



# Board of Adjustment Staff Report

Meeting Date: August 2, 2018

Agenda Item: 8A

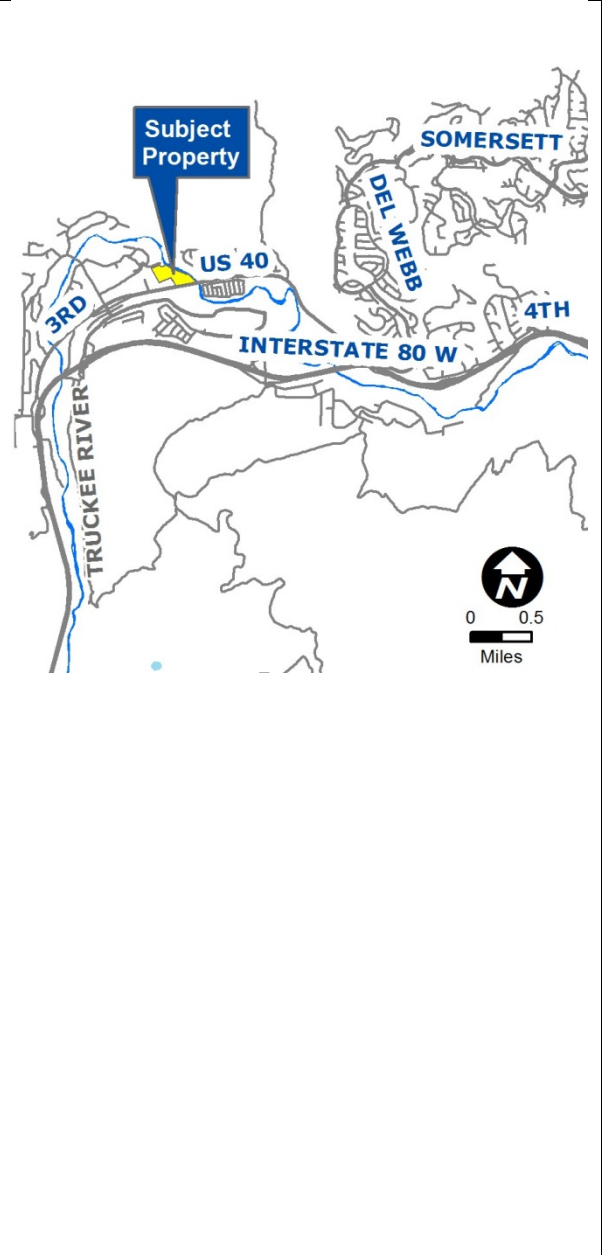
SPECIAL USE PERMIT CASE NUMBER: WSUP18-0008 (Arconic)

BRIEF SUMMARY OF REQUEST: To allow for the expansion of an existing legal, non-conforming use classified as General Industrial – Heavy within the Industrial regulatory zone.

STAFF PLANNER: Chris Bronczyk  
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### CASE DESCRIPTION

For possible action, hearing, and discussion to approve a special use permit for Schlosser Forge Company (operating as Arconic) to allow for the expansion of an existing legal, non-conforming use classified as General Industrial – Heavy within the Industrial regulatory zone. Arconic produces components for aerospace engine manufacturers. Forging of products on site will remain within current structures and is not proposed to be expanded. As proposed, the project will add 109,470 square feet of building space, primarily for the heat treatment, machining, storage and shipping portions of the operation, which is proposed to proceed in four phases. Phase 1 would include the construction of a new heat treatment building (12,750 square feet), as well as a storage building (8,355 square feet), to be located north of the existing heat treatment building. Phase 2 includes a machine shop (12,255 square feet), and a post-forge inspection building (4,800 square feet), to be located at the eastern portion of the site. Phase 3 includes a second heat treatment facility (12,750 square feet) to be identical to Phase 1 and to be located adjacent to the Phase 1 expansion. Phase 4 includes an additional machine shop (11,760 square feet), covered waste storage (4,800 square feet), and a shipping and storage building (42,000 square feet). Order of phasing is subject to change.



Applicant:	Rubicon Design Group
Property Owner:	Schlosser Forge Co.
Location:	1 Eric Circle, Verdi
APN:	038-060-36
Parcel Size:	21.38 Acres
Master Plan:	Industrial
Regulatory Zone:	Industrial
Area Plan:	Verdi
Citizen Advisory Board:	West Truckee Meadows/Verdi
Development Code:	Authorized in Article 810, Special Use Permits; Article 904, Non-Conforming Uses
Commission District:	5 – Commissioner Herman

### STAFF RECOMMENDATION

APPROVE

**APPROVE WITH CONDITIONS**

DENY

**POSSIBLE MOTION**

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve with conditions Special Use Permit Case Number WSUP18-0008 for Arconic, having made all five findings in accordance with Washoe County Code Section 110.810.30, and the one finding in accordance with the Verdi Area Plan:

*(Motion with Findings on Page 16)*

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Quench Oil CAPP Ingredients .....Exhibit J

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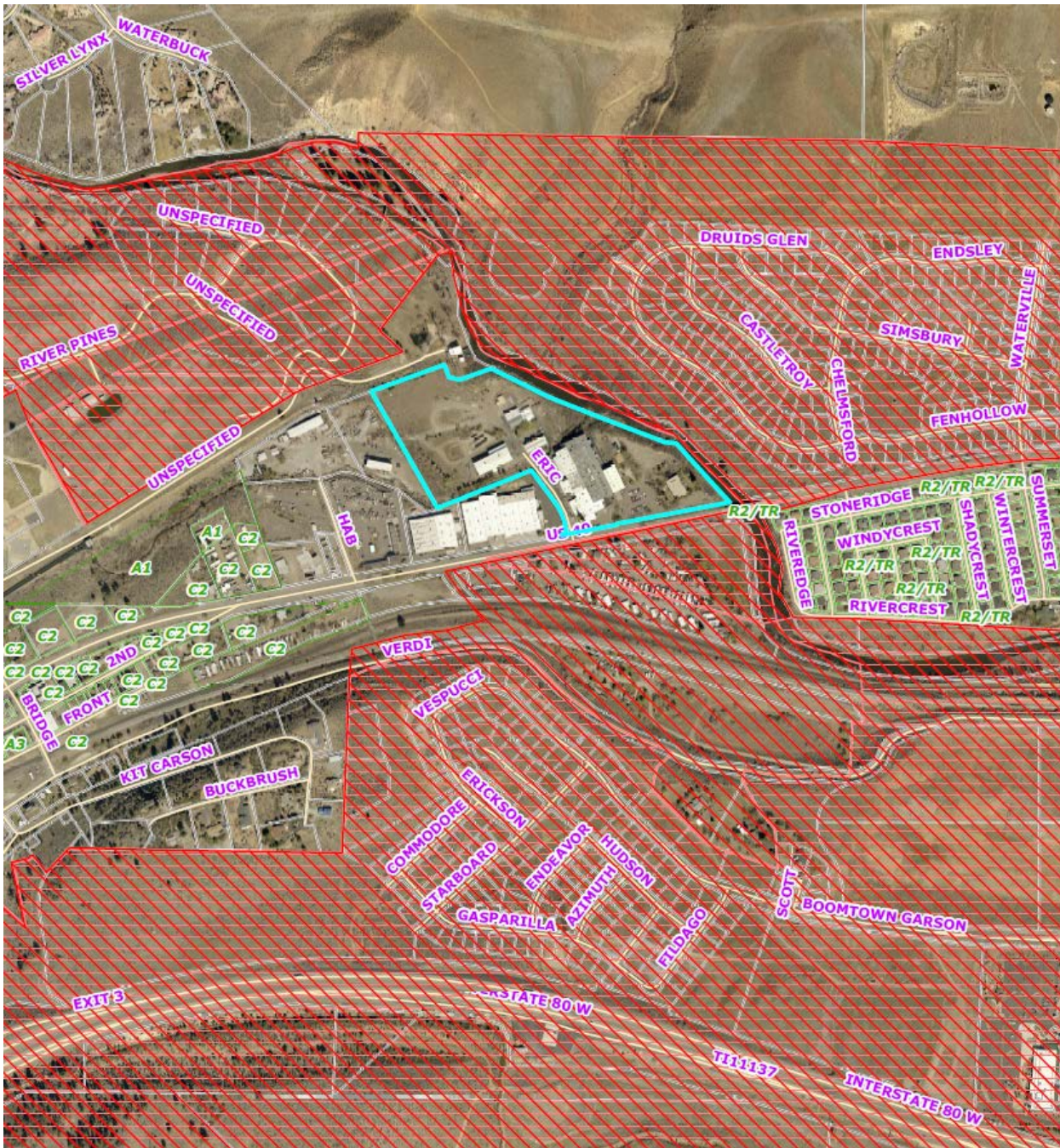
**Special Use Permit**

The purpose of a Special Use Permit is to allow a method of review to identify any potential harmful impacts on adjacent properties or surrounding areas for uses that may be appropriate within a regulatory zone; and to provide for a procedure whereby such uses might be permitted by further restricting or conditioning them so as to mitigate or eliminate possible adverse impacts. If the Board of Adjustment grants an approval of the Special Use Permit, that approval is subject to Conditions of Approval. Conditions of Approval are requirements that need to be completed during different stages of the proposed project. Those stages are typically:

- Prior to permit issuance (i.e. a grading permit, a building permit, etc.)
- Prior to obtaining a final inspection and/or a certificate of occupancy on a structure
- Prior to the issuance of a business license or other permits/licenses
- Some Conditions of Approval are referred to as “Operational Conditions.” These conditions must be continually complied with for the life of the business or project.

The Conditions of Approval for Special Use Permit Case Number WSUP18-0008 are attached to this staff report and will be included with the Action Order if the request is approved.

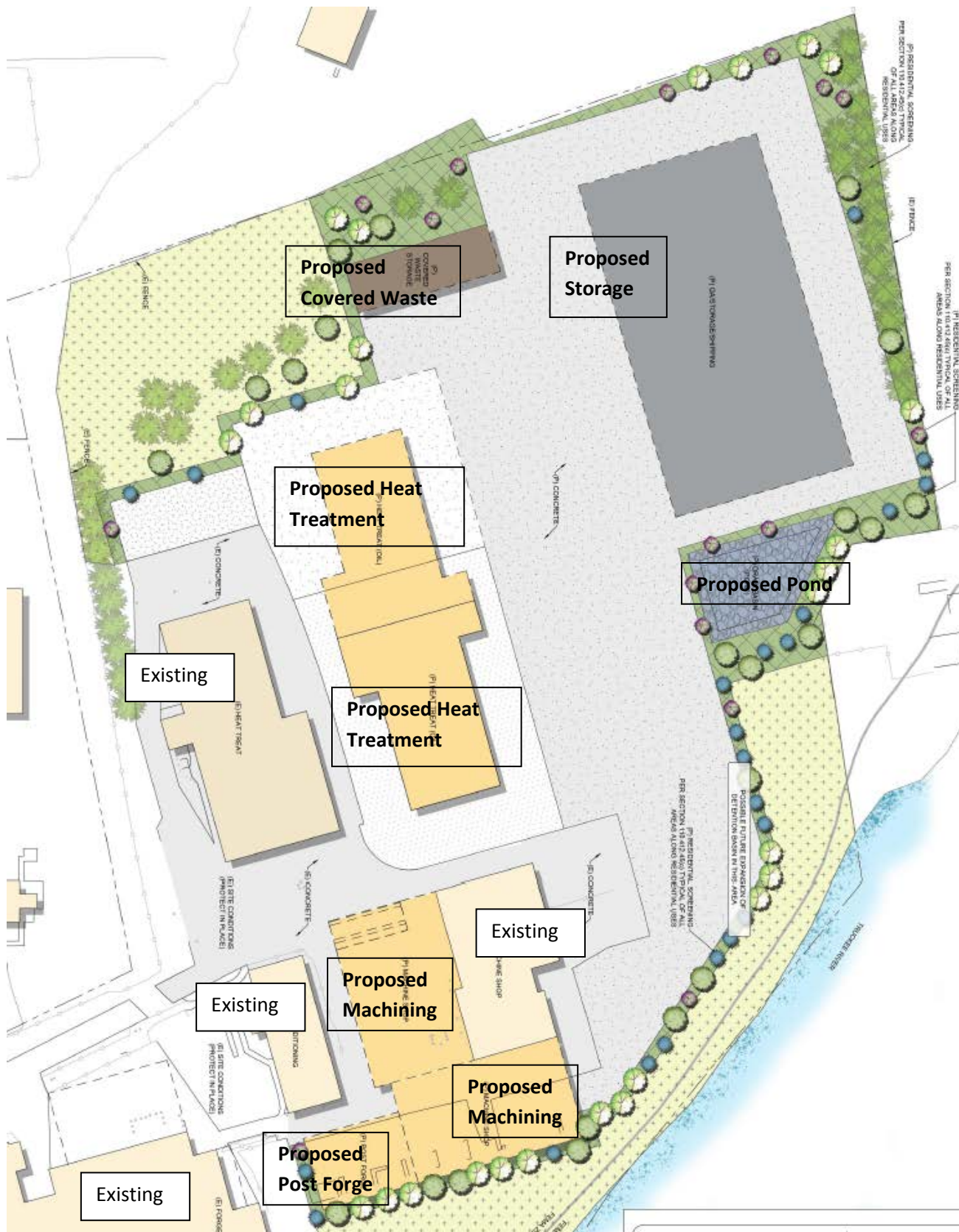
The subject property is a nonconforming use which seeks to expand more than the 10% allowed by WCC Section 110.904.20. This means the development must conform to the current provision of the Development Code. The subject property has an Industrial regulatory zone. The proposed General Industrial – Heavy use type is permitted in the Industrial regulatory zone with a special use permit per Washoe County Code (WCC) Section 110.302.05.4. Therefore, the applicant is seeking approval of this special use permit from the Board of Adjustment.



**Vicinity Map**  
**(subject parcel outlined in blue; red hatching indicates City of Reno jurisdiction)**

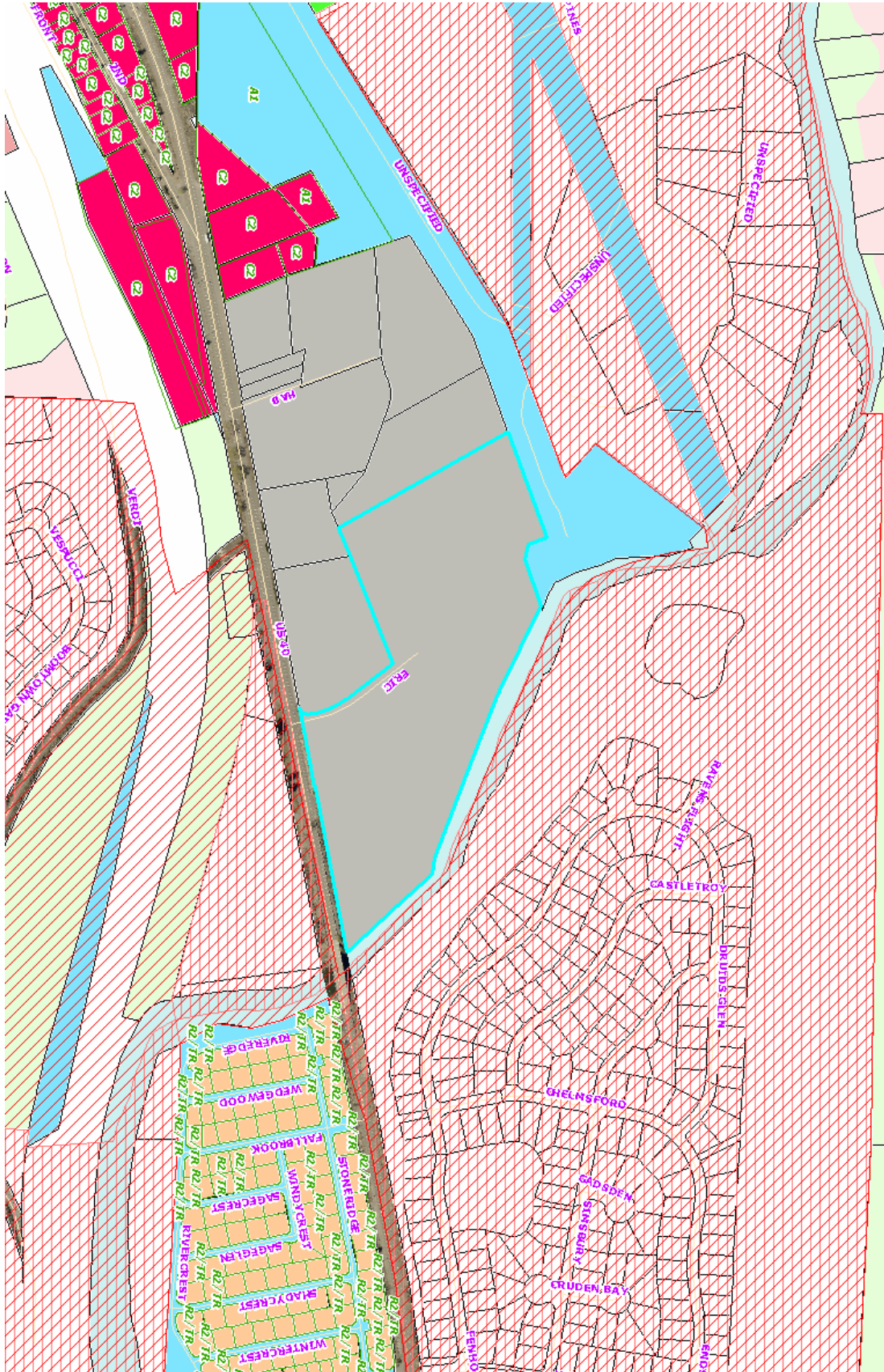


**Site Plan**



**Revised Site Plan**

(Submitted to Staff on June 18, 2018)



**Regulatory Zones**

(Subject Parcel Outlined in Blue)

## **Project Evaluation**

Arconic is seeking a special use permit to allow for the expansion of an existing Heavy Industrial use at 1 Eric Circle in Verdi. This property is located within the Verdi Village Center. The subject property is ± 21.38 acres and is located within an Industrial regulatory zone. Industrial uses have been operating at this site since 1967, with Schlosser Forge Company holding business licenses with Washoe County since 1971. Schlosser Forge Company is the parent company to Arconic, which has been operating at this site since 2013. Due to the applicant's desire to expand current operations past the allowed 10% as described in WCC Section 110.904.20 (a) (1), a special use permit is required, and must be approved by the Washoe County Board of Adjustment in order to expand.

WCC Section 111.304.30 (e)(3), *General Industrial, Heavy*, encompasses the activities performed at the project site.

*Heavy refers to production processes which should not be located near residential or commercial uses due to the intensive nature of the industrial activity and/or the scale of the operation. These uses may be located near other manufacturing uses exhibiting similar characteristics although special control measures may be required for some extremely intensive operations to ensure compatibility with similar industrial uses.*

Of note to this application is the definition of the industrial master plan category as contained in the Washoe County Master Plan – Land Use and Transportation Element.

*The Industrial Master Plan category is intended to provide for industrial uses of all types such as manufacturing, warehousing, mining and construction. The Industrial category is intended to create an environment in which industrial operations may be conducted with minimal impact on the natural environment and surrounding land uses. The following Regulatory Zones are allowed in and are consistent with the Industrial Master Plan category: Industrial, Public and Semi-Public Facilities, Specific Plan, Parks and Recreation, and Open Space.*

## **Project Specifics**

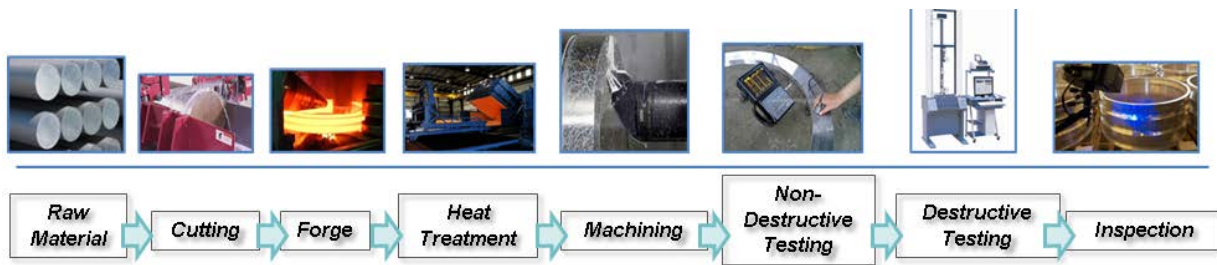
As described on page 7 within the project application (Exhibit M), Arconic produces components used in the aviation industry. Forging will remain within current structures and is not proposed to be expanded. The project proposed will add 109,470 square feet of building space, primarily for the heat treatment, machining, storage, and shipping portions of the operation. The Arconic process involves the pre-heating of raw materials in furnaces and transfer of the materials to a hydraulic press where the material undergoes a forging operation. The product is then cooled and conditioned for defects. The next step is ring rolling, where the product returns to the furnace for heating and then the product is transferred to the ring mill where the outer and inner diameters are manipulated. Once cooled, the product goes through an age and solution cycle and a quenching cycle. The age and solution are performed in furnaces; the quench cycle is a forced air cool, water, or polymer quench which is explained in more detail below.

Arconic currently has three existing quenching processes on site. As noted earlier, there are three types of quenching cycles described by the applicant as follows: The water quenching cycle is a closed loop system that uses a small make-up water line. Water quenching is a rapid cooling method of the individual part. Polymer quenching is also part of a closed loop system; the pH of the system is monitored and controlled. The polymer solution is a bridge in capabilities between water and oil. The forced air quenching is used for thin sections of steel with high hardenability. The cooling power is controlled via a baffle system.

With the expansion proposal, Arconic would bring a fourth quenching process onto the property. This quenching process involves oil, which is combined with additives to create the ideal cooling power. The oil is contained in a closed loop system with general monitoring. The temperature of the oil will be held at 160°F±10°F, with a maximum oil quench bath temperature rise of 40°F. The system is cooled by a closed loop cooling system.



The general quench process starts with parts being loaded into the furnaces to undergo a solution treatment, temperature ranges from 1,400°F to 2,150°F, at the completion of which a manipulator retrieves the parts and lowers them into the appropriate quench bath within 45 seconds or less. The quench bath uses an agitation system to distribute the heat quickly and uniformly.

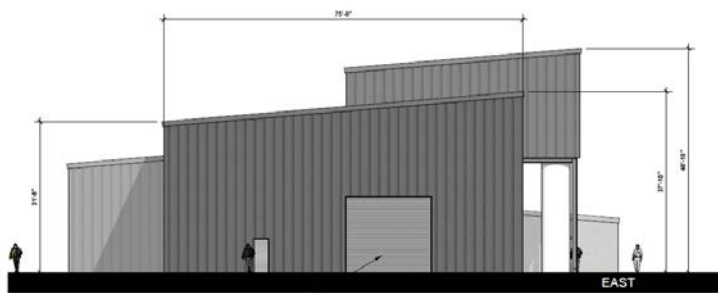


**Process Flow Chart for Arconic (Verdi)**

Arconic’s existing structures total 136,000 square feet, comprising of their main plant at 96,000 square feet and their existing heat treat building at 17,600 square feet. The height of existing buildings is less than 40-feet. The facility as it exists has approximately 107 parking spaces. Arconic projects peak shift employees to be 93 for Phase 1, 105 for Phase 2, 108 for Phase 3, and 120 for Phase 4. Arconic will be required to meet parking standards as set forth in WCC Chapter 110, Article 410 (1 parking space required during peak employment shift).

Arconic is intending to phase their expansion in four (4) phases.

- **Phase 1** – If the Special Use Permit is approved, Phase 1 will begin immediately following approval and would include the construction of a new heat treatment building (12,750 square feet) as well as a storage building (8,355 square feet). The expansion will be located north of the existing heat treatment building.



**Phase 1 Heat Treatment Building Elevations**

- **Phase 2** – Phase 2 includes a machine shop (12,255 square feet) and a post-forge inspection building (4,800 square feet). The expansion will be located at the eastern portion of the site.
- **Phase 3** – Phase 3 includes a second heat treatment facility (12,750 square feet). This expansion will be identical to Phase 1. The expansion will be located adjacent to the Phase 1 expansion.
- **Phase 4** – Phase 4 includes an additional machine shop (11,760 square feet), covered waste storage (4,800 square feet), and a shipping and storage building (42,000 square feet).

The total proposed building expansion is approximately 109,470 square feet. The elevation as proposed is 47 feet to the highest point of the Heat Treat Buildings with all other buildings ranging from 30-35 feet in height. The architect informed staff that the other buildings are still in the design phase but will resemble similar construction to the Phase 1 heat treatment building.

Phase Two shows a machine shop constructed directly south of the existing machine shop and the addition of a post forge building 22 feet from the existing conditioning building. The applicant is also proposing a drainage basin in the northern portion, directly east of the proposed shipping and storage building. A covered waste storage area is also proposed as part of the project, which must meet all standards provided by the reviewing agencies. This includes, but is not limited to, secondary containment of all waste. The original location for the waste storage area was along the northern property line in close proximity to the Truckee River. The revised plan shows the covered waste storage along the western property line. There is also significant pavement proposed as part of the project which will result in increased run-off from business operations and outdoor storage which could negatively impact the Truckee River. Washoe County Engineering and Truckee Meadows Water Authority (TMWA) have addressed these concerns within the proposed Conditions of Approval (Exhibit A).

### **Staff Concerns**

On June 12, 2018, Washoe County Planning staff toured the facility as part of the review. On June 18, 2018, staff from the Washoe County Health District, Environmental Health Division, and Truckee Meadows Fire Protection District (TMFPD) toured the facility as part of their agency review. On June 28, 2018, Nevada Division of Environmental Protection (NDEP), Truckee Meadows Water Authority (TMWA), and City of Reno Public Works staff toured the facility. Planning staff held a number of correspondences with NDEP regarding their site visit and NDEP indicated they will conduct a renewal permit inspection at the end of July regarding various concerns on the site. TMWA was also heavily involved in the County's review process and has provided staff with a memo of concerns and proposed conditions of approval regarding the Arconic Special Use Permit (Exhibit B). The Washoe County District Attorney's Office has identified that TMWA has the authority to recommend conditions and enforce those conditions.

**Noise:** There are forklifts transferring items from one part of the property to another consistently during the day and the machining buildings are extremely loud indoors. Consequently, staff is concerned about significant noise impacts on the surrounding properties. Condition 1(f) in Exhibit A, requires the applicant to conduct a noise study demonstrating that existing operations comply with WCC Chapter 110, Article 414, and that no additional noise impacts will occur as part of the expansion.

**Lighting:** Staff has not received a photometric plan, but has considerable concerns regarding existing lighting and proposed lighting in the context of the Verdi Area Plan's consistent call for best practice "dark-sky" standards. The policies regarding "dark-sky" standards are below.

*V.1.2 - Dark night skies are an important part of the Verdi RCMA character. To help preserve this character, outdoor-lighting must be consistent with best practice "dark-sky" standards.*

*V.11.13 - Dark night skies are an important part of the Village Center character. To help preserve this character, outdoor-lighting must be consistent with best practice "dark-sky" standards.*

*V.27.5 - Any lighting proposed must show how it is consistent with current best practice "dark-sky" standards. In subdivisions established after the date of final adoption of this plan the use of streetlights will be minimized.*

Condition 1(e), in Exhibit A, requires the applicant to comply with WCC Chapter 110, Article 414 which requires down shielding of existing and proposed lighting and does not permit spillover on to surrounding properties.

**Traffic:** The Washoe County Traffic Engineer and the Regional Transportation Commission (RTC) have reviewed the project. When Phase 4 is completed, the increase in traffic generation is 30 peak hour trips. This is well under the threshold to trigger a traffic impact report. U.S. 40 will continue to operate at its existing level of service.

**Hours of Operation:** Currently Arconic is operating on a 24-hour cycle, with peak shift operations occurring during the day. The applicant and their representatives state that nighttime operations happen indoors. Attendees at the Citizen Advisory Board meeting mentioned that the noise from forging operations begins in the early morning; those operations are active between 4:00 a.m. and 3:00 p.m. Attendees stated that those operations were heard off-site consistently. Condition 1 (o)(vi) requires those operation times to shift to later in the morning to help alleviate early morning noise concerns.

**Outdoor Storage:** Currently, Arconic's Verdi location stores metal from other facilities within the company. This is in addition to storage of product used at the Verdi site. There are concerns from the City of Reno, WCHD, TMFPD, Washoe County Planning, TMWA, and NDEP about the impact the outdoor storage has on stormwater runoff into the Truckee River and the TMWA ditch that runs through the center of the property. The applicant proposes to address these concerns in Phase 4; however, TMWA, Engineering, and TMFPD address these concerns within the Conditions of Approval (Exhibit A).

**Proximity to Truckee River:** Arconic is situated directly adjacent to the Truckee River. When staff toured the site it did not appear as if there is active run-off from the site towards the river, but there is no visible protection from runoff to the Truckee River presently. Any runoff contamination from the project site has the potential to directly affect TMWA's municipal water supplies. Engineering and TMWA have addressed these concerns within the Conditions of Approval (Exhibit A). TMWA's memo can be found as Exhibit B.

**Hazardous Materials:** There are no Chemical Accident Prevention Program (CAPP) ingredients in Arconic's proprietary quench oil (Exhibit J). Had any CAPP ingredients been used in the proprietary quench oil and the amounts were at a qualifying level – the special use permit would be required to be heard by the Planning Commission and then the Board of County Commissioners.

Existing hazardous material on site consists of oil, grease, sludge, metal powder, and metal shavings. These materials are currently stored on site and trucked off once a certain threshold has been met. Secondary containment will be required for these materials and a covered storage area is proposed as part of the application.

**Industrial Performance Standards:** Arconic, due to their Special Use Permit, will have to bring the entire site into compliance with current Washoe County Code standards. WCC Chapter 110, Article 340, *Industrial Performance Standards*, establishes the minimum standards for any industrial land use types. These standards involve lighting, odor, dust, smoke, access and other requirements which will be addressed at the building permit stage.

**Municipal Water Concerns:** Currently the Arconic facility is located 4,900 feet upstream of one of TMWA's municipal water intake sites (the Highland Canal). According to TMWA, if contamination occurs, there are approximately 4 hours of pollutant travel time on the river between the industrial facility and this municipal water intake site. Portions of the industrial facility are located within the Zone A, Special Flood Hazard Area, as depicted in the FEMA Flood Insurance Rate Map. Measures should be taken to minimize normal runoff from operations and normal storm events, and to the degree possible for flood events to minimize potential pollutants from entering the river. TMWA provided staff with public records from NDEP, which outlined contamination events from the site. According to these records, a total of 17 contamination events have occurred between 1979 and 2016. The contamination onsite in 2016 is related to remediation of Total Petroleum Hydrocarbons and Nickel in the soil. For this event, NDEP required the removal of 15-18 cubic yards of earth to depths of 2.5 feet. TMWA has provided a list of conditions within the memo attached as Exhibit B.

### **Verdi Area Plan**

The Verdi Area Plan addresses industrial uses in the Land Use portion of the plan. The following Goals and Policies pertain to industrial uses.

**V.11.2:** All development, including buildings, site plans, and civic or public uses shall be constructed consistent with an established green building standard for energy efficiency, renewable content, waste management, and general environmental performance.

Staff Comment: The applicant has stated that all new development within the Arconic site will use modern, state-of-the-art building methods and materials. This will ensure a more energy-efficient and general environmental performance from these structures in comparison to existing structures. The applicant also stated that Arconic is subject to environmental monitoring from both the County and State ensuring that environmental standards are complied with at all times.

**V.11.9:** Limit industrial operations to existing firms.

Staff Comment: Schlosser Forge Company has owned and operated at this location since 1967, and they have held business licenses with Washoe County since 1971. Schlosser Forge Company currently operates as Arconic at this location. The proposed project conforms to this policy.

**V.11.14:** Require sidewalks and street lighting in the Village Center. Encourage display windows and build articulation along the sidewalks. Prohibit blank walls along sidewalks.

