RESOLUTION COPPER

General Plan of Operations

Road Use Plan

Revised August 2020

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1. INTRODUCTION

Resolution Copper Mining, LLC (Resolution or Applicant) submitted a General Plan of Operations (Plan or GPO), dated November 2013, to the Tonto National Forest (TNF) for authorization to construct an underground mine, ore processing operation, and associated facilities and infrastructure near Superior, Pinal County, Arizona. These components are collectively identified as the Resolution Copper Project (Resolution Project or Project). The proposed location for the Project is referred to as the General Project Area (GPA) as defined in the submitted Plan. The Road Use Plan has been updated to include roads in the vicinity of the GPA that will not be adversely impacted by the Project, as well as roads that will be used to access the U.S. Forest Service (USFS) preferred alternative identified in the Environmental Impact Statement (EIS) with the Skunk Camp Tailings Storage Facility location

The main sites and associated primary Project elements within the GPA that are located on or accessed from TNF lands include:

- East Plant Site (EPS) – Underground mine and attendant shafts and surface support facilities;
- West Plant Site (WPS) – Concentrator (ore processing facilities), and administrative facilities;
- 230 kilovolt (kV) powerline corridor and access roads (230-kV corridor);
- Tailings Storage Facility (TSF) – Skunk Camp tailings storage area and associated Tailings Pipeline and Powerline Corridor (distribution pipelines, 115-kV powerline, and access roads [Utility Corridor]); and
- The Magma Arizona Railroad Company (MARRCO) Corridor (existing rail line, existing and future pipelines).

Development of project sites and elements would require the use of, maintenance of existing U.S. Forest Service Roads (FRs) as well as construction of Proposed New Roads (PNRs) both on and off TNF lands. With the exception of the TSF and ancillary infrastructure, the Project will be conducted primarily underground and on previously disturbed areas.

Proposed access routes within and adjacent to the GPA are identified on an overview map index and associated figures (**Figures 1 through 7**). Details of the activities associated with the proposed access routes are provided in **Tables 1 through 3**.

The Road Use Plan is intended to provide general guidance for minimizing impacts to areas, resources, and people adjoining, served by, or otherwise affected by FRs and PNRs proposed for use by Resolution and its agents to access Project sites throughout the duration of the Project. This Road Use Plan, prepared in accordance with USFS regulations for travel management and motor vehicle use on National Forest System (NFS) lands (36 CFR Parts 212, 251, 261, and 295), identifies and describes the following:

1. The Applicant's proposed access within and adjacent to the GPA and anticipated use of routes;
2. The intended public use and access allowed on the existing system of open FRs in and adjacent to the GPA, and the PNRs;

3. The design, construction, and/or maintenance standards for roads under the responsibility of Resolution; and
4. The estimated disturbance area to TNF lands associated with the construction of PNRs and maintenance of existing FRs required to complete the proposed activities.

2. EXISTING U.S. FOREST SERVICE ROADS

2.1. APPLICANT USE

All the FRs proposed for use in, and in the vicinity of, the GPA are currently designated as open authorized, open unauthorized, or open authorized restricted to motorized vehicles. Existing FRs would be used for access to, from, and within the GPA. Some portions of the roads would require routine maintenance for the Project duration. Some existing FRs, as well as several unauthorized roads, not officially within the USFS road system, will require decommissioning due to their location within the disturbance area of the GPA.

2.2. PUBLIC USE

Resolution will maintain public access on NFS roads to the areas surrounding the GPA throughout all phases of the Project to the extent practicable as depicted in **Figures 1 through 7**. The plan for public access is described in the following sections which are organized by main Project site and associated primary project elements.

2.3. MARRCO CORRIDOR

There are 17 proposed access points along the MARRCO Corridor for use in the Project for both construction and operation/maintenance purposes. All 17 of these MARRCO Corridor Access points (MCAs) will be accessed from within the MARRCO Corridor. The pipeline infrastructure within the MARRCO Corridor will be buried via trench installation during construction. Several FRs intersect the MARRCO Corridor and include: Hewitt Canyon Road (FR 357), FR 1933, FR 3454A, FR 3454C, FR 252, FR 293, FR 8, FR 2397, and FR 2395 (**Figures 2, 3, and 4**). The sections of FRs that cross the pipeline will be temporarily closed in coordination with the USFS and/or other relevant land management agencies (e.g. Arizona State Land Department [ASLD]), and then reestablished to their existing maintenance level after construction in coordination with the USFS and/or ASLD. During construction, alternate access directions will be provided to recreational users to allow access and connections via other FRs. Gates will be placed on either side of the FRs with appropriate signing (per USFS guidelines and Manual on Uniform Traffic Control Devices [MUTCD]) to restrict access to the MARRCO Corridor and Resolution's MARRCO access road and associated infrastructure. Although not a FR, the Arizona Trail (AZT) currently crosses the MARRCO Corridor. During construction of that section, that portion of the AZT will be temporarily closed to public access and a temporary crossing within the corridor in another location will be established to allow continued passage for recreational users. Additionally, to the extent practicable, the construction of that section will occur during low recreational use (summer months).

2.3.1. Tailings Storage Facility and Utility Corridor

The construction of the TSF will not impact any TNF roads but will restrict public access to unimproved existing county roads that traverse the proposed TSF area with the installation of a gate (**Figure 7**). PNR-10 will be constructed within the TSF footprint and is described in **Section 3**. Dripping Spring Road, a county road, will be used to access PNR-10, and a gate will be installed at the TSF fence line, restricting public access to the TSF. Dripping Spring Road within the footprint of the TSF will be decommissioned. Alternate access to Dripping Spring Road and areas north of the TSF will be via FR 899 to an unnamed county road that connects to Dripping Spring Road (**Figure 6**).

The TSF requires Tailings Pipelines and a 115-kV Powerline, which share the same corridor from the TSF to the 230-kV Corridor. At the intersection of the 230-kV Corridor, the Tailings Pipeline corridor travels west towards the WPS; while the 115-kV Powerline corridor travels northeast, along the 230-kV Corridor, towards the Silver King Substation. Both the Utility Corridor and 230-kV Corridor will cross TNF roads. The pipeline infrastructure within the Utility Corridor will be buried via trench installation during construction (except for tunnel and bridge span sections). The sections of FRs that cross the pipeline will be temporarily closed in coordination with USFS and ASLD as needed, and then reestablished to their existing maintenance level after construction in coordination with USFS, ASLD, and the county as needed. Road maintenance obligations will not change. The Utility Corridor will cross four existing FRs between the TSF and WPS (**Figures 4 through 7**). The Utility Corridor begins at the TSF and will travel north along the existing Dripping Spring Road crossing an SLR that connects to FR 248, east of the Utility Corridor. Public access between Dripping Spring Road and FR 248 will remain publicly accessible. After diverging from Dripping Spring Road, the pipeline is installed via a trenchless crossing near Mill Creek. No access roads are needed at this trenchless crossing. For the 115-kV Powerline, PNR-3 through PNR-9 will be constructed along Dripping Spring Road for access to the power structures (**Figure 6**). Each access road will have a gate located at Dripping Spring Road, prohibiting access to the public. FR 899 will still be publicly accessible from Dripping Spring Road through a connecting County road. PNR-3 will provide access to the 115-kV Powerline and connect to PNR-2, the Utility Corridor access road. From this point, PNR-2 travels north until it once again intersects with Dripping Springs Road. At this intersection, two gates will be installed at both sides of Dripping Springs Road restricting public access to PNR-2 (**Figure 5**). PNR-2 continues to travel northwest until it intersects with SLR-3. At this point, a gate will be installed restricting public access to southbound PNR-2. Resolution will use portions of SLR-1 through 3 as well as FR 2466 along the Utility Corridor. These portions will remain open to the public and maintained as-is (**Figure 5**). FR 2469 will remain accessible to the public. Where FR 2466 meets PNR-1, another gate will be installed restricting public access north within the Utility Corridor.

