

Solano County **Airport Land Use Commission**

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Planning Services Division
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Stephen Vancil Chairman

DATE: February 13, 2014

MEMORANDUM:

To:

Solano County Airport Land Use Commission

From:

Jim Leland, Principal Planner

Subject:

ITEM 9A: Conduct a Workshop to provide guidance to staff on the

requirements for aviation uses in Zone C and the controlling Part 77

Surfaces for the Nut Tree Airport.

INTRODUCTION

The Jimmy Doolittle Center (JDC) Education Foundation is designing a facility proposed for a site adjacent to the Nut Tree Airport (See Attachment A: Project Description). The JDC development will include an aviation related museum, corporate training center, hotel and restaurant on approximately 25 acres (See Attachment B: Site Plan). In order to design a facility that is consistent with the Nut Tree Airport Land Use Compatibility Plan (ALUCP), the JDC is requesting an interpretation from the Commission on the requirements for aviation related uses within Compatibility Zone C as well as a determination as to which Part 77 Surfaces govern at the Nut Tree Airport.

DISCUSSION

The JDC facilities include a corporate training center and aviation training facilities that will occur in Zones C and E. The JDC is seeking feedback from the Commission on the requirements for aviation uses in Zone C and the controlling Part 77 Surfaces for the Nut Tree Airport.

In order to explore this issue, the JDC engaged the services of Mead and Hunt to analyze the entire proposal for compatibility with the Nut Tree ALUCP (See Attachment C: Compatibility Analysis). Mead and Hunt analyzed each issue and reached the conclusion that the Jimmy Doolittle Center is consistent with the 1988 Land Use Compatibility Plan for the following reasons.

CFR Part 77 Issue

Staff concurs with Mead & Hunt that the CFR 14, Part 77 regulations currently in effect are controlling. These standards are set by the federal government and state and local agencies are preempted from modifying these regulations. The current Part 77 standards reflect the actual airport improvement plans for the Nut Tree Airport as approved by the FAA.

Aviation Related Use Issue

A portion of the JDC project lies within Compatibility Zone C. Within Zone C, office and retail uses are permitted with a limitation to only one story. The current Nut Tree Ranch development includes a plan for several one story office buildings within Zone C.

The Commission has previously determined that the JDC project is not a retail or office land use, but is more properly described as aviation related uses. Mead & Hunt recommends that the Commission consider the one story limitation on retail and office uses to be a means of controlling the intensity of the land uses in order to minimize the number of persons per acre on the site. Aviation related uses do not have the same population intensities as retail and office uses. Staff would agree that aviation related uses do not need to be limited to one story and that the Part 77 surfaces are sufficient to control their height.

CONCLUSION

Based on the discussions above, Staff recommends that the Solano County Airport Land Use Commission provide feedback and guidance to the JDC and staff for the preparation of a future request for a compatibility determination for their project.

Attachments:

Attachment A: Project Description

Attachment B: JDC Site Plan

Attachment C: Compatibility Analysis by Mead and Hunt

Jimmy Doolittle Center (JDC) and Solano Community College Aeronautics Center (SCCAC) at the Nut Tree Campus

General Project Description

Site Description

The site is 24.8 acre acres and is comprised of 5 parcels. Two parcels are privately owned and equal 11.4 acres, and 3 parcels are publically owned and equal 13.4 acres. The master plan will be entitled by the City of Vacaville as an integrated planned unit development covering all 24.8 acres. The site is adjacent to the Solano County – Nut Tree Airport, and is separately accessed through Nut Tree Road. Other contiguous uses include major retail centers, which include Lowes Retail, and the Nut Tree Retail Center.

Joint Master Plan

This master planned development will create a joint development between the JDC and the SCCAC, which will create a nationally recognized aviation education center. Solano Community College will build its Aeronautics Program facilities on a portion of the Site. The Jimmy Doolittle Center will build its museum and education center on the site. The integrated master will allow both institutions to collaborate on programs and to share resources. In addition, there is a planned hotel and restaurant which will be integrated into the master plan concept. Parking will be provided on site to serve the planned uses. All site uses will be accessible from Nut Tree Road.

Jimmy Doolittle Center

Jimmy Doolittle Center will become a nationally recognized Center focused on education ,leadership and patriotism. JDC is designed to become a self-sustaining multipurpose non-profit entity that will sponsor and support a range of programs and activities that includes: 1) *Hands-on learning programs-* focused on: aviation technology, flight simulation, entrepreneurship and innovation, leadership and patriotism; 2) *Living Exhibits* – based on an "Exploratorium-like" hands-on approach to aviation technology, innovation, and entrepreneurship; 3) *Visiting Scholars, Entrepreneurs, and Leaders Program* – bringing leaders from around the country and world to present ideas, promote excellence, and drive innovative initiatives that support the JDC goals and objectives; 4) *Community Meeting Center* – fulfilling a significant need in Solano County for a 500-2,500 seat meeting spaces to meet the needs of businesses, education institutions, and public and privately sponsored conferences; 5) *Multi-purpose event center*—leveraging its unique space and exhibits for private parties, corporate training, educational day camps, lectures, and many other events.

