

Agenda

Hermosa Advisory Panel Meeting #7 Wednesday, October 20, 12p-2p

Patagonia Public Library, 46 Duquesne Ave (inside Cady Hall)

- 12:00 Working Lunch
- Review Agenda and Acceptance/Amendments to Meeting Minutes:
September
- Scope of Work with Ty Ferre's students – panel point of contact/stipend
- Approval of South 32 Technical Assistance budget for workforce
development assessment/next steps
- 12:10 Panelists: Report Updates
- Patagonia Area Resource Alliance
 - The Nature Conservancy
- 12:25 Workforce Data Party
- 1:45 South 32 Social Impact and Opportunity Assessment
Draft Scope of Work review – Q&A
- 1:55 Wrap Up and Looking Ahead: November 17 meeting

Hermosa Advisory Panel Meeting #7
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The meeting of the Hermosa Advisory Panel was called to order at 12:00 pm on October 20, 2021 at Cady Hall, 46 Duquesne Ave by Angie Donelson.

Attendance

- Meeting Facilitators: Angie Donelson, Robin Breault
- South 32 Hermosa Advisory Panel Members: Adelmo Sandoval, Gerry Isaac, Linda Shore, Liz Collier, Marcelino Varona, Maritza Cervantes, Ruth Ann LeFebvre, Michael Young
- South 32 Hermosa Advisory Panel Members Absent: Olivia Ainza-Kramer, Carolyn Shafer, Damian Rawoot, Mark Beres
- South32: Melanie Lawson; Jenny Fiore (South 32 Communications Director)
- Scribe: Lizbeth Perez

12:00 Working Lunch; Review Agenda and Acceptance/Amendments to Meeting Minutes: September

- Panelists remembered former Hermosa panelist Nils Urman’s passing with a moment of silence. Funeral to be held on Saturday at Martinez Funeral Home at 11 o clock.

12:05 Review Agenda – What we are doing today

- Angie reviewed agenda and connected how the panel’s prior work relates to workforce development. She presented Powerpoint slides (Attachment A), reviewing what panelists have identified as key workforce issues and identifying the level of influence they are expected to having in shaping South 32’s workforce planning.

12:10 Acceptance/Amendments to Meeting Minutes: September

- Michael Young made an amendment to September minutes: Change language about Patagonia school district’s partnership. The school district’s CTE/JTED is with Cochise College; the dual credit partnership is with Pima Community College.

Scope of Work with Dr. Ty Ferre's students

- The Nature Conservancy's new intern Taylor McCoy will be responsible for coordinating with Dr. Ty Ferre's undergraduate student class, Fundamentals of Subsurface Hydrology. Students will attempt to explain hydrologic concepts to the panel in ways that are both scientifically correct and complete, but also understandable to a non-expert audience.
- The University of Arizona is making a \$1500 stipend available to TNC/Taylor McCoy to support this work.
- Panel members interested in participating include: Liz Collier, Ruth Ann LeFebvre, Carolyn Shafer and Damian Rawoot. Angie Donelson is also interested in supporting the process.
- Gerry Isaac: Over what time period is this taking place?
- Angie Donelson: Projects will end in December (the end of the student semester). Ty and Taylor will coordinate with those interested and explain more.

Approval of South 32 Technical Assistance budget for workforce development gaps assessment

- Angie Donelson: Had sent out a poll to vote ahead of time to the panelists; 8 panelists voted and all had voted yes. Since this represents 2/3rds of the panel, the proposal passes. Dr. Robin Breault is retained with \$5,000 of the panel's technical assistance funds and will present a scope of work for the panel at the next meeting.

12:15 Panelists: Report Updates

- Patagonia Area Resource Alliance
 - o Update on appeal; refer to Attachment B.
- Robin's Invite to Future Visioning Session
 - o As part of a county USDA grant to develop digital retail infrastructure, the county will be hosting future workforce visioning sessions November 3 and 4. The panel is invited to attend, along with stakeholders in small businesses, government, education. Goal is to examine future workforce needs and align them.

12:17 Data Party/Workforce Issues To Explore

Issues to Explore/Review

- Angie Donelson: panelists had pre-meeting homework: to review a packet (Attachment C) that included:
 1. Aug and Sep exploration of workforce issues with our panelist experts
 2. Panel's exploration of the following questions: "What assets and gaps in the workforce programs that already exist?" and "What can we realistically do about these workforce issues into the future?"
 3. Stated priorities and questions that came from Angie's initial interviews with panelists at the beginning of the panel's work
 4. Offerings from the provisional community college and NUSD
 5. Job descriptions for prospective S32 jobs
 6. South 32 HR presentation from August

- Angie Donelson: The panel can assess its level of influence in workforce issues using the last slide of Attachment A as a rubric; this will be a collaborative process.

- Melanie Lawson: In workforce planning, we will rely heavily on panel's recommendations.

Panelists divided into two groups (1) workforce pipelines k-12; 2) workforce pipelines post-secondary/WIOA) and discussed the following questions (with Robin Breault, Angie Donelson taking notes on posters):

1. What do you know about this issue (list studies, reports, personal knowledge)?
2. What are your concerns?
3. Are there opportunities?
4. What are your top ranked unknowns?
5. What are the unknown unknowns (what we don't even know to ask)
6. Who else needs to be engaged?

1:15 Gallery Walk

Panelists reviewed each others' work on posters (see Attachment D). As they did, they were asked to consider, and add sticky notes to comment on the following:

1. Who do we need to talk to next?
2. What information do we need to pull together?

- Robin Breault: Next step is to prioritize these issues and present to the panel in January: What are the opportunities to move forward in workforce planning/ What should we be doing next?
- Maritza Cervantes: After we have planned that, we need to look for service providers. One of our largest concerns is finding teachers when it deals with secondary education. We have to focus on how we can help bring in those teachers outside of the K-12 setting.
- Gerry Isaac: To that point, what makes a teacher qualified? Does a teacher have to be qualified to meet the requirements of the institution offering the education?
- Liz Collier: Dual credit teachers (for community college credit) have to have a master's degree in the subject area and 21 hours of education in the subject area being taught.
- Melanie Lawson: For CTE programs or technical trades, the instructor does not have to have to have a master's degree?
- Michael Young: No, just experience. They need an associate degree in that specific field. For instance, my welding teacher only has an associates in welding.
- Robin Breault: My next steps will be to sit down with South 32 HR and identify needed skills; then look into what is available in JTED programs, CTE and dual credit programs. We can then identify strategies on how to help find qualified teachers or identify ways of qualifying individuals.
- Maritza Cervantes: Our program can provide scholarships for eligible participants (those outside of K-12) to obtain those vocational skills or certifications, whether in automotive or any vocation. We can provide provides tuition and transportation.
- Angie Donelson: Arizona Community Foundation also provides scholarship rounds that run twice a year for current college student or adult reentry students, for 2-year and 4-year degrees.
- Marcelino Varona: Invited panelists to attend the Santa Cruz County Provisional Community College District Governing Board meeting on Saturday, November 6. They will be addressing workforce planning and CTE programs. Angie will follow up with invitation details to panelists.

- Robin Breault: Will follow up with Marcelino to make sure data from the Nov 3-4 future workforce visioning sessions will be available to them for their Santa Cruz County Provisional Community College District Governing Board meeting.

1:48 South 32 Social Impact and Opportunity Assessment

- Melanie Lawson shared a scoping document for the Social Impact and Opportunity Assessment (see Attachment E).

She would like panel feedback on the scope, especially whether any key stakeholders are missing, and whether any additional reports or studies should be considered. Once South 32's prefeasibility report is released (potentially January), a consultant will be preparing this report to assess social impacts, economic and environmental impacts and opportunities. The panel will serve as a key advisory group to the consultant.

- Linda Shore: Melanie, will broadband or internet infrastructure also be considered? This is an opportunity for Hermosa to build capacity.
- Ruth Ann LeFebvre: What is the consultant going to do?
- Melanie Lawson: They will identify impacts and opportunities and also address mitigation strategies.
- Ruth Ann LeFebvre: What is the timeline?
- Melanie Lawson: Plan is to select consultant at end of year, kick off study in January

1:55 Wrap Up and Looking Ahead: November 17 meeting

- Angie Donelson: for our next meeting, Ty Ferre will return to share about modeling/assumptions in the Clear Creek and PARA models, which project impacts of dewatering in the Town of Patagonia. He will also share more about the work his students are doing. His work is important to helping the panel in its task of formulating water recommendations to Newfields for alternative uses other than water.

We will not be having a meeting in December; I will be preparing a year-end report to share with the panel in January. At the next meeting, I will ask the panel to confirm their commitment/share how they are feeling about this process, and to get feedback on what we can address next year.

