

**SURVEY SOURCE INFORMATION:**  
 As a part of the field data acquisition activities, two separate surveys were conducted within the project study area. Southern Resource Mapping, located in Tuscaloosa Alabama, was subcontracted by Twin Pines Minerals to perform an aerial topographic survey using a Riegl LIDAR 780i (digital ortho) sensor. The LIDAR configuration included an Applanix AP60 IMU coupled with an AirBourne GPS and was affixed to a Cessna 206 fixed-wing aircraft. A flight plan was generated that produced 18 points-per-square meter(s), and was flown at an elevation of 1,700 feet above ground surface (ags). This resulted in a total of 17 flight lines which included one cross line. From the data collected by Southern Resource Mapping, a topographic map layer containing one-foot contour intervals was generated and used as a workable base map for the majority of the project study area (shown at five-foot interval).

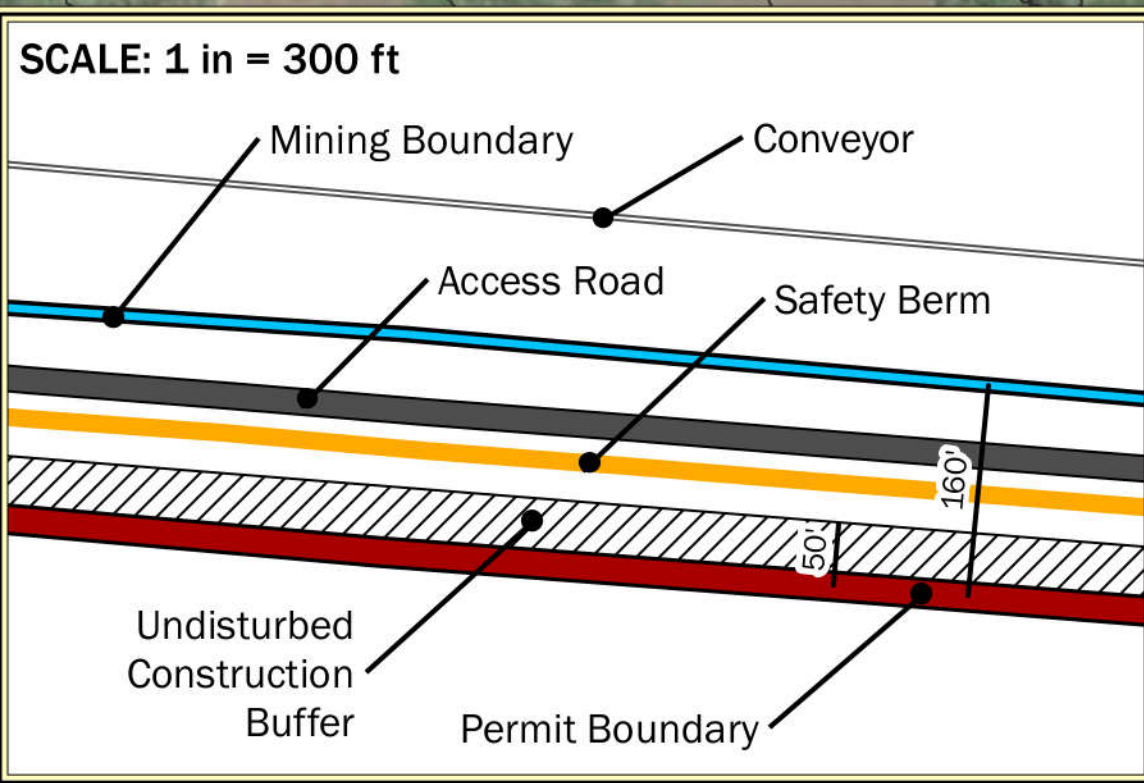
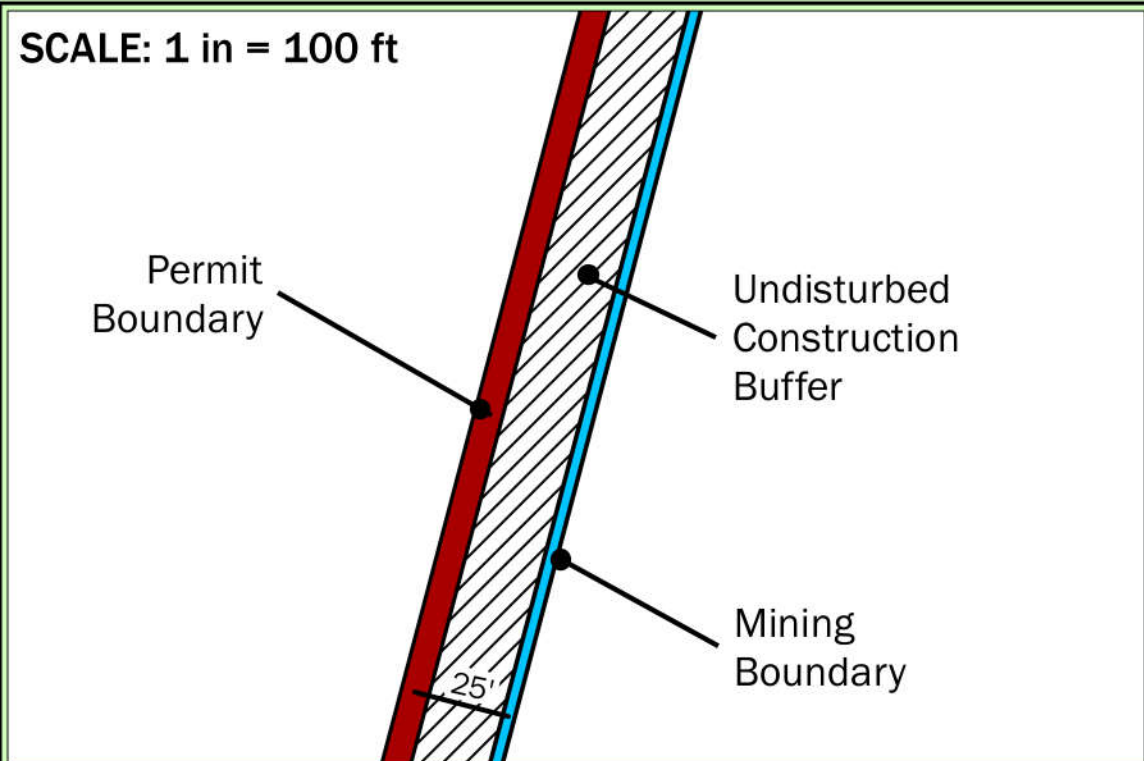
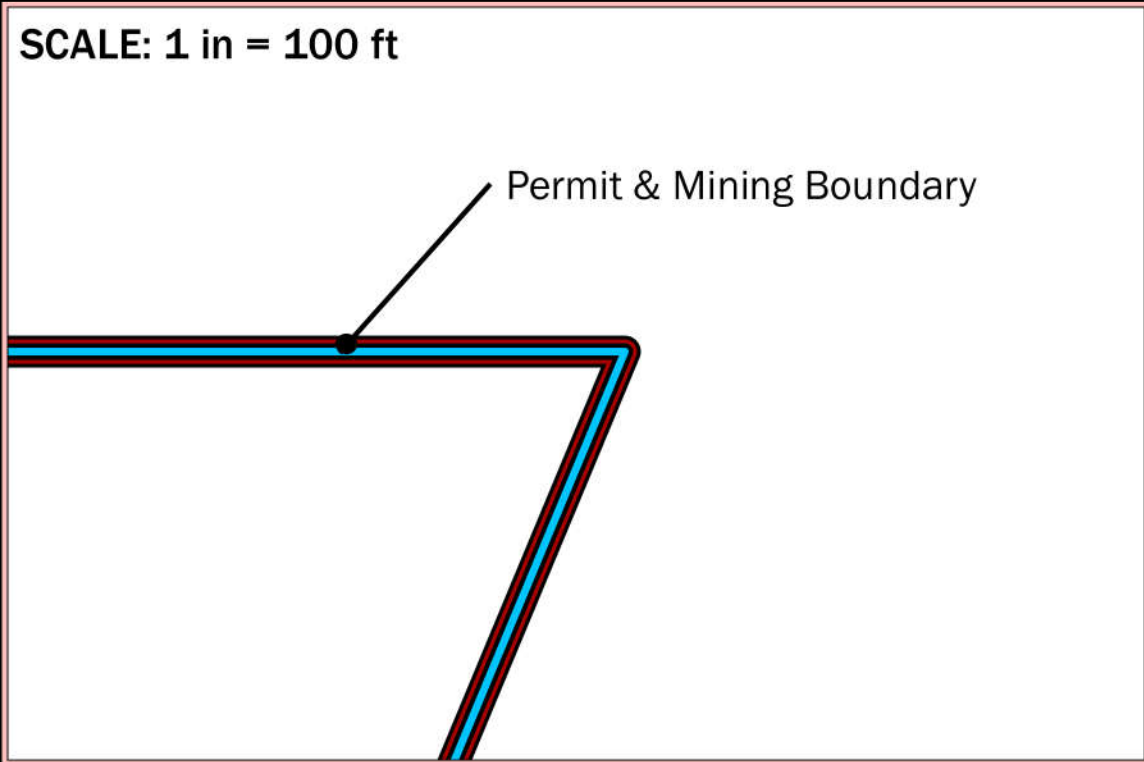
Site Survey Control		
Type	Identifier	Location
Property Boundary	Fence Post/Stake - Red	Property Corners
Mining Permit Boundary	Fence Post/Stake - Green	Approx. 200-foot intervals*
Buffer Boundary	Fence Post/Stake - Blue	Approx. 200-foot intervals*
Mining Pit Boundary	Fence Post/Stake - Orange	Approx. 200-foot intervals*
Permanent Survey Control Markers	Fence Post/Stake - Yellow	To be determined

