180-05)
- PROPOSED TEMPORARY LAYDOWN YARD
- PROPOSED SUBSTATION
- PROPOSED POLLINATOR AREA
- PROPOSED SWITCHYARD (*DESIGNED BY OTHERS*)
- PROPOSED RIP RAP
- PROPOSED WATER BAR
- PROPOSED ENTRANCE
- DC-XX / EC-XX PROPOSED DRAINAGE CROSSING
- PROPOSED ENTRANCE CROSSING
- FN-XX PROPOSED 20' ACCESS GATE
- FN-XX PROPOSED 24' ACCESS GATE
- XX-XX PERMITTED UTILITY CROSSING (BY OTHERS)
- XX-XX PERMITTED WATERBODY CROSSING (BY OTHERS)

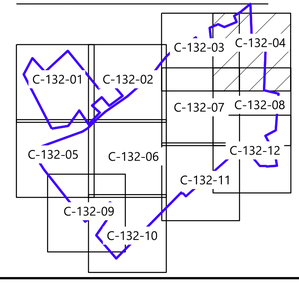
EARTHWORK ELEVATIONS

EARTHWORK	COLOR	MIN. DEPTH (FT)	MAX DEPTH (FT)
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STATE OF KENTUCKY
DAVID KELLEHER
35445
07/15/26
LICENSED PROFESSIONAL ENGINEER

PREPARED FOR:

Discovery A GTS COMPANY
3401 Ridgewood Dr.
Edmond, OK 73013

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	07/15/2026	IFC Civil Design Plans	MPH	ELS	DFK

0' 100' 200' 300'

Flat Run Solar, LLC

Taylor County, KY

Site Grading Plan - 4

ISSUED FOR CONSTRUCTION

DATE: 07/15/2026

SHEET: C-132-04

REV: 0

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