- Liz Collier: In Arizona, the concern is that the mine will come in and leave the community with the mess when they leave. Is there a mechanism for Hermosa to address this, such as setting up a trust or a fund with mitigation resources?
- Angie Donelson: Yes, this relates to larger issue of good neighbor agreements, which we will address next year. I would like to engage an expert with the panel's technical assistance budget to do a review of best practices of good neighbor agreements, such as what goes in them, what gets negotiated publicly, and what ends up in; these are typically agreements on some environmental impacts, but I believe we should also include workforce agreements. Good neighbor agreements become a "bucket" for transparency – so the agreements are accessible to everyone, and the broader community can see what is negotiated – hopefully even standing if a mine is bought out by a successor.
- Melanie Lawson: We would also need to identify who the agreement is with.
- Angie Donelson: Yes, some include 15 organizations or so. It would be nice to have a literature review to know what works, and what doesn't work.
- Ruth Ann LeFebvre: Will we soon have a tour of the Hermosa site?
- Melanie Lawson: Yes, we are now able to take people on site. We have a COVID protocol. We can make it part of an add-on to our November meeting or in December in place of our meeting. I will run a poll with the panel to see best availability.
- Ruth Ann LeFebvre: How long is the tour? Will it move right along, or can you ask questions?
- Melanie Lawson: You can ask questions. It is an estimated 2 hours in total, including the 25 min each way.

Wrap up and Survey: Now that you have explored workforce issues in greater depth....how are you feeling? What could improve?

- I believe we are on target
- I am still excited about moving forward; member involvement could improve
- Good, making progress. Team work is becoming more material.
- Every meeting I am able to learn more
- The format of the group discussion was powerful – we should continue this format. It helps with comprehension of various topics

- Better (clear and concise) information from South 32
- Pushed; less cross talking in a room with terrible acoustics

What do we need to address next?

- Workforce clearing house
- Start connecting the dots: what will the big picture look like?
- The tour for the operation
- Focus in depth discussion on the top three issues
- Would like to learn more about water mitigation and water resources for Patagonia. Are there things we could put in place to ensure future availability of water for the community?
- Better information from South 32 about the skills needed
- 1) Skills assessment needed; 2) assess ability to meet that training; 3) recommend how to fill the training gap
- Competing water models and the difference between the two

How well have you felt heard so far? (0-5, with 0 not at all and 5 very well)

- o 3 (1)
- o 5 (7)

Attachment A

Hermosa Advisory Panel Meeting #7

October 20, 2021

Let's Review From May- What Are We Doing/**Why a Data Workforce Party?**

Most “central” sentences, by themes*

1) Public process

2) Panel represents community: networks, asking and allowing for questions

3) Panelist commitment

4) S32 interests

5) Issue: Workforce/ promises about workforce commitments

6) Issues: Water; Transportation

7) Social impact

Relevant words encompass 4 themes**

1. Water issues and mining – recharge, quality, treatment
2. **Panel – investment in work, school people**
3. **S32 role in community – long term, important questions, economic feasibility/impacts**
4. Public process for understanding

Interviews with the 14 panelists were conducted on Zoom and transcribed with Audix, an electronic transcription service. Interview text was run through:
*GloVE (Global Vectors) text summarization algorithm developed at Stanford University converts sentences into network graphs to display those most central in a network

**Topic modeling algorithm developed at Columbia University produces visual networks of words (themes)

“Central” Sentences Organized By Themes

**5) Issue:
Workforce/
promises about
workforce
commitments**

Where they're going to get their employees from and if **their requirements for employment are too high**, then we need to say that and say **stop all PR**.

If the panel decides to work on **workforce issues** they really try to address Nogales needs and really work on some of those **relationships with families**.

Hermosa Advisory Panelists

What Can You Influence?

Hermosa Advisory Panel - Issues To Consider In Your Level of Empowerment as a Panel

How Much Influence You Have At Different Points in Negotiating with S32

developed by the international association for public participation



South 32 investments in school based and community college programs

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives and/or solutions.	To obtain public feedback on analysis, alternatives and/or decision.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Jobs that South 32 creates



Attachment B
INFORMATION for the Santa Cruz County Advisory Panel on Hermosa Project
Presented by Panelist Carolyn Shafer as PARA Board Member: October 20, 2021

These are three sources for information relative to water issues in the Sonoita Creek Watershed that I recommend:

- The [Town of Patagonia “Sonoita Creek Flood & Flow Committee”](#) (“F&F”) which conducts (currently via Zoom) monthly public meetings the second Thursday of each month at 10 a.m.
- [Friends of Sonoita Creek](#) (“FOSC”)
- [Patagonia Area Resource Alliance](#) (“PARA”)

UPDATE ON APPEAL of South32’s APP Permit

Background:

Before any facility releases pollutants to the groundwater, they must first apply for an Arizona Aquifer Protection Permit (APP). The agency responsible for granting those permits is the Arizona Department of Environmental Quality (ADEQ). The intended purpose of filling out the application is so ADEQ can see if the facility will meet the specific requirements set in place to protect people's drinking water.

This past August, Arizona Minerals Inc. (wholly owned subsidiary of South32) was given one of those permits. However, PARA was dismayed that the application did not meet state requirements. PARA, therefore, filed an appeal.

At the Appeals Board:

On October 6, 2021, the ADEQ Water Quality Appeals Board (WQAB) held a virtual pre-hearing. The decisions were to combine PARA’s appeal request with another appeal filed by a local individual and to grant South32's request to intervene. The WQAB also decided to send the consideration of appeals to the Office of Administrative Hearing to be heard by an administrative law judge. They stated that the matters outlined in the Appeal were "not trivial.”

Briefly, the relief requested in the Appeal includes:

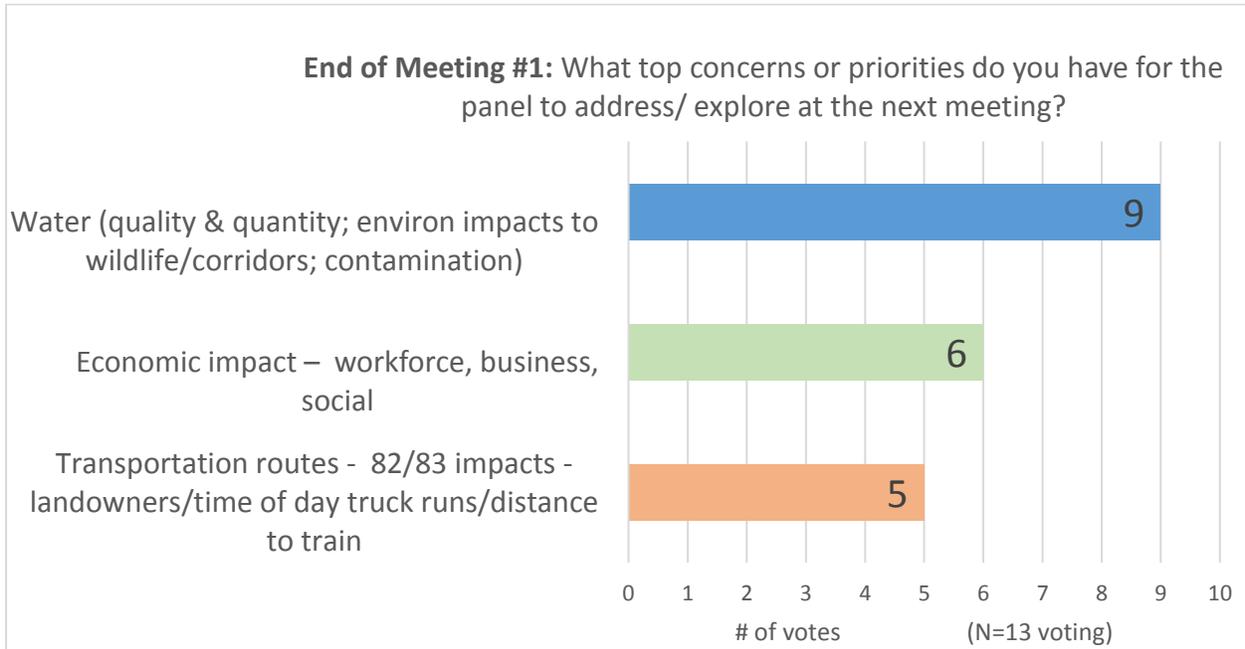
- **Points of Compliance** (*key location/s where levels of contamination or exposure can be screened*) be constructed before any mine dewatering activity.
- A system of early warning Points of Compliance with minimum monthly monitoring.
- **Baseline data** (*collection of prior information*) must be collected for a minimum of one full year before any large discharge.
- Background data on stream sediments in lower Harshaw Creek must be collected in advance of any significant discharge.
- All compliance monitoring and background data collected must be released to the public.
- A complete **hydrologic study** (*study of water*) must be conducted on the effect of the Hermosa Mine discharge to Harshaw Creek on downstream drinking water aquifers.

Attachment C

Workforce Data Party

End of meeting #1 (purple reflection sheet):

Now that you have heard more today about the planned work of this panel...



Workforce Issues Raised By Panelists to Date

Survey question post meeting #1 (on survey monkey via email) - The panel's current priorities are reflected in the draft meeting minutes. Which of these issues do you hope to address first?