Staff Comment: The Washoe County traffic engineer and the Regional Transportation Commission (RTC) have reviewed this plan, and are proposing a condition to require a five (5) foot sidewalk along US Highway 40. Display windows are not applicable for this project.

**V.12.1:** Prohibit new heavy industrial uses in the Village Center.

Staff Comment: Schlosser Forge Company has been operating at this location since 1967 and has held legal business licenses with Washoe County since 1971. This is an existing, non-conforming use pursuant to Article 904. Article 904 allows for the expansion of an existing use, provided the use is brought up to current code standards.

**V.14.2:** Require property owners to provide a safe and attractive pedestrian access along streets and shall be designed to connect to pedestrian access on adjoining lots, and;

**V.14.3:** Require sidewalks and street lighting and encourage display windows and building articulations along sidewalks. Prohibit blank walls along sidewalks.

Staff Comment on two policies: The Washoe County traffic engineer and RTC have reviewed this plan, and are proposing a condition to require a five (5) foot sidewalk along U.S. Highway 40.

**V.21.4:** Encourage the use of permeable materials in place of asphalt, concrete, brick pavers or other impermeable hardscape materials

Staff Comment: The applicant states that even though impervious surface is being added, significant landscaping and detention areas will be added as well to help reduce run-off from the site. The applicant states that these improvements are consistent with low-impact-development (LID) standards. Staff agrees with the applicant; while permeable materials in place of asphalt should be encouraged in the Verdi area, staff is more concerned with catch basins for all run-off. If permeable materials were used instead, it could lead to soil contamination quicker.

**V.27.3:** Applicants required to present their items to the Citizen Advisory Board (CAB) must submit a statement to staff regarding how the final proposal responds to the community input received at the CAB.

Staff Comment: The applicant has provided a memo regarding their presentation to the West Truckee Meadows/Verdi Township CAB. (Exhibit I)

**V.27.5:** Any lighting proposed must show how it is consistent with current best practice "dark-sky" standards. In subdivisions established after the date of final adoption of this plan the use of streetlights will be minimized.

*Staff Comment:* The applicant states that all new lighting will include modern shielded fixtures which prevent spill-over and glare and are dark sky compliant. No new street lights are proposed and internal site lighting will be provided for safety and security purposes only. The applicant will be required to bring all existing and proposed lighting into compliance with Article 414, *Noise and Lighting Standards*.

**V.27.8:** All landscape designs will emphasize the use of native and low water requirement vegetation.

*Staff Comment:* The applicant states that new landscaping will include drought tolerant species that will provide an effective screening of the Arconic operations and that landscape areas will utilize automatic drip irrigation systems.

**V.27.10:** The impact of development on adjacent land uses will be mitigated. The appropriate form of mitigation should be determined through a process of community consultation and cooperation. Applicants should be prepared to demonstrate how the project conforms to this policy.

*Staff Comment:* The applicant states that new lighting will include modern shielded fixtures that prevent spill-over and glare to adjoining parcels and Arconic is committed to replacing existing “problem” fixtures that may result in light pollution. The applicant further states that a dense landscape screen will be installed to buffer the site from properties to the north and east. Staff has worked with additional agencies to ensure that noise impacts and run-off impacts will properly be mitigated.

**V.27.15:** The approval of all Special Use Permits and administrative permits must include a finding that the community character as described in the character statement can be adequately conserved through mitigation of any identified potential negative impacts.

*Staff Comment:* The Verdi Area Plan Character Statement does not recognize existing industrial uses. Staff has worked with Washoe County Health District, Engineering, Traffic, NEDP, TMWA, TMFPD, and the City of Reno in order to mitigate impacts to surrounding properties. Due to this, staff believes it meets the overall intent of the character statement.

### **West Truckee Meadows/Verdi Township Citizen Advisory Board (WTM/Verdi CAB)**

The proposed project was presented by the applicant’s representative at the regularly scheduled WTM/Verdi CAB meeting on June 18, 2018.

Citizens present provided concerns regarding water availability, groundwater pollution, lights, noise pollution, hazardous materials, air quality impacts, and stormwater runoff.

The Citizen Advisory Board recommended approval with conditions. Those conditions included: the implementation of down-lighting; limit hours of louder forging to regular business hours; sound mitigation; and engagement with the community (Conditions 1 (e),(f),(n)(vi) in Exhibit A).

### **Reviewing Agencies**

The following agencies received a copy of the project application for review and evaluation.

- Washoe County Community Services Department
  - Planning and Building Division
  - Engineering and Capital Projects Division
  - Water Rights
  - Sewer
  - Traffic
- Washoe County Health District

- Air Quality Management Division
- Emergency Medical Services Program
- Environmental Health Services Division
- Washoe County Sheriff
- US Fish and Wildlife
- Nevada Department of Environmental Protection
- Nevada Department of Transportation
- Nevada Department of Wildlife
- Army Corp of Engineers
- Truckee Meadows Fire Protection District
- Regional Transportation Commission
- West Truckee Meadows/Verdi Township Citizen Advisory Board
- Washoe-Storey Conservation District
- City of Reno
- Nevada Historic Preservation
- Truckee Meadows Water Authority
- NV Energy

Six out of the twenty two above-listed agencies/departments provided comments and/or recommended conditions of approval in response to their evaluation of the project application. A **summary** of each agency's comments and/or recommended conditions of approval and their contact information is provided. The Conditions of Approval document is attached to this staff report and will be included with the Action Order if the application is approved by the Board of Adjustment.

- Washoe County Planning and Building Division addressed landscaping, parking and lighting standards and imposed operational conditions that will be in effect for the life of the project.  
**Contact: Chris Bronczyk, 775.328.3612, cbronczyk@washoecounty.us**
- City of Reno Planning addressed the need for a photometric plan demonstrating that spillover lighting is being mitigated; a noise analysis regarding existing and future noise impacts; environmental analysis, as well as concerns regarding building placement, and parking areas.  
**Contact: Kyle Chisholm, 775.326.6665, chisholmk@reno.gov**
- Regional Transportation Commission addressed Regional Transportation Plan access management standards, policy level of service, and sidewalk construction requirements.  
**Contact: Rebecca Kapuler, 775.332.0174, rkapuler@rtcwashoe.com**
- Truckee Meadows Fire Protection District addressed the safety evaluation requirement, emergency access, site emergency operation pre-plans, and Process Hazard Analysis requirements.  
**Contact: Lisa Beaver, 775.328.6005, lbeaver@tmfpd.us**
- Washoe County Engineering and Capital Projects addressed the construction plans, stormwater permits, paving requirements, grading bond requirements, drainage requirements, and sidewalks.

**Contact: Leo Vesely, 775.328.2048, [ivesely@washoecounty.us](mailto:ivesely@washoecounty.us), Clara Lawson, 775.328.3603, [clawson@washoecounty.us](mailto:clawson@washoecounty.us)**

- Washoe County Water Manager addressed the water rights requirements, water demands for phasing, and water budget conditions.

**Contact: Vahid Behmaram, 775.954.4647, [vbehmaram@washoecounty.us](mailto:vbehmaram@washoecounty.us)**

- Truckee Meadows Water Authority addressed stormwater runoff mitigation.

**Contact: Christian Kropf, 775.834.8016, [ckropf@tmwa.com](mailto:ckropf@tmwa.com)**

### **Staff Comment on Required Findings**

WCC Section 110.810.30 requires that all of the following findings be made to the satisfaction of the Washoe County Board of Adjustment before granting approval of the request. Staff has completed an analysis of the special use permit application and has determined that the proposal is in compliance with the required findings as follows.

### **Required Special Use Permit Findings (WCC Section 110.810.30)**

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Verdi Area Plan.

Staff Comment: The proposed use is consistent with the Master Plan and the Verdi Area Plan as described earlier in this staff report.

2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven.

Staff Comment: The facility has been utilized as an industrial site for many years, and proper facilities are in place.

3. Site Suitability. That the site is physically suitable for this type of development, and for the intensity of such a development.

Staff Comment: The site and use have been in operation since 1967. Staff believes the site is suitable for continuation of the heavy industrial use type and the intensity of the proposed use with the proposed conditions included as part of this Special Use Permit application.

4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area.

Staff Comment: TMWA has provided public records from NDEP on contamination events from the project site. Based on those records, the last event occurred in 1980, and the case was closed by NDEP. No NDEP recorded contamination events of the Truckee River have occurred since that year. Staff worked with NDEP, TMWA, and the Washoe County Health District in the review of the proposed project. There are proposed conditions from TMWA, the Health District, and the City of Reno regarding mitigation efforts from potential site runoff to the Truckee River. Furthermore, staff has received proposed conditions related to noise, lighting, landscape buffers, and secondary containment of materials which will minimize impacts to the surrounding area. Due to this, staff concludes that this finding can be met and that Arconic and its expansion is not expected to cause significant detriment or injury to the public, adjacent properties, or surrounding area.

5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose, or mission of the military installation.

Staff Comment: No military installations are located nearby and the proposed project expansion is not anticipated to have an effect on any military installation in the region.

### **Required Findings for Special Use Permits within the Verdi Area Plan**

**V.27.15:** The approval of all Special Use Permits and administrative permits must include a finding that the community character as described in the character statement can be adequately conserved through mitigation of any identified potential negative impacts.

Staff Comment: The Verdi Area Plan Character Statement does not recognize existing industrial uses. Staff has worked with Washoe County Health District, Engineering, Traffic, NEDP, TMWA, TMFPD, and the City of Reno, in order to mitigate impacts to surrounding properties. Due to this, staff believes it meets the overall intent of the character statement.

### **Recommendation**

Those agencies which reviewed the application recommended conditions in support of approval of the project, or provided no comments. Therefore, after a thorough analysis and review, Special Use Permit Case Number WSUP18-0008 is being recommended for approval with conditions. Staff offers the following motion for the Board's consideration.

### **Motion**

I move that, after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve, with the conditions included as Exhibit A to this matter, Special Use Permit Case Number WSUP18-0008 for Arconic, having made all five findings in accordance with Washoe County Code Section 110.810.30, and the one finding in accordance with the Verdi Area Plan:

### **Required Special Use Permit Findings (WCC Section 110.810.30)**

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Verdi Area Plan;
2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven;
3. Site Suitability. That the site is physically suitable for this type of development, and for the intensity of such a development;
4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area;
5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

### **Required Findings for Special Use Permits within the Verdi Area Plan**

**V.27.15:** The approval of all Special Use Permits and administrative permits must include a finding that the community character as described in the character statement can be adequately conserved through mitigation of any identified potential negative impacts.



**Appeal Process**

Board of Adjustment action will be effective 10 calendar days after the written decision is filed with the Secretary to the Board of Adjustment and mailed to the applicant, unless the action is appealed to the Washoe County Board of County Commissioners, in which case the outcome of the appeal shall be determined by the Washoe County Board of County Commissioners. Any appeal must be filed in writing with the Planning and Building Division within 10 calendar days from the date the written decision is filed with the Secretary to the Board of Adjustment and mailed to the applicant.

Applicant/Owner: Schlosser Forge Company  
1711 Arrow Route  
Rancho Cucamonga, CA, 91730

Representatives: Rubicon Design Group, LLC  
1610 Montclair Ave, Suite B  
Reno, NV 89509



# Conditions of Approval

Special Use Permit Case Number WSUP18-0008, Arconic

The project approved under Special Use Permit Case Number WSUP18-0008 shall be carried out in accordance with the Conditions of Approval granted by the Board of Adjustment on August 2, 2018. Conditions of Approval are requirements placed on a permit or development by each reviewing agency. These Conditions of Approval may require submittal of documents, applications, fees, inspections, amendments to plans, and more. These conditions do not relieve the applicant of the obligation to obtain any other approvals and licenses from relevant authorities required under any other act.

**Unless otherwise specified**, all conditions related to the approval of this Special Use Permit shall be met or financial assurance must be provided to satisfy the conditions of approval prior to issuance of a grading or building permit. The agency responsible for determining compliance with a specific condition shall determine whether the condition must be fully completed or whether the applicant shall be offered the option of providing financial assurance. All agreements, easements, or other documentation required by these conditions shall have a copy filed with the County Engineer and the Planning and Building Division.

Compliance with the conditions of approval related to this Special Use Permit is the responsibility of the applicant, his/her successor in interest, and all owners, assignees, and occupants of the property and their successors in interest. Failure to comply with any of the conditions imposed in the approval of the Special Use Permit may result in the institution of revocation procedures.

Washoe County reserves the right to review and revise the conditions of approval related to this Special Use Permit should it be determined that a subsequent license or permit issued by Washoe County violates the intent of this approval.

For the purpose of conditions imposed by Washoe County, “may” is permissive and “shall” or “must” is mandatory.

Conditions of Approval are usually complied with at different stages of the proposed project. Those stages are typically:

- Prior to permit issuance (i.e., grading permits, building permits, etc.).
- Prior to obtaining a final inspection and/or a certificate of occupancy.
- Prior to the issuance of a business license or other permits/licenses.
- Some “Conditions of Approval” are referred to as “Operational Conditions.” These conditions must be continually complied with for the life of the project or business.

**The Washoe County Commission oversees many of the reviewing agencies/departments with the exception of the following agencies.**

- **The DISTRICT BOARD OF HEALTH, through the Washoe County Health District, has jurisdiction over all public health matters in the Health District. Any conditions set by the Health District must be appealed to the District Board of Health.**

- **The REGIONAL TRANSPORTATION COMMISSION (RTC) is directed and governed by its own board. Therefore, any conditions set by the Regional Transportation Commission must be appealed to that Board.**

FOLLOWING ARE CONDITIONS OF APPROVAL REQUIRED BY THE REVIEWING AGENCIES. EACH CONDITION MUST BE MET TO THE SATISFACTION OF THE ISSUING AGENCY.

**Washoe County Planning and Building Division**

1. The following conditions are requirements of Planning and Building, which shall be responsible for determining compliance with these conditions.

**Contact Name – Chris Bronczyk, 775.328.3612, [cbronczyk@washoecounty.us](mailto:cbronczyk@washoecounty.us)**

- a. The applicant shall demonstrate substantial conformance to the plans approved as part of this special use permit.
- b. The applicant shall submit complete construction plans and building permits shall be issued within two years from the date of approval by Washoe County. The applicant shall complete construction within the time specified by the building permits.
- c. A note shall be placed on all construction drawings and grading plans stating:

NOTE

Should any cairn or grave of a Native American be discovered during site development, work shall temporarily be halted at the specific site and the Sheriff's Office as well as the State Historic Preservation Office of the Department of Conservation and Natural Resources shall be immediately notified per NRS 383.170.

- d. All landscaping shall be maintained in accordance with the provisions found in Washoe County Code Section 110.412.75, Maintenance. A three-year maintenance plan shall be submitted by a licensed landscape architect registered in the State of Nevada to Planning and Building, prior to any Certificate of Occupancy or issuance of any business license. The plan shall be wet-stamped.
- e. Prior to the issuance of any building or grading permit, the applicant shall provide the Planning and Building Division with a photometric plan of existing conditions, and a photometric plan demonstrating compliance with WCC Chapter 110, Article 414, including, but not limited to no spillover beyond the property boundaries and down-shielded/cut-off fixtures for all existing and proposed lighting.
- f. Prior to the issuance of any building or grading permit, the applicant shall conduct a noise study demonstrating that existing operations comply with WCC Chapter 110, Article 414, *Noise and Lighting Standards*, and that no additional noise impacts will occur as a result of the proposed expansion.
- g. All new development must adhere to the Verdi Area Design Standards, as found in Goal 27 of the Verdi Area Plan.
- h. Prior to any final inspection associated with the expansion, the applicant shall install landscape buffers a minimum of 30-feet in width along the entirety of the northern and eastern property lines to shield operations from surrounding residential uses. Landscape buffers shall meet the standards for residential buffers within WCC Chapter 110, Article 412, and also include a mix of evergreen trees and tall shrubs. Landscape designs shall emphasize the use of native and low water requirement vegetation.

- i. Prior to any final inspection associated with the expansion, the applicant shall construct a 6-7-foot tall solid fence or wall inside the landscaping buffers along the northern and eastern property lines.
- j. Prior to the issuance of any building or grading permit, the applicant shall provide an updated landscaping plan for the entire site that meets the requirements of Article 412, *Landscaping* and these conditions of approval.
- k. All existing and proposed parking shall comply with the provisions found in Washoe County Code Article 410, *Parking and Loading*.
- l. All grading shall be maintained in accordance with the provisions found in Washoe County Code Article 438, *Grading Standards*.

- m. City of Reno staff has general concerns regarding the placement of buildings and parking areas, as shown on the site plan, within 50 feet of the Truckee River. Additional environmental analysis and analysis of the Truckee River Corridor plan will be required.

**Contact – Kyle Chisholm, 775.326.6665, [chisholmk@reno.gov](mailto:chisholmk@reno.gov)**

- n. City of Reno Public Works staff had concerns related to stormwater. If any of Conditions (i) through (v) conflict with the requirements of a Washoe County agency, the Washoe County agency shall have the authority to determine which standards take precedence.

**Contact – Phil Tousignant, 775.657.4676, [tousignantp@reno.gov](mailto:tousignantp@reno.gov)**

- i. There shall be no increase in stormwater runoff from new impervious surfaces.
  - ii. No business operations, storage, or construction activity within 50 feet of river at 14,000 CFS mark as identified by the City of Reno Public Works Department
  - iii. No work shall occur within the Truckee Meadows Water Authority channel that runs through the central portion of the property without approval from Truckee Meadows Water Authority.
  - iv. Any outdoor chemical storage shall be covered and have secondary containment.
  - v. Any offload area for bulk chemicals (heat quench oil) must have secondary containment or other means of preventing a release from reaching the TMWA channel or Truckee River.
- o. The following **Operational Conditions** shall be required for the life of the project:
    - i. This special use permit shall remain in effect until or unless it is revoked or is inactive for one year.
    - ii. This special use permit shall remain in effect as long as the use is in operation, meets the conditions imposed by Special Use Permit Case Number WSUP18-0008 and maintains a valid Washoe County business license.
    - iii. All lighting and noise generated by the site shall comply with the provisions of Washoe County Chapter 110 and the Verdi Area Plan.
    - iv. Failure to comply with the conditions of approval shall render this special use permit null and void.
    - v. The development shall adhere to the performance standards set forth in Washoe County Code Chapter 110, Article 340.
    - vi. Forging Operations shall maintain a normalized schedule between the hours of 6:00 A.M. and 6:00 P.M.

- vii. Any contamination/leaks/releases that occur on the property shall be reported immediately to the Washoe County Planning and Building Division in addition to all relevant local, state and federal authorities.
- viii. Washoe County reserves the right to revoke this special use permit approval, by future action of the Board of Adjustment, if, on the advice of the Nevada Division of Environmental Protection and/or Washoe County Health District, the operations pose detrimental health impacts to the surrounding area or environment to such a degree that they should not be continued.

### **Washoe County Engineering and Capital Projects**

2. The following conditions are requirements of the Engineering Division, which shall be responsible for determining compliance with these conditions.

**Contact Name – Leo Vesely 775.328.2041, [ivesely@washoecounty.us](mailto:ivesely@washoecounty.us)**

### **GENERAL CONDITIONS**

- a. A complete set of construction improvement drawings, including an on-site grading plan, shall be submitted when applying for a building/grading permit. Grading shall comply with best management practices (BMP's) and shall include detailed plans for grading, site drainage, erosion control (including BMP locations and installation details), slope stabilization, and mosquito abatement. Placement or removal of any excavated materials shall be indicated on the grading plan. Silts shall be controlled on-site and not allowed onto adjacent property.
- b. The developer shall obtain from the Nevada Division of Environmental Protection a Stormwater Discharge Permit and submit a copy to the Engineering Division prior to issuance of a grading permit.
- c. The developer shall complete and submit the Construction Permit Submittal Checklist and pay the Construction Stormwater Inspection Fee prior to obtaining a grading permit.
- d. If material is to be exported from the site, the plans shall note where exported materials will be taken and a grading permit shall be obtained for the import site. Exported materials shall not be sold without the proper business license.
- e. A grading bond of \$2,000/acre of disturbed area shall be provided to the Engineering Division prior to any grading.
- f. The minimum pavement requirements for on-site paving shall be three inches (3") asphalt over six inches (6") granular base.
- g. All disturbed areas left undeveloped for more than 30 days shall be treated with a dust palliative. Disturbed areas left undeveloped for more than 45 days shall be revegetated. Methods and seed mix must be approved by the County Engineer with technical assistance from the Washoe-Storey Conservation District. The applicant shall submit a revegetation plan to the Washoe-Storey Conservation District for review.
- h. Any existing easements or utilities that conflict with the development shall be relocated, quitclaimed, and/or abandoned, as appropriate.
- i. Appropriate easements shall be granted for any existing or new utilities, including but not limited to overhead utility lines and ditches.
- j. New easements recorded for the project shall include an exhibit map that shows the location and limits of the easement in relationship to the project.

- k. The setback between the proposed retaining wall and the west boundary shall be wide enough to accommodate an interceptor drain above the retaining wall in accordance with Washoe County Code Article 438.
- l. Design of the proposed retaining wall on the west side of the site shall address the load from the adjacent existing utility pole and the potential for seepage, erosion and/or scour from the adjacent TMWA Raw Water Overflow/Return Ditch.
- m. Prior to approval of any building permit or grading permit, provide written approval from NV Energy for any improvements located within their easements or under their facilities. This includes but is not limited to the existing utility pole adjacent to the proposed retaining wall on the west side of the project, the existing utility pole in the detention pond and the existing overhead lines located inside the building envelope of the proposed QA/Storage/Shipping building.
- n. For the area to be developed and all excavated material to be removed from the site, submit an environmental assessment/geotechnical investigation that characterizes any existing soil contamination that has the potential to adversely impact surface or ground water and recommendations for appropriate disposal and management of contaminated soils.
- o. Submit the following final design level reports prior to approval of any building or grading permit: Geotechnical Report in accordance with Washoe County Code Article 436, and Soils Engineering Report and Engineering Geology Report in accordance with Washoe County Code Article 438.
- p. All slopes shall be 3:1 or flatter in accordance with Washoe County Code Article 438.

**DRAINAGE (COUNTY CODE 110.416, 110.420, and 110.421)**

- q. A detailed hydrology/hydraulic report prepared by a registered engineer shall be submitted to the Engineering Division for review and approval. The report shall include the locations, points of entry and discharge, flow rates and flood limits of all 5- and 100-year storm flows impacting both the site and offsite areas and the methods for handling those flows. The report shall include all storm drain pipe and ditch sizing calculations and a discussion of and mitigation measures for any impacts on existing offsite drainage facilities and properties.
- r. Any increase in storm water runoff resulting from the development and based upon the 5-year and 100-year storm shall be detained on site to the satisfaction of the County Engineer.
- s. The FEMA 100-year floodplain, floodway and/or shaded X boundaries with associated flood elevations shall appear on the site plan to the satisfaction of the County Engineer. Building permits for structures and fill in these areas shall be in conformance with the Washoe County Code Article 416.
- t. Standard reinforced concrete headwalls or other approved alternatives shall be placed on the inlet and outlet of all drainage structures and rip rap shall be used to prevent erosion at the inlets and outlets of all pipe culverts to the satisfaction of the County Engineer.
- u. Prior to the issuance of a building or grading permit by Washoe County, a Storm Water Pollution Prevention Plan (SWPPP) shall be provided to Washoe County and the Nevada State Division of Environmental Protection (NDEP), meeting the requirements of the Industrial Stormwater Permit. Said plan shall demonstrate among other things, that approved stormwater treatment devices are in place and Best Management Practices are implemented.

- v. All grading and building permits shall comply with Washoe County Code Article 421 Stormwater Discharge Program, including but not limited to Storm Water Regulations and Requirements, Environmental Control Permits and Post Construction Storm Water Quality Management, to the satisfaction of the County Engineer.
- w. The Truckee Meadows Regional Stormwater Quality Management Program Construction Permit Submittal Checklist and Inspection Fee shall be submitted with each grading or building permit.
- x. With each phase of the project, the owner shall demonstrate that all required state and local environmental permits and work completed are current and in good standing with NDEP and City of Reno. Any recommended improvements provided by these agencies which identifies deficiencies in or enhancements to current stormwater pollution prevention practices, shall be implemented through appropriate design, permitting and construction permits approved by all appropriate agencies and to the satisfaction of the County Engineer.
- y. TMWA's memorandum to Washoe County dated July 9, 2018 which provides discussion, concerns, and recommended conditions of approval shall be addressed to the satisfaction of the County Engineer.
- z. Prior to approval of any building permit or grading permit, the developer will furnish to the Engineering Division and Community Development staff, written confirmation from TMWA that they have reviewed and approved the permit application.
- aa. A maintenance and operation plan for the maintenance of the project's detention/retention basins, outdoor materials storage areas, and all other drainage facilities shall be developed in accordance with the Washoe County Code Article 421. Said plan shall be updated with each phase of new site construction.
- bb. The following note shall be added to the construction plans "All properties, regardless if they are located within or outside of a FEMA designated flood zone, may be subject to flooding. The property owner is required to maintain all drainage easements and natural drainages and not perform or allow unpermitted and unapproved modifications to the property that may have detrimental impacts to surrounding properties".
- cc. Prior to approval of any building permit or grading permit a geotechnical report shall address the impact of groundwater on proposed detention ponds. The pond bottom shall be located three feet above the historic high groundwater table.
- dd. Prior to approval of any building or grading permit, the developer shall obtain a permit from the U.S. Army Corps of Engineers (USACE) for any work within the wetlands/waters of the U.S., or submit documentation indicating that a permit is not required.

### **Traffic**

**Contact Name – Clara Lawson, 775.328.3603, [clawson@washoecounty.us](mailto:clawson@washoecounty.us)**

- ee. Provide a minimum 5 foot wide sidewalk along the property frontage.

### **Washoe County Water Management**

- 3. The following conditions are requirements of the Water Management Planner Coordinator, which shall be responsible for determining compliance with these conditions.

**Contact Name – Vahid Behmaram, 775.954.4647, [vbehmaram@washoecounty.us](mailto:vbehmaram@washoecounty.us)**

- a. Applicant shall provide the copies of current will serve water commitments to this site.

- b. Applicant shall provide estimated water demand for all proposed phases and projects in this SUP.
- c. The applicant shall cause the water company to provide a water budget including:
  - i. Water rights available to the water company;
  - ii. All current water service commitments;
  - iii. Supply capacity in GPMs and;
  - iv. Supply capacity commitments to all existing water customers.

**Truckee Meadows Fire Protection District (TMFPD)**

- 4. The following conditions are requirements of the Truckee Meadows Fire Protection District, which shall be responsible for determining compliance with these conditions. Unless otherwise stated, these conditions shall be met prior to the issuance of any building or grading permit or on an ongoing basis as determined by TMFPD.

**Contact Name – Lisa M. Beaver, 775.328.6005, [lbeaver@tmfpd.us](mailto:lbeaver@tmfpd.us)**

- a. It is indicated that the existing site is considered to be a “permitted grandfathered use,” however, due to the extensive additional operations associated with the existing site a safety evaluation of the entire site will be required to identify increased risk to fire and life safety. This risk shall be based upon the intent of protection found within national standards and current code.
- b. Fire protection of the use shall be as required by the current adopted International Fire Code and associated amendments; and the requirements of the appropriate NFPA standard(s). Prescribed fire protection system(s) shall be listed for the specific fire risk of the materials and operations (i.e. special provisions associated with flammable solids).
- c. Water supply to the site shall be adequate to address the required fire flow (gpm, pressure and duration) and the volume and pressure to support fire protection system(s). The site will be provided with an onsite fire loop with two points of connection to the public/private water system. Hydraulic calculations shall be provided that depicts the required fire flow through on site hydrants through a single connection. Isolation valves shall be provided every two hydrants to provide a means to isolate the system upon failure during firefighting operations.
- d. Access for emergency operations shall be in compliance with the International Fire Code and the adopted amendments and standards to the entire facility. All access to the site shall be paved all weather access.
- e. A Process Hazard Analysis shall be provided at the first cycle plan review that provides a systematic and organized assessment of the potential hazards associated with the industrial process.
- f. A site emergency operation pre-plan shall be provided with coordination with Truckee Meadows Fire Protection District Fire Prevention and Emergency Operations.
- g. An Operational Permit will be required for the site as required by the International Fire Code section 105.6. A fee shall be paid annually for the required permit and TMFPD shall provide for that fee an annual inspection. At a minimum an Operational Permit is required for Industrial Ovens and Hazardous Materials.
- h. Existing buildings that are proposed with added building area shall be in compliance with the current adopted International Fire Code and the associated adopted NFPA



standards. Fire Protection systems shall be provided for existing buildings that will have added area and additional uses.

- i. A detailed housekeeping plan shall be provided to indicate provisions that alleviate the accumulation of combustible dust and metal in the existing interior building areas. A house keeping plan is required at an agreed schedule to mitigate additional fire protection requirements for the existing buildings that currently have no fire protection. This is only for those buildings that remain as currently used without modification by the proposed project scope.
- j. New vegetation proposed shall be in compliance with the requirements of the adopted International Wildland and Urban Interface Code Section 603 for Defensible Space Modified Fuel areas.

### **Washoe County Health District**

5. The following conditions are requirements of Washoe County Health District, Environmental Health Division, which shall be responsible for determining compliance with these conditions.

**Contact Name – Wesley Rubio, 775.328.2434, [wrubio@washoecounty.us](mailto:wrubio@washoecounty.us)**

- a. Any future building permits for expansion may require a water project submittal for review and approval if there will be any additional fire or potable water requirements for the expansion or new structures proposed.
- b. If any additional water infrastructure is required to serve the facility for Fire or other purposes, a full Water Project must be submitted to WCHD for review and approval prior to any building permit issuance.
- c. WCHD must review and approve any proposed utility or building permits for this site.
- d. The existing waterline serving the site must be appropriately backflow protected and demonstrated on any plan submittal, or this must be included with any proposed design modification;
- e. The site may be required to obtain an annual operating permit through WCHD for Waste Management due to the storage of onsite materials, any materials hauled offsite to a landfill, or any sludge that is hauled offsite.

### **Regional Transportation Commission**

6. The following conditions are requirements of Regional Transportation Commission, which shall be responsible for determining compliance with these conditions.

**Contact Name – Rebecca Kapuler, 775.332.0174, [rkapuler@rtcwashoe.com](mailto:rkapuler@rtcwashoe.com)**

- a. The RTP, RTC Bicycle/Pedestrian Master Plan and the Nevada Department of Transportation Pedestrian Safety Action Plan, all indicate that new development and re-development will be encouraged to construct pedestrian and bicycle facilities, internal and/or adjacent to the development, within the regional road system. Also, these plans recommend that the applicant be required to design and construct any sidewalks along the frontage of the property in conformance with the stated ADA specifications.

### **Truckee Meadows Water Authority**

7. The following conditions are requirements of the Truckee Meadows Water Authority, which shall be responsible for determining compliance with these conditions, along with the Washoe County Planning Program.

**Contact Name – Christian Kropf, 775.845.8016, ckropf@tmwa.com**

- a. Prior to issuance of any building or grading permit, an analysis of the concrete secondary containment structure around the oil/water separator, oil recovery and cooling-water reuse ponds will be required to test to ensure that hazardous materials cannot migrate through this barrier to groundwater or surface water.
- b. The applicant shall take appropriate measures when filling the oil-quench tanks with oil to prevent leakage and contamination of soil, groundwater, and the Truckee River.
- c. Prior to issuance of any building or grading permit, overflow alarms shall be installed on waste oil tank, oil separator, and the reuse pond.
- d. Provide information regarding degreasing/washing station including:
  - i. Location of the degreasing station
  - ii. Type of degreasing agents used and include safety data sheets (SDS) for each
  - iii. Quantities of degreasing agent used and stored onsite
- e. Prior to issuance of any building or grading permit, the most recent five (5) years of discharge monitoring reports including water level measurements and groundwater quality data must be provided.
- f. Prior to issuance of any building or grading permit, a list of all chemicals used onsite must be provided, as well as their associated SDS.
- g. Provide specifications of the three monitoring wells onsite, including total depth, screened interval, and wellhead elevation.
- h. Stormwater Best Management Practices (BMP's) shall be in place and maintained during construction, and inspected as required by the appropriate governing agencies.
- i. Prior to issuance of any building or grading permit, an outfall plan shall be required showing the direction of stormwater flow after improvements to new and existing areas of the industrial facility. Include the locations of retention ponds as well as information on sizing (storm-frequency and volume) per phase.
- j. Prior to issuance of any building or grading permit, provide details of the location, operation, and maintenance schedule of existing and planned storm water interceptors and their efficacy in removing oil/grease, metal filings, metal dusts, and industrial manufacturing-related debris prior to storage and release to the Truckee River.
- k. The following **Operational Condition** shall be required for the life of the project:
  - i. Prior to any final inspection, secondary containment shall be provided for all hazardous materials including cutting, lubrication, and quenching oils stored on site.