\*Intervals may be adjusted based on site conditions.

**LEGEND**

- Permit Boundary (703± AC)
- Mine Footprint (582± AC)
- USACE Verified Non-Jurisdictional Wetland
- 20' Wide Access Road
- Safety Berm
- Undisturbed Construction Buffer
- Stormwater Pond
- Wastewater Treatment Pond
- Wastewater Discharge Flow Path
- PCP/WCP Pre-Concentration Plant/Wet Concentration Plant
- 5 ft Elevation Contour (See Survey Source Information)
- Permit Boundary Corner Coordinates

0 600 1,200 2,400 Feet



[OPERATOR'S NAME]  
 [MINE NAME]  
 [PERMIT NUMBER]  
 [CONTACT INFORMATION]

IDENTIFICATION SIGN (Typical)



**NOTES:**

- Access road will be installed between the safety berm and the mining area.
- Undisturbed construction buffer will be located between the safety berm and Highway 94.
- See Sheet 5 for plan view, cross-sections and details of the typical dragline mining operation.
- Tails stockpile and conveyors will move in accordance with the moving mine pit and are not permanent features; runoff will be controlled by berms, silt fence, hay bales or any combination thereof (see Sheet 6 for erosion & sediment control plan).
- Process water will be piped to the Mineral Separation Plant from the southernmost well (FPW-01). Any wastewater from the Mineral Separation Plant will be hauled, by tanked trucks, to the Wet Concentration Plant for re-use or final discharge.



**SHEET 3: MINING PLAN SHEET - SITE LAYOUT**  
 TWIN PINES MINERALS, LLC SAUNDERS DEMONSTRATION MINE (ID NO. 2073)  
 ST. GEORGE, CHARLTON COUNTY, GEORGIA

BASEMAP: Maxar, Vivid Imagery, 11/20/2019 (West, 0.5 m Resolution) & 3/24/2018 (East, 0.46 m Resolution).

DRAWN BY: DEK
CHECKED BY: SGR
DRAWING DATE: 11/13/2020
REVISION DATE: 6/25/2021
TTL JOB NO.: 000180200804.00
APPROX. SCALE: 1 in = 600 ft

	Area (AC)
Permit Boundary	703±
Mining Footprint	582±
Undisturbed Buffer	12±
Haul Road	4±