



MEMORANDUM

DATE: February 24, 2020

TO: Natural Resources Commission

FROM: Sherri Metzker, Principal Planner
Kerry Loux, Sustainability Coordinator

RE: Aggie Research Campus

RECOMMENDATION

Staff recommends that the Commission:

1. Receive the memorandum from staff; and
2. Receive a presentation from the applicant regarding the project and their proposed Sustainability Guiding Principles under review by city staff; and
3. Receive public comment; and
4. Provide feedback to staff and any specific recommendations for future Planning Commission and City Council consideration on the project's proposed Sustainability Guiding Principles.

BACKGROUND

On September 19, 2017, the City Council adopted Resolution 17-125, certifying the Final Environmental Impact Report ("EIR") for the Mace Ranch Innovation Center project ("MRIC"). The planning applications related to the EIR were subsequently put on hold. On June 11, 2019, the City received a letter from the property owners of the MRIC project site (Buzz Oates, Reynolds & Brown, and Ramco Enterprises) requesting the City recommence with processing of their innovation center application, which has been renamed as the Aggie Research Campus ("ARC"). On September 30, 2019, the applicant submitted a project description and a number of other exhibits related to their application that are under review and are included as informational attachments to this staff report.

The applicant spent the last two years conducting research on modern innovation parks, talking to industry experts, and analyzing the appropriate land uses. The applicant has decided to continue pursuing the appropriate general plan and zoning designations, as well as, an application to annex their proposed Aggie Research Campus project which is located on a 185-

acre project site, immediately east of the City of Davis city limits, near the “Mace Curve”, in unincorporated Yolo County. At build-out, the ARC would include up to 2,654,000 square feet of innovation center/business uses and 850 residential units of varied sizes and affordability. More specifically, the ARC project would include space for office, research & development, laboratory, advance manufacturing, prototyping, limited supportive retail, a hotel and a conference center, and include 850 residential units to provide a jobs/housing balance. The ARC proposal has been planned to be in conformance with the mixed-use project alternative that was analyzed in the MRIC EIR. The project is undergoing appropriate CEQA analysis (supplemental EIR), specifically evaluating changed environmental conditions.

The proposed Aggie Research Campus is a research and development business park campus that intends to offer a live/work environment through a comprehensive sustainable site design and broad array of complementary land uses. The proposed project would feature office, research & development, laboratory, prototyping, advanced manufacturing, recreation, open space, and housing. The applicant intends for these mix of uses to attract new economy incubators, entice UCD-spawned businesses seeking a growth location, and provide large-scale locational opportunities for well established companies, particularly those with research ties to the University. The applicant’s objective is to fulfill a clear City need for economic development space and allow existing and new companies to grow and remain in Davis.

The project description provided by the applicant provides a detailed narrative on the proposed project (Attachment 2). Additional project information can be found at <https://www.cityofdavis.org/city-hall/community-development-and-sustainability/development-projects/aggie-research-campus>.

The City’s Mace 25 Parcel

In the prior MRIC proposal, development of the City’s Mace 25 was part of the project proposal. The current ARC proposal removes the City’s Mace 25 parcel from the development proposal. There are no proposed changes to the agricultural zoning of the Mace 25 parcel nor to the City ownership of the property. The ARC project does propose a 150’ wide, nine-acre agricultural buffer easement on the southern and eastern edges of the Mace 25 parcel. The placement of the agricultural buffer easement will be considered as part of the larger entitlement application discussion at a future meeting.

Project Review Background

The Aggie Research Campus project has applied for a General Plan Amendment, Pre-Zoning, a Sphere of Influence Amendment and an Annexation. These are the land use entitlements that would be the subject of a Measure R vote should they ultimately be approved and referred to the ballot by the City Council. Baseline project features would also be established and memorialized as part of the Measure R vote. These initial entitlements would establish land use for the project area.

The application for the Aggie Research Campus has been and will continue to be reviewed by the City and various Commissions prior to consideration by the Planning Commission and City Council. The recommendations of those commissions will be forwarded to the Planning Commission and City Council as a part of the project approvals. The following commissions

have or will be making recommendations to the City Council as part of the current entitlement application.

- Open Space and Habitat Commission
- Social Services Commission
- Natural Resources Commission
- Finance and Budget Commission
- Bicycle and Transportation Street Safety Commission
- Tree Commission
- Parks and Recreation Commission
- Planning Commission

The project would require future implementing entitlements including a Tentative Subdivision Map and a Final Planned Development/Design Review. The project would go back to those commissions with project components specific to individual commission purview as part of the implementing entitlements should the initial land use entitlements be approved.

PROPOSED ENVIRONMENTAL SUSTAINABILITY GUIDING PRINCIPLES

Attachment 1 to this memorandum from the project applicant is a document entitled, *Aggie Research Campus Environmental Sustainability Guiding Principles*. The applicant proposes that these principles set the framework under which all future development in the campus will be evaluated for their sustainability features. Although the document implies that there is already agreement between applicant and staff, to be clear this is the applicant's proposal. Staff is still in the process of reviewing and gathering Commission and other feedback prior to any final approval. The proposed project will be consistent with the City requirements that include greenhouse gas reduction standards, Building Code requirements, construction waste management and recycling requirements, water efficient landscaping standards, storm water management, and bicycle parking requirements. The City standards and thresholds will be addressed in the project's EIR.

Staff is seeking comments and feedback from the Natural Resources Commission on the Aggie Research Campus Environmental Sustainability Guiding Principles. Staff will consider NRC feedback and recommendations as staff evaluates the project and prepares final recommendations to the Planning Commission and City Council. Staff will also share specific recommendations of the NRC regarding the project sustainability features with the Planning Commission and City Council as part of the project hearings.

Attachments:

- 1) Proposed Aggie Research Campus Environmental Sustainability Guiding Principles
- 2) Proposed Aggie Research Campus Project Description and Land Use Plan

Other project information is available at:

<https://www.cityofdavis.org/city-hall/community-development-and-sustainability/development-projects/aggie-research-campus>

P:\Planning\Projects-Special\Aggie Research Campus\Other Commission staff reports\NRC Staff Report Feb 24 2020.doc



ENVIRONMENTAL SUSTAINABILITY GUIDING PRINCIPLES

In recognition of the City's declaration of a climate emergency (RESOLUTION 19-023), the Developer and the City have agreed to the following Sustainability Guiding Principles for the Aggie Research Campus ("Project"). These Guiding Principles are a means for mandating, implementing and maintaining Project features that are designed to address and mitigate identified environmental concerns, including but not limited to impacts to global climate change, and to ensure sustainability for the life of the project.

