

## Module 6: Environmental Resources Maps

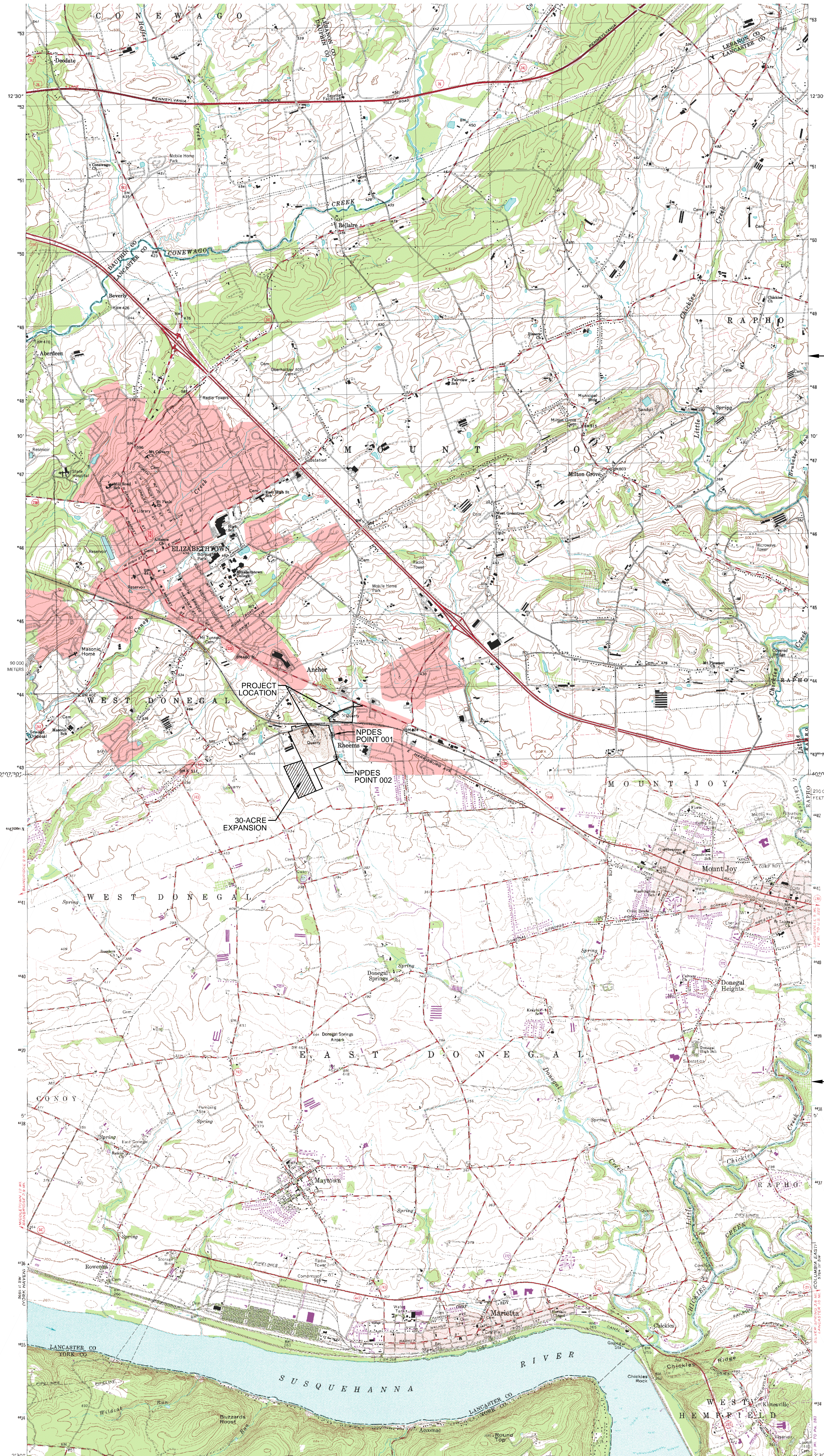
### 6.1 U.S.G.S. Map. [§77.104]

Provide a 7 1/2 minute U.S.G.S. topographic map (latest edition) delineating the proposed surface mine permit area and NPDES discharge points. Identify the map as Exhibit 6.1. (Note: Reproductions or maps obscured by identification keys will not be accepted.) See attached 6.1 Map

