

NOTICE OF PUBLIC HEARING: A public hearing will be held by the Pinal County Planning & Zoning Commission on the 20th day of **August, 2015**, at 9:00 a.m. at the Pinal County Complex, 31 N. Pinal Street, in the Emergency Operations Center (EOC) room, Building F, Florence, Arizona, to consider the application for a **rezoning and a Planned Area Development (PAD) Overlay District** to amend the zoning ordinance and/or maps for the unincorporated area of Pinal County, Arizona.

PZ-001-15 – PUBLIC HEARING/ACTION: Integrity Land and Cattle, LLC landowner/applicant, Rose Law Group, agent, requesting approval of a zone change from CR-3/PAD (single residence zone) and CB-2/PAD (General Business zone) (**PZ-013-04**), to I-3 (Industrial Zoning District) on 559.88 ± acres to plan and develop a copper concentrate transfer facility; pending and in conjunction with Board of Supervisors Planned Area Development (PAD) Overlay District approval under Planning Case (**PZ-PD-001-15**); situated in Section 3, T03S, R09E G&SRB&M, tax parcels 210-34-022A and 022B (legal on file) (located north of Skyline Drive and 2 miles east of the Felix Rd alignment).

PZ-PD-001-15 – PUBLIC HEARING/ACTION: Integrity Land and Cattle, LLC landowner/applicant, Rose Law Group, agent, requesting approval of a Planned Area Development (PAD) Overlay District to plan and develop a copper concentrate transfer facility; pending and in conjunction with Board of Supervisors zone change approval under planning case **PZ-001-15**; situated in Section 3, T03S, R09E G&SRB&M, tax parcels 210-34-022A and 022B (legal on file) (located north of Skyline Drive and 2 miles east of the Felix Rd alignment).

At least 24 hours prior to the public hearing, documents pertaining to these requests are available for public inspection at the Pinal County Planning and Development Department, Pinal County Complex, Building F, 31 N. Pinal Street, Florence, Arizona, Monday through Friday between the hours of 8:30 a.m. and 4:30 p.m. and on the internet at <http://pinalcountyz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#>

ALL PERSONS INTERESTED IN THIS MATTER MAY APPEAR AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE AND STATE THEIR APPROVAL OR OBJECTION TO THE PROPOSED AMENDMENT.

A WRITTEN STATEMENT OF APPROVAL OR PROTEST MAY BE FILED WITH THE PINAL COUNTY PLANNING & DEVELOPMENT DEPARTMENT, P.O. BOX 2973, FLORENCE AZ 85132 NO LATER THAN 5:00 P.M. ON August 10, 2015. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

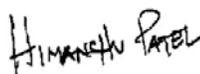
- 1) The Planning Case Number(s) See above
- 2) Your name, address, telephone number and property tax parcel number (print or type)
- 3) Whether you support or oppose the request
- 4) A brief statement of reasons for supporting or opposing the request
- 5) Whether or not you wish to appear and be heard at the hearing.

PROTESTS TO THE REZONING AND/OR PAD OVERLAY ZONE BY 20% OF THE PROPERTY OWNERS BY AREA AND NUMBER WITHIN 300 FEET OF THE PROPERTY PROPOSED FOR REZONING WILL REQUIRE AN AFFIRMATIVE VOTE OF THREE-FOURTHS OF ALL MEMBERS OF THE BOARD OF SUPERVISORS FOR APPROVAL.

Contact for this matter is: Ashlee MacDonald at 520-866-6642 or ashlee.macdonald@pinalcountyz.gov

DATED this 23rd day of July, 2015.

PINAL COUNTY COMMUNITY DEVELOPMENT



By: _____
Himanshu Patel, Community Development Director

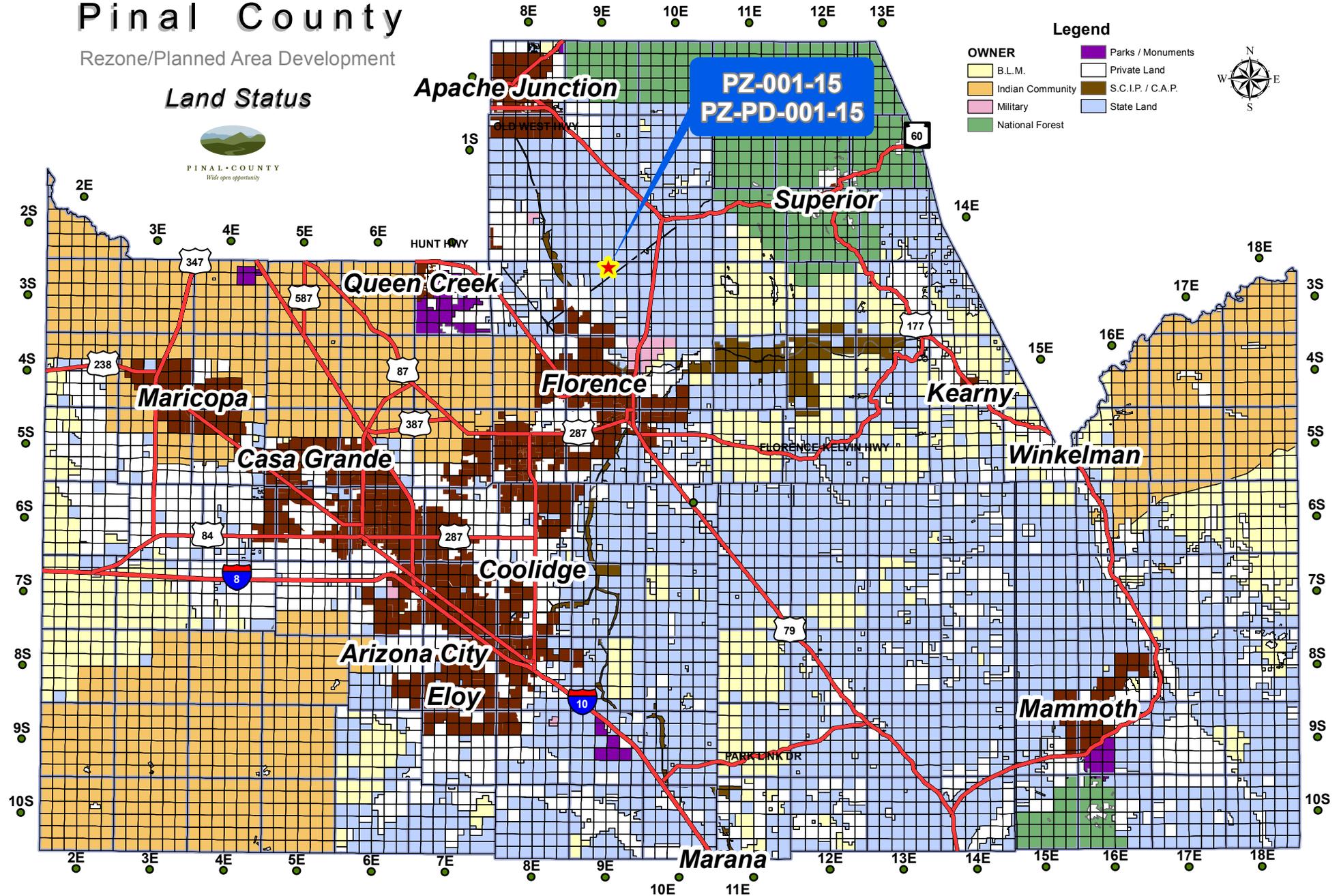
[Anything below this line is NOT for publication.]

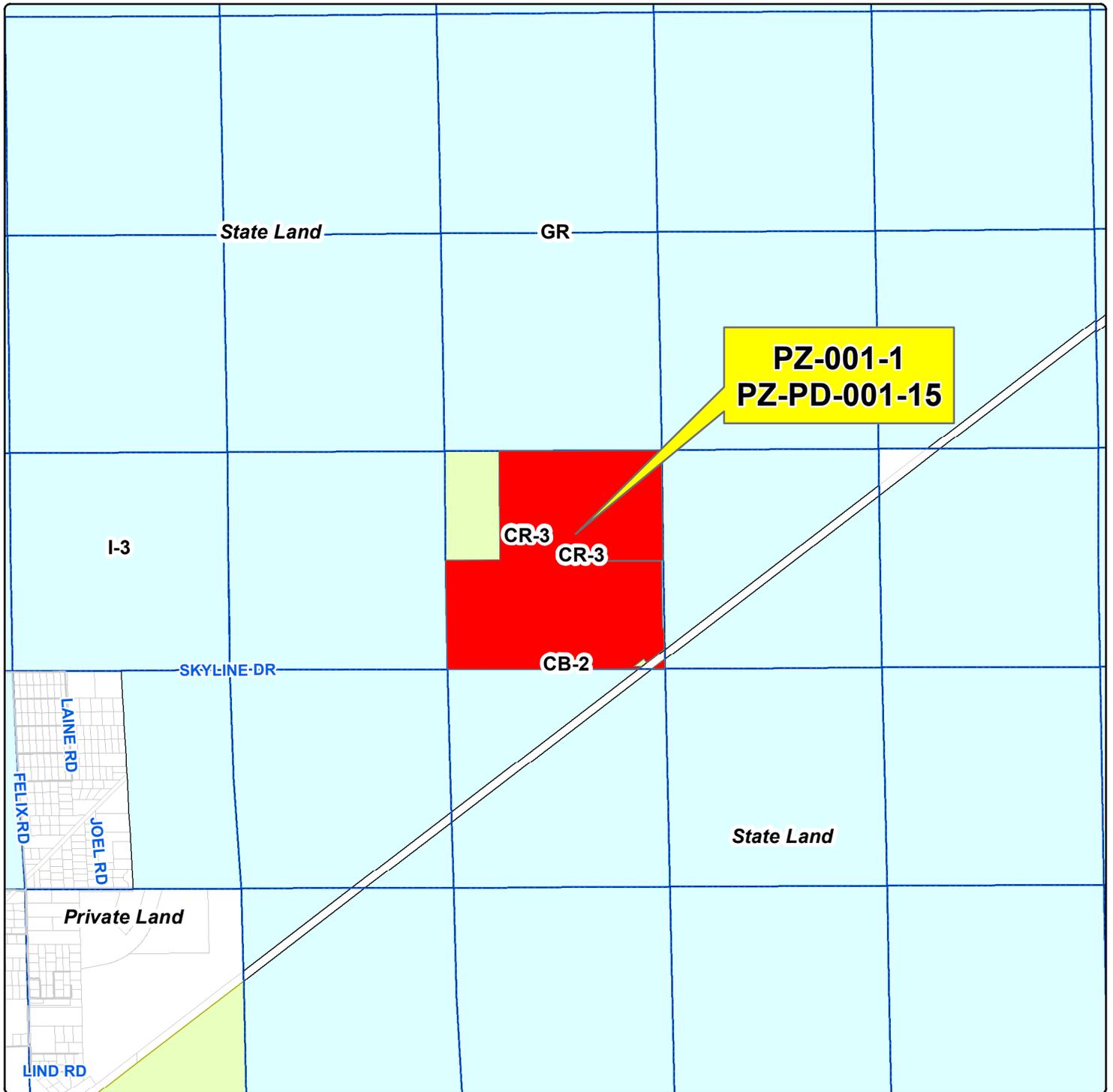
PUBLISH ONCE: Florence Reminder & Blade Tribune

Pinal County

Rezone/Planned Area Development

Land Status





Rezone/Planned Area Development

Community Development



PINAL COUNTY

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Integrity Land and Cattle, LLC

Legal Description:

Situated in a portion of the Section 03, T03S,R09E, G&SRB&M, Parcels 210-34-002A and 210-34-002B, (legal on file) (located north of Skyline Dr and 2 miles east of the Felix Rd alignment).

T03S-R09E Sec 03



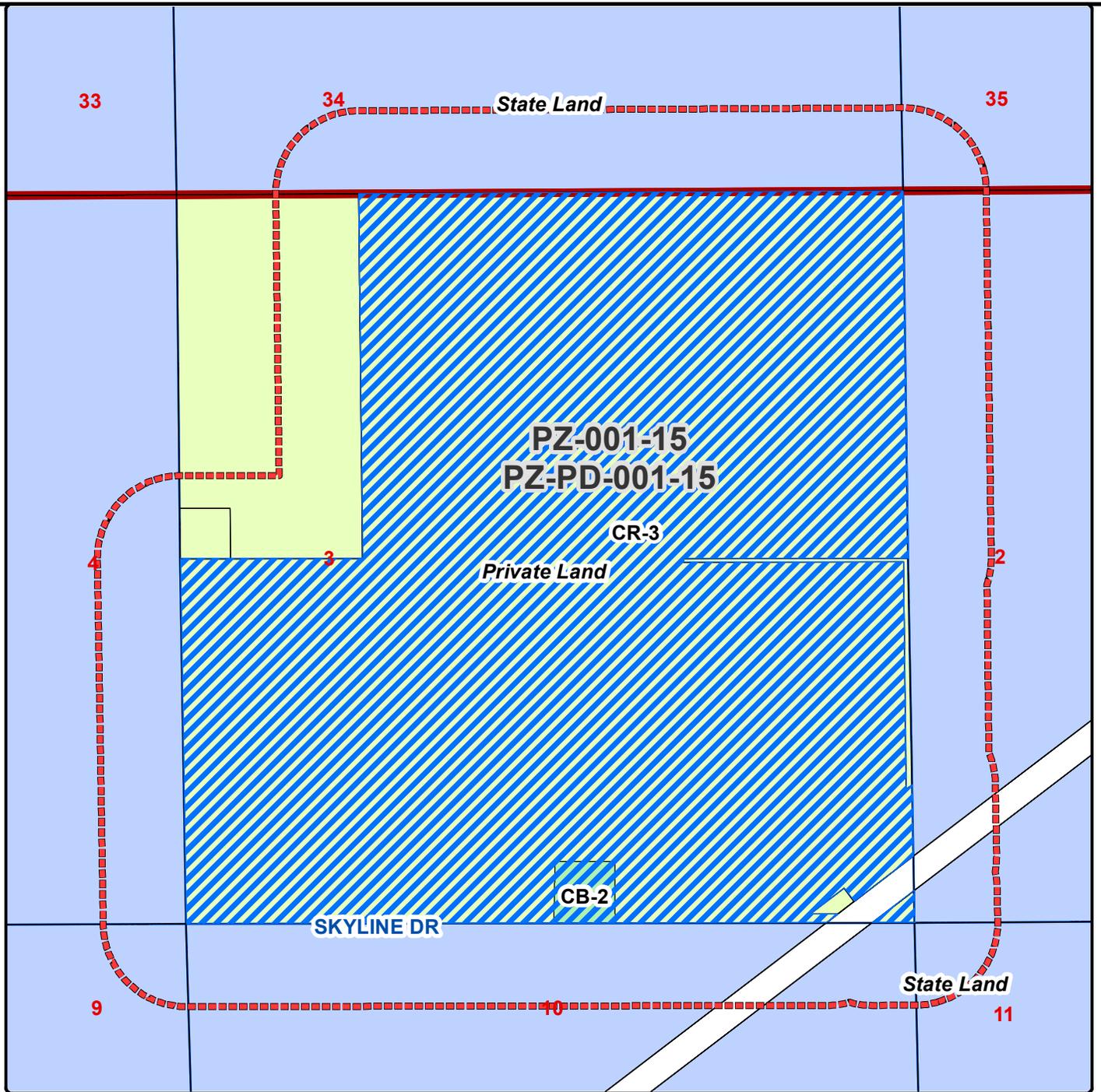
Sheet No.
1 of 1

Integrity Land and Cattle, LLC

Drawn By: GIS / IT / LJT Date: 2/10/2015

Sections 03	Township 03S	Range 09E
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Case Number: PZ-001-15, PZ-PD-001-15



Rezone/Planned Area Development

PZ-001-15, PZ-PD-001-15 – PUBLIC HEARING/ACTION: Integrity Land and Cattle, LLC landowner/applicant, Rose Law Group, agent, requesting approval of a zone change from CR-3/PAD (single residence zone) and CB-2/PAD (General Business zone) (PZ-013-04), to I-3 (Industrial Zoning District) on 559.88 ± acres to plan and develop a copper concentrate transfer facility; pending and in conjunction with Board of Supervisors Planned Area Development (PAD) Overlay District approval under Planning Case (PZ-PD-001-15); situated in Section 3, T03S, R09E G&SRB&M, tax parcels 210-34-022A and 022B (legal on file) (located north of Skyline Drive and 2 miles east of the Felix Rd alignment).

Current Zoning: CR-3, CB-2
Request Zoning: Rezone
Current Land Use: MLDR



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Legal Description:

Situated in a portion of Section 03, T03S, R09E, G&SRB&M, Parcels 210-34-002A and 210-34-002B; (legal on file) (located north of Skyline Dr and 2 miles east of the Felix Rd alignment).

T03S-R09E Sec 03



Owner/Applicant: Integrity Land and Cattle, LLC

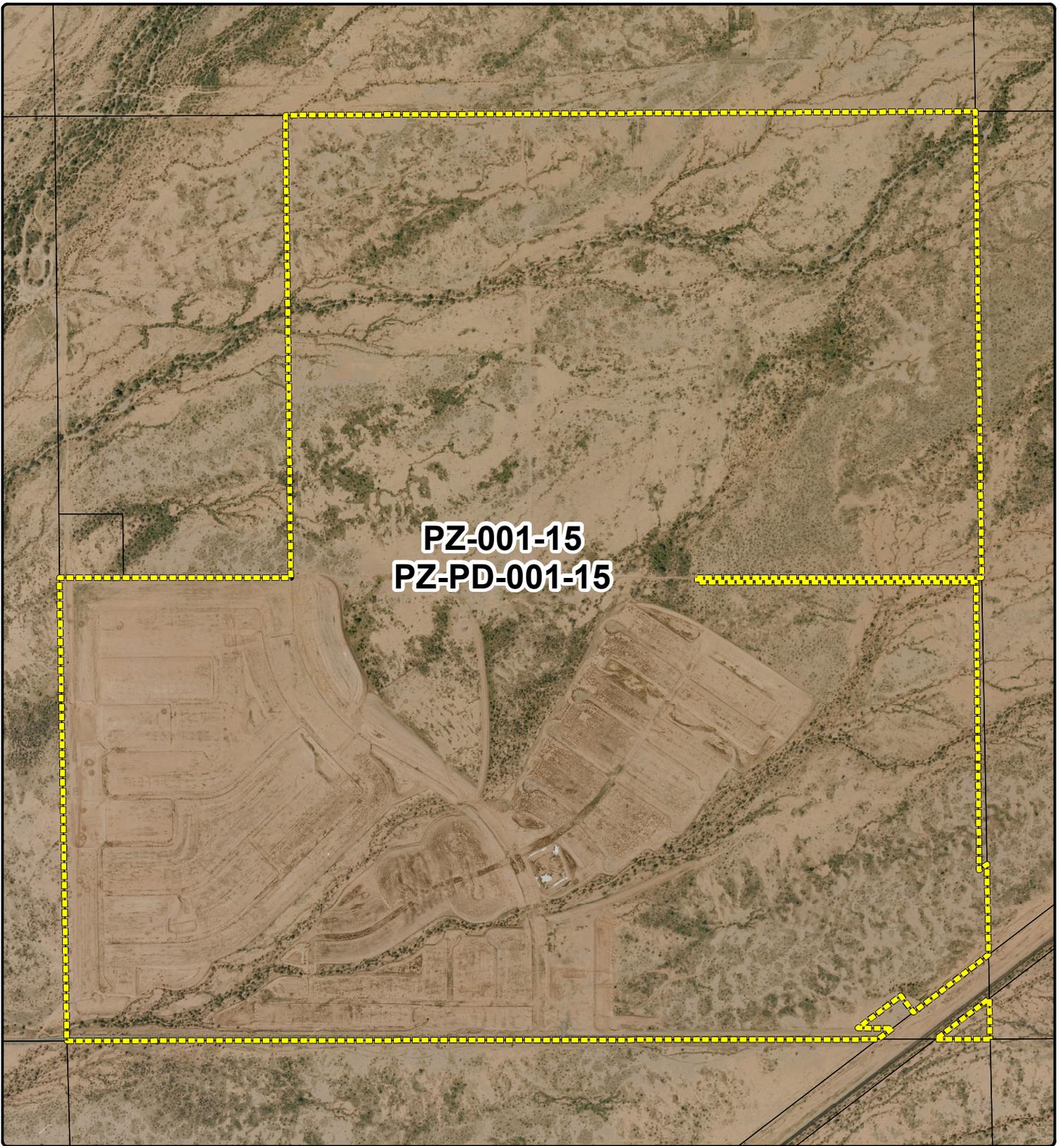
Drawn By: GIS / IT / LJT Date: 02/10/2015

Sheet No.

1 of 1

Sections: 03 Township: 03S Range: 09E

Case Number: PZ-001-15, PZ-PD-001-15



PZ-001-15
PZ-PD-001-15

Rezone/Planned Area Development



PINAL • COUNTY
Wide open opportunity

PZ-001-15
PZ-PD-001-15

**PZ-001-15
PZ-PD-001-15**



REZONING REQUEST TO I-3 PAD

PINAL COUNTY, ARIZONA

Submitted: January 5, 2015
Resubmitted: May 20, 2015

Prepared by:
ROSE | LAW GROUP^{pc}
RICH ■ HURLEY

Jordan Rose
Rose Law Group pc
7144 E. Stetson Drive, #300
Scottsdale, AZ 85251
jrose@roselawgroup.com
480-505-3939

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January 29, 2015

Dear Ms. Rose,

Staff has had an opportunity to review your request for a rezone and Planned Area Development for the Resolution Copper Transfer Facility and has the following comments:

Page Number	Comment
Zone Change/PAD Application Forms	
	#5 Please indicate the zoning category you are requesting (I-3) on the rezone application and change "Industrial PAD" to "I-3 PAD" on the PAD application
	Complete agency authorization forms (attached)
	Do you have a service agreement from your water provider? If so, please include with application.
PAD Application Forms:	
4/5	Staff strongly recommends providing a use palette for the I-3 zone to limit the allowable uses to those that support operation of this transfer facility.
	Submit preliminary drainage and traffic reports.
Narrative:	
3	The narrative indicates that the site was previously disturbed, if known, please indicate its previous use.
3	The privately owned land discussed under section 2.0 is zoned CR-3/PAD, please indicate this within section 2.0 and expand upon the compatibility with the proposed project and this approved zoning.
5	Because of the increased height, is there opportunity to increase the required setbacks on the western boundary adjacent to the CR-3 zone and the northern boundary? Also note that an industrial buffer is required on all sides of this development per PCDSC 2.340.040
7	#3, while this property is surrounded by vacant desert land the 80 acres to the northeast are zoned to allow a residential master planned community. Please include this information here.
11	Section 9.0 revise the second sentence.
15	Section 13.0 Please be more elaborate in the landscaping discussion. Because the ordinance provides few specific requirements for landscaping other than to provide landscaping within the industrial buffer, further information is needed. Staff would like to see landscaping along Skyline in particular.
General	The site plan shows a Helipad, please discuss this within the narrative. Under what circumstances will it be used, how frequently will it be utilized?
	Discuss timeline for development of the site if approved.
	The adopted Open Space plan shows proposed open space as well as a planned multi-



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	use trail corridor along the MARRCO right of way. I am working with our Open Space Dept. and will provide specific comments regarding this early next week.
Development Plan	
	Show distance of helipad from property boundaries. It appears to be rather close to the chain link fence, is this safe?
	Label setbacks and show the industrial buffer area.
	Show proposed landscaping required within the industrial buffer
	Label fence height.
	Staff will recommend that a solid wall be provided along the boundary adjacent to the CR-3/PAD zoned property as well as along Skyline. There should be landscaping between this wall and Skyline.
	Staff will stipulate that prior to development of the site the applicant receive Site Plan approval and that the site plan be in substantial compliance with the development plan approved as part of this PAD.
	The existing saguaro cacti shown on the vegetation/landscape plan that will be displaced, will those be relocated on-site?
General Comments/Questions	
	Have you had any contact with ASLD?

Once the additional information requested is submitted, staff may have additional comments or may request additional revisions.

Please submit one copy of the revised application by end of day February 6, 2015. If no additional revisions are necessary, you will be asked to submit 13 copies of your documents for the Planning Commission. Please let me know if you have any questions regarding these comments.

Sincerely,

Ashlee MacDonald, Planner II
ashlee.macdonald@pinalcountyyaz.gov
520-866-6642



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PROCEDURE OUTLINE

FOR A PROPOSED ZONE CHANGE IN UNINCORPORATED PINAL COUNTY

1. Submit a **Concept Review Application** for a Concept Review (pre-application) meeting with the Planning Department and other affected County agencies. - *(The Concept Review Application is a separate application prior to applying for a PAD Overlay District).*
2. Hold a **Neighborhood / Community Meeting** per requirements outlined in Section – [2.176.050 (D)] of the PCDSC.
3. Submit a **Zone Change Application** with the required supporting documentation using the attached forms.
4. Submit the following fees made payable to Pinal County in accordance with Section [2.151.010(1)(2)a] of the PCDSC:
 - a. 0-499 mail-outs: \$4,478.00
 - b. 500 or more mail-outs: \$4,880.00
5. Attend **Planning & Zoning Commission Public Hearing** for Commission recommendation to the Board of Supervisors. - *(Time frame is approximately 10 to 15 weeks from application acceptance by the Planning Department).*
6. Attend **Board of Supervisors Public Hearing** for decision. - *(Time Frame is approximately 4 to 8 weeks after Planning & Zoning Commission Public Hearing).*

NOTE: A Zone Change is not effective until 31 days after approval by the Board of Supervisors

Applicants should allow 4 to 6 months from the application acceptance by the Planning Department to a decision from the Pinal County Board of Supervisors.

COMMUNITY DEVELOPMENT
Planning Development

SUPPORTING INFORMATION

1. Note any services that are not available to the site. Discuss any improvements of services that would be paid for by the public:
see narrative

2. What is the amount of traffic to be generated (# of trips/day, deliveries/week)? Show ingress/egress on the site plan:
see narrative

3. How many parking spaces are to be provided (employees and customers)? Indicate these parking spaces on the site plan:
see narrative

4. Is there a potential for excessive noise (I.E.; children, machinery) or the production of smoke, fumes, dust or glare with this proposed land use? If yes, how will you alleviate these problems for your neighbors?
All operations will be conducted inside enclosed buildings to alleviate excess noise from machinery and rail cars.

5. What type of landscaping are you proposing to screen this use from your neighbors?
~~Natural desert vegetation landscaping will be used along with the creation of berms along the western boundary and Skyline Drive~~
6. What type of signage are you proposing for the activity? Where will the signs be located?
~~Minimal signage requested. There will be a sign at the entrance to the facility located on Skyline Drive.~~
7. If the proposed land use involves any type of manufacturing or production process, provide a short synopsis of the processes utilizing diagrams, flowcharts and/or a short narrative:
see narrative

8. Explain how the appearance and operation of the proposed land use will maintain the integrity and character of the zone in which the use is requested:
see narrative

9. Have you discussed possible conditions that may be placed on the approval with the Planning Department?
 YES NO

10. Do you understand that if a condition is violated, that there is a public process by which your zoning may be reverted?
 YES NO

I certify the information included in this application is accurate, to the best of my knowledge. I have read the application and I have included the information, as requested. I understand if the information submitted is incomplete, this application cannot be processed.

Name of Landowner (Applicant) Number	Address	Phone
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Signature of Landowner (Applicant) Address	E-Mail
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Name of Agent Number	Address	Phone
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Signature of Agent Address	E-Mail
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The Agent has the authority to act on behalf of the landowner, which includes agreeing to stipulations. The agent will be the contact person for Planning staff and must be present at all hearings. Please use attached Agency Authorization form, if applicable.



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PROCEDURE OUTLINE

FOR A PROPOSED PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT IN UNINCORPORATED PINAL COUNTY

1. Submit a **Concept Review Application** for a Concept Review (pre-application) meeting with the Planning Department and other affected County agencies. - *(The Concept Review Application is a separate application prior to applying for a PAD Overlay District).*
2. Hold a **Neighborhood / Community Meeting** per requirements outlined in Section – [2.176.050 (D)] of the PCDCS.
3. Submit a **Planned Area Development Application** for a Planned Area Development Overlay District with the required supporting documentation.
4. Submit the application filing fee made payable to Pinal County in accordance with Section (2.176.230) of the PCDCS:
 - A. Without accompanying zone change, 0-499 mail-outs: \$4,478.00
 - B. Without accompanying zone change, 500 or more mail-outs: \$4,824.00
 - C. With accompanying zone change: \$888.00
5. Submit a \$545.00 advertising fee made payable to Pinal County (*only for PAD Amendments*).
6. Attend **Planning & Zoning Commission Public Hearing** for Commission recommendation to the Board of Supervisors. - *(Time frame is approximately 10 to 15 weeks from application acceptance by the Planning Department).*
7. Attend **Board of Supervisors Public Hearing** for decision. – *(Time Frame is approximately 4 to 8 weeks after Planning & Zoning Commission Public Hearing).*

NOTE: A PAD is not effective until 31 days after approval by the Board of Supervisors

Applicants should allow 4 to 6 months from the application acceptance by the Planning Department to a decision from the Pinal County Board of Supervisors.

COMMUNITY DEVELOPMENT
Planning Division

AMENDED DEVELOPMENT STANDARDS

Proposed Zoning	Minimum Lot Area (Square Feet)		Minimum Lot Width		Minimum Yard Sizes (Building Setbacks in Feet)		Maximum Building Height (Feet)		Detached Accessory Buildings (Minimum Distance Between in Feet)		Buildable Area	
	Code	Proposed	Code	Proposed	Code	Proposed	Code	Proposed	Code	Proposed	Code	Proposed
					Front:	Front:			Main Building:	Main Building:		
					Side:	Side:			Front Lot Line:	Front Lot Line:		
					Rear:	Rear:			Rear & Side Lot Lines:	Rear & Side Lot Lines:		
					Front:	Front:			Main Building:	Main Building:		
					Side:	Side:			Front Lot Line:	Front Lot Line:		
					Rear:	Rear:			Rear & Side Lot Lines:	Rear & Side Lot Lines:		
					Front:	Front:			Main Building:	Main Building:		
					Side:	Side:			Front Lot Line:	Front Lot Line:		
					Rear:	Rear:			Rear & Side Lot Lines:	Rear & Side Lot Lines:		

please see narrative

NAME OF PROJECT: Resolution Copper Transfer Facility PLANNED AREA DEVELOPMENT

AMENDED PERMITTED USE LIST

Proposed Zoning	Uses that will <u>NOT</u> be permitted in this Planned Area Development
I-3 PAD	NONE

AMENDED PERMITTED USE LIST

Proposed Zoning	Uses that <u>WILL BE</u> permitted in this Planned Area Development
I-3 PAD	<p>A. Airport or landing strip; provided, that:</p> <ol style="list-style-type: none"> 1. The site is a minimum of 160 acres; and 2. The runway is a minimum of 600 feet from any site boundary. <p>B. Gasoline or flammables bulk station, provided said products, butane, gasoline, petroleum, or propane shall:</p> <ol style="list-style-type: none"> 1. Be located not less than 25 feet from building or lot line or similar tanks; be located no closer than 100 feet from any residential zone; and 2. Liquefied petroleum gases (LPG) bulk station shall be designed, constructed and maintained in compliance with provisions of National Fire Protection Association (N.F.P.A.) Standards No. 58. <p>C. Government structures, fire district stations, sheriff's facilities and their accessory uses.</p> <p>D. Heliport.</p> <p>E. Landfill and transfer stations.</p> <p>F. Manufacture, maintenance, assembling, painting, upholstery, compounding, processing, packaging or treatment operations.</p> <p>G. Power plants, wastewater treatment plants and ancillary offices and buildings.</p> <p>H. Wireless communication facilities, subject to the requirements set forth in Chapter 2.205 PCDCS.</p> <p>I. Some uses are allowed in all zoning districts based on statutory exemptions (see PCDCS 2.05.050) or because a governmental entity or governmental agency is performing a governmental function.</p> <p>J. Heavy truck storage, repair, service, staging and point of operation for trucking operations and their accessory equipment. [Ord. PZ-C-003-12 § 10; Ord. 011812-ZO-PZ-C-007-10 § 49].</p>

I certify the information included in this application is accurate, to the best of my knowledge. I have read the application and I have included the information, as requested. I understand if the information submitted is incomplete, this application cannot be processed.

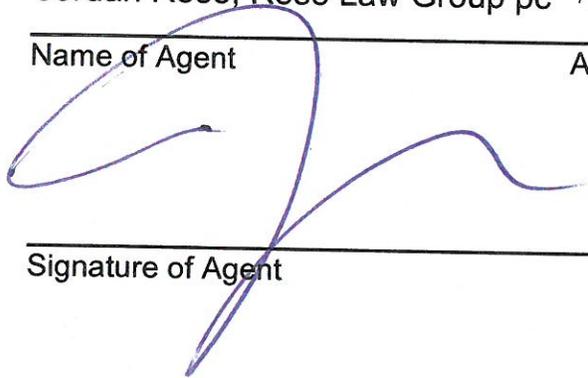
Integrity Land & Cattle, LLC 102 Magma Heights Superior, AZ 85173

Name of Landowner (Applicant)	Address	Phone Number
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Signature of Landowner (Applicant)	E-Mail Address
------------------------------------	----------------

Jordan Rose, Rose Law Group pc 7144 E. Stetson Drive, #300 Scottsdale, AZ 85251 480-505-3939

Name of Agent	Address	Phone Number
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jrose@roselawgroup.com

Signature of Agent	E-Mail Address
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The Agent has the authority to act on behalf of the landowner, which includes agreeing to stipulations. The agent will be the contact person for Planning staff and must be present at all hearings. Please use attached Agency Authorization form, if applicable.