Measurement and Verification

Critical to the success of the Aggie Research Campus is its ability to demonstrate continuous advancements in site sustainability during buildout and into campus operations. Many of the Sustainability Guiding Principles are designed to gradually increase site sustainability and further reduce Project impacts over time, such as improved air quality, reduced carbon emissions, greater electrical efficiency and reduced single-occupancy vehicle travel. These Guiding Principles will work in tandem with Project mitigation measures to reduce Project-related environmental impacts. To ensure accurate tracking and reporting, Developer will establish a Master Owners Association which reports to the City and is responsible for measurement, verification and assuring compliance with Project sustainability obligations and mitigation measures.

Building Standards

The Project shall meet and exceed Title 24, Cal Green Tier 1 and will utilize the City of Davis' Residential Energy Reach Code standards.

Energy Efficiency and Usage

The Developer is committed to maximizing clean energy production onsite and to implementing a program within the Project to ensure that all structures consume 100 percent renewable electricity. In furtherance of this pledge, the Developer commits as follows:

- To maximize and optimize onsite solar energy generation (and future clean energy use) by mandating photovoltaics on every conducive structure and in parking areas.
- Project will enter into a purchase and sale agreement with Valley Clean Energy (or another electric utility company) to which it will sell, and through which it will distribute, all electricity generated onsite. This arrangement will ensure that all power generated onsite which is not used onsite is utilized locally.
- All onsite residential units will be all-electric.
- To achieve a Project that is fueled by 100% clean energy, Developer commits all structures, residential and non-residential, to purchase power from solely renewable sources such as Valley Clean Energy's "UltraGreen" 100% renewable program or its equivalent, to offset any electric deficit.
- Achieve net zero for outdoor lighting.

- In anticipation of improved solar-connected energy storage, the Project will be designed and pre-wired for future microgrid capacity and energy storage.

Transportation Demand Management Plan

The Project shall implement a Transportation Demand Management Plan (TDM plan) with measurable results to quantitatively shift away from single occupancy vehicle (SOV) use and incentivize a mode shift to bicycling, public transit, private transit, or car pool and to determine which traffic mitigations are needed at each phase of Project development. Prior to, or concurrent with, adoption of Final Planned Development, Developer shall finalize a TDM plan acceptable to the City which shall include, in part, the following:

- Prior to the commencement of construction of each phase, a traffic study shall be prepared which measures in- and out-flow from the Project and identifies traffic patterns. This analysis will be shared with the City to determine which traffic mitigation measures are necessary to accommodate each phase of development. This will also serve to inform the City on mode share and to trigger the need for increased transit services.
- The Project shall be designed to accommodate internal, local and regional transit. It will include a centralized transit plaza that will serve as the hub for a variety of mode shares.
- At Phase 1, Developer will implement an electric shuttle service running weekdays from the AM to PM peaks, connecting the ARC to UCD and the Amtrak station.
- Developer will participate in and support Caltrans led efforts to add HOV lanes on I-80 from West Sacramento to Davis.
- Developer will continue its relationship with Yolobus and Unitrans, both of which have bus service contiguous to the site, to increase the frequency and capacity of bus service as the Project develops. Prior to the commencement of Phase 3, Developer will petition to reroute Unitrans and Yolobus service into and through the Project site. The transit plaza shall be designed with specifications to accommodate local and regional bus service.

Parking Lots and Internal Streets

To further incentivize a mode shift to bicycling, public transit, private transit, or car pool and to reduce the heat island effect, as well as visual and aesthetic impacts, Developer shall implement the following features in its parking areas and/or along the Project's internal roadway system:

- All streets and surface-level parking shall utilize low-impact development (LID) features such as bioswales to capture and filter runoff and to maximize groundwater recharge. Piping of runoff will be discouraged and only utilized when necessary.
- All parking surfaces or street-adjacent sidewalks utilizing tree shading shall use structured soil or suspended substrate to allow successful tree root development. Developer shall size pavement treatment area to accommodate the tree varietal's intended tree size.
- Landscaping shall provide 80% shading of pedestrian walkways and off-street Class I bike paths. 50% parking lot shading shall be achieved through either shade trees or photovoltaic arrays. These requirements shall be demonstrated at building permit for PV or shall be achieved within 15 years of planting for areas shaded by trees. Failure to meet shading requirements shall be considered a code violation and subject to penalty until remedied.
- Parking preference and priority will be given to high occupancy vehicles (HOV) and electric vehicles (EV). Not including handicap parking, only HOV and EV parking shall

be allowed adjacent to buildings. All stalls designated for EV will have charging stations pre-installed.

- All commercial parking areas will be designed with infrastructure to gradually phase-in the installation of EV charging stations as demand grows.
- All housing shall include one Level 2 EV charger per unit or, if a multifamily building is parked at a ratio of less than 1:1, one Level 2 EV charger per parking stall. Townhomes, if built to accommodate two vehicles, will be prewired to allow for the installation of a second charger.

Landscaping and Water Conservation

To reduce Project demand on groundwater and potable water the Developer commits to the following measures:

- Native and drought tolerant plants shall predominate the plant pallet. A diversity of native habitats shall be disbursed and managed throughout the site, primarily within the agricultural buffer and along the channel, including but not limited to riparian and California oak savanna.
- Turf will be strongly discouraged and utilized only in areas programmed for activities such as the Oval.
- Developer shall engage with the Center for Land Based Learning, the Davis Arboretum, or other local expert to design and manage its open and landscaped buffer areas. Landscape plans will be subject to City review including the Open Space and Habitat Commission and the Tree Commission.
- Developer will install recycled “purple pipe” infrastructure which will convey non-potable water for use in all landscaping. Developer will convert this system to reclaimed water if and when such service is made available.
- All runoff will be captured, conveyed and detained onsite in a series of bioswales intended to filtrate and clean the run-off and maximize groundwater recharge.

Housing

Housing at ARC is included to maximize the environmental benefits of mixed-use development. The inclusion of housing and an overall complementary mix of uses reduces the number and distance of project-related vehicular trips, encourages walking and bicycle trips, reduces air quality impacts and reduces the overall carbon footprint of the project. To further increase the sustainability benefits of onsite housing, the Developer commits as follows:

- Housing will be medium- and high-density with a range of 15-50 units per acre. No single-family detached housing will be permitted.
- Housing will be designed to meet the housing needs of the workforce and will not resemble student-oriented housing found elsewhere in the City. No unit will be greater than three bedrooms. Rental apartments will not exceed two bedrooms.
- Housing construction will be directly linked to the development of commercial space at a ratio of one home per 2,000 square feet of nonresidential space. This linkage will correlate the availability of housing with the creation of jobs which will maximize ARC employee occupancy of the housing.
- Housing will be all-electric and utilize the Residential Energy Reach Code.