**\*\*\* End of Conditions \*\*\***



Date: July 9, 2018

To: Chris Bronczyk, Planning and Building Division

From: Christian Kropf, Sr. Hydrogeologist, TMWA  
Bill Hauck, Sr. Hydrologist, TMWA

Through: John Enloe, P.E., Director of Natural Resources, TMWA

Re: Arconic Special Use Permit for Heavy Industrial Use WSUP18-0008  
APN 038-060-36

#### GENERAL PROJECT DISCUSSION

The Truckee Meadows Water Authority (TMWA) staff has reviewed the above referenced application. The special use permit (SUP) is for the establishment of a heavy industrial use within a parcel containing an existing industrial facility and to approve the site for future industrial expansion. TMWA is providing the following comments and conditions of approval which supplement applicable Washoe County, State of Nevada, and Federal requirements and are based upon a recent site visit and our review of public records and the application prepared by the Rubicon Design Group.

#### GENERAL COMMENTS

- The Arconic heavy industrial facility (“industrial facility”) is located immediately adjacent to the Truckee River and above shallow groundwater which enters the Truckee River.
- The industrial facility is located within a sensitive source water protection area that supplies most of the drinking water to Reno, Sparks, and the greater metropolitan area year-round.

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- The industrial facility is located just 4,900 feet upstream of the drinking water intake (Highland Canal) for the community; there is approximately 4 hours of pollutant travel time on the river between the industrial facility and the drinking water intake.
  - The industrial facility is bisected by a waterway that receives industry-impacted storm water from the industrial facility and then drains to the Truckee River.
  - Portions of the industrial facility are located within the Zone A Special Flood Hazard Area as depicted in the FEMA Flood Insurance Rate Map.

#### GENERAL CONDITIONS

- TMWA would like to have an opportunity to review any future submittals, revisions, or proposals associated with the Arconic industrial facility SUP for potential impacts to the region's drinking water source.

#### HAZARDOUS MATERIAL RELATED COMMENTS


- The industrial facility relies on large quantities of hazardous materials in their heat treatment process.
- A review of historic releases and contamination events at the industrial facility reveals that even small leaks, spills, and releases of hazardous materials can contaminate large areas of soil, groundwater, and surface water in a relatively short time. Various releases have occurred on dirt/gravel at the industrial facility, within buildings and escaped to contaminate soil outside of the buildings, and/or traveled overland to contaminate the river. A public records search with the Nevada Division of Environmental Protection (NDEP) revealed the following:
  - 1979 – Unauthorized oil reclamation pond. Order by NDEP to characterize the pond area. High levels of PCB found on the property. Contaminants may have been removed during pond lining?
  - 1980, June – Unauthorized discharge from oil recovery pond led to oil spill into the river. Oil flowed across the property to an irrigation ditch and to the river. Oil slick noted in the Highland Canal. The discharge occurred onsite, flowed to Truckee River, and entered Highland Canal within 4 hours or less. Water Pollution Control recommended that Viking replace the power canal spillway

- with conduit, install cement berms around the inside perimeter of their buildings to contain and interior spills, and install overflow alarms on the waste oil tank, oil separator, and the reuse pond.
- 1980, July – Finding of Violation and Order issued by NDEP for unlawful discharge of a pollutant into waters of the state. (Oil spill on Truckee River)
  - 1989, Jan. – 1,000-1,500 gallons of oil overflowed at oil/water separator. Reported to WCHD. Soil excavated.
  - 1990 – DMR data suggests that there is leakage from the oil reclamation basin.
  - 1991, May – Finding of Alleged Violation and Order by NDEP – found small concentrations of organic solvents (PCE, TCE, 111-TCA) in lab rinse 1,700 gallon fiberglass UST (installed in 1976) and in soil under the tank. Tank had 2 failures on the bottom. Estimated ~200 gallons lost in 7 days). Lab tank and contaminated soil removed. NDEP closed Viking site in 1993 (6/11).
  - 1992 – Diesel tank removed. Contaminated soils under tank removed.
  - 1992 – PCB capacitor broke and spilled. Spill contained.
  - 1993, Jan. – 20-25 gallons of lubricant spilled onto ground.
  - 1993, Mar. – in the past, old brick furnace linings were “used to build up low-lying areas at the plant” (Firth Rixson to NDEP, 3/18/93).
  - 1994, May – Compliance Monitoring Report suggested that high COD readings indicate groundwater likely impacted by operations at the oil/water separator or reuse pond.
  - 2002, May – Hydraulic Oil Leak (unknown volume) from compressor inside building that migrated outside into soil – 10 cu yds – within 10 feet of the power canal spillway. 9,000-12,000 mg/kg TPH. Excavated and closed.
  - 2008, Sept. – Hydrocarbon (TPH-E (ORO) 140,000 mg/kg) & metal cuttings release from Leaking Storage Bin (12 cu. yds). Excavated and closed.
  - 2009, May – Water and hydraulic oil released to soil during removal of process tank. Excavated and closed.
  - 2009, July – Hydraulic Oil Release from forklift; ~25 gallons. Barium @ 2.1 mg/L, TPH ORO @ 22,000 mg/kg. Excavated 30’ x 6’ x 3’ deep. 120 mg/kg and 540 mg/kg TPH remained. NDEP closed case.
  - 2011 – 3 USTs north of RAM building removed. TPH (ORO and DRO) and Nickel identified in soils under tanks. No groundwater contamination noted.
  - 2016 – Remediation of TPH and Nickel in soil. 15-18 cu. yds. of soil removed to depths of 2.5 feet.
- An oil/water separator and a concrete 50,000-gallon oil recovery and cooling-water reuse pond is located approximately 12-20 feet above groundwater and approximately 120 feet from the Truckee River. They are located within a concrete secondary containment structure that was constructed around 1973. The condition, water-tightness, and functionality of this aged structure is unknown.

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- Approximately 28,000 gallons of oil are planned for use in the oil-quenching process. Given the proximity to the river and the drinking water intake for the water treatment plant, care should be taken to prevent spills during filling, maintenance, and operations of the oil-quenching operation.

#### HAZARDOUS MATERIAL RELATED CONDITIONS


- Test the efficacy of the concrete secondary containment structure around the oil/water separator and oil recovery and cooling-water reuse pond to ensure that hazardous materials cannot migrate through this aged barrier to groundwater or surface water. If found to be inferior, damaged, and/or leaking, suitable reconstruction and/or lining should take place as required by the appropriate governing agency.
- Extreme care should be taken when filling the oil-quench tanks with almost 30,000 gallons of oil to prevent leakage and contamination of soil, groundwater, and/or the Truckee River.
- If not in place already, install concrete berms (secondary containment) along the interior walls of the new and existing buildings to prevent spills from migrating outside into soil, groundwater and/or surface water.
- If not in place already, install overflow alarms on waste oil tank, oil separator, and the reuse pond.
- Secondary containment for all hazardous materials including cutting, lubricating, and quenching oils stored onsite.
- The expansion plans call for a degreasing/washing station. Provide information for this station including:
  - Location of the degreasing station
  - Type of degreasing agents used and include safety data sheets (SDS) for each
  - Quantities of degreasing agent used and stored onsite
- A list of all chemicals used onsite and their associated SDS.

- 
- The specifications of the three monitoring wells onsite including total depth, screened interval, and wellhead elevation.
  - The most recent 5 years of discharge monitoring reports including water level measurements and groundwater quality data.
  - Provide a description of how the power canal spillway and the Truckee River will be protected from future spills and hazardous chemical releases.

## STORM WATER RELATED COMMENTS

A site walk revealed storm water-related concerns that should be addressed through the appropriate oversight agency.

- Housekeeping could be improved - especially with respect to waste storage, storm water BMPs, and sources of contamination to storm water onsite.
- An existing storm water retention pond is located just north of the former office building and approximately 100 feet from the Truckee River. It receives a large portion of the storm water from the industrial facility, including runoff from the forge area, fuel/oil storage area, maintenance area, used oil containment area, oil-reuse pond, and the oil/water separator.
- The existing storm water retention pond is located within the Zone A Special Flood Hazard Area as depicted in the FEMA Flood Insurance Rate Map.
- A new storm water retention pond is planned for the industrial facility expansion. It is tentatively located 160 feet from the Truckee River.
- The expansion calls for buildings to be located approximately 50 feet from the Truckee River and approximately 30 feet from the FEMA Flood Zone A. Given that petrochemical releases have originated within buildings and impacted soil outside of the building in the past, how will releases be contained within the new buildings?
- Specific storm water-related comments are depicted in Figure 1 and described below (see associated number on the figure):



(1) According to available outfall maps, there is no soil or structural berm down-gradient of the existing storm water retention pond which drains to the Truckee River.

(2) The existing industrial site drains areas littered with oil/grease, metal filings, metal dust, and manufacturing-related debris to storm water outfalls to a tributary (power canal spillway) of the Truckee River and there is only one known storm water interceptor onsite. Will the expansion area provide for the treatment of storm water to remove oil/grease, metal filings, metal dust, and manufacturing-related debris prior to storage and release to the Truckee River?

(3) Small untreated outfalls occur to the power canal spillway from the main bridge.

(4) Bank erosion, pavement erosion, and a limited temporary berm in place that does little to prevent storm water from reaching the power canal spillway and the Truckee River. Drains an area that is littered with significant amounts of black dust/grease/oil/metal filings of unknown composition directly to the power canal spillway.


(5) Storage of approximately 80 (eighty) 55-gallon drums of metal filings/chips. Storm water flow and drainage goes directly through this area that is littered with metal filings and dust to the Truckee River.

## STORM WATER RELATED CONDITIONS

- Storm water BMPs should be in place and maintained during construction and inspected as required by the governing agency or agencies.
- Storm water improvements to areas noted above (1 thru 5) should be corrected/constructed before or during Phase I to ensure capture of any releases and/or storm-exacerbated source water contamination events during construction of Phase I and subsequent phases.

(1) If there is no soil or structural berm down-gradient of the existing storm water retention pond which drains to the Truckee River, construct one as appropriate to prevent storm water discharge to the Truckee River from this storm water retention pond.



- 
- (2) Direct storm water flow to new or existing interceptors and/or storm water retention ponds to prevent contamination of the Truckee River with oil/grease, metal filings, metal dust, and manufacturing-related debris.
- (3) Direct untreated outfalls that currently go to the power canal spillway to a storm water interceptor and/or storm water retention pond.
- (4) Direct untreated storm water away from the power canal spillway and to a storm water interceptor and/or storm water retention pond. Repair and regrade this area to prevent soil erosion into the power canal spillway.
- (5) Direct storm water away from this open-air storage area to prevent metal filings, chips, and manufacturing-related debris from entering the Truckee River.
- The SUP application states that “the Arconic site will employ a series of detention ponds for the various phases of improvements”, but they are not indicated on any plans. Please provide an outfall map showing the direction of storm water flow after improvements to new and existing areas of the industrial facility. Include the locations of retention ponds as well as information on sizing (storm-frequency and volume) per phase.
  - Describe the location, operation, and maintenance schedule of existing and planned storm water interceptors and their efficacy in removing oil/grease, metal filings, metal dusts, and industrial manufacturing-related debris prior to storage and release to the Truckee River.

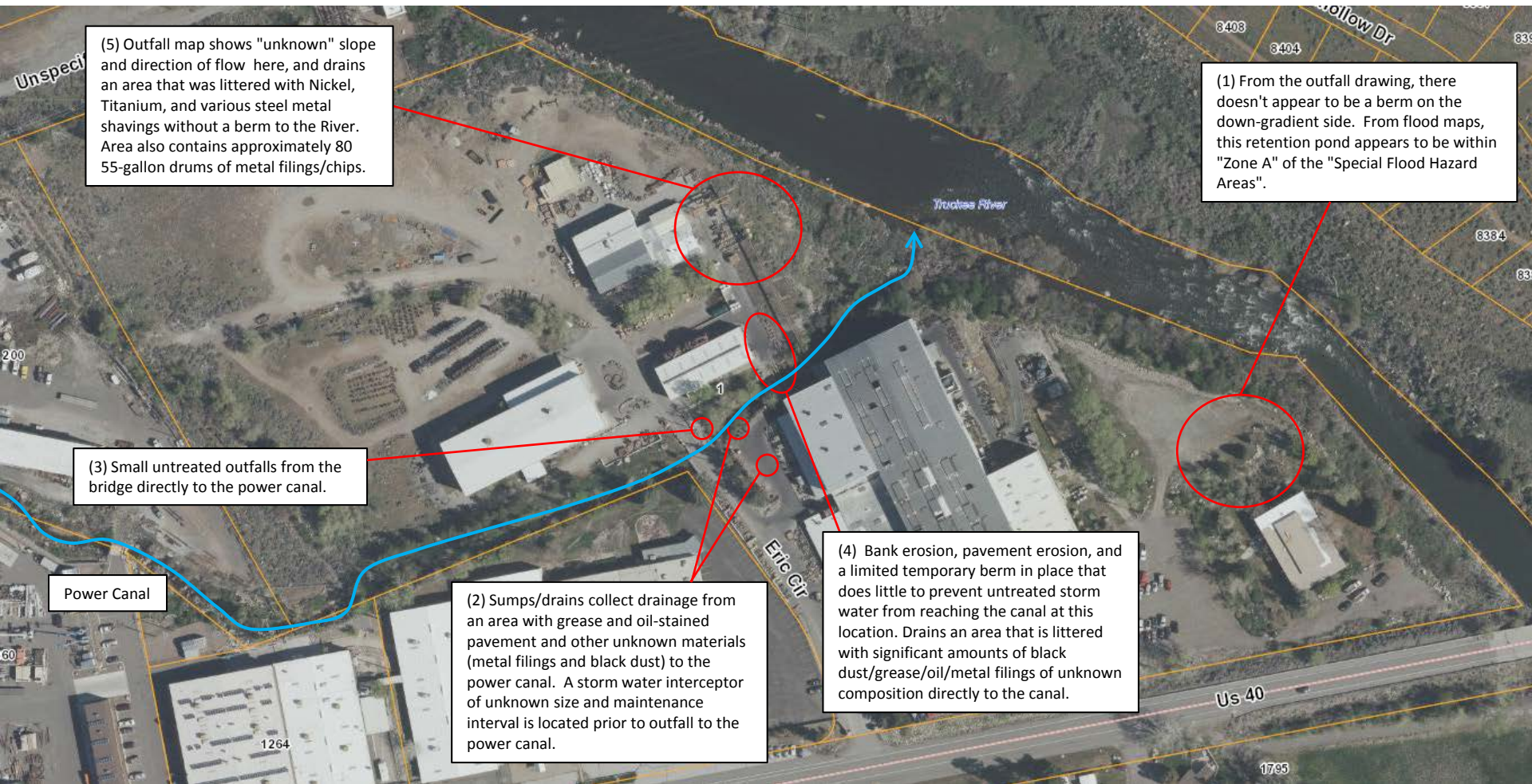


Figure 1. Storm water related comments and conditions



# WASHOE COUNTY

## COMMUNITY SERVICES DEPARTMENT

### Engineering and Capital Projects

1001 EAST 9<sup>TH</sup> STREET  
PO BOX 11130  
RENO, NEVADA 89520-0027  
PHONE (775) 328-3600  
FAX (775) 328.3699

Date: May 31, 2018

Revised: July 18, 2018

To: Chris Bronczyk, Planning and Building Division

From: Leo R. Vesely, P.E., Engineering and Capitol Projects Division  
Walter H. West, P.E., Engineering and Capital Projects Division  
Kristine R. Klein, P.E., Engineering and Capital Projects Division

Re: Arconic Special Use Permit for Heavy Industrial Use WSUP18-0008  
APN 038-060-36

#### GENERAL PROJECT DISCUSSION

Washoe County Engineering and Capital Project staff has reviewed the above referenced application. The SUP is for the establishment of a heavy industrial use within a parcel containing an existing industrial facility and to approve the site for future industrial expansion. The Engineering and Capital Projects Division recommends approval with the following comments and conditions of approval which supplement applicable County Code and are based upon our review of the application prepared by the Rubicon Design Group. The County Engineer shall determine compliance with all the following conditions of approval.

For questions related to sections below, please see the contact name provided.

#### GENERAL CONDITIONS & GRADING (COUNTY CODE 110.438)

Contact Information: Leo R. Vesely, P.E. (775) 328-2041

1. A complete set of construction improvement drawings, including an on-site grading plan, shall be submitted when applying for a building/grading permit. Grading shall comply with best management practices (BMP's) and shall include detailed plans for grading, site drainage, erosion control (including BMP locations and installation details), slope stabilization, and mosquito abatement. Placement or removal of any excavated materials shall be indicated on the grading plan. Silts shall be controlled on-site and not allowed onto adjacent property.
2. The developer shall obtain from the Nevada Division of Environmental Protection a Stormwater Discharge Permit and submit a copy to the Engineering Division prior to issuance of a grading permit.
3. The developer shall complete and submit the Construction Permit Submittal Checklist and pay the Construction Stormwater Inspection Fee prior to obtaining a grading permit.
4. If material is to be exported from the site, the plans shall note where exported materials will be taken and a grading permit shall be obtained for the import site. Exported materials shall not be sold without the proper business license.



INTEGRITY



EFFECTIVE  
COMMUNICATION



QUALITY  
PUBLIC SERVICE

Subject: Arconic Special Use Permit for Heavy Industrial Use WSUP18-0008  
Date: July 18, 2018  
Page: 2

5. A grading bond of \$2,000/acre of disturbed area shall be provided to the Engineering Division prior to any grading.
6. The minimum pavement requirements for on-site paving shall be three inches (3") asphalt over six inches (6") granular base.
7. All disturbed areas left undeveloped for more than 30 days shall be treated with a dust palliative. Disturbed areas left undeveloped for more than 45 days shall be revegetated. Methods and seed mix must be approved by the County Engineer with technical assistance from the Washoe-Storey Conservation District. The applicant shall submit a revegetation plan to the Washoe-Storey Conservation District for review.
8. Any existing easements or utilities that conflict with the development shall be relocated, quitclaimed, and/or abandoned, as appropriate.
9. Appropriate easements shall be granted for any existing or new utilities, including but not limited to overhead utility lines and ditches.
10. New easements recorded for the project shall include an exhibit map that shows the location and limits of the easement in relationship to the project.
11. The setback between the proposed retaining wall and the west boundary shall be wide enough to accommodate an interceptor drain above the retaining wall in accordance with Washoe County Code Article 438.
12. Design of the proposed retaining wall on the west side of the site shall address the load from the adjacent existing utility pole and the potential for seepage, erosion and/or scour from the adjacent TMWA Raw Water Overflow/Return Ditch.
13. Prior to approval of any building permit or grading permit, provide written approval from NV Energy for any improvements located within their easements or under their facilities. This includes but is not limited to the existing utility pole adjacent to the proposed retaining wall on the west side of the project, the existing utility pole in the detention pond and the existing overhead lines located inside the building envelope of the proposed QA/Storage/Shipping building.
14. For the area to be developed and all excavated material to be removed from the site, submit an environmental assessment/geotechnical investigation that characterizes any existing soil contamination that has the potential to adversely impact surface or ground water and recommendations for appropriate disposal and management of contaminated soils.
15. Submit the following final design level reports prior to approval of any building or grading permit: Geotechnical Report in accordance with Washoe County Code Article 436, and Soils Engineering Report and Engineering Geology Report in accordance with Washoe County Code Article 438.
16. All slopes shall be 3:1 or flatter in accordance with Washoe County Code Article 438.

**DRAINAGE (COUNTY CODE 110.416, 110.420, and 110.421)**

Contact Information: Leo R, Vesely, P.E. and Walter H. West, P.E. (775) 328-2041

Subject: Arconic Special Use Permit for Heavy Industrial Use WSUP18-0008  
Date: July 18, 2018  
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### **Discussion**

The site is located adjacent to the Truckee River to the north and adjacent to TMWA's Raw Water/Overflow Return Ditch (aka Power Canal that discharges to the Truckee River) to the west and the south.

Through discussions with state and local agencies, staff understands that the existing and proposed projects are subject to environmental permits through the State of Nevada and City of Reno which includes, but is not limited to, Nevada State Industrial Stormwater Permit, Nevada State zero discharge Groundwater Permit and a Reno zero discharge pre-treatment permit (for discharge into sanitary sewer).

Local and state agencies have and will be performing site inspections to review the existing site and proposed improvements to evaluate compliance with existing permitting and potential water quality effects of the existing and proposed development upon Truckee River.

Truckee Meadows Water Authority (TMWA) reviewed the existing and proposed project and provided comments relating to recommended Best Management Practices that should be employed to prevent pollution discharge to the Truckee River. As the Chalk Bluff Water Treatment facility intake is located downstream of the Arconic facility, Truckee River pollution prevention is of extreme importance to TMWA and the community.

The following conditions of approval shall apply:

1. A detailed hydrology/hydraulic report prepared by a registered engineer shall be submitted to the Engineering Division for review and approval. The report shall include the locations, points of entry and discharge, flow rates and flood limits of all 5- and 100-year storm flows impacting both the site and offsite areas and the methods for handling those flows. The report shall include all storm drain pipe and ditch sizing calculations and a discussion of and mitigation measures for any impacts on existing offsite drainage facilities and properties.
2. Any increase in storm water runoff resulting from the development and based upon the 5-year and 100-year storm shall be detained on site to the satisfaction of the County Engineer.
3. The FEMA 100-year floodplain, floodway and/or shaded X boundaries with associated flood elevations shall appear on the site plan to the satisfaction of the County Engineer. Building permits for structures and fill in these areas shall be in conformance with the Washoe County Code Article 416.
4. Standard reinforced concrete headwalls or other approved alternatives shall be placed on the inlet and outlet of all drainage structures and rip rap shall be used to prevent erosion at the inlets and outlets of all pipe culverts to the satisfaction of the County Engineer.
5. Prior to the issuance of a building or grading permit by Washoe County, a Storm Water Pollution Prevention Plan (SWPPP) shall be provided to Washoe County and the Nevada State Division of Environmental Protection (NDEP), meeting the requirements of the Industrial Stormwater Permit. Said plan shall demonstrate among other things, that approved stormwater treatment devices are in place and Best Management Practices are implemented.

Subject: Arconic Special Use Permit for Heavy Industrial Use WSUP18-0008  
Date: July 18, 2018  
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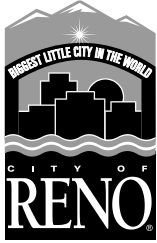
6. All grading and building permits shall comply with Washoe County Code Article 421 Stormwater Discharge Program, including but not limited to Storm Water Regulations and Requirements, Environmental Control Permits and Post Construction Storm Water Quality Management, to the satisfaction of the County Engineer.
7. The Truckee Meadows Regional Stormwater Quality Management Program Construction Permit Submittal Checklist and Inspection Fee shall be submitted with each grading or building permit.
8. With each phase of the project, the owner shall demonstrate that all required state and local environmental permits and work completed are current and in good standing with NDEP and City of Reno. Any recommended improvements provided by these agencies which identifies deficiencies in or enhancements to current stormwater pollution prevention practices, shall be implemented through appropriate design, permitting and construction permits approved by all appropriate agencies and to the satisfaction of the County Engineer.
9. TMWA's memorandum to Washoe County dated July 9, 2018 which provides discussion, concerns, and recommended conditions of approval shall be addressed to the satisfaction of the County Engineer.
10. Prior to approval of any building permit or grading permit, the developer will furnish to the Engineering Division and Community Development staff, written confirmation from TMWA that they have reviewed and approved the permit application.
11. A maintenance and operation plan for the maintenance of the project's detention/retention basins, outdoor materials storage areas, and all other drainage facilities shall be developed in accordance with the Washoe County Code Article 421. Said plan shall be updated with each phase of new site construction.
12. The following note shall be added to the construction plans "All properties, regardless if they are located within or outside of a FEMA designated flood zone, may be subject to flooding. The property owner is required to maintain all drainage easements and natural drainages and not perform or allow unpermitted and unapproved modifications to the property that may have detrimental impacts to surrounding properties".
13. Prior to approval of any building permit or grading permit a geotechnical report shall address the impact of groundwater on proposed detention ponds. The pond bottom shall be located three feet above the historic high groundwater table.
14. Prior to approval of any building or grading permit, the developer shall obtain a permit from the U.S. Army Corps of Engineers (USACE) for any work within the wetlands/waters of the U.S., or submit documentation indicating that a permit is not required.
15. Prior to approval of any building or grading permit, the developer shall obtain all required permits from the State of Nevada for any work within the wetlands/waters of the U.S., or submit documentation indicating that permits are not required.

## **Truckee Meadows Fire Protection District**

1. The following conditions are requirements of the Truckee Meadows Fire Protection District, which shall be responsible for determining compliance with these conditions.

**Contact Name – Lisa M. Beaver, PE, (775) 328-6005, [lbeaver@tmfpd.us](mailto:lbeaver@tmfpd.us)**

- a. Condition #1 – It is indicated that the existing site is considered to be a “permitted grandfathered use”, however due to the extensive additional operations associated with the existing site a safety evaluation of the entire site will be required to identify increased risk to fire and life safety. This risk shall be based upon the intent of protection found within national standards and current code.
- b. Condition #2 – Fire protection of the use shall be as required by the current adopted International Fire Code and associated amendments; and the requirements of the appropriate NFPA standard(s). Prescribed fire protection system(s) shall be listed for the specific fire risk of the materials and operations (i.e. special provisions associated with flammable solids).
- c. Condition #3 - Water supply to the site shall be adequate to address the required fire flow (gpm, pressure and duration) and the volume and pressure to support fire protection system(s). The site will be provided with an onsite fire loop with two points of connection to the public/private water system. Hydraulic calculations shall be provided that depicts the required fire flow through on site hydrants through a single connection. Isolation valves shall be provided every two hydrants to provide a means to isolate the system upon failure during firefighting operations.
- d. Condition #4 - Access for emergency operations shall be in compliance with the International Fire Code and the adopted amendments and standards to the entire facility. All access to the site shall be paved all weather access.
- e. Condition #5 – A Process Hazard Analysis shall be provided at the first cycle plan review that provides a systematic and organized assessment of the potential hazards associated with the industrial process.
- f. Condition #6 – A site emergency operation pre-plan shall be provided with coordination with Truckee Meadows Fire Protection District Fire Prevention and Emergency Operations.
- g. Condition #7 – An Operational Permit will be required for the site as required by the International Fire Code section 105.6. A fee shall be paid annually for the required permit and TMFPD shall provide for that fee an annual inspection. At a minimum an Operational Permit is required for Industrial Ovens and Hazardous Materials.
- h. Condition #8 – Existing buildings that are proposed with added building area shall be in compliance with the current adopted International Fire Code and the associated adopted NFPA standards.



# Community Development Department

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## MEMORANDUM

**Date:** May 24, 2018  
**To:** Chris Bronczyk, Planner  
Washoe County Community Services Department  
**From:** Kyle Chisholm, Assistant Planner  
**Subject:** WSUP18-0008 (Arconic)

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Below are listed comments or concerns resulting from a preliminary review of the application referenced above.

Comments:

1. There is no photometric plan included demonstrating that spillover lighting to adjacent residential properties is being mitigated. City of Reno staff recommends a condition requiring a photometric plan demonstrating a maximum 0.5 foot-candles of spillover lighting will occur at the residential property lines. Full-cutoff lighting may be necessary to reduce impacts to nearby residential properties.
2. There is no analysis regarding existing or future noise impacts of the facility. The existing 24-hour operations are a concern of City Staff and it is recommended that a noise study be provided demonstrating that no additional noise impacts will occur to the nearby residential properties beyond existing use. A condition may be necessary to accomplish this.
3. The applicant states in the application that the quenching oils used in operations do not trigger an "H" occupancy. However, it is recommended that Washoe County staff work with the State Fire Marshall and Truckee Meadows Fire Protection District to ensure that a Hazardous Materials special use permit is not required and that adequate fire access and protection is in place prior to approval of any building permits.
4. City of Reno staff has general concerns regarding the placement of buildings and parking areas, as shown on the site plan, within 50 feet of the Truckee River. Additional environmental analysis and analysis of the Truckee River Corridor plan should be required.





**REGIONAL TRANSPORTATION COMMISSION**

*Metropolitan Planning • Public Transportation & Operations • Engineering & Construction*

Metropolitan Planning Organization of Washoe County, Nevada

May 24, 2018

FR: Chrono/PL 183-18

Mr. Chris Bronczyk, Planner  
Community Services Department  
Washoe County  
PO Box 11130  
Reno, NV 89520

**RE: WSUP18-0008 (Arconic)**

Dear Mr. Bronczyk,

We have reviewed the subject application and have the following comments and recommendations.

**Comments and Recommendations:**

1. The Regional Transportation Plan identifies US 40 as an arterial with Moderate-access control. To maintain arterial capacity, the following RTP access management standards should be maintained.

<b>Access Management Standards-Arterials<sup>1</sup> and Collectors</b>							
Access Management Class	Posted Speeds	Signals Per Mile and Spacing <sup>2</sup>	Median Type	Left From Major Street? (Spacing from signal)	Left From Minor Street or Driveway?	Right Decel Lanes at Driveways?	Driveway Spacing <sup>3</sup>
Moderate Access Control	40-45 mph	3 or less Minimum spacing 1590 feet	Raised or painted w/turn pockets	Yes 500 ft. minimum	No, on 6 or 8-lane roadways w/o signal	Yes <sup>4</sup>	200 ft./300 ft.

<sup>1</sup> On-street parking shall not be allowed on any new arterials. Elimination of existing on-street parking shall be considered a priority for major and minor arterials operating at or below the policy level of service.

<sup>2</sup> Minimum signal spacing is for planning purposes only; additional analysis must be made of proposed new signals in the context of planned signalized intersections, and other relevant factors impacting corridor level of service.

<sup>3</sup> Minimum spacing from signalized intersections/spacing other driveways.

<sup>4</sup> If there are more than 60 inbound, right-turn movements during the peak-hour.

2. The policy Level of Service (LOS) standard for US 40 is LOS D and Greg Street is LOS D. Policy LOS for intersections shall be designed to provide a level of service consistent with maintaining the policy level of service of the intersection corridor. This project should be required to meet all the conditions necessary to complete road improvements to maintain policy LOS standards.
3. The application identifies the expansion of various buildings in four phases of an existing industrial operation. Access to the site will continue to use a private roadway, Eric Circle off of US 40. Overall impacts to traffic were identified as relatively minor with minimal increase in traffic volumes in to and out of the plant.

4. The RTC Bicycle & Pedestrian Master Plan identifies 4.50 miles of sidewalk on US Highway 40 from Bridge Street to Sommersett Ridge Parkway as low-priority.
5. The RTP, RTC Bicycle/Pedestrian Master Plan and the Nevada Department of Transportation Pedestrian Safety Action Plan, all indicate that new development and re-development will be encouraged to construct pedestrian and bicycle facilities, internal and/or adjacent to the development, within the regional road system. Also, these plans recommend that the applicant be required to design and construct any sidewalks along the frontage of the property in conformance with the stated ADA specifications.

Thank you for the opportunity to comment on this application. Please feel free to contact me at 775-332-0174 or email me at [rkapuler@rtcwashoe.com](mailto:rkapuler@rtcwashoe.com) if, you have any questions or comments.

