

1-1-1993

## An analysis of room use at Pueblo Blanco - LA 40 New Mexico : roomblock nine and roomblock sixteen

Tom Durkin

Follow this and additional works at: <https://huskiecommons.lib.niu.edu/studentengagement-honorscapstones>

---

### Recommended Citation

Durkin, Tom, "An analysis of room use at Pueblo Blanco - LA 40 New Mexico : roomblock nine and roomblock sixteen" (1993). *Honors Capstones*. 127.  
<https://huskiecommons.lib.niu.edu/studentengagement-honorscapstones/127>

This Dissertation/Thesis is brought to you for free and open access by the Undergraduate Research & Artistry at Huskie Commons. It has been accepted for inclusion in Honors Capstones by an authorized administrator of Huskie Commons. For more information, please contact [jschumacher@niu.edu](mailto:jschumacher@niu.edu).

NORTHERN ILLINOIS UNIVERSITY

An Analysis of Room Use  
at Pueblo Blanco - LA 40 New Mexico:  
Roomblock Nine and Roomblock Sixteen

A Thesis Submitted to the  
University Honors Program  
In Partial Fulfillment of the  
Requirements of the Baccalaureate Degree  
With Upper Division Honors  
Department of Anthropology

By  
Tom Durkin

DeKalb, Illinois  
December 1993

Student name: Tom Durkin

Approved by: Wilfred Creamer

Department of: Anthropology

Date: 4/30/93

HONORS THESIS ABSTRACT  
THESIS SUBMISSION FORM

AUTHOR: Tom Durkin

THESIS TITLE: An Analysis of Room Use at Pueblo Blanco - LA 40  
New Mexico: Roomblock Nine and Roomblock Sixteen

ADVISOR: Dr. W. Creamer

ADVISOR'S DEPT: Anthropology

DISCIPLINE: Archaeology

YEAR: 1993

PAGE LENGTH: 54

BIBLIOGRAPHY: Yes

ILLUSTRATED: Yes

PUBLISHED: No

LIST PUBLICATION:

COPIES AVAILABLE: Hard Copy

ABSTRACT:

The reconstruction of past behavioral patterns is one of the ultimate goals of Archaeologists. Ideally, these reconstructions would integrate isolated aspects of a past society into a series of interrelated behaviors which make up that society as a whole, thus furthering our understanding of culture in general.

This study attempts to reconstruct possible room uses for rooms excavated at the site of Pueblo Blanco during the 1992 field season. Based on a survey of room uses proposed by archaeologists working in the Southwest, a series of hypothetical room uses was constructed for Pueblo Blanco. These room uses included kivas, ceremonial rooms, storage rooms, work rooms, and habitation rooms. Field notes and an inventory of artifacts recovered from roomblocks nine and sixteen from Pueblo Blanco were studied, and an attempt was made to apply the hypothetical room uses to the excavated rooms. The only room uses identified from roomblocks nine and sixteen were habitation and storage rooms. Finally, an attempt was made to identify a range of activities for Pueblo Blanco. These activities included room construction, lithics working, ceramic production, food processing, agriculture, animal domestication, and hunting.