- Multifamily rental units shall be charged separately for parking so that any resident may have the option of renting car-free housing.

Mitigation Measures

The project shall comply with Mitigation Measures identified in the Approved Mitigation Monitoring Reporting Plan.

AGGIE RESEARCH CAMPUS

Project Description

Aggie Research Campus – Overview

The Aggie Research Campus is an innovation center that offers a live/work environment through a comprehensive sustainable site design and broad array of complementary land uses. The Campus features office, research & development, laboratory, prototyping, advanced manufacturing, recreation, open space, and housing, all in one compact location. This mix of uses will serve to attract new economy incubators, entice UCD-spawned businesses seeking a growth location, and provide large-scale locational opportunities for well established companies, particularly those with research ties to the University. The objective is to fulfill a clear City need for economic development space and allow existing and new companies to grow and remain *in Davis*.

The proposed Aggie Research Campus (hereinafter “Project,” “ARC,” or “Campus”) is located on a 185-acre project site, immediately east of the City of Davis city limits, near the “Mace Curve”, in unincorporated Yolo County. The Project site is approximately 2.5 miles east of downtown Davis, 3 miles from UC Davis, and 10 miles west of downtown Sacramento and the State Capitol. The project is easily accessible from existing roadway infrastructure, adjacent to the developed community on two sides (the south and west), and is bounded by lands protected by agricultural conservation easements on the other two sides (north and east). The Project site is adjacent to Interstate 80, public transportation and rail, is proximate to the University of California, Davis, and sits strategically between the Bay Area and the State Capital of California.

At build-out, the ARC would include up to 2,654,000 square feet of innovation center/business uses and 850 residential units of varied sizes and affordability. More specifically, the Project would include space for office, research & development, laboratory, advance manufacturing, prototyping, limited supportive retail, a hotel and a conference center, and include 850 residential units to provide a jobs/housing balance. The Campus has identified land uses within an urban framework that are designed to:

- Deliver office and corporate spaces that are highly flexible and technologically advanced. The spaces would include collaborative spaces, flex spaces, as well as dry and wet labs.
- Develop space for research/incubator start-ups that may be small, independent entrepreneurs or subsidiaries of larger, more established companies in Davis, Sacramento, and/or the Bay Area.
- Include programs that are scientific, technical and research-focused. The programs are anticipated to be University of California, Davis (UC Davis) spin-off research labs and internships.
- Be suitable for private research programs in the fields of ag tech, med/bio tech, and clean tech.
- Integrate spaces for prototyping and manufacturing with research facilities to allow for greater ease of advanced product development.

- Permit advanced manufacturing facilities on-site to allow for the establishment of “research-to- market” companies.
- Include a variety of workforce housing units, diverse in both size and affordability, designed to meet the needs of the innovation center employees, further spur collaboration and technology start-ups, create a hive of activity with people living and working on-site, and thereby reduce project-related vehicular trips.
- Accommodate corporate travelers and educational conferences.

In furtherance of this vision, the ARC applicants are seeking the following entitlements from the City of Davis:

1. General Plan Amendment converting the project site from Agriculture to Innovation Center
2. Prezone to Preliminary Planned Development
3. Annexation into the City of Davis
4. Development Agreement
5. Municipal Service Review
6. Detachment from the East Davis County Fire Protection District

The Project Applicants are also seeking to have the Council expeditiously place the Project and its Baseline Project Features on a citywide ballot, consistent with Davis Municipal Code, Article 41.01 Citizens’ Right to Vote on Future Use of Open Space and Agricultural Lands.

Project Objectives

The applicant proposes the Aggie Research Campus to achieve the following objectives:

1. Expeditiously provide a suitable space in which to retain existing local businesses and to attract and grow innovative high-value added, technology-oriented companies.
2. Provide an integrated, high-quality, campus-like environment offering a variety of commercial lot sizes that will respond to the current and future needs of technology start-ups, industry leaders, research and development, and products manufacturing firms; allowing for a full range of research to market uses.
3. Develop a strategic mix of residential unit types and sizes on-site, including affordable housing, introduced in phases to coincide with the creation of jobs.
4. Provide sufficient land to meet the demand in Davis for innovation centers over a 25-year time horizon.
5. Utilize land immediately adjacent to the City boundary with adequate and easily-extended infrastructure, including but not limited to fiber optics and the roll-out of 5G providing high-speed internet capable of serving technology-sector needs.
6. Develop a critical mass of users and residents at a given location sufficient to render economically feasible the delivery of infrastructure necessary for development to occur.
7. Contribute to job creation, housing supply and tax base enhancement while supporting the University of California, Davis as a premier research institution.
8. Utilize a site with existing access to I-80 for the convenience and benefit of employees, collaborators, suppliers, and goods movement.

9. Support and build upon the City of Davis’s existing successes by offering a logical extension to the 2nd Street technology corridor.
10. Develop an aesthetically pleasing site plan and architectural building design that incorporates energy and water efficiency, provides for non-automotive forms of transit, and is situated to receive and utilize recycled water when available.
11. Create a viable retail component, including hotel and conference center, which will primarily serve the needs of the innovation center, increase retail-related employment opportunities and contribute to tax revenue generation.
12. Encourage recreation and non-automotive modes of transportation by creating trail connections and safety improvements that enhance and encourage pedestrian/bicycle circulation and connectivity between the project site and surrounding areas.
13. Preserve and protect agriculture through the planning and development of property which will result in a distinct permanent urban edge.
14. Provide a business-oriented site design with a complementary mix of land uses that will encourage user interaction, collaboration, and the exchange of ideas, thereby serving as a catalyst to rapidly achieve economic growth.
15. Reflect the feedback captured through the Innovation Park Task Force’s planning, research and outreach, and incorporate as many of the consensus concepts as feasible.

Proposed Land Uses

The proposed mix of uses at the ARC will create a campus-like environment where the anticipated innovation center workforce can live, work, and play. The campus model would result in daily interaction between individuals such as IT professionals, research analysts, mechanical engineers and entrepreneurs, and provide opportunities and synergies for collaboration and innovation both during and after normal business hours.