Sincerely,



Rebecca Kapuler  
Planner

RK/jm

Copies: Mojra Hauenstein, Washoe County Community Services  
Trevor Lloyd, Washoe County Community Services  
Jae Pullen, Nevada Department of Transportation, District II  
Daniel Doenges, Regional Transportation Commission  
Tina Wu, Regional Transportation Commission  
Mark Maloney, Regional Transportation Commission  
Julie Masterpool, Regional Transportation Commission  
David Jickling, Regional Transportation Commission

/789 (Arconic)



**WASHOE COUNTY**  
**COMMUNITY SERVICES**  
**INTEGRITY COMMUNICATION SERVICE**

P.O. Box 11130  
Reno, Nevada 89520-0027  
Phone: (775) 328-3600  
Fax: (775) 328-3699

June 7, 2018

TO: Chris Bronczyk, Planner, CSD, Planning & Building Division  
FROM: Vahid Behmaram, Water Management Planner Coordinator, CSD  
SUBJECT: Special Use Permit Case Number WSUP18-0008 (Arconic)  
Revised: July 20, 2018

**Project description:**

The applicant is proposing establishment of a heavy industrial use within the industrial zone. The heavy industrial use proposed is heat treatment and oil quenching operations.

Location: 1 Eric Circle, Verdi, NV 89439, Assessor's Parcel Number: 038-060-36

*The Community Services Department (CSD) recommends approval of this project with the following comments and Water Rights conditions:*

***Comments:***

- 1) The site where the proposed project is located is within the service area of "Verdi Water Company". The past and existing projects located on this site have received water service from this purveyor of water.
- 2) The SUP application does not provide any information regarding the current water rights and water service commitments to this site from the water company. The SUP does not provide any data as to the water demands associated with the phases of this project. Therefore a proper evaluation of the SUP by County staff is not possible.

***Conditions:***

- 1) Applicant shall provide the copies of current will serve water commitments to this site.
- 2) Applicant shall provide estimated water demand for all proposed phases and projects in this SUP.
- 3) The applicant shall cause the water company to provide a water budget including a) water rights available to the water company b) all current water service commitments, c) Supply capacity in GPMs and d) supply capacity commitments to all existing water customers.



# West Truckee Canyon/Verdi Citizens Advisory Board

## MEMORANDUM

**Date: June 19, 2018**  
**To: Chris Bronczyk, Washoe County Planner**  
**Re: Special Use Permit Case Number WSUP18-0008 (Arconic) Application Heat Treat Plans Geotechnical Report**  
**From: Misty Moga, Recording Secretary**

The following is an excerpt from the West Truckee Meadows/Verdi Citizen Advisory Board on June 18, 2018.

**7.B. Special Use Permit Case Number WSUP18-0008 (Arconic) Application Heat Treat Plans Geotechnical Report** – Request for community feedback, discussion and possible action to forward community and Citizen Advisory Board comments to Washoe County staff on a request for the establishment of a heavy industrial use within the industrial zone. The heavy industrial use proposed is heat treatment and oil quenching operations.

- Applicant/Property Owner: Rubicon Design Group/Schlosser Forge Company
- Location: 1 Eric Circle, Verdi, NV 89439
- Assessor's Parcel Number: 038-060-36
- Staff: Chris Bronczyk, Planner; 775-328-3612; Cbronczyk@washoecounty.us
- Reviewing Body: Tentatively scheduled for Planning Commission, July 3, 2018

Derek Smith, Rubicon Design Group, provided a project powerpoint presentation and overview:

- The industrial uses are in place and appropriate for the zoning.
- The Special Use Permit is for Heavy/Custom Manufacturing
- They have been in operations since 1967
- He provided the project location, site photos and map of the new building
- He said some of the operations will move inside with the new building which is a benefit to the neighborhood to reduce the noise.

Arconic Engineer Mark Quattrin said it's been in operation for a long time. Operating under the same conditions – forming materials. No change in operation since 1966.

Carly said water usage is concern outthere. She aske dif they are on the water system currently. She asked about their current usage and if it will increase. Allen Grey, Arconic Representative, said he is looking into the current water system and speaking with TMWA in order to bring water to the site. He said they are also speaking with the County engineers. They will complete an assessment with Verdi Water Company for a sustainable water supply and to see if there is an impact and how they will deal with it if that is the case. TMWA is planning to expand their water system. The current plant has low water usage – its use for fire suppression. Consumption is primarily for domestic for bathroom. It all comes from the spring. There are other users on the source other than Arconic. The distribution system was put together by Verdi Water Company to serve other people.

Carly said she would love to see the layout of the buildings in person. She said the water consumption is an issue, and she is aware of where TMWA is in regards to their extension of the water system. They have to go

through a private property to get that extension completed. She said she is interested to know more about water consumption. She said she has issues proximity next to river, and expanding the use is concerning especially since there is hazardous materials. She wanted to know where is the water going, and how is it contained. Allen Grey said he would be happy to give a tour of proposed project. He said the manufacturing system uses water, however, no water goes off the property. It stays on site. There is a water treatment plant on site to process the water. Mark Quattrin said there low water usage because they don't use water in process. Water is used for cooling which is captured in closed loop system. It doesn't leave the site.

Carly asked about the lighting on the site. She said there is a large outdoor light on the east side that lights up the night sky. She asked if that type of lighting will be expanded. It should be the dark skies lighting. She asked how this expansion will impact the new neighborhood and current neighbors. Mark Quattrin said he will look into that light. It's there for security, however, they have a 24 hour security guard. Allen said the new development will comply with new codes with down lighting.

Carly asked about hour of operations. Mark said they operate 24/7 currently, but you may not notice because operations happen inside at night. No forging is happening on the weekend. There is someone always there. The usage will be business as usual. He said you won't notice any difference of activity. There is a heat treatment building – activities will take place in there.

Daniel asked about hazardous material. Mark Quattrin said waste oil, grease, sludge contained in approved containers; defined and enclosed storage will be built. He said they are a small generator of those hazardous material. There is secondary storage in case of failure to prevent run off. Daniel asked about air pollution. Mark spoke about wet collection and recycled or properly disposed. Daniel asked about Storm water run-off due to increase asphalt. Allen said there is a clean-up filter treatment installed to remove oil and materials, and containment areas to collect run-off.

Public comment:

Patrick Shickler asked about pre-evaluation. He asked about overall facility, current soil sample, water samples to ensure there is no run off. He said he wants to know the current condition compared to 2022 for checks and balances. There will be disturbed soil. He said there needs to to documentation of conditions for 2018 such as the water table, river, and neighbors' potential impacts. Document the current condition prior to construction. Allen said the County has been out there previously, and they are involved. They are creating a baseline. They are checking the quality of the runoff. The liaison with the County would know about the current baseline. Allen said the soils report is yet to come. It was an assessment for earthquake, history, kind of soil. That has been completed. They will pull soil to sample. Patrick said they need to take a look at the history, prior development, and comparisons with other sites. Mark said they will monitor quarterly to provide info to the County. He said the conditions have gotten better over the years.

Gene Gardella said he also noticed the bright light that Carly mentioned years ago. It's irritating. In the past, other manufacturing, they would allow employees to enroll as volunteer fireman. It would be helpful if they could provide fire service to the area with water tenders. He said we don't have a cohesive fire protection established. It's not automatic aid. It's over 8 minutes for service. He asked them to be supportive of fire service. He said in the past, there were complaints in the trailer park regarding the noise with the forging operation. He asked if there will be efforts that will mitigate the pounding sound. Mark said he is conscious of those complaints. He said the forging operations are during the day now, no longer at night. He said they can adjust hours if they need to. Gene asked if there is sound insulation in the new building. Mark said we can look at that. The building faces highway 40. He said they could look to add material to lessen the sound. There is a

Verdi area plan to characterize the community when it was building up. He said he would appreciate during design to incorporate design ideas and comply with Verdi area plan.

Chance Reading asked about the current zoning. Derek said we aren't changing the zoning. The uses are currently covered. Derek said they are proposing adding 1 building in this phase with 4 complete phases proposed which includes a new building and expanding existing buildings. Phase 1- heat treatment building. Phase 2 – inspection building. 3&4 expansion of machine building. Chance asked if the site has been review from the north. It's bare on the northside. He asked if it's visible from home sites on the north. Mark said yes, the heat treatment building will be visible from the north. Proper landscaping is required for screening. Chance asked if this is the head quarters. Mark said headquarters is in Pittsburg, PA. Chance asked if Arconic is willing to work with community. Mark said yes, they look forward to it.

Patricia Padden asked about a limit on the amount of heavy industrial operations will occur near the river. Kelly Mullen, Washoe County Senior Planner, said there isn't a specific limit. Kelly said the County looks at proposed use in regulatory zone, impacts, neighboring properties, river, ditch. Staff reviews and asks several different agencies to determine impacts and potentially mitigate them.

Carly asked about grandfather use – uses sets precedence. Kelly said its currently legally operating in its existing use.

Kitty Smith asked why this needs a special use permit. Chris said they are going through expansion process. Once an existing use wants to expand, they trigger a special use permit, noticing, and current development code. Current use is grandfather in, but expansion is under the current code.

Public member asked about lot and interceptor for sewer. Allen said the lot and interceptor extends on the property. There is a public use easement for sewer on south east corner. There is a manhole on the property.

Cheryl Berket asked about water line extension. Carly said they have to tap into the existing and get HOA approval to access and expand to go through up to boomtown.

Carly asked about the jurisdiction of Board of Adjustments. Chris said it will go to Board of Adjustment which is different from planning commission. If it's the application is appealed, it goes to the County Commissioners. Carly said it's at 1:30, which isn't convenient for the public. Kelly said it's a public hearing and everyone is welcome. If they cannot attend, they can submit their comments to Chris.

Daniel asked about conditions. Chris said various agencies can place conditions on this request. Washoe County staff can place conditions on it as well which depends on the findings.

George said he has lived here since 1955, and he remembers when this was first constructed. It was a smaller area, way out of town. He said they have taken every precaution not to disturbed the surrounding area.

**MOTION: Daniel Lazzareschi moved to recommend to Board of Adjustments approval with conditions, down lighting on new and existing structures, engage with community, reduce noise with forging to normal working hours/sound mitigation. Carly Borchard seconded the motion for approval. Motion passed unanimously.**



## MEMO

**Date:** June 21, 2018

**To:** Chris Bronczyk/Kelly Mullin

**From:** Mike Railey

**Regarding:** Arconic Special Use Permit

---

County staff has asked for an analysis of specific policies from the Verdi Area Plan as they relate to the proposed Arconic Special Use Permit (SUP) request. The policies are listed below and addressed in **bold face** type.

V.27.3 Applicants required to present their items to the Citizen Advisory Board (CAB) must submit a statement to staff regarding how the final proposal responds to the community input received at the CAB.

**Below is a list of key issues raised at the CAB meeting on June 18, 2018:**

- **Impact to wells**

Questions were raised as to whether or not area wells would be impacted as a result of this SUP request. It was explained that Arconic will be served with municipal water and not onsite wells.

- **Light impacts**

The CAB asked about proposed lighting and discussed an existing fixture along Old Highway 40 that creates spill over and glare. All new lighting within the project will include modern shielded fixtures which prevent spill-over and glare from occurring upon adjoining properties. Additionally, the "problem" fixture referenced by the public at the meeting is an older light that was installed 30+ years ago. Arconic committed at the meeting to replace that light with a shielded fixture to correct the problem.

- **Grandfathering of Heavy Industrial Use**

The CAB asked for clarification regarding how uses can be grandfathered. It was explained to the CAB that the Arconic site has operated as an industrial site for well over 40 years and that the SUP request was simply an expansion of existing activities that are occurring onsite now and have been for many years.

- **Noise and air pollution**

General comments were made regarding potential noise and air pollution impacts. New activities proposed with the SUP will be occurring indoors, ensuring that new noise impacts are not created. Additionally, Arconic has previously supplied County staff with noise monitoring readings at various locations within the site. Conditions can be placed on the SUP to require noise mitigation on new activities proposed with the expansion. All new activities will be subject to review by the Washoe County District Health Department and Nevada Department of Environmental Protection to ensure air quality standards are being met. This will include a separate permitting process, incorporation of air filters (if needed), etc. to ensure compliance with adopted standards.

- **Hazardous waste**

Questions were raised as to whether or not the project would generate hazardous waste. As detailed in the submitted SUP report, the project will not generate hazardous waste per NDEP standards. However, waste-oil will be contained onsite in an NDEP approved containment area where it is then removed by a third party vendor for recycling. This was explained to the satisfaction of the CAB by Arconic representatives at the meeting.

- **Proximity to river**

General statements were made in regard to the site's location along the Truckee River. The new buildings within the project are setback from the river and new landscaping will be installed along the northern boundary, greatly enhancing aesthetics along the river corridor.

- **Waste water**

Questions were raised as to whether or not waste water was dumped into the Truckee River. Domestic waste water (i.e. restrooms, etc.) will flow into the sanitary sewer/septic system in place. Industrial waste water is treated onsite per NDEP standards. This process was explained to the satisfaction of the CAB by Arconic representatives.

- **Hours of operation**

A general question was asked as to the hours of operation for Arconic. No changes in operating hours are proposed. The facility has operated on a 24-hour basis for numerous years without impact to adjoining properties.



- **Environmental testing**

The CAB asked if environmental testing would occur. Arconic operates under permits issued by the County and State that require strict adherence to environmental standards. Furthermore, the site receives inspections from State agencies such as NDEP to ensure ongoing environmental compliance.

- **Architectural character and visibility**

The CAB inquired about the architectural character of the new heat treatment facility. Architectural elevations were provided with the SUP submittal. All future phases will include architecture that is directly compatible with the proposed heat treatment facility. It is also important to note that the new buildings are generally not visible from Highway 40 and are screened by intervening buildings that already exist onsite. A dense landscape buffer is provided along the project perimeter which will serve to screen the site from properties to the north and east.

- **Community events**

Community members asked if Arconic could become involved with various community events in Verdi. Arconic representatives stated that they are certainly willing to participate and provided contact information for future reference.

Based on the information presented at the meeting and the responses provided to questions, the CAB voted unanimously to support the SUP request.

V.27.10 The impact of development on adjacent land uses will be mitigated. The appropriate form of mitigation should be determined through a process of community consultation and cooperation. Applicants should be prepared to demonstrate how the project conforms to this policy.

As discussed with the CAB, new lighting will include modern shielded fixtures that will prevent spill-over and glare to adjoining parcels. Arconic is also committed to replacing existing “problem” fixtures that were installed many years ago that may result in light pollution to adjoining parcels. Additionally, a dense landscape screen will be installed with the approval of this SUP. This will buffer the site from properties to the north and east and will also enhance the aesthetics of the Truckee River corridor. Lastly, the project must comply with all County and State environmental standards and is subject to supplemental permits and inspections.

V.11.2: All development, including buildings, site plans, and civic or public uses shall be constructed consistent with an established green building standard for energy efficiency, renewable content, waste management, and general environmental performance.

New development within the Arconic site will use modern state-of-the-art building methods and materials. These will provide for energy efficiency and will serve to further reduce impacts (i.e. lighting). As noted previously, Arconic is also subject to environmental monitoring from both the County and State ensuring that environmental standards are complied with at all times.

V.11.14: Require sidewalks and street lighting in the Village Center. Encourage display windows and build articulation along the sidewalks. Prohibit blank walls along sidewalks.

**The Highway 40 frontage of the Arconic site has been developed for well over 40 years and includes mature landscaping and existing improvements. The area covered by the SUP does not impact this area and will be contained on the northern portions of the site. Thus, no changes will occur along the Highway 40 frontage.**

V.14.2: Require property owners to provide a safe and attractive pedestrian access along streets and shall be designed to connect to pedestrian access on adjoining lots

**Not applicable. No changes are proposed along Highway 40. This area is already developed with existing improvements. Additionally, pedestrian access to industrial use types is discourage for safety and security purposes.**

V.14.3: Require sidewalks and street lighting and encourage display windows and building articulations along sidewalks. Prohibit blank walls along sidewalks.

**Buildings along the street frontage already exist and will not be altered as part of this SUP request.**

V.21.4: Encourage the use of permeable materials in place of asphalt, concrete, brick pavers or other impermeable hardscape materials

**Although impervious surface will be added, so will significant landscaping and detention areas to ensure that run-off from the site is not increased. These improvements are consistent with low-impact-development (LID) standards and will improve the overall environmental quality at the Arconic site.**

V.27.13: The approval of all Special Use Permits must include a finding that the community character as described in the character statement can be adequately conserved through mitigation of any identified potential negative impacts

**This request essentially has no effect on community character. The industrial use already exists and has so for decades. New activities will generally not be visible/noticeable from Highway 40. New landscaping will serve to screen the project from adjoining parcels and overall light impacts will be reduced with replacement of outdated fixtures (as needed) which result in glare and light pollution. The landscape and lighting improvements are in direct conformance with the community character statement included in the Area Plan.**

V.27.5 Any lighting proposed must show how it is consistent with current best practice “dark-sky” standards. In subdivisions established after the date of final adoption of this plan the use of streetlights will be minimized.

**All new lighting will include modern shielded fixtures which prevent spill-over and glare and are dark-sky compliant. Furthermore, Arconic has committed to replacing older outdated fixtures which are identified by residents as “problem” fixtures. No new street lights are proposed and internal site lighting will be provided for safety and security purposes only.**

V.27.8 All landscape designs will emphasize the use of native and low water requirement vegetation.

**New landscaping will include drought tolerant species that will provide effective screening of the Arconic operations. Additionally, landscape areas will utilize automatic drip irrigation systems which reduce water usage and irrigation water lost to evaporation and over-spray.**

**From:** Mike Railey  
**To:** [Bronczyk, Christopher](#); [Mullin, Kelly](#)  
**Subject:** FW: Dodge Quench Oil 811 #2  
**Date:** Friday, May 18, 2018 2:52:49 PM  
**Importance:** High

---

FYI. Here is the official email from the oil company verifying no CAPP ingrediaents.

---

**From:** Diehl, Lynzie <[Lynzie.Diehl@arconic.com](mailto:Lynzie.Diehl@arconic.com)>  
**Sent:** Friday, May 18, 2018 1:52 PM  
**To:** Mike Railey <[mrailey@rubicondesigngroup.com](mailto:mrailey@rubicondesigngroup.com)>; [agray@grayassociates.net](mailto:agray@grayassociates.net)  
**Cc:** Bilskis, Patricia A <[Patricia.Bilskis@arconic.com](mailto:Patricia.Bilskis@arconic.com)>  
**Subject:** FW: Dodge Quench Oil 811 #2

Hi Mike,

See below.

Good to go! Thanks!

**From:** [jimtmather@gmail.com](mailto:jimtmather@gmail.com) [<mailto:jimtmather@gmail.com>] **On Behalf Of** Jim Mather  
**Sent:** Friday, May 18, 2018 1:49 PM  
**To:** Diehl, Lynzie <[Lynzie.Diehl@arconic.com](mailto:Lynzie.Diehl@arconic.com)>  
**Cc:** Mike Pearce <[mikep@wsdodgeoil.com](mailto:mikep@wsdodgeoil.com)>; Andrew Lonberger <[andy@wsdodgeoil.com](mailto:andy@wsdodgeoil.com)>; Ed Prado <[edp@wsdodgeoil.com](mailto:edp@wsdodgeoil.com)>  
**Subject:** EXT: Dodge Quench Oil 811 #2

Lynzie,

This email is to confirm our conversation regarding CAPP ingredients.

There are no CAPP ingredients in our proprietary quench oil: Dodge Quench Oil 811 #2.

Thank you for the opportunity to partner with Arconic.

-Jim Mather

*Jim Mather*  
*Certified Lubrication Specialist 43034 42405*  
*W.S. Dodge Oil*  
*Mobile (310) 200-6346*  
[jim@wsdodgeoil.com](mailto:jim@wsdodgeoil.com)  
[www.wsdodgeoil.com](http://www.wsdodgeoil.com)

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## **Quenching Process Information;**

### **Water;**

A closed loop system that uses a small make-up water line, primary water loss is through evaporation. Water quenching is a rapid cooling method of the part, but it struggles during the initial stage. During this stage water simply does 'not get to' the hot work pieces efficiently, resulting in a non-uniform quench. Therefore, water quenching has its limitations for our industry.

### **Polymer;**

A closed loop system where the pH of the system is monitored and controlled. Polymer solution is a bridge in capabilities between water and oil. There is a need for a quenching speed, in between water and oil, to avoid cracking of the workpieces.

### **Forced Air;**

This method is primarily used for thin sections of steel with high hardenability. The velocity of the air is variable but does result in a variation of cooling power which needs to be controlled via a baffle system. The forced air method uses large fan/motor arrangements.

### **Oil;**

Oil quenchants are combined with additives to create the ideal cooling power for the process. The parts are immersed in an oil bath. The oil is contained in a closed loop system, with a general monitoring of the oil condition. The ideal quenchant will have a high initial quenching effect during the vapor phase and boiling range, before cooling slowly through the final convection range. The slow down of the quench effect at the end of the process reduces the distortion or cracking possibility, this is critical for crack sensitive alloys. The parts that are treated via this method are critical aircraft components. The temperature of the oil will be held at 160°F ±10°F, with a maximum oil quench bath temperature rise of 40°F, which is significantly lower than the flash point of the oil. The system is cooled by a closed loop cooling system.

### **General Quench Process;**

The parts are loaded into the furnace to undergo a solution treatment, temperature range 1400°F-2150°F, at the completion of the furnace cycle, a manipulator would retrieve the parts and lower them into a quench bath within 45 seconds or less. The transfer time of the system is critical to ensure the parts obtain their properties. Each quench bath uses an agitation system to distribute the heat quickly and uniformly, enabling a uniform temperature and quenching effect throughout the tank. Agitation speed varies when the system is loaded or unloaded.

### **Summary;**

Each method is individual to the mechanical and metallurgical properties desired by the customers for the part, the properties are developed by the various quenching techniques. The technique used by Arconic is immersion in a single quenchant, cooling to near room temperature without interruption. Each process is tightly controlled to meet the customer specifications.

#### Quench Waste;

In the unlikely event that we need to empty the tanks for a major refurbishment we would employ a certified contract service provider. Clean Harbors is a contractor we would identify for this type of work. Note – these are closed loop systems, no waste or fluids are discharged.

#### **Outside/Indoor Storage;**

After the planned expansion is completed, the only possible item to be stored outside would be wooden pallets used for shipping of equipment/product.

Forge tooling and in-process product staging would be located under the covered awnings.

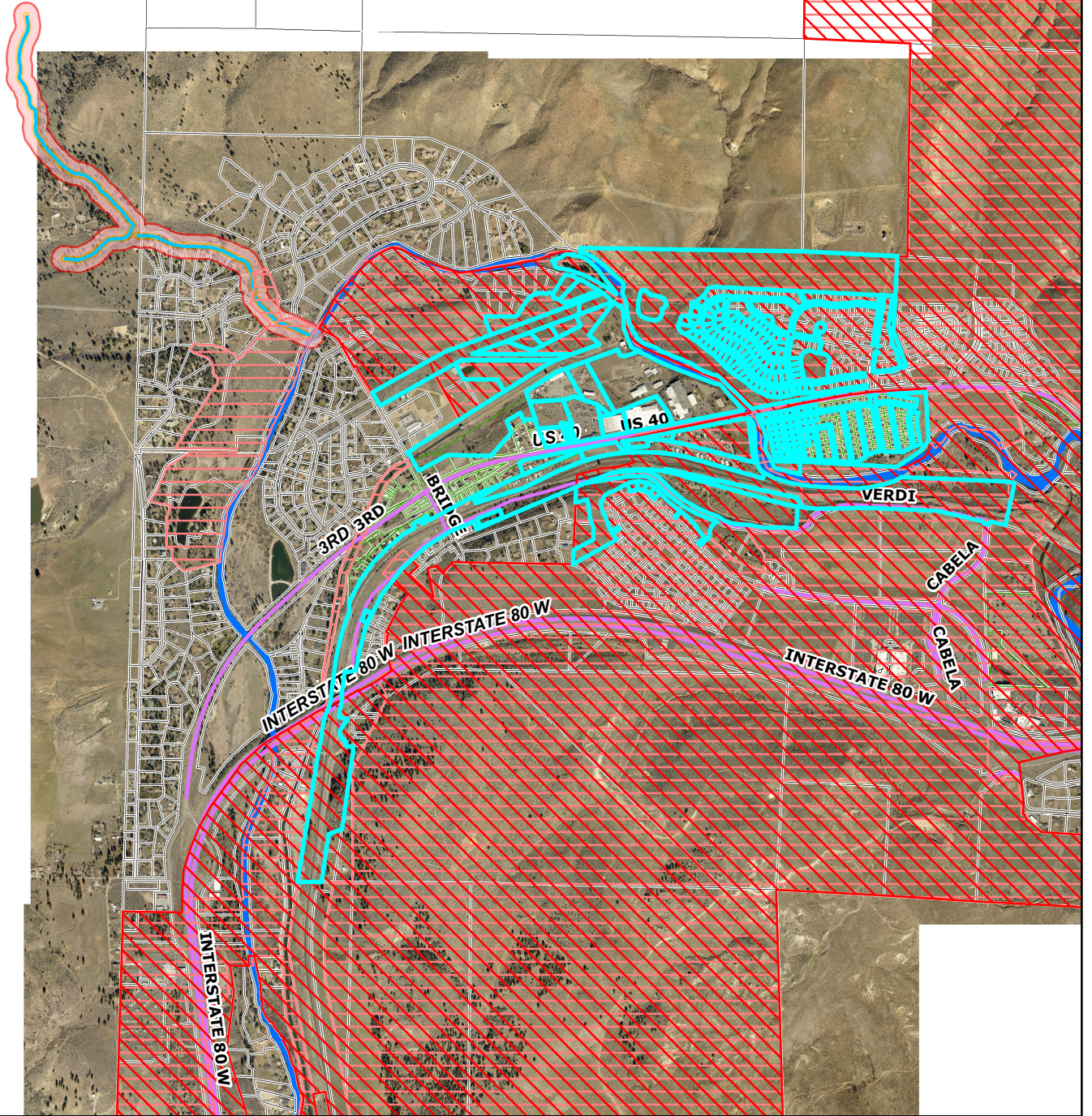
Indoor Storage – this would be the finished product, ready for shipping product, critical maintenance spares that are currently outside.

#### **Elevations of Other Structures;**

All proposed additional structures, other than HT, will be less than 35ft in height. All proposed additional structures will maintain similar features and elevations as illustrated on the HT building.

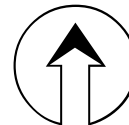
#### **Forge Equipment in Main Building;**

Clarification – all existing equipment will not be relocated. Relocating any of the forge equipment would require requalification of product. This is an expensive process and undesirable.



WSUP18-0008 Arconic  
850 Feet - 177 Properties

02500  
Feet



Community Services  
Department



Post Office Box 11130  
Reno, Nevada 89509





## MASTER PLAN – SPECIAL USE PERMIT

Prepared by:



**MAY 15, 2018**

# ARCONIC MASTER PLAN

## SPECIAL USE PERMIT APPLICATION

**Prepared for:**

Schlosser Forge Company

1 Eric Circle

Verdi, Nevada 89439

**Prepared by:**

Rubicon Design Group, LLC

1610 Montclair Avenue , Suite B

Reno, Nevada 89509

(775) 425-4800

**May 15, 2018**



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### Appendices:

- Washoe County Development Application
- Owner Affidavit
- Special Use Permit Application
- Material Safety Data Sheet
- Property Tax Verification
- Engineering Reports

### Map Pocket:

- Phasing Plan
- Preliminary Civil Improvement Plans
- Preliminary Landscape Plan
- Preliminary Building Elevations



**ARCONIC**  
Innovation, engineered.

---

**Attachments:**

Preliminary Title Report  
Preliminary Soils Research Report

## Introduction

This application includes the following requests:

- A **Special Use Permit** to allow for the establishment of a Heavy Industrial use within the Industrial zone.

## Project Location

Arconic currently operates a plant at the subject property located at 1 Eric Circle in Verdi (APN # 038-060-36). Specifically, project site consists of 21.38± acres and is located on the north side of Old Highway 40, south of the Truckee River and east of downtown Verdi. Figure 1 (below) depicts the project location.

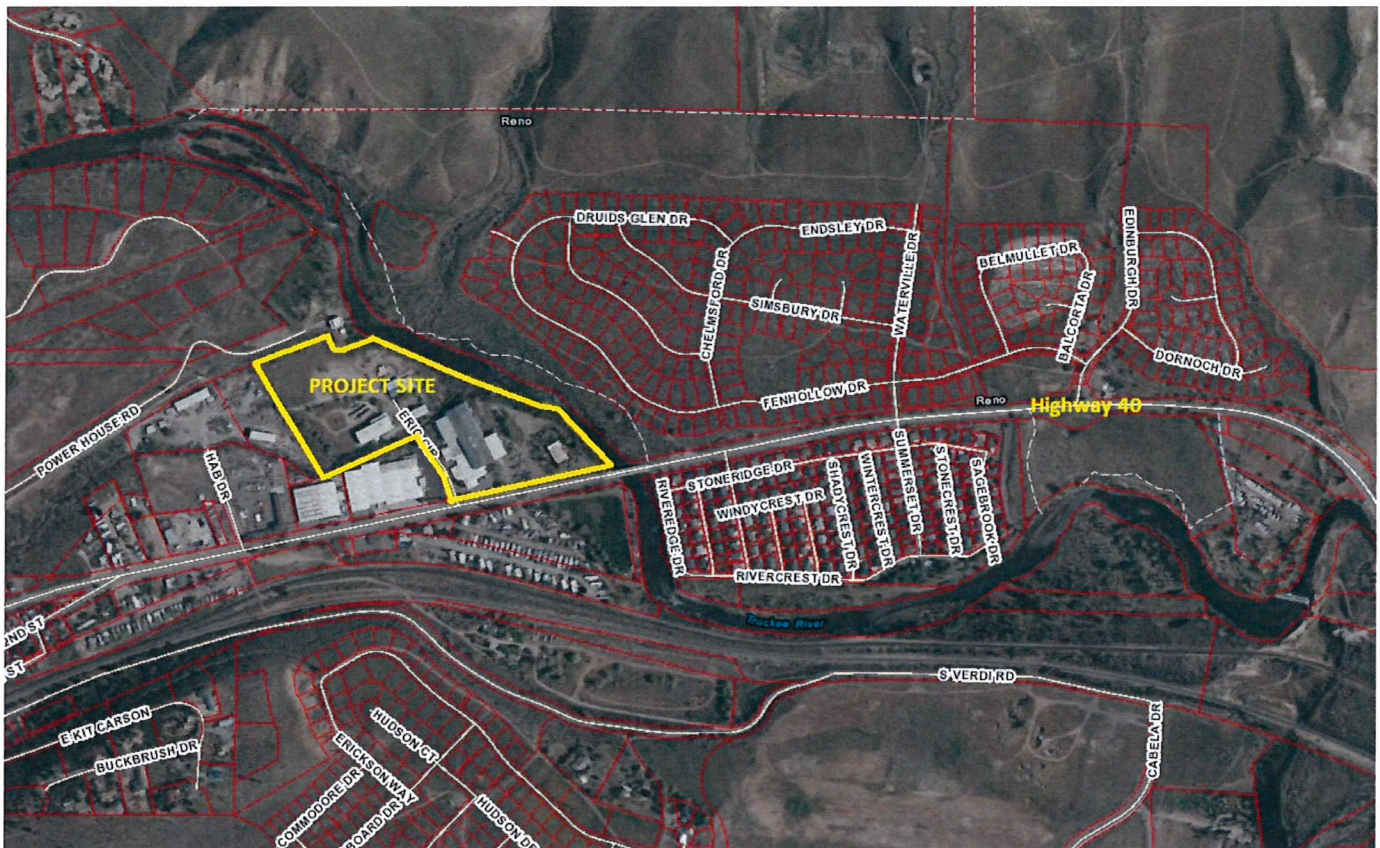


Figure 1 – Vicinity Map



### Existing Conditions

The Arconic property is located within the Verdi Area Plan where it is designated Industrial. Consistent with the Industrial Master Plan designation, the site also includes Industrial zoning. Figure 2 (below) depicts the Master Plan designations of the site and surrounding area while Figure 3 (following page) depicts the adopted zoning.