The first issue to consider is retaining and attracting local talent, providing educational opportunities to students interested in pursuing a trade career, and creating opportunities to attract outside talent.

Economic impacts in our county.

Workforce Issues Raised By Panelists to Date

Initial Panelist Interviews – Statements and Questions

At the end of the day, when it comes to the workforce, we really need to be very careful, at least I do in my industry, because we're going to end up competing for the same people.

Is our support (of the mine) going to have a negative impact on the produce industry? That is, on the amount of employees and the pay? We also have an older workforce as well. We're having a very difficult time attracting younger people. When the mine starts hiring, they are also going to look at younger employees first.

Where will South 32 be hiring from? There's a lot of people saying that right now – in Nogales there are people saying they will hire many from there. But I don't really know that.

We never really have had a full conversation with what their workforce needs are and what our goals are. And since they are going to be a major employer and a major tax contributor, I want to partner with them. I mean, we can offer them courses. Maybe they could offer us courses. Maybe they have some engineers that I could recruit to teach a math class. I mean, just there's just so many ways we can partner.

We've had double digit unemployment in Santa Cruz County for as long as I can remember. The produce season last nine months. Let's create a successful base of employment down here that's not seasonal.

How could we prepare candidates to be able to work for the mine? Are they going to hire locally? What kind of training do they need to have? Are they going to offer some kind of technical careers?

How do we make sure that we hire a local workforce instead of people from Sierra Vista? How do we make sure that our high school graduates or community college graduates have technical skills required?

I'd love to be able to see that dual credit pipeline developed for students. You know, kids are earning dual credit high school, which means they can get out and they have credit either in a community college or an end to the state universities, enabling them to shorten their time in their and dramatically lower their costs of going to school.

August and September Panelist Rapid Response Sessions: Workforce Assets and Gaps

The following panelists provided overview of their employment skills programs in relation to questions, as shown below:

Panelist	What you do/what workforce needs to do you address?	Who are you working with/ training and partnering with?	What are your practical and/or institutional barriers?
<p>Maritza Cervantes, Santa Cruz County Workforce Innovation and Opportunity Act Director</p>	<ul style="list-style-type: none"> - Title 1, Santa Cruz County workforce development career services and training - Title 2, Continuing education - Title 3, Department of Economic Security services - Title 4, Vocational Rehab, for individuals with disabilities. - Eligibility requirements: 1) in-school youth ages 14-21; 2) Out-of-school youth who dropped out or finished high school without plan, ages 16-24; 3) Adult training program; 4) those who have lost a job; 5) Incumbent workers program - Offers individual training in the classroom, on the job training, apprenticeship & customized training, incumbent worker training 	<p>Largest group is participants working towards CDLs (certified drivers license), they work with driving schools to get individuals their license</p>	<p>Identifying employers' specific needs. Have hired business specific needs finder to figure this out, will have data in the future</p>
<p>Liz Collier and Marcelino Varona, Santa Cruz County</p>	<ul style="list-style-type: none"> - Not yet an accredited community college; a provisional community college that hires providers to deliver classes. 	<p>Partners have that data, but don't always share it. PCC says Santa Cruz County campus is</p>	<p>Will take money and time to get classes set up for skills requested, but an option is to get a</p>

Panelist	What you do/what workforce needs to do you address?	Who are you working with/ training and partnering with?	What are your practical and/or institutional barriers?
Provisional Community College Board	<ul style="list-style-type: none"> - Will partner with anyone if students can benefit from it. 	<p>enrolling at higher rates than any other.</p> <p>Partners:</p> <ul style="list-style-type: none"> - UofA, most popular courses are business related - Wants to partner with a university south of the border to train-Mexican business - With high school via dual credit: NUSD and Rio Rico 	<p>truck to shuttle people over to PCC</p> <p>Partnering with Sahuarita for course development might be an option in the future</p>
Olivia Ainza-Kramer, President & CEO, Nogales-Santa Cruz County Chamber of Commerce Visitor & Tourism Center	<ul style="list-style-type: none"> - COVID revealed many businesses were not prepared, so support involves preparing them for emergencies. - Created small business resource center. - Did case-by-case analysis on what they needed to succeed. - Helped them through language and tech barrier - Informed them and guided them towards proper channels and assistance, as well as partners. - Worked with an expert on Federal recruitment plan to be able to sell to locals and bigger entities 	<ul style="list-style-type: none"> - Diverse, with large corporations and mom & pop shops. - Scattered all over Santa Cruz County, Nogales and Tucson 	<p>What can be done to prepare small businesses as potential suppliers to South 32? Expand their ecommerce & online presence. Prepare them to be found, prepare them to be able to supply to S32 vendors (Some businesses are not even incorporated).</p>

Panelist	What you do/what workforce needs to do you address?	Who are you working with/ training and partnering with?	What are your practical and/or institutional barriers?
	<ul style="list-style-type: none"> - Worked on the internet presence of businesses 		
<p>Jaime Chamberlain, Chamberlain Distributing</p>	<p>Majority in the produce industry fell in love with the business when they were young as they were immersed in the industry.</p> <p>Other opportunities are involved in this work like marketing, technology. Include the context of the mine, how it correlates to important future endeavors.</p>	<p>Mining jobs/produce could partner in logistics recruitment. Logistics is a crossover industry sector in Santa Cruz County that serves both mining and south 32. For example, transportation and warehousing are involved, and require secure/clean rooms and safety protocols.</p> <p>Mining jobs/produce could partner in recruitment, but mining will likely be recruiting from the produce industry employment base because mining jobs pay twice as much.</p>	<p>We should be starting with 7th graders who are interested in our industries. Get to youth early enough to educate them about the opportunities. This is also a challenge for mining.</p> <p>Produce industry is an aging workforce, work is taxing.</p> <p>Produce industry needs more CDLs. Drivers in the future will be critical like a nurse in the US</p>
<p>Adelmo Sandoval, Finance Director, Nogales Unified School District (NUSD)</p>	<p>Provided a handout (see Attachment B) of Pima JTED technical trade course offerings for students related to South 32 needs: These include: Automotive technologies; Business management; Network security; Technology device maintenance</p>	<p>Business and nursing classes are the most popular Automotive technology class is popular among students (enrollment = 80 students). They are trying to expand classrooms/offer more to enhance enrollments next year. Students taking these classes can test to get Career and Technical</p>	<p>Want to provide more for students, but lacking resources.</p> <p>Shortage of teachers in AZ, difficult to bring in certified teachers to this small town even with competitive salaries.</p>

Panelist	What you do/what workforce needs to do you address?	Who are you working with/ training and partnering with?	What are your practical and/or institutional barriers?
		Education certifications (test-based)	
<p>Michael Young, Behavior Interventionist & Assistant Principal, Patagonia Union High School</p>	<p>We only have 80 students at the high school. Many interested in trades. Welding –15 signed up this year and we just brought this program back. Auto mechanics class - we have 17 signed up this year We are also beginning to offer a joint Cochise college program in cloud computing We are also offering associates' degree to our students. Would much rather give them college credit than AP credit.</p>	<p>Cochise College. We are part of their offerings unlike the rest of the county. We have a Multi-year IGA – they like to be part of Pima JTED like the rest of the county.</p> <p>Two of my students are just a few credits short of their Associate's degree. This is the first year I am offering two Pima math classes; have a qualified math teacher now to do this. Also offering general ed classes.</p> <p>They are wanting to work with Empire HS on an apprenticeship with Caterpillar: diesel mechanics, as well as electronic equipment</p>	<p>Need to reach them as sophomores or even earlier – but students must first show proficiency in reading, writing, math to take advanced classes Demand is in trades. Automotive programs are unavailable - a program he found in Wyoming costs \$76,000 a year.</p> <p>South 32 could pay for tuition reimbursement to attract masters-level teachers.</p>

Group Activity: August 2021 - What else do we need to know about workforce assets and gaps?

What questions do you have about assets and gaps in the workforce programs that <u>already</u> exist?	What do we need to address? What can we realistically do about these workforce issues into the <u>future</u> ?
<ol style="list-style-type: none"> 1. Is there an adequate supply of skilled labor in the area to meet the needs of the Hermosa Project? 2. Would South 32 require vocational certifications that the Provisional Santa Cruz Community College can offer? 3. Are there scholarships for adult education? 4. How do we appeal mining jobs to high school seniors/freshmen in college? 5. How do we educate youth about water issues in relation to mining? 6. Can we bring the “Dig into mining” program into K-12 education? Digintomining.com 7. Have you looked at the Dreambuilder program to help get business to write their business plans? 8. What is South 32’s timeframe for opening operations? 9. What will be the size of the workforce when South 32 is in full operations? 10. Can we get specific about the type of training South 32 will need? What specialized certifications could be required versus degrees to meet “highly skilled” requirements? 11. How do we get address the rumor that South 32 hires their own and provides lower paying jobs for locals? 12. Is there a CDL licensed truck driver age limit? 13. With limited staff and financial resources, how do you document a successful community outreach program? 14. How long will it take for the Santa Cruz County Provisional Community College to provide specific courses in reference to South 32’s required skill sets? 15. What are the demographics for Santa Cruz County as far as workforce numbers? 16. What data have been documented as to the results of services provided, especially with the focus areas of service? 	<ol style="list-style-type: none"> 1. Quality of life is more important than salary 2. Climate crisis is changing the world 3. What are the projected demographic shifts in age groups in 5-10-15 years? 4. How do we move goods other than by trucks? 5. Internship programs 6. What specific skills/certificate programs will be needed to work at the mine? 7. Can South 32 engage the existing workforce development infrastructure in Santa Cruz County to tailor/develop a pipeline of local talent? 8. How can careers be flexible and adaptable, and open to change? 9. How can South 32 join in providing education through the provisional community college? Can we use South 32 experts to train, or provide certificates, in jobs needed? 10. How do we retain employees once trained?

