SANTA BARBARA COUNTY PLANNING COMMISSION
Staff Report for Shadow Hills Archaeological Easement Recorded Map and Development Plan Modifications to Allow Archaeological Testing

Hearing Date: November 9, 2005
Staff Report Date: September 28, 2005
Case # s: 02RMM-00000-00011
/ 04DVP-00000-00003
Environmental Document: Exempt (CEQA Section 15270)

Deputy Director: Steve Chase
Division: Dev Rev – South
Supervising Planner: June Pujo
Staff Contact: Alice Daly
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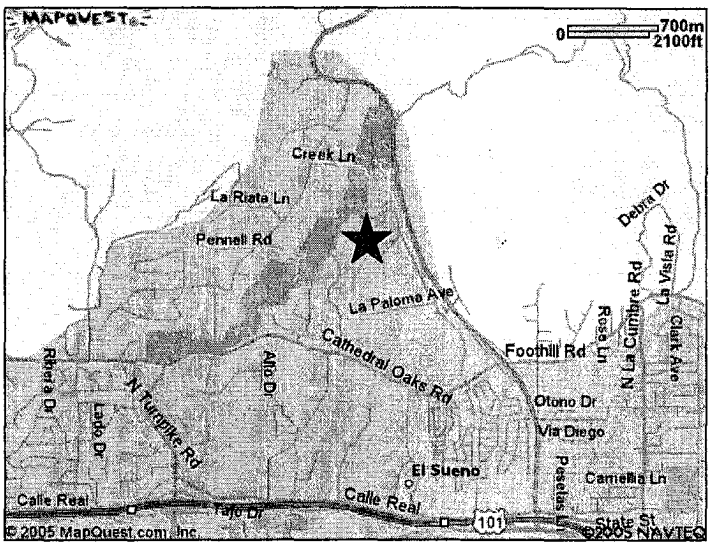
VICINITY MAP



This site is identified as Assessor Parcel Number 059-380-022, located west of Highway 154 at the north end of Via Chaparral, Goleta Community Plan Area, Second Supervisorial District.

OWNER/APPLICANT:
Hugh B. Thorson
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Santa Barbara, California 93110
(805) 967-2011

AGENT:
Susan Petrovich
Hatch & Parent
1018 State Street
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(805) 963-7000

1.0 REQUEST

Request of Susan Petrovich, agent for the owner, Hugh B. Thorson, to consider cases 02RMM-00000-00011 and 04DVP-00000-00003 for approval under the provisions of County Code Chapter 21 to modify recorded Tract Map 13,711 Condition # 7, and under the provisions of County Code Article III Chapter 35-317.10 to modify Final Development Plan 86-DP-45 Condition # 25 to allow ground disturbance (new archeological testing) in the Archaeological Easement within SBA-1820 in the Shadow Hills condominium development; and to accept the Exemption pursuant to Section 15270 of the State Guidelines for Implementation of the California Environmental Quality Act.

Application Filed: October 23, 2002
Application Complete: August 19, 2003
Processing Deadline: 60 days from NOE

2.0 RECOMMENDATION AND PROCEDURES

Follow the procedures outlined below and deny Case No. 02RMM-00000-00011 / 04DVP-00000-00003 marked "Officially Accepted, County of Santa Barbara Planning Commission, November 9, 2005, Exhibit 1", based upon the inability to make the required findings.

Your Commission's motion should include the following:

1. Adopt the required findings for denial of the project specified in Attachment A of this staff report, including CEQA findings.
2. Accept the exemption pursuant to CEQA Guidelines Sec. 15270 included as Attachment B.
3. Deny 02RMM-00000-00011/04DVP-00000-00003.

Refer back to staff if the Planning Commission takes other than the recommended action for appropriate findings and conditions.

3.0 JURISDICTION

This project is being considered by the Planning Commission based on Sections 21-15.9(g) and 21-6(a) of Chapter 21, which states that a hearing on a modification of a recorded map be before the decision-maker with current jurisdiction as determined by Chapter 21 for the final or parcel map or lot line adjustment proposed to be modified, and based on Article III Chapter 35-317.10.3(b), which states that a revision to a development plan shall be processed in the same manner as a new development plan.

4.0 ISSUE SUMMARY AND DISCUSSION

4.1: Issue Summary

There is a 20-year history of review and research documentation that discusses the age, extent and significance of the 3.28-acre archeological site known as SBA-1820 that exists on the elevated knoll area of the 51-unit Shadow Hills condominium site. Excavations, reports and memos were done by contract archeologists and geologists, by consultants who were contracted by the County, as well as by consultants who were contracted by the applicant.

In 1987, consistent with Comprehensive Plan policies that are protective of significant archeological resources (and with SBA-1820 meeting the standards for "significance" under CEQA), County decision-makers approved and recorded an Archeological Easement Grant Deed of Development Rights that prohibits ground disturbance or development in the 1.01-acre area within SBA-1820 above the 510 foot elevation contour line that is considered to have the highest density of cultural remains.

Because there has been to some degree a range of opinion in the contract experts' review documents as to the age, extent and significance of the easement site, the applicant requests that additional

archeological testing be allowed in order to support his subsequent request that the easement area should be reduced, in order to allow consideration of further development.

To inform staff recommendations on this request, in 2005, the County retained archeological consultants Applied Earthworks, Inc. to (1) review and summarize all existing documentation of SBA-1820 and (2) assess the key archeological issues (age of the site, integrity of the site and site boundary). New information, not available at the time of the Board decision in 1987 on the easement delineation (a 2002 geology report by Hoffman and a 2003 archeological review by Spanne) were included in the review authored by archeologist Joyce Gerber of Applied Earthworks (see Attachment C).

Gerber's evaluation, discussed in greater detail below and included in its entirety as Attachment C, forms the basis for staff's recommendation of denial of the request to modify conditions to allow further testing. Gerber concludes that the previously collected existing data from the earlier excavations appears sufficient to address the issues of contention at hand. Her recommendation—based on the sufficiency of existing data-- is that either development should be excluded from the area of the archeological easement, or if development were to be approved within the easement, any development shall require a Phase III excavation to mitigate adverse impacts.

In brief, the relevant points for a recommendation of denial are as follows:

- Because all experts agree that SBA-1820 qualifies as a "significant" site, approval of further testing and ground disturbance would be inconsistent with all relevant Comprehensive Plan and Goleta Community Plan policies regarding archeological resources, as detailed in Section 6.2 of this Staff Report. As detailed in Attachment A, many of the required Findings for approval of changes to map and development plan conditions cannot be made.
- No new research technologies or other changed circumstances that would argue for a changed decision-making scenario have been presented. Adequate data on site specifics already exists, and formed the basis for the earlier County decision that created the Archeological Easement in its current configuration. New testing would not be expected to contribute anything new to the decision process, and all testing in a known resource area is considered to be potentially damaging for the resources on site.
- While some disagreement exists among the consulting experts as to the extent of earlier ground disturbance and the areas of disturbance, because this is what is known as a "single component" site (representing one period of artifacts rather than multiple layers), the significance of the site has not been greatly altered by the past uses of the site.

4.2: Background

In January 1986, the Board of Supervisors approved Tract Map TM 13,711 for the Shadow Hills condominium/townhouse project on what had previously been the site of the San Marcos golf course. An Environmental Impact Report (80-EIR-46) was prepared for the rezone and General Plan Amendment that was required for approval of the project. The now developed 29.5 acre Shadow Hills site includes 51 residential units with 23 acres of common open space and a 1 acre archaeological

easement on a knoll area that is part of a 3.28 acre archeological site known as SBA-1820. The current request is based on Mr. Thorson's desire to now build two additional townhouses within the recorded 1- acre archaeological easement and is requesting a reduction of the recorded easement area. In 1987, prior to construction, the Board of Supervisors denied a similar request to reduce the easement. Mr. Thorson contends that disagreements between archaeologists and geologists who previously worked on the site provide evidence that the easement could be reduced in size without adversely impacting archaeological resources.

The applicant requests approval of additional archaeological field work (by a County-approved archaeologist directed by the County) to support his contention that the existing easement boundary is arbitrary and should be revised, which he expects will provide sufficient evidence to cause County decision-makers to agree to a smaller archaeological easement.

To enable this request for additional excavations within the easement to occur, a Recorded Map Modification (RMM) and revised Development Plan (DP) must be approved by the Planning Commission to revise Tract Map Condition # 7 and Final Development Plan Condition # 25. Subsequently, the Board of Supervisors must also approve a revision to the Grant Deed of Development Rights before new ground disturbance could occur.

If the RMM is approved to allow for excavation, the County will contract with a qualified archeologist to conduct a Phase II archeological significance assessment under County direction. The results of the Phase II investigation would enter into staff recommendations for subsequently proposed revisions to the recorded easement area, and later additional proposed changes to the RMM and DP to allow for future construction and development for two new dwellings within a portion of the existing easement area.

Since the time when archaeological fieldwork was first conducted at Shadow Hills, differing opinions have been offered by the various archaeologists contracted to research the site. At issue are the extent of the resource area, the age and significance of the resources, the integrity of the deposits (the extent to which the resources may have been previously disturbed by agricultural activity or golf course grading) and whether the site represents a single component resource, which would lend a disturbed site more research value and thus significance than one with multiple components from different settlement times.

Larry Wilcoxon, a consulting archeologist under contract to the County, researched the site from 1980 through 1984. He conducted a Phase I archeological study for the Environmental Impact Report (80-EIR-46). In 1983, Wilcoxon conducted subsurface boundary definition, and in 1984 he conducted Phase II excavations to more fully evaluate site significance. Geologist and soils scientist Dr. Tom Rockwell of SDSU also contributed his expertise to Wilcoxon's investigation of site integrity. Wilcoxon determined that the area of the site designated as CA-SBA-1820 was significant, very old, and had "a remarkable degree of integrity" with little disturbance. Wilcoxon concluded that CA-SBA-1820 represents a relatively large habitation site occupied sometime between 7,500 and 5,400 years ago. County Archeologist David Stone and Dr. Michael Glassow of UCSB supported Wilcoxon's findings and urged retention of the easement.

In 1985, David Van Horn, a consulting archeologist commissioned by the applicant, performed auger sampling and determined that the site was of lesser significance, relatively young, and highly disturbed except for a small area that retained some integrity. In a letter to the Board of Supervisors, Dr. Glassow of UCSB discussed the deficiencies of Van Horn's auger testing, but Dr. Clement Meighan of UCLA supported Van Horn and urged further excavation of the site. Each side retained a geologist to assess the extent of topographic disturbance.

The approval by the Planning Commission in 1985 of TM 13,711 was conditioned on the recordation of an archeological easement of 1.01 acre for the site area above the 510-foot contour. In 1986, Van Horn conducted salvage excavation approved by the County and recommended reassessment of the area within the 510-foot contour line. In a March 1987 memo to the Board of Supervisors, County archeologist David Stone argued against appeal of the recorded archeological easement, and the Board subsequently denied the appeal and approved final Tract Map TM 13,711. The Archeological Easement Grant Deed of Development Rights was recorded on June 23, 1987.