PNR-1 travels north, then west until it reaches Devils Canyon (**Figures 4 and 5**). At Devils Canyon, PNR-1 will span the canyon via a proposed private bridge then resume traveling north. Proposed bridge will be reviewed by USFS prior to construction. Prior to construction, a bridge inspection schedule will be determined by Resolution and USFS. At the intersection of PNR-1 and U.S. Highway 60, two gates will be installed restricting public access northbound and southbound on PNR-1. Once PNR-1 intersects the 230-kV Corridor, the 115-kV Powerline will begin to travel northeast (within the 230-kV Corridor) and utilize

the existing 115-kV access road. The 230-kV Corridor will only contain transmission towers and lines, allowing public access to FR 342 and FR 2459 to be maintained. Two gates will be installed at the intersection of these two FRs and PNR-1, restricting public access northbound and southbound on PNR-1. PNR-1 will continue to head north, following the Utility Corridor, intersecting FR 2458 which will remain publicly accessible. Just past the intersection with FR 2458 the pipeline corridor is bored under the mountains. On the west side of the mountain boring, the Utility Corridor will utilize FR 1010 for access to the WPS. FR 1010 will have a gate installed at the intersection with FR 2445, to restrict public access into the WPS. FR 2446 public access will be maintained via U.S. Highway 60 to FR 8, then to FR 3152, FR 229, and FR 2445. Design standards for PNR-1 through PNR-10 are described in **Section 3**.

Details on FRs and PNRs are presented in **Tables 1 through 3**.

2.3.2. West Plant Site

The WPS is primarily located on private lands, with only the Silver King Mine Road alternate entrance located on TNF lands (**Figure 4**). FR 229 is proposed for use as the main access for construction and operations into WPS (light and heavy-duty delivery vehicle traffic). Public access will be maintained along FR 229 but will be controlled at the security gate where the road then crosses onto private lands. The planned alternative access route to bypass the section of FR 229 on private lands will be FR 8 to FR 3152, which will then connect back to FR 229 north of WPS as shown in **Figure 4**.

2.3.3. East Plant Site

The EPS encompasses the proposed underground mine, associated shafts, and surface support facilities. The existing plant and related surface support facilities are currently located on private lands. During construction and operations of the Magma Copper Mine at EPS, between the late 1960s through 1996, the main mine access road was FR 469 which is also called the “Magma Mine Road.” For Resolution, at full build-out and production, EPS will expand only onto private land. Additional area encompassed by EPS includes the land surface above the ore body. This land surface area above the ore body is noted in **Figure 4** as the EPS Fracture Zone and correlates with the limit of the fracture zone at the end of the mine life. The following public access roads will be within the subsidence area on Resolution’s private property and will be decommissioned: FR 2432, FR 2433, FR 2434, and FR 3153. The portion of FR 315 located on Resolution’s private property and within the subsidence zone will also be decommissioned. The following roads on Resolution’s private property will remain open for access to the Oak Flat Campground and upper/middle Devils Canyon and will be renamed as private roads: FR 469, FR 2439, and FR 2438. A portion of FR 2438 will be closed due to impacts from subsidence. Gates will be installed at private lands along segments of these FRs to restrict public access (**Figure 4**). Public access to public lands in the vicinity of EPS will be maintained via SR 177 on the west side, FR 315 on the south side, and US 60 on the north via FR 469, FR 2439, and FR 2438. FR 469, FR 2439, and FR 2438 are on private lands owned by Resolution and will remain publicly accessible. Portions will be restricted in the future. **Tables 1 and 3** list all existing FRs impacted, their intended use, and access route descriptions for the Project.

2.3.4. 230-kV Corridor

The 230-kV Corridor is located on both private and TNF lands and runs from the WPS, through the EPS to the Silver King Substation (**Figure 4**). From the Silver King Substation, the 230-kV Corridor will utilize the existing 115-kV road as access. While the remainder of the 230-kV Corridor is on private lands, the corridor would intersect FR 229, near the WPS. As discussed in **Section 2.3.2.**, this portion of FR 229 will be restricted from public access.

2.4. ROUTINE MAINTENANCE TO EXISTING U.S. FOREST SERVICE ROADS

2.4.1. Maintenance Level Descriptions

As defined by the TNF (1985), USFS Road Maintenance Levels are as follows:

- Level 1 (Basic Custodial Care) – Roads are not open to traffic; they are maintained to protect the road investment and its surrounding resources. These roads may be opened for a specific activity and returned to Level 1 upon completion of the activity.
- Level 2 (High-Clearance Vehicles) – Roads are maintained open for limited passage of traffic. Roads in this maintenance level are primitive type facilities intended for high clearance vehicles. Passenger car traffic is not a consideration.
- Level 3 (Suitable for Passenger Cars) – Roads are maintained open and safe for travel by a prudent driver in a passenger car. However, user comfort and convenience are not considered a priority.
- Level 4 (Moderate Degree of User Comfort) – Roads are maintained to provide a moderate degree of user comfort and convenience at moderate travel speeds.
- Level 5 (High Degree of User Comfort) – Roads are maintained to provide a high degree of user comfort and convenience. These roads are normally two lanes with aggregate or paved surface.

2.4.2. Maintenance Activities

A description of maintenance activities required for each FR to be used during the proposed Project is provided in **Table 1**. Maintenance activity for roads requiring routine maintenance will be performed within the existing roadway width; therefore, maintenance is not considered as new disturbance. Schedule of road maintenance meetings between Resolution and USFS will be determined at time of the Road Use permit submittal. Additionally, upon submittal of the Road Use Permit, the parties responsible for road maintenance (e.g. USFS, Resolution, or approved contractor) will be determined also.

2.5. MAINTENANCE OF EXISTING U.S. FOREST SERVICE ROADS

To enable access to the GPA, certain segments of the existing FRs will require maintenance. All existing FRs being utilized for the Project will be maintained and repaired to maintenance levels as designated by the TNF. Maintained roads will adhere to the design standards described in the following subsections (Keller and Sherar 2003). Details of existing FRs are summarized in **Tables 1 and 3**.

2.5.1. Design Standards

2.5.1.1. Traveled Way

The maintained width of the traveled way of the existing FRs will be based on existing width. The majority of the existing FRs requiring maintenance will be used as temporary access to the pipeline and waterline for the MARRCO Corridor and pipeline and electrical maintenance access to the TSF from the EPS. (**Figures 1 through 7**).

All maintained roadways will be cleared of vegetative cover as needed for planned traffic. The road prism will be maintained to provide for passage of the specified maintenance level vehicles. Slides and slumps will be removed or repaired, as needed, to control resource damage. No new disturbance is anticipated for maintenance of existing FRs.

2.5.1.2. Crossing Existing Forest Service Roads

The Utility Corridor access road will intersect seven FR roads: FR 2469, FR 2466, FR 2459, FR 342, FR 2458, FR 2445, and FR 1010 (**Figures 4 and 5**). The Utility Corridor will be used for pipeline and powerline maintenance and is not intended as primary access to and from the WPS and TSF, so impacts on these road crossings will be minimal. Primary access to recreational areas north of the WPS and Utility Corridor are provided through FR 650 and FR 3152.

Hewitt Canyon Road (FR 357) serves as a temporary access route to areas west and north of the GPA (**Figures 2 through 4**). This road currently crosses the MARRCO Corridor. There is an existing 18-inch dewatering line and an existing 12-inch Arizona Water line along the MARRCO Corridor. A new 36-inch steel pipe waterline and 2- to 8-inch concentrate lines will be added to the MARRCO Corridor right-of-way and will be buried along with the existing lines at the current crossings. No other changes will occur to the current crossings. The route will be accessible to the public to provide access to public and private lands, apart from temporary closures in coordination with USFS as needed during pipeline construction.

