



Report to the Planning and Zoning Commission

Prepared by the Maricopa County Planning and Development Department

Case: Z2009063 – Arlington Valley Solar Energy

Meeting Date: April 14, 2011

Agenda Item: 2

Supervisor District: 4

Applicant: Arlington Valley Solar Energy, LLC

Owner: State of Arizona, LSP Arlington Valley LLC, SEP-II, Lorimor Walter Tr, Duke Energy Maricopa, LLC, Arlington Valley Solar Holdings, LLC, and Ward Frank/Judy

Request: Special Use Permit (SUP) for a 125 MW photovoltaic (PV) solar energy generation facility in the Rural-190 zoning district

Site Location: South of Narramore Rd., north of Southern Pacific Trl. and east and west of the 387th Ave. alignment (in the Tonopah / Arlington area)

Site Size: 1,433 acres

Density: N/A

County Island Status: N/A

County Plan: Industrial - In Concert

Municipal Plan: N/A

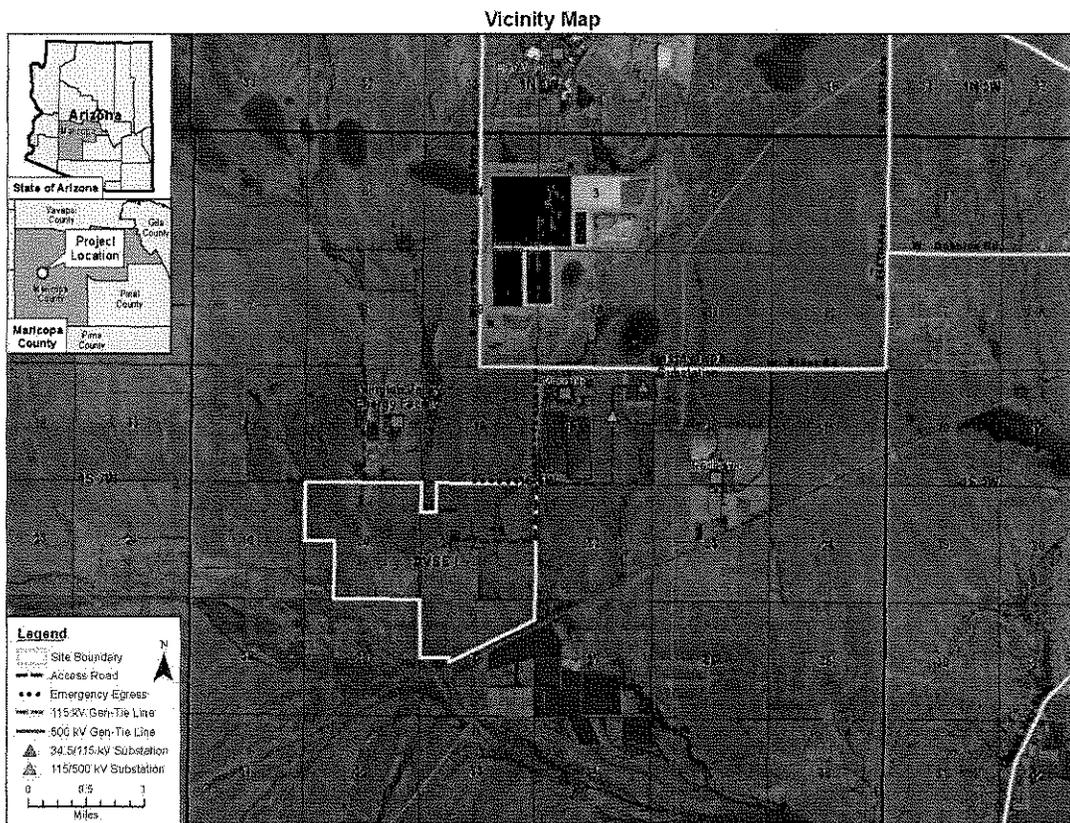
Municipal Comments: N/A

Support/Opposition: Five (5) items of support/No known opposition

Recommendation: **Approve** with stipulations