While no new site excavations have occurred since the 1987 Board decision to not allow a reduction of the easement, new studies have been presented by the applicant in support of his request to revise the easement boundaries. An August 2002 geology report by Rick Hoffman commissioned by Mr. Thorson reviewed prior geology documentation, historic aerial photos and visual examination of the site to determine areas of ground disturbance in the area within the archeological easement that the owner is proposing for future development. Hoffman cautions that his conclusions are estimates, and he recommends that further subsurface investigation would be required to better define past ground disturbance activities, but Hoffman does state that the area in question has been considerably impacted by past grading.

No definitive documentation exists in the form of grading quantities or other permit application materials that would clarify the extent of ground disturbance associated with the development of the golf course in 1955 or from the earlier agricultural activities on site. Further, in preparing 80-EIR-46, Larry Wilcoxon interviewed a former owner of the golf course who contended that "...little modification of the natural ridge top fairways occurred." In any case, the conclusion by all of the investigating archeologists that the site is likely a single-component site (see further discussion below) would support the argument that past grading activities would not have had significant impacts on the integrity or significance of the site.

In an April 2003 letter to County staff from consulting archeologist Larry Spanne (commissioned by the applicant), Spanne summarizes his review of the previous archaeological documents. Spanne states his opinion that while all previous investigators are in agreement that SBA-1820 is a significant archeological site under CEQA criteria, there are differences of opinion as to the extent of the area that retains sufficient integrity to contribute to the significance of the site, and different opinions on the age of the archeological deposits.

The following chart lists the involvement of various archaeologists and geologists who have taken a position that either supports the current easement or supports a reassessment of the easement.

Expertise	*Evidence Supporting Existing Easement*	*Evidence Supporting Reassessment of Easement*
ARCHAEOLOGY	**Larry Wilcoxon** • Nov 1980: Phase I Evaluation for EIR • Dec 1983: Subsurface Boundary Definition • Nov 1984: Phase II Excavations • Sep 1985: Letter to Board of Supervisors (BOS) • Jan 1987: Letter to BOS • **Michael Glassow, PhD. (UCSB Professor)** • Sep 1985: Letter to BOS • Oct 1986: Letter to Van Horn **David Stone, County Staff Archaeologist** • Sep 1985: Memo to BOS • Jan 1987: Memo to BOS • Mar 1987: Memo to BOS • Jun 1987: Memo to BOS	**David Van Horn, PhD.** • Sep 1985: Auger Sampling Program • Aug 1986: Phase III Excavations (outside the 510-ft contour) **Clement Meighan, PhD. (UCLA Professor)** • Jan 1987: Letter to Applicant **Larry Spanne** • Apr 2003: Letter to County Staff (opinion based on review of the previous archaeological studies)
GEOLOGY	**Tom Rockwell, PhD. (SDSU Professor)** • Nov 1984: Soils/Historical Disturbance • Mar 1987: Letter to BOS	**Rick Hoffman (Engineering Geologist)** • Aug 2002: Prelim Geologic Investigation (no new excavations were performed)

Note: Underlined entries comprise new information not available to the Board of Supervisors in June 1987.

Because the applicant requested approval of additional fieldwork to support his contention that the easement boundaries should be revised, in 2005 the County retained archeological consultants Applied Earthworks, Inc. to (1) review and summarize all existing documentation of SBA-1820 and (2) assess the key archeological issues (age of the site, integrity of the site and site boundary). The new information in the form of the geology report by Hoffman (Aug 2002) was also summarized and the archaeological review by Spanne (Apr 2003) was peer reviewed by archeologist Joyce Gerber of Applied Earthworks (see Attachment C).

Gerber's conclusions were organized into discussions of (1) data potential and (2) site integrity, in order to fully address the significance of the site within the easement area. In terms of data potential, Gerber concluded that because both Wilcoxon's and Van Horn's excavations above the 510 contour line (the area of the recorded easement) recovered substantial amounts of cultural remains, the data potential for the entire easement area is significant.

In her discussion of site integrity, Gerber concludes that Wilcoxon's field data and study of integrity was more thorough and comprehensive than Van Horn's. Wilcoxon's excavation included multiple large units offering profiles dispersed throughout the easement area that had the further advantage of being examined by a qualified soils scientist (Rockwell). In contrast, Van Horn only excavated one unit that would allow for an examination of profiles in the easement area. (Van Horn also excavated 22 augers, but the auger excavation methodology does not allow for adequate examination of soils profiles or any useful way to assess integrity). Gerber thus concludes that Wilcoxon's interpretation of high integrity in the entire area within the 510 contour (the easement area) is more likely to be correct and accurate than Van Horn's assessment. Further, because available data allows the conclusion that the archeological deposits represent a single component deposit, Gerber argues that even if Van Horn's assessment of the degree of prior site disturbance were correct, the entire site area can still yield important and significant scientific information.

A very important part of Gerber's evaluation is her assertion that the previously collected existing data from the earlier excavations appears to be sufficient to be able to address the issues of contention at hand. Her recommendation—based on the sufficiency of existing data-- is that either development be excluded from the area of the archeological easement, or if development were to be approved within the easement, that any development shall require a Phase III excavation to mitigate adverse impacts.

4.3 Issue Discussion

The key questions are (1) to what extent SBA-1820 is a "significant" site and (2) whether it is a significant resource in its entirety, in the area of the recorded easement, or only in a smaller area within the recorded easement.

All of the experts who performed field work at the site agree that SBA-1820 is significant. Both the Inland Zoning Ordinance and the Goleta Community Plan archeological policies apply specifically to *significant* sites or resources. During 1985-87, County staff, the Planning Commission, and the Board of Supervisors agreed with Wilcoxon and Rockwell that the site was significant and upheld the easement requirement.

All archeological excavation is considered potentially destructive and damaging to the resources on a site of significance. Given the peer-reviewed assertion that the existing site data recovered during earlier excavations is sufficient for drawing conclusions about the extent and significance of the resource area, staff cannot recommend that further testing should be approved.

Significant archeological resources are the main area of concern in determining whether a revision to the archeological easement as recorded for TM 13,711 should be considered. However, the visual impacts of development on an elevated area of the project site must also be considered, since the request to reduce the easement is being made with the intent to allow for two additional residential units on the knoll. One of the Overriding Considerations (due to the Class I impacts of the project) made by the PC and the Board in approving the Final Development Plan for Shadow Hills was that the Shadow Hills project provided for preservation of approximately 75% of the project site (over 24 acres) as common open space. Visual impacts upon views to this knoll area above the 510-foot contour would need to be analyzed, with consideration of views as seen from San Marcos Pass above and from the City below. It is stated in 80-EIR-46 that the project site is visible from residences

adjacent to the western portions of the site, and from East Camino Cielo to the north. The northeast portion of the site is visible to southbound traffic on Highway 154.

5.0 PROJECT INFORMATION

5.1 Site Information

Site Information	
Comprehensive Plan Designation	RES-1.8, Residential
Ordinance, Zone District	Article III, DR-1.8, Design Residential, 1.8 units per acre
Site Size	Total Site Area: 29.5 acres Shadow Hills Property Common Area (including Archeological Easement): 24.4 acres Recorded archaeological site SBA-1820: 3.28 acres Deeded Archaeological Easement: 1.01 acres (43,975 sq ft) Proposed smaller easement: 0.08 acre (3,365 sq ft)
Present Use & Development	Condominiums, pool, tennis courts, access roads
Surrounding Uses/Zoning	The land surrounding the archaeological easement is part of the Shadow Hills townhouse/condominium development. The lands surrounding the Shadow Hills development are as follows: *North:* open space, zoned 3-E-1 and REC *South:* residential, 1-E-1 *East:* open space, DR-1.8 and 1-E-1, and Highway 154 *West:* residential, 1-E-1
Access	From Via Chaparral onto private access drives within the development
Public Services	Water Supply: Goleta Water District Sewage: Goleta Sanitary District Fire: Santa Barbara County Fire

5.2 Setting

The project site is located on 29.5 acres at the terminus of Via Chaparral, in the foothills area northeast of the city of Santa Barbara and just west of Highway 154. San Antonio Creek flows north and west of the area beyond the project site. The area is characterized by undulating slopes ranging from approximately 10% to over 50%. The site is located on both Sespe and Fanglomerate geological formations. The area of the easement is grassy open space where shallow irrigation equipment was allowed to be installed per the Development Plan conditions.

5.4 Description

The property is a 29.5-acre parcel zoned DR-1.8 in the urban area just west of Highway 154 and 0.8 mi north of Cathedral Oaks Road and shown as APN: 059-380-022 and located on Shadow Hills Boulevard in the Goleta Planning Area, Second Supervisorial District.

The proposed project is a request for approval under the provisions of County Code Chapter 21 to modify recorded Tract Map 13,711 Condition # 7 and under the provisions of County Code Article III Chapter 35-317.10 to modify Final Development Plan 86-DP-45 Condition # 25 to allow ground disturbance (new archeological testing) in the 1.01-acre Archaeological Easement within the 3.28-acre archeological site SBA-1820. The recorded Archeological Easement is in the knoll area above the 510-foot elevation contour line at the Shadow Hills site.

5.5 Background Information

In 1958, construction of the San Marcos golf course was authorized through permit 58-CP-43. The project site had previously been open space under various agricultural uses.

The original GPA, rezone, and PDP applications for the Shadow Hills Condominium Project were submitted in 1980. Archaeological investigations by Larry Wilcoxon identified an archaeological site of 3.28 acres (SBA-1820) located in the proposed development area. In 1984, the project was revised to avoid the area of greatest concentration of artifacts (the top of the hill above the 510-ft contour). In January 1986, the Board of Supervisors approved Tract Map conditions for a 53-unit condominium/townhouse project. One of the conditions required the applicant to grant an easement deeding development rights to the County for a 1-acre portion of the archeological site. In November 1986, following two additional archaeological studies (by David Van Horn), the applicant appealed to reduce the size of the easement to allow construction of two additional townhouse units. In March 1987, the Board denied the appeal. In June 1987, the Grant Deed of Development Rights for a 1-acre archaeological easement was recorded. In 1989, Shadow Hills was constructed with 51 units (although 53 units were approved).

The project lies within the Goleta Community Plan (GCP) area. The Goleta Community Plan, adopted in August of 1993, contains policies pertaining to the protection of significant archeological resources that offer additional emphasis on protection and conservation of these resources beyond the Comprehensive Plan policies that were in place at the time that the Shadow Hills Archeological Easement was approved and recorded.

6.0 PROJECT ANALYSIS

6.1 Environmental Review

The proposed project may be found to be categorically exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15270 of the Guidelines for the Implementation of CEQA. Section 15270 [Projects Which Are Disapproved] exempts projects where the agency (in this case, Santa Barbara County) can determine that the project cannot be approved. This section is intended to allow an initial screening of projects on the merits for quick disapprovals prior to the initiation of the CEQA process. Please see Attachment B, CEQA Exemption Notice, for further detail.