The diversity of nonresidential uses allowed in one setting offers a unique “research-to-market” opportunity. It is rare to find locations at which corporate boardrooms, research and development, prototyping, and advanced product manufacturing can all occur adjacent to each other. The geographic proximity between what are often distant divisions allows for a compressed feedback loop that expedites product development and ultimate release to market. The table below identifies the diversity of land uses that would be present at ARC and the proposed amount of each use-type:

Aggie Research Campus Land Uses by Type	
Land Use	Size
Office; Research & Development; Laboratory	1,510,000 sf
Advanced Manufacturing; Prototyping; Product Testing	884,000 sf
Residential (average density 30 du/ac)	850 units
Ancillary Retail	100,000 sf
Hotel/Conference	160,000 sf (150 rooms)
Green Space	49.1 acres*
Transit Plaza	0.6 acres
<i>Total Acres</i>	<i>185 acres</i>
<i>Total square footage of commercial uses</i>	<i>2,654,000 sf</i>
<i>Total number of residential units</i>	<i>850 units (maximum)</i>
<p><i>* A nine-acre offsite easement which will be utilized for agricultural buffer area is included in this total. The addition of the easement area increases the total area of impact to 194 acres, though the general plan designation and zoning on the easement area will not be amended.</i></p>	

As the table indicates, roughly 57 percent of the commercial development is identified for office/R&D/laboratory use types; 33 percent is dedicated to advanced manufacturing, and up to 10 percent may be used for support retail uses including a hotel and conference center. The up to 260,000 sf of supportive commercial uses is anticipated to include roughly 160,000 sf of hotel/conference center use and 100,000 sf of ancillary retail located throughout the Project site. The hotel/conference center would be located in the southwestern corner, near the intersection of Mace Boulevard and 2nd Street. Most of the supportive retail would be on the ground floor of the proposed research/office/R&D or multi-family residential buildings surrounding the Oval park and the transit plaza area, resulting in vertically integrated mixed-use buildings (see Preliminary Land Use Plan, attached.).

To be clear, the proposed square footage of ancillary retail and office/R&D are inversely proportional within the 2,654,000 sf site total. For example, if there is less demand for ancillary retail than the allotted 100,000 sf and only 50,000 sf of retail is developed, the square footage of office/R&D could increase by 50,000 sf to 1,560,000 sf, thereby filling the available space. The ancillary retail space within ARC is intended to provide employees, residents, and visitors with basic conveniences such as: lodging/accommodations, health and fitness center, convenient coffee

and dining opportunities all located within walking distance of the Project's primary businesses and workforce housing uses.

Permitted and Conditional Uses

The ARC is proposing site-specific zoning through a Preliminary Planned Development (PD). The purpose of the PD zoning district is to provide a campus setting in which leading-edge institutions and local, regional, and international companies can cluster and connect with start-ups, businesses incubators, and accelerators, as well as UC Davis, to create a productive research and development center at which Davisites from all walks of life can live, work and play. The proposed PPD identifies and allows for the following uses:

Permitted uses.

The principal permitted uses of land in the ARC PD zoning district are as follows:

- (a) Offices: including but not limited to administrative, executive, headquarters, medical, coworking and incubator space.
- (b) Laboratories: including but not limited to research, design, analysis, development and/or testing of a product
- (c) Light manufacturing, assembly or packaging of products, including but not limited to electrical, pharmaceutical, biomed and food products and devices, and associated warehousing and distribution.
- (d) Any other technical, research, development or light manufacturing use determined by the Planning Director to be of the same general character as the permitted uses.
- (e) Residential: workforce housing with an average density at or above 30 dwelling units per acre. The anticipated density range is between 15 and 50 dwelling units per acre, or higher, depending on product type.
- (f) Renewable energy generation and storage facilities.
- (g) Support Retail, single users at or less than 25,000 square feet, including but not limited to food and beverage, restaurant, dry cleaners, fitness center or gym.
- (h) Lodging or Hotel.
- (i) Conference Space.
- (j) Agriculture, including open air or greenhouse cultivation of crop and the tasting and/or sale of any products cultivated or produced on the premises, but excepting the raising of fowls or animals for commercial purposes.
- (k) Higher Education: extensions or graduate programs; public, semipublic or private.
- (l) Any use which handles, stores or treats in any fashion hazardous materials as defined in Section 40.01.010 of this chapter in a manner consistent with adopted ARC performance standards.

Accessory uses.

The following accessory uses are permitted in an ARC PD zoning district:

- (a) Home occupations subject to the provisions of Sections 40.01.010 and 40.26.150.
- (b) Antenna and telecommunications, including 5G infrastructure.
- (c) Child care/day care facility.
- (d) Parking garage.
- (e) Stand-alone corporate signage.

Conditional uses.

The following conditional uses may be permitted in the ARC PD zoning district:

- (a) Support Retail, single users larger than 25,000 square feet.
- (b) Public and semipublic, including public utility uses necessary and appropriate to the ARC district.
- (c) Any use which handles, stores or treats in any fashion hazardous materials as defined in Section 40.01.010 of this chapter in a manner deemed to exceed or inconsistent with the adopted ARC performance standards.

The proposed language of the Planned Development and General Plan are attached for review.

Conceptual Site Layout by Use Type

The Planned Development submitted for ARC includes an exhibit identifying the anticipated building locations, infrastructure and amenities by use type. As indicated on the Land Plan, the PPD places advanced manufacturing uses along the northern and eastern periphery of the Project site, while the office/R&D/laboratory uses are centrally located along the internal circulation loop and proximate to the Transit Plaza. Workforce housing would be primarily clustered around the main park feature, the Oval, and proximate to the office/R&D uses as well as the transit plaza. Housing extends along the east/west greenway corridor but is appropriately set back and buffered from the research/manufacturing uses. The proposed hotel/conference center would be located at the southwestern corner of the Project site, northeast of the intersection of Mace Boulevard and 2nd Street. Ancillary retail uses would be concentrated within the office/R&D and multifamily residential buildings located proximate to the Oval park and the transit plaza, within the central and western portions of the Project site.

It should be noted that, although an anticipated site configuration has been proposed for purposes of environmental review, public review and comment, and City approval, the precise building locations and other project features represent a logical layout which may be subject to change during the final planned development process, per Municipal Code Section 40.22.090. The requested entitlements establish the General Plan land use designation and the uses permitted pursuant to the PD zoning; the precise size, location and configuration of a building or residential structure may fluctuate as long as it is determined that the use proposed would be sited at a logical location within the Project site, is permitted in the zoning, is substantially consistent with the Land

Use Plan and the description of the Project, and would not result in an exceedance of the maximum square footage or number of units permitted for a given use type.

If the currently requested entitlements are approved, in accordance with the City's PD zoning requirements, the Project applicant would need to return for a variety of subsequent entitlements, including filing for one or more final planned developments for ARC, which will be subject to discretionary review and approval by the City of Davis. The final planned development and accompanying tentative map(s) and design review will need to identify a greater degree of specificity, such as precise locations and configurations of lots and buildings, including all dimensions necessary to indicate size of structure, setbacks and yard areas, etc.. Subsequent entitlements will also establish design standards and ensure consistency therewith. Proposed buildings will need to submit elevations and design details sufficient to determine consistency with Design Guidelines, such as landscaping, fencing, and screening, etc. In sum, there will be a series of subsequent entitlements at which time more definitive detail will be proposed. It is anticipated that much of the building design and structural configuration proposals will be user driven.