P I N A L • C O U N T Y
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INFORMATION ABOUT CONSENT TO CONDITIONS/STIPULATIONS AND WAIVER OF CLAIMS FOR DIMINUTION IN VALUE

Pinal County, as part of the application process concerning land use requests, is now requesting that property owners or their authorized agents execute and return the attached Consent and Waiver. This policy is a result of that part of the Private Property Rights Protection Act (Proposition 207) that deals with regulatory takings and changes in land uses (A.R.S. §§12-1134 – 12-1138).

By signing the Consent and Waiver, the property owner agrees and consents to all conditions and stipulations in conjunction with the property owner's application, acknowledges that approval of the application might affect current or existing rights to use, divide, sell or possess the owner's property, and waives any right to compensation for diminution in value that may result from approval.

The Consent and Waiver form will be provided at the Concept Review Meeting to allow ample time for review. Should the Pinal County Planning and Zoning Commission ("Commission") recommend approval of the property owner's application, the form will again be provided to applicant together with the Commission's recommended stipulations/conditions. These materials will be provided to the applicant via e-mail, within three business days of the Planning Commission hearing. The property owner is requested to return the executed document to the Pinal County Planning and Development Department within 10 working days so that the document can be inserted into the packet to be presented to the Supervisors as part of the planning staff's report.

If an owner does not sign the Consent and Waiver, the application will continue through the normal County process. The Supervisors will be informed of the refusal and this will be one of the factors considered by the Supervisors.

If the Commission recommends denial of the property owner's application but the Supervisors decide to approve the application, the property owner will be requested to sign the Consent and Waiver with attached conditions/stipulations and conditions, after the Board of Supervisors' hearing.

PLANNING & DEVELOPMENT

When recorded return to:
Clerk
Pinal County Board of Supervisors
P.O. Box 827
Florence, AZ 85132

**CONSENT TO SCHEDULE FOR DEVELOPMENT AND
CONDITIONS/STIPULATIONS AND WAIVER OF CLAIMS FOR DIMINUTION IN
VALUE**

This Consent to Schedule for Development and Conditions/Stipulations and Waiver of Claims for Diminution in Value ("Consent and Waiver") is made in favor of Pinal County (the "County") by Integrity Land & Cattle, LLC ("Owner").

Owner warrants and represents that Owner is the fee title owner of the property described herein, and that no other entity or person has an ownership interest in the property. Prior to Owner's transfer, sale or conveyance of all or any part of its right, title and interest in the Property at any time within thirty (30) days of the County's approval of Owner's application described herein, Owner shall notify the County of said transfer, sale or conveyance and shall require the new Owner to execute and agree to this Consent and Waiver as part of any transfer, sale or conveyance of the property described herein.

Owner acknowledges that A.R.S. § 12-1134 of the Arizona Private Property Rights Protection Act provides in some cases that a county is required to pay just compensation to a landowner if the County approves a land use law that reduces the fair market value of the owner's property. Owner further acknowledges that A.R.S. § 12-1134 authorizes a private property owner to waive any claim for diminution in value of property in connection with any action proposed by a county or any action requested by the property owner.

Owner has submitted an application to Pinal County ("County") requesting the County approve a rezoning request to I-3 PAD for development of the following described property ("Property"):

["Legal description is attached hereto as Exhibit "A."]

By signing below, Owner agrees and consents to the Schedule for Development and all the conditions/stipulations imposed by Pinal County in conjunction with the approval of the rezoning request to I-3 PAD, Case No. PZ-001-15 and PZ-PD-001-15, which are attached hereto as

["Stipulations are attached here to as Exhibit "B."]

By signing below, Owner acknowledges that the approval of the rezoning request to I-3 PAD, Case No. PZ-PD-001-15, might affect existing rights to use, divide, sell or possess the Property. By signing below, Owner hereby waives any and all rights to claim compensation for diminution in value pursuant to A.R.S. §12-1134 that may now or in the future exist as a result of the approval of the rezoning request to I-3 PAD, Case No. PZ-PD-001-15, and the Schedule for Development and conditions/stipulations imposed in conjunction with the approval. Owner waives any and all rights to claim compensation for diminution in value for any action taken by the County to rescind approval of rezoning request to I-3 PAD in Case No. PZ-PD-001-15 because of non-compliance with the Schedule for Development and/or any of the approved conditions/stipulations.

This Consent and Waiver shall run with the land and shall be binding upon all present and subsequent property owners.

Owner consents to the recordation of this Consent and Waiver after approval of the above-referenced case by the County. If Owner withdraws its application prior to final action of the County or the County denies the application, Owner is released from this Consent and Waiver.

OWNER: Integrity Land & Cattle, LLC
[Print Entity Name]

OWNER: _____
[Print Entity Name]

Signature 

Signature _____

Its: CONTROLLER
[Title, if applicable]

Its: _____
[Title, if applicable]

Dated: 5/19/2015

Dated: _____

INDIVIDUAL ACKNOWLEDGMENT

[To be filled out if NOT a corporation, partnership, or trust]

STATE OF _____)

) ss.

COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, by _____.

[Insert Name of Signor(s)]

Notary Public

My commission expires: _____

CORPORATION, OFFICER, PARTNER OR TRUSTEE ACKNOWLEDGMENT

[To be filled out if a corporation, partnership, or trust]

STATE OF Arizona)

) ss.

COUNTY OF Pinal)

The foregoing instrument was acknowledged before me, this 19th day of May, by STERLING HUNDLEY as CONTROLLER.

[Insert Name of Officer]

[Insert Title]

of INTEGRITY LAND & CATTLE LLC, an ARIZONA corporation,

[Insert Name of Company]

[Insert State of Incorporation]

who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.



Stephanie Ortega
Notary Public

My commission expires: Sept 12, 2017

~~ALTERNATE ACKNOWLEDGMENT: Use only when a second company is signing on behalf of owner.~~

~~STATE OF _____)~~

~~) ss.~~

~~COUNTY OF _____)~~

~~The foregoing instrument was acknowledged before me, this ____ day of _____,
_____, by _____ as~~

~~_____
[Insert Signor's Name]~~

~~_____
[Insert Title]~~

~~of _____, an _____ corporation,
[Insert Name of Second Company] [Insert State of Incorporation]~~

~~as _____ for _____
[i.e. member, manager, etc.] [Owner's Name]~~

~~who being authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.~~

Notary Public

My commission expires: _____



1.0 Purpose of Request

Integrity Land and Cattle, LLC is the owner of approximately 560 acres of vacant, previously disturbed land in Pinal County that is the subject property for this application. They are also a subsidiary company of the Applicant, Resolution Copper Mining, LLC, ("Resolution Copper") which is working to develop one of the largest undeveloped copper deposits in the world in the area of the former Magma Copper Mine near the Town of Superior, Arizona. Resolution Copper is expected to have an economic value of \$61.4 billion over 60 years (the estimated life of mine), including billions in tax revenue to Pinal County over the life of the project.

Before any commercial ore extraction or processing begins, an approved mine plan must be obtained from the United States Forest Service ("USFS") as well as dozens of additional federal, state and county permits and approvals. The USFS decision must comply with the National Environmental Policy Act ("NEPA"), which requires that an Environmental Impact Statement ("EIS") be completed before a final mine plan is approved and record of decision is granted.

If the overall project is approved, it is expected to become the largest copper producer in North America and one of the largest in the world, with the capacity to supply more than a quarter of the nation's current demand for copper and employing thousands of people from throughout the region during construction and operation.

The request contained in this Application (the "Application") is to rezone the 559.06 acres on the north side of Skyline Drive, just west of the MARRCO railroad line and 0.82 acres at Skyline Drive adjacent to the south of the MARRCO



railroad line (the "Property"), from Single Family Residential ("CR-3") and General Business ("CB-2") to Industrial ("I-3") Planned Area Development ("PAD") Overlay Zoning District for use as a Copper Concentrate Filter Plant and Transfer Facility ("Transfer Facility"). It is an integral part of Resolution Copper's overall mine proposal and represents a necessary component of the mine's success.

The entire Property is well suited for Industrial use as it is land that has already been disturbed, located directly adjacent to the existing MARRCO rail line, surrounded by vacant land, mostly owned by State Trust in Pinal County with SRP transmission lines running to it. The proximity and access to the rail line makes the Property well suited for this low profile Transfer Facility to allow for the copper mined near Superior to be transported for additional processing off site. This Application is being made as one of the numerous permits and approvals required to bring the mine, located just outside of Superior, Arizona to fruition. This use is NOT a smelter and is NOT a noxious use of any kind. As described more fully below, the site is intended to be used for the filtering of water and subsequent loading of copper concentrate into rail cars or trucks for additional processing off site.

Copper concentrate, a mixture of copper minerals and water, is produced at the Concentrator facility located near Superior and will be transported via pipelines from the Concentrator to this Property. This pipeline will be located within the existing disturbed Magma Arizona Rail Road Company ("MARRCO") right-of-way. Upon arrival at the Transfer Facility, the concentrate will be directed to the "Filter Plant" Building where the excess water is removed or filtered from the concentrate. The excess water is then collected and stored in tanks and then pumped back up the MARRCO for reuse in the Concentrator



near Superior. Once filtered in this entirely enclosed on site building, the copper concentrate will be placed on a conveyor belt and delivered to the adjacent building called the "Load Out Building". Inside the Load Out Building, concentrate will be stored and loaded into railroad cars *inside* the building. The entire process occurs in enclosed buildings. After the railcars are loaded with the copper concentrate, they travel on the MARRCO to the Union Pacific Railroad ("UPRR") which then transports the concentrates to off-site smelters.

2.0 Existing Conditions and Zoning

The Property consists of two parcels totaling 559.88 acres in Pinal County.

The first parcel ("Parcel 1") identified by the Assessor's office as Assessor's Parcel Number ("APN") 210-34-022A is 559.06 acres and currently vacant land that has been previously disturbed. It is located on the north side of Skyline Drive and is adjacent to the MARRCO railroad line. This property was previously rezoned to allow for a planned residential community which is evidenced by initial stages of grading of the land. We can only assume that the previous plans for the property were halted due to the severity of the real estate market crash. The property was since purchased by Resolution Copper due its proximity to the MARRCO rail line.

The second parcel, APN 210-34-022B, ("Parcel 2") is less than one acre of vacant land located on the south side of the MARRCO railroad tracks.

The Property is surrounded by vacant desert land mostly owned by the Arizona State Land Department ("ASLD") and is over a mile from the nearest development of any kind. There is 77 acres of privately owned land on the northwest corner of the Property which is zoned CR-3/PAD however it is currently



vacant land. Resolution Copper has spoken with the private property owner who conveyed that he had no current plan to develop this parcel. More recently, the Applicant's representative was contacted by Stacy Brimhall who is considering the purchase of the 77 acres of private property. The Applicant's representative met with Mr. Brimhall and explained that the Resolution Copper site has been contemplated for Industrial/Employment uses for many years due to its proximity to the MARRCO rail line and showed him the detailed plans. Mr. Brimhall expressed several suggestions on how to potentially insulate the 77 acres that he is considering to purchase from any impacts and the Applicant is currently reviewing some of these suggestions. Salt River Project ("SRP") owns approximately three acres along the Property's western boundary line and there is a 69 kV transmission line that run along the boundary. This Property is currently zoned CR-3 and CB-2 which allows Single Family Residential mixed with General Business uses. Pinal County recently approved a Comprehensive Plan Amendment which designates this entire Property as Employment. In order to bring the Property into full compliance with the existing Employment land use designation, the Applicant is respectfully requesting Pinal County to rezone the Property to I-3 PAD.

[3.0 Proposed Zoning](#)

As described above, the proposed future use of the Property is to operate a Copper Concentrate Transfer Facility to be used in conjunction with the Concentrator near Superior. As previously mentioned, the request proposes to rezone the property to I-3 PAD which is consistent with the recently approved Comprehensive Plan Amendment re-designating the Property as Employment. The PAD Overlay Zoning District will provide the flexibility in design standards necessary for the operation of the proposed Transfer Facility and associated rail



loop. This Facility will be expected to operate for the sole purpose of providing an integral supplemental service to the Concentrator near Superior and allow transportation of copper concentrate via rail to off-site processing facilities. Thus, the Filter Plant and Load Out Buildings must be specifically designed for the storage and transportation of the copper concentrate utilizing the MARRCO rail line. The PAD Overlay Zoning District will provide the flexibility needed for the design of the Transfer Facility, while also allowing for redevelopment and re-use of an existing disturbed area. Approval of this application will allow the Property to be utilized for the most appropriate type of use based on its location on the rail line. As previously stated, this Property is isolated by vacant land and is adjacent to the MARRCO railroad, an industrial use. It is helpful to note that the Property has been identified in the Pinal County approved vision of the Superstition Vistas Planning Area as an Employment Corridor due to its convenient location along the MARRCO railroad line. In addition, the Planning & Zoning Commission and Board of Supervisors approved a Major Comprehensive Plan Amendment to allow for Employment Use on October 15, 2014. As such, this proposed use will maintain the integrity and character of the Industrial zone as it is being located in the envisioned Employment Corridor. Concentrate filtration, storage and load-out activities will be conducted within enclosed buildings to reduce and minimize noise and potential air emissions (i.e. dust). As such there will be no significant negative impact on the surrounding area by allowing the operation of the Copper Concentrate Transfer Facility at this location. The closest existing development of any kind is over a mile away from the proposed site and the vacant land that surrounds this site is completely fenced off with "No Trespassing" signs posted.

The proposed Transfer Facility will meet or exceed all of the Development Standards for the I-3 Zoning District outlined in Section 2.340 of the Pinal County



Zoning Ordinance with the exception of the maximum building height as indicated below.

I-3 Industrial District Development Standards		
	<u>Required Setback</u>	<u>Proposed Setback</u>
Front yard	50'	85'
Side yard (west side)	50'	85'
Side yard (east side)	50'	50'
Rear yard	50'	50'
Max. Building Height	50'	112'

[4.0 Amended Permitted Use List](#)

As suggested by County staff below is the amended list of permitted uses for the Property. The following uses will be allowed under this I-3 PAD request:

A. Gasoline or flammables bulk station, provided said products, butane, gasoline, petroleum, or propane shall:

1. Be located not less than 25 feet from building or lot line or similar tanks; be located no closer than 100 feet from any residential zone; and
2. Liquefied petroleum gases (LPG) bulk station shall be designed, constructed and maintained in compliance with provisions of National Fire Protection Association (N.F.P.A.) Standards No. 58.



- B. Government structures, fire district stations, sheriff's facilities and their accessory uses.
- C. Manufacture, maintenance, assembling, painting, upholstery, compounding, processing, packaging, loading, transferring, or any other treatment or transport operations associated with resolution copper's mining operation
- D. Water pump station
- E. Public utility substation
- F. Wireless communication facilities, subject to the requirements set forth in Chapter 2.205 PCDSC.
- G. Some uses are allowed in all zoning districts based on statutory exemptions (see PCDSC 2.05.050) or because a governmental entity or governmental agency is performing a governmental function.
- H. Heavy truck storage, repair, service, staging and point of operation for trucking operations and their accessory equipment. [Ord. PZ-C-003-12 § 10; Ord. 011812-ZO-PZ-C-007-10 § 49].

[5.0 Amended Prohibited Use List](#)

As suggested by County staff below is the amended list of prohibited uses for the Property. The following uses will not be allowed under this I-3 PAD request:

- A. Adult-oriented businesses and adult service providers, subject to the requirements set forth in Chapter 2.190 PCDSC.
- B. Airport or landing strip; provided, that:
 - 1. The site is a minimum of 160 acres; and

2. The runway is a minimum of 600 feet from any site boundary.

C. Heliport.

D. Impounded or towed vehicle storage yard; provided, that:

1. The site is enclosed by an eight-foot tall solid masonry wall;

2. There is no stacking of vehicles.

E. Junk, salvage or auto wrecking yards.

F. Landfill and transfer stations.

G. Power plants, wastewater treatment plants and ancillary offices and buildings.

H. Prisons, detention facilities and their accessory uses.

I. Private schools.

J. Restaurant.

1. No larger than 1,000 square feet total interior space;

2. No more than 100 square feet exterior seating;

3. No alcoholic beverage service; and

4. No live entertainment.

K. Sports arena.

L. Vocational schools.

[6.0 Conformance with Comprehensive Plan](#)



This Rezoning request follows a Comprehensive Plan Amendment that was unanimously approved re-designating the Property as entirely Employment. Rezoning this Property to the PAD Overlay Zoning District will bring the entire property into Conformance with the Comprehensive Plan and allow the proposed Copper Concentrate Transfer Facility to function as an integral part of the overall Mine operation near Superior.

Granting this Application will permit Resolution Copper to construct and operate an essential Transfer Facility, which will allow for the transfer of copper concentrate off site for further processing and to market. Further, rezoning this Property as an I-3 PAD aligns with the industrial use of the adjacent MARRCO railroad tracks, near the future North/South Freeway alignment, and surrounded by vacant desert land mostly owned by ASLD. It has been previously disturbed with the presence of 69 kV transmission lines located across the property. The proposed operation of the Transfer Facility has been designed to minimize impacts to the surrounding area. There will be no hazardous gases or liquids used or produced on site and filtration, storage and off-loading activities will be conducted within enclosed buildings on the Property. The Applicant had worked very closely with the East Valley Partnership Planning ("EVP") Team on the creation of the Superstition Vistas Planning Area which was approved by the Pinal County Board of Supervisors.

[7.0 Conformance with Section 2.176.070.A: PAD Criteria and elements for Consideration](#)

The proposed Transfer Facility complies with all of the consideration and approval determination criteria for a PAD outlined in the Zoning Ordinance and as follows:

1. The proposed development is consistent with the goals and objectives and policies of the Comprehensive Plan and the requirements of this chapter. As stated above, this rezoning request combined with the recently approved Comprehensive Plan Amendment which unified this Property under one land use designation and allow the Property to be utilized as an Industrial type of use in a designated Employment Corridor.
2. The arrangement of all uses and improvements reflect the natural capabilities and limitations of the site as well as the characteristics and limitations of adjacent properties. This location is well suited for the operation of a Copper Concentrate Transfer Facility based on its proximity to the MARRCO rail line. Extension of rail line onto the Property is ideal as it is surrounded by vacant land mostly owned by Arizona State Land Department. Construction of the Transfer Facility will have no detrimental impact on the surrounding adjacent properties. The buildings used for the operation of the Transfer Facility will be architecturally designed to complement the surrounding desert. Additionally, the Applicant will provide a substantial buffer to insulate the 77 acres of privately owned vacant land along the western property line from any potential impacts from the proposed use.
3. The development is compatible with the uses of adjacent properties. The Property is basically isolated by thousands of acres of vacant desert land owned mostly by Arizona State Land Department. While the majority of

the land surrounding the Property is vacant desert the 77 acres adjacent to the northwest of the site is vacant private land which is zoned to allow a residential master planned community. As previously mentioned, the Applicant's representative was recently contacted by Stacy Brimhall who is considering the purchase of the 77 acres. The Applicant's representative met with Mr. Brimhall and explained that the Resolution Copper site has been contemplated for Industrial/Employment uses for many years due to its connection to the MARRCO rail line and showed him the detailed plans. Mr. Brimhall expressed several suggestions on how to potentially insulate the 77 acres that he is considering to purchase from any impacts from the proposed use and the Applicant is currently reviewing some of these suggestions. Furthermore, the Applicant will be providing a substantial buffer along the western property line as well as ensure that all operations occur far away from the 77 acres of private residentially zoned land. The proposed Transfer Facility is not a noxious use of any kind. All operations will be conducted within enclosed buildings in order to eliminate any impacts on the surrounding properties whatsoever.

Additionally, the proposed site is ideally located adjacent to the MARRCO rail line which makes it the perfect location for Resolution Copper's Transfer Facility as the Copper Concentrate solution will be transported from the main mine location in Superior using an underground pipeline to be constructed in the MARRCO right of way easement along the railroad tracks.

4. Since this is an industrial type use there are no planned neighborhoods for this project. Therefore, open space connectivity does not apply.

5. The proposed Transfer Facility has plans for adequate facilities for water, sewer, storm water and streets. There will be a three million water storage basin located on the Property in order collect, store and reuse and recycle water and storm water for mine related operations.
6. The Property location is well suited for the operation of an Industrial use of this type. The Property is isolated by thousands of acres of vacant desert land and located adjacent to the MARRCO rail line which plans to be a major transportation component in the operation of the Transfer Facility. Also, the proposed use as a Transfer Facility is harmonious with the existing conditions of the adjacent properties and is not a noxious use of any kind. Finally, Resolution Copper will be acquiring all the necessary permits to allow the operation of the proposed Transfer Facility.
7. The proposed use will be accessed from Skyline Drive which is a paved street. This street is more than adequate to handle the minimal traffic created by the Transfer Facility. There will be no retail or pedestrian traffic to and from the site. During operations, the only people accessing the site will be employees of the Transfer Facility as well as vendors and/or delivery trucks.
8. All of the structures designed and used for the operation of the Transfer Facility will have paved access. Employees will utilize a paved secure entrance way off of Skyline Drive. This entrance way will lead the vehicles to a parking lot located along the northern boundary line. No screening will be required as the parking lot is located over 600 feet from the northern boundary line.

9. The proposed PAD will comply with all of the open space requirements for an Industrial type use of this nature. A Multi-use trail corridor has been identified by staff on the southern side of the MARRCO rail line which is located on Parcel 2. At this time, Resolution Copper has no plans for any type of construction on Parcel 2 and will ensure that any future plans on this parcel will accommodate this proposed Multi-use corridor.

10. This item does not apply to a PAD for an Industrial type of use.

[8.0 Recent Changes in the Area that Would Support Request](#)

In 2011, Resolution Copper worked very closely with Pinal County and members of the EVP's Planning Team to develop an ideal vision for the Superstition Vistas Planning Area in order to protect the pristine desert character, breath-taking views and provide guidance for the inevitable future development. It was collaboratively decided that the proposed Copper Concentrate Transfer Facility is an acceptable use in this area based on its location. It is adjacent to the MARRCO railroad line, surrounded by vacant land and located within an Employment Corridor that was identified in the Superstition Vistas project (and by the Pinal County Board of Supervisors).

The nearest North/South Freeway Alignment Option is located approximately three miles to the west of the proposed Transfer Facility location. The proposed use will have no negative impact on the future Freeway Alignment. In fact, the future Freeway Alignment will provide access to the Transfer Facility for future employees. The Property is located on the north side of Skyline Drive which is a paved and striped roadway; however, Skyline Drive does not continue past the MARRCO railroad tracks. Therefore, Skyline Drive is currently the only vehicular



access to and from the proposed Transfer Facility site and will, of course, be improved as required by the Pinal County public works department in the course of development.

[9.0 Proposed Rezoning is Necessary and Needed](#)

The proposed Amendment is necessary and needed to enable Resolution Copper's proposed mine operation to function efficiently and effectively. As discussed above, Resolution Copper must have a way to filter and transport the copper concentrate off site and must have the ability to transport concentrate to the Union Pacific Railroad for distribution to off-site processing facilities.

Additionally and most importantly, this Rezoning is necessary and needed to bring the Property into conformance with the recently amended Comprehensive Plan. This Application is being filed to rezone the Property to I-3 PAD to allow for a specific Industrial use; thus bringing the entire Property into conformance with the recently amended Comprehensive Plan land use designation of Employment and allowing it to function as the Employment Corridor envisioned and identified by Superstition Vistas Planning Area.

[10.0 Location and Accessibility](#)

Parcel 1 is located on the MARRCO railroad line in Pinal County and surrounded by Arizona State Land. It is on the north side of Skyline Drive, east of Attaway Road and west of Highway 79 and the MARRCO railroad line abuts the southeast corner of the Property.

Parcel 2 is located in the same vicinity as Parcel 1. It is less than an acre that is located on the northeast corner of Parcel 1, on the south side of the MARRCO railroad line. See [Exhibit 2 – Parcel Map](#).

As previously mentioned, these parcels are surrounded by vacant desert land, mostly owned by the Arizona State Land Department. Skyline Drive is the only paved access road that leads to the Property; however, it is currently closed by a locked gate just east of Laine Road. Upon approvals of both the Comprehensive Plan Amendment and Rezoning applications, Skyline Drive will serve as the main access road to and from the Transfer Facility and will be improved according to Pinal County standards. The only other access to the Property that currently exists is the MARRCO railroad line. This rail line will serve the Transfer Facility by providing the transportation of the filtered copper concentrate in rail cars to the Union Pacific Railroad line for distribution to off-site smelter plants.

[11.0 Traffic and Circulation](#)

The proposed Transfer Facility will have minimal vehicular traffic as this is not a commercial/retail use with patrons coming and going throughout the day. During operations, the only vehicles accessing this facility will be employees and occasional vendors and delivery trucks. Vehicles will enter the Property at the secured main entrance located at the southwest corner of the Property. Parking will be provided along the northern boundary line in the rear of the Property. Again, the Applicant does not anticipate any issues with traffic as the only vehicles accessing the Property will be employees of the Facility. Please see [Exhibit 3 – Site Plan](#) for detailed circulation plan.

12.0 Environmental Permits and Compliance with Federal, State, and Local Regulations

Resolution Copper will comply with all Federal, State, and Local Regulations and are in the process of obtaining all necessary permits. This operation will be among the most well regulated in the county and the state.

Before any commercial ore extraction or processing begins, an approved mine plan must be obtained from the United States Forest Service ("USFS") as well as dozens of federal, state and county permits and approvals. The USFS decision must comply with the National Environmental Policy Act ("NEPA"), which requires that an Environmental Impact Statement ("EIS") be completed before a final mine plan is approved and record of decision is granted.

Specifically, NEPA requires:

- Appropriate environmental protection and mitigation measures to be identified, considered and applied before a federal agency makes a decision. This includes rigorous water studies and substantive plans for protection of groundwater, surface water, recreation and cultural resources. Resolution will be accountable for implementing these measures.
- A final reclamation plan along with financial assurance – it is the law. Resolution will be required to cover all closure costs (facility demolition and rehabilitation) and post-closure monitoring, not taxpayers.
- Compliance with all relevant rules and regulations including the Clean Air Act, Clean Water Act, the Safe Drinking Water Act and

the Endangered Species Act for protection of public and environmental health and safety and biological resources. This is the law.

13.0 Public Utilities

Water: Potable water will be supplied to the Transfer Facility from the Arizona Water Company off site water system along the MARRCO Corridor.

Sewer: Wastewater from the facility will be routed to an on-site septic tank and leach field.

Electricity/Gas: The project's power source comes from Abel Sub-Station owned and operated by Salt River Project ("SRP"). This substation provides a power line to the Property and is more than sufficient to support the Transfer Facility's proposed operation.

The Applicant will be responsible for the extensions of any other services necessary for the operation of the proposed Transfer Facility at this location. At this time there are no agreements with any of the public utility companies as development for this project may be a decade away. This facility is one component of the overall Superior mine operation and the process of obtaining approvals/permits from state as well as federal agencies takes years.

14.0 Infrastructure

The infrastructure necessary to support operations of the Transfer Facility are already in place or will be before operations begin, which is yet another reason

that the Property is the ideal site for the project. The MARRCO right-of-way provides a path for the pipelines that transports the copper concentrate to the Transfer Facility, allowing for reuse of existing disturbed areas and thus reducing the need for a large amount of new disturbance. Once the copper concentrate reaches the Transfer Facility and the excess water is removed, the copper concentrate is loaded into railroad cars on the MARRCO rail line, which ties into the Union Pacific Railroad for transportation for off-site processing.

The project also provides for its own water infrastructure by capturing storm water onsite and recovering and reusing as much water as practical. Therefore, it provides for its own water needs and has its own infrastructure to support its water needs and store captured and re-used water.

14.1 Filter Plant Building

The proposed Filter Plant Building will house the main filtration operation. The copper concentrate will be piped to the Property in a pipeline which will bring it to the Transfer Facility located in the northern portion of the site. Upon arrival at the Transfer Facility the concentrate dewatered at the Filter Plant Building. The copper concentrate will then be placed on a conveyor to be sent to the adjacent Load Out Building for storage and transport via rail.

14.2 Load Out Building

Once the filtered material arrives at the proposed Load Out Building, it will be stored and then loaded into rail cars within an enclosed building. The

rail cars will then transport the material to the Union Pacific Rail line where it can be transported to off-site smelter facilities.

14.3 MARRCO Railroad Loop

Construction of additional railway will provide rail access onto the Property from the main MARRCO rail line. Rail cars will access the Transfer Facility in a simplistic loop formation, entering the Property and buildings from the east and exiting toward the west where the rail cars can reconnect with MARRCO Rail line and transport the filtered copper concentrate to the Union Pacific Rail line.

14.4 Water Storage/Reuse Basin

A three million gallon storage water tank will be constructed at the southeast corner of the property over 375 feet from Skyline Road. This water tank will store CAP water and well water in addition to the filtrate water from concentration filtration and storm water to be recycled and reused for onsite operations. This water will be pumped back up to the Concentrator in Superior mine using pump stations.

14.5 SRP Substation

The power supply for the Transfer Facility will be double-circuit 69-kV power lines on tubular steel poles. The 69-kV power lines will run approximately 4.7 mi (7.6 km) to the Transfer Facility from the existing Abel substation near the CAP canal crossing of the MARRCO Corridor. A new 69-kV substation will be located at the Filter Plant and Load Out Facility. Electrical transmission lines will run from the MARRCO Corridor along the eastern side of the site to the substation. From the substation, the power

supply will be distributed via the on-site electrical grid to serve the electrical loads for all equipment.

15.0 Landscaping and Signage

Appropriate landscaping and fencing will be utilized to insulate the Transfer Facility from neighboring properties. The proposed fencing will satisfy staff's comments by including a 6 foot high solid wall along the boundary adjacent to CR-3 zoned property as well as along Skyline Road. Additionally, a 6 foot high chain link fence will be installed along the remaining perimeter of the Property. Chain link material is preferred for this project in order to allow run off water to pass through with ease unlike a solid wall.

To further enhance the buffer along the western and southern property lines, the Applicant is providing an extremely generous setback buffer of 85 feet, only 50 feet is required. There shall be no structures within this proposed setback other than the solid wall and natural desert vegetation. In addition to the existing desert vegetation, Resolution Copper will utilize a native seed mix consistent with the Sonoran desert landscape including the relocation of displaced cacti on the Property. This will visually enhance the solid wall along Skyline Road. Below in Table 1 is the list of native plant species that may be utilized to enhance the existing desert landscaping.

Table 1. List of Native Plant Species Noted within the Survey Area

Native Plant Species Common Name	Native Plant Species Scientific Name
White-thorn acacia	<i>Acacia constricta</i>
Catclaw acacia	<i>A. greggii</i>
Triangle-leaf bursage	<i>Ambrosia deltoidea</i>
Canyon ragweed	<i>A. ambrosioides</i>
Desert broom	<i>Baccharis sarothroides</i>
Saguaro	<i>Carnegeia gigantea</i>
Desert hackberry	<i>Celtis pallida</i>
Blue paloverde	<i>Cercidium floridum</i>
Foothill paloverde	<i>C. microphyllum</i>
Brittlebush	<i>Encelia farinosa</i>
Hedgehog cactus	<i>Echinocereus fasciculatus</i>
Mormon tea	<i>Ephedra</i> sp.
Barrel cactus	<i>Ferocactus</i> sp.
Ocotillo	<i>Fouquieria splendens</i>
Burroweed	<i>Isocoma tenuisecta</i>
Creosotebush	<i>Larrea tridentata</i>
Wolfberry	<i>Lycium</i> sp.
Pincushion cactus	<i>Mammillaria</i> sp.
Wait-a-minute bush	<i>Mimosa biuncifera</i>
Ironwood	<i>Olneya tesota</i>
Engelmann's prickly pear	<i>Opuntia engelmannii</i>
Chainfruit cholla	<i>O. fulgida</i>
Christmas cholla	<i>O. leptocaulis</i>
Cane cholla	<i>O. spinosior</i>
Mesquite	<i>Prosopis velutina</i>
Jojoba	<i>Simmondsia chinensis</i>
Greythorn	<i>Ziziphus obtusifolia</i>

As you will see on the attached Site Plan, the Applicant is providing significant industrial setbacks along all property lines. These generous setbacks will provide more than ample buffer that will eliminate any concerns of potential impacts from the proposed facility to neighboring properties. The parking lot is more than 600 feet from the northern property line with the Transfer Facility buildings over 800 feet from the property line. The closest structure to the residentially zoned property to the west is a water basin that is 704 feet from the west property line with the Transfer Facility buildings nearly 1,400 feet from the western boundary. Please note that the proposed use of a Transfer Facility is not a noxious use. All filtering, processing and loading operations will occur within the enclosed buildings on the site. The massive size of this Property creates its own natural



buffer along the entire perimeter of the site from adjacent surrounding properties resulting in absolutely no negative impacts whatsoever.

Appropriate signage will be displayed at the secured main entrance to the Transfer Facility. There will be one sign at the main entrance of the Property accessed by Skyline Road to identify the facility and direct vehicular traffic. This sign will meet all of the county's sign regulations.

As mentioned above, all landscaping, fencing and signage will meet the standards identified in Pinal County's Zoning Ordinance.