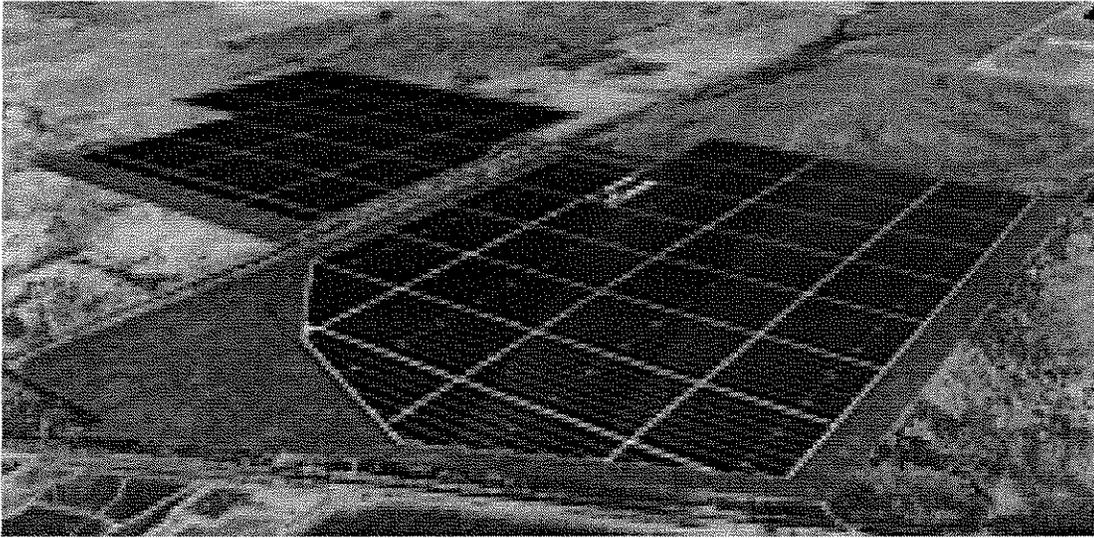
Project Summary:

1. Arlington Valley Solar Energy is a request for a Special Use Permit (SUP) for a 125 megawatt (MW) photovoltaic (PV) solar energy generation facility in the Rural-190 zoning district. The 1,433 acre site is located south Palo Verde Nuclear Power Plant, Elliot Road, Arlington Valley Energy Generating Station, and Mesquite Generating Station, north of Southern Pacific Trl. and Centennial Wash and east and west of the 387th Ave. alignment and Winters Wash in the Tonopah / Arlington area. The property is part of the Arlington Valley Generating Station's "water properties", a 2,465 acre area originally designated as open space, revegetated, and utilized for its groundwater usage. The property has subsequent approvals for Comprehensive Plan Amendments changing the land use designation to "Industrial" for the purpose of a solar energy generation facility, all of which is outlined in the 'Background' section of this report.