Notwithstanding the potential for building locations or other features to shift during the final planned development process, the ARC PPD includes sufficient use descriptions and placement detail such that a meaningful analysis of the Project can be conducted at this stage of entitlements. Despite this flexible approach, land uses are limited to maximum square footages and/or number of residential units, green/open space acreages are established, and the general geographic area in which a particular use type is permitted has been identified through the Land Use Plan and accompanying description.

Building Heights

The tallest buildings proposed for ARC – the multi-family housing and hotel – are up to 85 feet. The office/R&D buildings would be up to 65 feet tall and a maximum height of 45 feet, generally applies to the proposed advanced manufacturing uses, though features that extend up to 65 feet are permitted.

Density and Floor Area Ratio

The ARC would make efficient use of the land, providing residential densities ranging from fifteen to fifty units per acre, with an average net density of thirty units per acre. The Project site will have an overall net floor area ratio ("FAR") of 0.93.

Parks and Green Space

The Campus would incorporate several privately maintained parks and open space areas throughout the site, totaling approximately 49.8 acres of green space (see Open Space Plan, attached). Parks and open space areas would be conveniently accessible from all structures and would include programmed parks, greenways, plazas, natural open spaces, commons and courtyards. The greenways and open spaces would be anchored by a 5.1-acre lightly programmed recreational park ("the Oval"), which would be privately maintained but made available for public uses. The Oval is envisioned with a commercial corner or defining feature to solidify the park as a community attraction and provide a place to gather. A 150-foot-wide section of buffer land,

located along the northern and eastern boundaries of the site, would include bicycle and pedestrian paths within the inner fifty-foot but would have restricted public access to the outer 100-foot to minimize conflicts with adjacent agricultural activities and maximize habitat values.

The “East/West Greenway,” comprising approximately 3 acres, is the recreational spine of the Project site. The greenway would commence at an off-grade bicycle and pedestrian crossing of Mace Boulevard and terminate in the second largest park space located at the eastern property boundary. The trails and bike paths in the greenway will link to the trails that encircle the project site and would continue both east and west off-site to existing City recreational easements. The greenway parallels the Mace Drainage Channel which will be enhanced as it flows through ARC providing aesthetic and habitat value to the greenway. The North-South Commons creates a pedestrian passage between office/R&D pads where the roadway ends, allowing for increased access to the agricultural buffer area and provides a visual connection to the agricultural fields to the north.

The agricultural buffer for the ARC Project would include planned and natural spaces, utilized in part for drainage swales, on-site detention, bio swales, visual and noise attenuation, energy generation, owl habitat, as well as cycling and pedestrian trails. The agricultural buffer, which would abut active agricultural operations located along the north and east sides of the ARC site, would comprise approximately 22.6 acres. Consistent with the City’s agricultural buffer requirements, the minimum 150-foot agricultural buffer/agricultural transition area would be comprised of two components: a 50-foot-wide agricultural transition area located contiguous to a 100-foot-wide agricultural buffer located contiguous to the agricultural area. The following uses would occur with the publicly accessible 50-foot agricultural transition area at ARC: bike paths that encircle the Campus and connect to offsite facilities, pedestrian walking trails, community gardens, emphasis on native plants and pollinators, benches, and pedestrian scale lighting. Whereas, as mentioned, the 100-foot-wide portion would be primarily designed to provide drainage and habitat amenities.

Finally, the Campus would include private courtyards, plazas, and commons comprising approximately 11.5 acres. These passive recreational spaces would connect people and places and create quasi-secluded places for employees and residents to gather. Where possible, courtyards would be designed to connect with and be open to the commons, establishing walking links throughout the site, and thereby minimizing the pedestrian interface with vehicular roadways.

Circulation Network

The circulation framework for ARC features a modified grid with three primary roadway connections and two secondary connections to the existing bordering roadway system. The primary southern access point would be located along County Road (CR) 32A, where CR 32A intersects with the existing park-and-ride lot access road. The road would provide light-duty vehicular access to the dense office/R&D uses in the southwestern section of the Project site, to the transit plaza, and to centrally-located residential units. A secondary southern access point, located at the approximate center of the southern ARC site boundary, would connect to CR 32A and would be the principal point of entry for transport vehicles and goods movement traffic. Another primary access point would intersect with Mace Boulevard at Alhambra Drive, extending the existing east-west roadway to the transit plaza and into the center of the site thereby linking

the Project site to the adjacent neighborhoods. Internal roadways would provide two additional connections to Mace Boulevard, one right in and one right out located north of the Oval and another serving the uses in the northern third of the project and utilizing CR 30B as a final point of connection.

Transit

The ARC site is proximate to an existing Yolo Bus stop at the park-and-ride lot, from which a landscaped pedestrian connection would be improved to the site and the primary north-south pedestrian promenade. In addition, an existing transit stop is located on Mace Boulevard, adjacent to the proposed Project, and a Transit Plaza is proposed in the center of the campus to allow for a centralized transit terminal to accommodate all users and residents with a variety of transit modes.

The proposed Transit Plaza is anticipated to provide a dedicated Unitrans bus stops, terminus for a dedicated ARC shuttle which will run between ARC, the train station and UCD's main campus, and be a convenient drop-off/pick-up zone for rideshare services such as Uber and Lyft. It would also feature dedicated space for bikeshare and scooter services and seek to accommodate future transit modes not yet envisioned. Additional transportation demand management strategies which may occur at the Transit Plaza include a primary drop-off/pick-up area for local shuttles to downtown Davis and the Amtrak, and other more direct destination shuttles (UC Davis, Sacramento Airport). In addition, to the extent feasible, car-share parking spots and dedicated carpool/vanpool drop-offs would be located at the site to facilitate the use of alternative modes of transportation by both employees and residents at the innovation center.

Bicycle and Pedestrian Paths

The ARC includes significant onsite bicycle and pedestrian features, implements offsite safety improvements, and creates regional trails connections. Foremost, the Project site would be linked to the existing Davis pedestrian trails system and regional bike paths to facilitate convenient nonautomotive connections to and from the Project site thereby encouraging nonautomotive commutes. ARC would provide a grade-separated bike/ped crossing of Mace Blvd to be located near the Mace Drainage Channel alignment and feeding into the east/west greenway on the Project site. For improved safety on the Mace Curve, ARC would extend the existing bike lane around the inside of the Mace Curve, filling a long-derided gap and completing the connection, thereby bringing more employees safely to work and children safely to school.