16.0 Public Participation

The Applicant mailed out the required Notification letter to all property owners within 1,200 feet of the proposed site informing them of the proposed Copper Concentrate Transfer Facility. A Neighborhood meeting was held on June 30, 2014 at a nearby church in order to discuss both the recently approved Comprehensive Plan Amendment and this Rezoning application for the operation of the Transfer Facility with interested parties, answer questions and address any concerns. There were no attendees at the neighborhood meeting; however, the Applicant had phone conversations and email exchanges with the only other private property owner, Kam Talebi. His property is vacant land located on the northwest corner of Parcel 1 which is currently zoned for residential development. The Applicant has had several email correspondences with Mr. Talebi regarding the purchase/sale of the 77 acres of private land. Most recently, the Applicant's representative has been contacted by Stacy Brimhall who is looking to purchase the neighboring 77 acres. Our team has clearly explained to Mr. Brimhall that the Comprehensive



Plan does not permit residential development on the project site and it is fully intended to be developed for Industrial/Employment uses specifically to serve as a Transfer Facility for the Resolution Copper mining operation near Superior. As you will see on the Site Plan, the Applicant will provide a significant buffer, over 700 feet from the nearest structure to the adjacent residentially zoned property to the immediate west of the site.

The Applicant has every intention of continuing to work through any and all realistic issues and concerns raised by this application.

[17.0 Arizona State Land Department](#)

Arizona State Land Department (“ASLD”) has had no opposition to the proposed project. In fact, ASLD has been very helpful all along the way as this is a project that the state would like to see move forward due to the positive economic impact the overall mine operation will have on Pinal County.

[18.0 Timing of Development](#)

As briefly discussed above, this proposed facility is just one component of Resolution Copper’s overall Superior mine operation and the process of obtaining approvals/permits from state as well as federal agencies takes years. Resolution Copper needs to navigate through many comprehensive environmental reviews in order to obtain 50+ various approvals/permits before any kind of construction can begin. This contentious permitting process can take between five to ten years. The Applicant is predicting that the construction of the proposed Transfer Facility is approximately more than a decade away.



19.0 Conclusion

Rezoning this Property to I-3 PAD, in conjunction with the recently approved Comprehensive Plan Amendment to expand an existing Employment designation to cover an entire unified parcel of previously disturbed private property, will bring this Property into conformance and allow it to function in harmony with the existing MARRCO industrial use and Employment corridor envisioned and identified in the Superstition Vistas Planning Area. Approval of this rezoning request will allow the future operation of an essential component of the overall Superior mine operation. Once the entire mine operation is approved and functional, Resolution Cooper is expected to have an economic value of \$61.4 billion over 60 years (the estimated life of mine), including billions in tax revenue to Pinal County over the life of the project.

Resolution Copper appreciates Pinal County's consideration of this Rezoning Application.



December 1, 2014

Jordan Rose
Rose Law Group pc
7144 E. Stetson Drive, #300
Scottsdale, AZ 85251

RE: Planning Cases: PZ-PA-005-14

Dear Ms. Rose:

This letter is to inform you that the above referenced matter has been **APPROVED** by the Pinal County Board of Supervisors on October 15, 2014.

Enclosed is a copy of the **Resolution**, signed by the Board of Supervisors, as recorded by Fee No.: 2014-060282 in the Pinal County Recorder's Office.

Upon receipt of this letter, please contact the Pinal County Planning & Development Department to confirm validation of PZ-PA-005-14 or obtain further approval(s) or permits as may be required.

Thank you for your cooperation in this matter.

Sincerely,

Evan Balmer, Planner I
Pinal County
Community Development

Enclosure

xc: File

COMMUNITY DEVELOPMENT
PLANNING DIVISION



**OFFICIAL RECORDS OF
PINAL COUNTY RECORDER
VIRGINIA ROSS**

**When recorded mail to:
Board of Supervisors
P.O Box 827
Florence, AZ 85232**

**DATE/TIME: 10/20/2014 1348
FEE: \$0.00
PAGES: 4
FEE NUMBER: 2014-060282**



(The above space reserved for recording information)

RESOLUTION NO. PZ-PA-005-14

DOCUMENT TITLE

DO NOT DISCARD THIS PAGE. THIS COVER PAGE IS RECORDED AS PART OF YOUR DOCUMENT. THE CERTIFICATE OF RECORDATION WITH THE FEE NUMBER IN THE UPPER RIGHT CORNER IS THE PERMANENT REFERENCE NUMBER OF THIS DOCUMENT IN THE PINAL COUNTY RECORDER'S OFFICE.

When recorded mail to:
Board of Supervisors
P.O. 827
Florence, AZ 85232

RESOLUTION NO. PZ-PA-005-14

**A RESOLUTION OF THE PINAL COUNTY BOARD OF SUPERVISORS ADOPTING
AN AMENDMENT TO THE PINAL COUNTY COMPREHENSIVE PLAN FOR THE
UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA**

WHEREAS, pursuant to A.R.S. § 11-805, the Pinal County Board of Supervisors has authority to subsequently amend the County Comprehensive Plan; and

WHEREAS, the statutory required 60 day review and comment period was completed, notice of public hearing on the requested amendment to the County Comprehensive Plan was published according to statutory requirements, a public hearing held by the Planning and Zoning Commission, and recommendation made by the Planning and Zoning Commission; and

WHEREAS, notice of the public hearing on the requested amendment to the County Comprehensive Plan was published according to statutory requirements, a public hearing held by the Board of Supervisors, and the requested amendment considered by the Board of Supervisors.

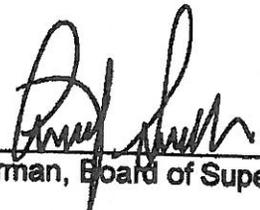
NOW, THEREFORE, BE IT RESOLVED: That the Pinal County Board of Supervisors hereby amends the Pinal County Comprehensive Plan for the unincorporated area of Pinal County, Arizona, by changing the land use map designation from MODERATE LOW DENSITY RESIDENTIAL to EMPLOYMENT on approximately 339± acres located in Pinal County, Arizona, described as follows:

LEGAL DESCRIPTION IS ATTACHED HERETO AS EXHIBIT "A"

BE IT FURTHER RESOLVED, that this amendment shall take effect thirty-one (31) days from and after the date of this Resolution.

PASSED AND ADOPTED this 15th day of October, 2014, by the PINAL COUNTY BOARD OF SUPERVISORS.




Chairman, Board of Supervisors

ATTEST:


Clerk of the Board

Exhibit A

PARCEL NO. 1:

LOTS 1, 2 AND 3 AND THE SOUTH HALF OF THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 3 TOWNSHIP 3 SOUTH, RANGE 9 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA,

PARCEL NO. 2:

THE SOUTH HALF OF SECTION 3, TOWNSHIP 3 SOUTH, RANGE 9 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA;

EXCEPT THAT PORTION OF THE MAGMA ARIZONA RAILROAD RIGHT-OF-WAY AS DESCRIBED AS BOOK 51 OF DEEDS, PAGE 645, AND THEREAFTER AFFIDAVIT OF CORRECTION RECORDED NOVEMBER 1, 2002 IN RECORDING NO. 2002-059993 OF OFFICIAL RECORDS.

EXCEPT THAT PORTION OF WELL SITE DESCRIBED AS FOLLOWS;

THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 3, TOWNSHIP 3 SOUTH, RANGE 9 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCING AT THE 1.5 INCH PIPE AT THE SOUTHEAST CORNER OF SAID SECTION 3, FROM WHICH A 3/4 INCH PIPE AT THE SOUTHEAST QUARTER CORNER OF SAID SECTION 3 BEARS NORTH 89 DEGREES 42 MINUTES 07 SECONDS WEST (AN ASSUMED BEARING) AT A DISTANCE OF 264 1. 14 FEET;

THENCE NORTH 89 DEGREES 42 MINUTES 07 SECONDS WEST, ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 3, FOR A DISTANCE OF 635.95 FEET TO A POINT ON THE NORTHWESTERLY RIGHT OF WAY LINE OF THE MAGMA ARIZONA RAILROAD, AS DESCRIBED IN BOOK 1 OF DEEDS, PAGE 645, AND THEREAFTER AFFIDAVIT OF CORRECTION RECORDED IN DOCUMENT NO. 2002-059993 OF OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA;

THENCE NORTH 52 DEGREES 52 MINUTES 39 SECONDS EAST, ALONG SAID RIGHT OF WAY LINE. FOR A DISTANCE OF 103.68 FEET TO A POINT ON THE NORTH LINE OF THE SOUTH 63.00 FEET OF THE SOUTHEAST QUARTER OF SAID SECTION 3, SAID POINT BEING THE POINT OF BEGINNING;

THENCE NORTH 89 DEGREES 42 MINUTES 07 SECONDS WEST, ALONG SAID NORTH LINE. FOR A DISTANCE OF 197 48 FEET.

THENCE NORTH 52 DEGREES 52 MINUTES 39 SECONDS EAST FOR A DISTANCE OF 306.84 FEET;

THENCE SOUTH 37 DEGREES 07 MINUTES 21 SECONDS EAST FOR A DISTANCE OF 120.00 FEET TO A POINT ON SAID NORTHWESTERLY RIGHT OF WAY LINE OF THE MAGMA ARIZONA RAILROAD,

THENCE SOUTH 52 DEGREES 52 MINUTES 39 SECONDS WEST, ALONG SAID RIGHT OF WAY LINE. FOR A DISTANCE OF 150.00 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 3:

A PERPETUAL RIGHT-OF-WAY EASEMENT ALONG THE FOLLOWING:

THE NORTH 10.00 FEET OF THE SOUTH 50.00 FEET OF SECTION 1, TOWNSHIP 3 SOUTH, RANGE 8 EAST OF THE GILA AND SAL T RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA;

AND THE FOLLOWING SECTIONS LOCATED IN TOWNSHIP 3 SOUTH, RANGE 9 EAST, GILA AND SAL T RIVER BASE AND MERIDIAN. PINAL COUNTY,

THE SOUTH 25.00 FEET OF SECTION 4; THE SOUTH 25.00 FEET OF SECTION 5;

THE SOUTH 25.00 FEET OF LOT 7, THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER AND SOUTHEAST QUARTER OF SECTION 7;

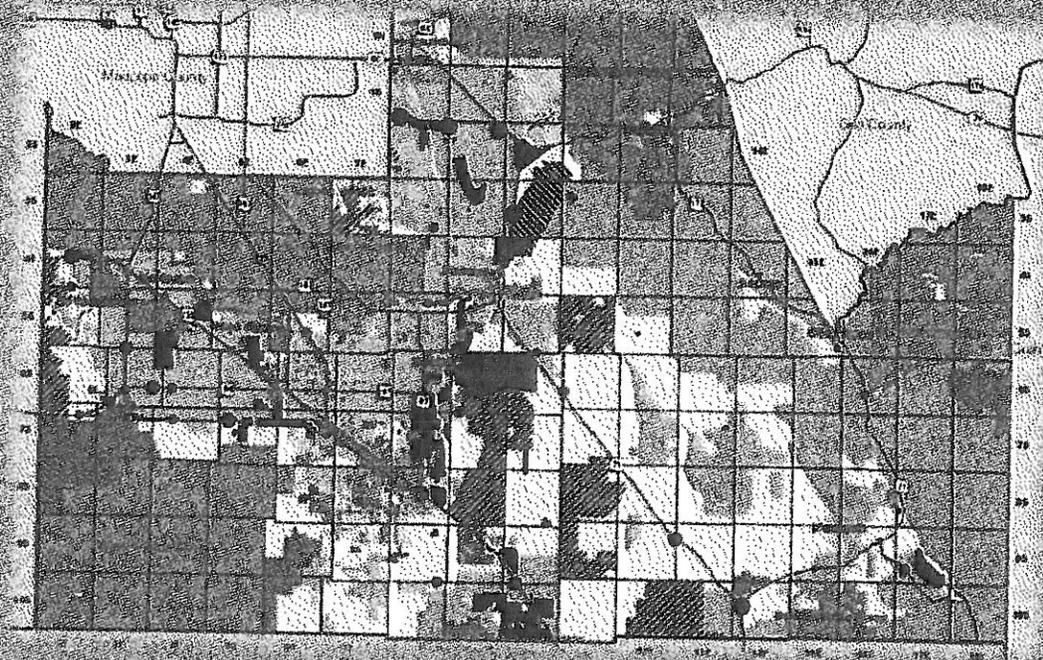
THE NORTH 25 FEET OF LOT 1, THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER AND THE NORTHEAST QUARTER OF SECTION 7;

THE NORTH 25.00 FEET OF NORTHEAST QUARTER OF SECTION 8; THE NORTH 25.00 FEET OF SECTION 9;

THE NORTH 25.00 FEET OF WEST 50.00 FEET OF SECTION 10;

AND THEREAFTER ASSIGNMENT OF RIGHT-OF-WAY RECORDED IN FEE NO. 2004-065196.

Pinal County Comprehensive Plan Amendment



Prepared for:



Prepared by:



Submitted June 6, 2014
Revised July 1, 2014

1.0 Introduction and Background

Resolution Copper Mining, LLC ("Resolution") is working to develop one of the largest undeveloped copper deposits in the world in the area of the former Magma Copper Mine near the Town of Superior, Arizona. Resolution is expected to have an economic value of \$61.4 billion over 60 years (the estimated life of mine), including billions in tax revenue to Pinal County over the life of the project.

Before any commercial ore extraction or processing begins, an approved mine plan must be obtained from the United States Forest Service ("USFS") as well as approximately 50 federal, state and county permits and approvals. The USFS decision must comply with the National Environmental Policy Act ("NEPA"), which requires that an Environmental Impact Statement ("EIS") be completed before a final mine plan is approved and record of decision is granted.

If the project is approved, it is expected to become the largest copper producer in North America and one of the largest in the world, with the capacity to supply more than a quarter of the nation's current demand for copper and provide employing thousands of people from throughout the region during construction and operations.

The request contained in this Application for Major Amendment to the Pinal County Comprehensive Plan (the "Application") is an integral part of Resolution Copper's proposal and represents a necessary component of the mine's success.

The entire Property is well suited for Employment designation and is located directly adjacent to the existing Magma Rail line north of the municipal boundaries of the Town of Florence in Pinal County. The proximity and access to the rail line make the Property well suited for economic development and positions it as an employment center. This Application is being made as one of the numerous permits and approvals required to bring the mine, located in Superior, Arizona to fruition. We want to be abundantly clear up front, this use is NOT a smelter and is NOT a

noxious use of any kind. As described below, the use is enclosed to minimize and limit emissions and impacts to the site and surrounding area and is for the purpose of loading copper concentrate into rail cars for additional processing off site.

During ore processing, a mixture of copper minerals and water, called concentrate is produced. Copper concentrate, will be transported via pipelines from the mine and concentrator facilities in Superior to this site. This pipe will be located within the existing disturbed Magma Arizona Rail Road Company (MARRCO) right-of-way. Upon arrival at the facility, known as a Transfer Facility, the excess water is removed or filtered from the concentrate and collected and stored in tanks and pumped back up the MARRCO for reuse in the processing facilities in Superior, Arizona. Once filtered, the copper concentrate will be conveyed to the adjacent concentrate Load out Facility. At the Load out Facility, concentrate will be stored and loaded into railroad cars *inside* the facility. This entire process occurs in an enclosed building. After the railcars are loaded with the copper concentrate, they travel on the Magma Railroad to meet up with Union Pacific Rail Road ("UPRR") and then to an off-site smelter.

2.0 Existing Land Use

Resolution Copper owns two parcels totaling 558.92 acres in Pinal County (the "Property").

The first parcel ("Parcel 1") identified by the Assessor's office as Assessor's Parcel Number ("APN") 210-34-022A is 558.1 acres and currently vacant land that has been previously disturbed. It is located on the north side of Skyline Drive and is adjacent to the Magma Railroad line.

The second parcel, APN 210-34-022B, ("Parcel 2") is less than one acre (0.82 acres) of vacant land and located on the south side of the Magma Railroad tracks.

The Property is surrounded by vacant desert land mostly owned by Arizona State Land Department ("ASLD") and is over a mile from the nearest development of any kind. There is some privately owned land on the northwest corner of the Property. Salt River Project ("SRP") owns approximately 3 acres along the Property's western boundary line and there is a 69 kV transmission line that run along the boundary.

The existing Comprehensive Plan Land Use Map identifies Parcel 1 as a mixture of two land use categories: Employment and Moderate Low Density Residential ("MLDR"). According to Pinal County's GIS Department a total of 219.5 acres near the southeast portion of Parcel 1 is currently designated as Employment leaving 338.6 acres on the northwest portion of Parcel 1 designated as MLDR. All of Parcel 2 is currently designated as MLDR.

3.0 Future Land Use and Proposed Comprehensive Plan Designations

As mentioned previously, Resolution Copper owns both parcels and is filing this Application as a "clean up" Amendment to re-designate the 338.6 acres of Parcel 1 and 0.82 acres of Parcel 2 as Employment in order to unify all of the Property under one land use category. See attached Exhibits.

It is helpful to note that the Property has been identified in the Superstition Vista's Planning Area as an Employment Corridor due to its convenient location along the Magma Railroad line and is ideal for this type of use.

3.1 Purpose for Proposed Comprehensive Plan Designations

The purpose for this request is to allow for the Resolution Copper mine to properly function. By re-designating the Property so it is all Employment, Resolution Copper will be able to construct

and operate an essential Transfer Facility, which will allow for the transfer of copper concentrate off site for further processing and to market. Resolution Copper needs this request to be approved to be able to effectively and efficiently operate the mine. Further, designating the Property as Employment is a better fit for the land. This Property is adjacent to the Magma Railroad tracks, near the future North/South Freeway alignment, and surrounded by State Land. It has been previously disturbed with 69 kV transmission lines running to it. The proposed operation of the Transfer Facility has been designed to minimized impacts to the surrounding area. There will be no hazardous gases or liquids used or produced on site and all operations will be conducted within enclosed buildings on the Property. The Applicant has worked very closely with the East Valley Partnership ("EVP") Planning Team and the creation of the Superstition Vista's Planning Area. The proposed Transfer Facility has been taken under consideration and has been concluded to be a good fit for this Employment Corridor area. This proposed Amendment will bring the entire Property under the most appropriate land use category and allow it to develop with the best possible use for this location.

3.2 Recent Changes in the Area that Would Support Request

In 2011, Resolution Copper worked very closely with members of the EVP Planning Team to develop an ideal vision for the Superstition Vista's planning area in order to protect the pristine desert character, breath-taking views and provide guidance for the inevitable future development. It was collaboratively decided that the proposed Transfer Facility is an acceptable use in this area based on its location. It is adjacent to the Magma Railroad line, surrounded by State Land and located within an Employment Corridor identified by Superstition Vista's Planning Area and Pinal County Board of Supervisors.

The nearest North/South Freeway Alignment Option is located approximately 3 miles to the west of the proposed Transfer Facility location. The proposed use will have no negative impact on the future Freeway Alignment. In fact, the future Freeway Alignment will provide access to the

Transfer Facility for future employees. The proposed Transfer Facility is located on the north side of Skyline Drive which is a paved and striped roadway; however, Skyline Drive does not continue past the Magma Railroad tracks. Therefore, Skyline Drive is currently the only access to and from the proposed Transfer Facility site.

3.3 Proposed Amendment is Necessary and Needed

The proposed Amendment is necessary and needed to enable Resolution Copper's mine plan to function efficiently and effectively. As discussed above, Resolution Copper must have a way to transport the copper concentrate off site and must have the ability to get it on the Union Pacific Railroad for distribution to an off-site smelter.

3.4 Environmental Permits and Compliance with Federal, State, and Local Regulations

Resolution Copper will comply with all Federal, State, and Local Regulations and are in the process of obtaining all necessary permits. This operation will be among the most well regulated in the county and the state.

3.5 Infrastructure

The infrastructure necessary to support operations of the Transfer Facility are already in place or will be before operations begin, which is yet another reason that the Property is the ideal site for the project. The Magma Railroad's right-of-way provides a path for the pipelines that transports the copper concentrate to the Transfer Facility without creating a large amount of new disturbance. Once the copper reaches the Transfer Facility and the excess water is extracted, the

copper concentrate is loaded into railroad cars on the Magma Rail Road, which ties into the Union Pacific Rail Road for transportation to an off-site smelter.

The project also provides for its own water infrastructure by capturing storm water onsite and recovering and reusing as much water as practical. Therefore, it provides for its own water needs and has its own infrastructure to support its water needs and store captured and re-used water.

The project's power source comes from Able Sub-Station, which provides a power line up the mine and is more than sufficient to support the Transfer Facility.

4.0 Compliance with Plan's Vision Components

This Application seeks a change that *is consistent* with the Sense of Community vision component as set forth in the Pinal County Comprehensive Plan (the "Plan"). The Property is ideally situated to host industrial uses and make the most of the important rail infrastructure that has played such a vital role in the history of Pinal County. Industrial uses are important job providers and help create and maintain a diverse economy allowing people to live close to where they work. Much of the Property is already designated as Employment indicating that the County has already envisioned this location as an Employment opportunity.

This Application *is consistent* with the Plan's Mobility and Connectivity vision component. Utilizing the rail and taking advantage of existing transportation corridors is key to satisfying this vision element. This proposal is only made possible as a result of this important mobility element.

This Application *is consistent* with the Economic Sustainability vision component. This proposal will drive jobs to the County and take advantage of existing rail infrastructure to better the future of the County.

This Application *is consistent* with the Open Spaces and Places vision component. The Property will be developed in accordance with the County's open space requirements.

This Application *is consistent* with the Environmental Stewardship vision component. The proposal is environmentally responsible by locating employment uses in areas that are close to existing infrastructure (the rail) thereby minimizing disturbances that could be caused by locating away from infrastructure.

This Application *is consistent* with the Healthy, Happy Residents vision component. Locating employment opportunities in the County cuts down on the need for residents to drive great distances to work. Keeping jobs in Pinal County keeps residents happy.

This Application *is consistent* with the Quality Educational Opportunities vision component. Providing diverse job opportunities for graduates of Pinal County schools helps further this vision component.

5.0 Conformance with Comprehensive Plan's Key Concepts

A portion of the Property is already designated for Employment uses and this small adjustment will permit the Property's proximity to the rail to be maximized and allow the best use of the land. This is consistent with the maps.

The Property is not within a mixed use activity center.

The proposed Major Amendment to the Plan *is consistent* with the Employment area Planning Guidelines. The Property is along a major existing transportation line (the rail) and development of this project will maintain and add to the amount of Employment designated land in the County.

This Application is clearly consistent with Economic Development element of the Plan. This project will bring jobs and a more diverse economy to the County.

The Application does not negatively impact agricultural, equestrian or rural lifestyles. This Application will put this land into use and does not take any agricultural land out of production.

This Application will follow any and all requirements of the County's Open Space Master Plan.

This Application will address any environmentally sensitive areas it may impact. In fact, because much of the site was already mass graded as part of a previously planned development, we already know that this is not an issue for much of the Property.

This Application will comply with all required water availability and quality standards.

6.0 Conformance with Comprehensive Plan Amendment Determination Criteria

1) *The identified site is appropriate for the use.*

The Property is perfectly located for this Employment use. It is currently vacant, previously disturbed desert land which is isolated by mostly State Land, adjacent to the Magma Railroad and a mile from any existing development. The Applicant inspected the Property extensively before determining that the proposed Transfer Facility is the best use based on the factors previously listed. The Applicant also worked very closely with the EVP's Planning Team on the vision for the Superstition Vista's Planning Area. This Property is located within an area that was determined by the Superstition Vista planning area as an Employment Corridor based on its proximity to the Magma Railroad.

2) The Amendment must constitute an overall improvement to the County.

The proposed Amendment is most definitely an overall improvement to the County as it will unify the land use designation on the entire Property in order to allow this Property to develop for its highest and best use creating jobs. The Amendment will designate the entire Property as Employment which along with the Rezoning Application will allow the operation of this essential Transfer Facility for what will be the largest copper mine North America. The construction phase alone will bring thousands of jobs to the County. The entire copper mine operation is estimated to bring in \$2.6 billion to Pinal county over the life of the project which is fifty (50) years.

3) The Amendment will not adversely impact a portion of, or the entire County, by:

a. Significantly altering existing land use patterns, especially in established neighborhoods;

This request will not alter any existing land use patterns and simply extends an existing Employment designation to cover an entire parcel to facilitate this employment use. The Property is surrounded mostly by vacant State Land and is, in fact, vacant land itself. Additionally, Superstition Vista's Planning Area identifies the Property as located within an Employment Corridor along the Magma Railroad.

b. Significantly reducing the jobs per capita balance in Pinal County;

The Amendment will significantly increase jobs in the County by re-designating this Property as Employment. This Amendment will allow for the operation of the proposed Transfer Facility at the Property. This Transfer Facility will be an essential

part of the Copper Mine's overall success. The construction phase alone for the Transfer Facility and underground pipeline in the Magma Railroad Right of Way will bring thousands of jobs to Pinal County. It is estimated that the entire Copper Mine operation will bring \$2.6 billion to the County over the life of the project.

c. Replacing employment with residential uses;

This proposal adds employment and does not reduce it.

d. Placing new development away from existing or approved development if the new development overtaxes infrastructure systems and public services when considering: future contributions to infrastructure and services through construction and dedication of improvements, payments of development fees, and other mitigation measures;

The current existing infrastructure is adequate to serve the site and this proposal will not overtax any infrastructure. Instead, it makes perfect use of the existing, and underutilized, Magma Rail right-of-way to create jobs in the perfect location.

e. Negatively impacting the existing character (ie visual, physical, environmental and functional) of the immediate area;

The facility will not negatively impact existing character. The facility is located a mile from any development and is designed to have its essential operations conducted within an enclosed space while utilizing delivery pipe in an already disturbed rail road corridor.

f. Increasing the exposure of residents to aviation-generated noise, and/or flight operations;

There are no residents within a mile of the site.

g. Diminishing the environmental quality of the air, water, land or cultural resources;

Before any commercial ore extraction or processing begins, an approved mine plan must be obtained from the United States Forest Service ("USFS") as well as approximately 50 federal, state and county permits and approvals. The USFS decision must comply with the National Environmental Policy Act ("NEPA"), which requires that an Environmental Impact Statement ("EIS") be completed before a final mine plan is approved and record of decision is granted.

Specifically, NEPA requires:

- Appropriate environmental protection and mitigation measures to be identified, considered and applied before a federal agency makes a decision. This includes rigorous water studies and substantive plans for protection of groundwater, surface water, recreation and cultural resources. Resolution will be accountable for implementing these measures.
- An alternatives analysis, including an assessment of tailings sites in other locations.
- A final reclamation plan along with financial assurance -- it is the law. Resolution will be required to cover all closure costs and post-closure monitoring, not taxpayers.
- Compliance with all relevant rules and regulations including the Clean Air Act, Clean Water Act, the Safe Drinking Water Act and the Endangered Species Act for protection of public and environmental health and safety and biological resources. This is the law.

If Resolution Copper does not comply with NEPA or numerous federal and state laws and regulations, the mine will never begin production.

- h. Significantly decreasing the quantity or quality of recreational amenities such as open space, parks and trails.*

The proposed Transfer Facility will have no negative impact on the surrounding recreational amenities and will do everything possible to accommodate and incorporate existing trail corridors.

7.0 Pre-Application Meeting Staff Comments

A pre-application meeting was held with Pinal County staff on May 27, 2014. Staff provided the following comments:

- 1. For dust control purposes, would the Applicant consider paving all parking areas?*

Response:

Yes, in addition to paving all parking areas, Resolution Copper will comply with all federal, state, and local air and environmental regulations and obtain all the necessary permits.

- 2. The potential North/South Freeway Corridor may potentially benefit the project, has the applicant contacted the Arizona State Highway Department to determine if this Freeway Corridor plan going to be implemented?*

Response:

We agree that the potential North/South Freeway Corridor would benefit the project and we are working to set up a meeting with the proper individuals to discuss the status of this corridor.

3. *There are two existing trails (horse/pedestrian) that run along the Property. One runs on the north side of the railroad tracks to the southwest corner of the Property and wraps around the west side of the project. The second trail runs the length of the railroad along the north side of the tracks. Is the Project going to negatively affect these trails?*

Response:

We are committed to working with the County to accommodate and address issues regarding trails and minimizing impacts to recreation. Appropriate impacts to recreation and associated mitigations will be assessed during the NEPA process before the federal agency makes a decision about the project. Resolution will be accountable for implementing these measures.

4. *There is a skinny outparcel within the Project, who does that belong to?*

Response:

The Applicant is still working closely with Pinal County GIS Department as well as Pinal County Assessor's office in order to determine the identification and ownership of the skinny outparcel located within the Project. According to the Assessor's office the skinny outparcel is identified as access for a roadway that was established many years ago under different ownership; however, no such roadway has ever been constructed to date. We are still awaiting confirmation from the Assessor's office if this access roadway is indeed included within Parcel 1.

8.0 Conclusion

This Application simply seeks to expand an existing Employment designation to cover an entire unified parcel of property. Approval of this Application will help facilitate one of the State's largest economic development projects ever. We appreciate your support of this Application.