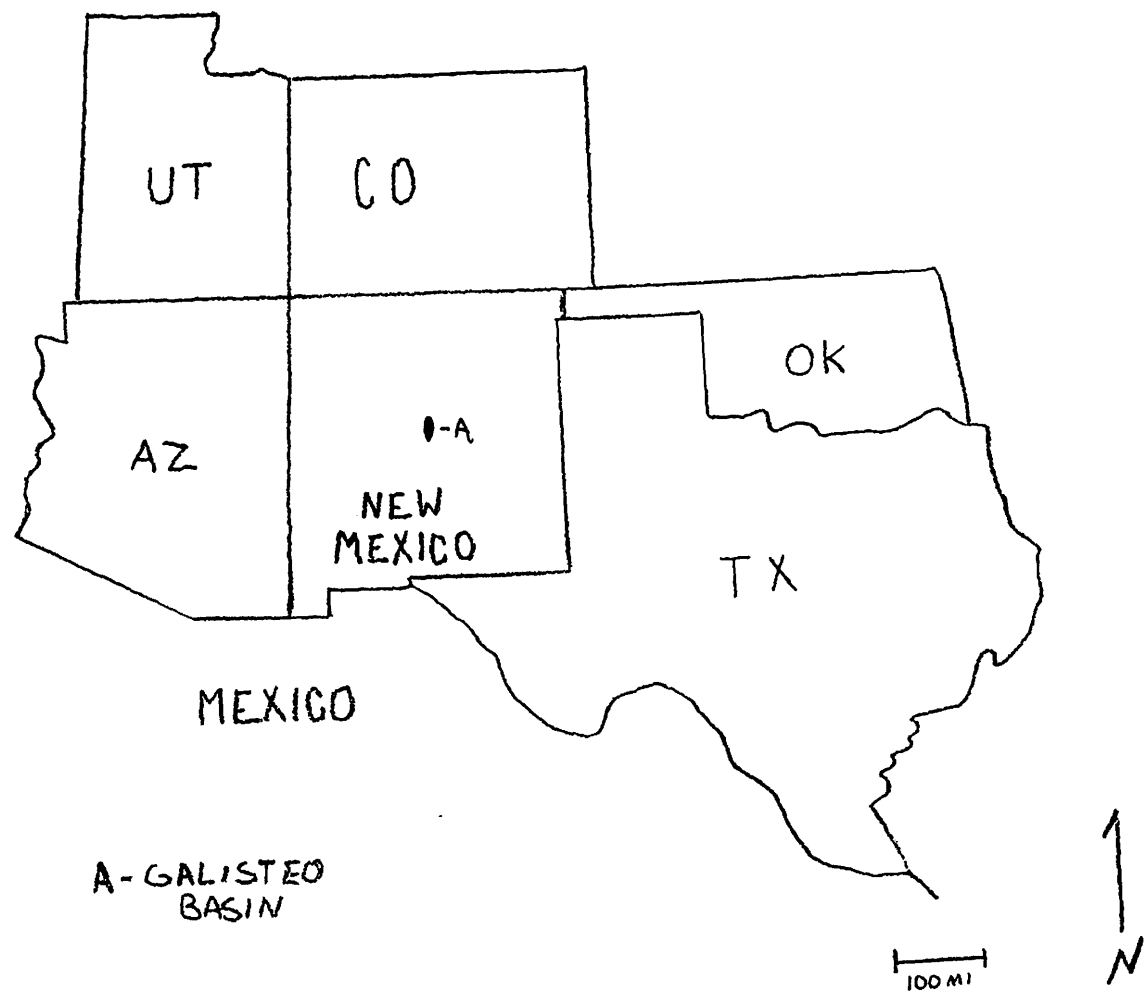
## Paper Outline

- I. Introduction
- II. Overview
  - A. Proto-history of pueblo society / P IV Period
  - B. History of Pueblo Blanco
  - C. Environment
    - 1. The Galisteo Basin
    - 2. Pueblo Blanco
- III. Summary of Methods Used By Various Archaeologists to Determine Room Use
- IV. My Criteria used in Determining Room Use at Pueblo Blanco
- V. The Room Uses
  - A. Presentation of the Evidence
    - 1. Features
    - 2. Artifacts
    - 3. Architecture
  - B. The Room Uses
- VI. Complete Inventory for RB 9 and RB 16
- VII. Social/Cultural Implications of Room Use at Pueblo Blanco
  - A. Range of Activities
  - B. Social Organization
  - C. Diet
  - D. Economy

## Part One: Introduction

One of the most important goals of archaeologists working today is to attempt to reconstruct past behavioral patterns from archaeological evidence. Hopefully, these reconstructions of past behavior will not only integrate isolated aspects of a past society, but perhaps explain how those behaviors fit into a series of interrelated behaviors making up that society as a whole. In the long run, this type of information could allow archaeologists and other anthropologists to understand human culture in general.

During the 1992 summer field season, archaeological excavations were undertaken at Pueblo Blanco (LA 40) in New Mexico by Dr. W. Creamer. These excavations recorded a sizable amount of information pertaining to Pueblo IV period (approx. 1300-1540) society in the Galisteo Basin of New Mexico. For example many artifacts, botanical samples, and soil samples were collected. In addition, maps and field notes recorded the work done at the site. Many interpretations of this information are possible. One informative and possibly valuable type of interpretation pertains to the uses of rooms at Pueblo Blanco. Through an analysis of this type, it might be possible to reconstruct a range of activities for the site, and therefore for the society in general. While some types of activities may not be specifically represented by the contents of rooms, some activities may be inferred. From the types of activities a society performs, other aspects of the society, such as social



A - GALISTEO  
BASIN

FROM BELK, 1969

organization, diet, or economy can be studied. The following pages of this report deal with possible reconstructions of room uses at Pueblo Blanco. In addition, an attempt will be made to demonstrate how these room uses were interrelated to other aspects of Pueblo IV society.