2.5.2. Maintenance Methods

Roads being used for the Project will be maintained in coordination with USFS and ASLD as needed, using typical road construction and maintenance equipment (i.e. bulldozers, graders, excavators, water truck). Maintenance will include filling and leveling of heavily eroded areas, placement of temporary low water crossings and placement of leveling fill or aggregate surfacing in the roadway. There will be no new disturbance to NFS lands outside the existing FR footprints.

2.5.3. Environmental Protection Measures

During maintenance of existing FRs, Resolution will minimize or eliminate erosion and subsequent downstream sedimentation through the implementation of erosion control Best Management Practices (BMPs). These BMPs include the following:

- To the extent practicable, vegetation will not be removed except from those areas to be directly affected by road maintenance activities.

- To the extent practicable, removal of primary growth medium material will be scheduled for the dry months to reduce the potential for erosion and high soil losses.
- Cut and fill slopes for road maintenance will be designed to prevent soil erosion. Drainage ditches with cross drains will be maintained. Disturbed slopes will be revegetated, mulched, or otherwise stabilized to minimize erosion as soon as practicable following maintenance.
- Road embankment slopes will be graded and stabilized with vegetation or rock as practicable to prevent erosion.
- Runoff from roads will be handled through BMPs, including sediment traps, settling ponds, berms, sediment filter fabric, wattles, etc. Design of these features will be based on an analysis of local hydrologic conditions. These will be designed as recommended in the *Low-Volume Roads Engineering Best Management Practices Field Guide* (Keller and Sherar 2003).
- Off-road vehicle travel will generally be avoided near FRs during construction and operations.
- During construction and operations, diversion channels will be constructed around affected areas to minimize erosion. A number of BMPs including check dams, dispersion terraces, and filter fences also will be used during construction and operations.
- Permanent diversion channels will be designed for long-term stability.
- Reclamation and revegetation will be implemented as soon as practicable for long-term stability.

3. PROPOSED NEW ROADS ON TNF AND STATE LANDS

3.1. APPLICANT USE

Resolution will construct PNRs for the proposed TSF and Utility Corridor. These roads include the Utility Corridor access roads (PNR-1 and PNR-2), the 115-kV Powerline access roads (PNR-3 through PNR-9), and the TSF perimeter road (PNR-10). These roads will be used for mine activities only. Closure of these roads will be addressed as part of the overall Project Closure Plan.

3.2. PUBLIC USE

The current plan is that the newly constructed PNR-1 through PNR-9 will be closed to the public and primarily used for pipeline and powerline maintenance. PNR-10 will not be open for public use because it is designated as a mine road. Gates will be installed to restrict public use (see **Figures 2 through 7**).

3.3. DESIGN STANDARDS

PNRs will be designed to minimize land disturbance to the greatest extent practicable based on the descriptions that follow.

PNR-1 and PNR-2: Utility Corridor Access Roads

PNR-1 and PNR-2 will be used for access along the Utility Corridor and will provide access to pipelines and powerlines along the corridor as well as alternative access from the WPS to the TSF (**Figures 4 through 7**).

These roads will be constructed and maintained to a Level 2 maintenance to generally achieve the High-Clearance Vehicles management designation.

PNR-3 through PNR-9: 115-kV Powerline Access Roads

PNR-3 through PNR-9 will be used for access to the 115-kV Powerline structures (**Figure 6**). These roads will be constructed and maintained to a Level 2 maintenance to generally achieve the High-Clearance Vehicles management designation.

PNR-10: TSF Perimeter Road

PNR-10 is a roadway that will provide access along the entire toe of the TSF and to surrounding facilities such as the TSF diversion channels and the seepage collection dams (**Figure 7**). This road will change over time as the TSF changes. For the purpose of this report, PNR-10 is modeled at build-out of the mine. The roadway will be constructed and maintained by Resolution and is within the TSF footprint.

3.3.1. Traveled Way

PNRs have varied design widths. PNR-1 through PNR-9 are access roads into mine property or maintenance routes, and will have a traveled width of approximately 10 ft. PNR-10 will have a traveled width of approximately 50 ft. Each roadway will be cleared of vegetative cover as needed for planned traffic, and the road prism will be maintained to provide for passage. Calculated new disturbance for PNRs are provided in **Table 3**.

3.3.2. Drainage Improvements

Drainage improvements to the PNRs will generally include sloped roadways to prevent erosion and ponding in the traveled way and culverts and/or ford-style low water crossings at existing drainage crossings. All necessary culverts will be installed under the provisions of the CWA, Individual Permit, assuming potentially jurisdictional waters are encountered. More specific drainage features that will be incorporated for each PNR are as follows.

PNR-1 and PNR-2

The Utility Corridor Access Roads will be mine operations roads only. The roadway will be sloped to drain either off the road or into a drainage ditch along the road. Drainage ditch locations will be determined in the field based upon actual water flow patterns and road surface erosion characteristics. Drainage ditch locations will be determined in the field based upon actual water flow patterns and road surface erosion characteristics. Culvert take-offs will direct the flow from the ditches off the roadway where overland flow may cause erosion on the fill embankments. Other erosion and stormwater control BMPs that may be incorporated will be detailed in the Project Stormwater Pollution Prevention Plan (SWPPP).

PNR-3 through PNR-9

The road will be designed to generally allow all stormwater to run off to the road shoulder over the embankments. The road fill slopes will be designed to prevent soil erosion. Disturbed slopes will be re-vegetated, mulched, stabilized with rock, or otherwise stabilized to minimize erosion. Culverts will be

installed where the realignment crosses existing drainages. Should there be a large concentration of runoff in cut sections, drainage ditches on either side of the road will be constructed and culvert take-offs installed. These culvert take-offs will only be installed where the potential exists for erosion to fill embankments, otherwise the flow from the ditches will be allowed to run off over the embankment. Other erosion and stormwater control BMPs that may be incorporated will be detailed in the Project SWPPP.

PNR-10

The TSF Perimeter road will be located within the TSF Project area and will be constructed and maintained under the jurisdiction of MSHA. The roadway will be sloped to drain either off the road or into a drainage ditch along the road. Drainage ditch locations will be determined in the field based upon actual water flow patterns and road surface erosion characteristics. Culvert take-offs will direct the flow from the ditches off the roadway where overland flow may cause erosion on the fill embankments. Since this roadway will be used for mine operations it will require a berm. Breaks in the berm will be incorporated as necessary to prevent ponding on the roadway. Culverts or ford-style low water crossings will be constructed as needed at drainage crossings. However, any stormwater potentially impacted by the tailings must be directed to the seepage collection dams. This will prevent any impacted waters from going offsite. Other erosion and stormwater control BMPs that may be incorporated will be detailed in the Project SWPPP.

3.4. CONSTRUCTION METHODS

New PNRs will be constructed using typical road construction and maintenance equipment (i.e. bulldozers, graders, excavators, water truck). An excavator may be used to reduce the size of large boulders when necessary. Drilling or blasting may be required for PNR construction if non-rippable material is encountered. Drilling or blasting will be coordinated with USFS and ASLD as needed, prior to beginning. Prior to construction, surveys will be conducted for exact placement of PNRs and related infrastructure.

3.5. ENVIRONMENTAL PROTECTION MEASURES

The erosion control BMPs to be implemented in the construction of the PNRs are the same as described in **Section 2.4.3** for the existing FR maintenance.