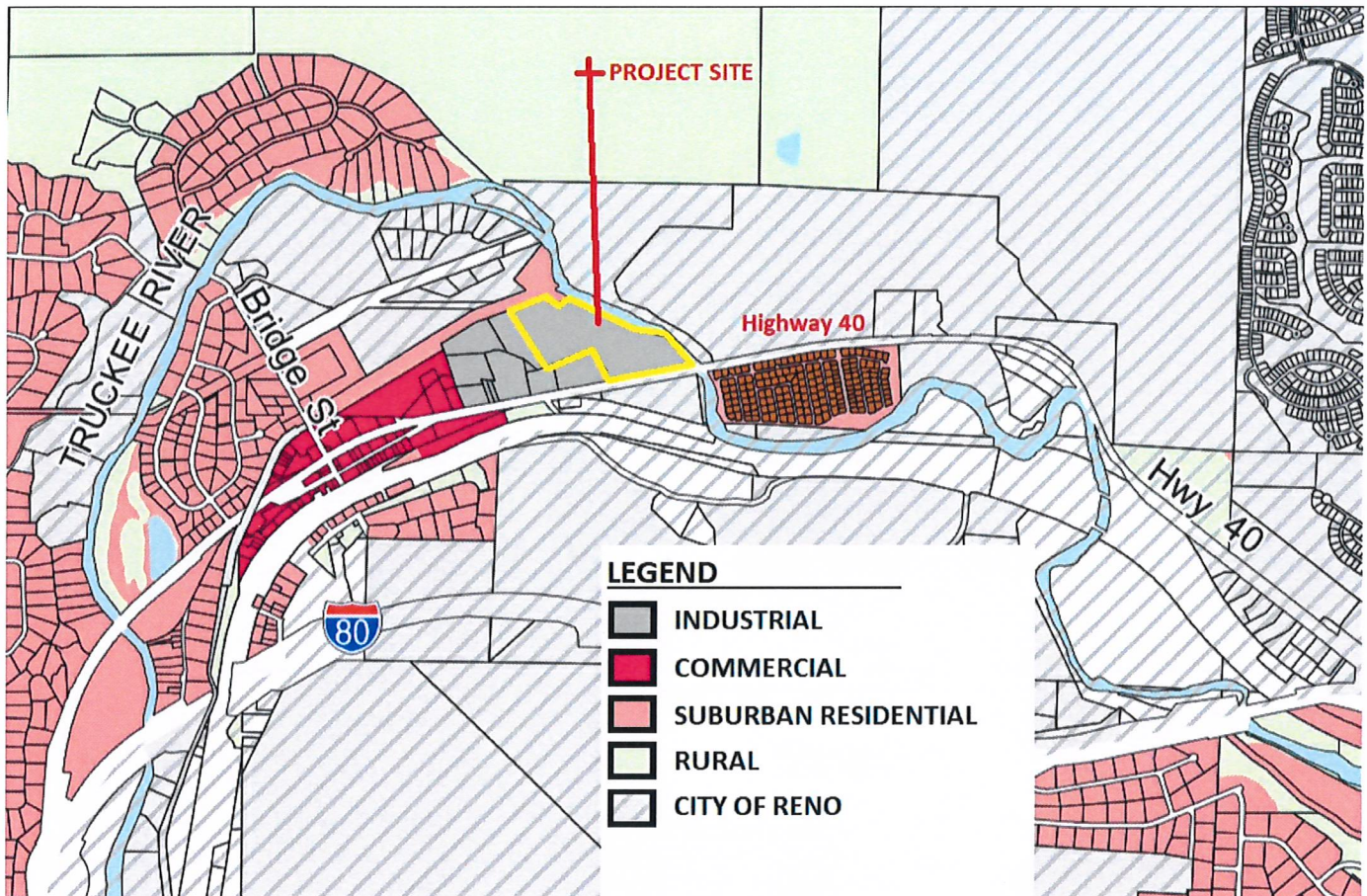


Figure 2 – Master Plan Land Use

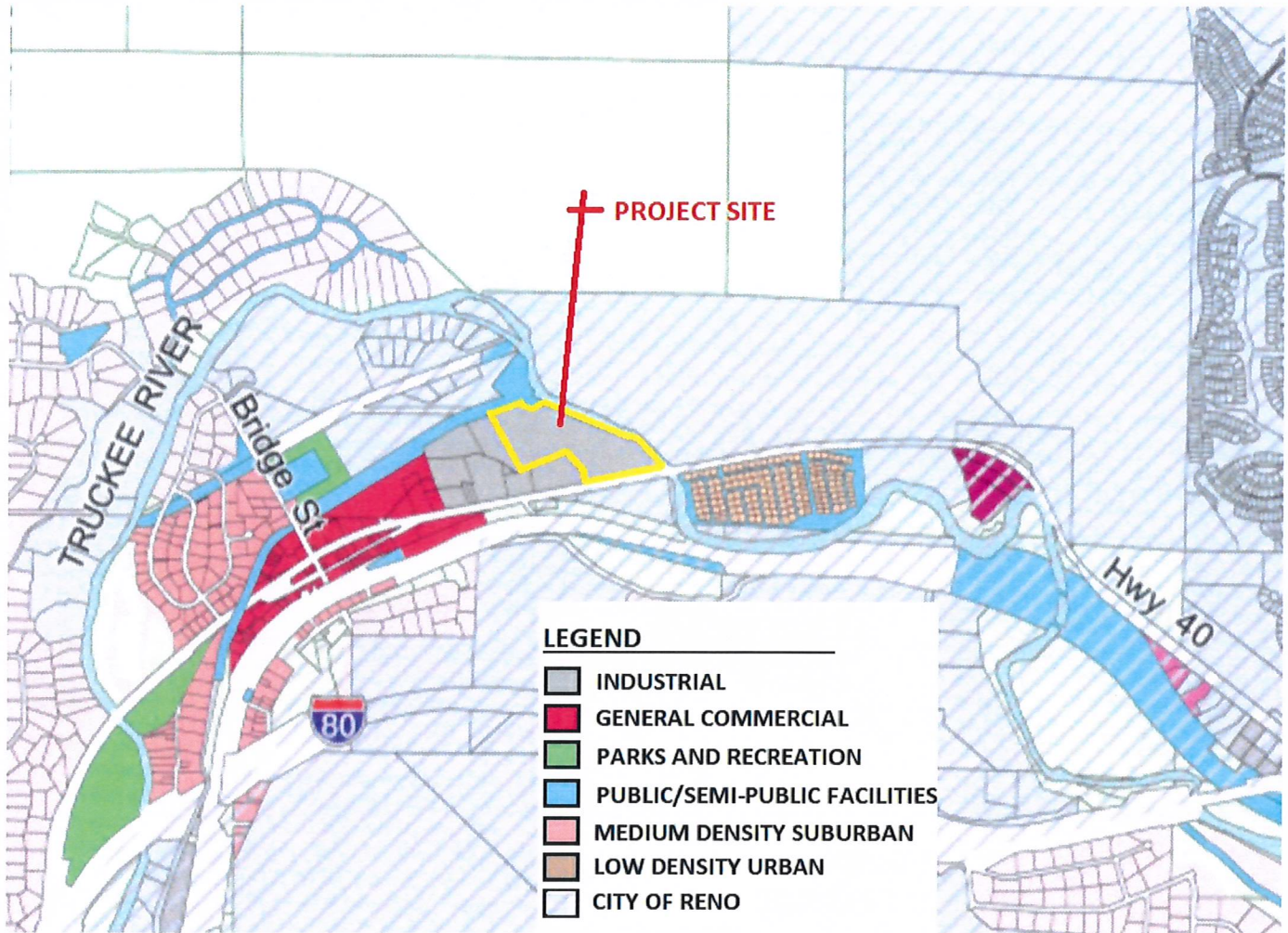


Figure 3 - Zoning

Access to the project site is via Eric Circle which connects with Old Highway 40 at the southwest portion of the site. Eric Circle is a private roadway easement which essentially functions as a driveway for the existing Arconic operations and the industrial use directly west of the site. A diversion channel from the NV Energy power plant located west of the site crosses the central portion of the Arconic property. This is a man-made diversion and is not a significant hydrologic resource, as defined by Washoe County.

The subject site has been in operation as an industrial use since 1967 and includes over 94,000 square feet of existing industrial buildings. Schlosser Forge Company (operating as Arconic) acquired the property in 2013 and currently operates permitted industrial activities at the site. Figure 4 (below) along with 5 and 6 (following pages) depict the existing onsite conditions.

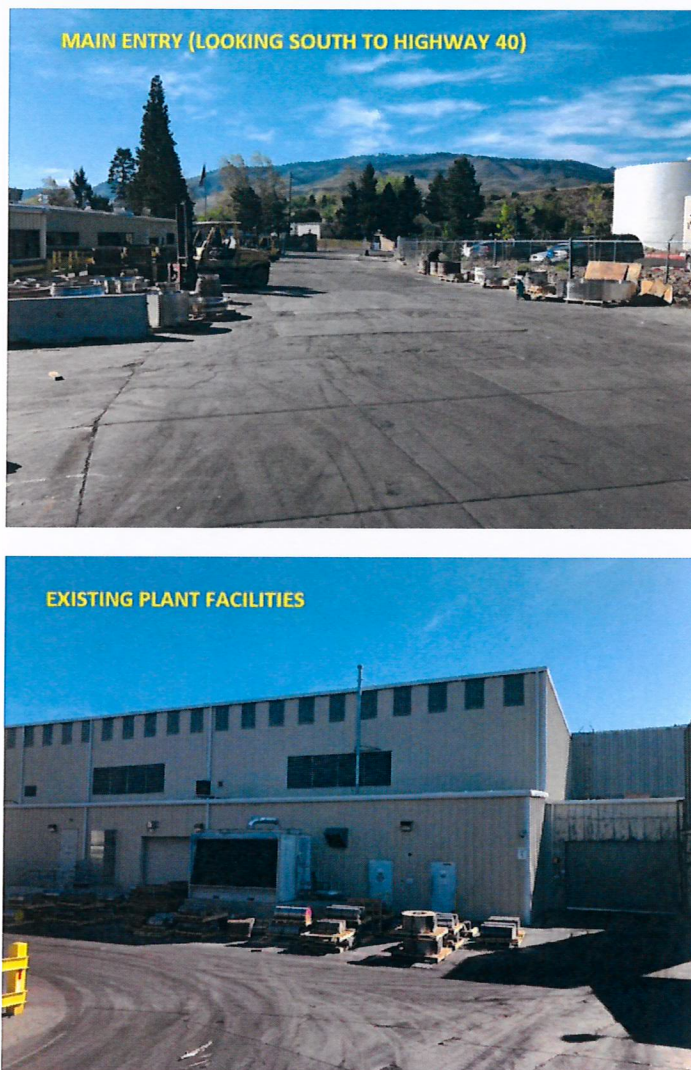


Figure 4 – Existing Conditions



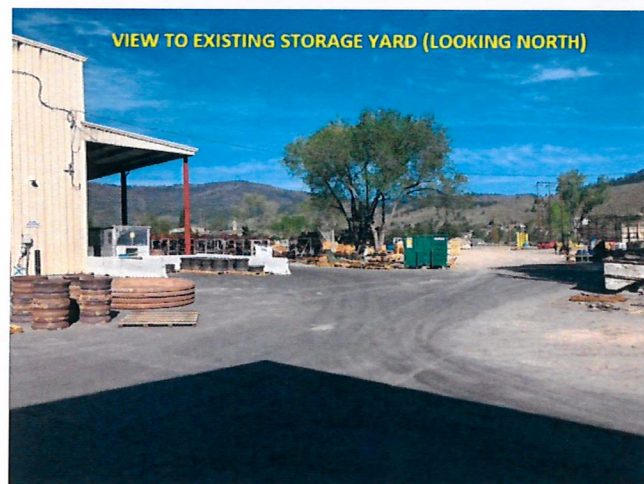
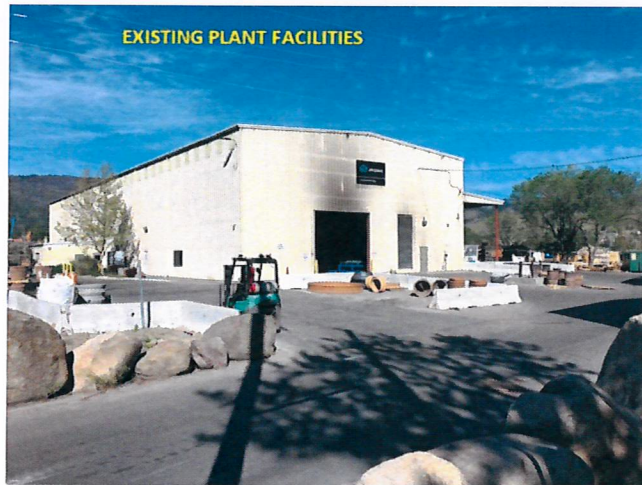
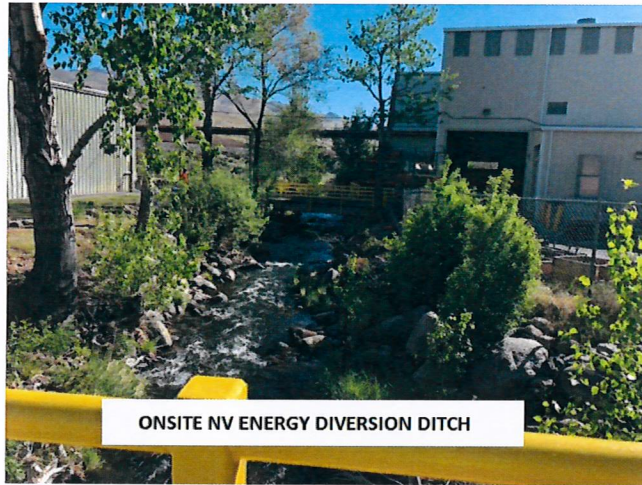


Figure 5 – Existing Conditions

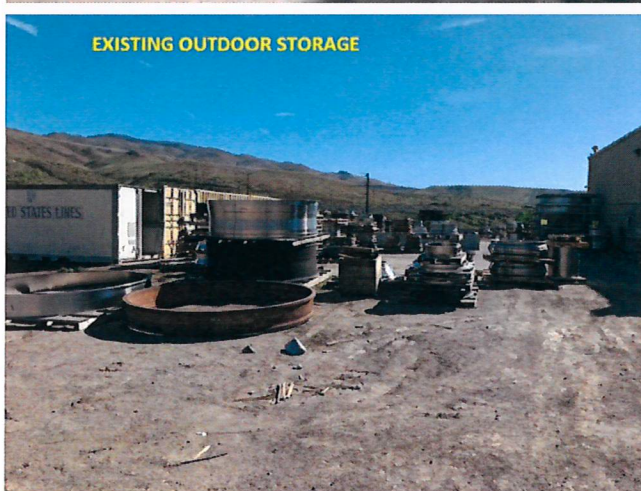
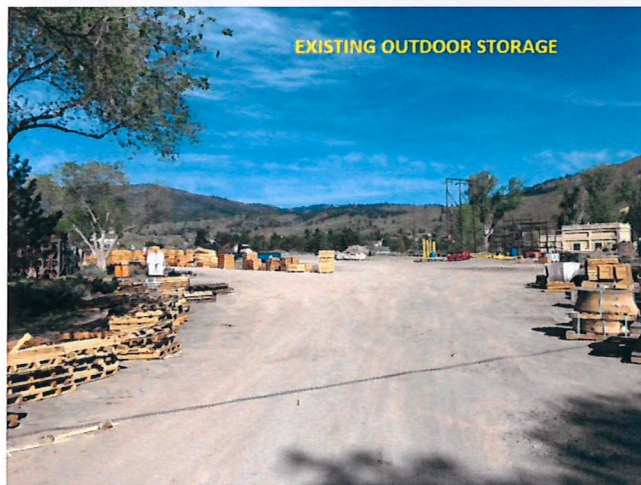
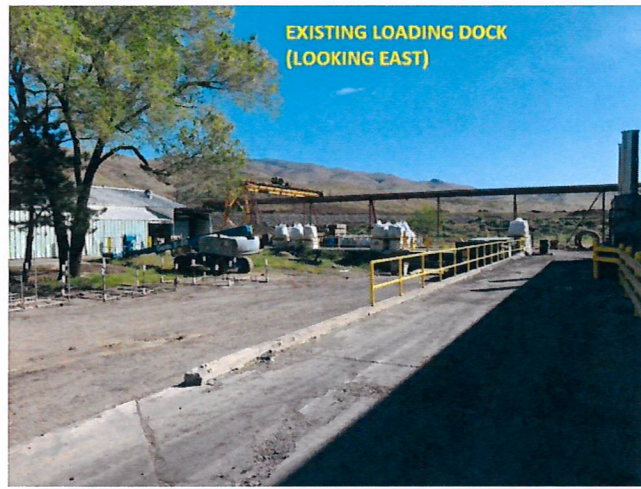


Figure 6 – Existing Conditions

## **Project Description**

As previously noted, Arconic has been operating at the Verdi site since 2013. Industrial use has occurred at the site since the 1960's. As such, much of the site was developed prior to the adoption of the current Washoe County Development Code. Thus, current operations are considered to be a permitted "grandfathered" use.

The Arconic operations are considered to be a heavy industrial use per Washoe County definition. Heavy industrial use requires the approval of a Special Use Permit (SUP) within the Industrial zone, per Table 110.302.05.4. Arconic is planning to expand current operations which triggers the need for a SUP for the new facilities. As part of this, a long-range master plan is being proposed which eliminates the potential for piecemealing development of the site and provides for a comprehensive plan that can be reviewed under a single SUP.

Arconic's Verdi facility produces alloys used in the aviation industry. Raw materials (Ni, Ti based alloys) are pre-heated in gas fired furnaces with an operating range of 1,000 to 2,200 degrees Fahrenheit. The material is then transferred with fork lifts to a 3,200-ton hydraulic press where the material undergoes a forging operation to flatten the billet and create a ring using a punch and pierce method. The product is then air cooled prior to being transferred to conditioning where any defects are removed. The next operation is ring rolling; the product returns to the forge building and is placed into the forge furnaces to be pre-heated. After pre-heat the product is transferred to the ring mill where the outer and inner diameter are manipulated to final sizes. Once cooled, the product is transferred to the heat treatment department where it will undergo a process to obtain final mechanical properties. This could be a combination of an age cycle and/or solution and quench cycle. The age and solution are both performed in gas fired furnaces. The quench cycle is either forced air cool, water, or polymer quench. The final operation is a CNC machining operation to meet the customer's Condition of Supply (COS) drawings.

The previous paragraph is a summary of the current operations at the Verdi plant. The master plan being proposed with this SUP consists of four phases. Each of these phases is described below:

- **Phase 1**

Phase 1 of the master plan includes various components that are slated to begin immediately following SUP approval. The first will be a new heat treatment building expansion. This facility will be located just north of the existing heat treatment building in the central portion of the site.

At the new heat treatment building, product will undergo the age or solution and quench cycle to obtain the desired mechanical properties as specified by a customer. The gas fired furnaces that will be installed have an operating range of 930 to 2,150 degrees Fahrenheit with a uniformity of  $\pm 10$  degrees. Maximum load in the furnaces is 14,000 pounds with a working volume of 186-inches by 144-inches by 60-inches. The quench process will be an oil-based quench with the oil temperature being controlled at 160 degrees Fahrenheit with a maximum temperature rise of 40 degrees Fahrenheit. The oil temperature will be controlled by a cooling tower/heat exchanger system.

A second component of Phase 1 will include covered tooling storage. This is a location where the tooling for the press and ring rolling operations can be stored under cover to protect against environmental factors. A staging area for product will be developed to provide a location for product to be held both prior to and after the heat treatment operations.

- **Phase 2**

Phase 2 will include a machine shop expansion adjacent to the existing machine shop at the eastern portion of the site. The building will house multiple CNC machines to complete final machining operations. These machines will be capable of machining the full range of products offered by Arconic.

Along with the machine shop, a post-forge inspection building will be constructed adjacent. The post forge inspection will contain blue (or white) light inspection equipment to conduct inspection of product prior to the heat treatment operation. This equipment will be housed in a clean, temperature-controlled environment.

- **Phase 3**

Phase 3 of the master plan will include a further expansion of the heat treatment facility. Located adjacent to the Phase 1 expansion, the Phase 3 expansion will essentially be identical to the Phase 1 facility described previously with the exception that the oil quench may be replaced by polymer or water.

- **Phase 4**

The final phase of the master plan will include an additional machine shop expansion. Like Phase 2, the machine shop will house equipment needed to complete final machining of product produced at Arconic. Additionally, Phase 4 will include a shipping and storage building to house finished product prior to dispatch from the Arconic plant.

Figure 7 (following page) provides an overall site plan that depicts the various master plan phases included with this SUP request. The buildings on the plan are labeled with either an “E” for existing or “P” for proposed and collate with the improvements previously described within the individual phases.

The existing onsite operations and buildings such as the primary offices, parking areas, access, etc. will remain unchanged. Therefore, the site plan included in Figure 7 focusses primarily on the areas of new development/expansion. New improvements such as paving, etc. are called out along with areas that currently exist. Full-size versions of this plan are included in the attached map pocket. Also attached are preliminary civil improvement plans that provide detailed site information and specifics.

As depicted in Figures 4 through 6, buildings within the Arconic site are industrial in character. Elevations for the new heat treatment facility included in Phase 1 are depicted in Figures 8 and 9. New buildings within Phases 2, 3, and 4 will be similar in architectural style and will be designed to complement both existing and newly developed structures. A condition to this effect can be added to the SUP to address future buildings.

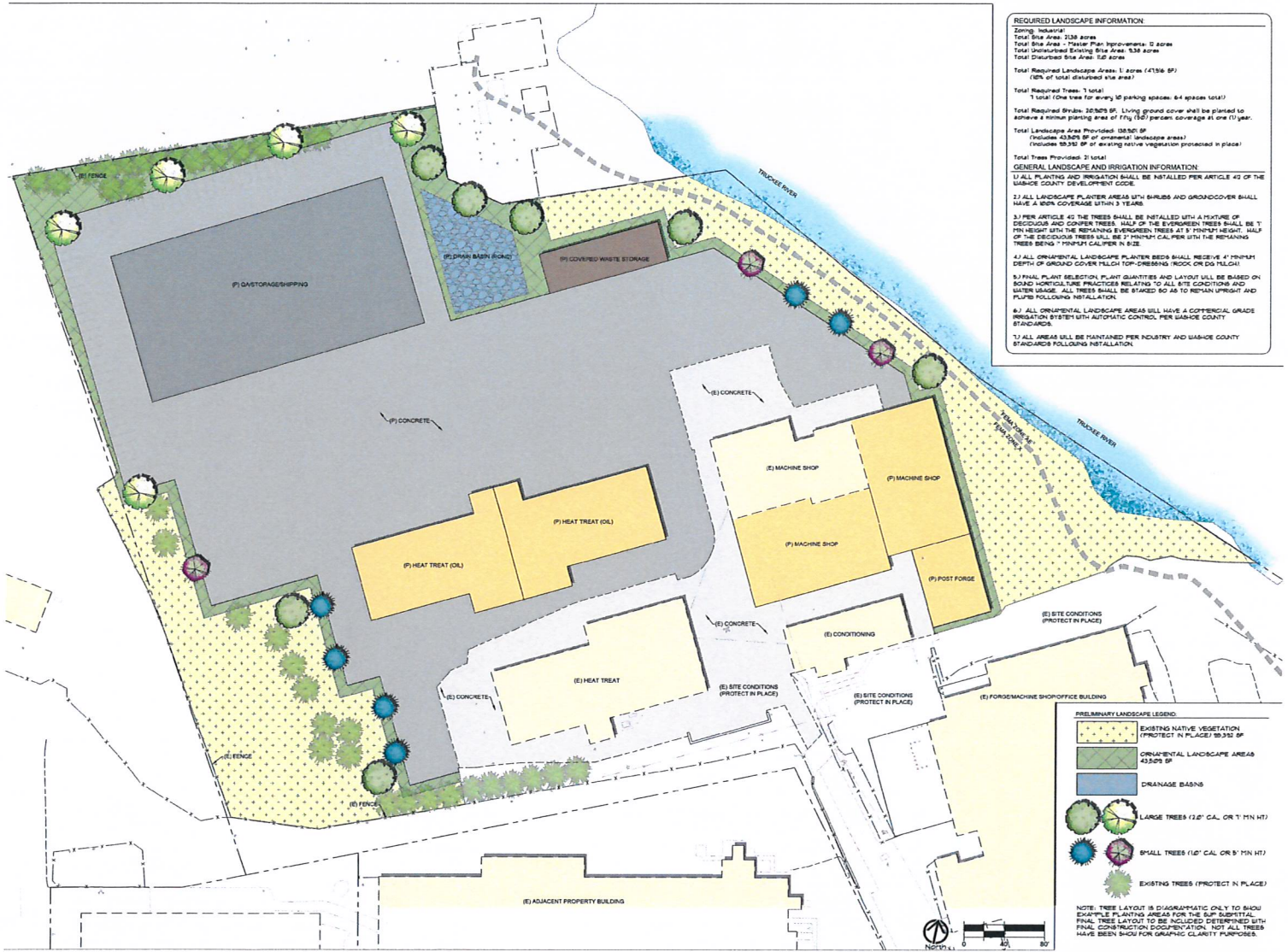
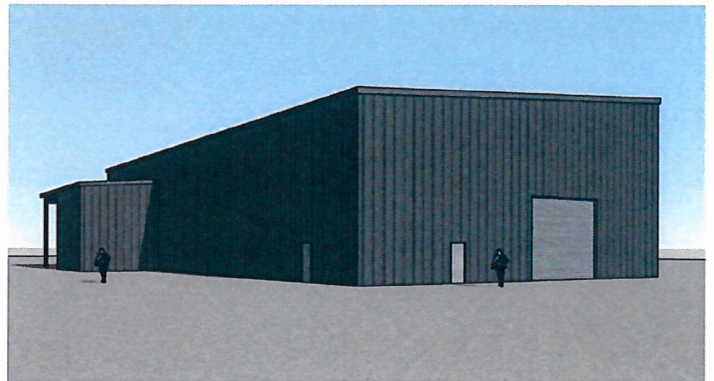
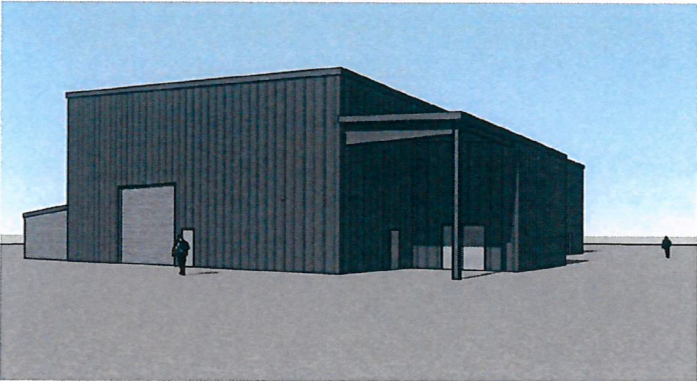
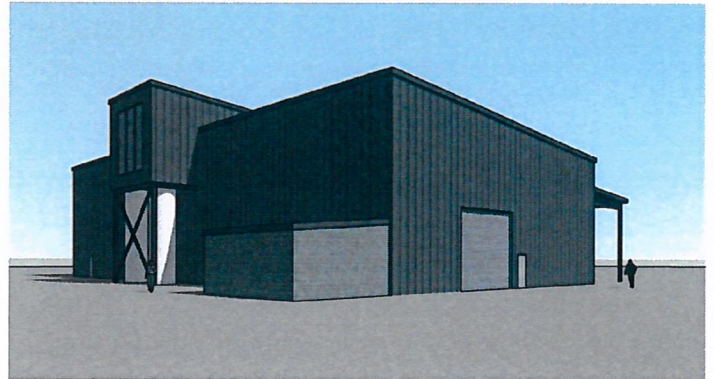
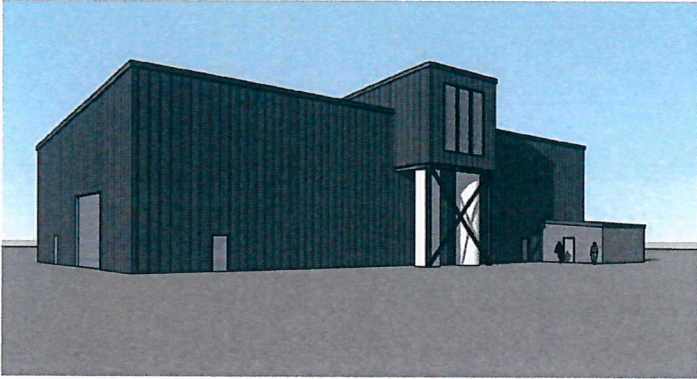


Figure 7 – Preliminary Site Plan



**ARCONIC**  
Innovation, engineered.



ARCONIC phase one Heat Treat

1 ERB DR, VERO, FL 34084

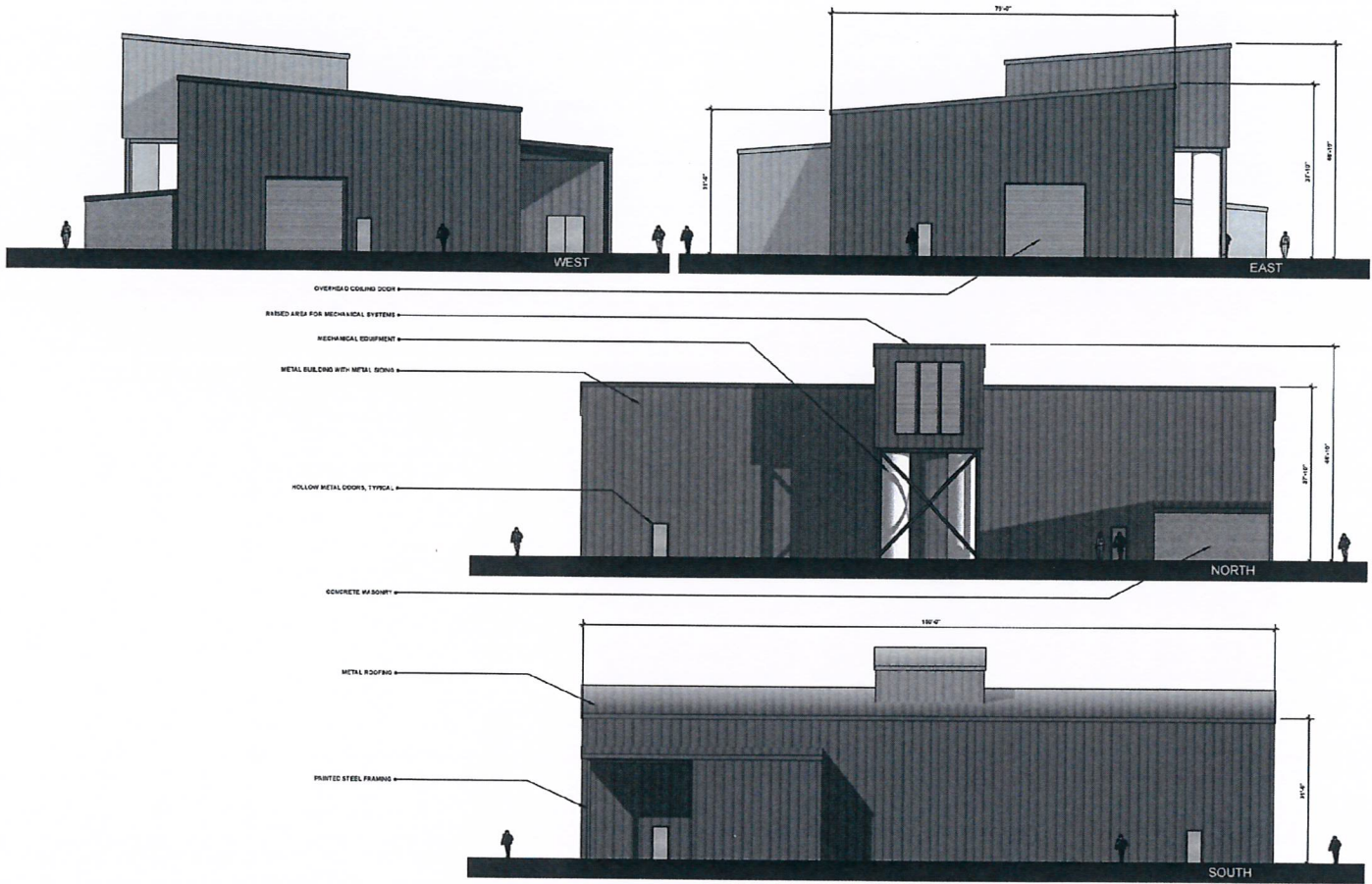
PERSPECTIVES

NO SCALE

2

MAY 10, 2018

Figure 8 – Heat Treatment Expansion Elevations



NOTE: COLORS ARE TENTATIVE AND YET TO BE DETERMINED

**ARCONIC phase one Heat Treat**

TRICIRCLE, VIRGO, NEVADA

**ELEVATIONS**

SCALE: 1/8" = 1' - 0"

**3**

FEB 18, 2018

Figure 9 – Heat Treatment Expansion Elevations

As discussed previously, the heat treatment expansion is considered a “heavy industrial” use per the Washoe County Development Code. Additionally, the oil used during the oil quench process is considered a hazardous material which also triggers a heavy industrial classification. Thus, the SUP included with this application will cover the heat treatment expansion and future phases of development at the Arconic site, as previously described. The existing Arconic operations at the Verdi site are operating under current permits issued by Washoe County, the State of Nevada, and Federal government and will not be altered by this SUP request.