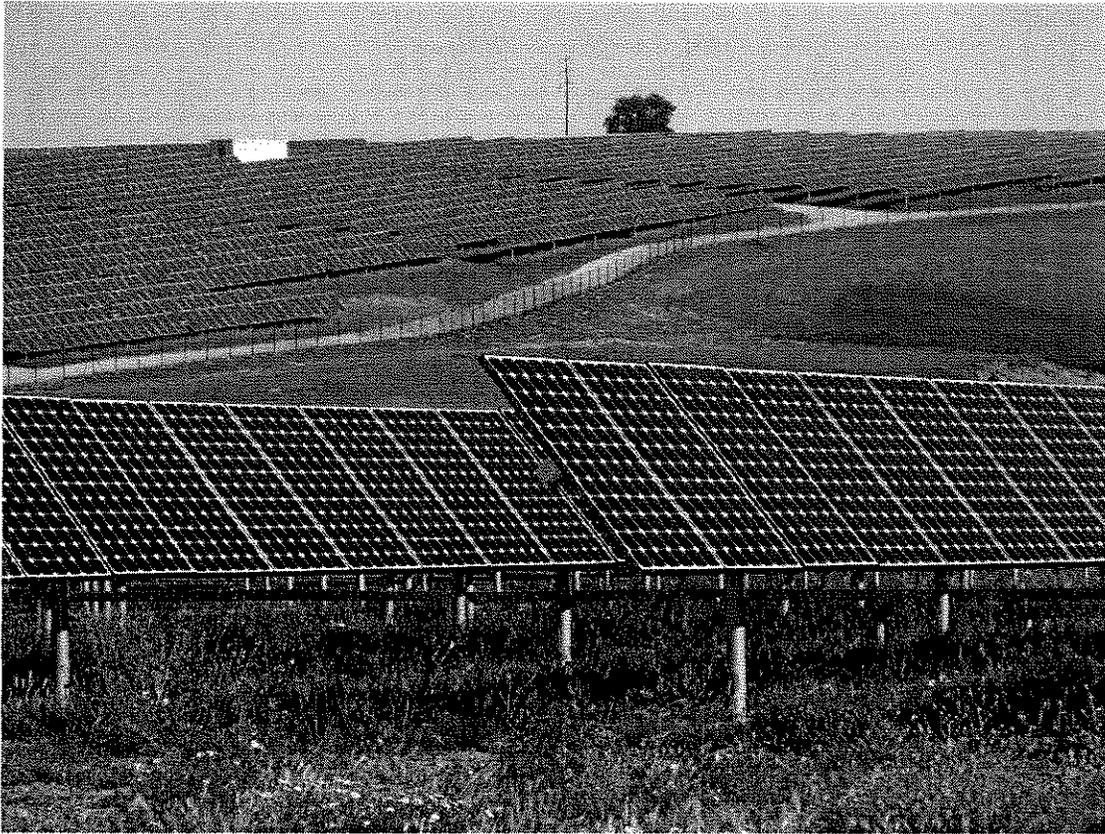


2. The proposal will allow the site to develop as a photovoltaic (PV) solar energy generation facility. The applicant's narrative report and site plan describe and illustrate in detail a facility designed to utilize PV panels that absorb sunlight and directly produce electricity without use of heat transfer fluid or cooling water. The fully operating facility will produce up to 125MWs of clean solar renewable electric energy and deliver electric output on a wholesale basis to meet goals for increase use of renewable energy. The facility will have three (3) phases with the first phase starting construction within the next year. The ultimate build out of the facility will take place over the next 30 years depending upon the market

and the rates of PV panel manufacturing. Each phase of the project is designed to stand alone with its requisite infrastructure.



3. The general layout, buffering, drainage facilities, access points, fencing, location of temporary construction yards, and perimeter roads of the facility are illustrated on Figure 1 (also, see artist's rendering above). The details of the common service areas which consist of a 5,000 sq. ft. operation/maintenance building, 4,000 sq. ft. water treatment building, well and septic areas, evaporation ponds, water tanks, substation, as well as parking are illustrated on Figure 2. Within the blocks designated on Figure 1, either fixed tilt supports or horizontal single axis tracker panels (see photos below) will be constructed which in turn will impact the final panel layout and internal roadways. The main substation for the project is within the common service area and 115kV lines run east from the substation and then north along the eastern boundary and off site to the Hassayampa Substation along Elliot Rd.



Horizontal tracking example



Fixed Tilt example

4. Approximately 12-15 operational personnel are anticipated. The site has been designed with extra parking to accommodate events such as employee training, public/stakeholder outreach, and other business functions which may involve a maximum of 30 participants. During construction, approx. 319

construction personnel will be utilized and will be accommodated within the designated temporary construction yards illustrated on Figure 1.