4. REFERENCES

Keller, Gordon, and James Sherar. 2003. Low-Volume Roads Engineering Best Management Practices Field Guide. *Prepared for U.S. Agency for International Development (USAID) in Cooperation with USDA Forest Service, International Programs and Conservation Management Institute Virginia Polytechnic Institute and State University*: U.S. Department of Agriculture. July 2003.

U.S. Forest Service. 1985. Tonto National Forest Plan. *edited by Southwest Region*: U.S. Department of Agriculture. October 1985. 329 p.

TABLES

Table 1. Proposed Forest Service Road Condition during Plan of Operations

Roadway ID	Existing Forest Service Road Maintenance Level	Planned Road Condition During Plan of Operations
FR 8	Level 2 - High Clearance Vehicles	Segment from FR 229 to FR 3152 will remain publicly accessible as Level 2.
FR 229	Level 3 - Suitable for Passenger Cars	Segment from FR 2445 to FR 8 is on private property and will be restricted from public access within the boundaries of the WPS. Segments north and south of WPS will remain publicly accessible as Level 3.
FR 252	Level 2 - High Clearance Vehicles	Segment from FR 2383 to MCA 8 will remain publicly accessible as Level 2.
FR 293	Level 2 - High Clearance Vehicles	Segment from FR 8 to MCA-7 will remain publicly accessible as Level 2. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.
FR 315 at EPS	Level 4 - Moderate Degree of User Comfort	Segment within the subsidence zone is on private property and will be decommissioned and restricted from public access.
FR 342	Level 3 - Suitable for Passenger Cars	Segment will remain publicly accessible as Level 3. Segment that overlaps PNR-1 to be decommissioned. Access to TNF via FR 2459 and FR 2458.
FR 357	Level 4 - Moderate Degree of User Comfort	Segment to remain publicly accessible as Level 4. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.
FR 469	Level 4 - Moderate Degree of User Comfort	Segment west of the campground will become private road (post-land exchange), however, a portion will remain open for public access to the Oak Flat campground and Devils Canyon connecting to FR2438 and FR2439.
FR 1010	Administration Access Only	Segment to be restricted from public access.
FR 1933	Level 2 - High Clearance Vehicles	Segment between MCA-15 through MCA-17 will remain publicly accessible as Level 2. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.
FR 2395	Level 2 - High Clearance Vehicles	Segment between MCA-2 and 4 will remain publicly accessible as Level 2. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.
FR 2397	Level 2 - High Clearance Vehicles	Segment between FR 8 and FR 2395 will remain publicly accessible as Level 2.
FR 2432	Level 3 - Suitable for Passenger Cars	On private property, will be decommissioned and restricted from public access.
FR 2433	Level 1 - Basic Custodial Care	On private property, will be restricted from public access.
FR 2434	Level 1 - Basic Custodial Care	On private property, will be restricted from public access.
FR 2435	Level 1 - Basic Custodial Care	On private property, will be decommissioned and restricted from public access.

Table 1. Proposed Forest Service Road Condition during Plan of Operations

Roadway ID	Existing Forest Service Road Maintenance Level	Planned Road Condition During Plan of Operations
FR 2438	Level 2 - High Clearance Vehicles	Road to remain publicly accessible as Level 2 for access to the Oak Flat campground. Minor sections to be decommissioned and restricted from public access at a future date within the subsidence area.
FR 2439	Level 2 - High Clearance Vehicles	Road to remain publicly accessible as Level 2 for access to the Oak Flat campground.
FR 2445	Level 2 - High Clearance Vehicles	Segment between FR 229 and FR 1010 will remain publicly accessible as Level 2.
FR 2458	Administration Access Only	Segment between PNR-1 and FR 2459 will remain as-is.
FR 2459	Level 2 - High Clearance Vehicles	Segment between FR 469 and PNR-1 will remain publicly accessible as Level 2.
FR 2466	Level 2 - High Clearance Vehicles	Segment between SLR-1 and PNR-1 to be maintained as Level 2.
FR 3152	Administration Access Only	Segment between FR 8 and FR 229 to remain as-is.
FR 3153	Level 1 - Basic Custodial Care	On private property, will be decommissioned and restricted from public access.
FR 3454A	Administration Access Only	Segment between FR 357 and MCA-14 will remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.
FR 3454C	Level 1 - Basic Custodial Care	Segment between FR 357 and MCA-11 will remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.

Notes:

- All FRs proposed for use in this Road Use Plan can be seen in detail in **Figures 1 through 7**.
- Detailed descriptions of purpose of, use of, improvements, and new disturbance area to FRs can be found in **Table 3**.

Table 2. Proposed New Road Condition during Plan of Operations

Roadway ID	Planned Maintenance Level	Planned Road Condition During Plan of Operations
PNR-1	Level 2	New access road along Utility Corridor to provide access from EPS to the TSF and to maintain facilities along the Utility Corridor. Will be maintained to generally achieve the High-Clearance Vehicles management designation.
PNR-2	Level 2	New access road along Utility Corridor to provide access from EPS to the TSF and to maintain facilities along the Utility Corridor. Will be maintained to generally achieve the High-Clearance Vehicles management designation.
PNR-3	Level 2	New access road along PNR-04 to provide access to 115-kV powerline.
PNR-4	Level 2	New access road along FR 899 to provide access to 115-kV powerline.
PNR-5	Level 2	New access road along Dripping Spring Road to provide access to 115-kV powerline.
PNR-6	Level 2	New access road along Dripping Spring Road to provide access to 115-kV powerline.
PNR-7	Level 2	New access road along Dripping Spring Road to provide access to 115-kV powerline.
PNR-8	Level 2	New access road along Dripping Spring Road to provide access to 115-kV powerline.
PNR-9	Level 2	New access road along Dripping Spring Road to provide access to 115-kV powerline.
PNR-10	No Classification	Perimeter road along the toe of the TSF.

Notes:

- PNR-3 through PNR-10 are not located on TNF lands, but for the purpose of the Road Use Plan, TNF road use maintenance levels are used.
- PNRs are shown in detail in **Figures 4 through 7**.
- Detailed descriptions of purpose of, use of, improvements, and new disturbance area of PNRs on TNF lands can be found in **Table 3**.

Table 3. Access Route Disturbance by Surface Land Management

Road ID	Purpose and Use	Road Length[1] Linear Feet	Improvement Description	Length (Ft)[2]		New Disturbance Area (Acres)
				Forest Service Land	Non-Forest Service Land	Forest Service Land
FR 8	East Happy Camp Road. Provides temporary access to FR 650 and MARRCO Corridor.	6,324	No improvements, 1.2 miles of roadway to remain publicly accessible.	6,171	153	0
FR 229	Silver King Mine Road provides access to the WPS	12,590	No improvements, 1.7 miles of roadway to remain publicly accessible, 0.7miles of roadway on private property and to be restricted from public access.	9,023	3,567	0
FR 252	Provides temporary access to MARRCO Corridor from FR 2383	3,147	No improvements, 0.6 miles of roadway to remain publicly accessible.	3,147	0	0
FR 293	Provides temporary access to MARRCO Corridor	9,677	1.8 miles of roadway to remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.	9,677	0	0
FR 342	Provides access between Silver King Substation and Utility Corridor access road PNR-1.	11,345	No improvements, 1.7 miles of roadway to remain publicly accessible, 0.4 miles of roadway to be decommissioned.	11,345	0	0
FR 357	Provides temporary access to the MARRCO Corridor and Queen Valley Pump Station	38,036	7.2 miles of roadway to remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.	33,914	4,122	0
FR 469	Provides access to campground and EPS	3,913	No improvements, 0.7 miles of roadway to remain publicly accessible.	20	3,893	0
FR 1010	Provides access to WPS and Utility Corridor from FR 2445.	7,218	No improvements, 0.4 miles of roadway on private property, all 1.4 miles to be restricted from public access as it leads into WPS.	5,252	1966	0
FR 1933	Provides access from FR 357 to MCA-15 and 16	5,097	1.0 mile of roadway to remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.	5,097	0	0