6.2 Goleta Community Plan and Comprehensive Plan Consistency

REQUIREMENT	DISCUSSION
Goleta Community Plan Policy HA-GV-1: *Significant* cultural, archaeological, and historical resources in the Goleta area shall be protected and preserved to the maximum extent feasible. **GCP Action HA-GV-1.6:** All development within boundaries of recorded archaeological sites shall be avoided to the maximum extent feasible by incorporating the site in open space. **Comprehensive Plan Land Use Element (LUE) Historical and Archeological Policy # 1:** All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites. **Comprehensive Plan (LUE) Historical and Archeological Policy # 2:** When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.	**Inconsistent:** The County Cultural Resource Guidelines state that archaeological "site significance is based on site integrity (preservation condition), research potential, and potential for public appreciation." Based on site excavation fieldwork and assessment conducted for 80-EIR-46, TM 13,711 and 86-DP-45 by contract archeologist Larry Wilcoxon and geologist Tom Rockwell, Wilcoxon evaluated the significance of the project site based on the criteria in Appendix K of CEQA. Wilcoxon concluded that archeological area SBA-1820, which comprises 3.28 acres of the project site, is important to scientific research because it contains a diverse assemblage of well-preserved artifacts that have the potential to yield important information about one of the earliest prehistoric societies in the Santa Barbara region. Wilcoxon concluded that the site possesses a "remarkable degree of integrity" and retains its scientific value. He also stated—per CEQA evaluation criteria—that the site could be important to the general public through its educational value. To propose a change to the existing recorded easement that offers protection of a significant site would be inconsistent with the intent of all policies that require protection of cultural resources. The report from contract archeologists Applied Earthworks, Inc. (August 31, 2005) concludes that existing data from earlier research on the project site is still adequate for the determination of the significance of the entire easement area, and that there is no changed evidence or new technological tools that would create new circumstances for making a determination based upon the existing relevant data. Wilcoxon recommended avoidance of SBA-1820 or placement of site areas into open space to ensure its preservation for future research. Because he concluded that the 1.01 acre area of SBA-1620 above the 510 elevation contour line exhibited the greatest density and most diverse array of resources, the Planning Commission approved and the Board of Supervisors upheld the creation of an

REQUIREMENT	DISCUSSION
	easement for that area deeding development rights to the County. The easement as currently configured protects and preserves a significant site to an appropriately feasible extent that is consistent with resource protection policies. The proposal to revise conditions to allow for new ground disturbance within the easement is **not consistent** with policy requirements for the maximum feasible protection of archeological resources.
Comprehensive Plan (LUE) Historical and Archeological Policy # 3: When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.	Because the project site is already developed with 51 condominuim units, and because the original action by the Planning Commission and the Board required that only a 1.01-acre portion of the 3.28-acre archeological site known as SBA-1820 was to be deeded into an Archeological Easement to be left as undisturbed open space, sufficient planning flexibility has already been exercised in the original discretionary decision to avoid the site area determined to be the most significant part of the site that holds the highest density of cultural remains. If additional ground disturbance were to be approved to allow for new archeological testing, and subsequent approval were sought for new development within the easement area, a Phase III investigation of the area would be the required mitigation for the adverse impacts of proposed development.
Comprehensive Plan (LUE) Historical and Archeological Policy # 5: Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.	**Consistent:** local area Chumash representatives are on the notification mailing list for the hearing on this proposal, and have thus been notified of possible pending action.
GCP Policy VIS-GV-1: The County shall through its discretionary and design review process ensure the maintenance and where necessary the improvement of the quality in the design and landscaping of industrial, commercial, institutional and residential facilities. **DevStd VIS-OT-1.4:** Site design shall include an analysis of existing conditions on and adjacent to a site. The analysis shall include an examination of	**Consistent:** The knoll area of the project site within SBA-1820 that is protected from disturbance or development by a Deed Grant of Easement is the highest point within the project site (the area of 510 foot contour elevation and higher), and is currently maintained as open space. The temporary disturbance for additional testing is not anticipated to create any permanent new visual impacts on site. However, if a future

REQUIREMENT	DISCUSSION
the site's physical properties and natural features, amenities, special problems, and neighboring environment. Development proposals shall demonstrate an effort to incorporate significant existing natural features into the project design. Site layout shall demonstrate compatibility and integration with neighboring properties.	proposed change to the easement were considered in order to allow the potential development of two additional residential units, the potential visual impacts would need to be considered in order to determine visual policy consistency.
GCP Policy N-GV-1: Interior noise-sensitive uses (e.g., residential and lodging facilities, educational facilities, public meeting places and others specified in the Noise Element) shall be protected to minimize significant noise impacts.	If the proposed modifications were approved that would allow for new ground disturbance and archeological testing, standard mitigation conditions would be applied to the project in order to restrict noise impacts to non-holiday weekdays from 7am-4:30pm.
Goleta Community PlanPolicy GEO-GV-4: Excessive grading for the sole purpose of creating or enhancing views shall not be permitted.	If the proposed modifications were approved that would allow for new ground disturbance and archeological testing, standard mitigation conditions would be applied to the project to ensure that no excessive grading or other ground disturbance beyond the scope of the proposed project would occur.

6.3 Ordinance Compliance

Article III, Sec. 35-211 states the following: *1. All available measures, including purchase of the site, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological and other classes of cultural sites. 2. When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.*

Because it is possible and feasible to retain the recorded Deed of Development Rights which protects the most significant 1.01 acre area within the 3.28 acre archeological site SBA-1820, compliance with Ordinance requirements is achieved through the retention of the easement area as recorded in open space and by not allowing for the approval of further testing and ground disturbance within this area.

If the proposed modification to conditions to allow for further testing and ground disturbance within the easement area were to be approved, impacts to the cultural resources on site would no longer be protected to the best feasible extent, resulting in *in*compliance with Article III Section 35-211.

7.0 APPEALS PROCEDURE

- The action of the Planning Commission may be appealed to the Board of Supervisors within ten (10) calendar days of said action.

- The action of the Board of Supervisors is not appealable to the Coastal Commission.

ATTACHMENTS

A. Findings
B. CEQA Exemption
C. Applied Earthworks Memo dated August 31, 2005
D. Shadow Hills Chronology
E. Site Plans

ATTACHMENT A: FINDINGS

1.0 CEQA FINDINGS

Find that the project is exempt from environmental review pursuant to CEQA Guidelines Section 15270.

2.0 ADMINISTRATIVE FINDINGS

Pursuant to Section 21-15.9 of the Chapter 21 Subdivision Regulations, modifications to final or parcel maps shall be approved only if all of the following findings can be made:

2.1 That there are changes in circumstances which make any or all of the conditions of such map no longer appropriate or necessary; and

From the time that the Archeological Easement (Grant Deed of Development Rights) was approved by the Board of Supervisors and recorded in 1987, no new excavation data has become available. The peer review by Applied Earthworks (August 31, 2005) states that the existing documentation of the earlier site excavations offers sufficient information upon which to base the conclusions that the entire easement area is of sufficient significance and integrity to continue to recommend that it remain as undisturbed open space. Further, the report by Applied Earthworks does not point to any technological advances in excavation techniques or artifact analysis since the earlier excavations that could qualify as changed circumstances that could potentially change the basis upon which the earlier decisions by the Planning Commission and the Board were made. There would also not have been any changes to the existing locations of sensitive resources on the project site, so there is no basis by which to find that there are changed circumstances that may cause the Planning Commission or the Board of Supervisors to conclude that the map conditions that created the Archeological Easement are no longer appropriate or necessary. Thus this finding cannot be made.

2.2 That the proposed map as modified does not impose any additional burdens on the present fee owner(s) of the property; and

The proposed modification to recorded Tract Map 13,711 Condition # 7 to allow ground disturbance for additional archeological testing within the recorded Archeological Easement could potentially impose burdens upon individual condominium owners at the project site in regards to the loss of the use of the open space of the easement and loss of the open space site aesthetics while new testing was being conducted. Additionally, the proposed testing in the easement area would be conducted for the purpose of supporting an argument for allowing a reduced easement so that two new residential units could be constructed. Thus, this finding cannot be made.

2.3 That the modifications would not alter any right, interest or title reflected by the recorded map; and

The proposed modification to recorded Tract Map 13,711 Condition # 7 to allow ground disturbance for additional archeological testing within the recorded Archeological Easement would alter the current prohibition on any further disturbance of sensitive resource areas within the 1.01-

acre Easement in the 3.8-acre SBA-1820 mapped archeological site. The right and interest of the County to maintain the area as undisturbed, in consistency with Goleta Community Plan Policy H-GV-1, would be altered by the proposed modifications to conditions. In addition, the right to the use of a portion of the existing common open space on the project site would be diminished for the property owners on the project site. Thus, this finding cannot be made.

2.4 That the proposed map as modified is consistent with applicable general and specific plans; and

The proposed modification to recorded Tract Map 13,711 Condition # 7, Final Development Plan 86-DP-45 Condition # 25, and the Grant Deed of Development Rights to allow ground disturbance for additional archeological testing within the recorded Archeological Easement is not consistent with Goleta Community Plan Policy HA-GV-1, and is potentially inconsistent with GCP Policy VIS-GV-1, as discussed in Section 6.2 of this Staff Report. Thus, this finding cannot be made.

3.0 Pursuant to Section 35-174.7.1, a Development Plan shall only be approved if all of the following findings are made:

3.1 That adverse impacts are mitigated to the maximum extent feasible.

If the proposed modification to Final Development Plan 86-DP-45 Condition # 25 to allow for further testing and ground disturbance within the easement area were to be approved, adverse impacts to the cultural resources on site would no longer be protected to the maximum extent feasible, as discussed under Section 6.2 of this Staff Report. Thus, this finding cannot be made.

3.2 That the project will not be detrimental to the health, safety, comfort, convenience, and general welfare of the neighborhood and will not be incompatible with the surrounding area.

The proposed modification to Final Development Plan 86-DP-45 Condition # 25 to allow for further testing and ground disturbance within the easement area would result in short-term impacts from excavation and testing activities and equipment, and the short-term loss of the use of the common open space area within the recorded easement site by the residents and owners of Shadow Hills condominiums. Thus, this finding cannot be made.

3.3 That the project is in conformance with the applicable provisions of Article III and the Goleta Community Plan.

The proposed modification to Final Development Plan 86-DP-45 Condition # 25 to allow for further testing and ground disturbance within the easement area would not be in conformance with Article III, Sec. 35-211, which states: *1. All available measures, including purchase of the site, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological and other classes of cultural sites. 2. When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.*

Because there is not any new information that would contradict the earlier determination of the significance of the site, and with the recent determination by Applied Earthworks (see

Attachment C) that the existing information from prior site investigation is sufficient to uphold the determination that the entire easement area is a significant, single-component site, further ground disturbance would not be in conformance with Article III, Section 35-211 as cited above. As discussed under Section 6.2 of this Staff Report, the proposed new ground disturbance would also be inconsistent with all relevant policies of the Goleta Community Plan and the Comprehensive Plan. Thus, this finding cannot be made.

ATTACHMENT B: ENVIRONMENTAL DOCUMENT

NOTICE OF EXEMPTION

TO: Santa Barbara County Clerk of the Board of Supervisors
FROM: Planning and Development, Development Review Division

Based on a preliminary review of the project the following activity is determined to be exempt from further environmental review requirements of the California Environmental Quality Act (CEQA) of 1970, as defined in the State and County Guidelines for the implementation of CEQA.

APN: 059-380-022 **Case No.**: 02RMM-00000-00011 / 04DVP-00000-00004

Location: 4442 Shadow Hills Blvd, Goleta Community Plan area, Second Supervisorial District

Project Title: Shadow Hills Recorded Map and Development Plan Modifications to Conditions to Allow Archaeological Testing

Project Description:
Approval under the provisions of County Code Chapter 21 to modify recorded Tract Map 13,711 Condition # 7, and under the provisions of County Code Article III Chapter 35-317.10 to modify Final Development Plan 86-DP-45 Condition # 25 to allow ground disturbance (new archeological testing) in the Archaeological Easement in DR-1.8 Zone District under Article III.