5. The main access point is located on the northern boundary of the site and will traverse north along the 391 Ave. alignment to Elliot Road approx. one mile. This main access road and the 24' wide main driveway within the site will be paved. Prior to construction, the applicant will acquire the exclusive right to an access road easement across the property to the north. Emergency access is also located along the northern boundary of the site, further east, and will traverse land owned by the Arizona State Land Department. The applicant has provided a copy of the pending right-of-way / lease application from the State and anticipates approval within 90 days and prior to construction. Perimeter driveways are proposed to be gravel and 24' wide whereas internal drives are proposed to be gravel and 12' wide. Dust will be controlled by periodic application of water or soil stabilizers as required by the Maricopa County Department of Air Quality.
6. The project will be enclosed with a 6' high chain-link fencing and gates with 1' high of barbed wire. Lighting is located at the main and emergency access gates and within common services area and consists of fully shielded light poles or wall mounted security lighting. A 32 sq. ft. entrance sign is proposed at the main gate within the project area.
7. The layout of the site as illustrated on Figure 1 has been planned with significant buffering. A minimum 25' wide buffer is proposed along 395th Ave, an arterial with 65' half-width of dedication required. Retention ponds are located along the southern portions of the site and Winters Wash traverses the property in the central portion of the site. A 24' wide bridge spans across the wash connecting the east and west sides of the project. Additional discussion regarding revegetation is within the 'Staff Analysis' section of this report.
8. The facility utilizes a minimal amount of water, approx. 11 acre feet per year. The water supply will be from the ground water rights associated with the Arlington Valley Energy project which were comprehensively modeled during the early 2000 approvals of the three combined cycle power plants along Elliot Rd. The applicant has provided a "will serve" letter from the Buckeye Valley Fire District and is proposing a 200,000 gallon on site water tank sufficient to provide 2 hours of water flow.

Public Participation Summary:

9. The applicant engaged in an extensive public participation effort regarding this project which started with their 2008 CPA process. In addition to the minimum requirements for site posting and notification, the applicant held numerous meetings with stakeholders and maintained a 1-800 comment number and website. Neither staff nor the applicant has received any negative comments and to date, staff has received five (5) items of support (attached).

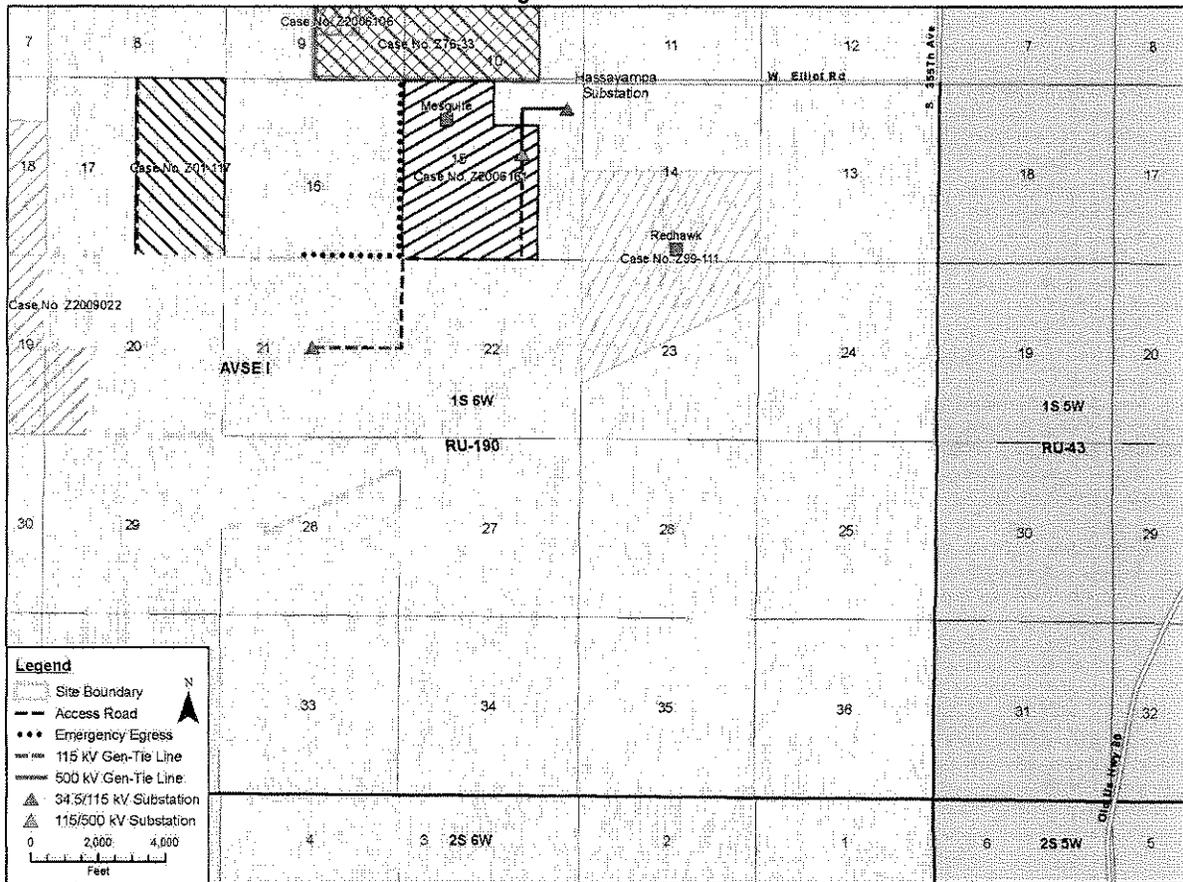
Background:

10. **August 23, 2000:** The Maricopa County Board of Supervisors (BOS) approved a request for a Special Use Permit (SUP), Z2000013, for 320 acres just north of the subject site for the Arlington Valley Energy combined cycle power plant as well as CPA200004, to amend the Tonopah Area Plan to change the land use designation from Rural Residential (0-1 d.u./ac.) to Industrial and Dedicated Open Space for the associated water rights property on 2,465 acres of which a portion was part of the subject property (see attachments).
11. **December 17, 2008:** The BOS approved a request, CPA200808, to amend the Old U.S. Highway 80 Area Plan to change land use designation from Dedicated Open Space to Industrial for a solar energy generation facility on 2,450 acres of which a portion was part of the subject property (see attachments).
12. **July 20, 2009:** The applicant applied for the subject Special Use Permit, Z2009063, request.
13. **December 1, 2010:** The BOS approved requests CPA200916 (80 acres), CPA200917 (80 acres), and CPA200919 (80 acres) to amend the Old U.S. Highway 80 Area Plan to change land use designation from Rural (0 -1 d.u./ac.) to Industrial to permit development of a solar energy generation facility for a portion of the subject property (see attachments).

Existing On-Site and Adjacent Zoning and Land Use:

- | | | |
|-----|---------|---|
| 14. | On-site | Rural-190 / vacant, revegetated desert |
| | North: | Rural-190, AVE SUP (Z2000013), & MSG SUP (Z2000071) SUPs / Combined Cycle power plants, transmission lines, vacant natural desert |
| | South: | Rural-190 / Vacant natural desert, Centennial Wash, Southern Pacific Trl & farmland |
| | East: | Rural-190 / Vacant natural desert |
| | West: | Rural-190 & Mesquite Solar SUP (Z2009022)/ Construction for Solar Energy Generation Facility & vacant natural desert |

Figure B - Land Use



Adopted Plans:

- 15. **Old U.S. Highway 80 Area Plan:** As amended with CPA200808, CPA200916, CPA200917, and CPA200919, the Area Plan designates the site as Industrial for a solar energy generation facility. The proposal is in concert with the amended Area Plan.

Utilities and Services:

- 16. Water: On-site wells
- Wastewater: On-site septic system
- School Districts: Arlington #47 & Buckeye Union HS
- Fire: Buckeye Valley Fire District

Outstanding Concerns from Reviewing Agencies:

- 17. N/A

Staff Analysis:

18. The subject request is for a Special Use Permit (SUP) for a 125 megawatt (MW) photovoltaic (PV) solar energy generation facility in the Rural-190 zoning district. The request has been through extensive technical review and has received sign off from reviewing County agencies. The project has been through an extensive public participation process and there is no known opposition. To the contrary, several support letters have been received and are attached. The BOS approved four CPAs related to the project in anticipation of this solar facility. Staff is supportive of the request and recommends a 40 year time frame for the SUP which is consistent with other recently approved SUPs for solar facilities. In addition, staff would recommend annual status reports to support Drainage Plan Review's desire to monitor retention areas.
19. The Maricopa County Department of Emergency Management commented on the project twice (see attached memos). The applicant addressed the concerns listed in the memo dated April 12, 2010 within their narrative by describing that the project will include a system to alert on site personnel in the event of an emergency. The memo dated March 28, 2011 indicates that if a Traffic Impact Study is required by MCDOT, then it should include emergency access routes ensuring that on site personnel will have adequate evacuation time. MCDOT has not required a TIS but the issue has been addressed with provision of an emergency access road which has been reviewed and approved by MCDOT. Further, staff has recommended stipulations that require provision of legal access documentation prior to zoning clearance. Additionally, on March 29, 2011 MCDEM concurred that this issue was adequately resolved.
20. Staff identified a regional trail segment alignment appearing to cross the subject site generally along Winters Wash and the 387th Avenue alignment. Although this application was routed to Maricopa County Parks, they have not commented. Nevertheless, since Winters Wash is not being developed with solar apparatus rather the intent is the revegetate the corridor, staff would encourage AVSE to accommodate any future needs to extend the regional trail into their site as may be deemed appropriate by Maricopa County Parks. Accordingly, a stipulation which is consistent with the Mesquite Solar approval has been recommended.
21. The BOS approved a Land Management Plan with CPA200004 with the following stipulation:

"A Land Management Plan for landscaping and revegetation of the site shall be applied to the site as proposed in the applicant's narrative report. Annual reports for the progress and implementation of the plan shall be required within the Special Use Permit (Z2000013)."

Subsequently, the BOS approved four CPAs which cover the area related to CPA200004. Because the Land Management Plan stipulation was primarily

tied to the CPA, staff felt that the new CPAs essentially overrode the subject stipulation and that the status of the project site with respect to revegetation efforts could simply be updated within the annual status report requirement of Z2000013. In fact, Arlington Valley Energy has included this update in their last status report stating that "during the pendency of the proposed solar plant, the Land Management Plan for the Arlington Valley Project is being suspended within Arlington Solar Energy Project I and Arlington Solar Energy Project II, to instead be governed by such land management plan as approved by the Board of Supervisors with respect to those projects." It is important to note that this area was originally designated as Open Space with the community expectation that it was to be revegetated. Having said that, staff acknowledges that both the BOS and community support the renewable energy goals that are achieved with this solar project. In the instance of AVSE, the applicant has expressed a willingness to maintain vegetation along 395th Avenue and to revegetate along the Winters Wash according to the permitting process including Winters Wash Restoration Plan that they have started with the United States Army Corps of Engineers. Staff supports both of these revegetation efforts and has stipulated to enhancement of the vegetation as may be necessary along 395th Ave. to be consistent with the adjacent parcel, Mesquite Solar. The Mesquite Solar parcels were also subject to a Land Management Plan associated with the water properties and combined cycle plant (Z2000071) and through their solar approvals agreed to maintain this vegetation along 395th Ave. in part to maintain wildlife corridors as expressed by the AZ Game and Fish Department during their process. Mesquite also agreed to maintain their Land Management Plan adjacent to their southern boundary along Centennial Wash.

22. Last, staff is recommending two additional stipulations in response to general concerns regarding the viability of solar projects. Once stipulation aims to revert the zoning, land use designations, and reinstitute the Land Management Plan if the project doesn't proceed to construction within three years. The second stipulation is aimed at restoring the site if the project construction commences but is abandoned.

Recommendation:

23. Staff recommends the Commission motion for **approval** subject to stipulations "a" – "aa" for the following reasons:
 - Reviewing agencies have no objections.
 - There is no known public opposition.
 - The proposal supports renewable energy goals.
 - The proposal is in concert with the Maricopa County Comprehensive Plan and the Maricopa County Old U.S. Highway 80 Area Plan.

Provided the following stipulations are met:

- a. Development of the site shall be in substantial compliance with the Site Plan entitled "Arlington Valley Solar Energy, LLC", consisting of sixteen

(16) full-size sheets, stamped received March 25, 2011 except as modified by the following stipulations.