Part Two:  
The Proto-historic, Historic, and Environmental Background

Pueblo Blanco is located in the southwest corner of the Galisteo basin in New Mexico. This site has been dated through dendrochronology to have been occupied during the late 1400's and early 1500's. However it is probable that the site was occupied before and after this time. This date range, the artifacts and architecture place Pueblo Blanco within the Pueblo IV period (1300-1540). This was the final period in the Southwest before contact with Europeans.

Generally, the P IV period was characterized by large aggregated pueblo villages, many of 1000 rooms or more. These villages seem to have grown up in areas not formerly occupied by pueblo people, and many seem to have been abandoned quickly. In New Mexico, the new population may have expanded from the west. (Cordell, 328-334)

The architecture of the P IV period was, in general, single to multiple story rectangular room pueblos arranged in large groups called room blocks. However, the construction techniques were somewhat variable, especially in the Rio Grande region (including the Galisteo basin). Some sites had puddled adobe walls, and others had masonry walls. At Pueblo Blanco the room walls were of both adobe and masonry. Kivas, known from earlier periods, were still an important architectural feature as a ceremonial room. However, some pueblos were without kivas. (Cordell, 331-332) In the Rio Grande river area, glazeware ceramics were first made. These pots may have been copies of the

St. John's or Hesotauthla design types, but the glaze was a new technological development. These glazes were true vitrified glazes made of copper, lead, zinc, magnesium, or other metallic elements. (Cordell, 337-341) At Pueblo Blanco many glazeware sherds were found.

Based on ethnography and archaeological data, some hypothesisists about P IV period society and social organization have been constructed. It has been inferred from kiva murals and rock art that P IV religion was centered on the kachina cult known from ethnographies of later times. The social organization to the P IV period is somewhat controversial. Some who have studied this topic believe that Pueblo IV society was similar to the tribal basis known from the later historic pueblos. Others believe that P IV society was strongly hierarchical, but that this aspect of pueblo society was destroyed by invading Europeans. (Cordell, 345-346)

Pueblo IV period people were agriculturalists. They grew a combination of corn, beans, and squash. In addition, wild plant foods were often collected. (Wetterstrom, 11-15) At Pueblo Blanco, corn cobs, grinding tools (manos and metates), a bean, and pinon nuts were found. The use of squash must be inferred because so far this plant has not been identified from the soil samples. In addition to plant foods, P IV people ate meat. Mule deer and turkey were common animal foods. (Wetterstrom, 30-32) Remains including bones and egg shells from these animals have been found at Pueblo Blanco.

The archaeology of the Southwest is unique when compared to

much of North America because there are very early accounts of the native inhabitants which were written during the travels of Spanish explorers, missionaries, and others. Some of these accounts may have described known archaeological sites. Therefore, these accounts have been valuable in the attempt to reconstruct occupation dates for sites or other aspects of Native American society in the Southwest.

Probably the earliest explorer to enter the Galisteo basin area was Francisco Coronado. His exploration group entered New Mexico about 1540. An important fact about Coronado's travels was that many of the accounts were written by a man by the name of Casteneda after the group had returned to New Spain (Mexico). Other important information about the Coronado expedition came from letters written by Coronado, and letters written by others in Coronado's group. (Nelson, 12-13)

When Coronado entered the Galisteo region, he set up a temporary base camp at a place along the Rio Grande River. This camp is thought to be in approximately the same location as the modern town of Bernadillo. Coronado periodically traveled between this camp and a pueblo referred to by Coronado as Cicyue (Probably Pecos Pueblo). The location of these two places, taking into account the distance and topography of different routes possible between them, makes a path through the Galisteo Basin most probable. However, the exact route through the Galisteo Basin is not known because the written accounts are somewhat vague on this topic. This is an important problem because the Galisteo basin is so large and because the accounts

do describe prehistoric pueblo ruins. (Nelson, 14,17)