### 6.2 Environmental Resource Map. [§77.410]

Provide a map or plan that includes the permit area and the area within 1000 feet of the permit area. The map or plan shall be clear, accurate, easily read and on a scale of no smaller than 1 inch = 400 feet. Maps on the scale of 1 inch = 200 feet for permit areas of 100 acres or less and 1 inch = 400 feet for permit areas larger than 100 acres are preferred. Use the same scale as used for Modules 9 and 18. Identify the map plan as Exhibit 6.2 Environmental Resources Map. Each map or plan must bear the seal or facsimile imprint of a registered professional engineer; or the seal or facsimile imprint of a registered professional land surveyor. A registered professional geologist must certify the geology-related information of items m), n), o), and p). Show all the following information within the permit area and for a distance of 1000 feet from the permit area, unless specified otherwise. Include an appropriate legend on the map. Indicate which items are present by placing a check mark in the box before this item. Please provide the permit number (if it has been assigned) or a space for it in the title block.

- a) topographic contours (contour intervals of 20 feet or less)
- b) proposed permit area
- c) surface water bodies such as streams, lakes, ponds, springs, wetlands, mine discharges and constructed or natural drains (include restricted and variance areas, and names of streams and lakes/use a unique label for each unnamed tributary)
- d) property lines (key ownership to Module 5)
- e) buildings (include names of the owners and present occupants, and the current use. Show restricted or variance areas)
- f) man-made features such as public highways, railroads, utility lines including right-of-ways or easements and other surface and subsurface manmade features (include the name of the highway, railroad and utility and the restricted or variance areas)
- g) oil and gas wells in and within 125 feet of the proposed permit area (include the name of the well owner/operator and well permit number. Show restricted or variance areas.)
- h) public or private cemeteries or Indian burial grounds (include restricted areas)
- i) existing or previously surface-mined areas, and existing areas of spoil, waste, and processing waste disposal (key to Module 7.4 and show permit name on map)
- j) areal extent of active and abandoned underground mines and entries (Key to Module 7.4)
- k) solid waste disposal areas
- l) test hole locations (key to 7.1 b data)
- m) strata strike and dip or structure contours
- n) geologic faults
- o) formation contacts and coal croplines (when applicable)
- p) direction(s) of groundwater flow (local and regional)
- q) public and private water supplies (include type, elevation of all springs, and key to Module 8.2(a)(8))
- r) public water supplies within ½ mile of the permit area and those with Wellhead Protection Zone extending to the permit area. Show on Exhibit 6.1 if outside limits of Exhibit 6.2.
- s) background and proposed monitoring points (key to Module 8. 1A)
- t) NPDES discharge points
- u) landslide prone areas
- v) sinkhole development and known cave systems



**ELIZABETHTOWN  
USGS TOPO MAP**  
ELIZABETHTOWN QUADRANGLE  
PENNSYLVANIA  
7.5-MINUTE SERIES (TOPOGRAPHIC)  
ELIZABETHTOWN, PA  
1999  
NIMA 5664 II NE-SERIES V81

**COLUMBIA WEST  
USGS TOPO MAP**  
COLUMBIA WEST QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
1814 MODIFICATION BY 2018/04/02  
COLUMBIA WEST, PA.  
8164 MODIFICATION BY QUADRANGLE  
40076-45-11-024  
1964  
PHOTOREVISED 1990  
DMA 5664 II SE-SERIES V81

**Akens Engineering Associates, Inc.**  
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"Providing Quality Engineering & Surveying Services since 1983."

**LOCATION MAP**

SCALE: 1" = 2000'

I hereby certify that this plan is correct and accurate to the best of my knowledge.

*Scott W. Akens*  
**SCOTT W. AKENS**  
Professional Engineer, PE073141  
Submitted on this 25th day of April, 2023.

REVISIONS:

**EXHIBIT 6.1  
TOPO MAP**

SURFACE MINE PERMIT NO. 36080301  
NPDES PERMIT NO. PA 0224651  
AUTHORIZATION TO MINE  
PERMIT NO. 6980-36080301-01

**PIERSON RHEEMS LLC  
QUARRY OPERATION**

WEST DONEGAL & MT JOY TOWNSHIPS  
LANCASTER COUNTY, PA

SCALE: 1" = 2000'	SHEET NUMBER: 1 of 6
PLAN DATE: APRIL 25, 2023	
FILE NAME: X:\240-1-51 Expansion\Drawing\240-1-51 Base.dwg	