Table 3. Access Route Disturbance by Surface Land Management

Road ID	Purpose and Use	Road Length[1] Linear Feet	Improvement Description	Length (Ft)[2]		New Disturbance Area (Acres)
				Forest Service Land	Non-Forest Service Land	Forest Service Land
FR 2395	Provides temporary access between MCA-2 through 4 along the MARRCO Corridor	6,630	1.3 miles of roadway to remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.	6,630	0	0
FR 2397	Provides access between FR 8 and FR 2395	2,012	0.4 miles of roadway to remain publicly accessible.	2,012	0	0
FR 2438	Located adjacent to subsidence zone. Provides access to Oak Flat Campground	13,469	No improvements, on private property; however, 2.1 miles of roadway to remain publicly accessible for access to the Oak Flat campground. Minor sections (0.4 miles) to be decommissioned and restricted from public access at a future date within the subsidence area.	0	13,469	0
FR 2439	Located adjacent to subsidence zone. Provides access to Oak Flat Campground	1,041	No improvements, on private property and TNF lands, 0.2 miles of roadway to remain publicly accessible for access to the Oak Flat campground.	545	496	0
FR 2445	Provides access between FR 229 and FR 1010	4,418	No improvements, 0.8 miles of roadway to remain publicly accessible.	4,418	0	0
FR 2458	Provides access between PNR-03 and FR 2459, to access the 230-kV Corridor	9,793	No improvements, 1.9 miles of roadway to remain publicly accessible.	9,793	0	0
FR 2459	Provides access between PNR-03 and FR 469 along the 230-kV Corridor	1,864	No improvements, 0.4 miles of roadway to remain publicly accessible.	1,864	0	0
FR 2466	Provides access along the Utility Corridor	1,656	0.3 miles of roadway to be maintained at existing maintenance level.	1,656	0	0
FR 3153	Located within subsidence zone, accessed by FR 2438	6,861	On private property, 1.3 miles of roadway decommissioned / restricted from public access	0	6,861	0
FR 3152	Provides access between FR 8 and FR 229	8,973	No improvements, 1.7 miles of roadway to remain publicly accessible.	6,250	2,723	0

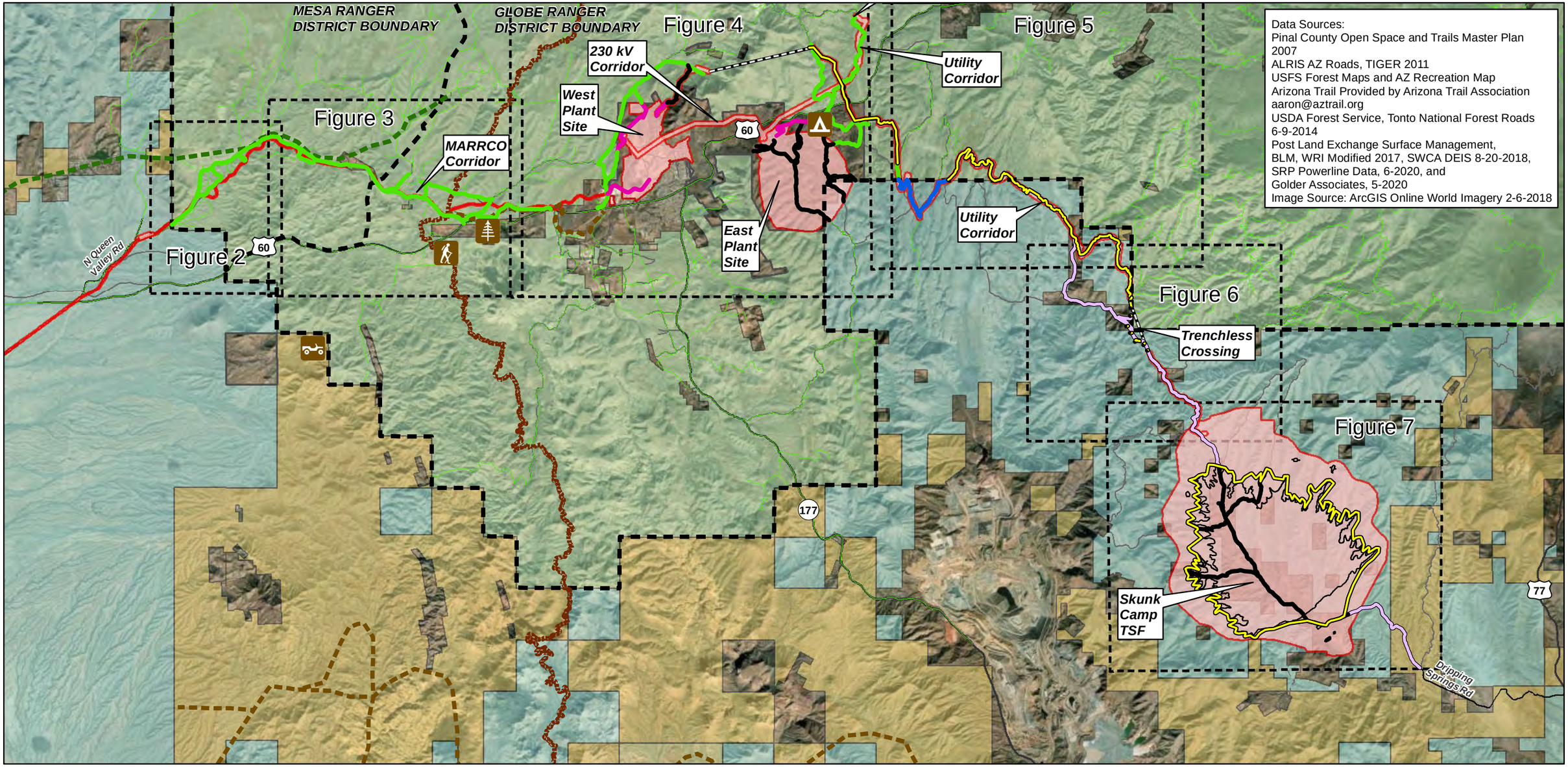
Table 3. Access Route Disturbance by Surface Land Management

Road ID	Purpose and Use	Road Length[1] Linear Feet	Improvement Description	Length (Ft)[2]		New Disturbance Area (Acres)
				Forest Service Land	Non-Forest Service Land	Forest Service Land
FR 3454A	Provides access between FR 357 and MCA-14	1,358	0.3 miles of roadway to remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.	1,358	0	0
FR 3454C	Provides access between FR 357 and MCA-11	2,685	0.5 miles of roadway to remain publicly accessible. Road to be temporarily closed during pipeline construction and will be re-established to existing maintenance level.	2,685	0	0
PNR-1	New access road along the Utility Corridor	18,355	3.5 miles of new road construction; 10 ft disturbance width assumed.	15,427	2,928	3.5
PNR-2	New access road along the Utility Corridor	40,292	7.6 miles of new road construction; 10 ft disturbance width assumed.	14,578	25,714	3.3
PNR-3	New access road along PNR-04	1,115	0.2 miles of new road construction; 10 ft disturbance width assumed.	0	1,115	0
PNR-4	New access road along FR-899	127	0.02 miles of new road construction; 10 ft disturbance width assumed.	0	127	0
PNR-5	New access road along Dripping Spring Road	199	0.04 miles of new road construction; 10 ft disturbance width assumed.	0	199	0
PNR-6	New access road along Dripping Spring Road	206	0.04 miles of new road construction; 10 ft disturbance width assumed.	0	206	0
PNR-7	New access road along Dripping Spring Road	640	0.1 miles of new road construction; 10 ft disturbance width assumed.	0	640	0
PNR-8	New access road along Dripping Spring Road	241	0.05 miles of new road construction; 10 ft disturbance width assumed.	0	241	0
PNR-9	New access road along Dripping Spring Road	111	0.02 miles of new road construction; 10 ft disturbance width assumed.	0	111	0
PNR-10	TSF perimeter road	102,761	194 miles of new road construction; disturbance area is within the TSF footprint disturbance area accounted for in the Plan; 50 ft disturbance width assumed.	0	102,761	0