Santa Cruz County Provisional Community College Current Offerings



PimaCommunityCollege

Keep striving.

Santa Cruz Center

2021 N. Grand Ave. | Nogales, Arizona | (520) 394-7180

Fall 2021 Class Schedule

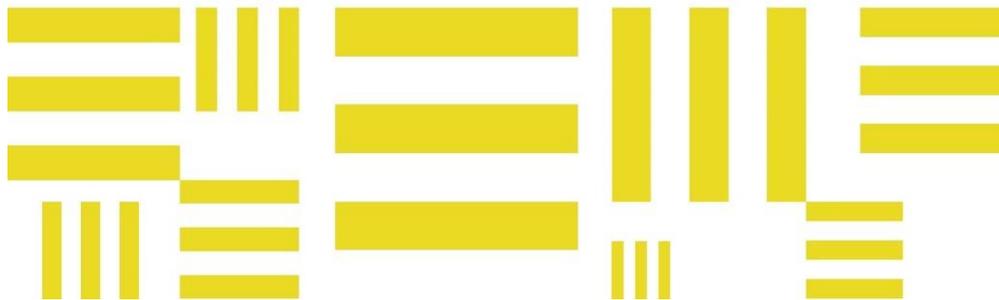
Register now www.pima.edu

- | | |
|--|---|
| 12307- Financial Accounting ACC 211
<i>F 10:00 am-noon</i> | 12311 Transp. & Traffic Mgmt. LGM 106
<i>F 9:30am – noon</i> |
| 12437 Academic and Critical Literacy ACL 080
<i>Tu Th 4:00 pm—6:15 pm</i> | 13400- Exploring Music MUS 151
<i>M W 10:00am—12:50 pm</i> |
| 12084-Intro Admin of Justice Systems AJS 101
<i>Th 5:45pm -8:25pm</i> | 13346-Nursing Assistant NRA 101
<i>M Tu W Th 8:00am -11:30am</i> |
| 12128-Criminal Law AJS 109
<i>Tu Th 5:45pm-8:25pm</i> | 11872 National & State Constitution POS 210
<i>Sa 9:00am-12:10 pm</i> |
| 12300-Criminal Procedures AJS 115
<i>M 5:45pm -8:25 pm</i> | 11888 -Intro To Psychology PSY 101
<i>W 6:00 pm-7:45pm</i> |
| 10026 -Ethics &Admin of Justice AJS124
<i>W 5:45 pm -8:25 pm</i> | 13281 Developmental Psychology PSY 240
<i>W 4:00pm-5:30pm</i> |
| 13376- Criminal Investigations AJS 204
<i>M 5:45pm -8:25pm</i> | 12275 Reading Improvement II REA 091
<i>Tu Th 4:30pm-6:20 pm</i> |
| 13418- Exploring Art/Visual Culture ART 105
<i>F 1:30pm -4:10pm</i> | 11619 Reading improvement II REA 091
<i>Tu Th 6:30pm-8:20pm</i> |
| 13419-Drawing I ART 110
<i>F 8:45am-1:15pm</i> | 12316 Old Testament REL 220
<i>M W 10:00 am-11:15am</i> |
| 12097- Biology Concepts BIO 100IN
<i>Tu 9:45am-12:40pm</i> | 12094 College Success / Career Planning STU 100
<i>W 3:00pm-3:50pm</i> |
| 11150- Environmental Biology BIO 105IN
<i>Tu 2:15pm-4:55 pm</i> | 11752 Univ Transfer Explore & Coll Succ STU 107
<i>W 3:00pm-3:50pm</i> |
| 11923-Introduction to Business BUS 100
<i>Tu Th 6:00pm-7:15pm</i> | 11889 English Composition I WRT 101
<i>Tu Th 3:00pm-4:15pm</i> |
| 12306 Ecommerce BUS125
<i>Tu Th 7:30pm- 8:45pm</i> | 13284 English Composition I WRT 101
<i>Tu Th 4:30pm-5:45pm</i> |
| 11871- Mathematics of Business BUS 151
<i>M W 7:30pm -8:45pm</i> | 12091 English Com/Integrated Studio WRT 101S
<i>Tu Th noon-1:15pm / W 10:30am-11:45pm</i> |
| 13424- MS Windows Oper Sys Prof Admin CIS103
<i>Tu 5:45pm -7:45pm</i> | 12089 English Com/Integrated Studio WRT 101S
<i>Tu Th noon-1:15pm / W noon-1:15pm</i> |
| 13189- Computer Fundamentals CIS 104
<i>Tu Th 8:15am -9:30am</i> | 12145 English Com/Integrated Studio WRT 101S
<i>Tu Th 1:30pm-2:45pm / W 1:30pm -2:45 pm</i> |
| 13426- Computer Hardware components CIS 136
<i>W 5:45pm -7:45pm</i> | 12146 English Com/Integrated Studio WRT 101S
<i>Tu Th 1:30pm-2:45pm / W 3:00pm-4:15pm</i> |
| 13244- Introduction to Education EDU 200
<i>W 4:30pm –5:45pm</i> | 13282 English Com II WRT 102
<i>Tu Th 3:00pm -4:15pm</i> |
| 13245 Relationships in Class Setting EDU 206
<i>W 6pm-7:15pm</i> | 13283 English Com II WRT 102
<i>Tu Th 4:30pm-5:45pm</i> |
| 12319 History of United States II HIS 142
<i>F 10:30am -noon</i> | 12494- Elementary Algebra MAT 092
<i>M W 4:00pm-5:25pm</i> |
| 13040- Integrated College Skills MAT ICS081
<i>M Tu W Th 9:45-11:00 am</i> | 12495- Mathematics Success Support MAT 092LB
<i>M W 5:40pm -6:35pm</i> |
| 12310- Contracts and Freight Claims LGM103
<i>Sa 9:30am -3:00 pm</i> | 12572- Topics in College Math MAT 142
<i>Tu Th 6:30pm -7:45pm</i> |
| | 11887- College Algebra T151
<i>M W 5:00pm– 6:50pm</i> |



WORKFORCE DEVELOPMENT OPERATIONS

SANTA CRUZ COUNTY,
ARIZONA, USA



WHY WORK AT HERMOSA?



Hermosa is considered one of the world's most significant undeveloped zinc, lead, silver and manganese resources. It's also one of the only significant undeveloped resource for these metals in America. These are commodities that are support transitioning to more renewable energy and accelerating the shift toward electric vehicles.

- Zinc is needed for wind turbines, battery storage, and solar panels.
- Lead is needed for electric vehicle batteries and battery storage.
- Silver is an essential coating on solar panels.
- Manganese, an element in steel production, is in demand for electric vehicle batteries.
 - › Manganese is a federally designated critical metal, but there is currently no manganese mining in the United States and no manganese metal production anywhere in North America.

Hermosa has the potential to provide the first U.S. production of manganese and meet U.S. needs domestically. South32 views Hermosa as a rare opportunity to innovate, too. Technology is changing fast, and we'll be at the fore as we look to create a carbon-neutral operation and use electric vehicles.