In the accounts of Castenada, several pueblo sites were noted which Coronado's group encountered while traveling the route to Pecos. One pueblo was described as "small and strong", a second as partially destroyed, and a third as totally destroyed. (Nelson, 14) If Castenada's descriptions coincide with the order in which the pueblos were encountered, then the third pueblo encountered could conceivably be Pueblo Blanco. (Nelson, 20) However, because the route necessary for Coronado to have passed by Pueblo Blanco was longer had rougher terrain and because there were an absence of "large stone balls" at the site as described by Castenada, Nels Nelson (see below) felt that the totally destroyed pueblo was not Pueblo Blanco. Pueblo San Lazaro, another pueblo studied by Nelson, was in the line of a more favorable route which passed far to the north of Pueblo Blanco. In addition, large stone balls had been found at San Lazaro. Therefor, Nelson felt that the pueblo referred to was San Lazaro. However, this interpretation is still debatable. (Nelson, 20)

Other explorers later entered the Galisteo region. Captain Chamuscado, Friar Rodreguez, and two other friars entered the Galisteo region in 1581. The friars were left behind and one year later Antonio de Espejo traveled into the region from Mexico to rescue the friars. Unfortunately, all three had been killed. Neither of these groups probably visited Pueblo Blanco. (Nelson, 20) Castano de Sosa entered the Galisteo Basin in 1590. He definitely visited Pecos Pueblo, and probably visited Pueblo

Galisteo and Pueblo San Cristobal. However, he is not thought to have visited Pueblo Blanco. (Nelson, 24)

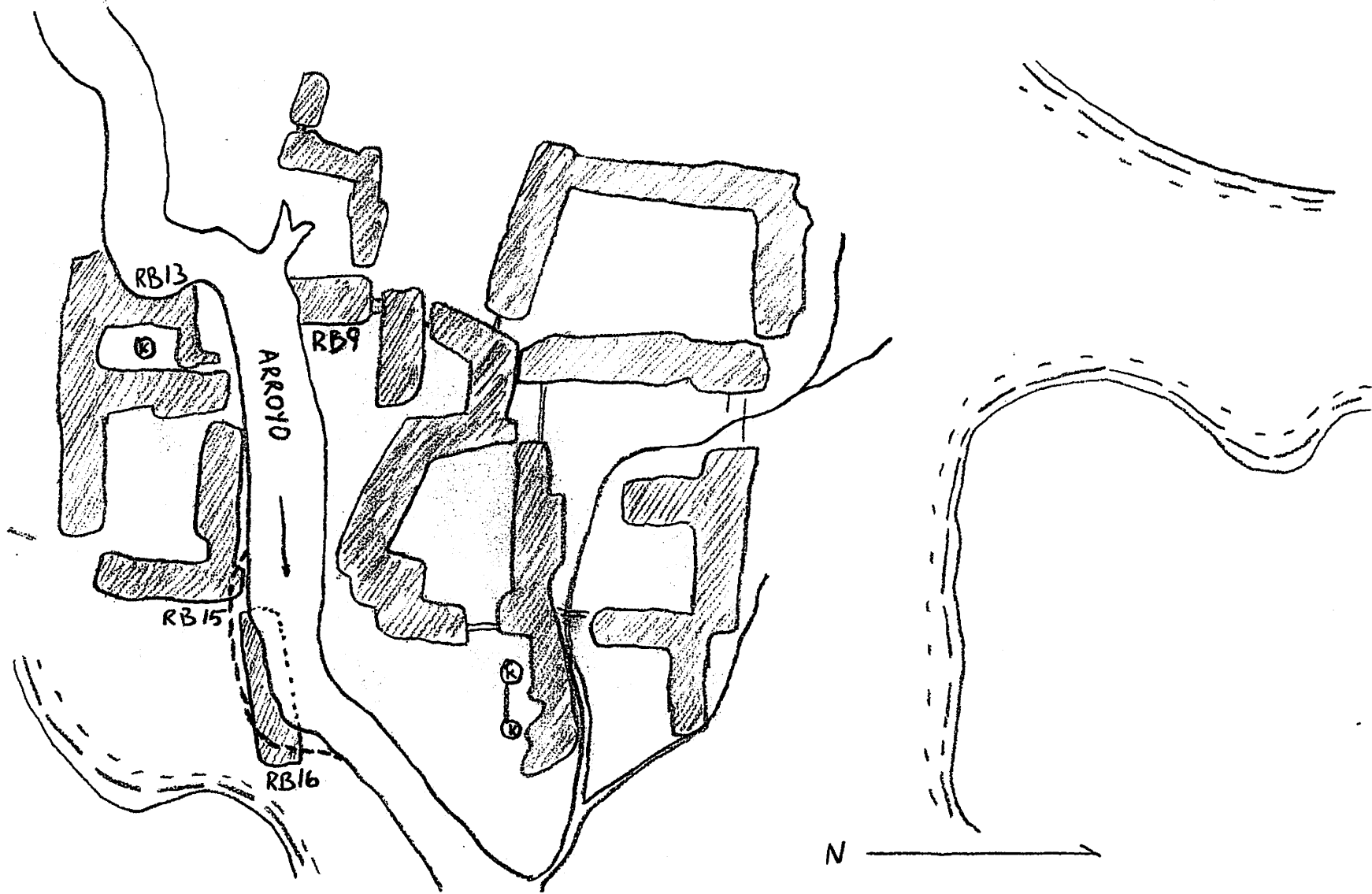
The first anthropologist/archaeologist to have visited the site was Adolff Bandelier. He traveled the American South West in the 1880's and recorded much information about sites in the Galisteo Basin. In 1882 Bandelier visited the site of Pueblo Blanco (which he referred to as Pueblo Largo), and described what he saw, but made no attempts to excavate the site. Bandelier recorded several distinctive features of the site which have survived to varying degrees. He described an arroyo which ran through the site, five kivas (ceremonial rooms) in the plazas, and curious parallel lines of stones in the plazas. (Nelson, 85, 87-88)