Exempt Status: (Check one)

___ Ministerial
_xx_ Categorical Exemption
___ No Possibility of Significant Effect [Sec. 15061 (b.3)].
___ Statutory
___ Emergency Project

CEQA Guideline Section: Section 15270 [Projects Which Are Disapproved]

Reasons to support exemption findings:
The proposed project may be found to be categorically exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15270 of the Guidelines for the Implementation of CEQA. Section 15270 [Projects Which Are Disapproved] exempts projects where the agency (in this case, Santa Barbara County) can determine that the project cannot be approved. This section is intended to allow an initial screening of projects on the merits for quick disapprovals prior to the initiation of the CEQA process.

Department/Division Representative _____ Date: _____

Acceptance Date: _____

A copy of this form must be posted at P&D 6 days prior to a decision on the project. Upon project approval, this form must be filed with the County Clerk of the Board and posted by the Clerk of the Board for a period of 30 days to begin a 35 day statute of limitations on legal challenges.

Distribution: Hearing Support Staff
Project file (when P&D permit is required)

Date Filed by County Clerk _____

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ATTACHMENT C: APPLIED EARTHWORKS, INC. MEMO

Applied EarthWorks, Inc. 515 East Ocean Avenue, Lompoc, CA 93436
Telephone: 805-737-4119 Fax: 805-737-4121

MEMORANDUM

Date: August 31, 2005
To: Alice Daly
Cc: June Pugot
From: Joyce Gerber
RE: CA-SBA-1820, Final Analysis and Interpretation of Existing Data for the Shadow Hills Archaeological Easement

1.0 Introduction

At the request of the County of Santa Barbara (County), Applied Earthworks, Inc. (AE) has reviewed all available documents pertaining to previous archaeological and geological investigations at CA-SBA-1820, a prehistoric archaeological site collocated with the Shadow Hills Development in Santa Barbara, California. AE's scope of work, as outlined by the County, called for a review of previous scientific reports and correspondence related to work at the site in the 1980s. As part of this review, the County requested (1) a summary of existing documentation; and (2) a section to highlight and assess key issues among archaeologists, e.g., the age of the site, integrity of the site, and existing archaeological easement boundary. A second task was to attempt to clarify the antiquity of the site with existing material by (1) conducting radiocarbon dating on bone from previous collections, and (2) performing a serpentine bead analysis and, if possible, compare the form of the bead to those at other sites associated with reliable dates. A third task, which the County subsequently requested to be put on hold, involved a review and evaluation of the work plan prepared for SBA-1820 by Mr. Laurence Spanne.

This analysis was conducted by Joyce Gerber, Ann Munns (bead analysis) and Clayton Lebow (obsidian hydration discussion) of AE.

2.0 Summary of Existing Documentation

All the documentation referred to in this summary was provided by the County or obtained from the UCSB Central Coast Information Center (CCIC). Where appropriate, documents are referenced by the designation assigned to each report by the County (Attachment A). It should be noted that no official site record is on file for SBA-1820 at either the UCSB CCIC or the Repository. State of California Department of Parks and Recreation (CA DPR) forms will be completed by AE after the completion of this review. The site record forms will be submitted to the County and the CCIC.

In 1980, Mr. Larry Wilcoxon completed a Phase 1 cultural resources evaluation for a proposed condominium complex to be constructed in the foothills just west of Santa Barbara, on the old San Marcos golf course. The results of this work were summarized in an EIR for the proposed project. Wilcoxon subsequently conducted subsurface boundary testing and Phase 2 testing,

which included analysis by Tom Rockwell, a geologist experienced in working with archaeological deposits. After completion of these studies, Mr. David Van Horn conducted an auger testing program followed by a "salvage" excavation, which today would be termed a Phase 3 excavation to mitigate impacts from the proposed project. Van Horn excavated one percent of the recorded site area that was within the proposed project footprint. The methods and results of these investigations are summarized below.

2.1 (County document R-1) Wilcoxon's Phase 1

- Recorded Areas 1 (SBA-1855), 2, and 3 (SBA-1820) as flake scatters w/ fire cracked rock, a projectile point fragment and groundstone.
- Tried to get grading plans for the golf course but couldn't; personal communication from the greenskeeper who assisted in golf course construction indicated that not much had been graded, and much had been filled for placement of greens.
- Could not determine depth of deposit; survey was limited by ground cover
- Recommended site boundary definition as a condition of any future development permit, followed by assessing project impacts and feasibility of mitigating potential impacts via project redesign.
- If project redesign to mitigate impacts was not possible, recommended testing to assess chronology, integrity, and significance.

2.2 (County Document R-2) Shadow Hills FEIR

- Wilcoxon's text, summarized above, was incorporated directly into the EIR.

2.3 (County Document R-3) Wilcoxon's subsurface boundary definition of Areas 2 and 3 via backhoe trenching

Figure 1 shows the location of Wilcoxon's boundary definition trenches.

- States up front that "a controlled determination of cultural resource integrity and uniqueness is beyond the proposed scope of work outlined in the project proposal."
- Excavated 32 units around the perimeter of Area 3 and along the ridgetop above Area 2, designed to intersect any cultural deposits present.
- Backhoe used to determine presence of cultural materials, depth of cultural deposits, and nature of stratigraphic relationships between cultural and non-cultural soil horizons.
- Sample screened through 1/8-in mesh from each unit.
- Defined site boundaries based on the presence/absence of cultural materials in trenches; combined Areas 2 and 3 into SBA-1820; Area 1 still designated SBA-1855.
- Initial information suggested to Wilcoxon that the materials were typical of Milling Stone Horizon dating between 7,500 years before present (YBP) and 3,500 YBP based on assemblage characteristics and temporally diagnostic artifacts (groundstone and projectile point basal fragment).
- Recommendations:
    - Avoid site if possible, incorporate into development as open space;
    - If avoidance not possible, reduce impacts by fill placement;

- If above not possible, conduct subsurface testing program to evaluate nature, extent, and significance of resource. If the site was determined significant, mitigate by excavation, analysis, reporting and curation.

2.4 (County Document R-4) Wilcoxon's Phase 2

Figure 1 shows the locations of Wilcoxon's Phase 2 excavation units, and the density of cultural material within the undisturbed levels in the unit.

- Objectives were to evaluate site significance (under CEQA, which hinges on questions of integrity and the ability to provide scientific data), assess proposed project effects, and develop mitigation measures
- Specific research questions addressed:
  - What is the vertical and horizontal extent of the cultural deposit?
  - What is the structure of the deposit including the geological stratigraphy, cultural stratigraphy, features, activity areas, etc.?
  - What is the range of artifacts and ecofacts contained in the deposit?
  - To what extent has the deposit been subjected to prior disturbance?
  - How old is the deposit?
- Methods: excavation of 21, ½ x 1 meter units placed by random selection within horizontal strata, excavated by hand in 10 centimeter units, and screened through 1/8-inch mesh; and 5 backhoe trenches for stratigraphic analysis (not artifact collection).
- Examined historic air photos, interviewed persons with precise knowledge of the property.
- Results: Landform modification research
  - Visual examination indicated that the pads for the 4th and 6th tees had been graded and elevated (p. 18);
  - Interviews with original golf course greenskeeper who helped construct the golf course indicated that the only modifications to existing topography were in areas where greens and tees were built. Specifically, Medina indicated that the 3rd and 5th tees were elevated with imported topsoil and sand purchased and brought from outside the project area (p. 19-20).

- Wilcoxon's evaluation of presence/absence of cultural deposits, horizontally and vertically: (starting on p. 30): (these were developed using information from the Rockwell's soils and disturbance analysis, see Document R-5, below)
  - Historic artifacts distributed in the upper levels of units only
  - Units A-1, A-2, 3, 4, and 9, in central portion of site corresponding to the relatively flat portion of the knoll, contain cultural deposits reaching maximum depths between 40 and 100 cm below ground surface; mean basal depth for this area is approximately 70 cm.
  - Units 1, 2, 6, 7, 12, 13, 14, and 15, in the western portion of the knoll, have cultural deposits reaching maximum depths between 60 and 130 cm with a mean depth of approximately 94 cm. The thicker deposits are attributed to accumulation of colluvium in the downslope portions of the knoll.

- Units 5, 10, and 11, in the eastern part of the site have a basal depth of cultural material ranging between 40 and 60 cm, attributed to the gentleness of the landform topography.
- Units 16, 17, and 18, and backhoe trenches 21 and 22, in the southeastern portion of the site (vicinity of the 6th tee) have a maximum depth of archaeological material between 20 and 60 cm. The shallowness is possibly attributed to former grading which removed a portion of the upper A horizon during construction of the tee pad to the southwest. Relatively thin, undisturbed, artifact-bearing deposits exist immediately overlie the B horizon.
- In the southern portion of the site, Trenches 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, and 13 show a basal depth of archaeological deposit between 26 and 40 cm below the ground surface, with a mean depth of approximately 36 cm.

- Wilcoxon's analysis of collected materials, including debitage, formal chipped stone tools, and groundstone:
  - Secondary flaking and finished tool manufacture were predominant on-site. Primary core reduction probably occurred at other localities. Projectile points and fragments are characterized by crudely flaked, small lanceolate-shaped forms with contracting stems, which are commonly attributed to Early Period assemblages in this region.
  - 22 groundstone artifacts were recovered. Globular mortars and pestles are completely absent in the collection. Wilcoxon believes that this pattern is characteristic of Early Period (Millingstone Horizon) sites; mortars and pestles begin to appear in the Santa Barbara region ca. 5400 years B.P.
  - Analysis of subsistence remains suggests that the site's inhabitants intensively exploited and processed a wide range of terrestrial plant and animal resources to the near exclusion of marine resources. This pattern is characteristic of Early Period sites. There is a virtual absence of marine resources.
  - One complete projectile point was found during the Wilcoxon excavations. It is not diagnostic of any time period

- Wilcoxon concludes the following:
  - CA-SBA-1820 represents a relatively large habitation site occupied sometime between 7500 and 5400 years ago by a population of moderate size. Implicit in his discussion (p. 50-52) is that while the duration of the occupation cannot be determined without further chronological analysis such as obsidian hydration study, the site represents a single component.
  - Subsistence resources exploited focused on wild plant foods seasonally available in nearby plant communities.
  - The absence of mortars and pestles suggests that the leaching process for acorn exploitation was not available at this time, and the presence of manos suggests that hard seeds were a primary resource.
  - Terrestrial mammals were exploited as a source of supplemental protein.
  - Wilcoxon was able to make statements about horizontal spatial patterning in the artifact and faunal distributions, e.g. areas of chipped stone tool manufacture and/or maintenance, loci of intensive plant resource processing, and areas of secondary refuse disposal.