Pinal County

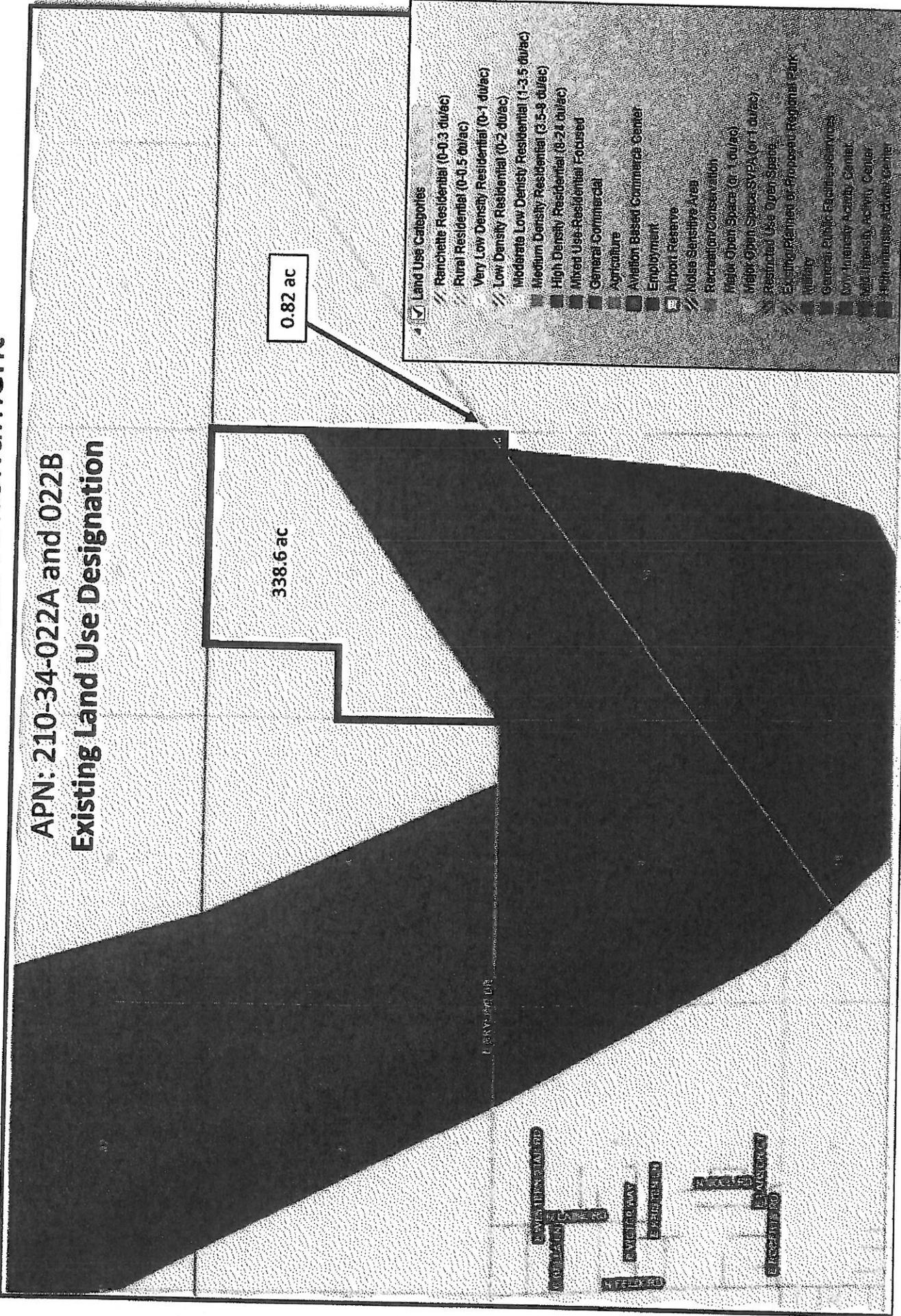
Comprehensive Plan Amendment

APN: 210-34-022A and 022B
Existing Land Use Designation

0.82 ac

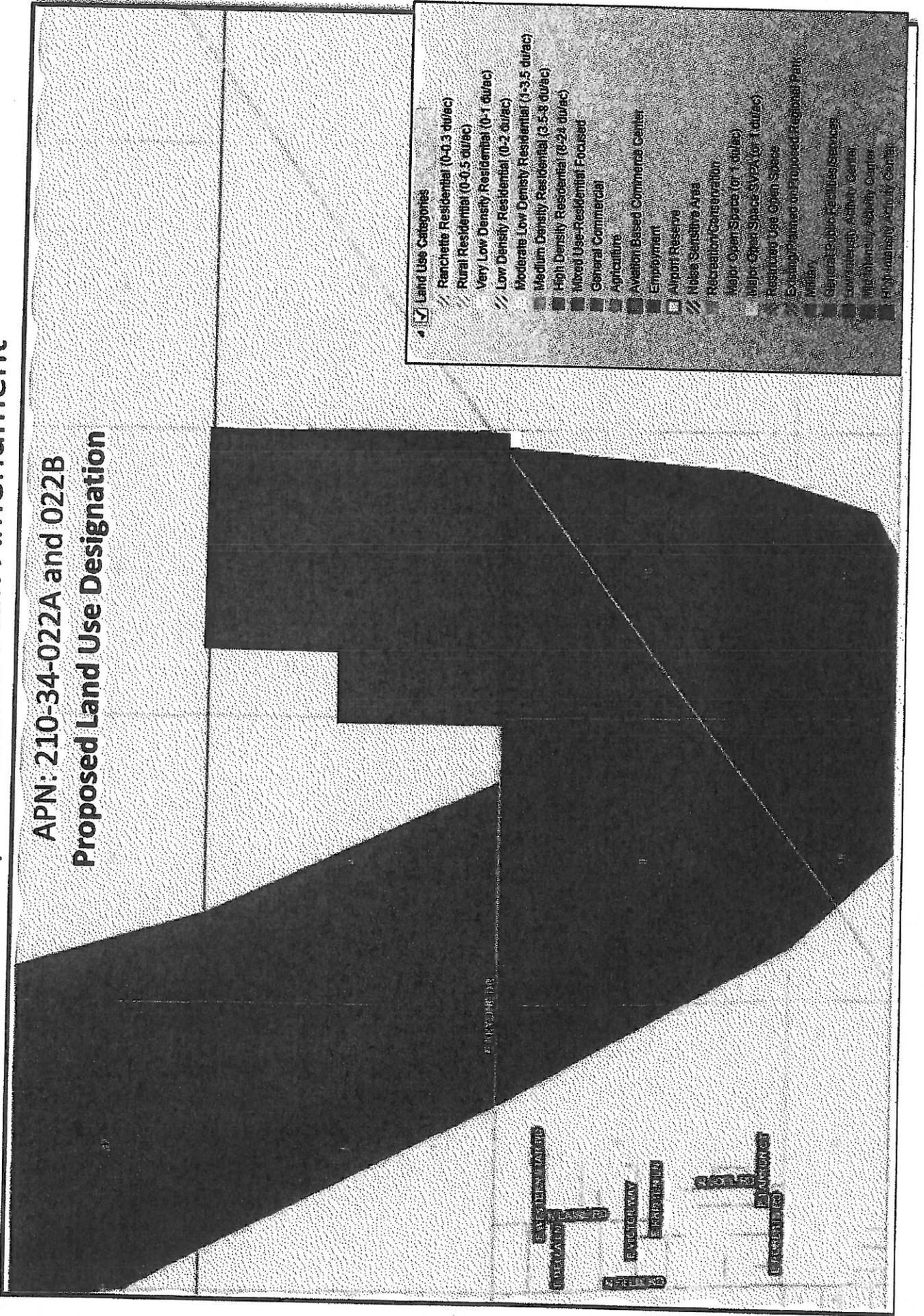
338.6 ac

- ✓ Land Use Categories
- /// Ranchette Residential (0-0.3 du/ac)
- /// Rural Residential (0-0.5 du/ac)
- /// Very Low Density Residential (0-1 du/ac)
- /// Low Density Residential (0-2 du/ac)
- Moderate Low Density Residential (1-3.5 du/ac)
- Medium Density Residential (3.5-9 du/ac)
- High Density Residential (8-21 du/ac)
- Mixed Use-Residential Focused
- General Commercial
- Agriculture
- Aviation Based Commercial Center
- Employment
- Airport Reserve
- /// Avoca Sensitive Area
- Recreation/Conservation
- Private Open Space (0-1 du/ac)
- Major Open Space (SVPA) (0-1 du/ac)
- Restricted Use Open Space
- ✓ Existing Elements of Proposed Regional Park
- History
- General Public Facilities Services
- Community Activity Center
- Medium Density Activity Center
- High Density Activity Center



Pinal County Comprehensive Plan Amendment

APN: 210-34-022A and 022B
Proposed Land Use Designation



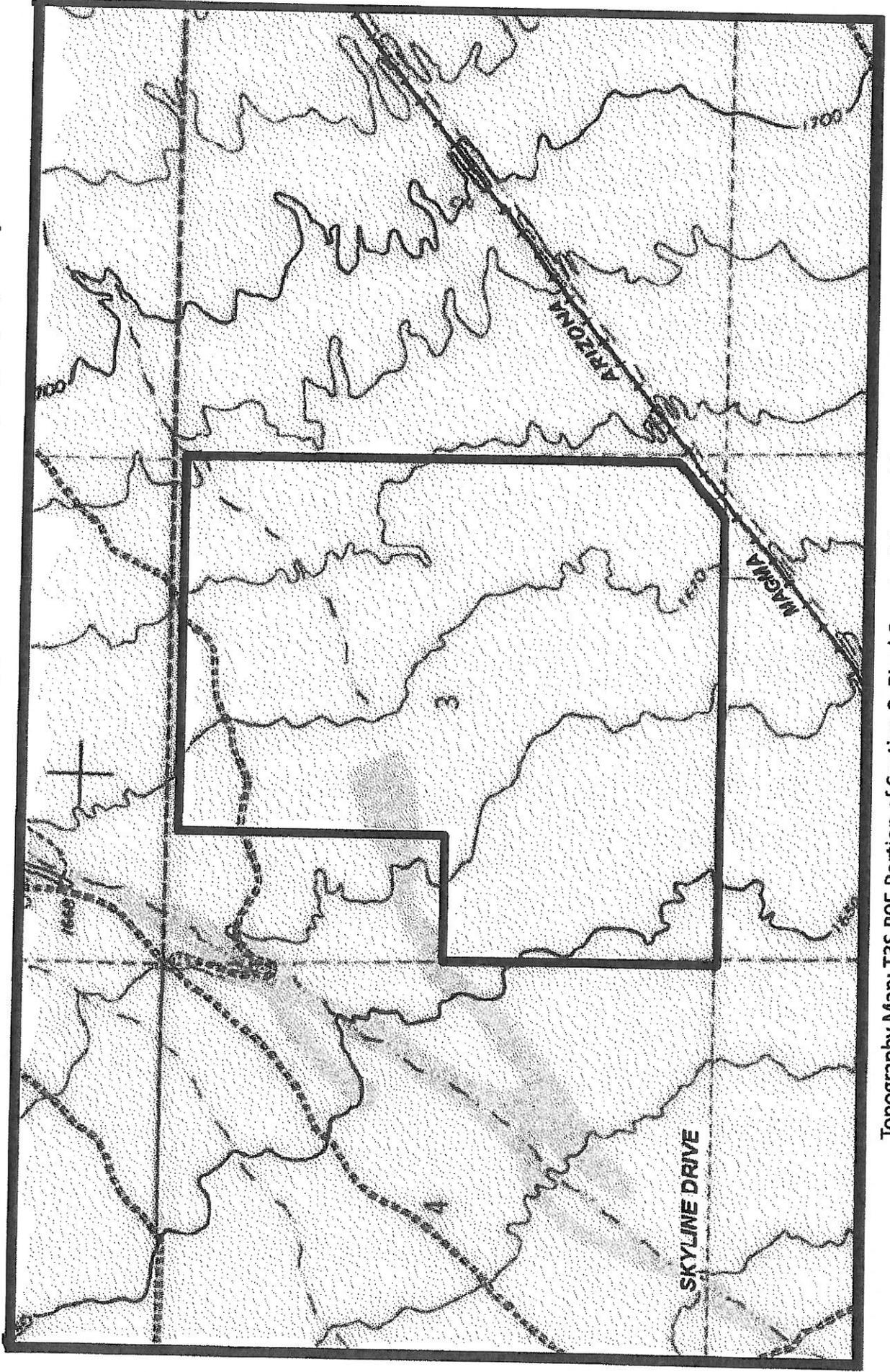
- Land Use Categories
- Ranchette Residential (0-0.3 du/ac)
 - Rural Residential (0-0.5 du/ac)
 - Very Low Density Residential (0-1 du/ac)
 - Low Density Residential (0-2 du/ac)
 - Moderate Low Density Residential (1-3.5 du/ac)
 - High Density Residential (3.5-8 du/ac)
 - Mixed Use-Residential Focused
 - General Commercial
 - Agriculture
 - Aviation Based Commercial Center
 - Employment
 - Airport Reserve
 - Noble Seaside Area
 - Recreation/Conservation
 - Major Open Space (or 1 du/ac)
 - Major Open Space (or 1 du/ac)
 - Residential Use Open Space
 - Existing Planned or Proposed Regional Park
 - Other
 - General Public Facilities/Services
 - Community Activity Center
 - High Density Activity Center
 - High Density Activity Center

Pinal County

APN: 210-34-022A and 022B

Comprehensive Plan Amendment

Topography Map



Topography Map: T3S R9E Portion of Section 3, Pinal County, Arizona, Magma USGS 7.5' Quadrangle

Pinal County
AFFIDAVIT OF POSTING BROADCAST SIGN

I, Pamela Swayze, Applicant's representative for case PZ-001-15 and PZ-PD-001-15, personally caused one sign to be posted in a visible place on or near the proposed project site east of Laine along Skyline Dr., at least 28 days before the Planning and Zoning Commission Public Hearing, regarding the proposed Resolution Copper site, in unincorporated Pinal County.

The notice was posted as indicated on the attached map and photograph.

Dynamite Signs, Inc.
Sign Company Name

Pamela Swayze
Sign Company Representative

Subscribed and sworn to be on this 9 day of February, 2015 by

Pamela Swayze.

IN WITNESS WHEREOF, I Hereto set my hand and official seal.

Sheila Esterline
Notary Public

My Commission expires: Apr 22, 2018



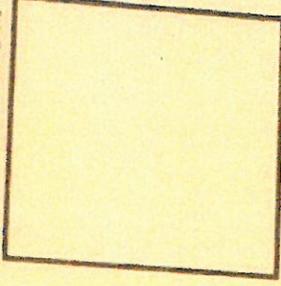
PINAL COUNTY **Public Hearings**

Case Number: PZ-001-15 and PZ-PD-001-15
Existing Zoning: CR-3 and CB-2
Proposed Zoning: I-3 PAD
Acreage: 559.88 acres

Applicant: Jordan Rose
Applicant Phone: 480-505-3939

Case Information Available at Pinal County Planning & Development Services
520-866-6442

**Public Hearing
Information**



STORMWATER DRAINAGE DESIGN MEMORANDUM

Prepared for: Resolution Copper Mining
Prepared by: WestLand Resources, Inc.
Date: September 23, 2014
Project No.: 807.94 07

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(follow text)

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- Figure 6. West Plant Site Ancillary Facility Stormwater Management
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- Figure 8. Tailings Storage Facility Local Catchment Areas

1. INTRODUCTION

Resolution Copper Mining, LLC (Resolution Copper) proposes to construct an underground mine, ore processing operation, and associated facilities and infrastructure near the town of Superior in Pinal County, Arizona (*Figure 1*). These components are collectively identified as the Resolution Copper Project (Resolution Project or Project). Resolution has submitted a General Plan of Operations (Plan) to the US Forest Service (USFS), Tonto National Forest (TNF) for authorization to use National Forest System lands for a portion of the Project. WestLand Resources, Inc. (WestLand) has prepared this stormwater drainage design memorandum to describe the preliminary design, layout, and strategies for stormwater management at sites and facilities associated with the proposed Resolution Project. If the Project is approved, the stormwater management systems described herein would be advanced through the design process.

The main sites and Project facilities are (*Figure 2*):

- East Plant Site (EPS);
- West Plant Site (WPS);
- Tailings Storage Facility (TSF);
- Filter Plant and Loadout Facility; and
- Magma Arizona Railroad Company (MARRCO) Corridor.

The EPS is approximately 68 miles east of Phoenix and 2 miles east of Superior in Section 32, Township 1 South, Range 13 East, of the Gila and Salt River Baseline and Meridian. The EPS encompasses the proposed underground mine, associated shafts, and surface support facilities. The existing mine and related surface support facilities are on private lands, and during mine operations would largely expand onto private lands. The support facilities, some of which already exist, are in a previously disturbed area and include a mine site where Shaft 9 was constructed in the 1970s. Additional area encompassed by the EPS includes the land surface above the ore body, comprised of unpatented mining claims on the Tonto National Forest and Arizona State Trust lands administered by the Arizona State Land Department (ASLD).

The WPS is approximately 65 miles east of Phoenix and 1 mile north of Superior in Section 32, Township 1 South, Range 13 East of the Gila and Salt River Baseline and Meridian. The WPS is on Resolution Copper private property and the Tonto National Forest. The WPS encompasses ore and development rock stockpiles, the Concentrator Complex (ore processing facilities), and administrative facilities.

The TSF will be situated west of the WPS and north of Queen Station, within the Tonto National Forest. The TSF will consist of the tailings storage area and associated Tailings Corridor (distribution pipeline and access roads). Tailings will arrive at the TSF from the WPS via a pipeline that traverses the intervening area (along with other infrastructure) along the Tailings Corridor.

The Filter Plant and Loadout Facility will be constructed near Magma adjacent to the existing Magma Arizona Railroad Company (MARRCO) right-of-way. The Filter Plant and Loadout Facility will consist of a copper concentrate filtration plant and facility to load concentrate onto trains for shipment.

The MARRCO Corridor will provide connecting infrastructure between the WPS and other Project facilities, crossing private, Tonto National Forest, and ASLD land. The infrastructure will include the railroad, water supply pipelines, dewatering pipelines, concentrate pipelines, and electrical power lines and other utility lines within the MARRCO right-of-way.

The following sections describe the methods used to design the Project stormwater management system (*Section 2*); site-specific design considerations for locating and sizing detention basins, diversion structures, and outfalls (*Section 3*); and conclusions regarding surface water management strategies for Project facilities (*Section 4*).

2. METHODS

The water management facilities (*e.g.*, stormwater basins and diversion structures) for the EPS, WPS, and Filter Plant and Loadout facilities are designed to have sufficient capacity to contain runoff generated by the 100-year, 24-hour storm event. Stormwater basins would be constructed with a minimum of 1 foot of freeboard above the high water mark of the stormwater event. The following sections describe the calculation assumptions and procedures for sizing each of the stormwater facilities.

The stormwater runoff and facility sizing calculations for the TSF and surrounding facilities (*e.g.*, seepage collection dams and diversion channels) are not detailed in this report as these calculations were performed and the facilities were designed by Klohn Crippen Berger (KCB 2014). However, this report summarizes the KCB stormwater management system design for the TSF and surrounding facilities.

2.1. DESIGN STORM EVENT

The design storm event selected for sizing the water management facilities at the EPS, WPS, and Filter Plant and Loadout Facility is the 100-year, 24-hour storm event. This return period was selected based on recommendations from the Arizona Department of Environmental Quality (ADEQ) *Arizona Mining Guidance Manual BADCT* [Best Available Demonstrated Control Technology] (BADCT Manual). The BADCT Manual describes the process and procedures required to obtain an Aquifer Protection Permit (APP) from ADEQ, which will be required for the Resolution Project. 100 years is the typical design storm return period; larger return periods are only recommended if it is required by another regulatory agency or failure of the facility presents an “imminent risk to human life.” 24 hours is the typical storm duration outlined in the BADCT Manual. The Resolution Project water management facilities that collect and return for reuse or treatment potentially impacted waters would be permitted under the APP Program.

2.2. PRECIPITATION DATA

Rainfall data for the area was obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation Frequency Data Server, Volume 1 Version 5.0: *Semiarid Southwest (Arizona, Southeast California, Nevada, New Mexico, Utah)*. This data server provides depth-duration point precipitation frequency estimates for many locations within the United States, based on latitude and longitude, as well as for specific weather stations.

Precipitation records were obtained for the closest NOAA weather station in the area, in Superior (Site ID 02-8348). This station is at 33.3008 north latitude and 111.0967 west longitude, at an elevation of 2,861 feet (872 m). The period of record for the Superior weather station is from July 12, 1930 through August 31, 2006. During that period, the extreme maximum daily precipitation was recorded as 3.80 inches (96.52 mm), which occurred in July 1990.

NOAA's estimated 100-year, 24-hour rainfall for the Superior area, is approximately 5.04 inches (128 mm). This rainfall data was used for designing the WPS, EPS, and Filter Plant and Loadout Facility water management systems. This precipitation depth is overly conservative for the final design of facilities at the Filter Plant and Loadout Facility, because the elevation at this site is much lower and receives less precipitation than the EPS and WPS. However, it is sufficiently conservative for the preliminary design of water management systems.

The assumed 5.04 inch precipitation depth from the design storm is significantly greater than the maximum daily rainfall event during the station's period of record, and may therefore be considered sufficiently conservative for preliminary design of retention basins. The locations of the WPS, EPS, and Filter Plant and Loadout Facility relative to the weather station are shown in *Figure 2*.

2.3. OFFSITE CATCHMENT AREAS

Offsite catchment areas are undeveloped land upstream of mine facilities; they are kept isolated from the developed mine facilities. Runoff from these catchments is considered non-contact water and is not routed into stormwater management basins. Instead, it is diverted around the mine facilities to the original discharge areas downstream. For the final design, the channels must be sized using peak flow rates determined by using either the Rational Method or a more detailed hydrograph method, and detailed grading plans for each facility. This level of analysis and design was not conducted for the preliminary designs described in this memorandum.

Offsite catchment area boundaries for the EPS, WPS, and Filter Plant and Loadout Facility were delineated from 1-meter contour data projected in UTM NAD 1927. The delineation was based on high points, ridges, and natural drainages identified in the contour data.

2.4. ONSITE CATCHMENT AREAS

Onsite catchment areas are generally defined as developed land containing either existing or proposed mine facilities. However, some undeveloped lands are considered onsite catchments since the runoff from these areas cannot be diverted around mine facilities. This is either due to the layout of facilities or the constraints of the surrounding topography. All direct rainfall and local runoff from onsite catchments is considered contact water and would be retained on site and reused in the mine process water system. This runoff would be collected in concrete or high density polyethylene- (HDPE-) lined “contact water basins” to be pumped out and incorporated into the process water circuit.

In order to calculate required basin volumes, onsite catchment area boundaries were determined from preliminary grading plans. M3 Engineering provided preliminary grading plans for the WPS and Filter Plant and Loadout Facility, and AMEC provided the preliminary grading plans for the EPS. The delineation was limited to identifying high and low points, and placing concentration points in areas that do not conflict with other mine functions.

2.5. RUNOFF VOLUME CALCULATION

The total runoff volumes of offsite and onsite catchment areas were calculated using the same method to promote a consistent method of measurement. Total runoff volume was calculated using a modified Rational Method where the total rainfall received over the site for the design storm is converted into a total volume of water. This value was then multiplied by the Rational Method runoff coefficient for the applicable land use. The runoff coefficient represents the ratio of runoff to rainfall and is used to represent or account for many factors including initial abstraction, infiltration, antecedent soil moisture, ground slopes, and soil types. This method of volume calculation is provided in Section 3.4 of the *Drainage Design Manual for Maricopa County*¹ (Drainage Manual; Flood Control District of Maricopa County 2011).

The runoff coefficient values used for onsite and offsite catchment areas were 0.88 and 0.69, respectively, and were obtained from Table 3.2, “Runoff Coefficients for Maricopa County”, in the Drainage Manual. When a range of Rational Method coefficients are given for a specific land use, the greater value is chosen in order to remain conservative. The Rational Method formula used to calculate runoff volume is:

$$V = C \left(\frac{P}{12} \right) A = CIA$$

Where,

V= volume in acre-feet (ac-ft)

C = runoff coefficient, Table 3.2 of the Drainage Manual

P = total rainfall depth for the 100-year, 24-hour storm, in inches

I = P/12 = total rainfall depth for the 100-year, 24-hour storm, in feet

A = area of the catchment in acres

¹ This Drainage Design Manual was used as there is no manual for Pinal County.

Because all Project sites would be closed systems and all basins were designed as retention basins, there is no need to calculate detention volumes. This method of hydrological analysis requires no time-of-concentration calculations; therefore, it is unaffected by grading changes to the sites as long as the runoff is routed to the same location.

In addition to runoff volumes, the contact water basins themselves would receive direct rainfall. All rain that falls directly on the basin would be retained within the basin, giving it a runoff coefficient of 1.0. Since the basin sizes have not been finalized, and the surface area may change from preliminary design to final design, a minimum of 1 foot of freeboard was added above the 100-year, 24-hour runoff volume water surface elevation. Contact water basins would typically remain empty; they would retain water only in immediate response to large storm events.

3. SITE-SPECIFIC DESIGN CONSIDERATIONS

3.1. EAST PLANT SITE DESIGN

3.1.1. Current Conditions

The EPS area measures approximately 40 acres, approximately 13 acres of which is currently disturbed. Surface water runoff from undeveloped portions of this site reports to Queen Creek, which is located within the Gila River Watershed.

The land use of disturbed portion of the EPS is light industrial. The topography of this area is mainly flat, with a gentle slope to the southeast. The ground surface is primarily bare soil, though there are several mine buildings and various appurtenant facilities. The Rational Method coefficient chosen for this condition and all new mining facility areas is 0.88, as described in the Drainage Manual. The undisturbed portion of the EPS is currently considered Sonoran Desert Hillslopes. The Rational Method coefficient chosen for this condition is 0.69, as described in the Drainage Manual.

3.1.2. Future Conditions

Eighteen separate catchment areas were identified at the EPS, with six identified as onsite catchments and 12 identified as offsite catchments. A detailed layout of the catchments identified at the EPS is shown in *Figure 3*.

3.1.2.1. Non-Contact Water

All non-contact water at the EPS would be diverted away from the onsite catchment areas by channels and berms. Offsite catchments A7 through A18 at EPS are shown in *Figure 3*.

Drainage from the offsite catchments along the ridge west of the mine site (A7 through A11) would be diverted through the north diversion channel along the western edge of the EPS and prevented from entering the mine facilities. This channel would run along the northwestern side of the EPS until it reaches onsite catchment A5. At this point, the flow would enter a drainage vault and then be conveyed

through an underground culvert under onsite catchments A5 and A4. There is an existing buried drainage pipe of unknown condition at this location that, depending on its precise slope and location, may require replacement. The culvert passes into Tonto National Forest land and discharges at an existing rip-rap outfall. A discharge channel would route the drainage from the existing outfall into a new rip-rap sediment basin to the existing natural channel downstream of Contact Water Basin E2. This existing channel currently receives all runoff from the EPS and is assumed to have adequate capacity for the slightly reduced flows it would experience after construction of the mine facilities.

Drainage from offsite catchments A12 through A18 would flow through a new South Diversion Channel along the southeastern edge of the property and pass under the new Magma Mine Road alignment. The non-contact water would then flow to the discharge channel and to a new rip-rap sediment basin. From there, it would travel in the existing natural drainage downstream of Contact Water Basin E2 and away from the EPS.

3.1.2.2. Contact Water

The site grading would follow the general existing slope of the land, with a gradual slope from west to east. Contact Water Basins E1, E2, and E3 would be constructed on the eastern edge of the EPS at low points to catch all stormwater flows from all of the onsite catchments. These basins are described further below.

3.1.2.2.1. Contact Water Basins E1 and E2

Contact Water Basins E1 and E2 would be constructed at the eastern edge of the EPS. The basins would be sited at low points in an existing drainage to capture the majority of the stormwater flows from the newly developed mine area. The southern portion of the EPS is within a single catchment area (catchment A1 in *Figure 3*), which would be graded to flow to Contact Water Basin E1. Contact Water Basin E2 would capture overflow from Contact Water Basin E1. The basins would be lined according to BADCT standards to prevent any infiltration of contact water into the soil. Contact Water Basins E1 and E2 would contain approximately 12 ac-ft (15,000 m³) and 11 ac-ft (13,600 m³) of water, respectively. These basins would be emptied after each storm event, and contact water would be reused in the process water supply or the underground mine operations.

3.1.2.2.2. Contact Water Basin E3

Contact Water Basin E3 would contain flows from the existing mine facilities in catchments A4 and A5, as well as from the newly developed mine facilities in catchments A2, A3, and A6. This basin would be in the area of an existing sump, which would be deepened and widened to catch all contact flow from these areas. This basin would be lined to prevent surface water infiltration. The basin would contain 13 ac-ft (16,000 m³) of contact water.

3.1.3. East Plant Site Runoff Volume Calculations

The offsite and onsite runoff volume calculations for the EPS are provided in *Tables 1* and *2*. The assumptions used for these calculations are provided in *Section 2*.

Table 1. East Plant Site Offsite Runoff Volume Calculations

Channel	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume (ac-ft)
North Diversion Channel	A7	Hillslopes, Sonoran Desert	0.69	0.42	1.5	0.4
	A8	Hillslopes, Sonoran Desert	0.69		3.4	1.0
	A9	Hillslopes, Sonoran Desert	0.69		3.2	0.9
	A10	Hillslopes, Sonoran Desert	0.69		4.4	1.3
	A11	Hillslopes, Sonoran Desert	0.69		6.2	1.8
North Diversion Channel Total						5.4
South Diversion Channel	A12	Hillslopes, Sonoran Desert	0.69	0.42	1.2	0.4
	A13	Hillslopes, Sonoran Desert	0.69		23.0	6.7
	A14	Hillslopes, Sonoran Desert	0.69		2.4	0.7
	A15	Hillslopes, Sonoran Desert	0.69		4.1	1.2
	A16	Hillslopes, Sonoran Desert	0.69		8.7	2.5
	A17	Hillslopes, Sonoran Desert	0.69		3.9	1.1
	A18	Hillslopes, Sonoran Desert	0.69		0.5	0.1
South Diversion Channel Total						12.7
Offsite Total:						18.1

Table 2. East Plant Site Onsite Runoff Volume Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume Required (ac-ft)	Volume Provided (ac-ft)
Basin E1 & E2	A1	Industrial-1	0.88	0.42	57.0	21.1	
Basin E1 & E2 Total						21.1	22.7
Basin E3	A2	Industrial-1	0.88	0.42	1.5	0.5	
	A3	Hillslopes, Sonoran Desert	0.69		0.8	0.2	
	A4	Industrial-1, Hillslopes, Sonoran Desert	0.87 ⁴		19.9	7.3	
	A5	Hillslopes, Sonoran Desert	0.69		8.8	2.6	
	A6	Industrial-1	0.88		6.2	2.3	
Basin E3 Total						12.9	13.0
Onsite Total						34.0	35.7

¹ Source: Drainage Manual (FCD of Maricopa County 2011)

² C = Runoff Coefficient

³ I = total rainfall depth for the 100-year, 24-hour storm; Source: NOAA 2013

⁴ Weighted Runoff Coefficient for percentage area of Industrial-1 and Hillslopes Sonoran Desert

3.2. WEST PLANT SITE DESIGN

3.2.1. Current Conditions

The WPS encompasses facilities associated with past mining activity and facilities that are currently in operation either to support new development or for closure of legacy facilities. This section of the report focuses on the Stockpile, the Concentrator Complex, and the Ancillary Facilities, which occupy an area of approximately 453 acres of former mine impacted and developed land.

The land use of the disturbed portion of the WPS is light industrial. This area is generally flat, with a gentle slope to the southeast. The ground surface is mainly bare soil with several mine buildings and various appurtenant facilities. The Rational Method coefficient chosen for this condition and all new mining facility areas is 0.88, as described in the Drainage Manual. The undisturbed portion of the WPS is Sonoran Desert Hillslopes. The Rational Method coefficient chosen for this condition is 0.69, as described in the Drainage Manual.

The current surface water runoff from the WPS is managed to eliminate all mining-related discharges from the facility, including those permitted from the existing individually permitted Outfall 001. Permit information for Outfall 001 is presented in Table 1.1-3 of the General Plan of Operations.

3.2.2. Future Conditions

The stormwater management system design for the WPS considers three main facilities:

- The Stockpile, which includes the Development Rock and Intermediate Rock stockpiles;
- The Concentrator Complex, which includes the process water pond, ore stockpile facility, tailings thickeners, copper molybdenum and copper concentrator thickeners, and the molybdenum plant; and
- The Ancillary Facilities, which include the administration building, contractor and warehouse laydown yards, and construction and employee parking.

3.2.2.1. Stockpile

The Development Rock Stockpile and Intermediate Rock Stockpile are two separate temporary rock storage facilities that would be located between the Concentrator Complex and the Ancillary Facilities. The rock would be generated from excavations in Resolution's preparations for mining. The runoff from the stockpiles is considered contact water since the material is potentially acid-generating. Once the Concentrator Complex is constructed and mine production commences, no additional waste rock would be produced and the Development Rock Stockpile and Intermediate Rock Stockpile would be removed and processed with the ore at the Concentrator Complex.

The proposed stormwater management system for the stockpiles is shown in *Figure 4*. The stockpile area is subdivided into 11 catchment areas. Catchments that are upstream of the Concentrator Complex

facilities and/or undeveloped land are categorized as offsite catchments (non-contact areas). Catchments that would either contain or be impacted by runoff from the stockpiles are categorized as onsite catchments.

3.2.2.1.1. Non-Contact Water

The runoff from the area upstream of the Development Rock Stockpile (catchment B1) currently flows following the existing land surface to the Apex Tunnel. The Apex Tunnel is an existing structure that diverts offsite flows from north of the stockpiles to the Silver King Wash, west of the site. This runoff is considered non-contact water. The runoff from catchment B1 would continue to flow to the Apex Tunnel until the construction of the Concentrator Complex.

Stormwater in the locations of the proposed stockpiles currently flows following the natural ground surface to legacy Tailings Pond 6. However, once the stockpiles are in place the stormwater runoff from them would be contained on site in contact water basins, as described below.

3.2.2.1.2. Contact Water

Contact Water Basin W1

Contact Water Basin W1 would be constructed to collect onsite runoff from the northern portion of the Development Rock Stockpile (catchment A1), from the tailings thickener pad (catchment A2), and from the eastern hillsides (catchment A3). The pad for the thickeners would be constructed to provide drainage to Contact Water Basin W1. Contact Water Basin W1 would be used during mine operations to collect contact water runoff from the Concentrator Complex, and would be constructed to contain 49.4 ac-ft (61,000 m³) of water (*Figure 5*). The basin would be lined according to BADCT standards and emptied after each storm event, and the contact water would be reused. The north stockpile diversion channel would direct flows between the tailings thickener pad fill slopes and the Development Rock Stockpile to Contact Water Basin W1 during this interim period.

Contact Water Basin W2

Stormwater from the southeast portion of the Development Rock Stockpile (catchment C1) would flow to Contact Water Basin W2. Stormwater from the eastern hillsides (catchment C2) would flow south along the existing roadway in a new drainage v-ditch, through an opening in the roadside safety berm, and into a culvert that would direct flow into Basin W2. The onsite runoff from the Intermediate Rock Stockpile and upstream hillsides (catchments C3, C4, and C5) would be collected in v-ditches along the toe of the stockpile. The runoff in these v-ditches would enter a culvert at the southwest corner of the Intermediate Rock Stockpile. From there, it would flow under the existing road into the roadside v-ditch, through an opening in the roadside safety berm into a culvert, and finally into Contact Water Basin W2. Contact Water Basin W2 would be constructed to contain 30.8 ac-ft (38,000 m³) of water. The basin would be lined according to BADCT standards and would be emptied after each storm event for reuse.

Contact Water Basin W3

Onsite runoff from the west slopes of the Development Rock Stockpile would be directed to flow via the west stockpile berm to Contact Water Basin W3. This will ensure containment of contact water on the

east side of the ridge to which the stockpile abuts. The berm would be relocated as necessary to contain water from that part of the stockpile as its footprint changes during operations. The runoff directed by the berm, combined with the runoff from the southwest portion of the stockpile (catchment D1), would flow to Contact Water Basin W3. Contact Water Basin W3 would be constructed to contain 12.3 ac-ft (15,000 m³) of water. The basin would be lined according to BADCT standards and would be emptied after each storm event for reuse. A berm at the southern edge of Contact Water Basin W3 would divert water to this basin and prevent it from continuing downstream to legacy Tailings Pond 6.

Contact Water Basin W5

Stormwater runoff from the far west portion of the Development Rock Stockpile (catchment E1) would be captured in Contact Water Basin W5. Contact Water Basin W5 would be constructed to contain 8.4 ac-ft (10,400 m³) of water. The basin would be constructed by excavating a portion of an existing tailings deposit down into the native subgrade. The southern embankment slope of the basin that abuts the existing tailings would be stabilized by an earthen fill. The basin would be lined according to BADCT standards and would be emptied after each storm event for reuse in the thickeners.

3.2.2.1.3. Stockpile Runoff Volume Calculations

The offsite and onsite water runoff volume calculations for the Stockpile area are provided in **Tables 3 and 4**. These calculations are based on the assumptions described in **Section 2**.