CURRENT WORKFORCE (PROJECT)



Current Project Workforce:

- Approximately 100 South32 employees (all locations – Tucson Office, Patagonia Office, & Project Site)
- Staff hiring is prioritized by:
 1. Santa Cruz County;
 2. Surrounding Counties (Tucson, Arizona area);
 3. Western United States;
 4. Specialized technical knowledge from other South32 locations globally

Current Roles in the Workforce:

- Water Treatment Plant Operators
- Core Processing Technicians
- Electricians
- Facilities Maintenance Technicians
- Environmental Technicians
- Environmental Specialists & Engineers
- Geologists
- Mining Engineers
- Metallurgical Engineers
- Geotechnical Engineers
- Finance Professionals
- Human Resources Professionals
- Corporate Affairs Professionals
- Project Management & Construction Professionals
- Safety Professionals
- Purchasing & Procurement Professionals



SLIDE 3

FUTURE WORKFORCE (OPERATIONS)



Future Operational Workforce:

- Staff hiring is prioritized by:
 1. Santa Cruz County;
 2. Surrounding Counties (Tucson, Arizona area);
 3. Western United States

Future Roles in the Workforce:

- Water Treatment Plant Operators
- Core Processing Technicians
- Electricians
- Facilities Maintenance Technicians
- Environmental Technicians
- Environmental Specialists & Engineers
- Geologists
- Mining Engineers
- Mobile Maintenance Technicians
- Metallurgical Engineers
- Geotechnical Engineers
- Electrical Engineers
- Finance Professionals
- Human Resources Professionals
- Corporate Affairs Professionals
- Fixed Plant Maintenance Technicians (Millwright)
- Process Controls Technicians
- Safety Professionals
- Electrical & Instrumentation Technicians
- Underground Miners
- Surveyors
- Laboratory Technicians
- Warehouse Technicians
- Purchasing & Procurement Professionals
- Maintenance Planning Professionals
- Various Supervisory & Management Professionals



SLIDE 4

LOCAL WORKFORCE



Workforce Development:

South32 is committed to hire and train a local workforce for operational phases of an underground mine. South32 anticipates the following means to mitigate risks associated with workforce development, readiness, and mobilization:

1. Utilization of existing skilled trade and operational training programs in Santa Cruz and Pima counties;
2. Recruitment and relocation of experienced skilled trade and operational employees to provide on the job training and knowledge transfer;

Utilization of Existing Programs:

1. Explore capability and capacity of current programs within Santa Cruz County as well as Pima County (and surrounding area) to better understand:
 - a) What programs are ready now?
 - b) What programs are being developed?
 - c) What programs are anticipated in the future?
2. Flexibility of inter-county partnership for skills needed in Santa Cruz County

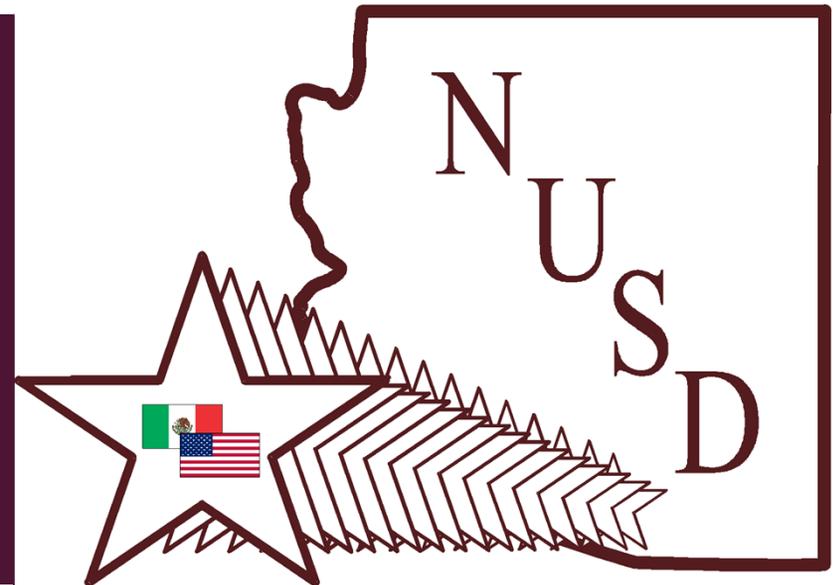
Skilled Positions and Knowledge Transfer:

1. Hire highly skilled and experienced employees:
 - a) Teach entry-level workforce the fundamentals of their field of expertise (i.e., underground full cycle mining, circuit operation, mobile & fixed maintenance, electrical/E&I/process controls)
 - b) Safe mine operation
 - c) Workplace culture development
2. We will hire experienced individuals in conjunction with less experienced local employees with the expectation that the knowledge will be transferred and retained locally



NOGALES UNIFIED SCHOOL DISTRICT #1 PIMA JTED SATELLITE PROGRAMS

WEDNESDAY, AUGUST 25, 2021



NUSD #1 Governing Board Members:

- Mr. Greg Lucero, Governing Board President
- Mr. Robert Rojas, Governing Board Clerk
- Mr. Cesar Lopez, Board Member
- Mr. Manuel Ruiz, Board Member
- Dr. Marcelino Varona Jr., Board Member

NUSD #1 Administration:

- Mr. Fernando Parra, Superintendent
- Ms. Angel Canto, Assistant Superintendent
- Ms. Irma Fontes, CTE/JTED Programs Director
- Ms. Judith Mendoza-Jimenez, Student Services Director
- Mr. Adelmo Sandoval, Finance Director
- Ms. Mayra Zuniga



NUSD#1 PIMA JTED SATELLITE PROGRAMS

NOGALES HIGH SCHOOL (NHS)

- Air Force JROTC
- Automotive Technologies
- Business Management
- Cabinetmaking
- Culinary Arts
- Early Childhood Education
- Fashion Design & Merchandising
- Graphic Design
- Network Security
- Sports Medicine & Rehabilitation*
- Technology Device Maintenance

PIERSON HIGH SCHOOL (PHS)

- Digital Printing*
- Nursing Services
- Digital Photography*

* New programs



PROGRAM CERTIFICATIONS

- Automotive Technologies—Automotive Service Excellence (ASE)
- Business Management—Microsoft Office Specialist
- Cabinetmaking—OSHA 10 Construction Industry
- Culinary Arts—ServSafe Food Protection Manager
- Digital Photography—Visual Design (via Photoshop)
- Digital Printing—Adobe Illustrator
- Early Childhood Education—Praxis Para Pro
- Graphic Design—ADOBE Illustrator
- Network Security—TestOut PC Pro
- Nursing Services—Licensed Nursing Assistant
- Sports Medicine & Rehabilitation—OSHA 10 Healthcare
- Technology Device Maintenance—TestOut PC Pro

NUSD#1 PIMA JTED SATELLITE PROGRAM HIGHLIGHTS

2020-2021 Program Highlights

- JTED satellite enrollment at our two satellite campuses included 1,988 unduplicated count for students taking one or more CTE courses during the 2020-2021 school year. With high student enrollment up significantly at both campuses this year, CTE enrollment is expected to increase as well for the 2021-2022 school year.
- 149 students earned an industry certificates during the 2020-2021 school year, which is also expected to increase this year as we return to in-person instruction.
- Since last school year, we have introduced a few new programs at the NHS and PHS satellite campuses to avoid program duplications between the two schools and increase student offerings. These new programs include Sports Medicine & Rehabilitation, Digital Printing, and Digital Photography programs.
- Last year we began to offer dual enrollment credit for Culinary Arts students through Pima Community College and are completing requirements to offer dual enrollment for the Automotive program as well.

NUSD#1 PIMA JTED SATELLITE PROGRAM HIGHLIGHTS

2020-2021 Program Highlights Continued

- NHS Business Management students, who are part of the school's FBLA program, had another very successful year competing in Leadership, Regional, State and National competitions, garnering dozens of awards as students placed in the top of each competition. This includes being recognized in the Chapter Sweepstakes and 1st place this past January in competition, edging out University High (Tucson) and Metro Tech of Phoenix.
- PHS Nursing students did exceptionally well on the CTE state assessment this year, earning some of the top scores in the state. Additionally, 95% of the students earned their LNA certification this past spring and we assisted Spring 2020 graduates to obtain certification as well.
- As you are aware, we completed a remodel and upgrade of our Culinary Arts classroom and are now proceeding with remodeling plans for the district's Automotive program. We are beginning the process to contract an architect and plan for an automotive upgrade to meet industry standards.
- This past year we entered into a partnership between the NHS Automotive Technologies program and Royal Automotive in Tucson that resulted in three NHS graduates being offered paid summer internships which resulted in all three graduates being hired as full-time mechanics at Royal. This year Royal has asked to expand the industry partnership to include more Automotive students as well as Business Management students for paid internship and hiring opportunities.
- With changes in the economic landscape and local industry needs, we are not only upgrading current programs to meet industry standards, but new programs are continuously being explored for implementation in the future to meet student and industry needs.