- Wilcoxon's evaluation of the site's significance was based on criteria in Appendix K of CEQA: (1) does the resource contain information needed to answer important scientific research questions; (2) does the resource have a special and particular quality such as the oldest of its type or best available example of its type, and (3) is it directly associated with a scientifically recognized important event or person.
    - Wilcoxon concluded that SBA-1820 is important to scientific research because it contains a diverse assemblage of well-preserved artifacts and ecofacts which have the potential to yield important information about one of the earliest prehistoric Native American societies to occupy the Santa Barbara region. He states that it possesses a "remarkable degree of integrity" and thus retains its scientific value. He also states that it is important to the general public primarily because of its educational value (p. 55 and 60).

- Wilcoxon's management recommendations (no specific grading, utility trenching, or landscaping plans were available):
    - The development as originally planned would have disturbed or destroyed 75.5 % or 10,033 square meters of the site's area as mapped.
    - Wilcoxon's recommendations included avoidance of site or placement of site areas into open space with measures to ensure its preservation for future research;
    - If site could not be avoided as above, he recommended archaeological "salvage" excavations of all areas were land altering activities would occur, after development of specific plans.
    - He states, "The portion of SBA-1820 exhibiting evidence for the most diverse array of prehistoric activities is the area near the top of the knoll above the 510 foot contour interval" (p. 65). He recommends that at least 25 percent of this area be excavated for data recovery, as adequate mitigation.
    - Further, "The portion of the site occurring below the 510 foot contour is thought to contain fewer extensive cultural features but greater densities of subsistence remains." He recommends that between 10 and 15 percent of this area be salvaged through data recovery excavations.
    - Wilcoxon states that provision should be made for the deposition of all artifacts and faunal materials in a permanent repository meeting current professional standards of curation.

2.5 (County Document R5) Rockwell's analysis of soils and historical disturbance at SBA-1820

The location of Rockwell's trenches is shown in Figure 1. Rockwell's assessment of the stratigraphy of each of Wilcoxon's excavation units is also indicated in Figure 1.

- Rockwell (soils geomorphologist familiar with archaeological contexts) assessed the soils in excavation units and trenchs for
    - The effects of human occupation on the soil;
    - The effects of historical earth movement on the archaeological sites;
    - The integrity of the site as a whole; and,
    - The effects of erosion on the site.

- Rockwell – unit analysis: Based on his analysis, Rockwell divided the excavated units into four groups based on soil type, location, and disturbance:
    - Culturally disturbed within greens but the lower part of the A horizon is present and intact (Units 3, 4, A1, and A3).
    - Units in fanglomerate with little or no disturbance, retaining most or all of their original characteristics. These were subdivided into Group 1, evaluated as almost entirely undisturbed (Units 13, 15, 16, 17, 18, A2) and Group 2, and evaluated has having experienced compaction as a result of heavy machinery traffic during golf course construction (Units 1, 2, 8, and 9).
    - Soils in eroded fan alluvium or colluvium overlying shallow bedrock (Units 5, 10, and 11). These are relatively intact soils containing cultural material, and are soils that have moved downslope via soil creep.
    - Soils with thick colluvial components (Units 6, 7, 12, and 14). Units contained components of colluvium over 50 cm in depth, containing cultural material. Rockwell states that much of the cultural material may have been carried downslope by soil creep processes, and the units otherwise appeared intact with no obvious historical disturbance.

- Rockwell – trench analysis:
    - Trenches were excavated to analyze soils and their relationships, and to help delineate fill and disturbed soils from A horizon soils containing *in situ* cultural material.
    - Trench 33 was excavated to delineate colluvial gravelly material from intact eroded fan deposits, and supplement information from Units 5, 10 and 11.
    - Trench 34 was excavated to test for the presence of translocated CaC03, which would indicate dissolved shell. Rockwell concluded that little or no shell was present at SBA-1820 during the Holocene and during the probable time period of prehistoric occupation of the site.
    - Trench 35 was cut to assess the amount and nature of historical fill at the edge of a green and see how it was emplaced. Where the contact was apparent, the fill was "simply placed on top of the original surface indicating little or no disturbance of cultural material below the spoil. Because the spoil was derived from A horizon material that may have been taken from within site boundaries, it too may contain cultural material although it would be out of place" (p. 28). (Joyce's note: this area is outside of the proposed sensitive area but the lower half of the trench is within the 510 ft contour)
    - Trench 36 was excavated to assess the southern green area. The fill material in this area was approximately 45 cm thick, and the trench was terminated when abundant cultural material was encountered at the top of the natural A horizon. (Joyce's note: this area is outside of the proposed sensitive area but within the 510 ft contour).
    - Trench 37 was excavated across a low berm to investigate the nature of the berms that surrounded the greens in a ring. The berm was constructed with A horizon material and was easily delineated from the underlying surface. The buried A horizon appeared intact and undisturbed (p. 28). (Joyce's note: this area is outside of the proposed sensitive area but within the 510 ft contour)

Rockwell concluded that "in general, most of the soils at SBA-1820 appear intact in terms of cultural material, the primary exception being in the vicinity of the putting greens. Also, the natural soil beneath the soil berms which ring the greens appears intact as well. Overall, the large majority of SBA-1820 appears to have retained its integrity and archaeological investigations will record the natural state of the site as it was prior to golf course construction" (Rockwell R5, p. 13). Rockwell also concludes that little or no marine shell was ever deposited at the site as indicated both by the absence of shell within the A horizon and the absence of significant quantities of calcium carbonate within the B horizon.

2.6 (County Document R-6) Van Horn's Auger Sampling Program

The locations of Van Horn's auger samples are shown in Figure 2.

- Van Horn states that "It was the owner's opinion that (Wilcoxon's) assessment exaggerated the importance of SBA-1820. (Van Horn) was retained to investigate the situation for himself. The auger sampling study...was conducted for that purpose" (p. 2). The auger sampling method was selected because it was "fast, inexpensive, and provides reliable results") (p. 2).
- Methods – 9 inch diameter auger. Each line of auger holes was a series, A through H, and X (see table). The first four auger series were waterscreened through 1/8-inch mesh. Second four auger series were screened through 1/8-inch mesh dry because it was faster.
- There were 47 auger samples total, most dug to maximum depth of topsoil, placed within Wilcoxon's site boundaries that he based on the trenching/boundary testing. Van Horn's auger holes were placed in 5-10 meter intervals.
- Van Horn found abundant chipped stone and some animal bone, manos and metate fragments, hammerstones, no shell, few formal tools (same as Wilcoxon).
- The site boundaries, based on the presence/absence of cultural materials, conformed closely to those identified by Wilcoxon.
- Two augers, D-1 and E-1, contained 25 percent of the lithic material and 74 of the 76 bone fragments found.
- Van Horn concluded that much of the flake scatter on the slopes may have resulted from disturbance due to pre-golf course agricultural activities and from subsequent golf course construction. He also concluded that the surviving habitation deposit was much smaller than Wilcoxon's report indicated. He said that the significance of the waste flake scatter on the slope is very restricted because it contains almost nothing but flakes that were never used as tools...In a subsequent letter to the County (County Document C-2) Glassow disagreed, and argued for microwear study. (See report summary below). The county concurred and Van Horn later confirmed the value of the study, which was conducted in the "salvage" or phase 3 study subsequent to the auger test program.

Based on the results of three studies by Wilcoxon and one by Van Horn, as well as input from Dr. Michael Glassow, the County required the owner to permanently preserve the portion of the knoll above the 510 ft contour line and to salvage one percent of the remaining outlying portions of the site (the slopes). Eventually, the area above the 510 foot contour line was placed into an archaeological easement and closed to further ground disturbance.

2.7 (County Document R-7) Van Horn's Phase 3 Excavations outside the 510 ft contour

The locations of Van Horn's 2x2m excavation units are shown if Figure 2.

- The purpose of Van Horn's "salvage" excavation was to mitigate the impact of building on the less dense part of the site; to accomplish this he excavated 1 percent of the previously recorded site area that was slated for development. He dug 10, 2 meter by 2 meter excavation units. Nine of the units were placed intuitively so that the sample would be evenly distributed within all of the areas to be developed. One of the units, #28, was placed in the middle of the area that, based on the results of the auger testing, he believed to contain the densest and most intact deposit, in order to have a "habitation area" with which to compare the rest of the units. The units were excavated with picks and shovels in 10 cm levels and screened through 1/8 inch mesh.

- Van Horn documented an assemblage very similar to what was documented by Wilcoxon – much chipped stone, mostly secondary and tertiary flakes, with few formal chipped stone tools; some bone that was very fragmented; manos, metate fragments and hammerstones, no subsistence shell, and no *olivella* shell at all

- At Glassow's suggestion, Van Horn conducted microwear analysis on chipped stone from the site. Observed polishes on utilized flakes from the Van Horn excavation indicated that the flakes had been used on hide, wood, and meat. Ninety of the 213 utilized flakes displayed evidence of microwear (polish, or abrasion without polish). 30 utilized flakes from the Wilcoxon excavation were examined also and 16 were found to exhibit microware that indicated mostly meat and hide polishes. Examination of flakes classified as unutilized also showed that about 28% of the sample examined displayed polishes representing hide, wood, meat, bone, antler, and (possibly) plant.

- Complete and fragmentary manos, and metate fragments are the only type of ground stone found at the site by either investigator. Twenty three hammerstones were found from all combined investigations. One fragment of worked bone was recovered, probably the end of a needle.

- No marine shell was found at the site by Wilcoxon, and only two small unidentifiable shell fragments and a small cluster of tiny fossil oysters were found by Van Horn (in Unit 28).

- Van Horn did not observe any vertical differentiation in the assemblage and says, "All investigators agree that it is a single component site"; however Glassow, in his 24 June 2004 letter to Richard Kentro, states in the third paragraph, "Regarding efforts to date the archaeological deposits, it is important to consider that the site may have witnessed multiple episodes of prehistoric occupation, possibly with considerable gaps of time intervening between them." Dr. Glassow made this statement in the context of a caveat regarding radiocarbon dating in older sites in general, and it is unclear if he reviewed the 1820 reports with this issue in mind. (Joyce's note: In archaeology, a "component" is a culturally homogeneous stratigraphic layer within a site that belongs to one culture and is interpreted as the remains of a single people during a relatively brief period of time.

Some sites contain multiple components, recognized by critical changes in the artifact assemblages. Thus a single component, sometimes also referred to as a "single occupational component, is the manifestation of a specific time period at a site.)

- Van Horn agrees with Rockwell's descriptions, analysis and conclusions, and found no stratigraphic evidence which conflicted with Rockwell's analysis with the exception that Van Horn's believes that all soil horizons in auger hole X, were disturbed. This is in the approximate location of Wilcoxon's Unit 8, and perhaps 20 to 25 feet south of Wilcoxon's units 3 and 4 (see attached map).

Conclusions: Based on his work, Van Horn believes that the area he terms the "area of original deposit", or, alternately, the "habitation area", does **not** extend throughout the area above the 510 foot contour line (see attached maps). He believes that much of the site's original deposit has been removed from the area above the 510 contour line via grading associated with green and tee construction, and that the "known surviving deposit" is actually much smaller than the knoll above 510 feet. Van Horn proposes to keep the reduced "habitation area" as the revised archaeological easement. The area that Van Horn suggests is the "habitation area", or the primary, undisturbed, important part of the site, is shown in orange hatchmarks on Figure 2.

Van Horn does not argue that the site is not significant. He does argue that the habitation area is smaller than previously plotted, and that the 'habitation area', by which he means the area of denser cultural materials, that has not been graded, is the important part. He argues that the rest of what was previously mapped as site area and evaluated as important by Wilcoxon is disturbed, and not *in situ*; that site materials were moved to the area around the edges of the knoll by plowing and then grading.