The uses being added to the site are consistent with those already occurring. Additionally, industrial use is located immediately west of the site and is complementary to the Arconic operations. Overall impacts will be relatively minor in terms of traffic, etc. Parking for employees and visitors already exists along the southern boundary of the site and is sufficient to accommodate the growth within the proposed master plan. As depicted in Figure 7, new landscaping improvements will be added within the new master plan area providing full compliance with code for new operation areas. Lastly, the new improvements will not greatly increase traffic volumes in and out of the plant. Trip generation is not expected to alter significantly and does not trigger the need for a traffic impact report as AM and PM peak hour trips are well below the 80-trip threshold.

The proposed industrial uses are complementary to existing industrial operations to the west. Residential uses to the south (trailer park) will not be visually impacted by the proposed additions within the Arconic facility. Existing buildings and operations will screen the new development from view of Old Highway 40 and uses to the south. The Truckee River forms the northern and eastern boundaries of the site. This also creates a significant natural buffer between Arconic and planned residential uses within the City of Reno to the north/west. Furthermore, future residential uses are situated significantly higher (20 to 40 feet) than the Arconic property. As a result, views from future homes will not be obstructed by new development within the Arconic parcel. New landscaping around the northern and western perimeter will provide for further screening of new industrial uses within the Arconic site.

The new master plan proposed with this SUP predominantly located at the northern portion of the site. Currently, this area is largely undeveloped and utilized for outdoor storage and staging (refer to previous Figures 4 through 6). As depicted in Figure 7, the master plan calls for new paving and improvements to be developed concurrently with the new buildings. This, coupled with new landscaping around the perimeter of the site, will serve to greatly enhance the aesthetics of the site, reduce dust, and provide for a much higher level of organization. This will also ensure full compliance with current Washoe County Development Code requirements.

No new signage is proposed with this SUP. An exception to this is internal directional, safety, and building identification signage consistent with the current Arconic operations and as required by the State of Nevada and federal regulations. Lighting will be provided on buildings for safety and security purposes. All new lighting will include cut-off fixtures to ensure that spill-over and glare do not occur upon adjoining properties.



Infrastructure needed to serve the project is available at the project site and will be extended as necessary to serve the new uses. Arconic is currently served by the Verdi Water Company and will likely connect to the Truckee Meadows Water Authority system with future improvements planned in the area. The project is served by municipal sanitary sewer.

Although highly toxic and/or dangerous chemicals are not used for the processes occurring at Arconic, the oils used for the quenching process are classified as a Class IIIB liquid. These are liquids having a closed cup flash point at or above 200 degrees Fahrenheit. A detailed material safety data sheet is included within the appendices of this report for review and comment by the Truckee Meadows Fire Protection District and Nevada Department of Environmental Protection.

The attached map pocket includes preliminary civil improvement plans, a landscape plan, phasing plan, and building elevations for the Phase 1 heat treatment facility. Additionally, a preliminary soils research report is included as an attachment to this document.

In conclusion, the Arconic master plan SUP provides for a long-term planned approach to development and ensures that piecemealing of expansions does not occur. As described in this report and detailed on the included plans, screening will be provided to ensure compatibility with adjoining uses and consistency with Development Code standards. The uses being proposed are consistent with the existing Industrial zoning and are an extension of industrial uses that have operated onsite for well over 40 years. Arconic has proven its ability to operate onsite without generating negative impacts since 2013 and this SUP will provide Washoe County with a mechanism to implement additional conditions, as necessary.

### **Special Use Permit Findings**

In order to approve a Special Use Permit, the following findings must be made. Responses are provided in **bold**.

1. Consistency. The granting of the special use permit is consistent with the policies and maps of the Comprehensive Plan Elements and the Area Plan in which the property is located.

**This SUP and the uses proposed are consistent with the existing Industrial Master Plan and zoning designations adopted by Washoe County and are simply an extension of permitted activities that are currently operating onsite.**

2. Adequate Public Facilities. Adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities must exist or will be provided.

**The project site is already served by existing municipal infrastructure and services. The proposed expansion(s) will not result in the need for significant improvements. Any improvements needed to serve future uses within the Arconic site will be at the expense of the developer.**

3. Site Suitability. The site must be physically suitable for the proposed use and for the intensity of development.

**The area included within the master plan is well suited for the expansion of existing uses occurring onsite. The property is flat and located outside of the FEMA flood zone.**

4. Issuance Not Detrimental. Issuance of the permit may not be significantly detrimental to the public health, safety or welfare; have a detrimental impact on adjacent properties; or be detrimental to the character of the surrounding area.

**The proposed master plan uses are consistent with the existing Industrial zoning as well as existing industrial uses occurring within the area and onsite. By providing a master plan approach to the site, Washoe County and surrounding properties are provided with long-term assurances on how the property will be developed and what uses will be occurring. This ensures that piecemeal development does not occur.**

**New site and landscaping improvements will significantly add to the aesthetics of the property and the area as a whole. Negative impacts to surrounding properties are not anticipated. The expansion(s) is an extension of existing uses that have occurred onsite for many years, without incident. This SUP will not create significant impacts in terms of traffic, noise, etc. In fact, from view of Highway 40, the Arconic facility will essentially appear as it does today (existing buildings screen areas within the SUP master plan).**

# APPENDICES

## Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

<b>Project Information</b>		Staff Assigned Case No.: _____	
Project Name: <b>Arconic Master Plan</b>			
Project Description: A SUP to allow for the establishment of a heavy industrial use(s) within the Industrial zone. Refer to attached report for a highly detailed project description.			
Project Address: 1 Eric Circle, Verdi, NV 89439			
Project Area (acres or square feet): 21.38 acres			
Project Location (with point of reference to major cross streets <b>AND</b> area locator): <b>North side of Old Highway 40, east of Verdi</b>			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
038-060-36	21.38 acres		
Section(s)/Township/Range: Section 8, T19N, R18E			
Indicate any previous Washoe County approvals associated with this application: Case No.(s).			
<b>Applicant Information</b> (attach additional sheets if necessary)			
<b>Property Owner:</b>		<b>Professional Consultant:</b>	
Name: Schlosser Forge Company		Name: Rubicon Design Group, LLC	
Address: 1711 Arrow Route		Address: 1610 Montclair Ave., Suite B	
Rancho Cucamonga, CA	Zip: 91730	Reno, NV	Zip: 89509
Phone: 775-770-1406	Fax:	Phone: 775-425-4800	Fax:
Email: lynzie.diehl@arconic.com		Email: mrailey@rubicondesigngroup.com	
Cell: 775-770-1406	Other:	Cell: 775-250-3455	Other:
Contact Person: Lynzie Diehl		Contact Person: Mike Railey	
<b>Applicant/Developer:</b>		<b>Other Persons to be Contacted:</b>	
Name: Same as Above		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	
<b>For Office Use Only</b>			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

July 1, 2017

Property Owner Affidavit

Applicant Name: ARCONIC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA )
COUNTY OF WASHOE )

I, MARK QUATTRIN (please print name)

being duly sworn, depose and say that I am the owner\* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true, and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Building.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 038-060-36

Printed Name MARK QUATTRIN

Signed [Signature]

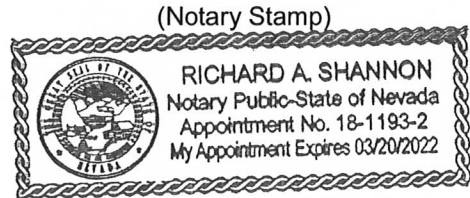
Address 1 ERIC CIR.

VERDI, NV 89439

Subscribed and sworn to before me this 15th day of MAY, 2018.

[Signature] Notary Public in and for said county and state

My commission expires: MARCH 20, 2022



\*Owner refers to the following: (Please mark appropriate box.)

- Owner
Corporate Officer/Partner (Provide copy of record document indicating authority to sign.)
[X] Power of Attorney (Provide copy of Power of Attorney.)
Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
Property Agent (Provide copy of record document indicating authority to sign.)
Letter from Government Agency with Stewardship

**SPECIAL POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS that Schlosser Forge Company, (“Schlosser Forge”) a California corporation, does hereby grant unto the Plant Manager of Schlosser Forge, Verdi, Nevada facility (the “Facility”) this Power of Attorney, authorizing said Plant Manager, as attorney-in-fact, to execute, on behalf of the Facility such environmental permit applications, reports and other information requested by the appropriate Federal, State, Municipal and governmental environmental regulatory agencies as he/she in his/her capacity as Plant Manager of the Facility deems necessary or appropriate to the conduct of the business of Schlosser Forge.

The rights, powers and authority of said attorney-in-fact granted herein shall commence on the date hereof and shall remain in full force and effect until revoked.

Furthermore, to the extent that any other “Special Power of Attorney” documents have been executed prior to this date granting authority to an individual by name or by title to execute the documents described in this Special Power of Attorney, such prior authorizations are hereby revoked.

In Witness Whereof, this Power of Attorney has been executed on the 11<sup>th</sup> day of February 2015.

Schlosser Forge Company

By: [Signature]  
John Kenna  
Vice President

COMMONWEALTH OF PENNSYLVANIA      )  
  ) ss:  
COUNTY OF ALLEGHENY                     )

Before me, a Notary Public in and for the Commonwealth and County aforesaid, on this day personally appeared John Kenna known to me to be the Vice President of Schlosser Forge Company, and signed, acknowledged and delivered the foregoing Special Power of Attorney.

Witness my hand and official seal this 11<sup>th</sup> day of February 2015.

[Signature]  
Notary Public

COMMONWEALTH OF PENNSYLVANIA  
Notarial Seal  
Renee L. Sekely, Notary Public  
City of Pittsburgh, Allegheny County  
My Commission Expires Nov. 19, 2016  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

## Special Use Permit Application Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits.

1. What is the type of project being requested?

The SUP request included will allow for a comprehensive phased master plan for the existing Arconic industrial operations in Verdi. The SUP is needed to allow for the establishment of a heavy industrial use within the Industrial zone. The proposed heat treatment and oil quenching operations are considered a heavy industrial use by Washoe County.

Refer to the attached report for a detailed project description.

2. What currently developed portions of the property or existing structures are going to be used with this permit?

The southern and central portions of the property are developed with long-standing industrial uses currently operated by Arconic. This SUP will cover the northern portion of the property and will allow for expansion of existing onsite operations.

Refer to the attached report for a detailed description.

3. What improvements (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?

The project will include new structures, paving, landscaping, etc. on northern portions of the property. The site is already served by municipal utilities and services that can easily be extended to serve the expansion.

Refer to attached report and plans for additional details.

4. What is the intended phasing schedule for the construction and completion of the project?

Phasing for the project is explained in detail within the attached report.

5. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

The project site is flat and well suited for the type of industrial development proposed. Analysis of the site characteristics and potential impacts is reviewed in detail within the attached report.



6. What are the anticipated beneficial aspects or effects your project will have on adjacent properties and the community?

The proposed master plan will bring the new operations into full compliance with existing Development Code requirements. New paving and landscaping will greatly enhance aesthetics, reduce dust, and provide for effective screening.

Refer to attached report for a highly detailed analysis.

7. What will you do to minimize the anticipated negative impacts or effect your project will have on adjacent properties?

The new expansion area will not be visible from residential uses to the south. Landscaping around the perimeter of the site will screen Arconic from future residential uses to the north and west. Additionally, the Truckee River forms a large natural buffer between the site and residential uses. Future residential uses are also located at a much higher grade than the Arconic site.

Refer to attached report for a detailed impact analysis.

8. Please describe operational parameters and/or voluntary conditions of approval to be imposed on the project special use permit to address community impacts:

Operational parameters will match that of the existing permitted Arconic operations. 24-hour use will occur. However, the majority of night time activity occurs within enclosed buildings. Thus impacts related to onsite operations are properly mitigated.

9. How many improved parking spaces, both on-site and off-site, are available or will be provided? (Please indicate on site plan.)

Parking for the facility is already in place and operational. Refer to attached plans for additional details.

10. What types of landscaping (e.g. shrubs, trees, fencing, painting scheme, etc.) are proposed? (Please indicate location on site plan.)

A preliminary landscape plan is attached and provides specifics on proposed plantings, quantities, etc.

11. What type of signs and lighting will be provided? On a separate sheet, show a depiction (height, width, construction materials, colors, illumination methods, lighting intensity, base landscaping, etc.) of each sign and the typical lighting standards. (Please indicate location of signs and lights on site plan.)

Signs will be internal to the project site and will provide for directional, building identification, and safety purposes. Lighting will be provided for safety and security purposes and will be shielded to ensure that spill-over and glare do not occur upon adjoining properties.

12. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
------------------------------	--

13. Utilities:

a. Sewer Service	Municipal Sewer (City of Reno)
b. Electrical Service	NV Energy
c. Telephone Service	AT&T or Charter Communications
d. LPG or Natural Gas Service	NV Energy
e. Solid Waste Disposal Service	Waste Management
f. Cable Television Service	AT&T or Charter Communications
g. Water Service	Verdi Water Company

For most uses, the Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required:

h. Permit #		acre-feet per year	
i. Certificate #		acre-feet per year	
j. Surface Claim #		acre-feet per year	
k. Other #		acre-feet per year	

l. Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

The property is already served by Verdi Water Company. Water rights can be dedicated, as necessary, to serve future expansions.

14. Community Services (provided and nearest facility):

a. Fire Station	TMFPD Verdi Volunteer Station or Mogul Station (full station)
b. Health Care Facility	Saint Mary's Regional Med. Ctr., or Renown Regional Med. Ctr.
c. Elementary School	Verdi Elementary
d. Middle School	Billinghurst Middle School
e. High School	McQueen High School
f. Parks	Truckee River Greenbelt, Crystal Peak Park, Verdi School Park
g. Library	Washoe County Library - Verdi Branch
h. Citifare Bus Stop	N/A

**W. S. DODGE OIL Co., Inc.**

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	B

HMIS RATING

**MATERIAL SAFETY DATA SHEET**

NFPA RATING

**SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**TRADE NAME: **Quench Oil #811**MSDS NUMBER: **A**

GENERIC NAME: Petroleum lubricant

DATE ISSUED: 9-13-99

MANUFACTURER: W. S. Dodge Oil Co., Inc.

MANUFACTURER PHONE: 323-583-3478

ADDRESS: 3710 Fruitland Ave.

MANUFACTURER FAX: 323-583-0950

CITY, STATE, ZIP: Maywood, CA 90270-2110

EMERGENCY ONLY (Chemtrec): 800-424-9300

**SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS**

CHEMICAL NAME	CAS NUMBER	%	TLV	PEL
Mineral oil (Petroleum Hydrocarbon)	64741-97-5	variable	5 mg/m <sup>3</sup> *	5 mg/m <sup>3</sup>

\*NOTE: TLV/PEL apply when in a mist form.

**SECTION III - HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW: Petroleum derived mineral oil of generally low toxicity.

HMIS RATING: **Health: 1      Fire: 1      Reactivity: 0      Personal Prot.: B****POTENTIAL HEALTH EFFECTS:****ROUTES OF ENTRY:** Inhalation (mist), skin, eyes, ingestion**INHALATION:** Inhalation of mists can cause upper respiratory irritation. Inhalation of vapors is not normally a problem due to the low volatility of this product.**SKIN CONTACT:** May cause mild irritation. Repeated, prolonged skin contact may cause dermatitis. Also, the use of abrasive soaps or solvents to clean skin can promote dermatitis.**EYE CONTACT:** Mild irritant.**INGESTION:** Irritating to the GI tract. May cause nausea, vomiting and diarrhea.**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Chronic respiratory or skin diseases.**CARCINOGENICITY:** This product is not classified by NTP, IARC or OSHA.

Quench Oil #811

MSDS A

**SECTION IV - FIRST AID MEASURES**

**INHALATION:** Remove to fresh air. If coughing and irritation develop, call a physician.

**EYE CONTACT:** Flush with large amounts of water until irritation subsides. See a physician if irritation persists.

**SKIN CONTACT:** Wash with mild soap and warm water after each exposure. Remove grossly contaminated clothing and launder before re-use. If irritation or redness develops, see a physician.

**INGESTION:** If swallowed, CALL A PHYSICIAN IMMEDIATELY. Due to danger of aspiration, do not induce vomiting.

**NOTE TO PHYSICIAN:** In general, emesis is unnecessary in high viscosity, low volatility products, i.e., most oils and greases.

**SECTION V - FIREFIGHTING MEASURES**

**NFPA RATING:** Health: 1 Fire: 1 Reactivity: 0 Other: 0

**FLASHPOINT AND METHOD:** >350°F, 177°C (COC) LEL: ND UEL: ND

**EXTINGUISHING METHOD:** CO<sub>2</sub>, Dry chemical, foam, water spray

**NFPA FIREFIGHTING PROCEDURES:** Use water spray, dry chemical, foam or carbon dioxide. Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposures.

**FIRE OR EXPLOSION HAZARDS:** Combustible material when exposed to sufficient heat and ignition. Isolate from oxidizers, heat, sparks, electrical equipment and open flame. Because of the potential for dense smoke to be created in a fire situation, fire fighters should wear an approved self-contained breathing apparatus.

**SECTION VI - ACCIDENTAL RELEASE MEASURES**

**SPILL OR LEAK PROCEDURES:** Prevent entry to sewer or waterway. Mop up small spills with absorbent and discard in a tightly covered approved waste container. For large spills, dike area to prevent spread. Reclaim liquid by pumping into salvage tanks and clean up remainder with absorbent. Unless grossly contaminated, reclaimed material can be recycled.

**SECTION VII - HANDLING AND STORAGE**

**STORAGE TEMPERATURE:** Store in well ventilated areas at temperatures below 49°C (120°F).

**SPECIAL SENSITIVITY:** Do not store near oxidizers or sources of heat, sparks or flame.

**HANDLING PRECAUTIONS:** Maintain containers upright with caps and bungs tightly secured. To maintain product usefulness, keep tops of barrels free of water at all times. Do not store where container can be subject to rain or water.

Quench Oil #811

MSDS A

**SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**EYE PROTECTION:** Wear safety goggles if splashing or spraying is expected.

**SKIN PROTECTION:** Wear coated gloves impervious to oils, wash clothing before reuse. Wear shoes with soles which are impervious to oils.

**RESPIRATORY PROTECTION:** Not normally required. However, when exposures over the PEL/TLV are encountered and engineering or other controls are not adequate to reduce airborne concentrations to below the PEL/TLV, use a half mask respirator with cartridges approved for use with organic vapors.

**HYGIENIC PRACTICES:** Wash thoroughly before meals, breaks, and at the end of work period. Remove contaminated clothing and launder before reuse. Do not use abrasive soaps or solvents.

**SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL FORM:** Oily liquid

**BOILING POINT:** > 374°F

**EVAPORATION RATE (water = 1):** < .01

**Vapor Density (air = 1):** < .1

**SOLUBILITY IN WATER:** Negligible

**SPECIFIC GRAVITY:** .84 to .90

**SECTION X - REACTIVITY**

**STABILITY:** Product is stable under normal conditions.

**HAZARDOUS POLYMERIZATION:** Cannot occur.

**INCOMPATIBILITIES:** Strong oxidizing agents, KOH, NaOH, NaAlH<sub>2</sub>, LiAlH<sub>2</sub>, Chromic Acid.

**DECOMPOSITION PRODUCTS:** Carbon Monoxide, Carbon Dioxide from burning. When heated to decomposition, fumes can react with oxidizing materials forming NO<sub>x</sub>, SO<sub>x</sub>, H<sub>2</sub>S.

**CONDITIONS TO AVOID:** Exposure to strong oxidizers, heat, flame, sources of spark or ignition.

**SECTION XI - TOXICOLOGICAL/ECOLOGICAL INFORMATION**

**ECOLOGICAL HAZARDS:** Not determined.

**SECTION XII - DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** Recycle when appropriate. If heavily contaminated or judged unsuitable for recycling, place waste in suitable approved container. Seal and properly label the waste container. Send the container to an approved Transportation, Storage and Disposal (TSD) facility via an approved waste hauler. Be sure manifests have been completed and an adequate "Paper trail" has been established.

Quench Oil #811

MSDS A

**SECTION XIII - TRANSPORTATION INFORMATION****DOT SHIPPING NAME:** Not Regulated**DOT LABEL:** None**DOT HAZARD CLASS:** None**UN/NA NUMBER:** None**PACKAGING GROUP:** None**FLAMMABILITY CLASS:** N/A**SECTION XIV - REGULATORY INFORMATION****OSHA STATUS:** This product is considered hazardous under OSHA criteria (see Section II).**TSCA STATUS:** Components of this product are included in the TSCA Chemical Inventory.**CERCLA REPORTABLE QUANTITY:** N/A**SARA TITLE III:****SECTION 302 EXTREMELY HAZARDOUS:** This product contains no extremely hazardous substances as defined and listed in section #302**SECTION 311/312 HAZARD CATEGORIES:** Reportable as a hazardous substance. Check with your Local Emergency Planning Committee for reportable quantities.**SECTION 313 TOXIC CHEMICALS:** This product is not reportable under Section #313.**SECTION XV - APPROVALS****REASON FOR ISSUE:** General update, change in phone numbers**PREPARED BY:** Anne Marie Downs**TITLE:** Vice President**APPROVAL DATE:** 9-13-99**SUPERSEDES:** All previous versions**SECTION XVI - DISCLAIMER**

AS OF THE DATE OF THIS DOCUMENT, THE FOREGOING INFORMATION IS BELIEVED TO BE ACCURATE AND IS PROVIDED IN GOOD FAITH TO COMPLY WITH APPLICABLE FEDERAL AND STATE LAWS. HOWEVER, NO WARRANTY OR REPRESENTATION OF LAW OR FACT, WITH RESPECT TO SUCH INFORMATION, IS INTENDED OR GIVEN.

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# Arconic

## Material Classification and Quantities

Occupancy: I would classify this building as an F1 due to the use of the oil quench.

The occupancy is not an H occupancy because the quantity of Class IIIB Combustible Liquids is unlimited for storage and in use.

11-Apr-18

Commercial Name	Physical Form	Flash Point	Autoignition Temp.	Boiling Point	Melting Point	UFC Classification	Flammable Liquid	Combustible Liquid	Flammable Gas	Oxidizer	Other health hazard	Sensitizer	Irritant	Spill and Secondary Containment	Handling	Total Quantity	Quantity used and in Process	Use: Closed System	Use: Open System	Storage	Use: Closed System	Use: Open System	Exempt Quantities Allowed in Control Area; Limited amounts of Aerosol in a General use Warehouse	SARA, EPA or OSHA Hazardous Waste
1 Quench Oil #811	Liquid	>350 degrees F 177 degrees C	?	>374 degrees F	N/A	N/A		Class IIIB	N/A	N/A		Do not store near oxidizers or sources of heat, sparks, or flame	Yes	Required		?	?	?	17,921 gal	13,200 gal, unlimited if building is fully sprinklered		3,300 gal, unlimited if building is fully sprinklered		
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

[F] COMBUSTIBLE LIQUID. A liquid having a closed cup flash point at or above 100°F (38°C). Combustible liquids shall be subdivided as follows:

Class II. Liquids having a closed cup flash point at or above 100°F (38°C) and below 140°F (60°C).

Class IIIA. Liquids having a closed cup flash point at or above 140°F (60°C) and below 200°F (93°C).

Class IIIB. Liquids having a closed cup flash point at or above 200°F (93°C).

Account Detail

[Back to Account Detail](#)
[Change of Address](#)
[Print this Page](#)

Washoe County Parcel Information		
Parcel ID	Status	Last Update
03806036	Active	5/15/2018 2:06:41 AM
<b>Current Owner:</b> SCHLOSSER FORGE COMPANY  11711 ARROW ROUTE RANCHO CUCAMONGA, CA 91730		<b>SITUS:</b> 1 ERIC CIR WCTY NV
<b>Taxing District</b> 4011		<b>Geo CD:</b>
Legal Description		
Section 8 SubdivisionName _UNSPECIFIED Township 19 Range 18		

Tax Bill (Click on desired tax year for due dates and further details)					
Tax Year	Net Tax	Total Paid	Penalty/Fees	Interest	Balance Due
2017	\$48,133.25	\$49,817.95	\$0.00	\$0.00	\$0.00
2016	\$46,913.51	\$46,913.51	\$0.00	\$0.00	\$0.00
2015	\$47,455.66	\$47,455.66	\$0.00	\$0.00	\$0.00
2014	\$48,681.44	\$48,681.44	\$0.00	\$0.00	\$0.00
2013	\$48,653.18	\$49,139.71	\$0.00	\$0.00	\$0.00
Total					\$0.00

Important Payment Information
<ul style="list-style-type: none"> <li><b>ALERTS:</b> If your real property taxes are delinquent, the search results displayed may not reflect the correct amount owing. Please contact our office for the current amount due.</li> <li>For your convenience, online payment is available on this site. E-check payments are accepted without a fee. However, a service fee does apply for online credit card payments. See Payment Information for details.</li> </ul>

**Pay Online**

No payment due for this account.

**\$0.00**

**Pay By Check**

Please make checks payable to:  
**WASHOE COUNTY TREASURER**

**Mailing Address:**  
P.O. Box 30039  
Reno, NV 89520-3039

**Overnight Address:**  
1001 E. Ninth St., Ste D140  
Reno, NV 89512-2845

**Payment Information**

**Special Assessment District**

**Installment Date Information**

**Assessment Information**

The Washoe County Treasurer's Office makes every effort to produce and publish the most current and accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use, or its interpretation. If you have any questions, please contact us at (775) 328-2510 or tax@washoecounty.us

This site is best viewed using Google Chrome, Internet Explorer 11, Mozilla Firefox or Safari.

# Preliminary Hydrology Report

for

## Arconic Master Planned Expansion

Verdi, Nevada

Prepared for:

Arconic Fastening Systems  
Schlosser Forge Company  
1 Eric Circle  
Washoe County, NV 89439  
(775) 770-1423

Prepared by:

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BAF 6-30-19

May 7, 2018

A067-18003



Gray & Associates INC.

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## INTRODUCTION

This report presents hydrologic and hydraulic calculations for the Arconic Schlosser Forge industrial project. The Schlosser Forge site is located in the southeastern 1/4 of Section 8, T.19N, R.18E, M.D.M. in Verdi, Nevada. The overall property consists of a 21.377-acre parcel (APN 038-060-36) on Eric Circle off of old US Highway 40 (State Route 425). The purpose of this study is to compute the 5-year and 100-year peak runoff for the site in its existing condition and improved condition and to provide supporting computations for the calculated peak runoff.

## SITE DESCRIPTION

The Arconic Schlosser Forge site is located on a developed industrial parcel on Eric Circle, an existing road in Verdi, Nevada (See Vicinity Map, Appendix A). The parcel is zoned General Industrial and bound on the west by Industrial properties, on the north by an Industrial/Utility Company, on the east by the Truckee River, and on the south by US 40 and the River Belle Mobile Home Park. Land located further north across the Truckee River is currently under residential development by DR Horton (West Meadows Estates). All of the adjoining parcels have been fully developed with the exception of West Meadows Estates which is currently under construction.

The Arconic parcel is currently accessed from US 40 via Eric Circle. Topography of the parcel ranges from flat to mildly sloping. The site drains easterly across the parcel to the Truckee River. The site is nearly bisected by the NV Energy return ditch (from Verdi Power Plant) flowing west to east into the Truckee River.

The subject parcel is 21.377 acres in area and is divided by the above mentioned NVE return ditch. All of the proposed growth contemplated by the Arconic Master Plan is to be located north of the NVE ditch. The southerly 9 acres of the site (south of the ditch) is fully developed and will not be included in the master planned growth relative to land development. Therefore, this report will be limited to the northerly portion of the site (approximately 12 acres north of the ditch). Groundcover in this area is split between developed land (approximately 30%) and undeveloped land (approximately 70%). The developed area consists primarily of concrete pavement, asphalt pavement and Metal Buildings along with well-developed shrubs, trees and mature landscaping. The undeveloped portions of the property consist of sparse, low growing native desert weeds and grasses. Groundcover is similar on the adjacent parcels.

Existing slopes on the property generally do not exceed 5%, and the site is not categorized as a Hillside Development.

The currently proposed project will involve the phased construction of a master planned expansion for site operations beginning with the phase 1 Industrial Heat Treat Building and associated covered storage for treated metal parts. Future improvements will include a Machine Shop addition, a shipping and receiving pad, Tool Storage and a “Post Forge” area with associated pavement, utilities and staging areas (See Master Plan).

### **FLOOD ZONE**

The property is impacted by both the Truckee River Floodway and 100-year flood zone “A” with elevations determined as depicted on Flood Insurance Rate Map 32031C3013G effective 3-16-2009. The slope of the land generally falls from west to east. The Truckee River eventually collects runoff from the subject site. No improvements are planned in or near the flood zones.

### **PROJECT DESCRIPTION**

The current master plan for the site is presented in the Master Plan portion of the Special Use Permit Application. The first phase of construction will be the Heat Treat Building which will consist of a combined Oil Treatment Building and associated covered storage for the temporary placement of forged materials. The site will be partially paved and will include access improvements, staging areas, landscaping and include drainage improvements. Public streets and utility infrastructure exists adjacent to (and within) the site. All runoff associated with the new building improvements will be routed to a detention basin located within the improvement limits. Unpaved disturbed areas will be revegetated and stabilized with a dryland mix. Construction of the Phase One site improvements, driveway and utilities will disturb roughly 2 acres, while the entire master planned improvements will disturb approximately 11 of the 12 acres on the site.

Perimeter ditches will be constructed where appropriate and lined with rock riprap in accordance with Washoe County Health District, Vector Control Division requirements. Rock check dams are recommended to control the transport of sediment in the ditches. The site is not intended to

be revegetated prior to site work and building construction activities as those activities are anticipated to proceed soon after completion of grading activities.

The proposed detention pond has been sized to allow runoff from both the 5-year and 100-year return frequency storms to be reduced to existing peak rates prior to discharge from the site.