NUSD#1 PIMA JTED SATELLITE PROGRAMS

Air Force JROTC

- Under the command of newly hired Lt. Colonel Roxburgh, the cadets are focused on leadership activities and special team activities, including Color Guard, Drill Team, Rocketry, Kitty Hawk Air Society among others. In fact, students have already completed two Color Guard activities in this new school year.
- Additionally, the JROTC has almost three dozen cadets working with the Civil Air Patrol in Tucson for a flight around Southern Arizona in which students will be able to pilot the aircraft.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Automotive Technologies

- We are currently completing requirements for dual certification with Pima Community College for this program and, as mentioned, have begun plans for a remodel and expansion of the auto classroom/bay to meet industry standards. Students are also earning ASE certification and continuing participating in CTSO activities.
- This past year, NUSD entered into a partnership with the Royal Automotive Group in which 3 NHS graduates were accepted into a paid internship program in June and were hired to work full-time at Royal beginning in July. Their Operations Director (Gordon Young) was very impressed and has asked to now expand to include more Nogales graduates in internships.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Business Management

- This program also boasts the largest CTSO membership of our satellite programs, with a very successful competition history as already mentioned. Advanced students are also able to enroll in Business Management coursework as part of the district's International Baccalaureate program.
- FBLA members have excelled, with dozens placing highly in Arizona leadership, regional, and state competitions.
- Students manage a school store during lunch time and also engage in community service projects outside of school such as a canned food drive benefitting a local shelter, community cleanup, Christmas toy drive for district children, and raising funds for a local non-profit agency that provides medical assistance for needy children.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Cabinetmaking

- This program, which has a relatively new instructor, teaches students OSHA compliant practices for the construction industry and provides opportunities for hands-on lab activities. Students are engaged in numerous projects throughout the year to develop carpentry skills and techniques.
- Remodeling on a finishing room is being finalized to provide a space for students to varnish and apply spray finishes to completed pieces.
- The program has also increased CTSO membership over the last few years, building leadership skills of members and has begun to become involved in state competitions.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Culinary Arts

- Students enjoy exploring the world of culinary arts in the remodeled classroom that now boasts industrial appliances identical to those found in restaurants and hotels.
- The program has also developed a strong industry partnership with a local hotel owner who has additional properties in California and provides program support.
- The advanced class is involved in catering events such as the NHS Hall of Fame Dinner and various school activities. They have also highlighted their skills while collaborating with Sodexo, the district's food service, through participation in county culinary events hosted by the Santa Cruz County Fresh Produce Association.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Early Childhood Education

- This program offers Para Pro certification and hands-on lab experience at all six of our district elementary schools.
- After studying early childhood curriculum material and theories, students are transported weekly to our schools to work directly with certified elementary school teachers, providing classroom instruction and assessments to students enrolled in our primary grade levels.
- Program completers leave with the ability and certification to become employed as an instructional aide in local schools or go on to pursue a career in education.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Fashion Design and Merchandising

- Students learn presentation, design, and sewing experience in this program. Prior to the pandemic, advanced students also participated in a Tucson fashion show with Pima College students and local designers and entrepreneurs to showcase their clothing designs.
- Fashion design students also collaborate with the school's theater program, designing the wardrobe for theatrical productions.
- Partnering with the Culinary Arts students, these students also have engaged in fundraising activities for various holidays, such as Valentines Day, as part of their CTSO campus fundraising.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Graphic Design

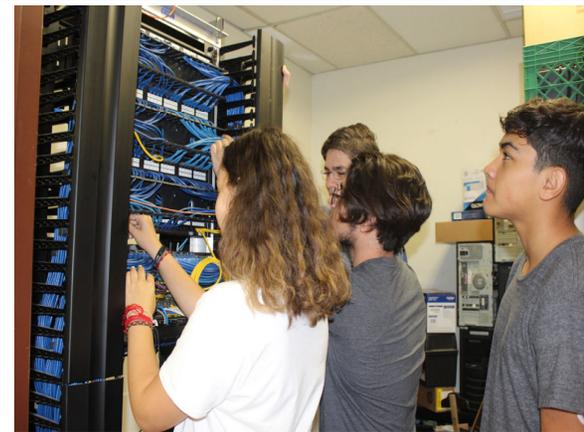
- This popular program offers ADOBE certification and multimedia lab experiences for students.
- After the retirement of the program's teacher this past spring, a new instructor with a wealth of international and university level experience was hired. He brings commercial filmmaking and multimedia industry experience to the table for first year and advanced students. Students also create and sell NHS school gear to support athletics and other special events.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Network Technologies and Technology Device Maintenance

- Students enrolled in both of these programs and earn the TestOut PC Pro certification.
- In addition to strong CTSO participation, the students in these programs comprise the school's Geek Squad, a skilled team that works with site IT staff to provide computer repair, network security assistance, and technology support for staff. Additionally, these students provide staff development for district teachers and staff regarding technology programs and applications.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Sports Medicine

- This is a relatively new program that is in its second of implementation and is currently enrolling year 2 students on the road to becoming our first completers.
- Students earn OSHA 10 Healthcare certification and have opportunities for hands-on application during lab activities.
- We are in the planning stage to provide a base health occupations course after which students interested in health careers could transition to the Sports Medicine program at the NHS campus or enroll in the Nursing Services program at the PHS satellite campus.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Digital Photography

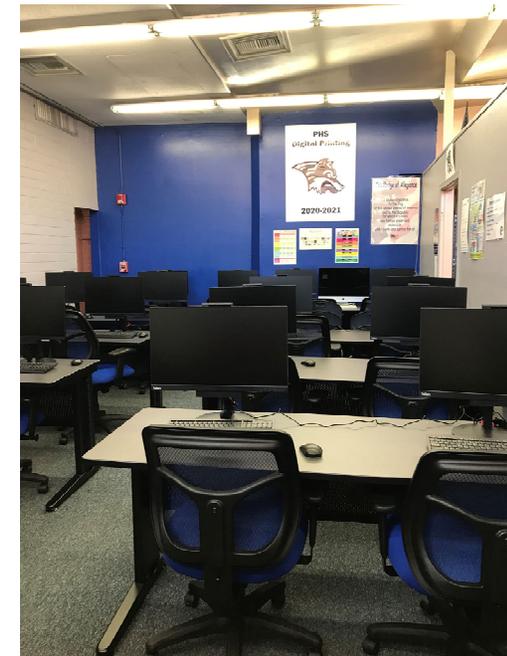
- In an effort to refresh district offerings, avoid program duplication in our district's satellite programs, and provide a program of high interest to our alternative school students, Digital Photography was added for this school year, increasing JTED satellite enrollment at this site.
- Students will learn virtual design using Photoshop, refine their photography and editing skills, and will be provided opportunities for application in the production of the school's yearbook and social media updates.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

Digital Printing

- This is another new program provided at Pierson High School satellite campus to expand district JTED offerings.
- The site's Technology Device Maintenance program was sunset and, based upon student survey results and industry outlook, Digital Printing was selected as a new program offering.
- The program features ADOBE certification and includes a remodeled classroom space as well as new lab space that includes industry standard printing equipment, including a vinyl banner maker.



NUSD#1 PIMA JTED SATELLITE PROGRAMS

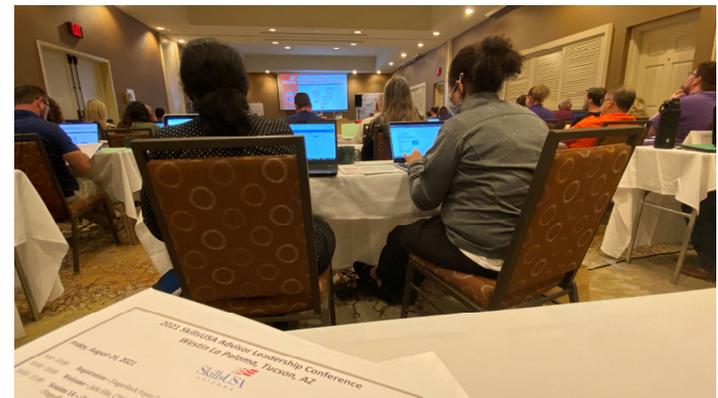
Nursing Services

- We no longer contract out for our nursing program instruction. Rather, we have been approved as our own Certified Nursing Assistant program by the Arizona State Board of Nursing. The PHS Nursing program has also become certified as a testing site so that our LNA students no longer travel to Tucson, but are assessed in their own classroom at the end of the year.
- This past year 95% of the students earned their LNA certification and a number of nursing graduates returned for assistance in preparing for and successfully completing their LNA assessment after school closed in the Spring of 2020 and there were unable to be assessed.



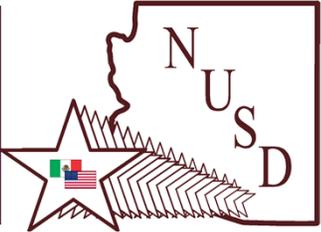
COLLABORATIVE ACTIVITIES WITH PIMA JTED

- Our CTE team has enjoyed opportunities for training through Pima JTED, including planned training for student officers which they will participate in this year.
- We have also appreciated access to lesson plans and activities for our various programs through the JTED Curriculum Consortium where our teachers can share model lessons with other JTED teachers.
- NUSD CTE teachers also have benefitted from participation in Pima JTED industry partner and advisory meetings.
- JTED staff will be assisting the district in producing a film to highlight and promote our satellite programs offerings.
- We look forward to support Pima JTED in areas such as their fundraising efforts at annual events like the Gala, which benefits our students by providing funds for travel and participation in CTSO state and regional competitions as well as teacher scholarship funds to enroll in higher education coursework.