**SOILS**  
 BvC - Bucks silt loam, 8 to 15 percent slopes  
 DbA - Duffield silt loam, 0 to 3 percent slopes  
 DbB - Duffield silt loam, 3 to 8 percent slopes  
 HaA - Hagerstown silt loam, 0 to 3 percent slopes  
 HaB - Hagerstown silt loam, 3 to 8 percent slopes  
 HbC - Hagerstown silty clay loam, 8 to 15 percent slopes  
 LaB - Lansdale loam, 3 to 8 percent slopes  
 LaC - Lansdale loam, 8 to 15 percent slopes  
 Ln - Lindsie silt loam  
 Pa - Penlaw silt loam  
 Qu - Pits quarry  
 RaB - Readington silt loam, 3 to 8 percent slopes  
 UaC - Ungers loam, 8 to 15 percent slopes  
 W - Water

**GEOLOGY (GIS INFO PROVIDED BY SRBC)**  
 Oa - Annville Formation  
 OcO - Cocalico Formation  
 Oe - Epler Formation  
 Os - Stonehenge Formation  
 TRn - New Oxford Formation  
 TRnc - New Oxford Formation

**NOTES:**

1. THE DRAINAGE STRUCTURE UNDER W. HARRISBURG AVE. AT ENTRY TO THE QUARRY IS A CONCRETE BOX 8' WIDE x 4'-6" HIGH (WATERWAY OPENING). THE DRAINAGE STRUCTURE UNDER THE DRIVEWAY CONNECTING THE QUARRY & THE PENNSYLVANIA GROWERS PROPERTY IS A 72" x 44" C.M.P ARCH.
2. THE PERMITTEE IS HEREBY GRANTED A WAIVER, PER TITLE 25 SECTION 77.504(d)(2), TO CONDUCT SUPPORT ACTIVITIES ONLY WITHIN 300 FEET OF COMMERCIAL BUILDINGS OWNED BY PENNSYLVANIA GROWERS, LLC, AS EXISTED UNDER PREVIOUS MDP NO. 6276SM6.
3. THE AERIAL PHOTOGRAPHY AND CONTOURS ARE ACQUIRED FROM A DRONE FLIGHT TAKEN ON AUGUST 13, 2020 CONTROLLED BY RTK GPS NAVD 88 (2011) ON THE NAD83 PENNSYLVANIA STATE PLANES SOUTH ZONE COORDINATE SYSTEM.
4. OUTSIDE THE FLIGHT, THE IMAGE IS ACQUIRED FROM A 2018 PEMA ORTHOMAGERY FILE, AND THE CONTOURS ARE ACQUIRED FROM 2006 PAMAP PROGRAM 3.2 FT DIGITAL ELEVATION MODEL OF PENNSYLVANIA.

**ALL BENCHMARKS TOP OF REBAR**

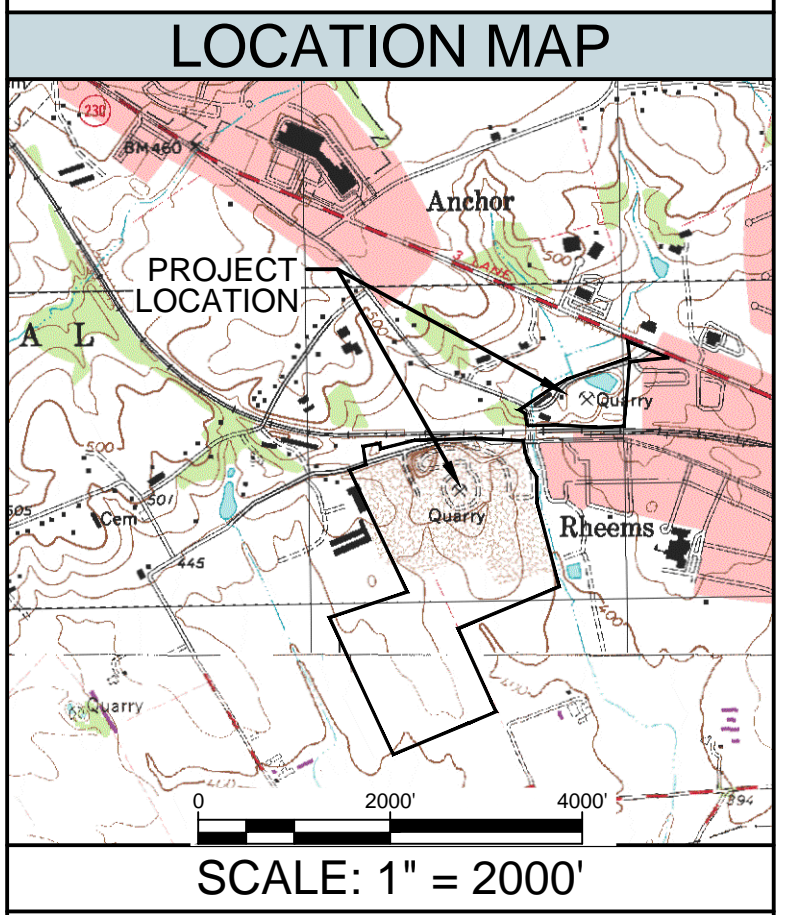
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**LEGEND**