The JDC facility is comprised of 3 interconnected pavilions totaling 127,700 gross sf, on 2 levels.

Entry Pavilion. The entry pavilion will have a reception hall, media wall, information center, and museum store. This will also have a café and will allow access to the outdoor garden court and historic plane exhibits.

Main Exhibit Hall. The main exhibition hall will house the permanent large plane collection, aviation innovation exhibits, flight training simulators, and oral history center.

Theatre Hall. The theatre hall will house a 170 seat media theatre, classrooms, exhibit storage and maintenance area, administrative offices, and exhibition hall.

Attachment A

Concourse. The concourse connector will connect at the upper level the 3 JDC pavilions and the SCCAC facility. This concourse will allow both institutions to interconnect and share meeting spaces, equipment and programs. The concourse connector will house the leadership education exhibits that tell living stories of leadership, civic duty, entrepreneurism, personal sacrifice, and patriotism.

Solano Community College Aeronautics Program and Restoration Center

The SCCAC facility will focus on expanding the Solano Community College's aviation maintenance and operations programs. This facility will also house a portion of the airplane collection supplied by the JDC to be used by students for pedagogic and hands-on training purposes. JDC members will also share use of this facility to collaborate on aircraft repair and restoration. This equipment will be for training purposes only and will not be actively used aviation equipment. The SCCAC will also have 4-6 classrooms, equipment storage, maintenance workshops, faculty and administrative offices, computer resource rooms, student break rooms, kitchen and lounge. The SCCAC will also have access to an outdoor courtyard area which will be accessible to students for informal uses. The SCCAC will share use of the JDC facilities including: media theatre, classrooms, flight simulation equipment, living aviation exhibits, oral history center, and leadership exhibits.

The SCCAC building is approximately 40,000 gross sf on 2 levels. The facility consists of a 14,000sf double height restoration hall, 8,000sf classroom area, 10,000sf corporate training center, and 8,000sf support area.

Corporate Training Center. The SCCAC will also house a corporate training center. This facility will be integral to the aeronautics program and will include: a large lecture room, 6-8 breakout meeting rooms, and informal break area. The corporate training center will also share use of the JDC facilities, including: media theatre, classrooms, conference meeting spaces, and reception hall.

Other Program Sharing. This educational link will provide broader education opportunities and missions. In addition to the aeronautics program, SCC will be able to collaborate with the JDC with its theatre programs, museum curator programs, hospitality and event planning programs, and other core programs that can establish hands-on learning and training shared activities with JDC. The Solano Community College partnership will provide a framework for future education collaboration that may include: leadership curriculums, entrepreneurship classes, lecture series, etc.

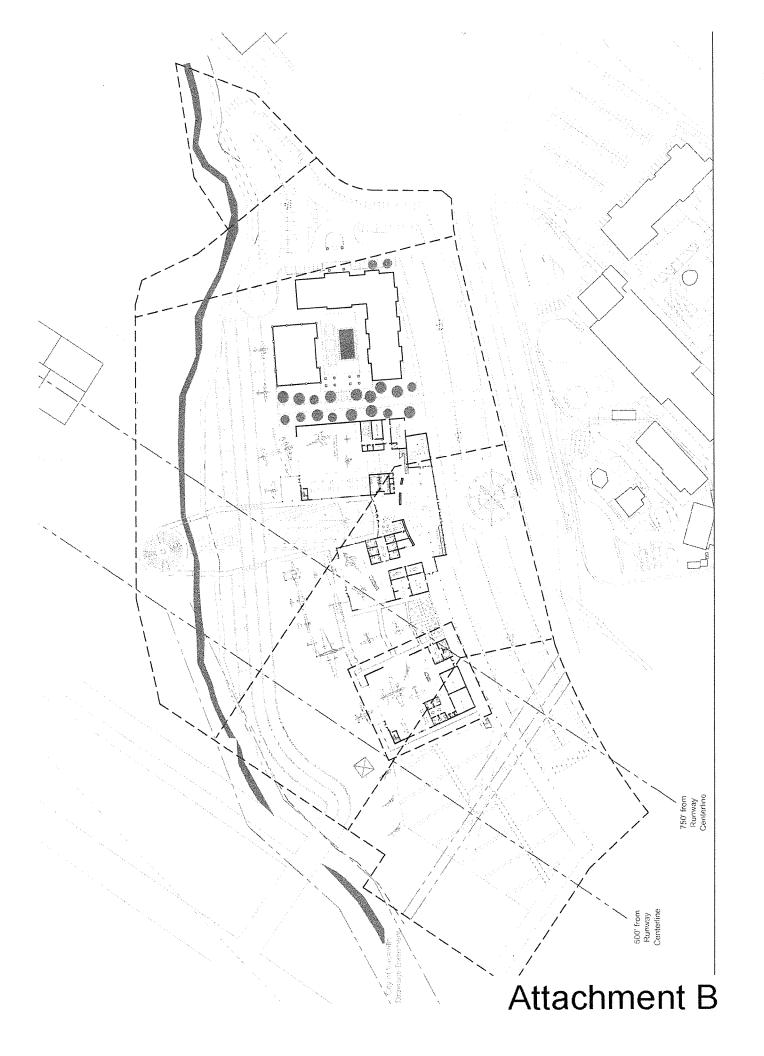
Hotel and Restaurant. The site is also planned to have a 4 star hotel and restaurant. The hotel will have 150-200 rooms on 3 or 4 levels. The hotel will have a separate access from Nut Tree Road, separate drop-off and parking area. Contiguous with the hotel will be a 2 level restaurant, which will overlook the active airplane taxi area. This will allow private planes to taxi up to the hotel/restaurant and temporarily station.