In his conclusions, Van Horn suggests a site occupation span between 0 and 500 AD (1950 YBP to 1450 YBP based on the obsidian rind measurements and the absence of projectile points at SBA-1820. Elsewhere in the report, Van Horn cites Dr. Clement Meighan at the UCLA Radiocarbon Laboratory as assigning dates of 1872 B.P to 1166 BP. to the obsidian samples that were submitted (Van Horn p. 77).

Van Horn addresses a series of research questions with his data. The questions, and classes of data needed to address them, were suggested by Dr. Glassow, as follows:

- Was the site used by people whose principal base camp was on the coast, or was it occupied by people whose principal base camp was SBA-1820 or a nearby inland site?
    - Data needed to address this question: time of SBA-1820 occupation in relation to times of occupation of coastal sites; knowledge of seasons of occupation at SBA-1820.
- Was SBA-1820 a spring/summer inland base camp for exploiting seeds, riparian plants, and/or game? Or was it not an inland base camp but a temporary camp, perhaps by people occupying a base camp nearby?
    - Data needed would be the density and diversity of the artifact and food remains at SBA-1820 in comparison to nearby sites.

- Was food resource exploitation at the site highly focused on only one or a few resources because of a distinctive environmental location or season of use, or was the site used to exploit a wide variety of resources in about equal proportions?
    - Data needed would include evaluation of all evidence of resource exploitation at the site and the kinds, abundances, and seasons of maximum availability of resources near the site, ideally compared with information from other inland sites in the area.
- Was SBA-1820 occupied pre-5500 BP, which is generally characterized by highly mobile populations that emphasized resource utilization in the inland area as much as on the coast, or was it occupied during a time when greater focus was placed on marine and estuarine resources, resulting in a more specialized and limited use of inland zones (most likely after 5500 BP)?
    - Data needed is "much more temporal data on settlement patterns for the larger Santa Barbara-Goleta region.

Some aspects of some of these questions were addressed in Van Horn's report. For instance, Van Horn believes that the site is a seasonally occupied camp, or perhaps special activity area, occupied during the winter or early spring. It is difficult to independently evaluate his analysis, however, for several reasons. The bone assemblage is small and fragmented. Van Horn's data are often lumped in his report tables to illustrate a particular conclusion, but are not in presented in the raw form that would allow the information to be rearranged and examined for a different purpose. In addition, information needed to address some of the more regionally oriented questions was simply not available at the time that this research was conducted. Finally, because of the small obsidian sample size submitted by Van Horn, the hydration measurements were not able to conclusively resolve the issue of the site's antiquity.

2.8 (County Document R-8) Hoffman's 2002 Geologic Investigation

The greens where Mr. Hoffman believes substantial grading has occurred, and the area he believes to be fill, are shown on Figure 2.

In 2002, Mr. Hoffman conducted a geologic investigation in an undeveloped portion of the Shadow Hills property. The purpose of the study was to assist the landowner in defining the area of ground disturbance in the vicinity of the proposed new building site, which is within the previously established archaeological easement. The results of Mr. Hoffman's analysis are shown in the attached map (Figure 2 in his report). Using historic aerial photographs, topographic maps, and visual examination of the ground surface, and estimating cut and fill depths based on existing topography, he constructed a map showing estimated locations and depths of cut and fill activity on the top of the knoll within approximately the 500 ft contour. He cautions that his conclusions are estimates that should be verified in conjunction with previous archaeological (subsurface) studies. He also recommends that further subsurface investigation would be required to better define past grading and ground disturbance activities.

3.0 Additional information pertaining to the site's antiquity

3.1 Radiocarbon dating of bone from SBA-1820

The County requested that up to six samples of bone be selected from the SBA-1820 collections and submitted for AMS dating. The bones were to be selected from the middle and lower strata of the site. The AMS technique allows the submittal of smaller samples because it requires that less collagen be present. If a single bone of sufficient size and preservation is submitted, radiocarbon dating is an effective way to obtain an absolute date for a site. AMS samples are required to be a minimum of 2 grams, with a recommended weight of 30 grams. Another important factor in sample selection is that the submitted sample be a single bone, not an aggregate sample. Additionally, it is important that the bone is from an animal unlikely to have died in a burrow (pocket gopher or lagomorph, for example).

According to the reports summarized above in previous sections, both Wilcoxon and Van Horn collected bone from the site. AE visited the UCSB Repository to examine the faunal collection and select appropriate bone samples for radiocarbon dating. Examination of the collections and discussion with Repository personnel revealed that all of Van Horn's collection from SBA-1820, and some of Wilcoxon's collected bone from the site, were not present at the Repository.

Wilcoxon's Collection

The accession number for the CA-SBA-1820 materials collected by Wilcoxon is #330. These materials and the artifact catalog for SBA-1820 were present at the Repository, but the facility did not possess a copy of the associated Phase 2 report. AE obtained a copy of this report from the County and gave it to the CCIC to copy for the Repository. Then the bone was examined to find pieces that had been identified to the species level, or at least to the broad categories of small, medium, or large mammal. This identification is customary during analysis of excavated material, and these distinctions are recorded in the artifact catalog for the project. Close examination of accession #330 revealed that none of the identified bone was with the collection. Those particular bags were missing from the collection. The only bone from the Wilcoxon excavation stored at the Repository is all extremely small and fragmented, and cannot be reliably identified as larger than small mammal. None of this bone was suitable for dating.

Van Horn's Collection

Van Horne's catalog of artifacts was filed at the Repository, and the materials were assigned accession # 361. However, the materials were not present in the repository. Mr. Robert White of Mr. Van Horn's firm, Archaeological Associates, was contacted about the collection. Mr. White located the identified bone from accession # 361 and sent the materials to Applied EarthWorks, Inc. The bone assemblage was extremely fragmented. Only three pieces suitable for analysis were located. These were sent to Beta Analytic, Inc. in Coral Gables, Florida for AMS dating. The response from Beta indicated that none of the samples retained enough collagen for analysis, and none of the bones could be dated. Consequently, the radiocarbon analysis was unsuccessful.

3.2 Stone bead analysis

In an effort to shed light on the site's antiquity, the County tasked AE with conducting an analysis of the globular serpentine bead from Wilcoxon's collection. Specifically, Wilcoxon had information that a similar bead had been found from SBA-9 in Carpinteria, and that there was a radiocarbon date from a stratum associated with that bead. AE requested all stone bead from the SBA-1820 and SBA-9 collections housed at the Repository at the University of California, Santa Barbara (UCSB). Although radiocarbon dates have been submitted for SBA-9, and the results are available on-line through Coyote Press, the Repository was not able to locate any report for SBA-9 other than the initial survey report. And as stated above in Section 3.1, radiocarbon dating of bone from Van Horn's SBA-1820 collection was unsuccessful. As a result, there were no radiocarbon dates with which to pair the stone beads from either site.

In August of 2005, AE bead analyst Ann Munns (Ph.C, RPA) examined the beads from SBA-1820 and SBA-9. Following are her comments about these artifacts and their ability to shed light on the antiquity of SBA-1820.

The globular serpentine bead recovered by Wilcoxon from SBA-1820 (catalog # 330-473) is fragmented, brittle, and appears to have been burned. With a diameter of 12.17 millimeters and thickness of 7.81 millimeters, the bead is comparatively small, relative to the known size range for this bead type (see C. King 1990:Figures 10 through 13). The hole measures 5.4 millimeters and is biconical, drilled roughly 80 percent from one face.

Stone bead typology and chronology are poorly documented for the Santa Barbara Channel Region, particularly for the early portion of the sequence (C. King 1990:119, 138). Little data is available for Early and early Middle Periods (5500-200 B.C.). Detailed data have yet to be gathered to document stone bead attribute patterning through time and to link such a sequence to calendar dates through radiocarbon dating of associated material. Consequently, it is impossible to reliably assign calendar dates to CA-SBA-1820 based on a single associated stone bead specimen.

At a coarser level of temporal resolution, prior research by C. King (1990) has suggested the possible existence of temporally sensitive changes in stone bead styles. These changes remain only suggestive, however, because they have not yet been thoroughly documented and because they are based on small samples drawn from a small geographical area—particularly for Early and early Middle Period times (C. King1990: 119, 138). Stone beads are present from the middle phase of the Early Period (beginning ca. 4000 B.C.) until after European contact. During most of the Early Period, stone discs and cylinders (along with clam beads) appear to be "the most commonly used shaped beads during most of the Early Period" (C. King 1990:106). Serpentine is among the earliest stone bead material types recorded (1990:109). Cylindrical serpentine beads of a size similar to the SBA-1820 globular bead are described from mid-Early Period deposits. However, King did not identify globular stone beads in collections pre-dating Phase 2 of the Middle Period, which begins ca. 200 B.C. (King 1990:119).

Although relatively uncommon during Phase M2, globular and tubular stone beads reached their peak frequency during Phase M3 (C. King 1990: 139), and were the dominant late Middle Period styles of stone beads in the Channel Region (1990:145). Globular and tubular stone beads

remained relatively common until after Phase M4, when they declined in proportion to other bead types (1990:143).

Wilcoxon discusses the SBA-1820 globular serpentine bead in his 1984 report (1984:15), pointing out the artifact's similarity to early Middle Period stone beads. However, he suggests the possibility that this bead type may occur much earlier that previously documented, citing a globular serpentine bead from SBA-9 as dating to more than 7,000 years ago, within the first phase of the Early Period. To evaluate Wilcoxon's suggestion, Æ's analyst examined two serpentine beads borrowed from the SBA-9 collection, curated under Accession Number 250 at the UCSB Repository (specimens 250-84 and 250-85). However, both beads are disc, rather than globular types—of no use in assessing the hypothesis that globular serpentine beads pre-date the early Middle Period.

Van Horn reports that he recovered three stone beads from the SBA-1820 deposit. These were not available for analysis. His raw material descriptions in his report are consistent with serpentine material types; however, all three beads appear consistent with disc, rather than globular types. King depicts serpentine beads of comparable sizes during all time periods and most sub-phases (1990:Figures 10-13). Van Horn's suggestion that the SBA-1820 stone beads fail to provide clear temporal associations is consistent with our current state of knowledge.

In summary, current understanding of regional stone bead chronology simply does not permit assignment of a temporal range to the SBA-1820 specimen that would hold even a minimum level of confidence.

3.3 Obsidian hydration analysis data – old and new

Obsidian hydration studies as an analytical method have become commonplace in archaeological studies. Developed by geologists and introduced to archaeologists in 1960 (Friedman and Smith 1958, 1960), its value as a dating method and as a means of investigating postdepositional processes has been widely recognized (Skinner 1995). When the surface of obsidian is fractured, water begins to diffuse, or hydrate, from the newly exposed surface into the interior of the piece. The hydrating rind slowly grows over time and, when thick enough, is visible in a thin cross section under a microscope. The rind width can then be measured. Comparing rind widths serves as a means of relative dating as thicker rinds are older than thinner rinds. Comparing relative rind widths also can help assess mixing of archaeological components. For instance, mixed cultural deposits are suggested if approximately equal proportions of thick and thin rind widths are recovered from the same depth in an excavation unit.