[1] Total road length for USFS land, Private land, and State Trust land
[2] Length of road to be used within the GPA or as access to the GPA

FIGURES

Path: M:\Jobs\800's\807.176\ENV\RoadUsePlan\mxd\Fig1_RoadUsePlan_Overview_7_8_2020_AllAccess.mxd



Data Sources:
Pinal County Open Space and Trails Master Plan 2007
ALRIS AZ Roads, TIGER 2011
USFS Forest Maps and AZ Recreation Map
Arizona Trail Provided by Arizona Trail Association
aaron@aztrail.org
USDA Forest Service, Tonto National Forest Roads 6-9-2014
Post Land Exchange Surface Management, BLM, WRI Modified 2017, SWCA DEIS 8-20-2018, SRP Powerline Data, 6-2020, and Golder Associates, 5-2020
Image Source: ArcGIS Online World Imagery 2-6-2018

Legend

- Offroad
- Arboretum
- Campground
- Trailhead
- Proposed New Road
- Existing Road To Be Decommissioned-Restricted from Public Access
- Existing State Land Road - Public Access To Be Maintained
- Existing County Road - Public Access To Be Maintained
- Existing Forest Road - Public Access To Be Maintained
- Private Road
- Trail
- Proposed Drainage Trail
- Arizona National Scenic Trail Polyline
- TNF Ranger District Boundary
- 115 kV Power Structure
- Skunk Camp Tunnel, Spans and Trenchless Crossings
- Preferred Alternative
- Skunk Camp Seepage Dam
- Sheet Index
- TNF Roads
- US Highways
- Highways
- Arterials
- Streets
- Primitive Roads
- Post Land Exchange Resolution Holdings

Post Land Exchange Surface Management

- Bureau of Land Management (BLM)
- Bureau of Reclamation
- Private Land (No Color)
- State Trust Land
- National Forest System

N

0 5,000 10,000 Feet

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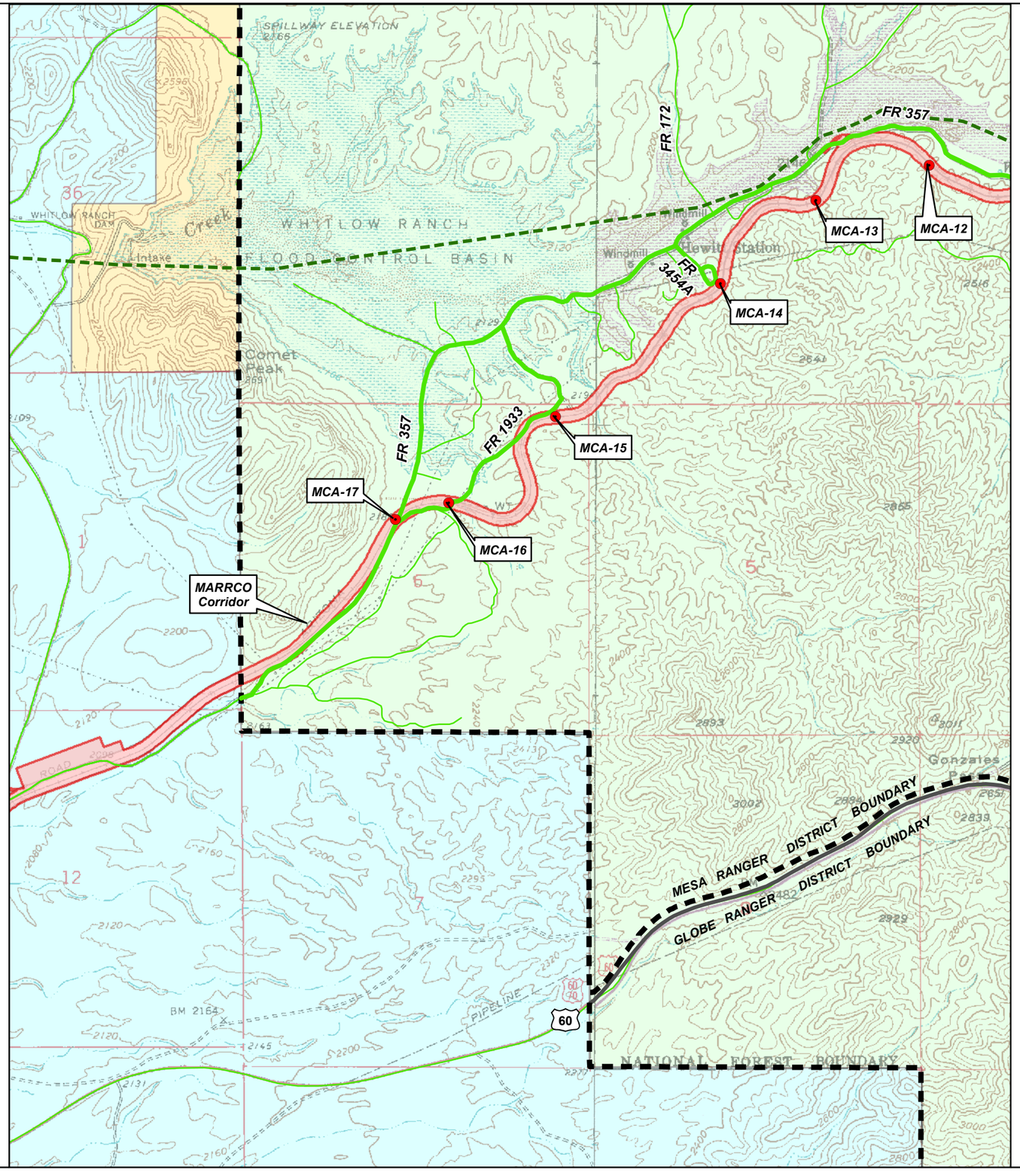
ROAD USE PLAN OVERVIEW

Figure 1

Path: M:\Jobs\800's\807.176\ENV\RoadUsePlan\mxd\Fig2_MARRCO_West_7_9_2020.mxd



Legend

- MARRCO Corridor Access Point (MCA)
- Existing Forest Road - Public Access To Be Maintained
- Proposed Drainage Trail
- TNF Ranger District Boundary
- TNF Roads
- Preferred Alternative

Post Land Exchange Surface Management

- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land
- National Forest System

Data Sources:
Pinal County Open Space and Trails Master Plan 2007
USDA Forest Service, Tonto National Forest Roads 6-9-2014
SWCA DEIS 8-20-2018
Post Land Exchange Surface Management, BLM, WRI Modified 2017
Image Source: Florence Junction & Picketpost Mountain USGS 7.5 Minute Quadrangles

N

0 900 1,800 Feet

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MARRCO

Figure 2

Path: M:\Jobs\800's\807.176\ENV\RoadUsePlan\mxd\Fig3_MARRCO_to_WPS_7_9_2020.mxd

MCA-12
MCA-11
MCA-10
MCA-9
MCA-8
MCA-7
MCA-6
MCA-5
MCA-4
MARRCO Corridor
FR 357
FR 3454C
FR 252
FR 2383
FR 2381
FR 293
FR 8
FR 2397
FR 2395
FR 2396
60
Private Land
Potts Canyon
Arizona Trail
Queens Station
Queen Creek Br
Thompson Arboretum
Picketpost Inn