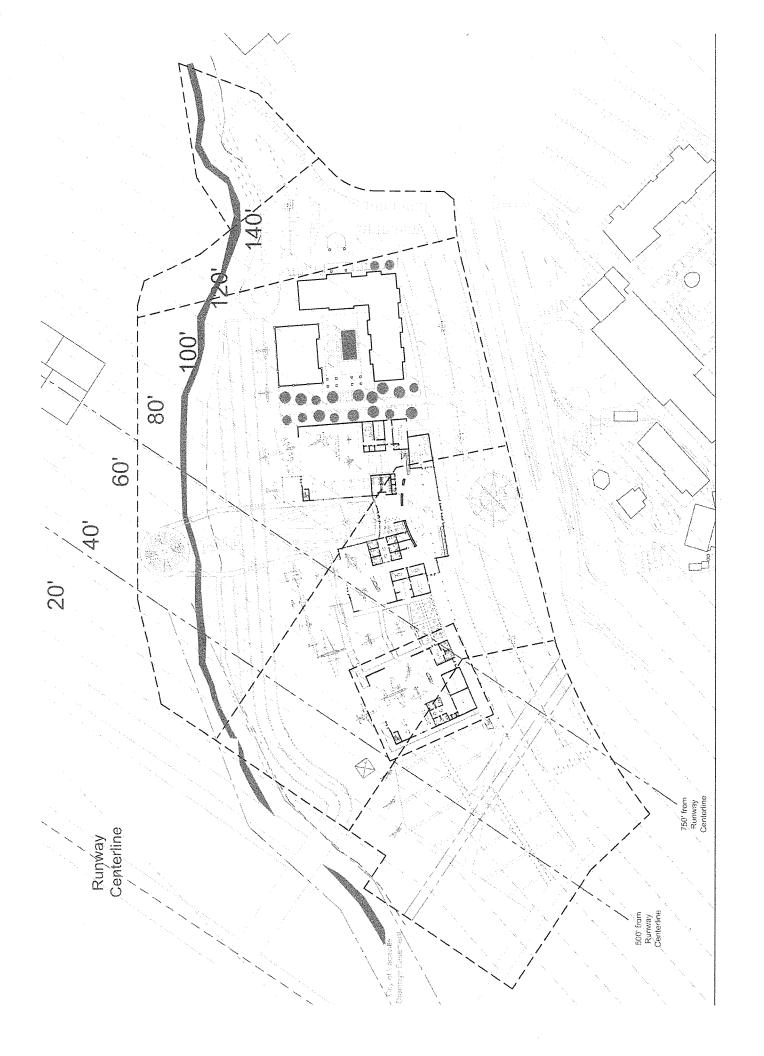
Other Site Program Uses

Parking. The master plan will provide up to 500 parking spaces located along Nut Tree Road. This parking will be shared by the SCCAC and the JDC facilities. Parking for the hotel will be zoned and accessed independently.

Apron and Airplane Display. The site will allow private airplanes to access the site from the Nut Tree runway to an apron area that allows access to the SCCAC Restoration Center and JDC Exhibit Halls. The apron area will also allow airplanes to park contiguous to the Hotel/Restaurant facility. These airplanes will be able to temporarily and permanently park in this Apron area.