## METHODOLOGY

Peak rate of runoff is computed using the Rational Method. The Rational Method determines peak runoff by expressing the ground cover, site gradient, and soil type as a ratio relative to a completely impervious site. Rainfall intensity is derived from the NOAA Atlas 14 for 24-hour duration storms (See Appendix B). The Rational Method uses the following equations to compute peak runoff:

$$Q = CiA$$

Where,            Q = Peak Runoff (cfs)  
                      C = Runoff Coefficient (unitless)  
                      i = Rainfall Intensity (in/hr)  
                      A = Area of Drainage Basin (ac)

Runoff coefficients for a variety of surface conditions are defined by the Truckee Meadows Regional Drainage Manual ("T-M Drainage")

Rainfall intensity is a function of rainfall duration and was computed using NOAA's Point Precipitation Frequency Estimates function available on the NOAA website. NOAA's system allows for pinpoint precipitation estimates by allowing the user to input the exact coordinates of the project site. The highest rainfall intensity occurs when the rainfall duration is equal to the time of concentration for runoff.

In hydrograph theory, time of concentration is defined as the time from the end of excessive rainfall to the end of direct runoff. In practical calculations, time of concentration is the flow time from the most hydraulically remote point in a drainage basin to the point of discharge.

Concentration time is therefore a combination of two related factors: initial overland flow time and concentrated flow time. The initial time is based on the distance travelled over the ground surface prior to concentrating into organized channels (sheet flow). The minimum time of concentration is defined by T-M Drainage as 10 minutes.

The initial overland flow time is computed using the following equation:

$$t_i = \left[ \frac{1.8(1.1 - R)L_0^{\frac{1}{2}}}{S^{\frac{1}{3}}} \right]$$

Where,  $t_i$  = Initial overland flow time (min)  
 $R$  = 5- year Runoff Coefficient (unitless)  
 $L_0$  = Length of overland runoff (ft); 500 ft maximum  
 $S$  = Overland slope (%)

Time of concentrated flow is computed using the following equation:

$$t_n = \frac{L_n}{v_n \left(60 \frac{\text{min}}{\text{in}}\right)}$$

Where,  $t_n$  = Concentrated flow time for segment n (min)  
 $L_n$  = Length of concentrated flow segment n (unitless)  
 $v_n$  = Velocity of concentrated flow in segment n (ft)

Time of concentration ( $t_c$ ) is therefore computed using the following equation:

$$t_c = t_i + \sum_{n=1}^n t_n$$

According to Truckee-Meadows Drainage Manual, the peak rate of runoff may not be increased as a result of development. Development of the project site will result in an increase in impervious surfaces and an increase in the efficiency with which runoff is allowed to travel through the site. These increases combine to cause an increase in peak runoff. To reduce peak runoff to existing rates, a stormwater detention basin system has been proposed.

A stormwater detention basin is an area in which runoff is allowed to temporarily accumulate while it is allowed to escape at a prescribed rate. The Arconic site will employ a series of detention ponds for the various phases of improvements. The outlets will be used to control runoff from storms to match pre-development conditions.

Drainage ditches will be modeled using Manning's equation for open channel flow:

$$Q = \left(\frac{1.49}{n}\right) (A) \left[\left(\frac{A}{P}\right)^{\left(\frac{2}{3}\right)}\right] \left(S^{\left(\frac{1}{2}\right)}\right)$$

Where,  
 Q = Flow in open channel (cfs)  
 n = Manning's roughness coefficient (unitless)  
 A = Cross-sectional area of flow (ft<sup>2</sup>)  
 P = Wetted perimeter of channel (ft)  
 S = Longitudinal slope of open channel (ft/ft)

In accordance with Washoe County Health District Vector Control, all commercial drainage channels, regardless of runoff velocity, shall be lined with rock riprap. The size of the riprap in the channel defines the Manning's roughness coefficient for that channel. Per T-M Drainage, the roughness coefficient of riprap may be determined using the following equation:

$$n = (K)(d_{90})^{\left(\frac{1}{6}\right)}$$

Where,  
 n = Manning's roughness coefficient (unitless)  
 K = 0.34 for velocity calculations and 0.38 for channel sizing calculations  
 d<sub>90</sub> = Diameter of the riprap for which 90% of riprap is smaller (ft)

As can be seen above, there are two values of the K coefficient. The smaller value of K will result in a lower Manning's roughness coefficient and ultimately higher velocities. The smaller value is used to compute velocities for sizing riprap. This will result in a conservatively larger size of riprap. Conversely, the higher K value will result in a larger Manning's roughness



coefficient, and therefore lower velocities. Lower velocities correspond to greater depth of flow in open channels. Using the larger value of K to determine Manning's roughness coefficient will result in a conservatively larger channel cross-section.

Per T-M Drainage, riprap is sized using the following equation:

$$d_{50} = \left\{ \frac{[(0.05) \left(V^{\frac{1}{2}}\right) (S^{0.34})]}{[(S_s - 1)^{1.332}]} \right\}$$

Where,  $d_{50}$  = Diameter of the riprap for which 50% of riprap is smaller (ft)  
 $V$  = Velocity of runoff (fps)  
 $S$  = Longitudinal slope of open channel (ft/ft)  
 $S_s$  = Specific gravity of rock (unitless); Minimum value of  $S_s$  is 2.50

The size of riprap to be used is determine iteratively. A Manning's roughness coefficient is assumed, and the velocity of runoff is determined using Manning's equation. That velocity is used to estimate the minimum  $d_{50}$  of riprap to be used. The computed  $d_{50}$  is compared to available riprap gradations to determine the class of riprap to be specified. Once the class of riprap is selected, the  $d_{90}$  of gradation of the selected class of riprap. That  $d_{90}$  is used to compute the Manning's roughness coefficient using the smaller K value. This process is repeated until the selected riprap class stabilized. Once the final riprap class is selected, the larger K value is used to compute the Manning's roughness coefficient that is to be used to determine the appropriate channel section necessary to safely convey the computed runoff.

Catch basin capacities are computed using the methodology in the US Army Corps of Engineers HEC-22 document; Urban Drainage Design Manual.

## EXISTING RUNOFF ANALYSIS

In its current state, it appears that the existing site drains predominantly from west to east and ultimately discharges into the Truckee River. Runoff originating on the site appears to drain in an overland manner to a broad stretch of lands adjacent to the Truckee River. A small portion of

the subject site runoff concentrates and is captured in a truck well that currently has a blocked outlet, which will be remedied during the expansion process.

The portion of the site which currently drains in an unconcentrated manner to the broad expanse of Truckee River banks consists entirely of the northwestern undeveloped portion of the property. Runoff patterns in this portion of the site will be unchanged with development after having been routed through a detention pond.

A small portion of the project site drains into the above-mentioned truck well and appears to accumulate until overflowing to the undeveloped land to the east where it eventually enters the NVE return ditch and lands adjacent to the Truckee River.

No offsite areas drain onto the project site. All runoff from the adjacent property to the west is intercepted and routed into the NVE ditch immediately upon entrance onto the project site via the TMWA ditch along the western boundary of the site. All runoff originating offsite will have no impact on the overall hydrology of the development.

Table 1 represents the hydrologic characteristics of the existing site.

**Table 1. Existing Conditions: Peak Runoff**

Subarea	Area (ac)	C <sub>5</sub>	C <sub>100</sub>	t <sub>c</sub> (min)	i <sub>5</sub> (in/hr)	i <sub>100</sub> (in/hr)	Q <sub>5</sub> (cfs)	Q <sub>100</sub> (cfs)
<b>Arconic Expansion Site</b>	12	0.34	0.34	23	1.43	3.5	5.83	14.28

All calculations were performed by hand and can be found in Appendix C.

## PROPOSED RUNOFF ANALYSIS

Development of the Arconic Master Planned improvements will involve the construction of paved vehicular access to seven possible new buildings, paved and unpaved equipment storage areas, an unpaved staging area, drainage swales, several stormwater detention facilities, and a shipping dock. The construction of the improvements will alter the runoff originating on the site by providing swales and curbs through which the drainage will be routed into the proposed stormwater detention ponds. The detention ponds will be sized to contain all on-site runoff reaching it and discharge runoff at a rate that will match the rate of runoff that currently leaves the site.

The proposed ditches will be lined with riprap and will have capacity to carry runoff from the 100-year storm.

Table 2 represents the hydrologic characteristics of the developed site after stormwater detention.

**Table 2. Developed Conditions: Peak Runoff Leaving Site**

Subarea	Area (ac)	C <sub>5</sub>	C <sub>100</sub>	t <sub>c</sub> (min)	i <sub>5</sub> (in/hr)	i <sub>100</sub> (in/hr)	Q <sub>5</sub> (cfs)	Q <sub>100</sub> (cfs)
Arconic Expansion Site	12	0.63	0.63	23	1.43	3.5	10.84	26.54
Detention Pond*	12	0.63	0.63	47	0.78	1.91	5.8	14.4

All calculations were performed by hand and can be found in Appendix C.

By comparing Table 1 and Table 2, it can be seen that peak developed runoff leaving the site and draining to the discharge points are either equal to the pre-development rate of runoff or less than the pre-development rate of runoff.

Peak runoff reaching the detention ponds has been increased as a result of development. This is entirely due to an increase in the amount of impervious ground cover in the form of driveways, parking areas, and roofs. The detention ponds have been adequately sized to control runoff from

both the 5-year and the 100-year recurrence interval storms. Table 3 breaks down the storage and flow statistics for the detention ponds.

**Table 3. Detention Pond**

<b>Design Storm</b>	<b>Inflow (cfs)</b>	<b>Ponding Depth (ft)</b>	<b>Storage Volume (cf)</b>	<b>Outflow (cfs)</b>
<b>5-Year</b>	9.07	1.98	18,000	4.4
<b>100-Year</b>	14.5	3.15	41,000	12.3

Cutoff ditches will be sized using the methods described in “Methodology” above. All ditches will use Class 150 riprap, which has a  $d_{50}$  of 6-inch diameter stones.

Catch basins capacities are computed using the methods defined in HEC-22, treating the catch basin drainage areas separately from the overall site. When considered separately, the drainage basins for the catch basins have very short concentration times, resulting in much higher peak rates of runoff.

The catch basins will have sufficient capacity to collect runoff from the 5-year storm where 100-year flows can safely overflow within the system.

## **CONCLUSION**

The Arconic project will result in the development of 11 acres of undeveloped land into mostly paved and developed improvements within the 12-acre subject site, including new buildings, storage areas, private driveways and utility infrastructure. Development of the project will result in an increase in impervious ground cover. The increase in impervious ground cover will cause an increase in peak runoff generated by the project. To reduce peak runoff back to existing levels, a detention pond system will be constructed. The detention ponds have been sized to reduce peak runoff from both the 5-year and the 100-year return frequency storms.

All disturbed ground surfaces which are not paved will be re-vegetated using a dry land native seed mix. By re-vegetating disturbed slopes and by lining cutoff ditches with rip-rap, erosion and sedimentation can be minimized.

Washoe County Code requires that the 5-year and 100-year peak runoff leaving a developed site not exceed the peak runoff leaving the site in its undeveloped state. County policy advocates for the treatment of runoff to remove pollutants from 90% of storms prior to discharge from the site. The proposed improvements are expected to meet both of these standards.

Consequently, there will be no change in hydrologic impact on downstream receiving waters as a result of development of the Arconic Master Planned Expansion project.

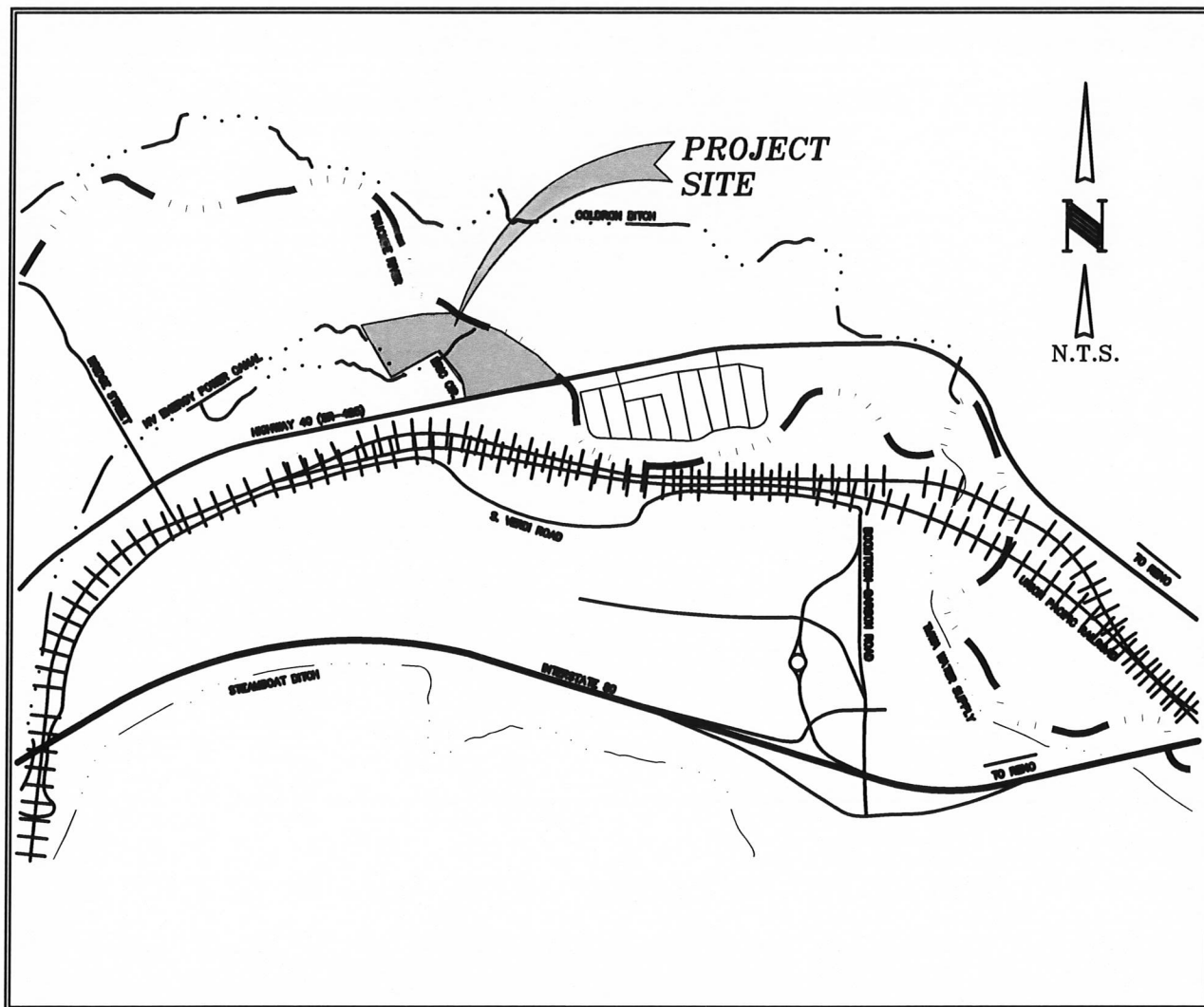
# APPENDIX A

## VICINITY MAP

VERDI

WASHOE COUNTY

NEVADA



VICINITY MAP

SECTION 8, T.19N., R.18E., MDM

N.T.S.

**ARCONIC**  
 SUP & MASTER PLAN  
 VICINITY MAP

SCALE: N.T.S.

DRAWN BY: AG

DATE: 5-8-18

JOB NO.: 18003



**Gray & Associates** INC.

CIVIL ENGINEERS • PLANNERS • SURVEYORS

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 (775) 329-2911 • admin@grayassociates.net

# APPENDIX B

## I-D-F CURVES





NOAA Atlas 14, Volume 1, Version 5  
 Location name: Verdi, Nevada, USA\*  
 Latitude: 39.5219°, Longitude: -119.9767°  
 Elevation: 4807.7 ft\*\*  
 \* source: ESRI Maps  
 \*\* source: USGS



**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

**PF tabular**

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) <sup>1</sup>										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.38 (1.18-1.58)	1.72 (1.48-2.00)	2.28 (1.96-2.68)	2.81 (2.40-3.31)	3.71 (3.10-4.42)	4.55 (3.70-5.48)	5.56 (4.37-6.82)	6.80 (5.15-8.51)	8.86 (6.32-11.4)	10.8 (7.36-14.2)
10-min	1.06 (0.900-1.21)	1.31 (1.12-1.52)	1.73 (1.49-2.03)	2.14 (1.83-2.52)	2.82 (2.36-3.36)	3.46 (2.81-4.18)	4.23 (3.33-5.18)	5.18 (3.92-6.47)	6.74 (4.81-8.69)	8.20 (5.60-10.8)
15-min	0.872 (0.740-1.00)	1.08 (0.928-1.26)	1.43 (1.23-1.68)	1.77 (1.51-2.08)	2.33 (1.95-2.78)	2.86 (2.32-3.45)	3.50 (2.75-4.29)	4.28 (3.24-5.35)	5.57 (3.98-7.18)	6.78 (4.63-8.94)
30-min	0.588 (0.500-0.674)	0.728 (0.624-0.846)	0.964 (0.828-1.13)	1.19 (1.02-1.40)	1.57 (1.31-1.87)	1.93 (1.56-2.32)	2.36 (1.85-2.89)	2.88 (2.18-3.60)	3.75 (2.68-4.83)	4.56 (3.12-6.02)
60-min	0.363 (0.309-0.417)	0.451 (0.386-0.524)	0.596 (0.512-0.700)	0.737 (0.630-0.868)	0.972 (0.811-1.16)	1.19 (0.967-1.44)	1.46 (1.15-1.79)	1.79 (1.35-2.23)	2.32 (1.66-2.99)	2.83 (1.93-3.73)
2-hr	0.244 (0.217-0.276)	0.302 (0.270-0.343)	0.382 (0.339-0.436)	0.454 (0.398-0.518)	0.563 (0.482-0.647)	0.664 (0.555-0.770)	0.780 (0.637-0.918)	0.934 (0.738-1.12)	1.21 (0.916-1.51)	1.47 (1.08-1.88)
3-hr	0.199 (0.180-0.223)	0.247 (0.225-0.278)	0.306 (0.276-0.343)	0.354 (0.317-0.399)	0.423 (0.373-0.479)	0.485 (0.422-0.554)	0.558 (0.477-0.645)	0.662 (0.552-0.776)	0.838 (0.679-1.02)	1.01 (0.798-1.27)
6-hr	0.151 (0.137-0.168)	0.188 (0.170-0.209)	0.229 (0.206-0.255)	0.261 (0.234-0.291)	0.302 (0.268-0.339)	0.333 (0.292-0.376)	0.364 (0.316-0.415)	0.404 (0.346-0.466)	0.480 (0.402-0.560)	0.555 (0.459-0.655)
12-hr	0.106 (0.096-0.119)	0.133 (0.120-0.148)	0.166 (0.149-0.185)	0.191 (0.171-0.213)	0.225 (0.199-0.253)	0.252 (0.220-0.285)	0.278 (0.240-0.318)	0.305 (0.259-0.352)	0.340 (0.282-0.400)	0.369 (0.300-0.440)
24-hr	0.072 (0.065-0.081)	0.091 (0.082-0.102)	0.114 (0.103-0.128)	0.134 (0.119-0.150)	0.161 (0.143-0.180)	0.182 (0.161-0.205)	0.205 (0.179-0.231)	0.228 (0.198-0.259)	0.261 (0.222-0.298)	0.287 (0.241-0.331)
2-day	0.046 (0.040-0.052)	0.057 (0.051-0.066)	0.074 (0.065-0.085)	0.087 (0.077-0.100)	0.107 (0.093-0.123)	0.123 (0.106-0.141)	0.139 (0.119-0.162)	0.157 (0.133-0.184)	0.183 (0.151-0.217)	0.203 (0.166-0.244)
3-day	0.034 (0.030-0.039)	0.043 (0.038-0.049)	0.056 (0.049-0.064)	0.067 (0.059-0.077)	0.082 (0.072-0.095)	0.095 (0.082-0.110)	0.109 (0.093-0.127)	0.124 (0.104-0.145)	0.146 (0.120-0.172)	0.163 (0.132-0.196)
4-day	0.028 (0.025-0.032)	0.036 (0.031-0.041)	0.047 (0.041-0.054)	0.057 (0.049-0.065)	0.070 (0.061-0.081)	0.082 (0.070-0.094)	0.094 (0.080-0.109)	0.108 (0.090-0.126)	0.127 (0.104-0.150)	0.143 (0.115-0.171)
7-day	0.019 (0.017-0.022)	0.025 (0.021-0.029)	0.033 (0.028-0.039)	0.040 (0.034-0.047)	0.049 (0.042-0.058)	0.057 (0.048-0.067)	0.066 (0.055-0.078)	0.075 (0.062-0.089)	0.088 (0.071-0.106)	0.099 (0.079-0.120)
10-day	0.015 (0.013-0.018)	0.020 (0.017-0.023)	0.027 (0.023-0.031)	0.032 (0.028-0.037)	0.040 (0.034-0.046)	0.046 (0.039-0.053)	0.052 (0.044-0.061)	0.059 (0.049-0.070)	0.069 (0.056-0.082)	0.076 (0.062-0.092)
20-day	0.010 (0.009-0.012)	0.013 (0.011-0.015)	0.017 (0.015-0.020)	0.021 (0.018-0.024)	0.026 (0.022-0.030)	0.029 (0.025-0.034)	0.033 (0.028-0.039)	0.037 (0.031-0.044)	0.042 (0.035-0.051)	0.047 (0.038-0.056)
30-day	0.008 (0.007-0.010)	0.011 (0.009-0.012)	0.014 (0.012-0.016)	0.017 (0.015-0.020)	0.021 (0.018-0.024)	0.023 (0.020-0.027)	0.026 (0.023-0.031)	0.030 (0.025-0.035)	0.034 (0.028-0.040)	0.037 (0.031-0.045)
45-day	0.007 (0.006-0.008)	0.009 (0.008-0.010)	0.012 (0.010-0.013)	0.014 (0.012-0.016)	0.016 (0.014-0.019)	0.019 (0.016-0.021)	0.021 (0.018-0.024)	0.023 (0.020-0.027)	0.026 (0.022-0.030)	0.028 (0.024-0.033)
60-day	0.006 (0.005-0.007)	0.007 (0.006-0.008)	0.010 (0.009-0.011)	0.012 (0.010-0.013)	0.014 (0.012-0.016)	0.016 (0.013-0.018)	0.017 (0.015-0.020)	0.019 (0.016-0.022)	0.021 (0.018-0.024)	0.023 (0.019-0.026)

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.  
 Please refer to NOAA Atlas 14 document for more information.

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# APPENDIX C

## SUPPORTING CALCULATIONS

# Arconic Hydrologic Calculations

Development Area = Northern Portion of Site = 12 Acres

Coverage: EXISTING: Pavement, Buildings, etc = 30%  
~~EXISTING~~ OPEN / native vegetation / undeveloped 70%

Length of Overland Runoff  $\approx$  300 ft  $L_o = 300'$

5 yr runoff coefficient =  $30\% (.68) = .204$   
 $+ 70\% (.20) = .14$   $R = .34$

Overland Slope = 1.5%  $S = 1.5$

$$\begin{aligned} \text{initial overland flow: } t_i &= \left[ \frac{1.8(1.1-R)L_o^{1/2}}{S^{1/3}} \right] \\ &= \left[ \frac{1.8(1.1-.34)300^{1/2}}{1.5^{1/3}} \right] = \frac{1.8(.78)17.32}{1.118} \\ &= 21.24 \text{ min.} \end{aligned}$$

Time of Concentrated Flow:  $t_n = \frac{L_n}{V_n (60 \text{ min/in})}$

$$t_n = \frac{200}{1.5(60)} = 2.2 \text{ min}$$

$L_n$  = length of concentrated flow = 200'

$V_n$  = Velocity  $\approx$  1.5 fps assuming paved channel

$$\text{Time of Concentration: } t_c = t_i + \sum_{n=1}^n t_n = 21.24 + 2.2 = 23.4$$

PROJECT Arconic PRO. # 18003  
SUBJECT Hydrology DATE 5-9-18  
BY AG SHEET 1 OF 2



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EXISTING SITE Runoff:

$$Q = CIA$$

Area = 12 Acres

$$C = .34$$

$$i_5 = 1.43 \text{ in/hr}$$

$$i_{100} = 3.5 \text{ in/hr}$$

$$Q_5 = .34(1.43)(12) = 5.83 \text{ cfs}$$

$$Q_{100} = .34(3.5)(12) = 14.28 \text{ cfs}$$

Developed Condition: 90% Coverage

$$C = .9(.68) + .1(.20) = 0.632$$

$$Q_5 = .632(1.43)(12) = 10.84 \text{ cfs}$$

$$Q_{100} = .632(3.5)(12) = 26.54 \text{ cfs}$$

$$Q_i = \text{initial peak inflow at } D \Rightarrow Q_{i_{100}} = .632(1.91)(12) = 14.5 \text{ cfs}$$

$$D = \text{Rainfall Duration (min)} \quad (\text{Assume } D = 2t_c) = 46.8 \text{ Min}$$

S = Storage

$$\text{Inflow } S = [(Q_i)(D)(60^3/\text{min})]$$

$$S_{100} = [14.5(46.8)(60^3/\text{min})] = 40,716 \text{ ft}^3$$

Therefore: Provide Initial Detention Storage of 41,000 ft<sup>3</sup>

$$\text{@ 3' depth: Req'd Area} = 13,667 \approx 180 \times 75$$

$$\text{or } 117 \times 117$$

PROJECT Arconic PRO.# 18003  
SUBJECT Hydrology DATE 5-9-18  
BY AG SHEET 2 OF 2



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WSUP18-0008  
EXHIBIT M

# Preliminary Sanitary Sewer Report

for

## Arconic Master Planned Expansion

Verdi, Washoe County, Nevada

Prepared for:

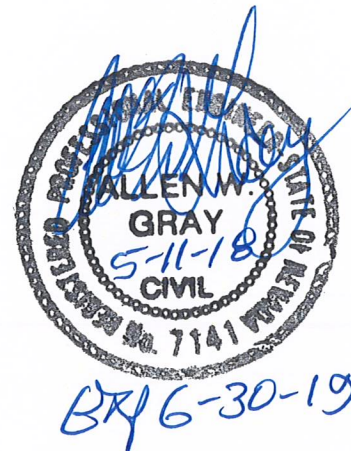
Arconic Fastening Systems  
Schlosser Forge Company  
1 Erik Circle  
Washoe County, NV 89439  
(775) 770-1423

Prepared by:

Gray & Associates, Inc.  
3680 Grant Drive  
Suite B  
Reno, NV 89509  
(775) 329-2911

May 7, 2018

A067-18003



Gray & Associates INC.

CIVIL ENGINEERS

**WSUP18-0008**  
**EXHIBIT M**

## **SITE DESCRIPTION**

This report presents sanitary sewer calculations for the master planned improvements contemplated by Arconic Fastening Systems at their Schlosser Forge facility in Verdi, Nevada. Arconic is located in the southeastern 1/4 of Section 8, T.19N, R.18E., M.D.M. in Washoe County, Nevada. The existing site encompasses 21.38 acres and includes four existing industrial buildings and one office building. Domestic water is provided by the Verdi Mutual Water Company. The system consists of a well and distribution system to a small number of users. Industrial waste water is treated on-site and no industrial waste leaves the site. Domestic sewer is currently routed to the City of Reno Public Sewer System at the Verdi Interceptor.

## **FLOOD ZONE**

According to FEMA Flood Insurance Rate Map No. 32031C3013G, the site is partially impacted by a Flood Hazard Zone (elevation determined) and Truckee River Floodway.

## **PROJECT DESCRIPTION**

According to the proposed Arconic Master Plan, the site will eventually add seven industrial buildings on the northern portion of the site. All the proposed buildings will be used for industrial and/or operational staging activities, and very few employees will be working within the proposed buildings (approximately 12). Only one bathroom is proposed in each of the buildings. The nearest existing Sanitary Sewer Main is the City of Reno Verdi Interceptor, the point of connection of which is located on the southeast corner of the property.

Industrial waste water will continue to be treated on site, and will not be introduced into the public sanitary sewer system.

## **SEWER CAPACITY ESTIMATES**

The existing 42" sanitary sewer main (Verdi Interceptor) currently terminates within the Arconic property and no additional up stream users exist at this time. It is the intent of the City of Reno to extend the Verdi Interceptor westward, but the time frame of the future extension of this interceptor is not certain. The existing sewer main flows easterly from the Arconic site toward Reno and has been designated as the primary sewer main for the Verdi area.

The existing domestic wastewater disposal system on the Arconic site consists of a series of grinder pumps and a low head pressure system transporting wastewater to the public sewer located within the property limits. This existing system will be expanded and extended to the proposed restrooms and domestic water fixtures within the proposed master planned buildings.

The Washoe County code prescribes an average design sewer flow of 457 gallons per day per acre for industrial land. The City of Reno is the purveyor of the Verdi Interceptor into which effluent from this project will discharge, and their code states a peak design sewer flow of 3,000 gallons per day per acre.

The entire Arconic site (21.38 Acres) would therefore generate a peak flow of 64,140 gallons per day (21.38 x 3000 gal/day). The actual flows will likely be much smaller given the fact that all process water is treated on site. The master planned expansion can be counted as part of the standard sewer generation for the entire site, which is presently only half developed.

Therefore, at ultimate buildout, the Arconic site would be expected to generate 64,140 gallons per day peak flow at standard effluent generation rates. The capacity of the Verdi Interceptor is approximately 16 million gallons per day (16 MGD), indicating that the existing system is adequately sized to accept effluent from this project.

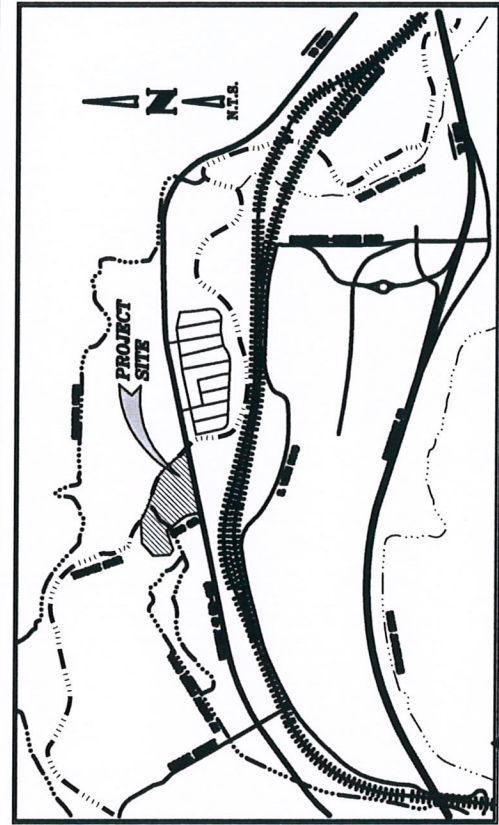
## **CONCLUSION**

The full capacity of the existing 42" sanitary sewer main (Verdi Interceptor) is approximately 16 MGD and was designed to serve future upstream users when it is ultimately extended to west Verdi. The domestic waste generated on the Arconic site (64,140 peak gallons/day) is minimal in comparison with the capacity of the Verdi Interceptor. Therefore the proposed sanitary sewer flows from Arconic can be easily accommodated by the existing Verdi Interceptor.