- 395 --- EXISTING 5' CONTOUR
- 400 --- EXISTING 25' CONTOUR
- PIERSON-RHEEMS LLC PROPERTY LINE
- ADJOINER PROPERTY LINE
- SETBACK
- TOWNSHIP LINE
- ZONING LINE
- RAILWAY
- FENCELINE
- UTILITY POLE
- LIGHT POLE
- EXISTING MONITORING WELL LOCATION
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- BORE HOLES
- BENCHMARKS
- BACKGROUND & PROPOSED MONITORING POINTS
- 1,000 FOOT PERIMETER
- LIMIT OF MINING AS OF 01/01/72
- PROPOSED LIMIT OF MINING AND BONDING
- PROPOSED SURFACE MINE PERMIT
- EXISTING SURFACE MINE PERMIT
- EXISTING TREE LINE
- EXISTING EDGE OF WATER
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- MAPPED BEDROCK GEOLOGY
- MAPPED FAULT
- MAPPED FOLD
- MAPPED KARST FEATURE
- 300' RADIUS TO OCCUPIED STRUCTURE
- EXISTING QUARRY ZONE
- OF INFLUENCE CONTOURS



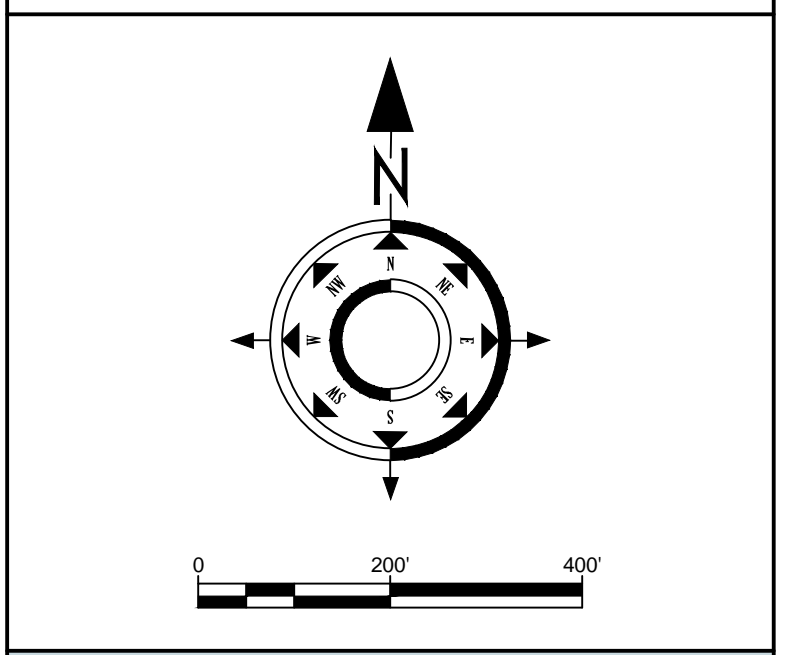
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**SCOTT WILLIAM AKENS**  
 REGISTERED PROFESSIONAL ENGINEER  
 ENGINEER NO. 1744

I hereby certify that this plan is correct and accurate to the best of my knowledge.

*Scott W. Akens*  
 SCOTT W. AKENS  
 Professional Engineer, PE0793141  
 Submitted on this 25th day of April, 2023.



**REVISIONS:**


**EXHIBIT 6.2 ENVIRONMENTAL RESOURCES MAP**

SURFACE MINE PERMIT NO. 36080301  
 NPDES PERMIT NO. PA 0224651  
 AUTHORIZATION TO MINE PERMIT NO. 6980-36080301-01

**PIERSON RHEEMS LLC QUARRY OPERATION**

WEST DONEGAL & MT JOY TOWNSHIPS  
 LANCASTER COUNTY, PA

SCALE:	SHEET NUMBER:
1" = 200'	2 of 6
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**MARK GIRARD FOERSTER**  
 REGISTERED PROFESSIONAL GEOLOGIST  
 GEOLOGIST NO. PG003946

I hereby certify that this plan is correct and accurate to the best of my knowledge.