Onsite, the ARC would include an approximately 2.25-mile bike path and adjacent pedestrian trail encircling the Project site within the 50-foot transition zone of the agricultural buffer and on landscaped buffer areas. This bicycle path and the pedestrian walkway would connect to the east/west greenway that bisects the Project site and would be easily accessible from any location within ARC. The ring bike path would connect to the existing Class II bike lane on CR 32A at the project's southeastern corner. The Class II bike lane on CR 32A provides connectivity to the following: 1) Old Lincoln Highway Class I (separated) bike path along Interstate 80 (I-80) via the Union Pacific Railroad (UPRR) train tracks at-grade crossing; 2) Class II (striped) bicycle lanes on CR 32A east of CR 105 and the UPRR crossing; and 3) Class I bicycle path on the Yolo Causeway.

Additional on-site amenities that promote cycling are provided, including bicycle parking provided near all entrances to office and multi-family residential buildings, bike storage lockers, and a repair kiosk provided near the Transit Plaza to enable any bike repairs that may be needed by employees, residents, or simply users of the regional trail that pass through ARC.

Parking

The parking ratios utilized for the office/commercial components of the Project are a considerable reduction from those required by the City’s Municipal Code. Similarly, at a ratio of 1:1, ARC’s residential units are proposed to be parked at a standard less than the City average and in a manner that reflects the walkability of the site and trending shifts in personal transit preferences. The overall parking ratios would be as follows:

Use	Square Footage	Ratio	Parking Spaces
Office/R&D/ancillary retail	1,610,000	1/600	2,683
Adv. Manufacturing	884,000	1/1250	707
Hotel	150 rooms	1/1.5 units	100
Commercial Total			3,490
Housing	850 units	1/1	850
ARC TOTAL			4,340

The Project applicant proposes creation of a parking reservoir to allow the allotted 3,490 nonresidential parking stalls to be distributed throughout the Project site as needed, rather than strict parking ratios being applied at the issuance of each building permit based upon use type. For example, if an advanced manufacturing use is more employee dense than typical manufacturing and, as such, requires parking for its employees at a number that exceeds the 1/1250 ratio, ARC may accommodate that particular user’s need. However, the 3,490-stall capacity within the Project’s envelope does not increase, therefore future users may be parked at a level below the allotted ratio. Effectively, the parking envelop allows the ARC to collectively park the site as is determined necessary during build-out based upon an evaluation of user needs and transit patterns. There is an assumption that Phase 1 users may desire to park at, or slightly above, the reduced parking ratios identified in the Table, but that the demand for parking will be reduced in the future as the following occur: critical mass of employees is achieved on-site; the on-site jobs/housing balance is realized; transit and shuttles are fully utilized at the proposed transit center; car share and carpooling spaces are dedicated on-site; bike path connections are developed and further improved to Downtown Davis and the region; tenant companies retain a Transportation Manager to coordinate all modes of transportation to and from the site; and transit reimbursements and bike credits are offered by tenants to their employees.

Residential parking will be provided in private parking garages. Multi-family units would have shared parking facilities identified for the exclusive use of residents with assigned stalls. Single-

family units and townhomes would have private garages. Similar to the commercial component, the 850 parking spaces allotted for residential units may be distributed as deemed appropriate by the developer. It is foreseeable that some single-family units may include two-car garages and that multi-family, particularly micro-units or studios, may be parked at a ratio of 0.5 stalls/1 unit. Shared parking arrangements will be permitted onsite between commercial and residential uses at appropriate locations. The shared corporate and multi-family residential parking areas result in more efficient use of land since the demand for business parking is greatest 8:00am to 5:00pm five days per week and residential parking demand peaks between 5:00pm and 8:00am on weekdays and on weekends.

All off-street parking areas would be designed to incorporate shade orchards and to maximize the installation of solar arrays. Where possible, permeable surfaces would be utilized to assist in drainage and groundwater recharge. As a result of user demand-driven build out, parking fields may be converted to parking structures over time to accommodate development at greater densities. Diagonal on-street parking is proposed adjacent to The Oval and may be utilized elsewhere on the Project site based upon locational considerations. On-street parking stalls will not be withdrawn from the parking envelopes available to residential or nonresidential uses as they are primarily intended to accommodate visitors to ARC rather than employees or residents.

Infrastructure

Infrastructure would be extended from nearby utilities to serve the site with public water, wastewater collection, and storm water detention. The following discussion pertains to the proposed water, wastewater, drainage, and other infrastructure-related improvements which are intended to be supplied to the site in a manner substantially consistent with the proposals submitted and reviewed as part of Chapter 8 of the Environmental Impact Report (“EIR”) for the Mace Ranch Innovation Center.

Water

Domestic water would be supplied by extending the existing 12-inch diameter City water main located along Mace Boulevard in a manner consistent with Figure 8-5 from the Mace Ranch Innovation Center EIR. The main would be looped throughout the site to supply potable water to internal businesses and workforce housing. The loop would provide the site’s interior-use service connections for the planned office/R&D/industrial, residential, and fire-fighting uses. The improvements required to tie the proposed site loop to the City’s existing water infrastructure are anticipated to be at three or four locations on Mace Boulevard and would be relatively minor. The water improvements could likely be coordinated with proposed surface improvements along the site’s western frontage. Alternatively, the Project may consider the option of making one of the loop connections to the existing 20-inch main that connects to the booster pumping station at the four-million-gallon City water tank.

The Project applicant proposes to install a new irrigation well in the west-central portion of the site in order to meet approximately 80 percent of the project’s non-potable, irrigation water needs. The well would be located within the proposed Oval park area adjacent to Mace Boulevard. The irrigation well would serve the proposed parks and recreation field areas, as well as other open

space areas on-site, using a dedicated irrigation distribution piping system. The well may also be used for irrigating street landscaping within the proposed street corridors on-site, as well as other public common areas. As an alternative to installing a new irrigation well, the project may utilize an existing agricultural well, provided the well proves adequate for the intended use.

The existing water supply infrastructure available to the site does not include a recycled water distribution system nor is a source for this water needed to service the demands of the Project. However, in order to conserve water resources, the future landowners and users at the site may desire to utilize recycled water if and when it is made available from the City's Wastewater Treatment Plant (WWTP). In order for recycled water to be provided to the Campus site, off-site distribution infrastructure would need to be installed from the WWTP to the Project site. While this off-site distribution infrastructure is not proposed by the applicant, the applicant has proposed to install recycled water/purple pipe infrastructure within the Project, with pipe stubs at the property boundaries, in the event that the City, or another entity, constructs this infrastructure at some future date. Should the necessary off-site infrastructure be installed, recycled water from the City's WWTP can be supplied to the site at a future date.