Table 3. Stockpile Offsite Runoff Volume Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume (ac-ft)
Apex Tunnel	B2	Hillslopes, Sonoran Desert	0.69	0.42	349.2	101.2
Offsite Total						101.2

¹ Source: Drainage Manual (FCD of Maricopa County 2011)

² C = Runoff Coefficient

³ I = total rainfall depth for the 100-year, 24-hour storm; Source: NOAA 2013

Table 4. Stockpile Onsite Water Runoff Volume Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume Required (ac-ft)	Volume Provided (ac-ft)
Basin W1	A1	Industrial-1	0.88	0.42	16.1	5.9	
	A2	Industrial-1	0.88		18.8	6.9	
	A3	Hillslopes, Sonoran Desert	0.69		9.3	2.7	
Basin W1 Total						15.6	49.4
Basin W2	C1	Industrial-1	0.88	0.42	28.5	10.5	
	C2	Hillslopes, Sonoran Desert	0.69		10.1	2.9	
	C3	Hillslopes, Sonoran Desert	0.69		25.8	7.5	
	C4	Industrial-1	0.88		9.9	3.6	
	C5	Hillslopes, Sonoran Desert	0.69		9.8	2.8	
Basin W2 Total						27.4	30.8
Basin W3	D1	Industrial-1	0.88	0.42	20.4	7.5	
Basin W3 Total						7.5	12.3
Basin W5	E1	Industrial-1	0.88	0.42	18.9	7.0	
Basin W5 Total						7.0	8.4
Onsite Total:						47.9	100.9

¹ Source: Drainage Manual (FCD of Maricopa County 2011)

² C = Runoff Coefficient

³ I = total rainfall depth for the 100-year, 24-hour storm; Source: NOAA 2013

3.2.2.2. Concentrator Complex

The stormwater management system design for the Concentrator Complex addresses the new facilities proposed for the northern part of the WPS. The Concentrator Complex would be situated north of the Development Rock Stockpile, Intermediate Rock Stockpile, and legacy Tailings Pond 6. The stormwater management system for the Concentrator Complex, once the stockpiles are removed, is shown in *Figure 5*. The Concentrator Complex site and adjacent upstream areas are subdivided into 16 catchment areas.

3.2.2.2.1. Non-Contact Water

The west diversion channel would run on the surface along the north and west edge of the WPS. Runoff from the northernmost offsite catchments B2 and B3 would report to the west diversion channel. The channel would direct stormwater through a culvert passing between the Process Water Pond and the Ore Stockpile Facility, then south along the western side of the WPS past the thickeners to discharge at the inlet of the Apex Tunnel.

3.2.2.2.2. Contact Water

The stormwater that falls in the remaining 14 Concentrator Complex catchment areas is considered contact water and would be retained on site in five separate HDPE-lined retention basins:

- Contact Water Basin W1 would be southeast of the Concentrator, and would be constructed to contain approximately 49.4 ac-ft (61,000 m³) of water.
- Contact Water Basin W2 would be south of the Concentrator Complex, and would be constructed to contain 30.8 ac-ft (38,000 m³) of water.
- Contact Water Basin W3 would also be south of the Concentrator Complex, and would be constructed to contain 12.3 ac-ft (15,000 m³) of water.
- Contact Water Basin W4 would be north of the thickeners and would be constructed to contain approximately 2.2 ac-ft (2,700 m³) of water.
- Contact Water Basin W5 would be in the drainage west of the Concentrator Complex within onsite Catchment E1, to capture runoff from the area that would have been previously occupied by the Development Rock Stockpile. This basin would be constructed to contain 8.4 ac-ft (10,400 m³) of water.

The stormwater runoff from the majority of the site (catchments A2 and A6) would flow along surface roads and be routed by a series of berms and small channels into Basin W1. Catchments A3, A4, and A5 would be on a westward-facing slope and report to the east stormwater channel to be routed south into Basin W1. Catchment 7 would collect runoff from a small area of the site and report to Basin W4.

Stormwater from the eastern hillsides and plant site, south of the Concentrator Complex catchments C2, C3, C4, C5, and C7), is considered contact water and would be routed via roadway, channel, and culvert to Contact Water Basin W2. In the event that Contact Water Basin W1 overflows, an emergency overflow ditch would route excess water to Contact Water Basin W2. Contact water runoff from the south slopes of the Concentrator Complex and areas previously occupied by the Development Rock Stockpile (catchments C6 and D2) would be captured in Contact Water Basins W2 and W3. A berm at the southern edge of Contact Water Basin W3 would divert water to this basin and keep it from continuing downstream to legacy Tailings Pond 6.

3.2.2.2.3. Concentrator Complex Runoff Volume Calculations

The offsite and onsite water runoff volume calculations for the Concentrator Complex are provided in *Tables 5 and 6*. These calculations are based on the assumptions described in *Section 2*.

Table 5. Concentrator Offsite Runoff Volume Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume (ac-ft)
West Diversion Channel	B2	Hillslopes, Sonoran Desert	0.69	0.42	147.2	42.7
	B3	Hillslopes, Sonoran Desert	0.69		61.2	17.8
Offsite Total						60.4

Table 6. Concentrator Onsite Runoff Volume Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume Required (ac-ft)	Volume Provided (ac-ft)
Basin W1	A2	Industrial-1	0.88	0.42	18.8	6.9	
	A3	Hillslopes, Sonoran Desert	0.69		9.3	2.7	
	A4	Hillslopes, Sonoran Desert	0.69		24.5	7.1	
	A5	Hillslopes, Sonoran Desert	0.69		26.4	7.6	
	A6	Industrial-1	0.88		64.9	24.0	
Basin W1 Total						48.4	49.4
Basin W2	C2	Hillslopes, Sonoran Desert	0.69	0.42	8.3	2.4	
	C3	Hillslopes, Sonoran Desert	0.69		25.8	7.5	
	C4	Industrial-1	0.88		9.9	3.6	
	C5	Hillslopes, Sonoran Desert	0.69		9.8	2.8	
	C6	Industrial-1	0.88		31.9	11.8	
	C7	Industrial-1	0.88		3.2	1.2	
Basin W2 Total						28.1	30.8
Basin W3	D2	Industrial-1	0.88	0.42	30.1	11.1	
Basin W3 Total						11.1	12.3
Basin W4	A6	Industrial-1	0.88	0.42	3.0	1.1	
Basin W4 Total						1.1	2.2
Basin W5	E1	Industrial-1	0.88	0.42	18.9	7.0	
Basin W5 Total						7.0	8.4
Onsite Total:						84.6	103.1

¹ Source: Drainage Manual (FCD of Maricopa County 2011)

² C = Runoff Coefficient

³ I = total rainfall depth for the 100-year, 24-hour storm; Source: NOAA 2013

3.2.2.3. Ancillary Facilities

The Ancillary Facilities are located south of the Concentrator Complex and north of Superior. This area has been historically developed and is a mixture of industrial and natural Sonoran Desert land. No mining activity would occur within the Ancillary Facilities area; therefore, all catchments are considered to be

offsite catchments. See *Figure 6* for the stormwater management system design for the future developed locations. The Ancillary Facilities and adjacent upstream areas are subdivided into 13 catchments.

3.2.2.3.1. Non-Contact Water

The stormwater that falls in the Ancillary Facilities catchment areas is considered non-contact water and is retained on site in four separate HDPE-lined retention basins, two combined Sludge Storage Impoundments (SSI North and SSI South), and Indian Pond:

- Non-Contact Water Basin W6 would be north of the mill/vehicle maintenance building and south of the truck wash. It would be constructed to retain approximately 2.4 ac-ft (3,000 m³) of water. This basin would receive all the runoff from the surrounding catchment E1.
- Non-Contact Water Basin W7 would be south of the Administration Building parking lot, and receive surface runoff from catchment F1. This basin would be constructed to contain 3.6 ac-ft (4,400 m³) of water.
- Non-Contact Water Basin W8 would be along Lone Tree Access Road west of Superior. It would contain all surface water flows from the access road (catchment G1) and two small adjacent undeveloped areas (catchments G2 and G3). Basin W8 would be constructed to contain 4.6 ac-ft (5,600 m³) of water.
- Non-Contact Water Basin W9 would be an HDPE-lined basin designed to handle the stormwater flows from the parking areas near the mine entrance (catchment H2) and the adjacent hillsides and open areas (catchments H1 and H3). This basin would be constructed to contain 7.7 ac-ft (9,500 m³) of water.
- Legacy Tailings Ponds 1 and 2 will remain and receive all runoff from the various laydown yards (catchments J1, J2, and J3) and the upstream hillsides (catchment J4). The legacy tailings ponds are sufficiently sized to contain the estimated 15.4 ac-ft (19,000 m³) of runoff generated by the 100-year, 24-hour rainfall event.
- Indian Pond would receive runoff from catchment K1, which would flow under Lone Tree Access Road in culverts to the Indian Pond area near Outfall 1. The volume of stormwater from catchment K1 is estimated to be approximately 12 ac-ft (14,800 m³), and would be completely contained within Indian Pond.

3.2.2.3.2. Ancillary Facilities Runoff Volume Calculations

The offsite and onsite runoff volume calculations for the Ancillary Facilities site are provided in *Table 7*. These calculations are based on the assumptions described in *Section 2*.

Table 7. Ancillary Facility Offsite Water Runoff Volume Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume Required (ac-ft)	Volume Provided (ac-ft)
Basin W6	E1	Industrial-1	0.88	0.42	6.6	2.4	
Basin W6 Total						2.4	2.4
Basin W7	F1	Industrial-1	0.88	0.42	10.0	3.6	
Basin W7 Total						3.6	3.7
Basin W8	G1	Industrial-1	0.88	0.42	7.9	2.9	
	G2	Hillslopes, Sonoran Desert	0.69		3.4	1.0	
	G3	Hillslopes, Sonoran Desert	0.69		2.5	0.7	
Basin W8 Total						4.6	5.6
Basin W9	H1	Hillslopes, Sonoran Desert	0.69	0.42	8.9	2.5	
	H2	Industrial-1	0.88		9.6	3.5	
	H3	Hillslopes, Sonoran Desert	0.69		5.9	1.7	
Basin W9 Total						7.7	8.0
Existing Tailings Ponds	J1	Industrial-1	0.88	0.42	17.1	6.2	
	J2	Industrial-1	0.88		10.8	3.9	
	J3	Industrial-1	0.88		5.5	2.0	
	J4	Hillslopes, Sonoran Desert	0.69		11.6	3.3	
Existing Tailings Ponds Total						15.4	> 15.4
Indian Pond	K1	Hillslopes, Sonoran Desert	0.69	0.42	42.3	12.0	
Indian Pond Total						12.0	> 12.0
Onsite Total:						45.7	> 47.1

¹ Source: Drainage Manual (FCD of Maricopa County 2011)

² C = Runoff Coefficient

³ I = total rainfall depth for the 100-year, 24-hour storm; Source: NOAA 2013

3.3. FILTER PLANT AND LOADOUT FACILITY

The proposed stormwater management system for the Filter Plant and Loadout Facility is depicted in *Figure 7*. Runoff from offsite catchment areas upstream of the Filter Plant and Loadout Facility would be routed around or through the site and returned to the existing downstream washes via the north diversion channel and culverts. The majority of the area within the Filter Plant and Loadout Facility would remain undisturbed and the runoff considered non-contact. Contact water from the Filter Plant and Loadout Facility would be contained on site in contact water basins.

3.3.1. Non-Contact Water

The North Diversion Channel would convey offsite flows west around catchment A1, following the northern edge of the property. The channel would then turn south along the west edge of the construction

laydown yard to Outfall 1, in the existing wash. Runoff from catchment B1, the construction laydown yard, would be graded to also flow off site via Outfall 1. A low point in the roadway would allow flows in B1 to cross to Outfall 1.

Outfall 2 would collect runoff from offsite catchment areas east of the property and onsite catchments C1, C2, C3, and C4. Flows from the east enter the site over the MARRCO Access Road and through three culverts under the rail loop. The MARRCO Access Road is graded so that stormwater flow is not impeded. Two additional culverts allow flow to continue west under the rail loop from offsite catchments C1 and C2, discharging to catchment C3. Flows from C3 would be directed over the Skyline Access Road into catchment C4 and to Outfall 2. A small catchment in the southeast corner of the property (catchment D1) will be graded to flow off site at Outfall 3. All of these catchments are considered off site because stormwater from them does not come into contact with mining facilities.

3.3.2. Contact Water

The Concentrate Filter Plant, Conveyor, Concentrate Loadout, Clarifier, Ancillary Facilities, an SRP Substation, a helipad, and a parking area would be within catchments A1 and A2. These areas would be graded to flow to Contact Water Basin F1. This basin would be constructed to contain approximately 22 ac-ft (27,000 m³) of water. The basin would be lined according to BADCT standards and would be emptied after each storm event for reuse.

The Filter Plant Site, CAP Water Pump Station, and CAP Water Tank would be within catchment E1. These areas would be graded to flow to Contact Water Basin F2. This basin would be constructed to contain 3.4 ac-ft (4,200 m³) of water. The basin would be lined according to BADCT standards and would be emptied after each storm event for reuse.

3.3.3. Filter Plant and Loadout Facility Runoff Volume Calculations

The offsite and onsite runoff volume calculations for the Filter Plant and Loadout Facility are provided in *Table 8*. These calculations are based on the assumptions described in *Section 2*.

Table 8. Filter Plan and Loadout Facility Offsite Runoff Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume (ac-ft)
Outfall 1	B1	Hillslopes, Sonoran Desert	0.69	0.42	40.0	11.6
Outfall 1 Total						11.6
Outfall 2	C1	Hillslopes, Sonoran Desert	0.69	0.42	169.5	49.1
	C2	Hillslopes, Sonoran Desert	0.69		52.0	15.1
	C3	Hillslopes, Sonoran Desert	0.69		127.0	36.8
	C4	Hillslopes, Sonoran Desert	0.69		88.4	25.6
Outfall 2 Total						126.6
Outfall 3	D1	Hillslopes, Sonoran Desert	0.69	0.42	9.4	2.7
Outfall 3 Total						2.7
Onsite Total:						140.9

Table 9. Filter Plan and Loadout Facility Onsite Runoff Calculations

Basin	Catchment	Land Use Category ¹	C ^{1,2}	I ³ (ft)	Area (acres)	Volume Required (ac-ft)	Volume Provided (ac-ft)
Basin F1	A1	Hillslopes, Sonoran Desert	0.69	0.42	34.0	9.9	
	A2	Industrial-1	0.88		28.8	10.6	
Basin F1 Total						20.5	21.6
Basin F2	E1	Industrial-1	0.88	E1	7.0	2.6	
Basin F2 Total						2.6	3.4
Onsite Total:						23.1	25.0

¹ Source: Drainage Manual (FCD of Maricopa County 2011)

² C = Runoff Coefficient

³ I = total rainfall depth for the 100-year, 24-hour storm; Source: NOAA 2013

3.4. TAILING STORAGE FACILITY

The stormwater management system for the TSF was designed by KCB to divert non-contact water around the facility, collect and reclaim surface runoff from the TSF, provide storage for the design storm events without discharge, and protect the TSF and diversion structures from erosion from storm events. Proposed stormwater management structures and upstream catchments in the vicinity of the TSF are shown in *Figure 8*. The TSF footprint would impact the Roblas Canyon and Pott's Canyon watersheds. The main flows of Roblas and Pott's canyons will continue to pass without any alteration to the drainage flow paths to the west and east of the TSF, respectively.

3.4.1. Non-Contact Water

Three diversion channels would be constructed north of the TSF to route the upstream catchments (S1, S2, and S3) around the facility. (*Figure 8*). These diversion channels would be constructed to convey

the peak PMF flow, which is the greater peak flow of the general probable maximum flood (PMF) 72-hr or local PMF 6-hr storms. The diversion channel design flows range from 3,500 to 12,000 cubic feet per second (100 m³/s to 340 m³/s) and diversion channel base widths range from 16 feet to 50 feet (5 m to 15 m) with side slopes of 1H:2V. The slopes of the diversion channels would be 1 percent. With construction of the three diversion channels, non-contact water would continue to report to Queen Creek.

3.4.2. Contact Water

The stormwater that falls directly on the TSF, or downstream of the diversion channels in early stages of tailings construction, would be contained within the TSF (catchment S4). This water would directly offset supply water needs for tailings void fill and water lost to evaporation. The stormwater that seeps through the tailings would be collected in a series of rockfill underdrains to report to one of 11 seepage collection dams. Each of these dams would have a low permeability core and grout curtain, and would be keyed into bedrock to limit seepage. The seepage dams would also collect all stormwater that runs off of the tailings embankments (catchment S5), and would be constructed to store the runoff from a 200-year 24-hr storm without discharge. The seepage dams are designed with emergency spillways that are sized for the 1,000-year, 24-hr storm. Any collected seepage would be pumped back into the TSF. Excess water in the TSF system would be pumped back to the Concentrator Complex as reclaim water.

The calculations and design of these facilities are provided in the 2014 Klohn Crippen Berger report, *Resolution Copper Mining Near West Tailings Management Mine Plan of Operations Study* (KCB 2014).

4. CONCLUSION

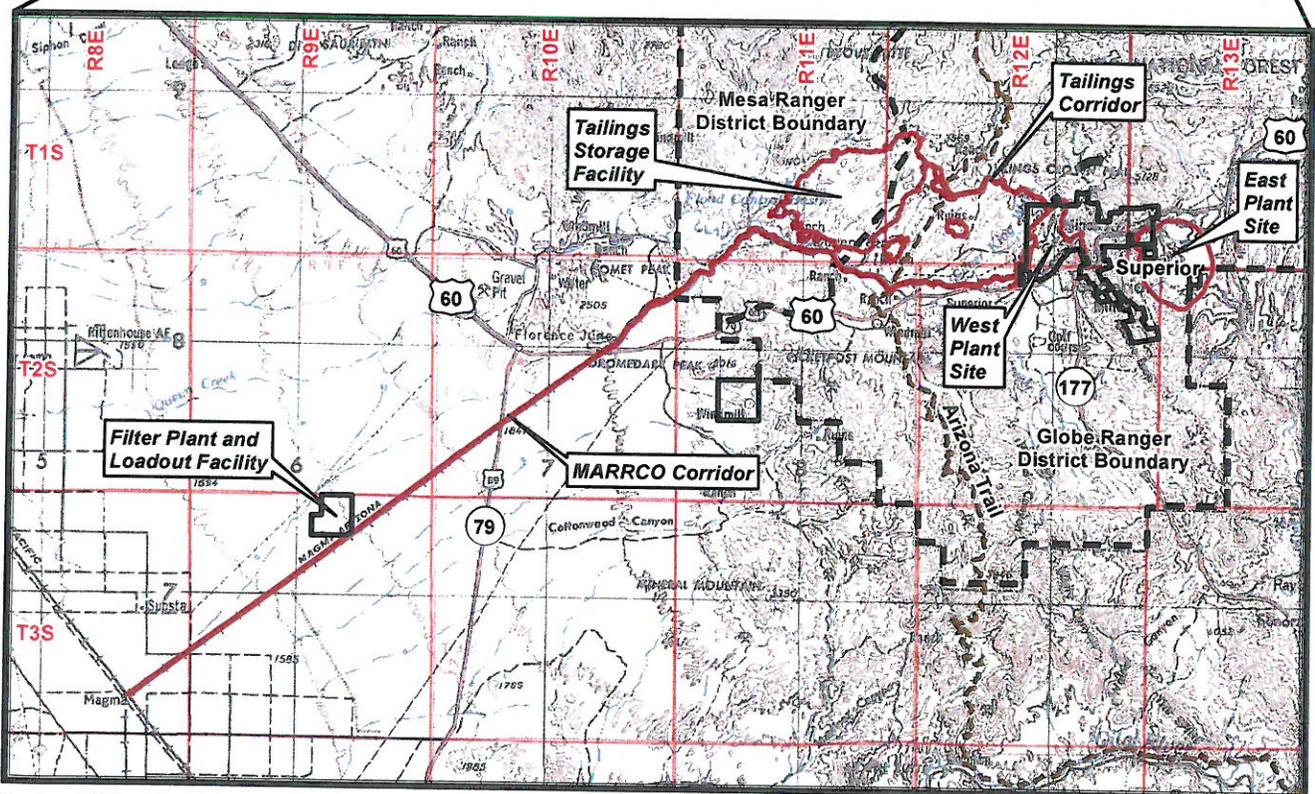
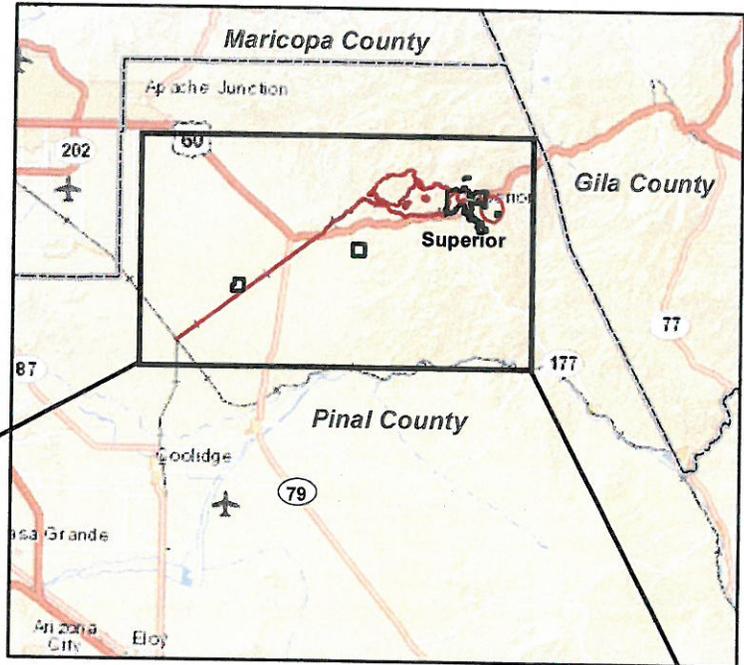
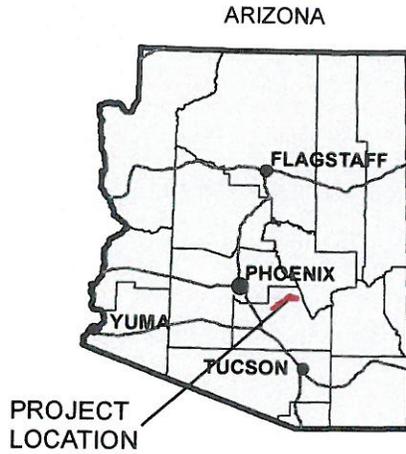
All contact water generated from the 100-year, 24-hour storm runoff at the EPS, WPS, and the Filter Plant and Loadout Facility can be contained either within new contact water basins constructed for this purpose or within existing tailings ponds. Additionally, the non-contact stormwater runoff may be routed via berms and channels around mine facilities and back to their original drainage channel without coming into contact with mine facilities, or may be incorporated into contact water basins. These berms and channels may be temporary for construction or operational phasing, or may be maintained over the life of the mine.

More detailed site grading plans and impermeable surface information will be required for final design of the hydraulic structures for peak flows. It is recommended that a full hydrological analysis be performed using hydrologic modeling software (*i.e.*, HEC-1 or HEC-HMS, and HEC-RAS) to size the channels and culverts when the design of the facilities reaches an appropriate level of detail.

5. REFERENCES

- Arizona Department of Environmental Quality (ADEQ). 2004. Arizona Mining Guidance Manual BADCT. Aquifer Protection Program. Publication TB-04-01.
- Flood Control District of Maricopa County (FCD). 2011. Drainage Design Manual for Maricopa County; Hydrology. February 2011.
- Klohn Crippen Berger (KCB). 2014. Resolution Copper Mining Near West Tailings Management Mine Plan of Operations Study. September 2014.
- NOAA. 2013. Point Precipitation Frequency Estimates from NOAA Atlas 14, Volume 1, Version 5.

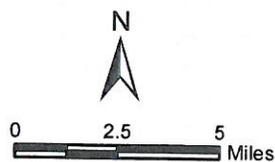
FIGURES



Portion of Pinal County,
Image Source: Mesa 1:250,000 USGS Quadrangle

Legend

- Resolution Holdings
- Project Area
- Arizona Trail (ESRI Online Data)
- Tonto National Forest Ranger District Boundary

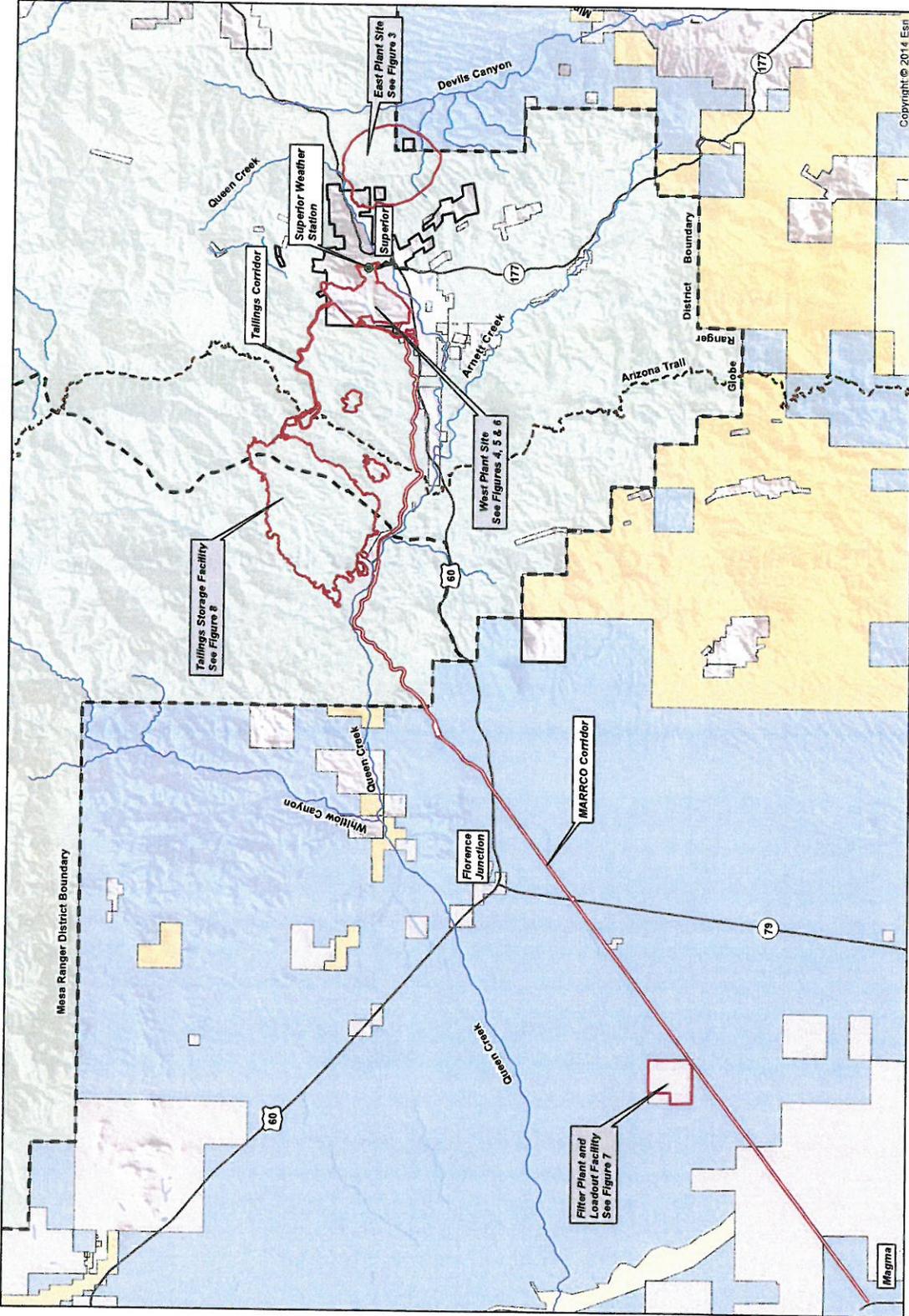


**RESOLUTION COPPER
Stormwater Drainage Design**

VICINITY MAP

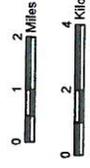
Figure 1

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- Legend**
- Resolution Holdings
 - Project Area
 - Arizona Trail (ESRI Online Data)
 - Tonto National Forest
 - Ranger District Boundary
 - Surface Management (Source: BLM 2011)
 - Bureau of Reclamation
 - Private Land (No Color)
 - State Trust Land
 - US Forest Service (USFS)

Image Source: ESRI Online World Shaded Relief

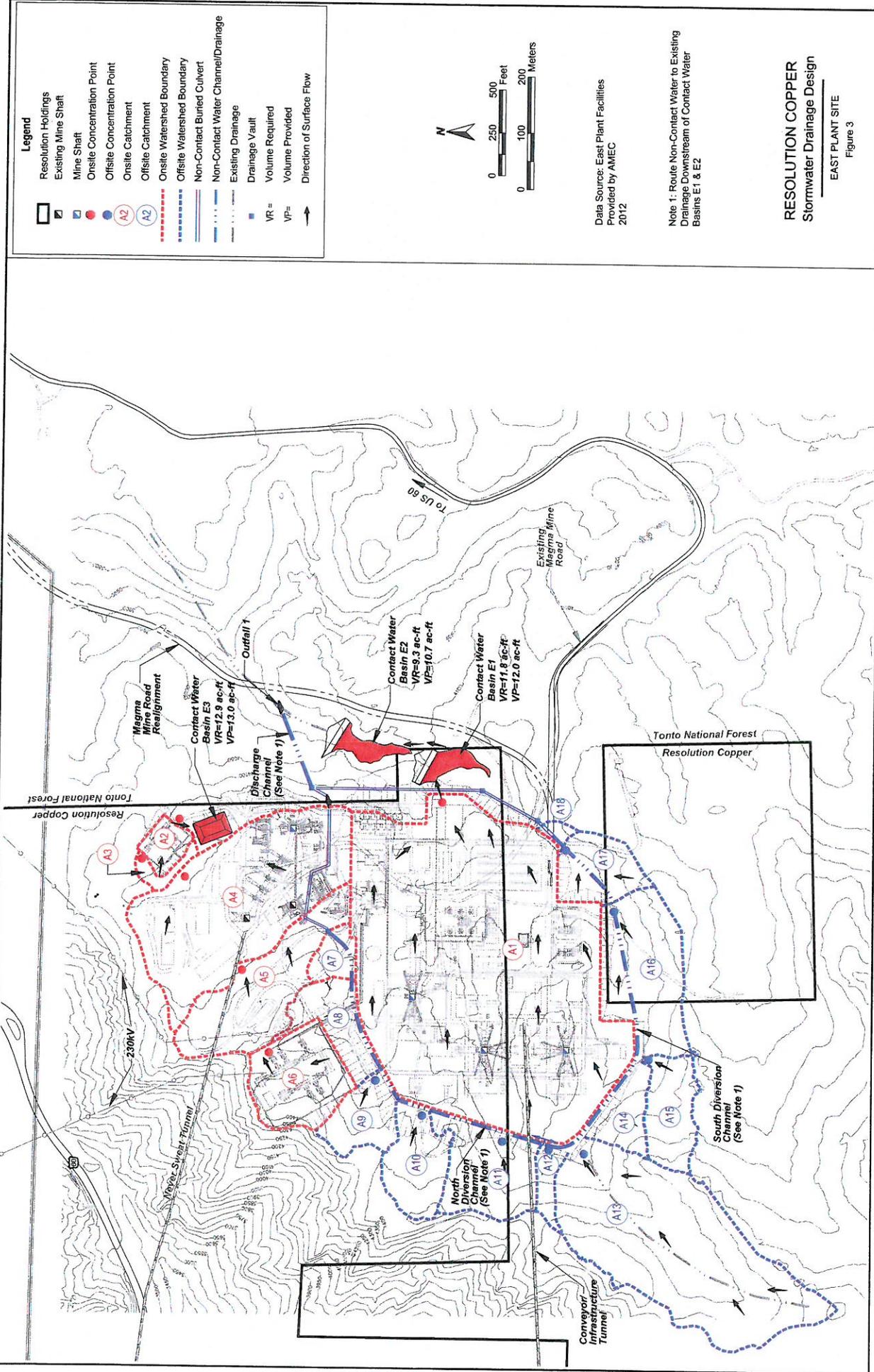


RESOLUTION COPPER
Stormwater Drainage Design

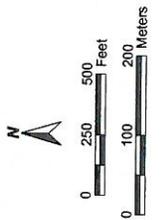
PROJECT OVERVIEW
Figure 2

Copyright © 2014 Esri

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- Legend**
- Resolution Holdings
 - Existing Mine Shaft
 - Mine Shaft
 - Onsite Concentration Point
 - Offsite Concentration Point
 - Onsite Catchment
 - Offsite Catchment
 - Onsite Watershed Boundary
 - Offsite Watershed Boundary
 - Non-Contact Buried Culvert
 - Non-Contact Water Channel/Drainage
 - Existing Drainage
 - Drainage Vault
 - VR = Volume Required
 - VP = Volume Provided
 - Direction of Surface Flow