However, various studies have demonstrated that numerous factors affect hydration rates. Principal among these is chemical composition of the obsidian. Each obsidian source has a distinct chemical composition, and obsidian from different sources can hydrate at different rates. For this reason, the geologic source of the obsidian usually accompanies modern hydration studies. Effective hydration temperature also is important. Other potential variables include relative humidity, soil alkalinity, and interobserver error. Fire burning over obsidian in surface or near-surface contexts can affect hydration readings. All of these factors have been examined elsewhere and will not be discussed here (Ericson 1981; Freter 1993; Friedman and Obradovich 1981; Mazer et al. 1991; Michels and Tsong 1980; Stevenson et al. 1993; Tremaine 1989).

Because of these variables, it is important to have a sufficient sample when using obsidian hydration as a dating technique. It is necessary to look for gross patterns in the data rather than focusing on a few or individual rind widths.

With sufficient data, the rate at which hydration occurs can be calculated and rind widths then used to provide absolute dates. Typically, a hydration rate is established empirically by comparing obsidian hydration rind widths from archaeological components with independently derived radiocarbon dates from those same components.

However, two difficulties have inhibited development of hydration rates for California's Central Coast. First, because obsidian was imported from considerable distances, sample size in archaeological deposits tends to be small. Large sample sizes more accurately portray the range and variability of rind widths and reveal data patterns that are not available with smaller samples. Furthermore, obsidian from Central Coast sites tends to be from several different sources, which further decreases the sample size from any given source (i.e., those with similar chemical composition). Second, bioturbation and other postdepositional processes often are extensive in sites along the Central Coast. Mixing of cultural deposits makes direct correlations between radiocarbon dating and obsidian samples difficult. For these reasons, reliable hydration rates have not been established for the region.

However, despite the lack of well established and reliable hydration rates, rind widths do provide a gross measure of antiquity. Obsidian from the Coso Volcanic Field with measured hydration rinds has previously been reported at five sites on Vandenberg AFB. Given the proximity of those sites to CA-SBA-1820, variables such as effective hydration temperature should be constant. Of the four sites on Vandenberg AFB, CA-SBA-539 and -2696 have comparable rind widths (between about 3.4 and 4.2 microns) and comparable radiocarbon age determinations (about 2300–1900 cal B.P.) (Glassow 1990, Colten et al. 1997). Rind widths are thicker at CA-SBA-670, with an average of 5.3 microns, and the radiocarbon age determinations are correspondingly older. Radiocarbon analysis indicates that the site was occupied at various times (see Lebow et al. 2002:Appendix A), but the obsidian samples were collected in conjunction with excavations that yielded radiocarbon age determinations between 5968 and 7333 cal B.P. (Environmental Solutions 1990b). The hydration rind was measured on a single Coso obsidian specimen from CA-SBA-1823; the 5.3 micron width corresponds to an occupation that appears to predate 5,500 years based on the extensive ground stone assemblage composed entirely of manos and metates (Harro et al. 2001). Most recently, three obsidian specimens from CA-SBA-530 were sourced to the Coso Volcanic Field. One of these, with a rind width of 6.4 microns, is associated with a deposit radiocarbon dated to 7650–6320 cal B.P. The remaining two specimens, with rind widths of 5.3 and 4.8 microns, are from a deposit radiocarbon dated to 10,570–8800 cal B.P. (Applied EarthWorks, in progress).

This limited sample from Vandenberg AFB suggests that Coso obsidian with rind widths in the 3.4–4.2 micron range correspond with radiocarbon ages in the neighborhood of 2300–1900 cal B.P. Rind widths that are 4.8 microns and greater correspond with ages exceeding 5,500 years.

Figure 3 illustrates the distribution of hydration rind widths listed in Table 1 for CA-SBA-1820. Peak frequencies fall within the 6–8 micron range. Given the rates of hydration noted on Vandenberg AFB as discussed above, this range corresponds to an occupation predating 5,500

years (and potentially substantially predating that time). As such, the obsidian data supports Wilcoxon's (1984) estimate of the antiquity of CA-SBA-1820.

In addition to providing a rough gauge of antiquity, obsidian hydration measurements can also provide a means of suggesting whether a site represents a single component or multiple components. If a site represents a single component, the distribution of hydration measurements should have a single peak frequency. If multiple components are represented, each component should have a peak frequency. Although the sample from CA-SBA-1820 is small, the curve illustrated in Figure 3 suggests that a single component is represented, with a single peak frequency in the distribution of rind widths.

4.0 Discussion: Key Issues Among Archaeologists

The table below summarizes the differences and similarities among previous researchers regarding the issues that have bearing on the archaeological easement and its configuration. It includes the new information discussed in Section 3.0 that address the site's antiquity. For the purposes of this discussion, the key issues are the site's integrity, its antiquity, and its importance under CEQA.

Researcher	*Integrity*	*Antiquity*	*Importance*
Wilcoxon	In some areas they might be truncated, but intact deposits exist under fill.	5500 – 7400 YBP based on artifact assemblage	Yes.
Rockwell	High degree of integrity, even under greens where area was truncated.	n/a	n/a
Van Horn	Integrity compromised via plowing and golf course construction; only area with integrity is what he terms the 'habitation deposit' and immediately surrounding area of denser chipped stone. He believes that the flakes and other chipped stone material on the slopes are the result of displacement by agricultural activities pre-golf course, and of golf course construction.	1450- 1950 YBP, based on assemblage and obsidian rind thicknesses; Meighan says 1166 – 1873 YBP	Yes, in area that is still intact.
Hoffman	Estimated cut and fill areas based on air photos, maps, and visual examination. Thinks more study should be done to define what is disturbed and what isn't.	n/a	n/a
Baca, (County Geologist)	Agrees with Hoffman's areas of cut and fill.	n/a	n/a
AE's analysis of combined Van Horn and Wilcoxon obsidian hydration data	Argues for single component site, which indicates that even truncated or disturbed deposits have the potential to contribute to research questions.	Greater than 5,500 years old.	Yes, all of site.

This table illustrates only the key issues on which researchers agree and disagree. While it would be easy to become enmeshed in debates of site function and/or seasonality, specific assemblage composition, and research issues of the site's place in the regional settlement system, these are not issues that are directly pertinent to the question of whether or not the archaeological easement, as currently configured, is reasonable.

This point was also made by Mr. Laurence Spanne, who was retained in 2004 by the landowner to review the previous work at SBA-1820, and to assess whether there was justification for changing the existing easement. Spanne reviewed the available documentation on the site, and summarized the major issues as follows: "While all of the previous investigators of SBA-1820 are in agreement that the archaeological site is significant under the criteria of the California Environmental Quality Act, there are differences concerning the definition of areas that retain sufficient integrity to contribute to the overall significance of the resource. In addition to (these questions), the age of the archaeological deposit...is still in dispute" (p. 1, par. 3, letter from Laurence Spanne to Richard Kentro dated June 10, 2004).

Both Van Horn and Wilcoxon indicated that data from the site had the ability to contribute to answering both specific and regional research questions. It seems clear that there is no argument among researchers about whether the undisturbed portions of SBA-1820 are important. In general terms, data from site areas that retain depositional integrity can be used to reliably answer many regional research questions. Data from portions of a site that lack integrity cannot usually be used, and thus any site sub-area that lacks integrity would not contribute to its importance under CEQA. The exception, however, is a site containing only a single occupational component. In this case, when a site has neither discrete occupational episodes nor vertical stratification in the artifact assemblage, then the data from a single site's assemblage can be used to answer many research questions. This is the case because questions of vertical or horizontal context are not critical to the overall patterning in the data.

Further, with regard to the site's antiquity, it is very important to note that no matter what the age of the site, its importance is determined primarily by its ability to yield data that will help answer established regional research questions. However, sites dating to the Early Period or the Early Holocene – as CA-SBA-1820 appears to be – are much less common than sites dating to the Middle and Late Periods. Consequently, much more is known about the Middle and Late Periods than the Early Period and the Early Holocene. Therefore, a site such as CA-SBA-1820 can take on additional significance because it contains data that can be used to address questions about these lesser-known periods.

5.0 Conclusions and Recommendations

All parties agree that the site is significant under CEQA. The key question is the amount of site remaining above the 510 foot contour that contains the site's significant qualities—Wilcoxon indicates that the entire portion of the site above the 510 contour is significant while Van Horn argues for a much smaller area. If Wilcoxon is correct, all of the site above the 510 foot contour should remain as an archaeological easement. If Van Horn is correct, removal of a portion of the easement would not adversely affect the site's significant qualities. The important issues regarding this question are (1) data potential and (2) site integrity. Without completing

additional archaeological studies to address these issues, it is necessary to rely on the data previously collected. Importantly, the existing data appear sufficient.

Data Potential

Within the archaeological easement, Wilcoxon completed eight 0.5 by 1 meter excavation units, five backhoe trenches for soil interpretations, and two backhoe trenches for presence/absence boundary delineation. These units were dispersed throughout the site area above the 510 contour, allowing examination of variability. Importantly, Wilcoxon's interpretations of integrity were aided by Rockwell's examinations of the soils. By comparison, Van Horn completed a single 2 by 2 meter excavation unit and 22 auger borings above the 510 contour.

Both Wilcoxon's and Van Horn's excavations above the 510 contour recovered substantial amounts of cultural remains. Wilcoxon found that densities of flaked stone from excavation units in this part of the site ranged between 800 and 1,775 per cubic meter; Van Horn found densities ranging between 137 and 1,914 per cubic meter. While formed tools appear to be relatively rare, Van Horn found that flake tools are common. Given the relatively high density and the presence of utilized flakes, Æ opines that the entire area within the archaeological easement as currently defined contains the data potentials that make the site significant.

Site Integrity

The remaining question, then, is the integrity of the archaeological deposit above the 510 contour. Wilcoxon's investigations included units that are dispersed throughout the area in question. Furthermore, these units were sufficiently large that profiles could be (and were) examined to address the issue of integrity. In addition, the profiles were examined by a qualified soil scientist. On the other hand, Van Horn excavated a single unit that would allow examination of profiles within the area above the 510 contour. Although Van Horn also excavated 22 augers, this method of excavation holds little utility for examinations of soil profiles or understanding of integrity. Compared to Wilcoxon's investigations, Van Horn's study also suffered from a lack of a qualified soil scientist. Based on the available data, it is Æ's opinion that the Wilcoxon study of integrity was more thorough and comprehensive. Consequently, it is most likely that Wilcoxon's and Rockwell's interpretation that intact archaeological deposits remain above the 510 contour is correct. Furthermore, even if Van Horn is correct and the area retains little integrity, the archaeological deposit appears to represent a single component. A disturbed single component archaeological deposit can still yield important scientific information.

In sum, it is Æ's opinion that the portion of CA-SBA-1820 above the 510 contour (i.e., the portion within the archaeological easement) contains important data potentials and retains sufficient integrity. Consequently, the deposit within the archaeological easement as currently defined is significant. We recommend that (1) development be excluded from the archaeological easement, or (2) archaeological data recovery (Phase 3) excavations be required to mitigate adverse effects if development is allowed to proceed within the easement.

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Attachment D:
Shadow Hills Project Chronology

Pre-1955 Agricultural activities at the site.

1955-83 San Marcos Golf Course (9-hole) at the site.

Mid-1980 Original case applications submitted (GPA, rezone, and PDP).