Legend

- MARRCO Corridor Access Point (MCA)
- Arboretum
- Trailhead
- Existing Forest Road - Public Access To Be Maintained
- TNF Roads
- Lost Trail
- Proposed Drainage Trail
- Arizona National Scenic Trail Polyline
- TNF Ranger District Boundary
- Preferred Alternative

Post Land Exchange Surface Management

- Private Land (No Color)
- State Trust Land
- National Forest System

Data Sources:
Pinal County Open Space and Trails Master Plan 2007
USFS Forest Maps and AZ Recreation Map
Arizona Trail Provided by Arizona Trail Association
aaron@aztrail.org
USDA Forest Service, Tonto National Forest Roads 6-9-2014
SWCA DEIS
8-20-2018
Post Land Exchange Surface Management, BLM, WRI Modified 2017
Image Source: Picketpost Mountain
USGS 7.5 Minute Quadrangles

N

0 1,000 2,000 Feet

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MARRCO TO WEST PLANT SITE
Figure 3

Path: M:\Jobs\800's\807.176\ENV\RoadUsePlan\mxd\Fig4_WPS_EPS_7_9_2020.mxd

Silver King Substation
Span Across Queen Creek
Tunnel
Utility Corridor
FR 342
FR 229
FR 2445
FR 2446
Gate
FR 1010
FR 2458
Gate
PNR-1
Process Water Pond
Gate
230 kV Corridor
FR 2459
FR 342
Gate
Concentrator Complex
Magma Mine Road Realignment
Span Across Devils Canyon
Development Rock Stockpile
FR 229 Bypass (Along FR 8 & FR 3152)
FR 229
Gate
FR 469
FR 2439
Silver King Mine Road (Alternate Entrance to Substation) Gate
East Plant Site
FR 2433
FR 315
Gate
FR 2438
FR 650
FR 3152
FR 229
FR 2434
FR 2432
Gate
Utility Corridor
FR 8
Administration Building
FR 3153
FR 229 Bypass (Along FR 8 & FR 3152)
FR 8
FR 8
East Plant Site Fracture Zone
Gate
MARRCO Corriodor
MCA-1
East Plant Site Subsidence Zone
FR 315
MCA-2
MCA-3
60
Gate
Gate
FR 2395
FR 2400
Alternate Road
West Plant Site
60
Laydown Yard
FR 2403
LOST Trail
FR 3154
FR 230
PNR 08
FR 989
Arnett Creek
FR 988
FR 2423
FR 2424
FR 2422
FR 2426
FR 2425

Legend

- Gate
- MARRCO Corridor Access Point
- Campground
- Private Road
- Proposed New Road
- Existing Road To Be Decommissioned-Restricted from Public Access
- Existing Forest Road - Public Access To Be Maintained
- Lost Trail
- Arizona National Scenic Trail Polyline
- TNF Ranger District Boundary
- TNF Roads
- Subsidence Zone
- Fracture Zone
- Skunk Camp Tunnel, Spans and Trenchless Crossings
- Preferred Alternative

Post Land Exchange Surface Management

- Private Land (No Color)
- State Trust Land
- National Forest System

Note: Project area around disturbance area defined by modeled zone of continuous subsidence.

Data Sources:
Pinal County Open Space and Trails Master Plan, 2007
ALRIS AZ Roads, TIGER 2011
USFS Forest Maps and AZ Recreation Map
Arizona Trail Provided by Arizona Trail Association aaron@aztrail.org
SWCA DEIS 8-20-2018
Subsidence and Fracture Zone 2017
West Plant Facilities
Provided by M3 Engineering, July 6, 2020
USDA Forest Service, Tonto National Forest Roads 6-9-2014
Post Land Exchange Surface Management, BLM, WRI Modified 2017,
SRP Powerline Data, 6-2020, and
Golder Associates, 5-2020
Image Source: Picketpost Mountain & Superior USGS 7.5 Minute Quadrangles

N

0 1,500 3,000 Feet

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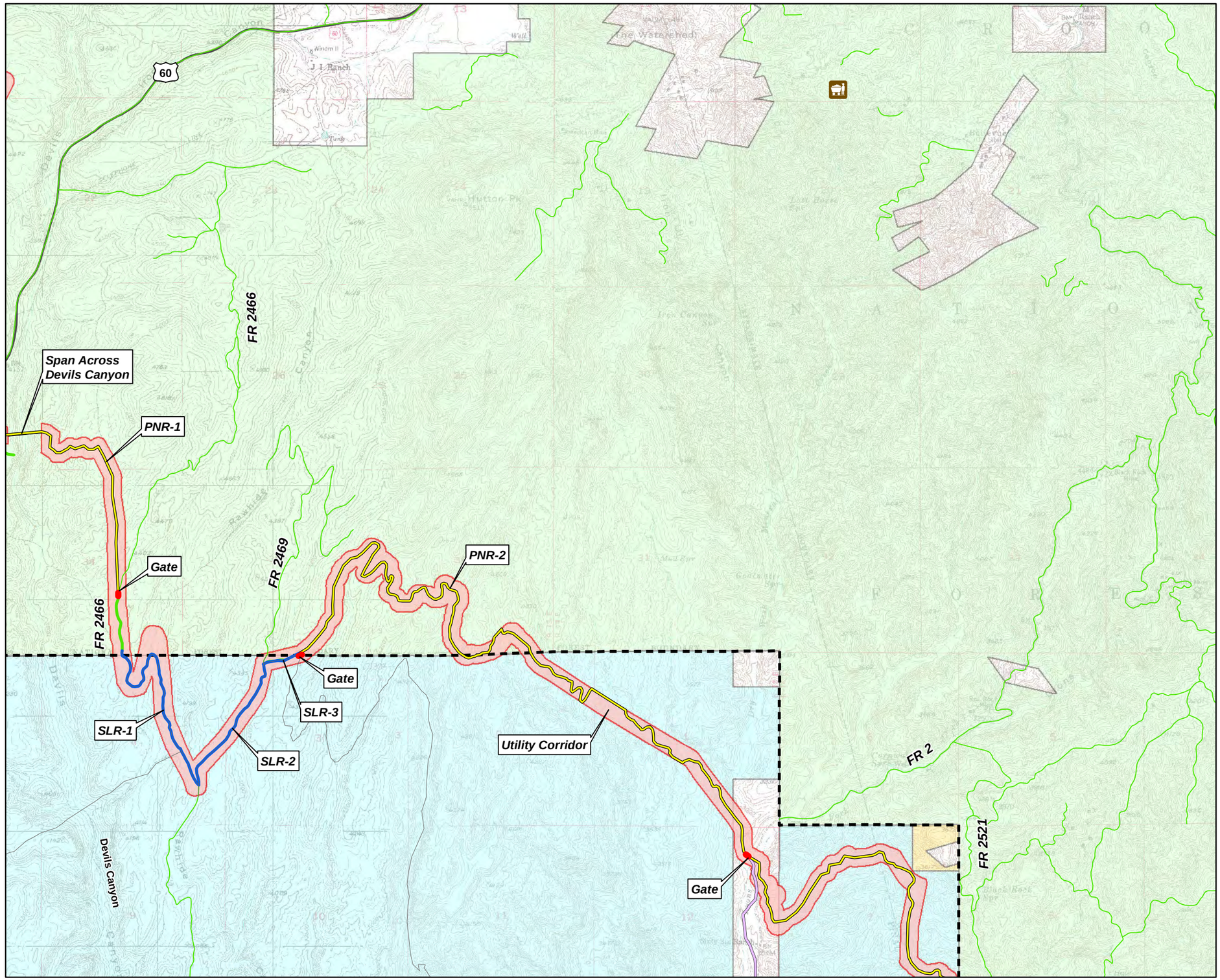
WEST AND EAST PLANT SITES
Figure 4