THANK YOU



Experienced Underground Mobile Maintenance Technician

Responsibilities:

Reporting to the Underground Mobile Maintenance Supervisor, the Experienced Underground Mobile Maintenance Technician, is responsible for the following:

- Safely service, repair, and trouble shoot both hydraulic and electric underground mobile equipment, including but not limited to bolters, haul trucks, loaders, drills, and support equipment
- Perform other duties as assigned

Qualifications:

- Five (5) years of mobile maintenance experience preferred
- Four (4) years prior underground experience preferred
- Strong background in the repairing of underground drilling and bolting preferred
- Strong diagnostic and repair skills in regard to electrical and hydraulic systems of underground mining equipment preferred
- Ability to read and understand equipment service manuals required
- Commitment to working safely and to standards required
- Ability to provide own tools required
- Strong computer skills preferred
- Demonstrated ability to be self-directed, team orientated and work with minimum supervision required
- Demonstrated ability to perform the essential functions of this position required

Entry Level Underground Mobile Maintenance Technician

Responsibilities:

Entry level Underground Mobile Maintenance Technician, is responsible for the following:

- Safely operate forklifts in underground and surface work environments transporting parts of all sizes to staging areas. Track receiving of parts for planned jobs. Stock parts for planned jobs in staging areas. Move dumpsters and shop supplies as needed. Work with other departments to get components and component cores to and from the warehouse.
- Perform other duties as assigned.

Qualifications:

- One (1) year of light mechanical experience preferred.
- One (1) year of mining (surface or underground) experience preferred.
- Some mechanical aptitude preferred, but not required.
- Strong work ethic and good attendance are required.
- Ability to use a computer for parts and work order tracking as well as send/receive emails required.
- Commitment to working safely and to standards required.
- Strong computer skills preferred.
- Demonstrated ability to be self-directed, team orientated and work with minimum supervision required.

Surface Mobile Maintenance Technician

Responsibilities:

Perform maintenance of support equipment including grader, dozer and rubber tire dozer, oil and filter replacement on all maintenance and operation equipment; perform other duties as assigned.

Qualifications:

- Two (2) years of experience in mechanical maintenance of heavy equipment preferred
- Working knowledge of electrical and hydraulic schematics preferred
- Willingness to work in inclement weather conditions required
- Basic computer skills required
- Ability to provide own tools required
- Demonstrated ability to be self-directed, team-oriented and work with minimum supervision required
- Ability to lift up to 50 lbs. with or without reasonable accommodations required
- Proven safety record required
- Excellent attendance record required

Fixed Maintenance Technician

Responsibilities:

The Fixed Maintenance Technician is responsible for the following:

- Responsible for performing preventative maintenance and repairs of Ball and SAG mills, gear boxes and agitators, centrifugal pumps, vibrating screens, process crushing and conveying maintenance
- Perform crushing and conveying maintenance on equipment including, but not limited to: cone, gyratory, and jaw crushers and several types and configurations of conveyor belting structures, both fixed and mobile
- Perform other duties as assigned

Qualifications:

- Excellent safety and attendance record required
- Millwright, or similar, with welding and/or mechanical experience required
- Housekeeping standards are maintained to a high level required
- Willing to work in a team-based maintenance organization required
- Demonstrated ability to be self-directed and work with minimum supervision required
- Ability to work in adverse weather conditions required
- Basic knowledge of mechanics, hydraulics, and pneumatics required
- Skilled in mild steel cutting and position welding required
- Ability to lift at least fifty (50) pounds required
- Excellent verbal, written, and radio communication skills required
- Ability to perform the essential functions of this position required
- Experience with conveyors, chutes, crushers, rollers, pulleys, and bearings preferred
- Experience with preventative maintenance and repairs of Ball and SAG mills, gear boxes and agitators, centrifugal pumps, vibrating screens preferred
- Understanding of basic oil analysis, thermography and vibration analysis preferred
- Understanding of precision alignment techniques preferred

Underground Electrician

Responsibilities:

The successful candidate will safely and efficiently perform preventive, installation, and troubleshooting of power distribution centers, switchgears, motors and controls, process controls, and instrumentation.

Qualifications:

- Minimum four (4) years Electrical/Instrumentation experience or two (2) years trade school preferred
- Strong knowledge/skills in E&I repair, maintenance, installation, and troubleshooting of complex underground equipment required
- Ability to read blueprints and Piping & Instrumentation Diagrams (P&ID) required
- Experience programming/troubleshooting Variable Frequency Drives (VFD), Programmable Logic Controllers (PLC) preferred
- Experience with installation and repair/troubleshooting of fiber optic networks preferred.
- Willingness to work in a team-based maintenance organization required.
- Strong dedication to safety and courageous leadership required
- Proven safe work record required
- Demonstrated knowledge of Microsoft Office and Oracle preferred

Electrical & Instrumentation Technician

Responsibilities:

- Assist operations, maintenance, and metallurgical groups by understanding, troubleshooting, problem solving, and optimizing instruments, equipment, and systems
- Pull and terminate all instrumentation cable
- Perform advance valve/actuator repairs and calibration
- Read advanced Piping & Instrumentation Diagrams (P&ID), loop diagrams, and schematics
- Write and adapt calibrations and preventative procedures
- Utilize test equipment, Electronic/Electrical theory, computer loops, and mechanical theory to calibrate Instruments
- Perform advance troubleshooting of instrumentation
- Perform transformer/switch gear/motor control repairs
- Perform preventative maintenance –troubleshooting, plant process and flow, transformers, switchgear, and motor control centers (MCC)
- Layout panels and cabinets
- Comply with state and federal health and safety regulations, company policies and procedures and the company's environmental compliance policy

Qualifications:

- Experience in the operation and maintenance of electrical, electronic and instrumentation equipment used in the Industrial or Mining industries
- Electrical Degree or equivalent experience
- Strong problem-solving skills
- Proven excellent safety and attendance record
- Proven ability to work effectively in a team environment
- Demonstrated ability to perform the essential functions of the job

Entry Level Underground Miner

Responsibilities:

The Underground Truck Driver is responsible for the following:

- Safely and effectively operator mining equipment
- Be expected to work in a safe and efficient manner
- Perform other duties as assigned

Qualifications:

- One (1) year of mining experience preferred
- Prior underground and/or equipment operation experience preferred
- Excellent safety, attendance and work records required
- Demonstrate initiative as a team member in a growing, fast-paced environment required
- Ability to communicate with all Mine Operations personnel required
- Ability to work with minimal supervision required
- Previous haul truck driver or equipment operation experience preferred

Experienced Underground Miner

Responsibilities:

The Experienced Underground Miner is responsible for the following:

- Must be able to safely operate equipment in an underground mining operation
- Must be able to safely perform tasks in the underground environment with minimum supervision

Qualifications:

- Five (5) years of mechanized underground mining experience preferred
- Proven track record with full-cycle mining to include, but not limited to, drilling, blasting, haulage/backfill and ground support installation preferred
- Proven safe work record with belief and value seen in courageous leadership model required
- Ability to be an integral, team member in a growing, fast-paced environment required
- Good attendance record required

Process Plant Operator

Responsibilities:

- The successful candidate will safely and efficiently operate multiple circuits including: Leach circuits, boilers, carbon stripping, elution, reagent handling, roving; properly handle chemicals; monitor slurry and water flows
- Make calculations and adjustments to maintain plant operation which includes checking system components and equipment, identifying hazardous issues
- Perform other duties as assigned.

Qualifications:

- One (1) year of Process experience preferred
- Willingness to learn on the job required
- Willingness to work in inclement weather conditions required
- Proven safety and attendance record required
- Basic computer skills required
- Ability to work under minimal supervision required
- Ability to communicate and effectively work with a variety of individuals (i.e., operations and maintenance) required
- Ability to perform the essential functions of this job required

Environmental Technician

Responsibilities:

Inspects, samples, monitors, tests, and reports on environmental tracking systems and maintains compliance with all environmental regulations and permits for the project's mineral exploration, construction, water treatment, and mining operations.

- Ensure site and field safety procedures are followed during all work activities.
- Adhere to and promoting a safe workplace and meet all company and MSHA safety requirements at a facility with a strong safety culture.
- Assist with conducting and documenting environmental compliance inspections of site facilities and operations for the project's mineral exploration, construction, water treatment, and potential future mining operations.
- Lead inspections and maintenance of stormwater and spill control measures throughout site.
- Collecting water samples (surface and ground), documenting field observations or readings, and/or downloading data from various pieces of equipment in an outdoor setting in accordance with established procedures.
- Piloting drone for site inspections and photographs.
- Adhere to quality control/quality assurance protocols.
- Prepare and ship time- and temperature-sensitive fragile lab samples.
- Assist with data entry and maintain all data related to environmental monitoring in an organized and effective manner.
- Develop and maintain positive relationships and represent the company positively in the community.
- Participate in waste management, including solid and hazardous waste management.
- Responsibilities are mostly on surface; some underground work will be required.
- Complete special projects or other duties as assigned.