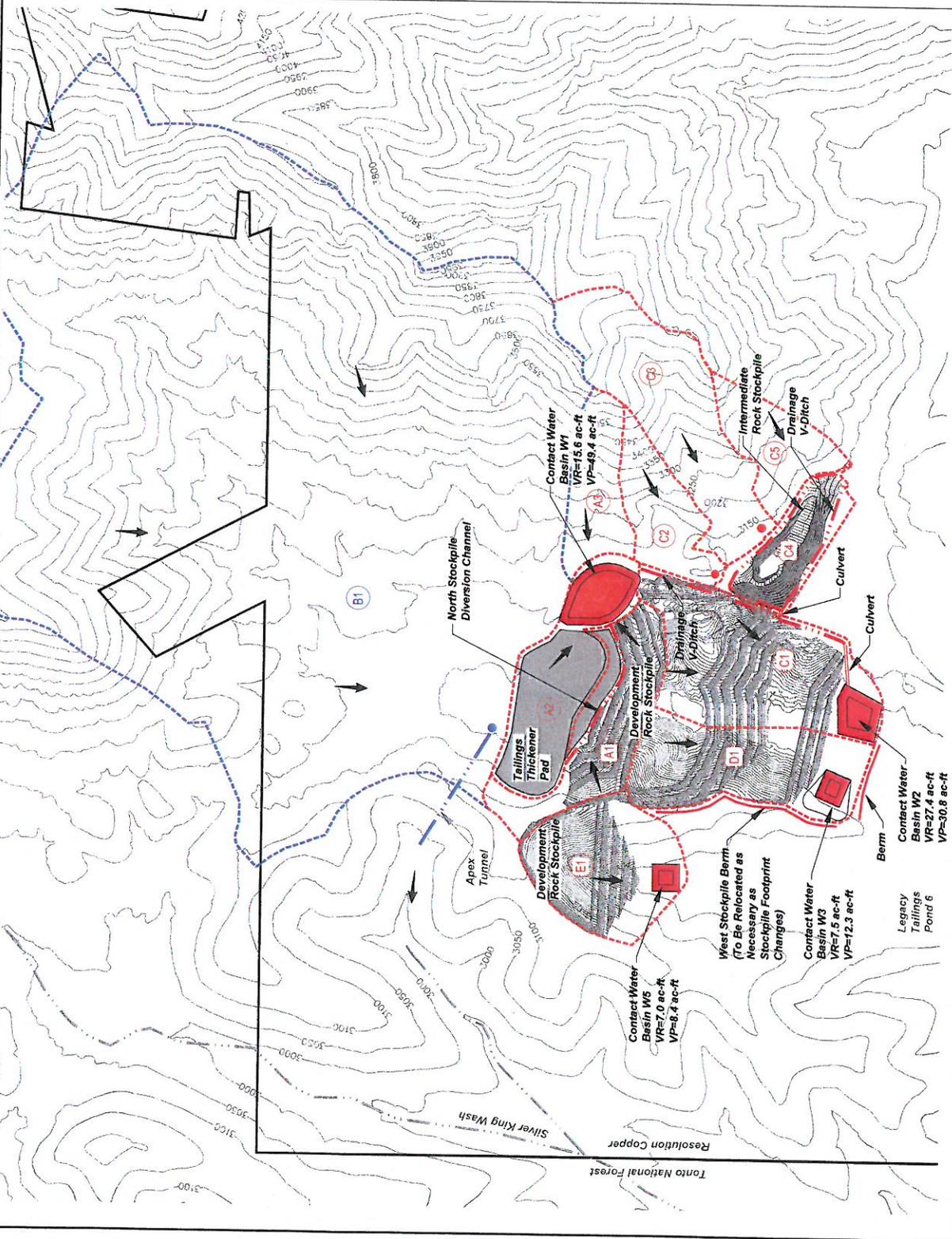


Data Source: East Plant Facilities
 Provided by AMEC
 2012

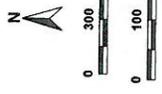
Note 1: Route Non-Contact Water to Existing
 Drainage Downstream of Contact Water
 Basins E1 & E2

RESOLUTION COPPER
Stormwater Drainage Design
 EAST PLANT SITE
 Figure 3

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- Legend**
- Resolution Holdings
 - Onsite Concentration Point
 - Offsite Concentration Point
 - Onsite Catchment
 - Offsite Catchment
 - Onsite Watershed Boundary
 - Offsite Watershed Boundary
 - Contact Water Buried Culvert
 - Non-Contact Water Channel/Drainage
 - Contact Water Channel/Drainage
 - Contact Water Berm
 - Existing Drainage
 - VR = Volume Required
 - VP = Volume Provided
 - Direction of Surface Flow



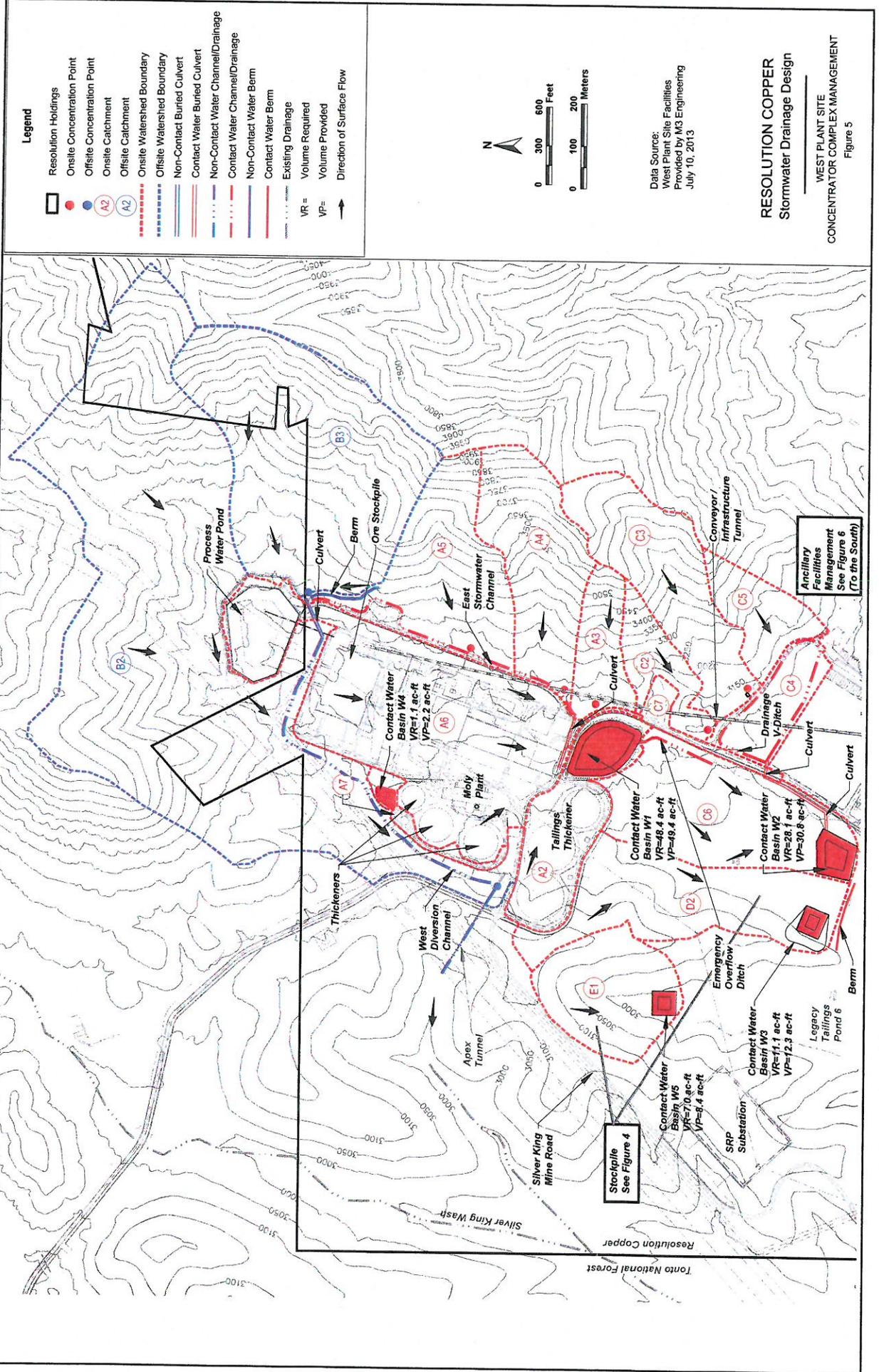
Data Source:
 West Plant Facilities
 Provided by M3 Engineering
 July 10, 2013

Development Rock Stockpile Footprint
 Provided by Resolution Copper 2013

Intermediate Rock Stockpile Footprint
 Provided by Golder Associates 2012

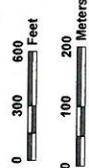
RESOLUTION COPPER
Stormwater Drainage Design
 WEST PLANT SITE
 STOCKPILE
 Figure 4

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Legend

- Resolution Holdings
- Onsite Concentration Point
- Offsite Concentration Point
- Onsite Catchment
- Offsite Catchment
- Onsite Watershed Boundary
- Offsite Watershed Boundary
- Non-Contact Buried Culvert
- Contact Water Buried Culvert
- Non-Contact Water Channel/Drainage
- Contact Water Channel/Drainage
- Non-Contact Water Berm
- Contact Water Berm
- Existing Drainage
- VR = Volume Required
- VP = Volume Provided
- Direction of Surface Flow



Data Source:
West Plant Site Facilities
Provided by M3 Engineering
July 10, 2013

RESOLUTION COPPER
Stormwater Drainage Design

WEST PLANT SITE
CONCENTRATOR COMPLEX MANAGEMENT
Figure 5

Ancillary
Facilities
Management
See Figure 6
(To the South)

Stockpile
See Figure 4

Tonto National Forest
Resolution Copper

Silver King
Mine Road

Silver King Wash

Contact Water Basin W3
VR=11.1 ac-ft
VP=12.3 ac-ft

Contact Water Basin W5
VR=7.0 ac-ft
VP=8.4 ac-ft

Contact Water Basin W4
VR=1.1 ac-ft
VP=2.2 ac-ft

Contact Water Basin W1
VR=48.4 ac-ft
VP=49.4 ac-ft

Contact Water Basin W2
VR=28.1 ac-ft
VP=30.8 ac-ft

Process Water Pond

Thickeners

West Diversion Channel

Apex Tunnel

Moly Plant

Tailings Thickener

East Stormwater Channel

Berm

Ore Stockpile

Culvert

Conveyor / Infrastructure Tunnel

Drainage V-Ditch

Culvert

Culvert

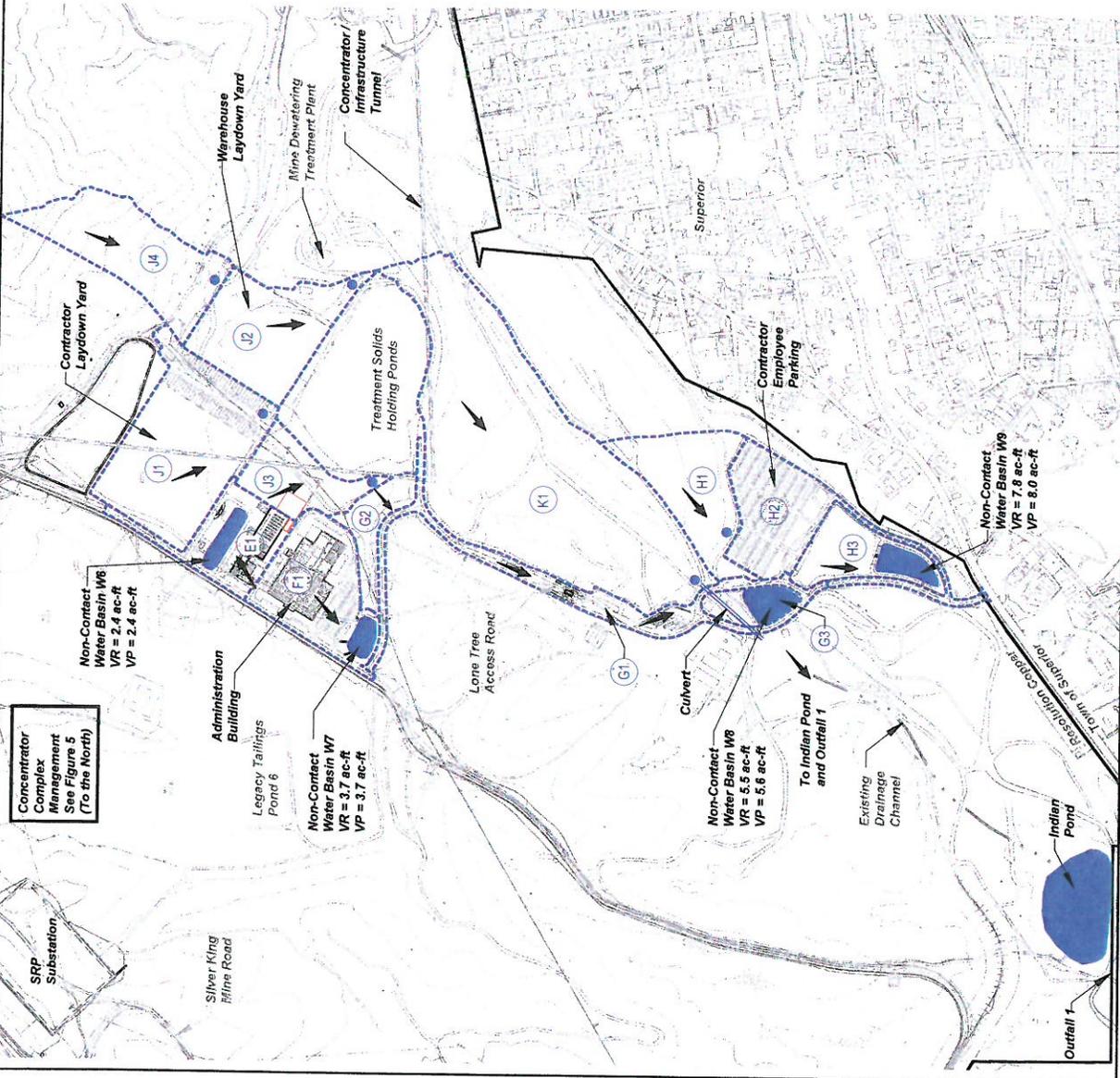
Berm

Emergency Overflow Ditch

SRP Substation

Legacy Tailings Pond 6

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Concentrator Complex Management See Figure 5 (To the North)

Non-Contact Water Basin W6
VR = 2.4 ac-ft
VP = 2.4 ac-ft

Administration Building
Legacy Tailings Pond 6

Non-Contact Water Basin W7
VR = 3.7 ac-ft
VP = 3.7 ac-ft

Lone Tree Access Road

Non-Contact Water Basin W8
VR = 6.5 ac-ft
VP = 6.6 ac-ft

To Indian Pond and Outfall 1

Existing Drainage Channel

Non-Contact Water Basin W9
VR = 7.8 ac-ft
VP = 8.0 ac-ft

Outfall 1

Indian Pond

Resolution Copper

Contractor Employee Parking

Treatment Solids Holding Ponds

Mine Dewatering Treatment Plant

Warehouse Laydown Yard

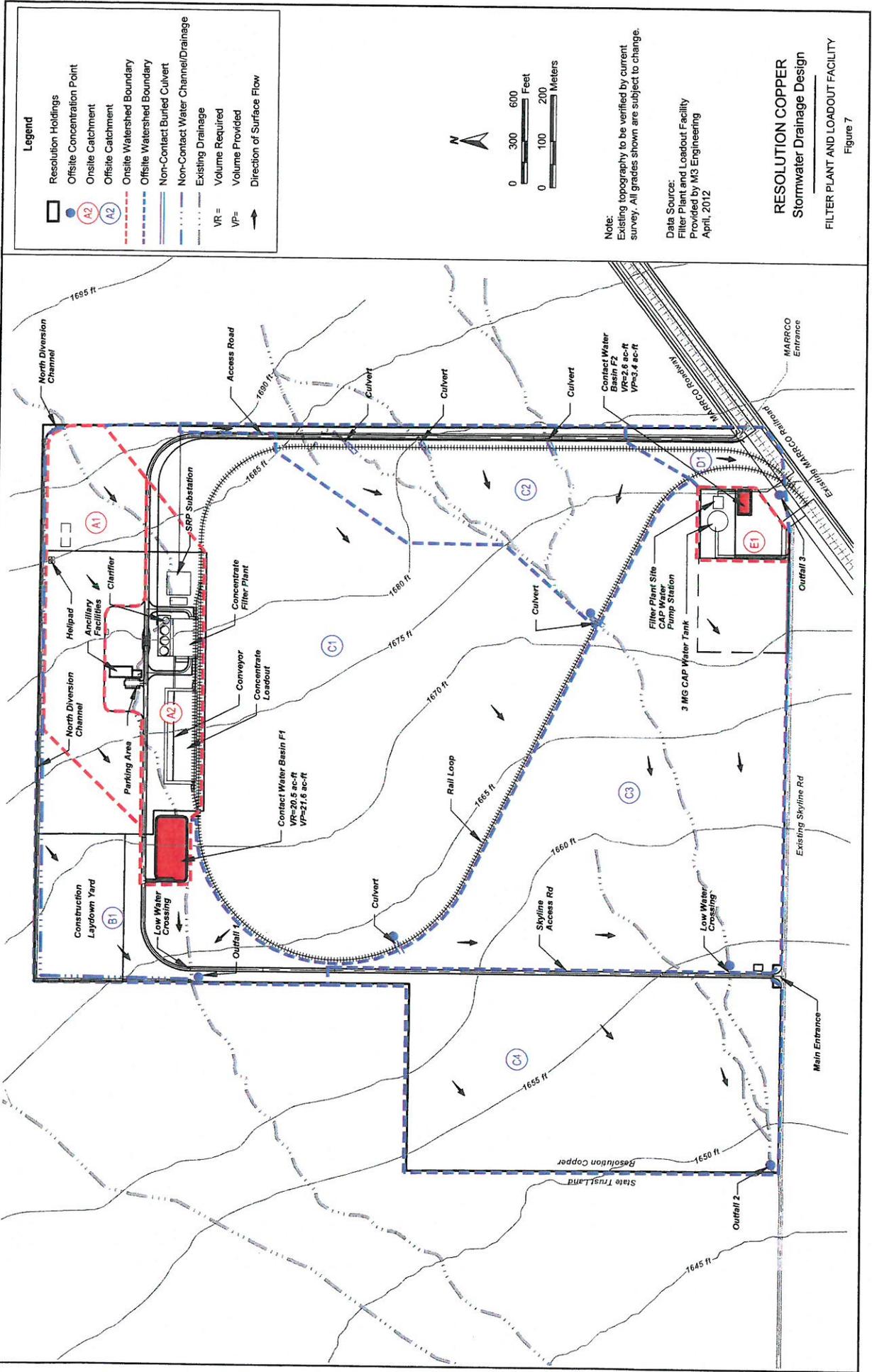
Contractor Laydown Yard

Concentrator Infrastructure Tunnel

SRP Substation

Silver King Mine Road

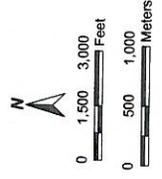
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Legend

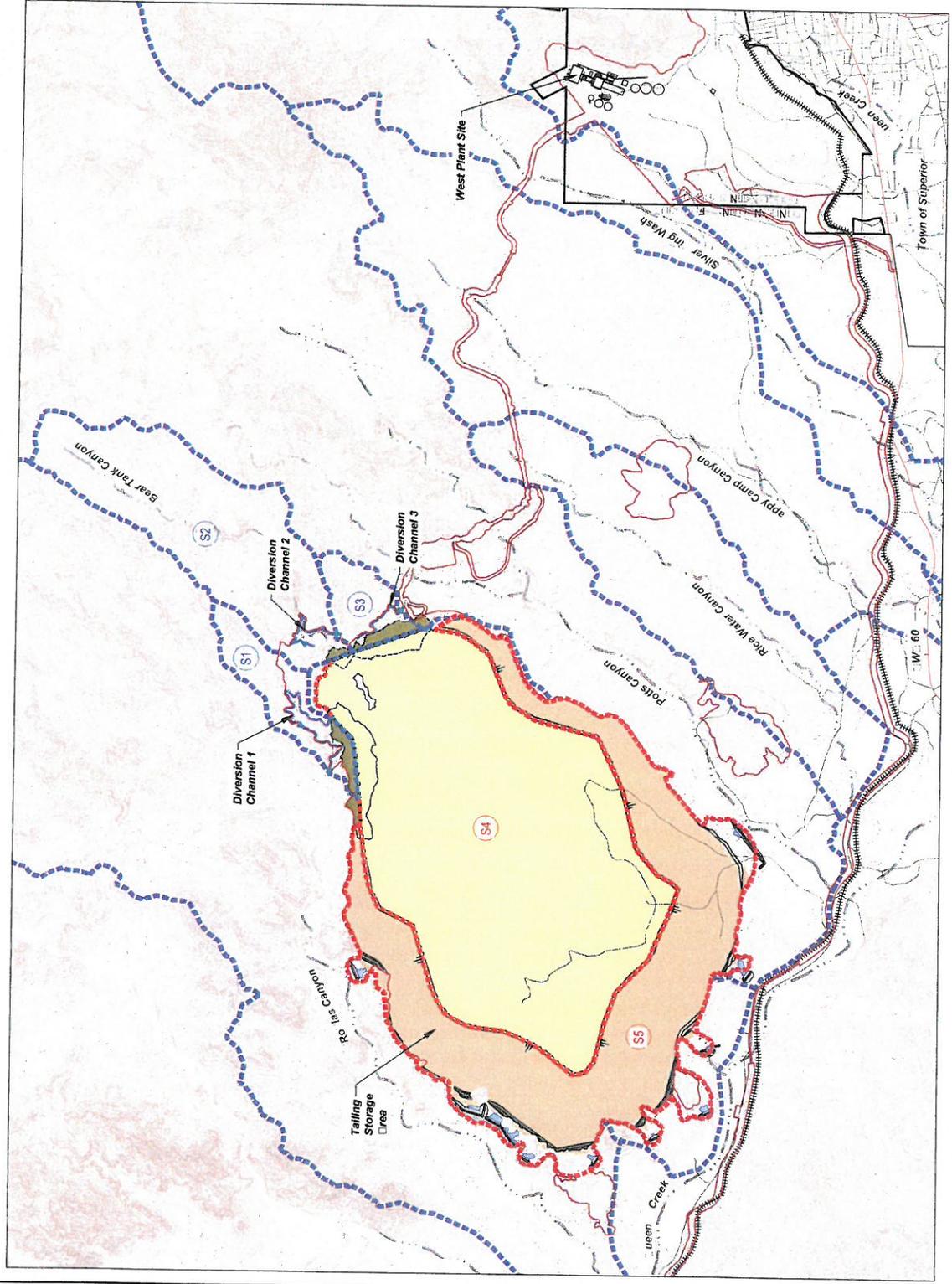
- Resolution Holdings
- Project Area
- Onsite Catchment
- Offsite Catchment
- Onsite Watershed Boundary
- Offsite Watershed Boundary
- Existing Drainage
- Upstream Embankment Raise Fill
- Starter Dam
- Thickened Scavenger Tailings
- North Dams
- Seepage Collection Dam Pond

Topography Based on 1 Meter (3.3 Foot) Interval Contours Received From Resolution January, 2013.



RESOLUTION COPPER
Stormwater Drainage Design

TAILINGS STORAGE FACILITY
Figure 8





General Plan of Operations
Road Use Plan

September 2014

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Figure 8.	Typical Cross Sections
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1. INTRODUCTION

Resolution Copper Mining, LLC (Resolution Copper or Applicant) submitted a General Plan of Operations (Plan), 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 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) – Ore and development rock stockpiles, Concentrator (ore processing facilities), and administrative facilities;
- Tailings Storage Facility (TSF) – Tailings storage area and associated Tailings Corridor (distribution pipeline and access roads); and
- The Magma Arizona Railroad Company (MARRCO) Corridor (existing and future pipelines)

Development of project sites and elements would require the use of, maintenance, and/or reconstruction of existing Forest Service Roads (FRs) as well as construction of Proposed New Roads (PNRs). With the exception of the TSF, the Project will be conducted largely from 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 4*.

This 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 Copper and its agents to access project sites throughout the duration of the Project. This Road Use Plan was prepared to be consistent with Forest Service (FS) regulations for travel management and motor vehicle use on National Forest System lands (36 CFR Parts 212,251,261, and 295). Specifically, this Road Use Plan 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 proposed PNRs;
3. The design, construction, and/or maintenance standards for roads under the responsibility of Resolution Copper; and

4. The estimated disturbance area to TNF lands associated with the construction of PNRs and reconstruction of existing FRs required to complete the proposed activities.

2. EXISTING FOREST SERVICE ROADS

2.1. APPLICANT USE

All of 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 of the roads would require routine maintenance for the Project duration. Other existing FRs would require significant maintenance/reconstruction to allow access by drilling, excavation, hauling, and support equipment. Some existing FRs, as well as a number of unauthorized roads, not officially within the FS road system, will require decommissioning due to their location within the disturbance area of the EPS, the TSF, and the Tailings Corridor.

2.2. PUBLIC USE

Resolution Copper will maintain public access to the areas surrounding the GPA throughout all phases of the Project to the extent practicable. The plan for public access is described in the following sections which are organized by main project site and associated primary project elements.

2.2.1. MARRCO CORRIDOR

There are 17 proposed access points along the MARRCO Corridor for use in the Project for both construction and operation/maintenance purposes. Fifteen of these MARRCO Corridor Access Points (MCAs) will be accessed from existing FRs. These FRs include Hewitt Canyon Road (FR 357), FR 1933, FR 3454A, FR 3454C, FR 8, FR 2397, FR 2395, and FR 2400 (*Figures 2 and 3*). Two of the MCAs, MCA-16 and MCA-17, will be accessed from previously disturbed areas connecting off of FR 357 (*Figure 2*). For the purposes of accessing the MARRCO Corridor, none of the existing FRs or previously disturbed areas to be used as temporary access roads will require reconstruction, maintenance level changes, or restriction from public use. The main access road to the MARRCO Corridor is Hewitt Canyon Road (FR 357), which also provides public access to many connecting routes in this area. Similar to the water pipeline that was placed within the MARRCO Corridor in 2008 to deliver dewatering water to farmers at New Magma Irrigation District, additional pipeline infrastructure will be placed in the MARRCO during construction and operations. To maintain public access on FR 357, the additional pipeline infrastructure will be built to allow this road to bypass.

2.2.1. TAILINGS STORAGE FACILITY AND TAILINGS CORRIDOR

The construction of the TSF will restrict public access to unimproved existing FRs and other existing roads that traverse the proposed TSF area (*Figure 4*). These roads make up a total of approximately 32 acres of previously disturbed area within the footprint of the TSF and will be decommissioned. However, existing roads and trails outside of the footprint will accommodate continued recreational use in the

vicinity of the TSF and allow access to higher elevation recreational areas. Existing FRs (*Figure 3*) will be utilized for general access to the TSF area and/or haul routes from borrow areas to the TSF for the construction of the TSF starter dams. The FRs used for general access will not change maintenance level or require any reconstruction. Although the majority of borrow material for the tailings starter dam would come from within and directly adjacent to the TSF footprint (Borrow Areas 1 through 4), if additional material is needed for construction or reclamation, borrow areas well outside the footprint would be used (Borrow areas 5 and 6). To access Borrow Areas 1 through 4, the haul routes inside the TSF footprint will require widening of several existing FRs. If Borrow Areas well outside the TSF (5 and 6) are needed, the haul routes outside the TSF will also need widening. A PNR (PNR-02) will be constructed within the TSF footprint and is described in *Section 3*.

The Tailings Corridor will cross several existing FRs between the TSF and WPS and will restrict public access across three FRs: FR 982, FR 2367, and a relatively small portion of FR 2371 immediately north of the tailings corridor where the road terminates (*Figures 3 and 5*). Public access will not be restricted across FR 650, except temporarily during haulage of material from Borrow Areas 5 and 6. Public access will not be restricted across FR 3152. To maintain access on these routes, the Tailings Corridor and associated infrastructure will be built so there are no at-grade crossings. The details of these crossings are presented in *Section 2.4.1.2*. A PNR (PNR-03) will be constructed along the Tailings Corridor as an access road to the associated infrastructure along the route; the details of PNR-03 are described in *Section 3*.

All reconstruction and access details are presented in *Tables 1 and 4* and cross sections showing construction details for each road are contained within *Figures 8 and 9*.

2.2.1. WEST PLANT SITE

The WPS is primarily located on private lands, with only the Process Water Pond and Silver King Mine Road alternative entrance areas located on TNF lands (*Figure 5*). Silver King Mine Road (FR 229) serves as primary access to the region north of the WPS. The segment of FR 229 on TNF lands that passes through the WPS will be reconstructed to Mine Safety and Health Administration (MSHA) specifications and will be maintained by Resolution Copper. FR 229 is proposed to be used as the main access for construction and operations into the 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. However, it is recognized that FR 229 is a primary access road north of the WPS that leads into higher elevation areas; therefore, an alternative route will be provided to maintain public access to that portion of the TNF. The planned 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 the WPS as shown on *Figure 5*. The details of maintenance and reconstruction required for FR 8 and FR 3152 are presented in *Tables 1 and 4* and cross sections showing construction details for each road are contained within *Figures 8 and 9*.

2.2.2. 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 the East Plant Site, between the late 1960's and through to 1996, the main mine access road was FR 469 or also called the "Magma Mine Road". For Resolution Copper, at full build out and production, the EPS will largely expand onto private lands with a smaller portion on TNF lands. Additional area encompassed by the EPS includes the land surface above the ore body, comprised of unpatented mining claims on lands administered by the TNF. This land surface area above the ore body is identified on **Figure 6** as the Disturbance Area and correlates with the limit of the fracture zone at the end of the mine life. Public access to roads within this disturbance area will be restricted, and the roads will be decommissioned. Roads within the EPS Boundary, which correlates to the ultimate limit of subsidence (continuous zone), will also be restricted from the public. **Tables 1 and 4** list all existing FRs impacted, their intended use, and access route descriptions for the Project. Public access to public lands in the vicinity of the EPS will be maintained via State Route (SR) 177 on the west side, US 60 on the north via FR 469 (although not the full extent), and FR 315 on the south, which all connect to other access roads in the area (**Figure 7**).

To maintain access for Resolution Copper to the EPS surface support facilities, a new PNR (PNR-01) will be constructed and is described in **Section 3**.

2.3. ROUTINE MAINTENANCE TO EXISTING FOREST SERVICE ROADS

2.3.1. MAINTENANCE LEVEL DESCRIPTIONS

Forest Service Road Maintenance Levels as defined by the Tonto National Forest Plan (TNF 1985) are:

- 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 is 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.

2.3.2. 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.

2.4. RECONSTRUCTION OF EXISTING FOREST SERVICE ROADS

To enable access to the GPA, certain segments of the existing FRs will require significant maintenance and/or reconstruction. The methods of road reconstruction are described in **Section 2.4.2**. Proposed improvements to the existing FRs are summarized in **Table 1**.

All existing FRs will be maintained, repaired, or reconstructed to maintenance levels as designated by the TNF. Reconstructed roads will adhere to the design standards described below.

2.4.1. DESIGN STANDARDS

2.4.1.1. *Traveled Way*

The reconstructed width of the traveled way of the existing FRs will depend on intended use. The majority of the existing FRs requiring reconstruction will be used as haul routes from Borrow Areas 5 and 6 to the TSF (**Figures 3 and 8**).

These borrow areas are outside of the footprint of the TSF and will only be excavated if required material is not available from within the footprint of the TSF. Similar to Borrow Areas 1 through 4, Borrow Areas 5 and 6 will be excavated for reclamation and/or for construction. The required width for these haul routes was calculated assuming two-way traffic for a 40 to 50-ton truck. The 40 to 50 ton truck is approximately 12 ft (3.9 m) wide. The assumed total traveled way width is 48-50 ft, assuming 24 ft for two-way traffic, an additional 6 ft of clearance to allow for truck passing and an additional 18 feet for berms. These roads will be used for mine activities throughout the life of the mine and will be maintained to MSHA specifications; therefore, these roads will require berms of a height equal to the axle height of the largest vehicle on the road. It is worth noting that the roads within the TSF footprint will be progressively covered through the life of mine as the footprint expands; although the perimeter road would be used to haul borrow material for reclamation once the starter dam construction has ended.

Other segments of existing FR roads to be reconstructed, which will not be used as haul routes, include Silver King Mine Road (FR 229) and FR 3152 (**Figure 5**). FR 229 will be reconstructed and realigned as the main entrance to the WPS for construction and larger scale delivery of materials during operations. Only a segment of this reconstruction will occur on TNF land (**Figure 5**). The typical section for the reconstruction of the Silver King Mine Road can be found on **Figure 9**. It will consist of a 26.25 ft (8.0 m) traveled way with a safety berm and drainage ditches (as needed), cut slopes of 1:1, and fill slopes of 1.5:1.

FR 3152 will be reconstructed to provide public access around the WPS to FR 229 north of the WPS. The reconstruction of FR 3152 is needed due to restricted access to FR 229 on private land (*Figure 5*). FR 3152 will be widened to approximately 30 ft, which is the existing width of Silver King Mine Road. Access to FR 229 north of the WPS will be via FR8 connecting to FR 3152. No berms are required since the road will not be used for mine activities. The typical section for FR 3152 is shown in *Figure 8*.

All reconstructed 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. The amount of new disturbance estimated for reconstruction of existing FRs is based on the applicable typical section. The new disturbance accounts for vegetation clearing and trimming on cuts and fills, out-sloping the road bed and clearing loose rock and soil from the road bed and the toe of the cut slope. The estimated disturbance is shown in *Table 4*.

2.4.1.2. Crossing Existing Forest Service Roads

The Tailings Corridor will intersect five existing FRs; FR 982, FR 2367, FR 2371, FR 650, and FR 3152 (*Figure 5*). A segment of the Tailings Corridor access road (PNR-03) runs along FR 982. In this area, FR 982 will be reconstructed to the typical section of PNR-03. Since FR 2367 is accessed from FR 982 it will no longer be accessible to the public. A segment of FR 2371 will also be restricted from public access where the Tailings Corridor crosses the road. Since FR 2371 is not a primary access to the region and is maintained at Level 1, it may not be necessary to preserve access to this FR north of the Tailings Corridor. FR 650 and FR 3152 either currently serve or will serve as primary access to recreational areas north of the GPA. To maintain access to the region, FR 650 will be reconstructed to bypass under the Tailings Corridor via a box culvert (or similar structure), and FR 3152 will be reconstructed to bypass over the pipeway of the Tailings Corridor. For the FR 3152 crossing, the pipeway will be buried and the access road will be routed around the pipeway to intersect with FR 3152, where there signage will be posted to warn private vehicles of potential cross traffic. The typical sections of these crossings are shown in *Figure 9*.