Nels Nelson, another well known archaeologist visited and excavated at the site of Pueblo Blanco in 1914. According to Nelson's estimates there were 16 roomblocks (apartment-like groupings of rooms) and 1450 total ground-floor rooms in the room blocks at the site. Nelson estimated that with additional upper floor rooms comparable to other pueblos, there may have been more than 2000 rooms at Pueblo Blanco. (Nelson, 86) However, according to Nelson the entire site was probably not constructed at once. A more likely interpretation of the site is that the roomblocks represent a series of successive building events. Nelson excavated a total of 47 rooms from all of the roomblocks identified at the site. (Nelson, 87, 93-94) He recorded in his notes that 96 quarts of sherds, 2 human skeletons, and 139 artifacts were catalogued from the site to be shipped back to the

American Museum of Natural history. In addition, Nelson noted such things as doors, hearths, and the types of artifacts found in each room. Nelson also noted that a shrine was excavated in one of the rooms. (Personal notes of Nels Nelson)

Nelson also recorded other types of information about the site. He located two large reservoirs at the site, one lay to the north about 200 feet, and another lay to the south about 400 yards. Nelson noted that small basins in the rocky escarpment to the east of the site may have been enlarged to hold water, and that small dams seem to have been erected across the openings to the plazas for the same purpose. Nelson located few refuse heaps, a fact he felt was strange for a pueblo of this size. (Nelson, 88-89) Of the features referred to by Bandelier, only two kivas remained, and the parallel lines of stones were totally obliterated. (Nelson, 87-88) However, the arroyo remained and still remains. In fact, the arroyo has been a source of major damage to the site.

In the summer of 1992, Dr. W. Creamer headed a new excavation at Pueblo Blanco. This is the first excavation done on the site since 1914. The project was executed through Northern Illinois University and the Field Museum of Natural History, Chicago. The excavations were made possible through the permission of the State Land Office in New Mexico, because the site is on state owned land. As part of the permit agreement, the excavations at Pueblo Blanco were in areas most in danger of being eroded further into the arroyo running through the site. This is an important activity because maps drawn by Nelson show



(K) - KIVA

/// - ROOM BLOCKS (RB)

--- - EROSION 1992

.... - EROSION 1414

--- - ESCARPMENT

PUEBLO  
BLANCO

FROM NELSON, 1914

considerably less erosion of the arroyo banks than exists today. This erosion is especially prevalent in Roomblock 16.

Dr. Creamer's research has focused on the protohistorical or Pueblo IV period in Southwestern pueblo sites. Using excavated material from these sites a reconstruction of pre-contact pueblo demographics is being created to explain the nature of the contact period between Europeans and Native Americans in the South West. This includes the effects of disease and the patterns of site abandonment during periods of fluctuation in population levels. Archaeology has been an important component of this research as a result of an absence of documentation about pre-contact pueblo society.