Wastewater

ARC includes installation of a gravity sewer pipe within the internal road rights-of-way. The gravity sewer line would collect wastewater generated on-site and route the wastewater to the northeastern corner of the site. From the northeastern corner, an off-site wastewater delivery pipe would be installed, the alignment of which would run north of the Project site, approximately 0.7-mile. Here, the pipe would connect to an existing manhole along CR 30, near an existing rural residence. Wastewater from the project site would then flow east through an existing 42-inch gravity sewer line, along CR 30, to the intersection of CR 30/CR 105, where the pipe extends north along CR 105 to the WWTP.

An alternative off-site sewer alignment has also been identified for ARC and is evaluated in chapter 8 of the MRIC EIR for potential resultant environmental impacts. As shown in Figure 8-7, the alternative sewer alignment would extend east from the site, along the Mace Drainage Channel, and would connect to the existing 21-inch sewer pipe in CR 105, from which point the project's wastewater would flow north to the City's WWTP.

Prior to installing the new off-site sewer alignment, during the first phase of development, the Project includes the ability to tie into the existing sewer main located in Mace Boulevard. The temporary connection to and use of existing sewer infrastructure would require the use of a lift station and a force main to be replaced with the off-site gravity fed sewer line with the implementation of Phase 2 (see MRIC EIR, Figure 8-8).

Drainage

The existing Mace Drainage Channel, which transverses the center of the Project site, would predominantly remain in place and continue to serve drainage flows from the Project as well as much of East Davis. Due to its importance in the City's drainage conveyance, ensuring sustained and improved capacity of the Channel is paramount. However, the Project also intends to enhance

the Channel through the site, adding aesthetic and habitat value. The detention basin located at the eastern Project boundary would be modified in shape and slope to ensure safety and functionality. Both the channel and detention basin are anticipated to be reconfigured to be more attractive and compatible with the innovation center.

Internal drainage corridors, and perimeter drainage retention areas, swales, and corridors, providing distributed detention storage and water quality treatment, would be constructed at the Project site for purposes of collecting surface drainage, maximizing groundwater recharge, and systematically routing the drainage to the existing, centrally-located Mace Drainage Channel (see MRIC EIR, Figure 8-9). Treated storm water would then flow off-site through the existing MDC to the east, where the runoff would eventually, again, be retained as necessary, before entering the Yolo Bypass.

Fiber optic Internet

High speed internet capability with bandwidth sufficient to service the technology sector is available for immediate extension to the Project site. Existing fiber optics infrastructure within the UPRR right-of-way would be extended to ARC and would proceed in a manner consistent with overall Project buildout.

Phasing

It is anticipated that ARC will build-out gradually over the course of approximately twenty to twenty-five years. The initial development will likely occur along the western edge at Mace Blvd and the southern portion along County Road 32A, as infrastructure will be gradually extended into the ARC site from these urbanized edges. Once established, subsequent phases are anticipated to fill in the Project's central core and then move north and east. The proposed development pattern represents a logical sequencing with structures gradually extending from the current urbanized area out toward the City's new urban boundary, although the exact pattern of build-out would be driven by user demand and infrastructure costs. For purposes of assigning some upfront mitigation measures, the MRIC EIR discusses site build-out in the context of four phases; that framework is continued with ARC.

Phase 1 of the proposed Project is anticipated to consist of approximately 45 acres in the western portion of the site and will include 540,000 sf of nonresidential building space and up to 270 residential units comprised of single- and multi-family housing types. Construction of the residential units will be timed to slightly trail the commercial development so that jobs are created onsite prior to offering housing. Housing will be permitted at the ARC site at a ratio of one unit for every 2,000 square feet of nonresidential development. The goal, if possible, is to time the availability of the homes to be concurrent with the creation of the jobs so that it maximizes the likelihood that employees at the Campus will occupy the units thereby maximizing the environmental benefits of including housing at ARC. The housing is planned to include a variety of mixed-use, rental, and for-sale residential options catering to the needs and demands of innovation center employees. However, the housing at ARC will not be restricted to employees only but will, consistent with Fair Housing Act requirements, be available to the community at large.

Two vehicular access points would be provided for Phase 1: 1) an enlarged intersection at Mace Boulevard and Alhambra Boulevard, and 2) a new southern access point, which would connect to CR 32A, east of the existing park-and-ride lot driveway. The two roadways would connect within the site thereby creating through-site circulation for vehicles and pedestrians alike. In addition, Phase 1 would include the Transit Plaza which would serve as the focal point of the phase.

Phase 2 is projected to be 700,000 sf of commercial structures, including the proposed hotel/conference center, various research/office/R&D proximate to the Oval park, and additional ancillary retail space. Phase 2 also includes the up to 350 workforce housing units, continuing the direct linkage between the creation of jobs and the construction of homes. The central feature of Phase 2 would be the “Oval” park which is a defining component of the Project located adjacent to Mace Boulevard.

Phase 3 would include an additional 700,000 sf of building space, comprised of research/office/R&D and advanced manufacturing uses. Phase 3 would include the final 230 housing units. Phase 3 completes improvements to the Mace Drainage Channel and the Campus’s core area. Concurrent with Channel improvements, this phase finalizes the east/west greenway and adds a second park along the eastern Project boundary of the site. In addition, Phase 3 completes all roadway infrastructure.

Phase 4 is anticipated to include approximately 714,000 sf of manufacturing/research and research/office/R&D uses. The on-site housing has been fully developed prior to this phase of the development. At the completion of Phase 4, the site will include up to 2,654,000 sf of jobs-creating spaces and up to 850 units of mixed-use, rental, and for-sale housing options.

Sustainability Features

- Develop a strategic mix of employment and residential uses on-site, introduced in phases to maximize utility, to ensure that the Project does not detrimentally impact the jobs/housing balance in Davis. The mix of uses will allow employees at the innovation center to live within walking distance of work, thereby minimizing vehicular trips, reducing commutes and reducing project-related greenhouse gas (GHG) emissions.
- Provide electrical energy and/or its functional equivalent using renewable generation resources and advanced technologies. On-site energy generation and energy conversion systems, which may include solar photovoltaic production and heat transfer technologies, shall supply and/or supplant a material portion of the electrical energy requirements of the proposed project.
- Incorporate the use of shading and passive solar techniques to minimize heat gain and the heat island effect. Orient buildings to maximize solar exposure from natural daylight resulting in energy conservation.
- Make use of parking lots, rooftops, drainage features, and other areas deemed appropriate for dual-purposes, for the installation of solar panels to generate energy for on-site uses.
- Include the necessary infrastructure to utilize, to the fullest extent possible, solar panels as a means for energy generation on-site and energy exchange throughout the project site including the potential for on-site energy storage.