*Mark Girard Foerster*  
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 Registered Professional Geologist, PG003946  
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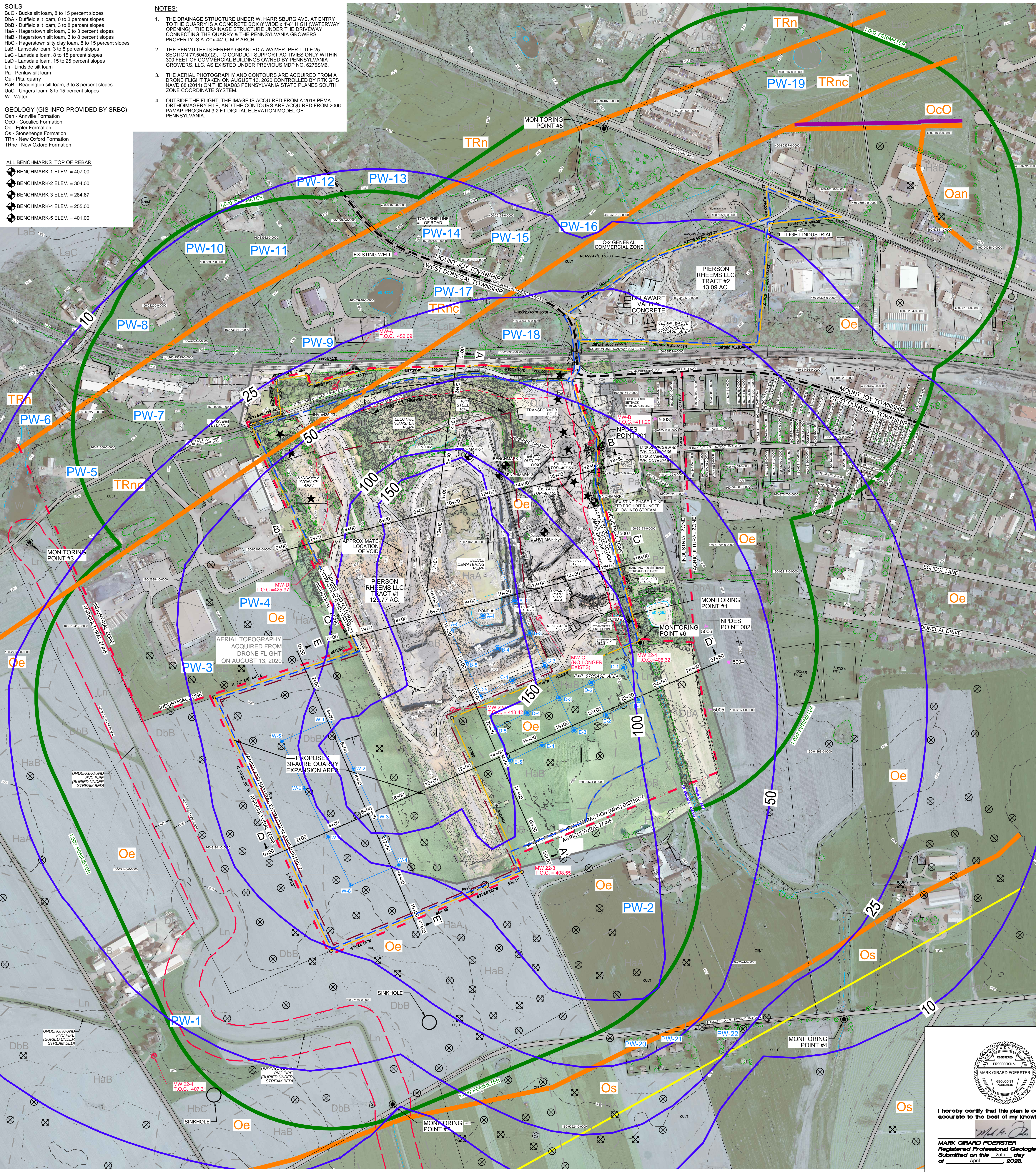
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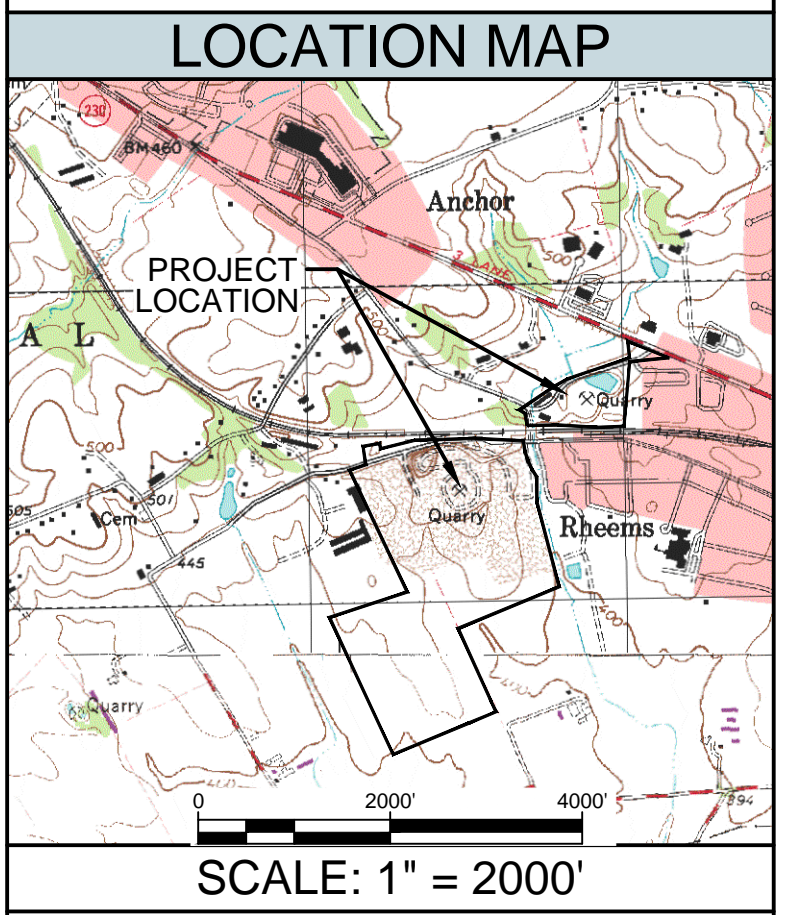
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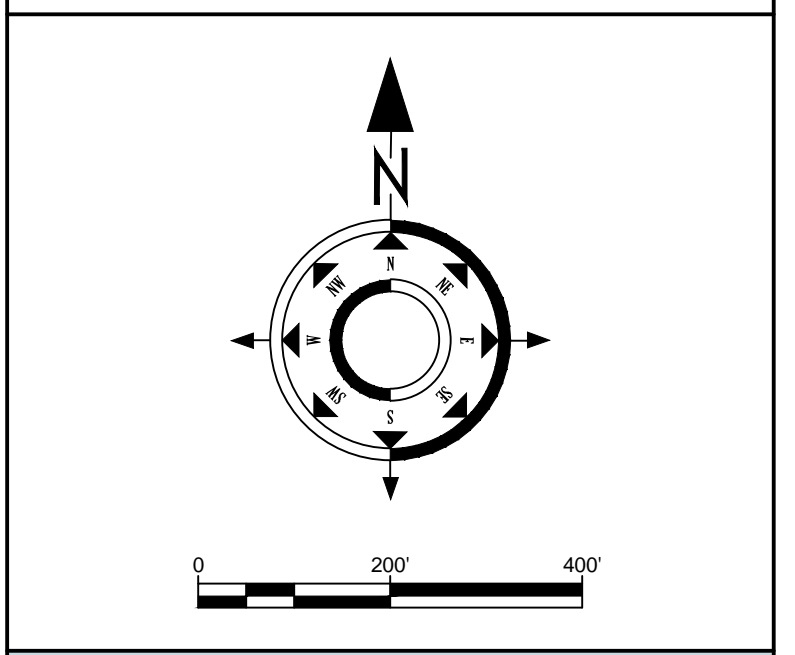
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**SCOTT WILLIAM AKENS**  
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 ENGINEER NO. 134

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*Scott W. Akens*  
 SCOTT W. AKENS  
 Professional Engineer, PE073141  
 Submitted on this 25th day of April, 2023.



**REVISIONS:**


**EXHIBIT 6.2A**  
**ZONE OF INFLUENCE TO 126 MEAN SEA LEVEL**

SURFACE MINE PERMIT NO. 36080301  
 NPDES PERMIT NO. PA 0224651  
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**MARK GIRARD FOERSTER**  
 REGISTERED PROFESSIONAL GEOLOGIST  
 GEOLOGIST NO. 000946

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*Mark Girard Foerster*  
 MARK GIRARD FOERSTER  
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