Path: M:\Jobs\800's\807.176\ENV\RoadUsePlan\mxd\Fig5_North_SCamp_UtilCorr_7_10_2020.mxd



Legend

- Gate
- Mine
- Proposed New Road
- Existing State Land Road - Public Access To Be Maintained
- Existing County Road - Public Access To Be Maintained
- Existing Forest Road - Public Access To Be Maintained
- TNF Ranger District Boundary
- TNF Roads
- Skunk Camp Tunnel, Spans and Trenchless Crossings
- Preferred Alternative

Post Land Exchange Surface Management

- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land
- National Forest System

Data Sources:
ALRIS AZ Roads, TIGER 2011
USDA Forest Service, Tonto National Forest Roads 6-9-2014
Post Land Exchange Surface Management, BLM, WRI Modified 2017,
SRP Powerline Data, 6-2020, and
Golder Associates, 5-2020
Image Source: Superior and Pinal Ranch
USGS 7.5 Minute Quadrangles

N

0 1,400 2,800 Feet

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UTILITY CORRIDOR
Figure 5

Path: M:\Jobs\800's\807.176\ENV\RoadUsePlan\mxd\Fig6_MiddleSCampCorridors_7_10_2020.mxd

PNR-2

PNR-2

Utility Corridor

FR 2521

FR 2528

PNR-3 To Poles 184 and 185

FR 899

PNR-4 Pole 186 & Gate

Trenchless Crossing

Dripping Springs

FR 248

PNR-5 Pole 190 & Gate

PNR-6 Pole 191 & Gate

PNR-7 Pole 194 & Gate

PNR-8 Pole 195 & Gate

PNR-9 Pole 196 & Gate

Road

Utility Corridor

Skunk Camp Fenceline

Gate

Gate

Gate

Gate

Legend

- Gate
- 115 kV Power Structure
- Proposed New Road
- Existing County Road - Public Access To Be Maintained
- TNF Ranger District Boundary
- TNF Roads
- Skunk Camp Tunnel, Spans and Trenchless Crossings
- Preferred Alternative

Post Land Exchange Surface Management

- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land
- National Forest System

Data Sources:
ALRIS AZ Roads, TIGER 2011
USDA Forest Service, Tonto National Forest Roads 6-9-2014
Post Land Exchange Surface Management, BLM, WRI Modified 2017,
SRP Powerline Data, 6-2020, and
Golder Associates, 5-2020
Image Source: Pinal Ranch & Hot TamalePeak USGS 7.5 Minute Quadrangles

N

0 1,000 2,000 Feet

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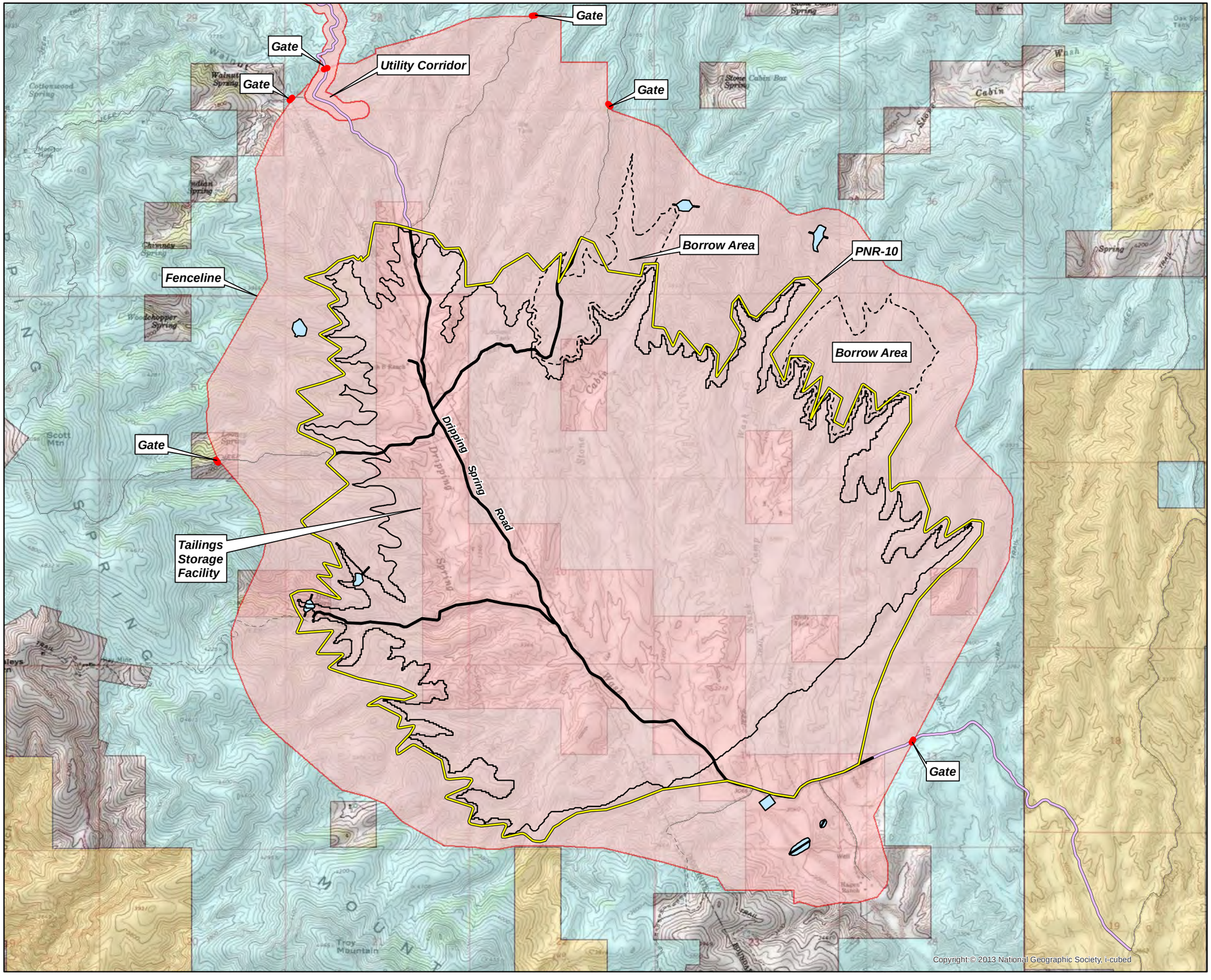
UTILITY CORRIDOR
NORTH OF TSF
Figure 6

Path: M:\Jobs\800's\807.176\ENV\RoadUsePlan\mxd\Fig7_SkunkCampTSF_7_10_2020.mxd



Legend

- Gate
- Proposed New Road
- Existing Road To Be Decommissioned-Restricted from Public Access
- Existing County Road - Public Access To Be Maintained
- Skunk Camp TSF
- Skunk Camp Diversion Dikes and Seepage Dams
- TSF Borrow Areas
- Preferred Alternative

Post Land Exchange Surface Management

- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land

Data Sources:
ALRIS AZ Roads, TIGER 2011
Post Land Exchange Surface Management, BLM, WRI Modified 2017,
SWCA DEIS 8-20-2018,
SRP Powerline Data, 6-2020, and
Golder Associates, 5-2020
Image Source: Hot Tamale Peak and El Capitan Mountain USGS 7.5 Minute Quadrangles

N

0 1,400 2,800 Feet

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SKUNK CAMP TSF
Figure 7