Nov 1980 Larry Wilcoxon prepared Phase I archaeological study for the EIR.

Feb 1981 Final EIR (80-EIR-46) certified.

Dec 1983 Wilcoxon conducted subsurface boundary definition. Site designated as SBA-1820.

Nov 1984 Wilcoxon conducted Phase II excavations to evaluate site significance. He determined that artifacts found onsite date to 7500-5400 years BP.

Mar 13, 1985 **Planning Commission** approved a revised Preliminary Development Plan and found that "Significant mitigation...has been accomplished through project redesign so that all of the archaeological site above the 510 contour line will be undisturbed and preserved."

Mar 1985 Director (Al McCurdy) letter after PC Hearing: "Significant mitigation of the project's archaeological impacts has been accomplished through project redesign so that all of the archaeological site above the 510 contour line will be undisturbed and preserved.

Sep 1985 David Van Horn performed an Auger Sampling Program at SBA-1820. This became the basis for his conclusion that the most significant surviving portion of the site is a small area between two former golf greens.

Sep 1985 Professor Michael Glassow (UCSB) letter to the Board discusses deficiencies in Van Horn's September 1985 auger testing program.

Sep 1985 Dianne Guzman letter to the Board discusses deficiencies in Van Horn's September 1985 auger testing program and urges the Board to uphold the PC decision.

Jan 27, 1986 **Board of Supervisors** approved the Tentative Tract Map and an Archaeological Easement for the area above the 510 contour.

Jan 1986 Tract Map conditions include an Archaeological Easement for the area above the 510 contour. Required 1% data recovery sample to mitigate impacts *outside* 510 contour (the Aug 1986 Van Horn study).

Aug 1986 David Van Horn conducted Phase III excavation approved by the County. He concluded that Wilcoxon's age estimate is about 3000 years too old and the significance of artifacts was exaggerated. He recommended reassessment of the area within the 510-foot contour.

Oct 1986 Glassow critiqued Van Horn's report, finding numerous problems, most importantly with Van Horn's estimate of site age. He said, "...SBA-1820

may be somewhere between 4500 and 5500 years old. So the site may not be quite as old as (Wilcoxon) thought, but it may not be anywhere near as young as you thought."

Nov 1986 Staff Report to PC: Applicant proposes two additional units within the Archaeological Easement, because the "sensitive" area is less than the total easement area. Staff recommended "no action" at this time.

Nov 19, 1986 **Planning Commission** approved the Final Development Plan (86-DP-45)

Jan 1987 Wilcoxon letter to Board defends against Clough's Nov 1986 letter and Van Horn's criticisms in his Aug 1986 report.

Jan 1987 Professor Clement Meighan (UCLA) letter to Applicant supports excavation of the site to end the controversy.

Mar 1987 In a letter to the Board, Tom Rockwell (geologist who contributed to Wilcoxon's Nov '84 Phase II report) contends that SBA-1820 is "largely undisturbed" and developers of the golf course "did not significantly modify the landscape at the site."

Mar 1987 In a memo to the Board, Stone argued against appeal of Archaeological Easement.

Mar 9, 1987 **Board of Supervisors** approved Final Development Plan, revising Condition 24 (removed site SBA-1855) and denying appeal of Condition 25.

May 1987 Applicant signed a Grant Deed of Development Rights (Archaeological Easement) for the area above the 510 contour.

Jun 1, 1987 **Board of Supervisors** approved Final Map, Tract 13,711.

Jun 16, 1987 **Board of Supervisors** accepted the Archaeological Easement Grant Deed.

1989 Shadow Hills was built with 51 units (53 units were approved).

Oct 2002 Applicant submitted an application for case processing (Shadow Hills Archaeological Easement Map Modification 02RMM-00000-00011).


ATTACHMENT E: SITE PLANS
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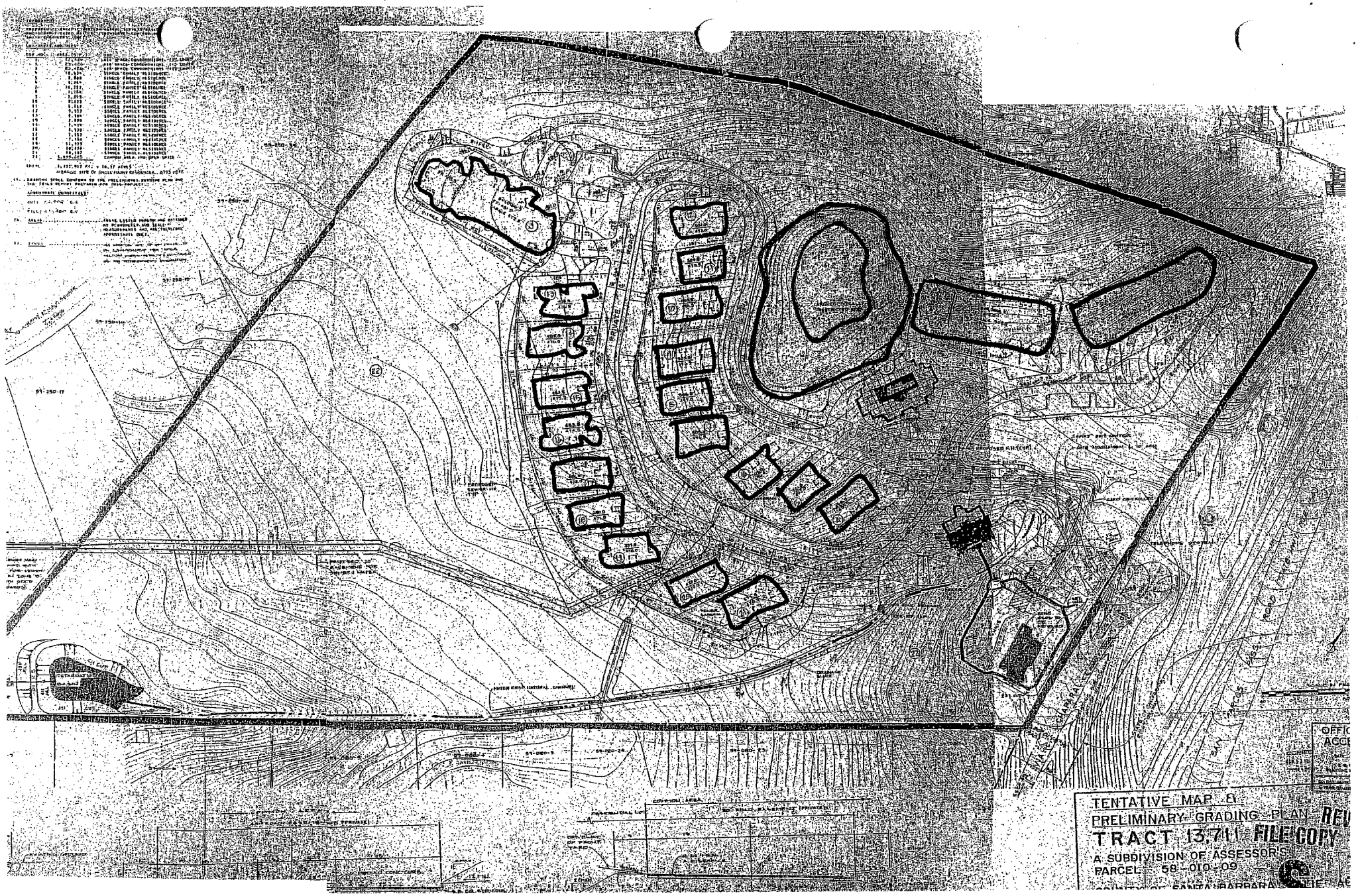

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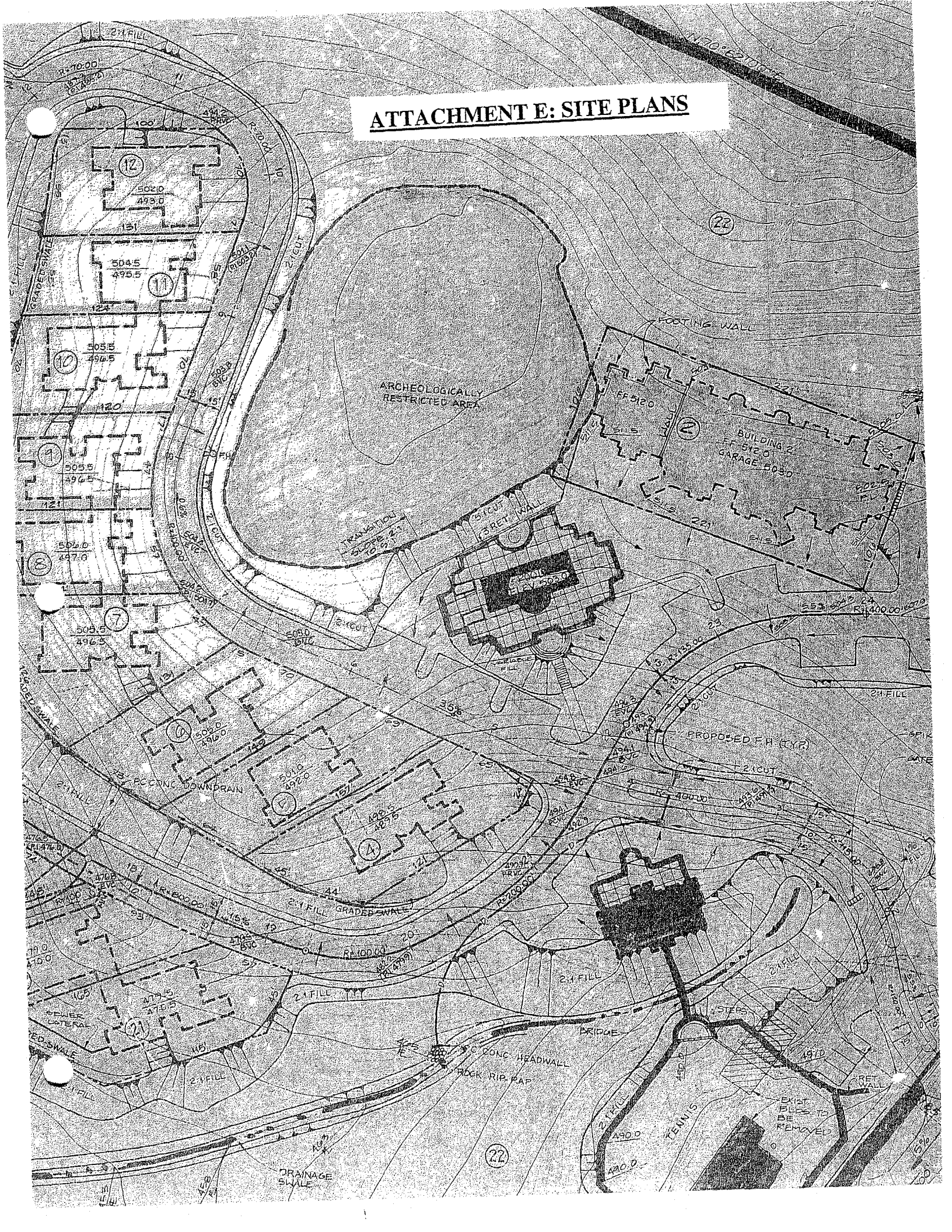

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