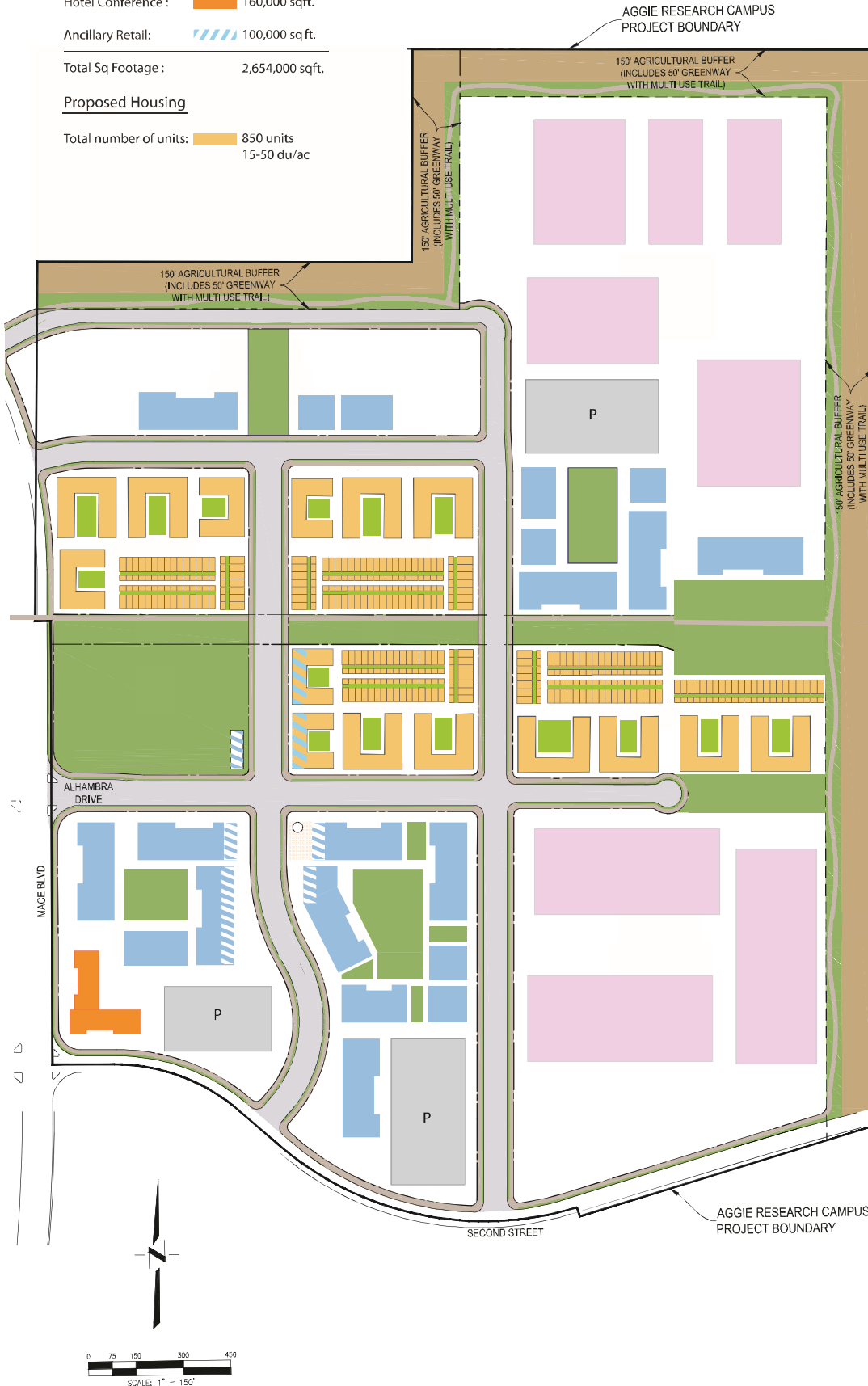
- Utilize drought-tolerant plantings and incorporate native species adapted to the local climate. Include stormwater management features such as dispersed detention basins and bio swales. Use the agricultural buffer areas to help enhance the efficacy of these measures, particularly as they relate to protecting and enhancing natural and ecological systems.
- Maximize the use of permeable surfaces to reduce storm water runoff and assist in groundwater recharge.
- Incorporate Leadership in Energy & Environmental Design (LEED) Silver or CalGreen building standards in all structures.
- Utilize the latest building technology mechanical/electrical systems for energy efficiency, including remote monitoring and setting modification systems, and energy reductions on plug-loads and ventilation systems.
- Make use of building orientation and natural daylight to promote overall energy efficiency across the site.
- Use natural ventilation for buildings when feasible.
- Promote water conservation and reductions, where feasible, including the utilization of smart and/or high-efficiency fixtures and appliances.
- Incorporate a multitude of Transportation Demand Management (TDM) strategies such as carpooling, bus transit, shuttles, car share, and other smart phone technologies to assist in providing transportation options for employees.
- Dedicate drop-off and pick-up zones for buses, dedicated shuttles, and have carpool uses integrated into the proposed project. This includes a specific “Transit Plaza” to help facilitate alternative modes of transportation to and from the Site for employees and residents.
- Support a Transportation Manager who will coordinate transportation options for the site and help to facilitate the use of alternative modes for all workers and residents.
- Install bicycle supportive facilities such as racks, storage lockers, a repair station and showers to encourage and help establish the use of bicycles as a predominant mode of transportation to the site.

Total Programs

- Office/R&D : 1,510,000 sqft.
- Adv. Manufacturing 884,000 sqft.
- Hotel Conference : 160,000 sqft.
- Ancillary Retail: 100,000 sqft.
- Total Sq Footage : 2,654,000 sqft.

Proposed Housing

- Total number of units: 850 units
- 15-50 du/ac



Project Data

Project Site Boundary:	194 AC
------------------------	--------

Project Areas Acreage:

Office R&D	44.7 AC
Adv. Manufacturing	57.2 AC
Residential/MU	27.4 AC
Parks/Greenways	15.0 AC
AG Buffer	13.6 AC
Easement	9 AC
Roadways	27.1 AC

Total Project Acreage 194 AC

Project FAR: .93

LEGEND

	PROJECT BOUNDARY
	PROPERTY LINE
	RIGHT-OF-WAY
	EASEMENT