- b. Development of the site shall be in general conformance with the Narrative Report entitled "Arlington Valley Solar Energy", consisting of a bound document, 35 pages with figures and appendices, dated revised March 2011 and stamped received March 25, 2011 except as modified by the following stipulations.
- c. Any events as described in the narrative report shall be limited to 30 participants.
- d. Prior to zoning clearance for any permit, legal access documentation shall be provided for both the main and emergency access points.
- e. To the extent possible, the applicant shall accommodate Maricopa County's regional trail system which traverses their site generally along the 387th Ave. alignment adjacent to Winters Wash as may be deemed necessary by Maricopa County Parks.
- f. Any existing vegetation along 395th Avenue shall be maintained through construction and revegetation efforts shall be generally consistent with the vegetation along the west side of said alignment.
- g. Revegetation along and within Winters Wash shall be consistent with the US Army Corps of Engineers permitting requirements. In the event that this permit is not pursued, revegetation along Winters Wash shall be consistent with the Arlington Valley Energy Land Management Plan approved with CPA200004.
- h. All trees shall be double-staked when installed.
- i. All transformers, back-flow prevention devices, utility boxes and all other utility related ground mounted equipment shall be painted to complement the development and shall be screened with landscape material where possible. All HVAC units shall be ground-mounted or screened with a continuous parapet.
- j. Dedication of additional rights-of-way to bring the total half-width dedication to 65' for 395th Avenue shall occur within six (6) months of approval of this request by the Board of Supervisors, and prior to zoning clearance. All such dedications shall be in fee and free of all liens and encumbrances. Prior to acceptance of such dedication, the applicant shall provide the County an owner's title insurance policy issued to the County, the Maricopa County Department of Transportation (MCDOT) environmental checklist and any and all other requirements as set forth in the "MCDOT Right-Of-Way Dedications Reference Guide". Until Maricopa County has accepted said dedication, all responsibilities,

including but not limited to maintenance and repair for the property to be dedicated shall be that of the applicant.

- k. Prior to zoning clearance, the applicant/property owner shall obtain the necessary encroachment permits from the Maricopa County Department of Transportation (MCDOT) for landscaping or other improvements in the right-of-way.
- l. The following Maricopa County Environmental Services (MCESD) stipulations shall be met:
 - Prior to zoning clearance for issuance of the first facility building permit, all required permits for any required drinking water, sanitary and industrial wastewater permits by MCESD and Arizona Department of Environmental Quality (ADEQ) must be submitted to the appropriate agency.
 - No facility operation can begin prior to the approval of the above permits (issuance of an Approval to Construct) and a construction approval (Approval of Construction) of the required facilities signed by MCESD.
- m. All outdoor lighting shall conform to the Maricopa County Zoning Ordinance.
- n. Development of the site shall be in compliance with all applicable Maricopa County Air Quality rules and regulations.
- o. An archeological survey shall be submitted to and approved by the Arizona State Historic Preservation Office prior to issuance of a grading permit. The applicant must contact the State office prior to initiating disturbance of the site. The applicant shall provide the Planning and Development Department with written proof of compliance with this stipulation prior to zoning clearance for any building permits.
- p. The following Maricopa County Drainage stipulations shall be met:
 - All development and engineering design shall be in conformance with the Drainage Regulation and current engineering policies, standards and best practices at the time of application for construction.
 - Drainage review of planning and/or zoning cases is for conceptual design only and does not represent final design approval nor shall it entitle applicants to future designs that are not in conformance with the Drainage Regulation and design policies and standards.

- All modeling and analysis shall be considered conceptual and shall be refined to a level appropriate for design with the request for construction permits.
 - Yearly status reports shall be required that shall demonstrate that the retention areas have been inspected and maintained as listed in the *Operations and Maintenance of Drainage Systems* section of the latest drainage report and with any additional information that Maricopa County may require to demonstrate that the projects drainage management system is in conformance with regulatory development requirements.
 - The requirements for status reports shall be in addition to the requirements for such reports determined by the Planning Division or other regulatory agencies.
 - With all applications of construction permits, final construction details shall be provided for all requested construction activity for which details were not requested a part of the entitlement case. This shall include, but not be limited to, fencing, signage, erosion protection, channel armoring and drywells
 - All construction activity shall be within the Special Use Permit (SUP) limits.
 - A schedule of construction shall be submitted with all phases of construction permit applications.
 - At time of construction permit application, all phases shall be demonstrated to meet regulatory development requirements independently from future phases or for prior phases not completed at time of final inspection.
- q. As part of the building permit process, a Floodplain Use Permit will need to be obtained from the Floodplain Management and Services Division of the Flood Control District.
- r. Development and use of the site shall comply with requirements for fire protection measures as deemed necessary by the Buckeye Valley Fire District. Prior to issuance of zoning clearance, the applicant shall seek review and comment from the applicable fire protection agency, and shall provide written confirmation that the site will be developed in accordance with their requirements.
- s. The applicant or his successor shall obtain approval of any development plans from the applicable Fire Marshall prior to any construction.