Hewitt Canyon Road (FR 357) serves as an access route to areas west and north of the TSF (*Figures 2 and 3*). This road currently crosses the MARRCO Corridor. There is an existing 18-in dewatering line and an existing 12-in Arizona Water line along the corridor. A new 36-in steel pipe waterline and 2 to 8-in concentrate lines will be added to the 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 and therefore no typical section/profile is provided.

2.4.1.3. Drainage Improvements

Drainage improvements to reconstructed roads will be conducted only as needed. Roadways will be sloped for drainage to reduce erosion, water bars will be installed where necessary to prevent concentration of runoff. The creation of berms along the side of the road will only be implemented on

roads which must meet MSHA regulations. Breaks in the berms will be utilized to take water off the road and will be determined in the field based upon actual water flow patterns. Rolling-dip cross-drains will be constructed into the roadway on steep grades to help prevent erosion.

Rolling-dip cross-drains are designed to slow traffic and disperse surface water. Rolling dips require less maintenance and are less likely to plug and fail than culvert pipes. Spacing of rolling dips is a function of road grade and soil type. Recommended maximum distances between rolling dips is provided in **Table 2**. Specific locations of rolling dips will be determined in the field based upon actual water flow patterns, rainfall intensity, road surface erosion characteristics, and available erosion resistant outlet areas. A typical rolling dip profile is provided in **Figure 8**.

To the extent practicable, existing drainage crossings will be simple ford-style low water crossings. Where existing drainages that cross the roadway are deeply incised, temporary crossings may be constructed and armored using cobble-sized rocks to allow water to flow through the crossings to the extent possible. The use of culverts will be avoided to the extent practicable, although some temporary culverts may be installed under the provisions of Clean Water Act, Nationwide Permit No. 14, assuming potentially jurisdictional waters are encountered.

2.4.2. CONSTRUCTION METHODS

Roads will be reconstructed using some or all of the following; a Caterpillar D8, D9 or equivalent-sized dozer, a Caterpillar 140M to 14M size motor grader or equivalent, a tracked excavator, and a water truck. Reconstruction will include filling and leveling of heavily eroded areas, placement of temporary low water crossings, cut for placement of the box culvert crossing, and placement of leveling fill or aggregate surfacing in the roadway.

2.4.3. ENVIRONMENTAL PROTECTION MEASURES

During reconstruction of existing FRs Resolution Copper 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 reconstruction 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 reconstruction will be designed to prevent soil erosion. Drainage ditches with cross drains will be constructed where necessary. Disturbed slopes will be revegetated, mulched, or otherwise stabilized to minimize erosion as soon as practicable following construction.
- 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.
- During construction and operations, diversions 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 LANDS

3.1. APPLICANT USE

Resolution Copper will construct new PNRs for the proposed EPS, TSF, and Tailings Corridor. These roads include the Magma Mine Road Realignment (PNR-01), the TSF Perimeter Road (PNR-02,) and the Tailings Corridor Access Road (PNR-03). These roads will be utilized for mine activities only, and typical sections for each PNR are depicted on *Figure 8*. 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 PNRs will not be open for public use as they are designated as mine roads.

3.3. DESIGN STANDARDS

PNRs will be designed to minimize land disturbance to the greatest extent practicable as described below.

PNR-01: Magma Mine Road Realignment

PNR-01 is the realignment of a segment of the existing Magma Mine Road (FR 469, FR 315, and FR 2432; *Figure 6*). This road will be built in approximately year 8 of the mine due to surface disturbance where the existing road is located and will be utilized as the main access to the EPS site from US 60. The EPS site entrance will have a security building and gate where Magma Mine Road ends at the EPS entrance to control public access to the site. Resolution Copper will be responsible for ongoing road and sign maintenance on both the existing Magma Mine Road and the realignment designated PNR-01. This road will require Level 4 maintenance; therefore, it will be paved, and maintained consistent with the current Magma Mine Road Repair, Maintenance and Care Plan contained with Appendix H of the Prefeasibility Plan of Operations (03-12-02-006).

PNR-02: TSF Perimeter Road

PNR-02 is a roadway that will provide access along the entire toe of the TSF and to surrounding facilities such as the diversion channels, Borrow Areas 1 and 4 and the seepage collection dams (*Figure 4*). It is within the TSF footprint.

PNR-03: Tailings Corridor Access Road

PNR-03 will be utilized as an access along the Tailings Corridor and will provide access to pipelines along the corridor as well as access from the WPS to the TSF (*Figure 5*). The roadway will be constructed of general fill and will be maintained to MSHA specifications.

3.3.1. TRAVELED WAY

Each PNR has a different design width. PNR-01 will have a traveled width of approximately 24 ft (7.32 m), PNR-02 will have a traveled width of approximately 50 ft (15 m), and PNR-03 will have a traveled width of approximately 26.25 ft (8 meters). PNR-02 and PNR-03 will be required to meet MSHA specifications; therefore, they will be constructed with berms to the required heights per design vehicle. PNR-01 is an access road into mine property; therefore it will not be under MSHA jurisdiction. All PNRs will have a maximum of 1:1 cut slopes and 1.5:1 fill slopes. However, where PNR-02 is adjacent to or on tailings the cut slopes will be 5:1.

Each roadway will be cleared of vegetative cover as needed for planned traffic, and the road prism will be maintained to provide for passage of the designated maintenance level vehicles in *Table 3*. Typical roadway sections are provided on *Figure 8*. The typical section for PNR-03 is for the Tailings Corridor Access Road only and does not show the entire section with the pipeway and transmission line. The total width of the Tailings Corridor varies along its length depending on the number and layout of pipes; however an average disturbance width of 180 ft was calculated and is incorporated in *Table 4*. Each of the estimated disturbances associated with PNR construction are shown in *Table 4*.

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 culverts will be installed under the provisions of Clean Water Act, Nationwide Permit No. 14, assuming potentially jurisdictional waters are encountered. More specific drainage features that will be incorporated for each PNR are as follows.

PNR-01

The Magma Mine Road Realignment will be a paved roadway, crowned with two percent cross-slopes. The roadway will not have berms as it will not be an MSHA regulated road. This will generally allow all stormwater to runoff 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 is, 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 Stormwater Pollution Prevention Plan (SWPPP).

PNR-02

The TSF Perimeter Road will be located within the TSF project area. 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. Runoff from PNR-02 in the northern section by diversion channels 1, 2, and 3 will not be impacted by tailings and therefore is allowed to be directed into these diversion channels. Other erosion and stormwater control BMPs that may be incorporated will be detailed in the Project SWPPP.

PNR-03

The Tailings Corridor Access Road will be a mine operations road only and therefore will incorporate many of the same drainage improvements as the TSF Perimeter Road. This includes breaks in the berm, diversion ditches, and culvert take-offs. However, unlike PNR-02, PNR-03 will not have any ford-style low water crossings, due to the required slope of the concrete pipelines that share the same corridor as PNR-03. PNR-03 crosses several existing ephemeral drainage ditches. Culverts will be installed at each of these crossings to allow water to pass through. 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 reconstructed using some or all of the following equipment: a Caterpillar D8, D9 or equivalent-sized dozer, a Caterpillar 140M to 14M size motor grader or equivalent, a tracked excavator, and a water truck. The tracked excavator may be used to reduce the size of large boulders as necessary. Drilling or blasting may be required for PNR construction if non-rippable material is encountered. 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 reconstruction.

4. REFERENCES

USDA Forest Service. 1985. Tonto National Forest Plan. October 1985.

USDA Forest Service. 2001. Road Management Policy. January 2001.

Keller, G and Sherar, J. 2003. Low-Volume Roads Engineering Best Management Practices Field Guide. July 2003.

Resolution Copper Mining. 2013. General Plan of Operations. November 2013.

TABLES

Table 1. Proposed Improvements to Existing Forest Service Roads

Roadway ID	Forest Service Road Maintenance Level	Planned Road Condition During Plan of Operations Improvements
FR 8	Level 2 - High Clearance Vehicles	Segment reconstructed as haul route from borrow areas to the TSF. Segment from FR 229 to FR 3152 will be upgraded to maintenance Level 3
FR 172	Level 2 - High Clearance Vehicles	A segment will be used to access Seepage Collection Dams. Repair and maintain road segments at the Level 2 maintenance standard. Improve road segments where current conditions do not meet this standard. Generally achieve a Level 2 maintenance standard suitable to provide access for the equipment required to accomplish planned activities
FR 229	Level 3 - Suitable for Passenger Cars	Will be reconstructed for alternative entrance to the WPS. Segment to be restricted from public access within the boundaries of the WPS.
FR 252	Level 2 - High Clearance Vehicles	A segment will be decommissioned upon the completion of the TSF. A segment will be used to access Seepage Collection Dams. Repair and maintain road segments at the Level 2 maintenance standard. Improve road segments where current conditions do not meet this standard. Generally achieve a Level 2 maintenance standard suitable to provide access for the equipment required to accomplish planned activities
FR 293	Level 2 - High Clearance Vehicles	To be reconstructed as haul route from borrow areas to the TSF
FR 315	Level 2 - High Clearance Vehicles	Segments to be decommissioned in the Disturbance Area of the EPS and restricted from public access within the vicinity of the GPA.
FR 469	Level 3 - Suitable for Passenger Cars	Segments to be decommissioned in the Disturbance Area of the EPS or restricted from public access within the vicinity of the GPA.
FR 518	Level 2 - High Clearance Vehicles	To be decommissioned with the construction of the TSF
FR 650	Level 2 - High Clearance Vehicles	Segment reconstructed as haul route from borrow areas to the TSF. Segment will be disturbed for block culvert installation at the Tailings Corridor crossing
FR 982	Level 2 - High Clearance Vehicles	Segments to be reconstructed, decommissioned and restricted from public access with the construction of the TSF and Tailings Corridor
FR 1010	Level 1 - Basic Custodial Care	Segment on TNF land to be decommissioned within WPS. Segment on private land to be restricted from public access
FR 1903	Level 2 - High Clearance Vehicles	Segment to be decommissioned with the construction of the TSF
FR 1904	Level 2 - High Clearance Vehicles	A segment will be used to access Seepage Collection Dams Repair and maintain road segments at the Level 2 maintenance standard. Improve road segments where current conditions do not meet this standard. Generally achieve a Level 2 maintenance standard suitable to provide access for the equipment required to accomplish planned activities
FR 1907	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1908	Level 1 - Basic Custodial Care	To be restricted from public access due to location at toe of the TSF

Table 1. Proposed Improvements to Existing Forest Service Roads

Roadway ID	Forest Service Road Maintenance Level	Planned Road Condition During Plan of Operations Improvements
FR 1909	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1910	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1912	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1913	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1914	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1915	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1916	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1917	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1918	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1918A	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1919	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 1933	Level 1 - Basic Custodial Care	To be used to access MARRCO Corridor Access Points 19, 22, and 23
FR 2359	Level 2 - High Clearance Vehicles	To be decommissioned with the construction of the TSF
FR 2360	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 2361	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 2362	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 2363	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 2364	Level 2 - High Clearance Vehicles	To be decommissioned with the construction of the TSF
FR 2366	Level 1 - Basic Custodial Care	To be decommissioned with the construction of the TSF
FR 2367	Level 1 - Basic Custodial Care	To be restricted from public access due to its confluence with the Tailings Corridor
FR 2371	Level 1 - Basic Custodial Care	Will be maintained at Level 1. Segment will be restricted from public access where the existing FR crosses the Tailings Corridor.
FR 2380	Level 2 - High Clearance Vehicles	To be decommissioned with the construction of the TSF
FR 2381	Level 1 - Basic Custodial Care	To be reconstructed for haul route from Borrow Area 5 to the TSF
FR 2383	Level 1 - Basic Custodial Case	To be reconstructed for haul route from Borrow Area 5 to the TSF
FR 2386	Level 1 - Basic Custodial Care	To be reconstructed for haul route from Borrow Area 6 to the TSF
FR 2395	Level 1 - Basic Custodial Care	To be used to access MARRCO Corridor Access Points 2, 4, and 5
FR 2397	Level 1 - Basic Custodial Care	To be used to access MARRCO Corridor Access Points 2, 4, and 5
FR 2400	Level 1 - Basic Custodial Care	To be used to access MARRCO Corridor Access Point 1
FR 2432	Level 3 - Suitable for Passenger Cars	To be restricted from public access within the vicinity of the GPA.
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	To be decommissioned due to location within Disturbance Area of the EPS
FR 2438	Level 2 - High Clearance Vehicles	Segments to be decommissioned in the Disturbance Area of the EPS and restricted from public access within the vicinity of the GPA.
FR 3152	Level 1 - Basic Custodial Care	Upgrade to maintenance Level 3, segment will be disturbed for block culvert installation at the Tailings Corridor crossing
FR 3153	Level 1 - Basic Custodial Care	To be decommissioned due to access cut off within Disturbance Area of the EPS
FR 3454A	Level 1 - Basic Custodial Care	To be used to access MARRCO Corridor Access Point 18
FR 3454C	Level 1 - Basic Custodial Care	To be used to access MARRCO Corridor Access Point 13

Table 1. Proposed Improvements to Existing Forest Service Roads

Roadway ID	Forest Service Road Maintenance Level	Planned Road Condition During Plan of Operations Improvements
FR 3791	Level 1 - Basic Custodial Care	Segment to be restricted from public access within the vicinity of the GPA.

Notes:

1. All Forest Service Roads proposed for use in this Road Use Plan can be seen in detail in *Figures 1 and 4 through 7*.
2. Detailed descriptions of purpose of, use of, improvements, and new disturbance area to FRs can be found in *Table 4*.

Table 2. Recommended Maximum Distance between Rolling Dips¹

Road Grade %	Low to Non-Erosive Soils	Erosive Soils
0-3	120 ft	75 ft
4-6	90 ft	50 ft
7-9	75 ft	40 ft
10-12	60 ft	35 ft
12+	50 ft	30 ft

¹ Keller, G and Sherar, J. 2003. Low-Volume Roads Engineering Best Management Practices Field Guide. July 2003. Table 7.1, Page 55

Table 3. Proposed New Roads

Roadway ID	Road Management Classification	Planned Road Condition During Plan of Operations Implementation
PNR-01	Level 4	Re-alignment of Magma Mine Road to provide access road to EPS facilities. Will be maintained to generally achieve the Level 4 management designation
PNR-02	No Classification	Perimeter road along the toe of the TSF
PNR-03	No Classification	New access road along Tailings Corridor to provide access from the WPS to the TSF and to maintain facilities along the Tailings Corridor. Will be maintained to generally achieve the High-Clearance Vehicles management designation

Notes:

1. Proposed New Roads are shown in detail in Figures 4 through 7.
2. Detailed descriptions of purpose of, use of, and improvements to PNRs can be found in Table 4

Table 4 - Access Route Descriptions

Road ID	Purpose and Use	Road Length ¹	Improvement Description	Length (Ft) ²		New Disturbance Area (Acres)	
		Linear Feet		Forest Service Land	Private Land	Forest Service Land	Private Land
FR 8	East Happy Camp Road. Provides access to FR 650 and MARRCO Corridor. Haul route to the TSF	19,155	Reconstruction of 1.78 miles of roadway; 40 ft disturbance width 0.44 miles of roadway upgraded to maintenance Level 3; no new disturbance planned	11,732	0	8.6	0
FR 172	Provides access to FR 1904	55,752	Maintain approximately 1.65 miles of roadway; No new disturbance planned	8,706	0	0	0
FR 229	Silver King Mine Road, provides access to the WPS	27,881	Reconstruct 1.34 miles of roadway. 100 ft disturbance width 1.13 miles of roadway restricted from public access	7,054	5,964	16.2	0
FR 252	Bomboy Mine Road, haul route to the TSF	26,893	Reconstruction of 0.16 miles of roadway; 48 ft disturbance width 3.09 miles of roadway to be decommissioned Maintain approximately 0.86 miles of roadway	26,893	0	0.95	0
FR 293	Provides access to FR 2381, haul route to the TSF	9,848	Reconstruction of 1.46 miles of roadway; 48 ft disturbance width	7,720	0	8.5	0
FR 315	Accessed by FR 469	14,052	1.55 miles of roadway to be decommissioned/ restricted from public access	14,052	0	0	0
FR 357	Provides access to the MARRCO Corridor and Queen Valley Pump Station	51,894	Maintain approximately 7.21 miles of roadway; No new disturbance planned	33,965	4,072	0	0
FR 469	Provides access to FR 315 and FR 2438	2,440	1.71 miles of roadway restricted from public access Maintain approximately 0.36 miles of roadway; No new disturbance planned	2,440	0	0	0
FR 518	Provides access to FR 2380	13,735	To be decommissioned	13,735	0	0	0
FR 650	North Happy Camp Canyon Road. Provides access to FR 2386, FR 982, and PNR 1. Haul route and access to the TSF	78,595	Reconstruction of 1.52 miles of roadway; 40 ft disturbance width Disturbance area at Tailings Corridor Crossing included in PNR-01 disturbance calculation	8,048	0	7.4	0

Road ID	Purpose and Use	Road Length ¹	Improvement Description	Length (Ft) ²		New Disturbance Area (Acres)	
		Linear Feet		Forest Service Land	Private Land	Forest Service Land	Private Land
FR 982	Haul route from Borrow Areas 1 to TSF	38,579	1.54 miles of roadway to be decommissioned Reconstruction of 1.90 miles of roadway; 48 ft disturbance width	18,152	0	11.0	0
FR 1010	Accessed by FR 2445	7,218	0.03 miles of roadway to be decommissioned 0.37 miles of roadway restricted from public access	162	1,971	0	0
FR 1903	Accessed by FR 252	26,432	2.92 miles of roadway to be decommissioned	15,393	0	0	0
FR 1904	Provides access to FR 252 and TSF	32,115	Maintain approximately 1.68 miles of roadway; No new disturbance planned	8,856	0	0	0
FR 1907	Provides access to FR 1910 and FR 1913	9,619	To be decommissioned	9,619	0	0	0
FR 1908	Provides access to FR 1909	1,426	To be restricted from public access	1,426	0	0	0
FR 1909	Accessed by FR 1908	3,208	To be decommissioned	3,208	0	0	0
FR 1910	Accessed by FR 1907	2,170	To be decommissioned	2,170	0	0	0
FR 1912	Accessed by FR 1903	5,030	To be decommissioned	5,030	0	0	0
FR 1913	Accessed by FR 1907	1,542	To be decommissioned	1,542	0	0	0
FR 1914	Accessed by FR 252	1,608	To be decommissioned	1,608	0	0	0
FR 1915	Accessed by FR 252	2,067	To be decommissioned	2,067	0	0	0
FR 1916	Accessed by FR 252	1,179	To be decommissioned	1,179	0	0	0
FR 1917	Accessed by FR 252	2,106	To be decommissioned	2,106	0	0	0
FR 1918	Accessed by FR 252	1,187	To be decommissioned	1,187	0	0	0
FR 1918A	Accessed by FR 1918	826	To be decommissioned	826	0	0	0
FR 1933	Access to MCA-19, 22, and 23	5,177	Maintain approximately 0.98 miles of roadway; No new disturbance planned	5,177	0	0	0
FR 2359	Accessed by FR 1903 and FR 2364	12,121	To be decommissioned	12,121	0	0	0
FR 2360	Accessed by FR 518	6,197	To be decommissioned	6,197	0	0	0
FR 2361	Accessed by FR 2360	2,030	To be decommissioned	2,030	0	0	0
FR 2362	Accessed by FR 2361	1,591	To be decommissioned	1,591	0	0	0
FR 2363	Accessed by FR 518 and FR 2360	1,959	To be decommissioned	1,959	0	0	0
FR 2364	Provides access to FR 2359	3,302	To be decommissioned	3,302	0	0	0
FR 2366	Accessed by FR 518	1,766	To be decommissioned	1,766	0	0	0
FR 2367	Accessed by FR 982	1,093	0.29 miles of roadway restricted from public access	1,093	0	0	0

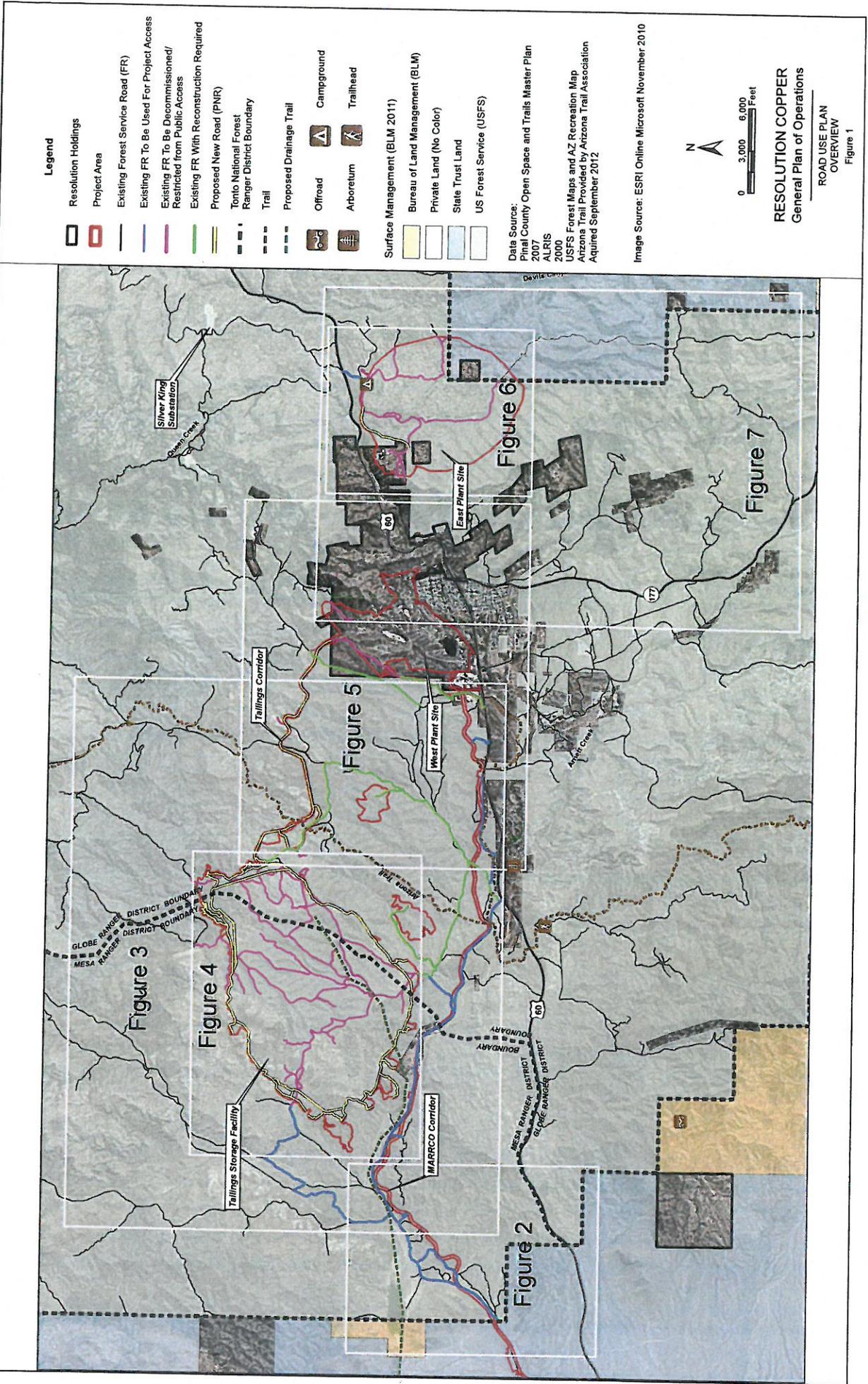
Road ID	Purpose and Use	Road Length ¹	Improvement Description	Length (Ft) ²		New Disturbance Area (Acres)	
		Linear Feet		Forest Service Land	Private Land	Forest Service Land	Private Land
FR 2371	Crosses Tailings Corridor	3,732	0.17 miles of roadway restricted from public access	861	0	0	0
FR 2380	Provides access to FR 2360, FR 2363, FR 2366	5,292	To be decommissioned	5,292	0	0	0
FR 2381	Main access to Borrow Area 5	7,196	Reconstruction of 1.36 miles of roadway; 51 ft disturbance width	7,196	0	8.4	0
FR 2383	Provides access to FR 252, haul route to the TSF	1,550	Reconstruction of 0.41 miles of roadway; 48 ft disturbance width	1,550	0	1.7	0
FR 2386	Main access to Borrow Area 6	2,063	Reconstruction of 0.39 miles of roadway; 48 ft disturbance width	2,063	0	2.3	0
FR 2395	Access to MCA-2, 4, and 5	6,352	Maintain approximately 1.21 miles of roadway; No new disturbance planned	6,352	0	0	0
FR 2397	Access to MCA-2, 4, and 5	2,088	Maintain approximately 0.40 miles of roadway; No new disturbance planned	2,088	0	0	0
FR 2400	Access to MCA-1	1,618	Maintain approximately 0.31 miles of roadway; No new disturbance planned	1,618	0	0	0
FR 2432	Accessed by FR 315	4,098	0.64 miles of roadway restricted from public access	2,871	1,227	0	0
FR 2433	Accessed by FR 2432	1,570	On private property; restricted from public access	0	1,570	0	0
FR 2434	Accessed by FR 2432	2,091	On private property; restricted from public access	0	2,091	0	0
FR 2435	Accessed by FR 315	1,866	To be decommissioned	1,866	0	0	0
FR 2438	Provides access to FR 3153, accessed by FR 469	15,504	0.93 miles of roadway to be decommissioned/restricted from public access	4,889	0	0	0
FR 3152	Provides access to FR 229, north of Project Area	8,981	Reconstruction of 1.70 miles of roadway; 28 ft disturbance width Disturbance area at Tailings Corridor Crossing included in PNR-01 disturbance calculation	6,295	2,686	4.0	1.73
FR 3153	Provides access to FR 3791	6,925	To be decommissioned	6,925	0	0	0
FR 3454A	Access to MCA-18	1,439	Maintain approximately 0.27 miles of roadway; No new disturbance planned	1,439	0	0	0
FR 3454C	Access to MCA-13	2,455	Maintain approximately 0.17 miles of roadway; No new disturbance planned	910	0	0	0
FR 3791	Accessed by FR 3153	1,641	0.10 miles of roadway to be decommissioned	551	0	0	0
PNR-01	Re-alignment of Magma Mine Road	5,098	New Road Construction; 150 ft disturbance width	5,098	0	17.6	0

Road ID	Purpose and Use	Road Length ¹	Improvement Description	Length (Ft) ²		New Disturbance Area (Acres)	
		Linear Feet		Forest Service Land	Private Land	Forest Service Land	Private Land
PNR-02	TSF perimeter road; Main access to Borrow Area 4	89,283	New Road Construction. Disturbance area is within the TSF footprint disturbance area accounted for in the Plan; 150 ft disturbance width	89,283	0	307.4	0
PNR-03	New access road along the Tailings Corridor	28,669	New Road Construction; 180 ft disturbance width	28,669	0	118.5	0

¹ Total road length for both Forest Service land, Private land, and State Trust land

² Length of road to be used within the GPA or as access to the GPA

FIGURES

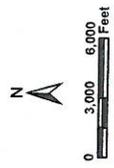


Legend

- Resolution Holdings
- Project Area
- Existing Forest Service Road (FR)
- Existing FR To Be Used For Project Access
- Existing FR To Be Decommissioned/Restricted from Public Access
- Existing FR With Reconstruction Required
- Proposed New Road (PNR)
- Tonto National Forest
- Ranger District Boundary
- Trail
- Proposed Drainage Trail
- Offroad
- Arboretum
- Campground
- Trailhead
- Surface Management (BLM 2011)
- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land
- US Forest Service (USFS)

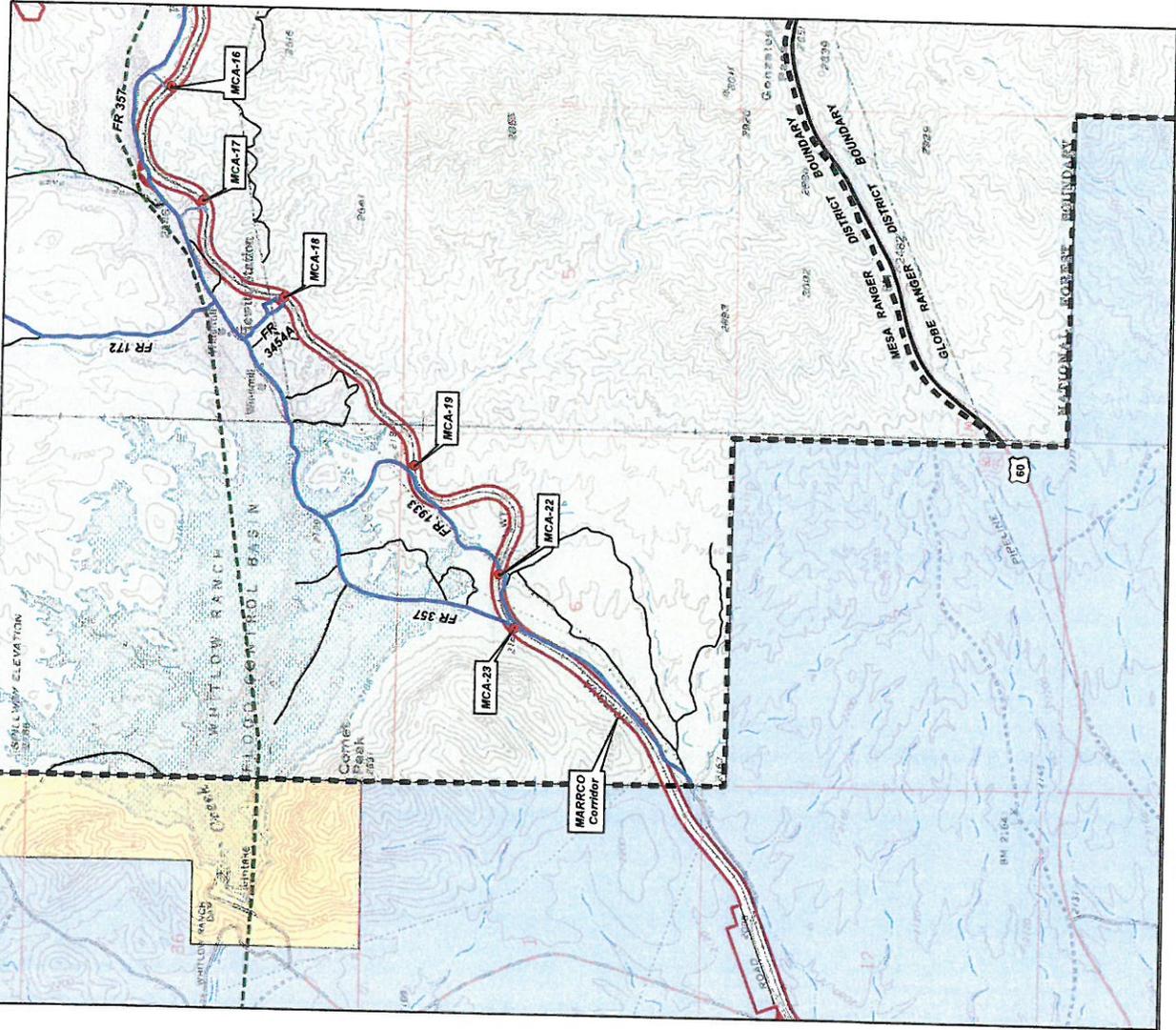
Data Source:
 Pinal County Open Space and Trails Master Plan 2007
 ALRIS 2000
 USFS Forest Maps and AZ Recreation Map
 Arizona Trail Provided by Arizona Trail Association
 Acquired September 2012

Image Source: ESRI Online Microsoft November 2010



RESOLUTION COPPER
 General Plan of Operations

ROAD USE PLAN
 OVERVIEW
 Figure 1



Legend

Resolution Holdings

Project Area

MARCO Corridor Access Point (MCA)

Existing Forest Service Road (FR)

Existing FR To Be Used For Project Access

Previously Disturbed Area To Be Used As Temporary Access Road

Tonto National Forest Ranger District Boundary

Proposed Drainage Trail

Surface Management (BLM 2011)

Bureau of Land Management (BLM)

Private Land (No Color)

State Trust Land

US Forest Service (USFS)

Data Source:

Pinal County Open Space and Trails Master Plan 2007

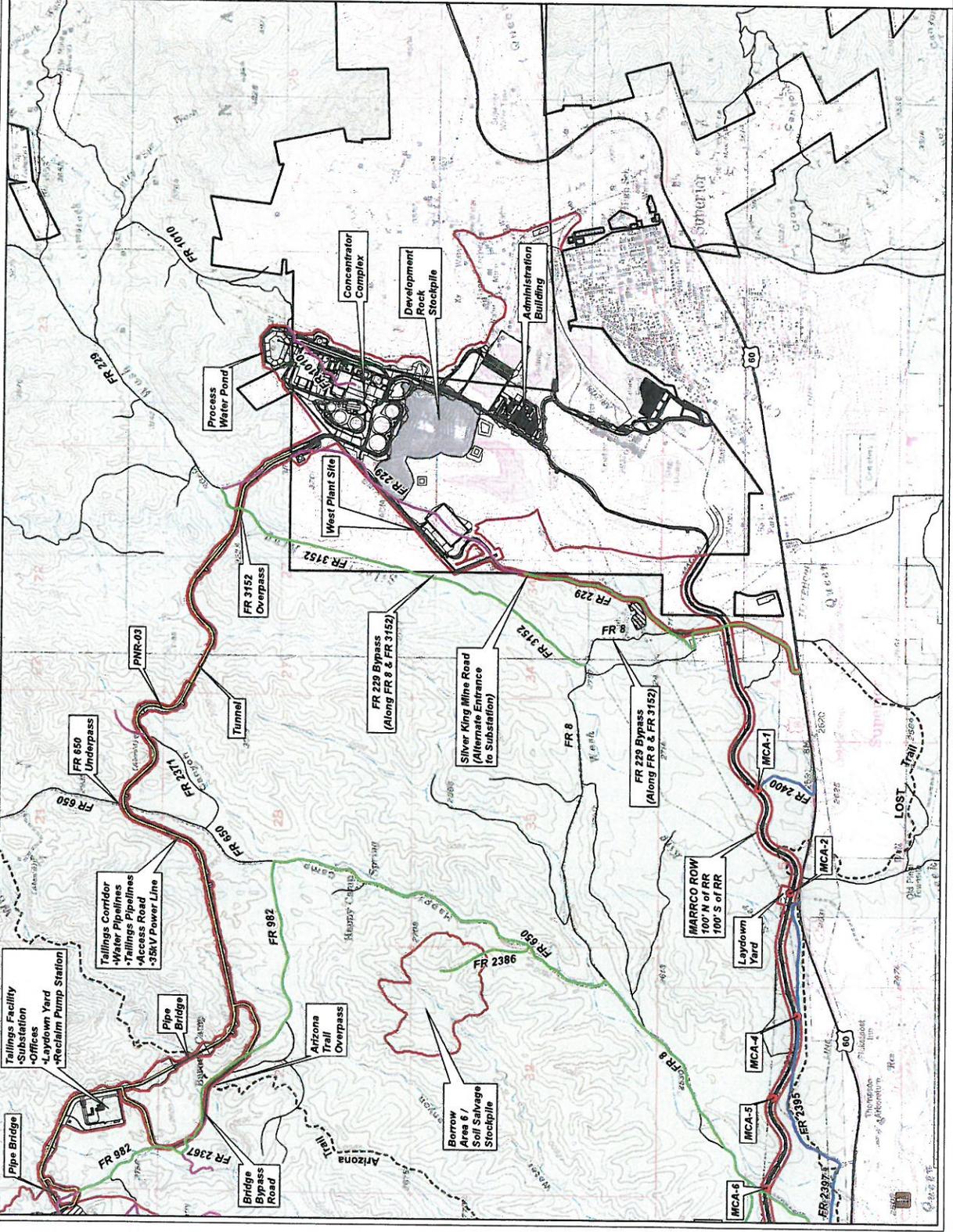
Image Source: Florence Junction & Picketpost Mountain USGS 7.5 Minute Quadrangles



RESOLUTION COPPER
General Plan of Operations

ROAD USE PLAN
Figure 2

Path: M:\bbs\9505\907\3\REV\GFDP_Resp\2\TNR\Revised_TNRF\UsePlan\MXD\Fig5\TailingsCor&MPS.mxd



- Legend**
- Resolution Holdings
 - Project Area
 - MARRCO Corridor Access Point (MCA)
 - Arizona Trail (ESRI Online Data)
 - Existing Forest Service Road (FR)
 - Existing FR To Be Used For Project Access
 - Existing FR To Be Decommissioned/Restricted from Public Access
 - Existing FR With Reconstruction Required
 - Proposed New Road (PNR)
 - Trail
 - Arboretum

- Surface Management (BLM 2011)
- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land
- US Forest Service (USFS)

Data Source: Tailings Corridor Facilities Provided by M3 Engineering July 10, 2013

Borrow Areas & Tailings Storage Facility Footprint Provided by Kohn Crippen Berger 2013

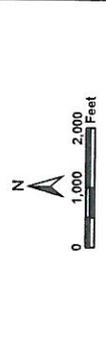
West Plant Facilities Provided by M3 Engineering July 10, 2013

Pinat County Open Space and Trails Master Plan 2007

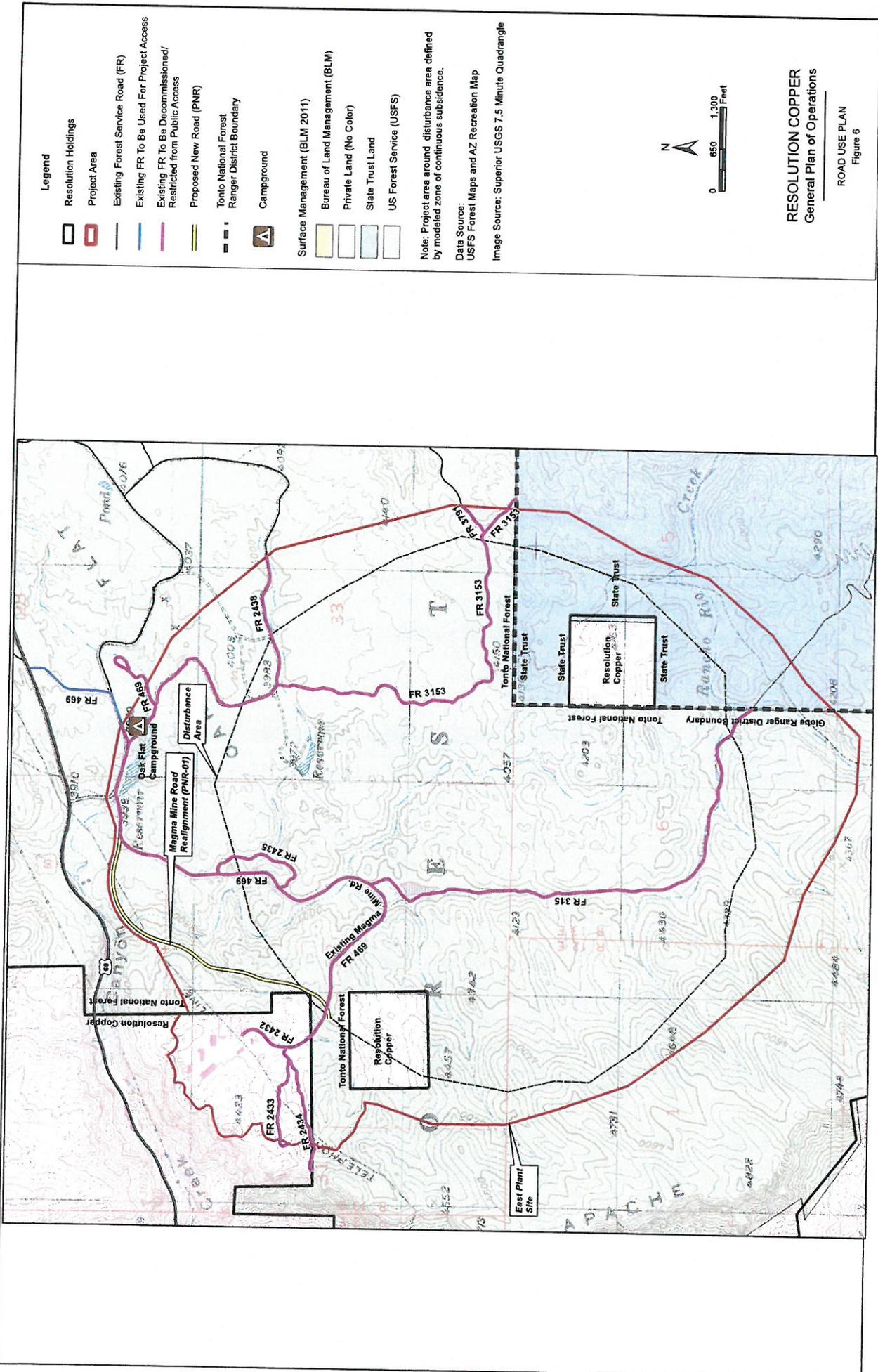
USFS Forest Maps and AZ Recreation Map

Arizona Trail Provided by Arizona Trail Association Acquired September 2012

Image Source: Picketpost Mountain & Superior USGS 7.5 Minute Quadrangles



RESOLUTION COPPER
 General Plan of Operations
 ROAD USE PLAN
 Figure 5



Legend

- Resolution Holdings
- Project Area
- Existing Forest Service Road (FR)
- Existing FR To Be Used For Project Access
- Existing FR To Be Decommissioned/Restricted from Public Access
- Proposed New Road (PNR)
- Tonto National Forest Ranger District Boundary
- Campground
- Surface Management (BLM 2011)
- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land
- US Forest Service (USFS)

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

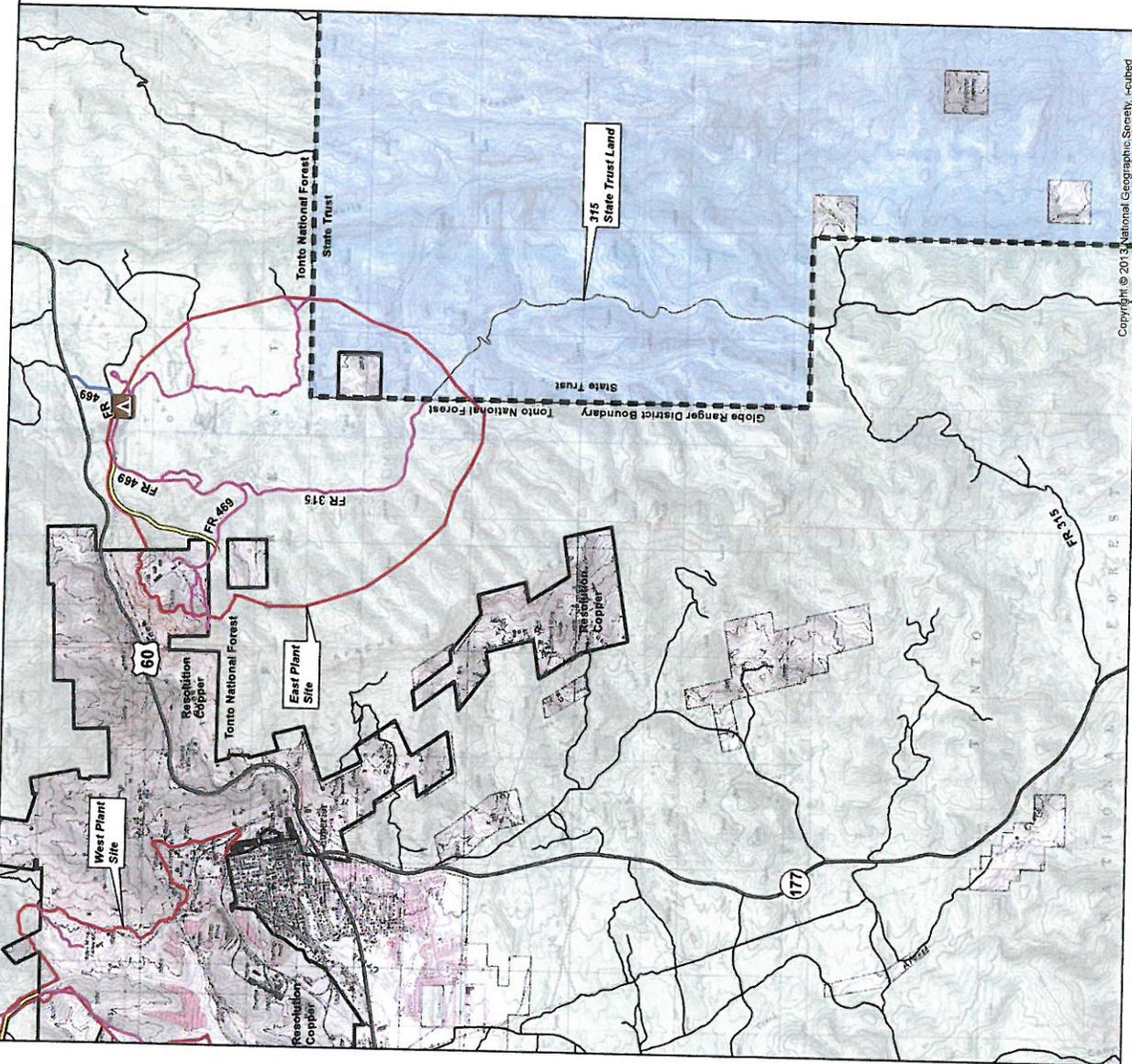
Data Source:
USFS Forest Maps and AZ Recreation Map

Image Source: Superior USGS 7.5 Minute Quadrangle



RESOLUTION COPPER
General Plan of Operations

ROAD USE PLAN
Figure 6



Legend

- Resolution Holdings
- Project Area
- Existing Forest Service Road (FR)
- Existing FR To Be Used For Project Access
- Existing FR To Be Decommissioned/ Restricted from Public Access
- Proposed New Road (PNR)
- Tonto National Forest Ranger District Boundary
- Campground

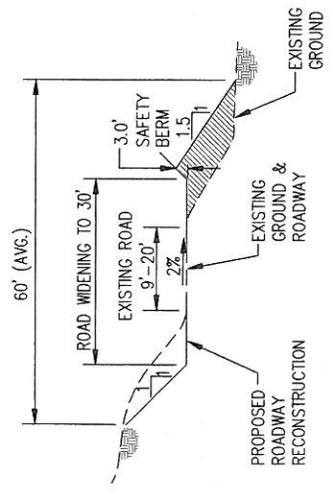
- Surface Management (BLM 2011)
- Bureau of Land Management (BLM)
- Private Land (No Color)
- State Trust Land
- US Forest Service (USFS)

Data Source:
 USFS Forest Maps and AZ Recreation Map
 Image Source: Superior & Teapot Mountain
 USGS 7.5 Minute Quadrangles
 (ESRI Online USA Topo Maps)

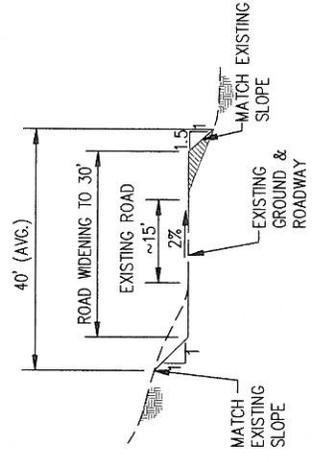


RESOLUTION COPPER
 General Plan of Operations

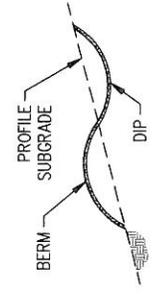
ROAD USE PLAN
 Figure 7



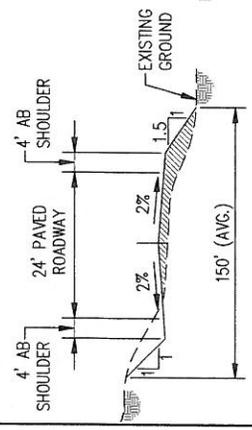
ROADWAY RECONSTRUCTION FOR HAUL ROUTES



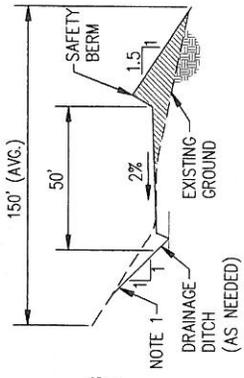
FR 3152 ROADWAY RECONSTRUCTION



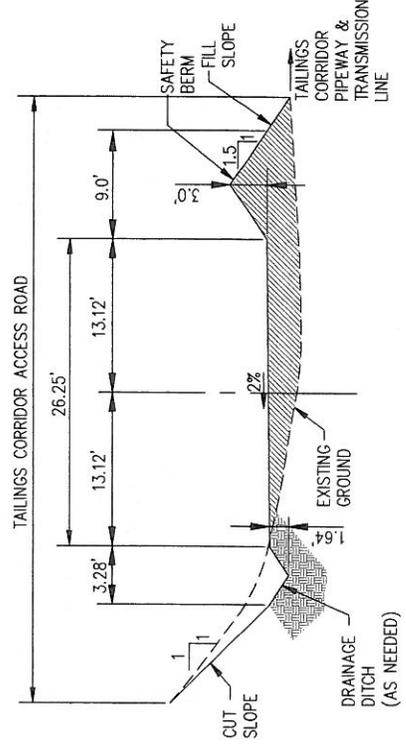
TYPICAL ROLLING DIP PROFILE



PNR 01 TYPICAL SECTION

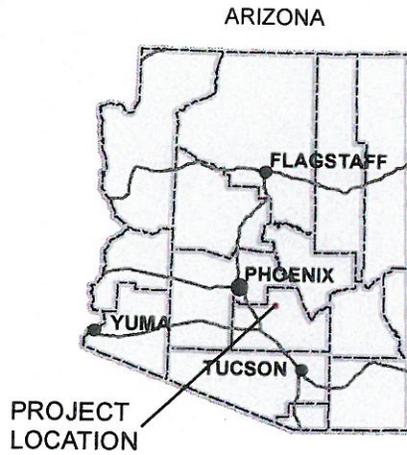


PNR 02 TYPICAL SECTION

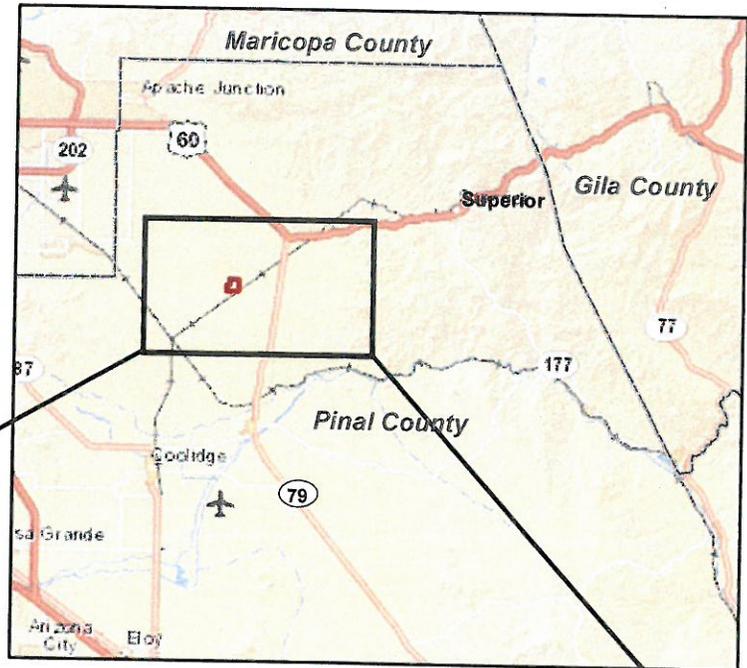


PNR 03 TYPICAL SECTION

- Notes:**
- Maximum cut slope is 1:1. Where PNR-02 is adjacent to or on tailings the cut slope shall be 5:1.

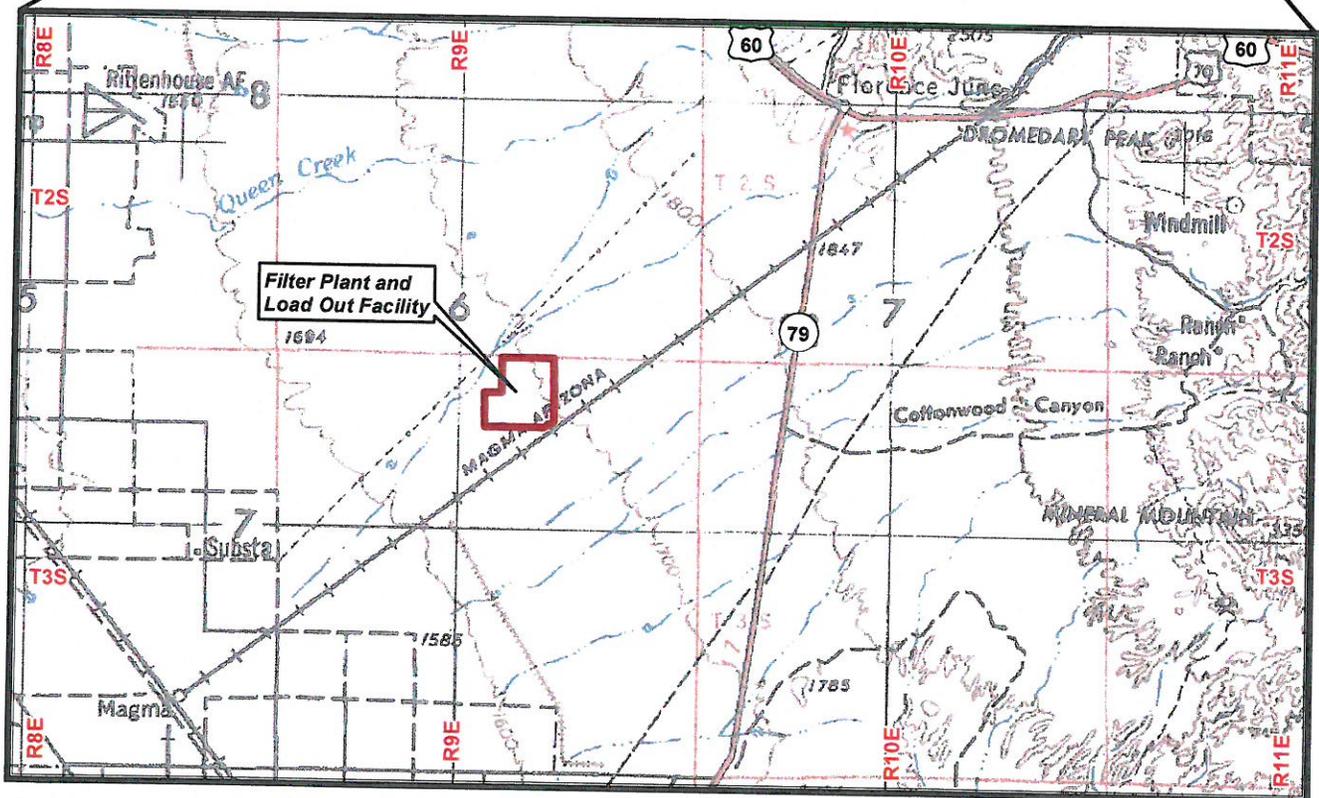


PROJECT LOCATION



Legend

Approximate Scale 1 Inch = 15 Miles



T3S, R9E, Portion of Section 3,
 Pinal County, Arizona
 Image Source: Mesa 1:250,000 USGS Quadrangle

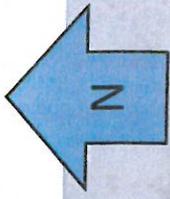


RESOLUTION COPPER
 Filter Plant and Load Out Facility

VICINITY MAP

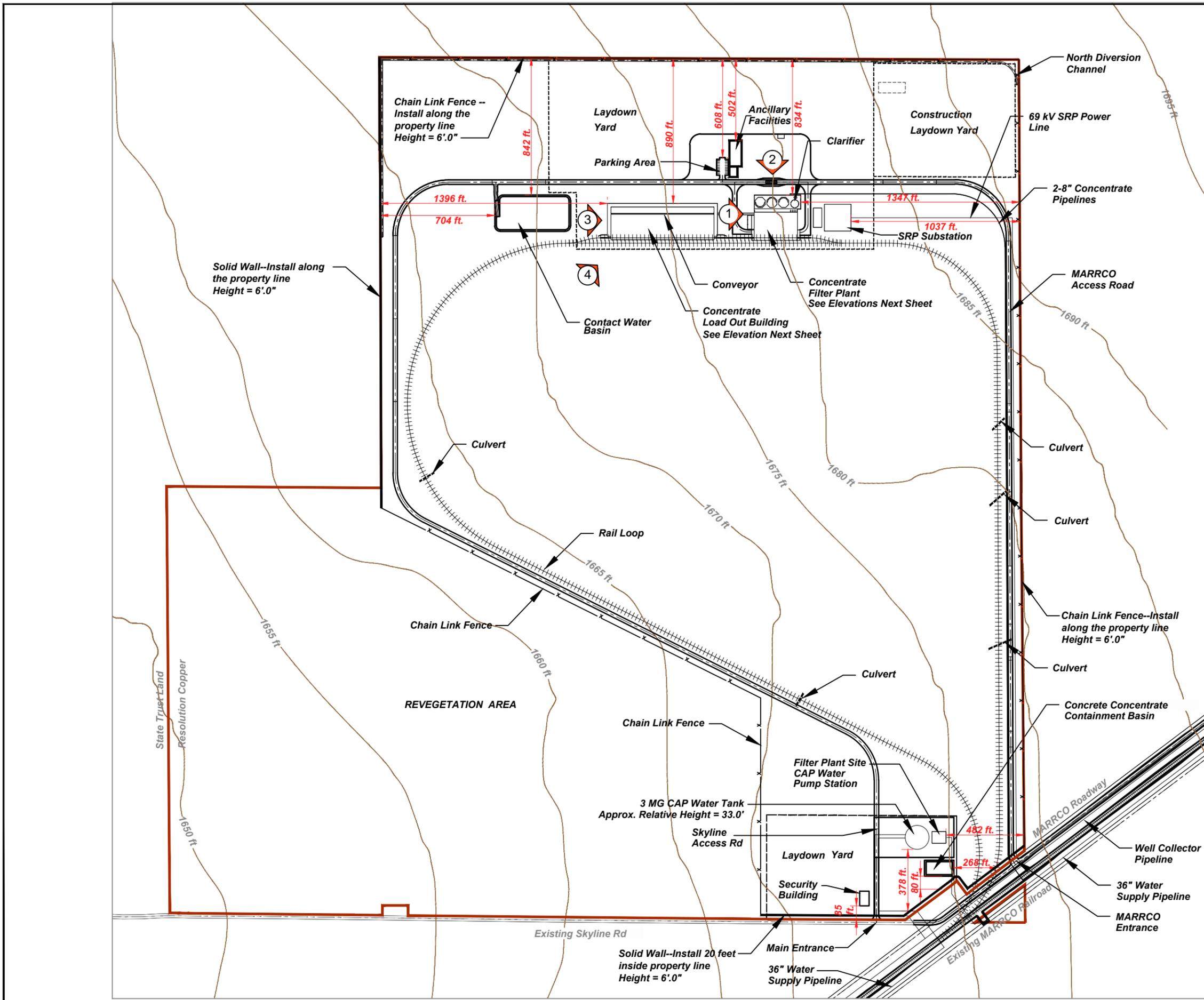
Figure 1

Resolution Copper – PAD Rezoning Request
Exhibit 2 - Parcel Map

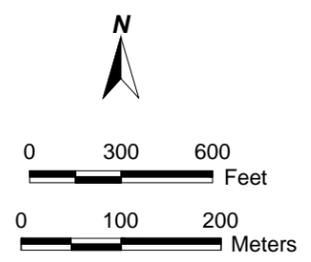


ASLD





- Legend**
- Property Line
 - 1 Viewpoint for building elevation/ isometric. See Figure 3



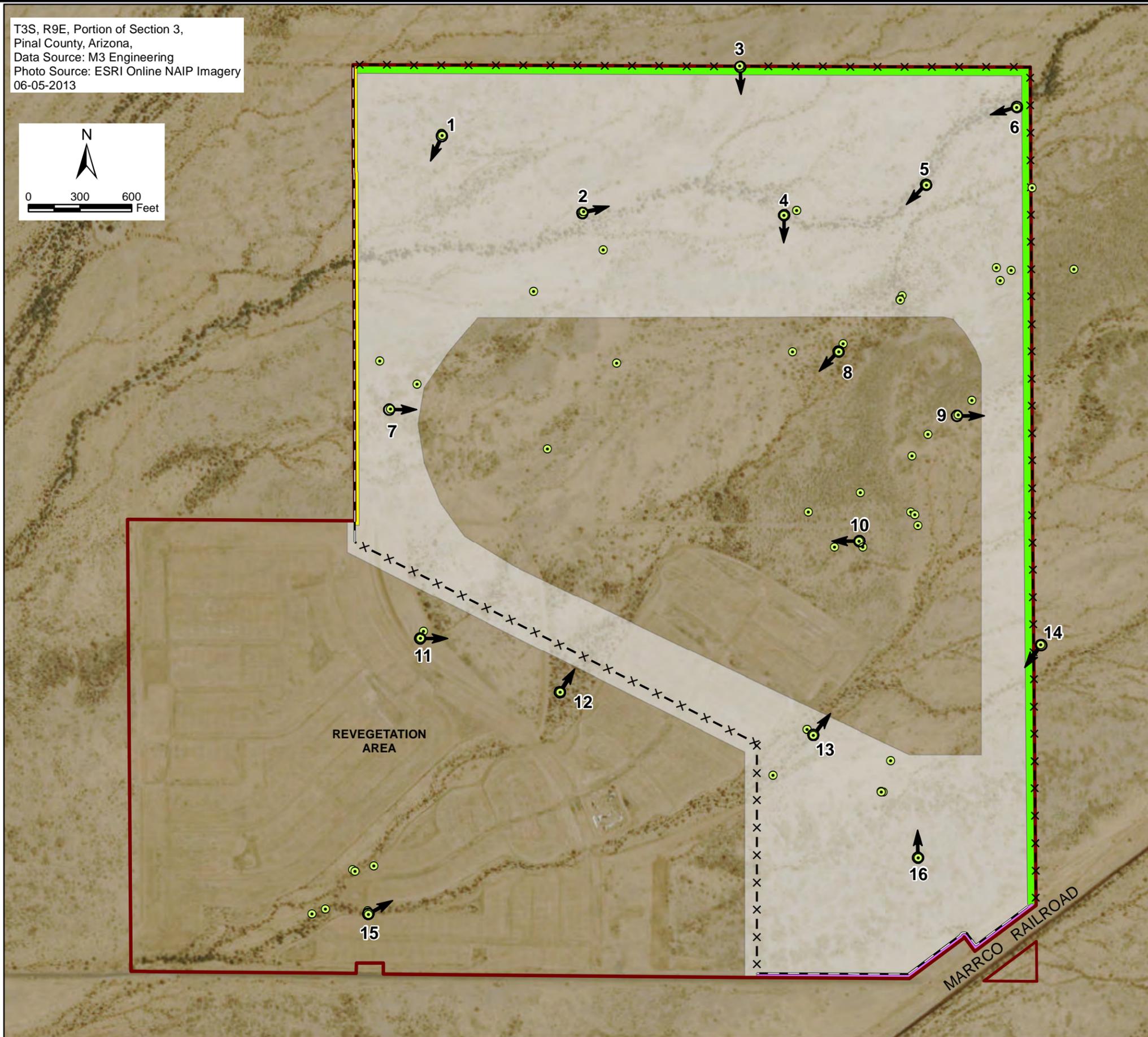
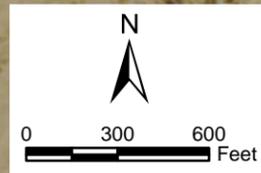
Data Source: Filter Plant and Loadout Facility Provided by M3 Engineering April, 2012

Note: Existing topography to be verified by current survey. All grades shown are subject to change.

RESOLUTION COPPER
Filter Plant and Loadout Facility

SITE PLAN
Figure 2

T3S, R9E, Portion of Section 3,
Pinal County, Arizona,
Data Source: M3 Engineering
Photo Source: ESRI Online NAIP Imagery
06-05-2013



Legend

- Photo Point See Figure 5
- Existing Saguaro
- Chain Link Fence - Height = 6'.0"
- Solid Wall - Height = 6'.0"
- Property Boundary
- Natural Desert Landscape Buffer - Width 25'
- Natural Desert Landscape Buffer - Width 20'
- Enhanced Natural Desert Landscape Buffer - Width 50'
- Approximate Limits of Proposed Disturbance

Existing Vegetative Community

The project site is located within the Lower Colorado subdivision of the Sonoran Desertscrub. WestLand staff visited the area on December 18 and 19, 2014, and observed that the dominant plant species across the site are Creosote (*Larrea tridentata*) mixed with Triangleleaf Bursage (*Ambrosia deltoidea*). Grades across the site are flat and level except where divided by natural washes. A greater diversity of plant species is associated with these drainages including Ironwood (*Olneya tesota*), Velvet Mesquite (*Prosopis velutina*), Palo Verde (*Parkinsonia florida*), and Wolfberry (*Lycium*). Scattered Saguaro cacti (*Carnegiea gigantea*) are also found within the project boundaries. Outside of the drainages, the vegetation is widely spaced and the bare soils exhibit signs of disturbance resulting from off-road vehicles. Much of the southwestern corner of the site was graded at a previous time. The soils there remain largely bare of vegetation and show signs of erosion.



RESOLUTION COPPER
Filter Plant and Loadout Facility

EXISTING VEGETATION / LANDSCAPE PLAN

Figure 4



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10

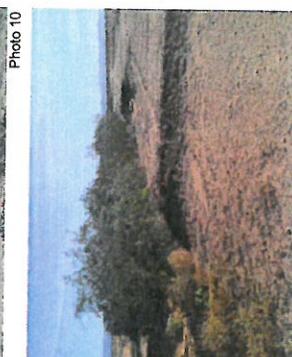


Photo 11

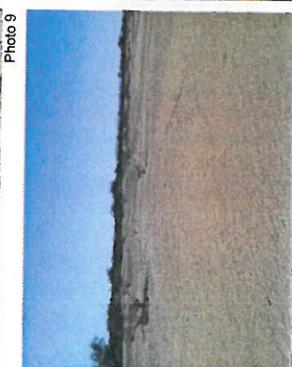


Photo 12



Photo 13



Photo 14



Photo 15



Photo 16

RESOLUTION COPPER
Filter Plant & Load Out Facility
 SITE PHOTOS
 EXISTING VEGETATION & SAGUAROS
 Figure 5