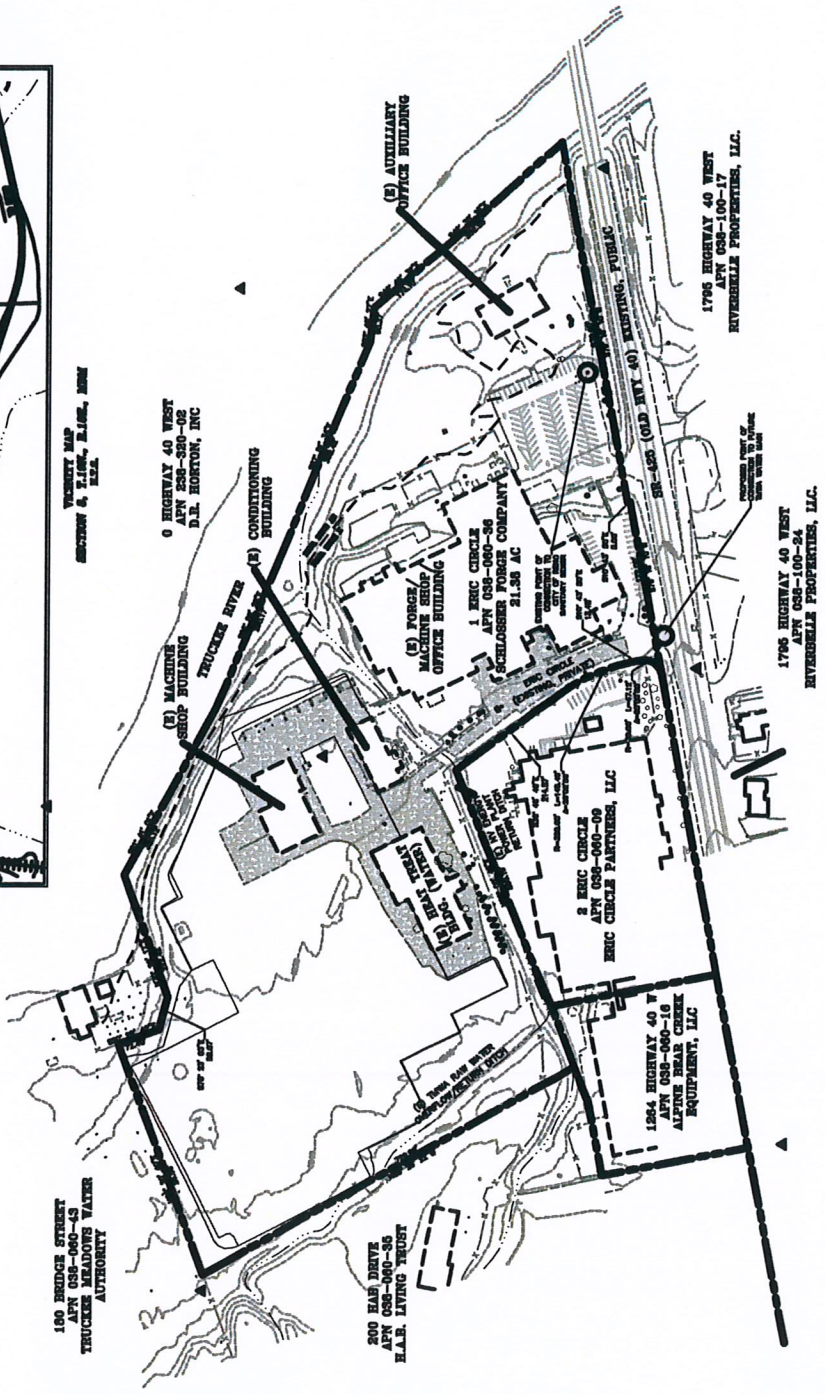


**ARCONIC  
 SUP AND MASTER PLAN  
 EXISTING SITE  
 TRUCKEE COUNTY - NEVADA**

DATE	
BY	
REVISION	
DATE	
BY	
REVISION	
DATE	
BY	
REVISION	

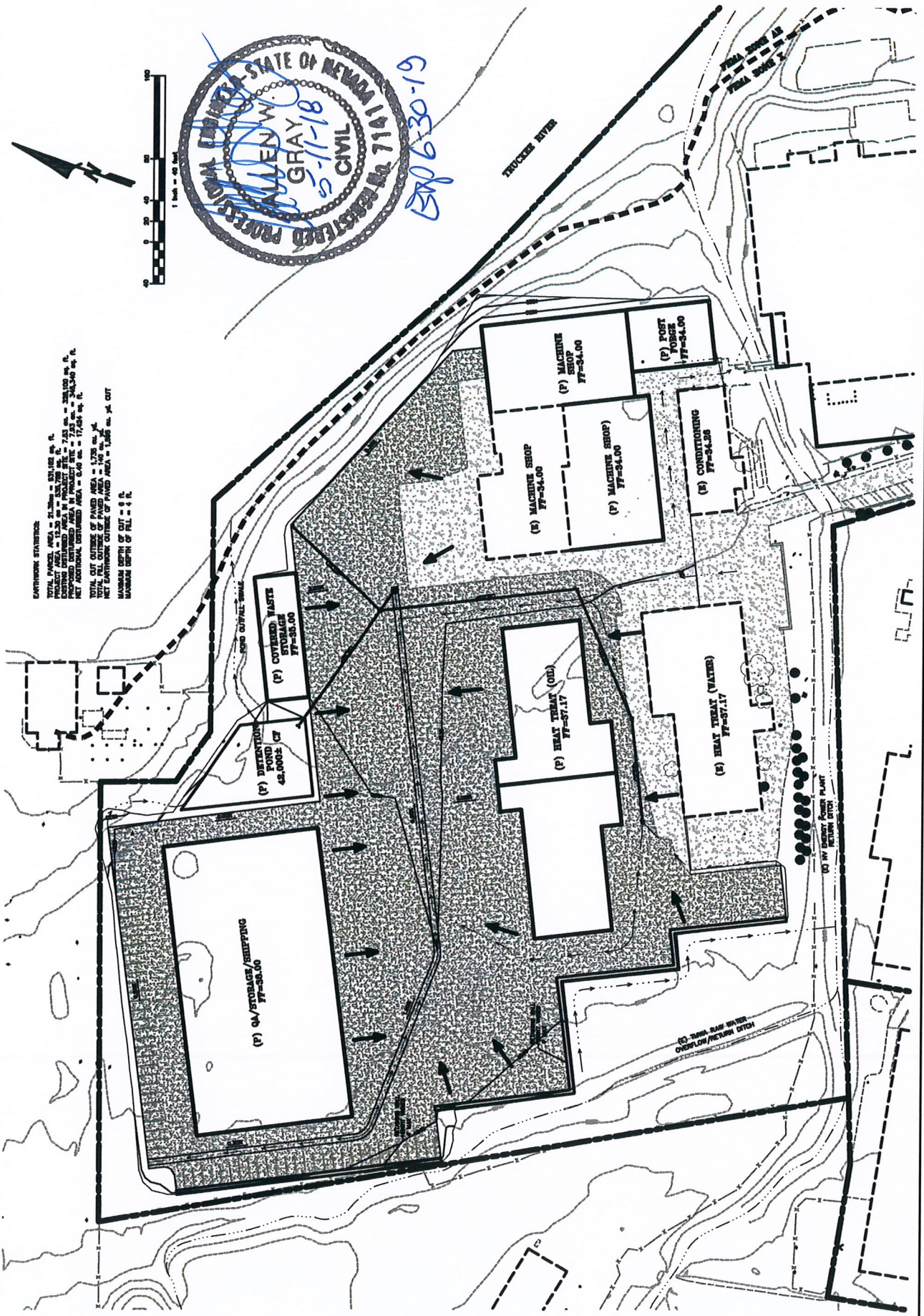


**STATE OF NEVADA**  
**PROFESSIONAL ENGINEER**  
**ALLEN W. GRAY**  
 5-11-18  
**CIVIL**  
 LICENSE NO. 71141  
 EXP 6-30-19

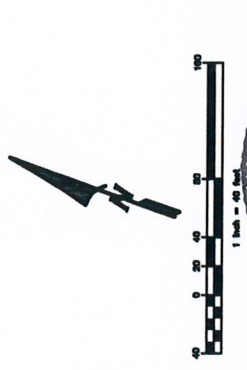


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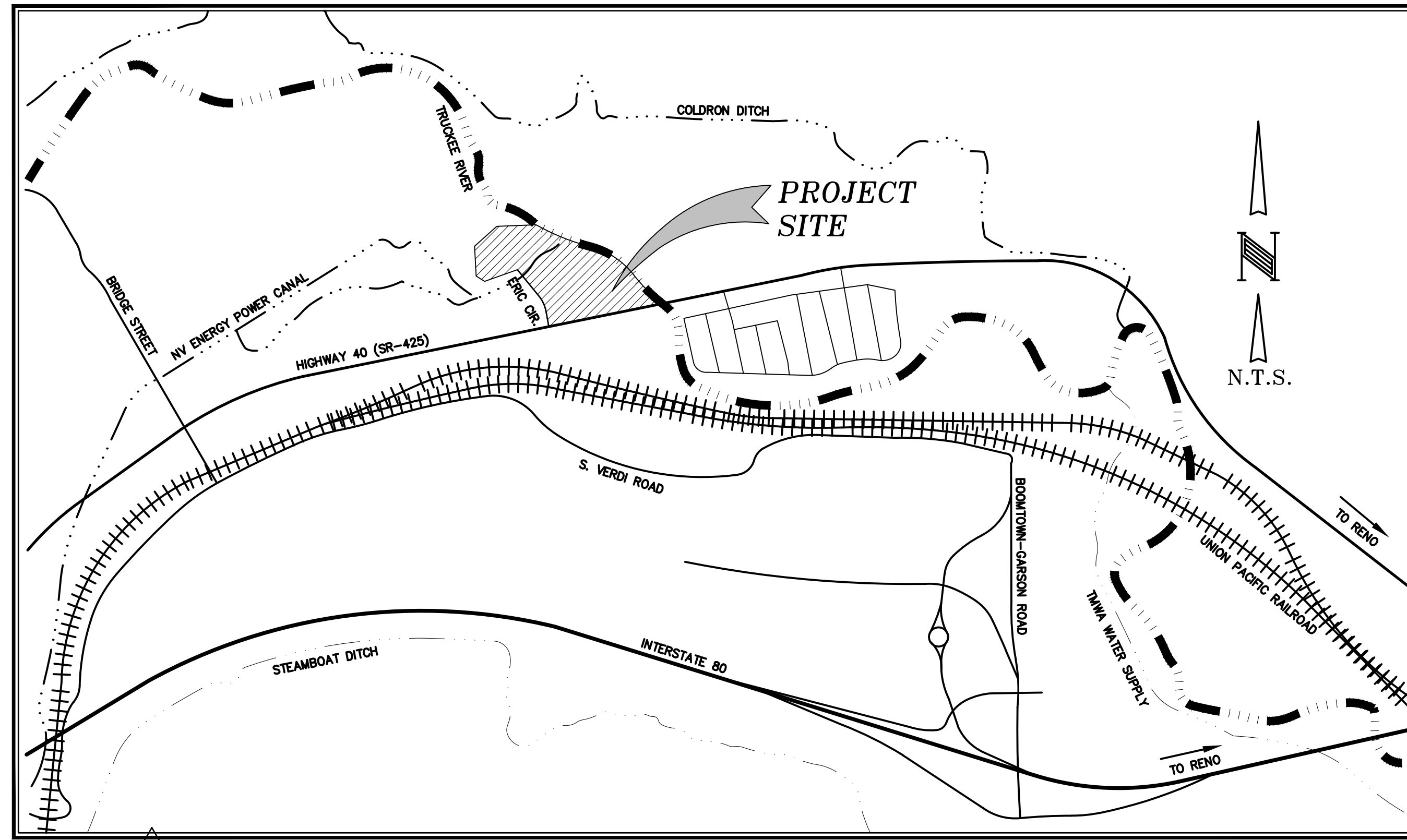




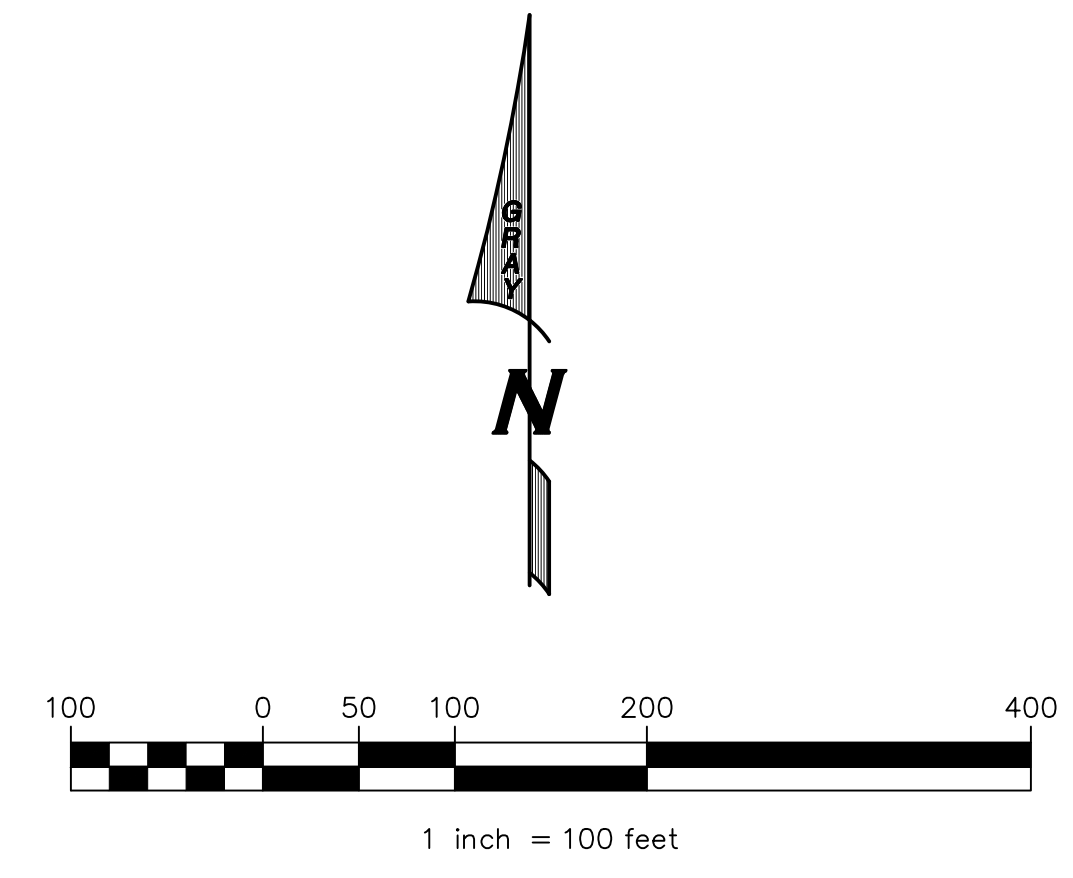
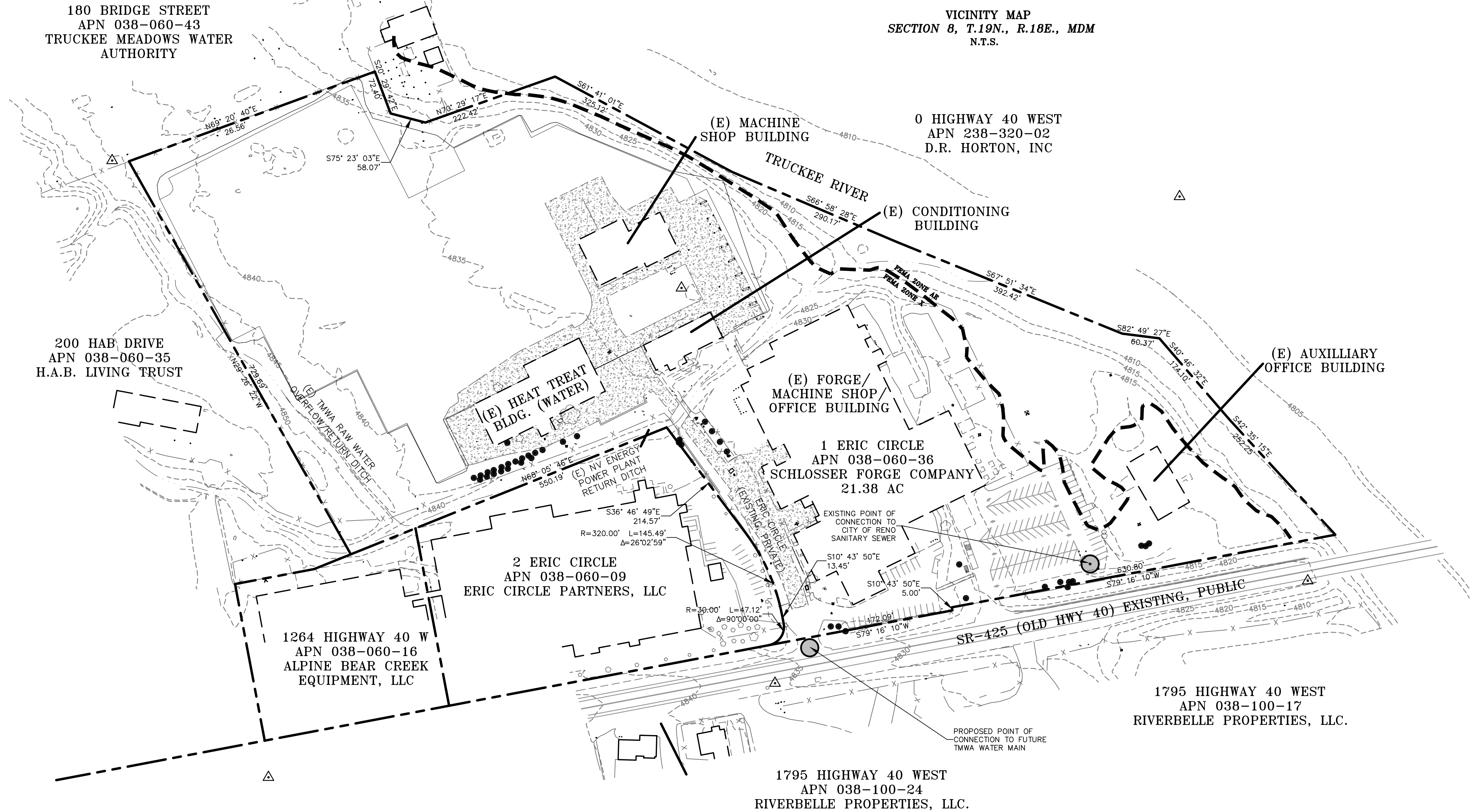
**EXISTING ELEVATIONS**  
 TOTAL PAVED AREA = 21,284 sq. ft.  
 TOTAL UNPAVED AREA = 1,100 sq. ft.  
 EXISTING DISTURBED AREA IN PROJECT SITE = 282,000 sq. ft.  
 PROPOSED DISTURBED AREA IN PROJECT SITE = 723 sq. ft. = 24,240 sq. ft.  
 NET ADDITIONAL DISTURBED AREA = 643 sq. ft. = 17,400 sq. ft.  
 TOTAL CUT OUTSIDE OF PAVED AREA = 1,700 cu. yd.  
 TOTAL FILL OUTSIDE OF PAVED AREA = 1,700 cu. yd.  
 NET EARTHWORK OUTSIDE OF PAVED AREA = 0.00 cu. yd.  
 MAXIMUM DEPTH OF CUT = 0.0 ft.  
 MAXIMUM DEPTH OF FILL = 0.0 ft.



STATE OF NEVADA  
 PROFESSIONAL ENGINEER  
 MALEK W. GRAY  
 No. 1118  
 Exp. 6/30/19



VICINITY MAP  
SECTION 8, T.19N., R.18E., MDM  
N.T.S.



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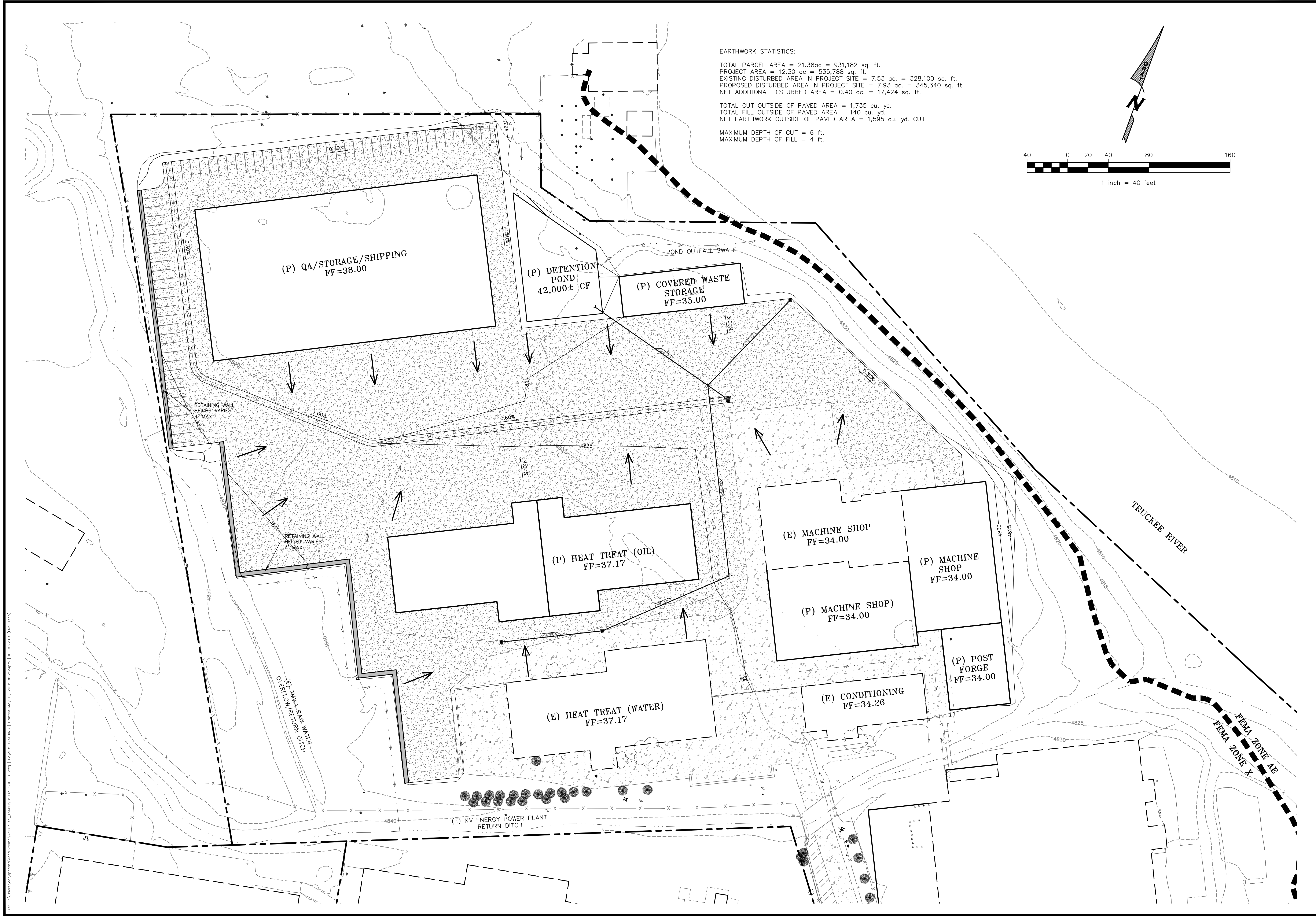
PROFESSIONAL ENGINEER - STATE OF NEVADA  
ALLEN W. GRAY  
CIVIL  
No. 71414  
EXP: 6/30/19

ARCONIC  
SUP AND MASTER PLAN  
EXISTING SITE  
WASHOE COUNTY - NEVADA

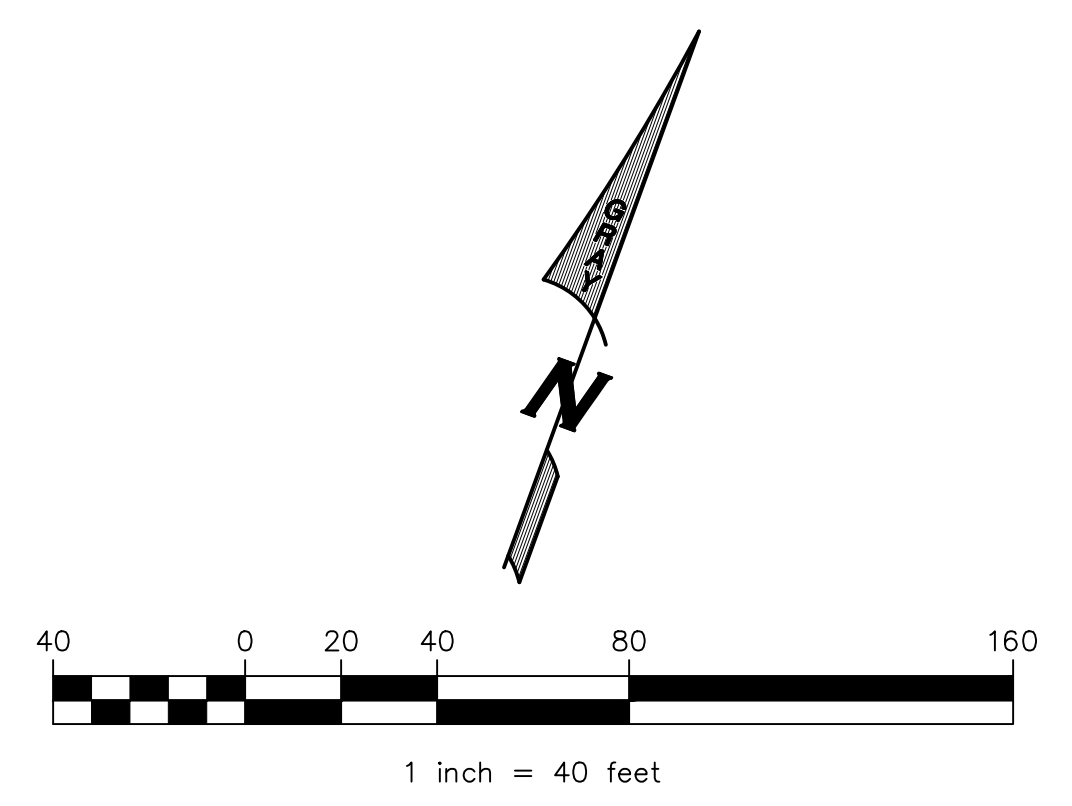
DATE	REVISIONS	BY

CLIENT No.: A087  
JOB No.: 18003  
DRAWN BY: ECT  
CHECKED BY:  
DATE: 5-14-18

SHEET No.  
**C1**  
OF THREE



EARTHWORK STATISTICS:  
 TOTAL PARCEL AREA = 21.38ac = 931,182 sq. ft.  
 PROJECT AREA = 12.30 ac = 535,788 sq. ft.  
 EXISTING DISTURBED AREA IN PROJECT SITE = 7.53 ac = 328,100 sq. ft.  
 PROPOSED DISTURBED AREA IN PROJECT SITE = 7.93 ac = 345,340 sq. ft.  
 NET ADDITIONAL DISTURBED AREA = 0.40 ac = 17,424 sq. ft.  
 TOTAL CUT OUTSIDE OF PAVED AREA = 1,735 cu. yd.  
 TOTAL FILL OUTSIDE OF PAVED AREA = 140 cu. yd.  
 NET EARTHWORK OUTSIDE OF PAVED AREA = 1,595 cu. yd. CUT  
 MAXIMUM DEPTH OF CUT = 6 ft.  
 MAXIMUM DEPTH OF FILL = 4 ft.



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 ALLEN W. GRAY  
 CIVIL  
 No. 7141  
 EXP: 6/30/19

ARCONIC  
 SUP AND MASTER PLAN  
 PRELIMINARY GRADING PLAN  
 WASHOE COUNTY - NEVADA

DATE	REVISIONS	BY

CLIENT No.: A087  
 JOB No.: 18003  
 DRAWN BY: ECT  
 CHECKED BY:  
 DATE: 5-14-18

SHEET No.  
**C2**  
 OF TWO

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**REQUIRED LANDSCAPE INFORMATION:**

Zoning: Industrial  
 Total Site Area: 2138 acres  
 Total Site Area - Master Plan Improvements: 12 acres  
 Total Undisturbed Existing Site Area: 9.38 acres  
 Total Disturbed Site Area: 112 acres

Total Required Landscape Areas: 11 acres (47,916 SF)  
 (10% of total disturbed site area)

Total Required Trees: 7 total  
 7 total (One tree for every 10 parking spaces: 64 spaces total)

Total Required Shrubs: 20,929 SF. Living ground cover shall be planted to achieve a minimum planting area of fifty (50) percent coverage at one (1) year.

Total Landscape Area Provided: 138,921 SF  
 (Includes 43,509 SF of ornamental landscape areas)  
 (Includes 95,392 SF of existing native vegetation protected in place)

Total Trees Provided: 21 total

**GENERAL LANDSCAPE AND IRRIGATION INFORMATION:**

- 1) ALL PLANTING AND IRRIGATION SHALL BE INSTALLED PER ARTICLE 412 OF THE WASHOE COUNTY DEVELOPMENT CODE.
- 2) ALL LANDSCAPE PLANTER AREAS WITH SHRUBS AND GROUND COVER SHALL HAVE A 100% COVERAGE WITHIN 3 YEARS.
- 3) PER ARTICLE 412 THE TREES SHALL BE INSTALLED WITH A MIXTURE OF DECIDUOUS AND CONIFER TREES. HALF OF THE EVERGREEN TREES SHALL BE 1' MIN HEIGHT WITH THE REMAINING EVERGREEN TREES AT 5' MINIMUM HEIGHT. HALF OF THE DECIDUOUS TREES WILL BE 2' MINIMUM CALIPER WITH THE REMAINING TREES BEING 1' MINIMUM CALIPER IN SIZE.
- 4) ALL ORNAMENTAL LANDSCAPE PLANTER BEDS SHALL RECEIVE 4" MINIMUM DEPTH OF GROUND COVER MULCH TOP-DRESSING (ROCK OR DG MULCH).
- 5) FINAL PLANT SELECTION, PLANT QUANTITIES AND LAYOUT WILL BE BASED ON SOUND HORTICULTURE PRACTICES RELATING TO ALL SITE CONDITIONS AND WATER USAGE. ALL TREES SHALL BE STAKED SO AS TO REMAIN UPRIGHT AND PLUMB FOLLOWING INSTALLATION.
- 6) ALL ORNAMENTAL LANDSCAPE AREAS WILL HAVE A COMMERCIAL GRADE IRRIGATION SYSTEM WITH AUTOMATIC CONTROL PER WASHOE COUNTY STANDARDS.
- 7) ALL AREAS WILL BE MAINTAINED PER INDUSTRY AND WASHOE COUNTY STANDARDS FOLLOWING INSTALLATION.



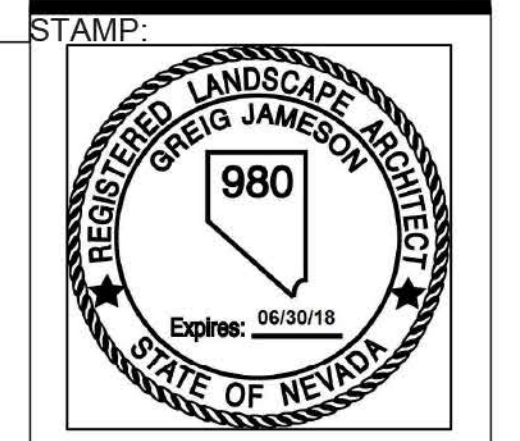
**GRAY & ASSOCIATES**  
 3680 Grant Drive, Suite B  
 Reno, NV 89509

**ARCONIC ALCOA**  
 SUP PRELIMINARY LANDSCAPE PLAN

DRAFTED: G&J  
 REVIEWED: G&J

J & A JOB NUMBER:  
 17-107-01

PLAN SET:  
 SUP PRELIMINARY PLAN



PLAN DATE: 05/15/18

REVISIONS:

#	DATE

SCALE: 1:40  
 SHEET:

**PRELIMINARY LANDSCAPE LEGEND:**

- EXISTING NATIVE VEGETATION (PROTECT IN PLACE) 95,392 SF
- ORNAMENTAL LANDSCAPE AREAS 43,509 SF
- DRAINAGE BASINS
- LARGE TREES (2.0' CAL OR 1' MIN HT)
- SMALL TREES (1.0' CAL OR 5' MIN HT)
- EXISTING TREES (PROTECT IN PLACE)

NOTE: TREE LAYOUT IS DIAGRAMMATIC ONLY TO SHOW EXAMPLE PLANTING AREAS FOR THE SUP SUBMITTAL. FINAL TREE LAYOUT TO BE INCLUDED DETERMINED WITH FINAL CONSTRUCTION DOCUMENTATION. NOT ALL TREES HAVE BEEN SHOWN FOR GRAPHIC CLARITY PURPOSES.