- t. This Special Use Permit shall expire forty (40) years from the date of approval by the Board of Supervisors, or upon expiration of the lease to the applicant, or upon termination of the use, whichever occurs first. All of the site improvements shall be removed within 90 days of such termination or expiration.
- u. The applicant shall submit an annual written report from the date of approval by the Board of Supervisors. The status report shall be reviewed by staff to determine whether the Special Use Permit remains in compliance with the approved stipulations including maintenance of drainage facilities.
- v. Amendments to the site plan and narrative report shall be processed as a revised application in accordance with Maricopa County Zoning Ordinance Article 304.9.
- w. Noncompliance with the conditions of approval will be treated as a violation in accordance with the Maricopa County Zoning Ordinance. Further, noncompliance of the conditions of approval may be grounds for the Planning and Zoning Commission to take action in accordance with Chapter 3 (Conditional Zoning).
- x. Non-compliance with the regulations administered by the Maricopa County Environmental Services Department, Maricopa County Department of Transportation, Drainage Review Division, Planning and Development Department, or the Flood Control District of Maricopa County may be grounds for initiating a revocation of this Special Use Permit as set forth in the Maricopa County Zoning Ordinance.
- y. The granting of this change in use of the property has been at the request of the applicant, with the consent of the landowner. The granting of this approval is temporary and allows the property to enjoy uses in excess of those permitted by the zoning existing on the date of application, subject to conditions and stipulations. In the event of the failure to comply with any condition or stipulation, and at the time of expiration of the Special Use Permit, the property shall revert to the zoning that existed on the date of application. It is, therefore, stipulated and agreed that either revocation due to the failure to comply with any conditions or stipulations, or the expiration of the Special Use Permit, does not reduce any rights that existed on the date of application to use, divide, sell or possess the property and that there would be no diminution in value of the property from the value it held on the date of application due to such revocation or expiration of the Special Use Permit. The Special Use Permit enhances the value of the property above its value as of the date the Special Use Permit is granted and reverting to the prior zoning results in the same value of the property as if the Special Use Permit had never been granted.

- z. If a building permit for the facility has not been issued within three (3) years from the date of Special Use Permit (SUP) approval, this SUP and the related Comprehensive Plan Amendments (CPA200808, CPA200916, CPA200917, and CPA200919) will be scheduled for public hearing by the Maricopa County Board of Supervisors, upon recommendation by the Maricopa Planning and Zoning Commission, to consider reverting the zoning to Rural-190 and the related land use designations to Open Space and Rural respectively. Additionally, in the event of the reversion, the Land Management Plan associated with CPA200004 shall be implemented.

- aa. Prior to issuance of any construction permits or ground disturbance activities, the developer shall provide assurance in an amount and form acceptable to the Maricopa County Planning & Development Department sufficient to restore any natural areas and stabilize the entire site in the event the project is abandoned, expires or otherwise becomes defunct.

Presented by: Terri S. Hogan, AICP, Principal Planner
 Reviewed by: Darren V. Gerard, AICP, Deputy Director

Attachments: Case Map (1 page)
 Vicinity Map (1 page)
 Narrative Report with site plan (77 pages)
 Routing Memos (4 pages)
 MCDOT comments (1 page)
 MCESD comments (2 pages)
 DPR comments (2 pages)
 FCD comments (1 page)
 MCDEM comments (2 pages)
 SHPO comments (1 page)
 ADOT comments (1 page)
 Buckeye Valley Fire District "will serve" letter (1 page)
 Tonopah Valley Community Council letter (1 page)
 Tonopah Tribune letter (1 page)
 Citizen Participation Plan Results Report (12 pages)
 Z2000013 Case Map and Approval Letter (5 pages)
 CPA200004 Case Map and Approval Letter (3 pages)
 CPA200808 Case Map and Approval Letter (3 pages)
 CPA200916 Case Map and Approval Letter (3 pages)
 CPA200817 Case Map and Approval Letter (3 pages)
 CPA200819 Case Map and Approval Letter (3 pages)

Enclosures: Narrative Report with Figures & Appendices