Qualifications:

- High School Diploma required
- Drive company vehicle and be covered under company insurance
- Must be able to pass Background and Drug Screen
- Willingness to work underground
- Department of Transportation HazMat Training (preferred)
- EPA Method 9 – Visual Opacity Certification (preferred)
- 24- or 40-hour HAZWOPER Training (preferred)
- MSHA training (preferred)
- Excellent organization and communication
- Proficient in MS Office (Word, Excel, PowerPoint, etc)
- Maintain high standards of professional and ethical conduct
- Strong written and oral communications

- Minimum one (1) year of Environmental technical field work experience
- Working knowledge of environmental monitoring systems and procedures
- Experience with multitasking, office procedures, tracking and maintaining project documentation with attention to detail
- Experience working with teams and interacting with customers
- Proven track record of developing and maintaining a safe work culture
- Ability to work under pressure, maintain composure, set priorities, and work with a myriad of personalities

Water Treatment Plant Operator

Responsibilities:

The purpose of the Water Treatment Plant Operator is to safely and effectively operate the plant.

- Follow all site Health, Safety, Security, and Environmental requirements and standards
- Carry out routine operation and housekeeping of plant and make minor repairs as trained where possible
- Ensure communication of necessary repairs to site-services maintenance department to minimize downtime
- Ensure accurate and timely reporting
- Demonstrate effective skills in troubleshooting, problem solving and team building
- Ability to use Microsoft Office Suite (Word, Excel, Outlook, etc.)
- Complete special projects or other duties as assigned

Qualifications:

- Must be able to work a rotating shift schedule with no restrictions
- Experience working in a mining or heavy construction or manufacturing environment preferred
- General working knowledge of mechanical, electrical, and piping systems
- ADEQ Certification Level 1 preferred, but not required

Attachment D

Workforce Data Party with Hermosa Panel - October 20, 2021

1. What do we know?

K-12 Pathways	Post Secondary Pathways
<ul style="list-style-type: none"> ● Students are worried about debt -- college etc. ● We have opportunities for students who aren't college-bound, but can't get them to come and participate in them ● Need more funding for meaningful workforce training that young people want 	<ul style="list-style-type: none"> ● We don't have a big workforce to work with (i.e construction importing workers) ● We don't know the specific skills S32, or retail, or produce, logistics, and construction are looking for ● Go through the specific job descriptions to ID specific skills. Robotics/remote operators/maintenance ● Pima has some programs SCC Provisional CC can pay to offer ● SCC is bound by expenditure limits ● SCC can't find qualified instructors--fully qualified retirees might be recruited

2. Concerns?

K-12 Pathways	Post Secondary Pathways
<ul style="list-style-type: none"> ● How does the trend toward certifications impact K-12 learning ● Make sure to keep balance and integrate between core learning (literacy, numeracy, etc) and CTE/technical training ● There isn't cultural buy-in for CTE and certifications 	<ul style="list-style-type: none"> ● We start "importing" people ● No schools ● Land use/housing - Martin Shore Indiana developer ● Patagonia small lots 1 acre outside perimeter ● Land use changes in SCC - 4.3 /ac hsg on perimeter of Patagonia does not allow for affordable housing ● Infrastructure - Roadways ● Infrastructure - Broadband - there is not internet many places through the county, we lack internet at the college ● Will post secondary programs be available and affordable? ● How practical is it for the SCC college to offer detailed courses to benefit industry, the mine? ● Updating logistics course offerings

3. Opportunities?

K-12 Pathways	Post Secondary Pathways
<ul style="list-style-type: none"> ● Pandemic helped families see value of schools and teachers more ● Cybersecurity, technology, upcoming trends in digital jobs ● Teacher expertise and development ● Resources from industry to start earlier learning opportunities in school (i.e. junior high, etc) ● Automotive ● PCC connections ● DE funding for teacher development ● ID degrees and certification pathways between HS and college (i.e. DE/early college, certs, etc) 	<ul style="list-style-type: none"> ● How can the mine and other industry provide funding /gaps for SCC expenditure limits ● Can S32 offer funding to help credential /train retirees or others to teach at SCC ● This is an opportunity to develop workforce throughout the region ● SCC can subcontract with schools, community colleges should not be building huge buildings, we need \$ in contracting ● Opportunity to outsource (SCC Prov) could focus on a few disciplines ● Willing to buy a van to transport students to specific Pima offerings if needed ● Explore digital infrastructure needs to be addressed by the community college

4. Unknowns?

K-12 Pathways	Post Secondary Pathways
<ul style="list-style-type: none"> ● How do we keep topics like science courses (science) and integrate/offer CTE courses as well? ● Where and how do we have students gain hands-on experience? ● How (is it possible) can we adapt state course #s for funding to incorporate more experiential learning and training? ● Specific needs for S32 workforce ● How to engage IB, AP, honors students in considering new opportunities--how will they react? 	<ul style="list-style-type: none"> ● Mining is a big industry. Are they willing to pay more at entry level? ● Job descriptions are a starting point - we need more detailed assessment of skills ● Pay \$ - would like to see seasonal / produce workers (with no healthcare) to have better opportunities and benefits ● What is the potential impact to produce industry? How will they find workers? How will they handle competition?

5. Unknown Unknowns?

K-12 Pathways	Post Secondary Pathways
<ul style="list-style-type: none"> ● What students are we targeting? ● How much do students know about mining or any other opportunity? What do they think? ● How to communicate transferability of skills to all stakeholders? ● What are the cross cutting skills? 	<ul style="list-style-type: none"> ● S32 job requires HS diploma ● Rest of jobs require specialized experience - where will these people come from? ● Is there a curriculum for mining? UA school of mines? ● Pima is co-locating/offering courses

6. Who else needs to be engaged?

K-12 Pathways	Post Secondary Pathways
<ul style="list-style-type: none">● Need corporate engagement and funding if we are training workers	<ul style="list-style-type: none">● Representatives and engagement from core industries, retail, construction, produce, logistics, schools + local gov, chambers, etc.● Wine industry● Water issues

Sticky notes - comments:

- FAFSA
- Student Scholarships
- Big industry willing to pay more at entry level?
- S32 to provide specific skills, no specific skill reqs yet
- AZ@Work can fund vocational training for eligible individuals - logistics, CDL, welding, auto mechanics

HERMOSA SOCIAL IMPACT AND OPPORTUNITY ASSESSMENT SCOPING DOCUMENT

August 2021

Melanie Lawson – Communities Specialist

Purpose

This is a scoping document to begin planning the social impact and opportunity assessment (SIOA) for Hermosa. The SIOA will identify potential community impacts and their mitigation actions which will include ways to enhance the positive aspects of the Hermosa Project. This document aligns with the requirements of Section 1.1.2 of the Community Standard and each identified impact would be assessed based on the criteria defined in *ICMM Community Development Toolkit, Tool 12: Social Impact and Opportunity Assessment Table 15*.

Background

The Hermosa Project is a development option in an historic mining district in the Patagonia Mountains. South32 acquired the project in 2018, and preliminary studies revealed it contains a world-class resource. The resource has significant potential to provide critical base metals essential for everyday needs and for the shifts required to address climate change.

Mining is not currently underway at the Hermosa Project. The project is currently in the pre-feasibility study phase and identifying a preferred development path which will then transition the project to the feasibility phase and more in-depth analysis.

SCOPE

The SIOA will utilize the outcomes of the prefeasibility study (the preferred development option) and analyze community impacts (both positive and negative), mitigation actions, and potential socio-economic development opportunities.

This scope will be revised and edited with the assistance of the Santa Cruz County Advisory Panel to the South32 Hermosa Project (Advisory Panel) and other key stakeholders. At a minimum, the assessment should evaluate the following:

- Impacts at each stage of the project, from feasibility through to closure, including phases like construction when a large, temporary workforce may be present.
 - o Area specific impacts, including but not limited to the dry-stack tailings storage facility.
- Integration with current local socio-economic studies, including the Santa Cruz County Economic Study focused on the nature based restorative economy.
 - o Specially seek out opportunities for partnership and collaboration with the local tourism industry and the nature based restorative economy.
- Social economic impacts to tribal stakeholders.
- Impacts on women and vulnerable and/or marginalized groups.
- Santa Cruz County and other key stakeholder priorities, concerns and interests related to project development
- Opportunities for Hermosa to support capacity building in the areas of water resources management, education, health, employment and training.
- The future social and economic profile of Hermosa and surrounding communities throughout Santa Cruz County and Southern Arizona.
- Opportunities to support climate change

GOVERNANCE

The Communities Specialist at Hermosa will lead the assessment. The Advisory Panel will provide oversight to the project – both reviewing and finalizing this scope of work, have check-ins during the process and review the final report. Additional stakeholders will be consulted as required.

The Consultant will at a minimum:

- Hold a project kick-off meeting with the Advisory Panel to review the approach and timeframe
- Undertake a desktop review of the current information and prepare materials to inform stakeholder engagement activities (interviews, etc.)
- Include meetings and interviews with local, regional and national stakeholders to gather feedback and provide written summary reports, anonymously if requested, to both South32 and the Advisory Panel.
- Synthesize feedback and views of all stakeholders into written reports.