Park Area. Along the north edge abutting the Nut Tree Airport will be located a park that will be accessible to the public. The creek along this area will be restored. Seating and pedestrian paths will be developed in the park. Two pedestrian bridges are envisioned to allow pedestrian and motorized carts to connect to the Nut Tree Airport.







January 9, 2014

Mr. Brian McInerney
Jimmy Doolittle Center Education Foundation
1111 Webster Street
Fairfield, CA 94533

Subject: Proposed Doolittle Center at Nut Tree Airport and Airport Airspace Concerns

Dear Mr. McInerney:

Mead & Hunt, Inc. completed a compatibility assessment in late October 2013, of the proposed Jimmy Doolittle Education Center with the adopted Airport Land Use Compatibility Plan (ALUCP) from 1998 for the Nut Tree Airport. This analysis included a review of the project in relation to the four factors that the ALUCP has policies regarding: safety, noise, airspace, and overflights.

Subsequent to the completion of the compatibility assessment and the presentation made to the Airport Land Use Commission (ALUC) on the findings, it was discovered that the airspace policies and map contained in the 1998 ALUCP are based upon a planned runway configuration with a precision instrument approach. Additionally, concern was raised as to whether or not multi-story development within Zone C is a compatible use.

Airport Airspace and the Transitional Surface

The Civil Airport Imaginary Surfaces (CFR 14, Part 77) dictate the dimensions and locations of various three-dimensional surfaces surrounding the Airport; these are designed to protect the airspace from hazards to navigation. The portion of these imaginary surfaces that impact the proposed project is called the transitional surface and is located lateral to the runway at Nut Tree Airport. The transitional surface extends out and up at a slope of 7:1 (7 feet horizontally for every 1 foot vertically).

When the 1998 ALUCP for Nut Tree Airport was adopted, the 1982 Airport Master Plan and Airspace Plan were in place. The Plans reflected a future instrument approach procedure that established the transitional surface to begin at 500 feet lateral to either side of the runway centerline. Using that Airspace Plan, the proposed project would underlie and penetrate the transitional surface.

In 2012, Solano County updated its Airport Master Plan and Airspace Plan. In 2013, the Airport Land Use Commission determined that the 2012 Nut Tree Airport Master Plan was consistent with the 1988 Nut Tree Airport Land Use Compatibility Plan. This determination permits the ALUC to utilize the Airspace

Mr. Brian McInerney January 9, 2014 Page 2 of 2

Plan from the latest Master Plan rather than the previous Airspace Plan associated with the 1982 Airport Master Plan. The 2012 Airspace Plan shows the transitional surface beginning at 250 feet lateral to either side of the runway centerline. The 250-foot location is determined by various criteria relating to the runway, including aircraft type that use the Airport, and the lowest instrument approach minimums available. The FAA, Caltrans Division of Aeronautics, and the Airport conduct project reviews based on the transitional surface being established at 250 feet on either side of the runway centerline. The 250-foot location has also been used throughout the planning process by the Doolittle Foundation as the basis for height restrictions in the project vicinity.

The 1998 Nut Tree ALUCP states (page 15): "The criteria for protecting the airspace in the vicinity of the airports in Solano County shall be set in accordance with Part 77, Subpart C, of the Federal Aviation Regulations (See Appendix C)..." This provision in the ALUCP appears to allow/require application of the current Part 77 surfaces. Therefore, it is the opinion of Mead & Hunt that the Airspace Plan referenced in the 1998 ALUCP is no longer applicable and that the current Airspace Plan dated November 2013 be used for height restriction purposes.

Multi Story Development within Zone C

The 1998 Nut Tree ALUCP (page 67) lists the Acceptable Uses for Zone C and states that retail, motels, office and financial uses are acceptable uses, but only if limited to one story. Concern has been raised that this implies that the two-story hangar and aircraft education building would not be allowed. However, given that the portion of the proposed project located within Zone C is an aviation related use (multi-use aircraft hangar, maintenance education center and aviation class rooms) and aviation does not fall within any of the land use categories which are restricted, the two-story restriction should not apply. Furthermore, these restrictions are all related to intensity (people per acre) limitations, not height. Use of height restrictions to control intensity of uses in not uncommon, and many ALUCs establish limitations on the number of stories that can be constructed as a means of establishing restriction on the intensity of the use to address safety concerns, not height of structures and airspace protection. It is the opinion of Mead & Hunt that this second story limitation is specified for the purpose of intensity restriction and control, not for the purpose of height restrictions and airspace protection, as building height is restricted by Part 77. The intensity of people within the proposed site was analyzed in our previous letter dated November 4, 2013.

If you have any questions or require additional information, please contact me.

Sincerely,

MEAD & HUNT, Inc.

Corbett Smith, CM Aviation Planner