Under the direction of Dr. Creamer, the field crew excavated a total of 12 rooms at Pueblo Blanco. The room blocks (RB) excavated included RB 9, RB 13, RB 15, and RB 16. As a result of the arroyo's erosional effects all but one of the twelve rooms excavated were incomplete to varying degrees. In addition to the excavations, an extensive surface collection was made from transects set up on all of the identified room blocks. (Hamlen, 1993)

The excavations performed at Pueblo Blanco in 1992 followed accepted field methods. Excavation progressed in 15 centimeter levels after the surface of the room was cleared and bisected. After reaching the floor, the second half of the room was excavated in the natural stratigraphic layers revealed in the profile wall. All soil was screened, and the artifacts were bagged and provenienced by site, roomblock, room, number, and



level/layer. The materials were inventoried after they had been transported back to the site. The materials collected were generally separated according to the categories of ground stone, cultural material (sherds, lithics, shell etc.), botanical remains, faunal remains, pollen samples, soil samples, and tree ring samples. Level, layer, and feature forms along with plan and profile maps, were utilized to record the progression of the excavation. Each field crew worker was also required to maintain a journal as a record of their personal actions at the site and interpretation of the evidence. After the excavations were completed all the excavated rooms were drawn on maps using a plane table and alidade.

The environment of the Galisteo basin is generally very dry, receiving the majority of its precipitation in the summer. The vegetation of the basin ranged from gramma/galleta grass in the dryer valley bottom to thicker vegetation of pinion pine, juniper, sage, and scattered douglas fir in the somewhat moister uplands at the basin's margins. This is an area primarily used for animal grazing today. (Morain, 1977)

Pueblo Blanco is located in the southwest corner of the Galisteo basin in an upland region and has the characteristic vegetation listed above. In addition to these plants, cholla cactus grew on the disturbed areas in and around the site. The animals which were seen in and around the site included mule deer, pronghorn antelope, jackrabbits, rattle snakes, lizards, and various birds. According to a geological survey done on the site, Pueblo Blanco is located between resistant outcroppings of

Mesa Verde sandstone (which provided building material), and over sediments deposited on easily erodible Mancos shale. The sediments under the site were apparently alluvial (stream deposited) deposits of a now stable flood plain. The soils of the site indicated a relatively (for the region) moist climate which allowed an enriched organic layer to be created(Meyer,1-4)

Part Three:  
Summary of Methods Used by Various Archaeologists  
and Ethnographers to Determine Room Use

The following section summarizes numerous methods and criteria judged valid and used by archaeologists in the determination of room use at pueblo sites in the American Southwest. The purpose of this section is to compensate for certain deficiencies in the amount of data collected from Pueblo Blanco and used within this analysis. In order to correctly study room use at a pueblo site such as Pueblo Blanco it would be necessary to excavate and study many rooms. However, only 12 rooms were excavated at the site in 1992, and only three rooms are being used for the current study. These rooms include room number one from roomblock nine (RB 9, RM 1), RB 16 RM 4, and RB 16 RM 5. It is hoped that, through a survey of the following material a basic and general model of room use can be constructed and applied to the available rooms. In other words, this study will essentially work by analogy, and it should be kept in mind that complex factors of a site such as room use may not be completely related from one site to another.

Stanley Stubbs and W. S. Stallings did excavations at Pindi Pueblo, New Mexico in 1932-1933 as part of a WPA project. It is thought that this site dates to approximately 1300 AD. (Stubbs, vii) They differentiated room uses into several groups according to various criteria. Basically, they separated rooms into temporary structures, habitation rooms, kiva like rooms, kivas, and turkey pens. Temporary structures were made of poles and interwoven sticks, and covered with a layer of adobe. Some of the

temporary structures had hearths. Habitation rooms had fire pits, cysts, and artifacts related to domestic life, such as pottery, stone tools, and grinding tools. Kiva-like rooms had some but not all of the aspects of kivas, such as hearths, ash pits, ventilators, and small round vents. These rooms tended to be larger than other rooms but smaller than kivas. Kivas were circular and subterranean or D-shaped and above ground. Kivas also tended to have vents and hearths. The walls were held up with upright poles and covered with adobe and plaster. Kiva floors were frequently stone-lined. Turkey pens were stick structures and contained remains of turkey dung and egg shells. (Stubbs, 24-39)

Fred Wendorf organized and partially wrote the report about excavations in the Chama valley done in 1951-1952. Part of the excavations were done at a site called Te'ewi (LA 253) in New Mexico. This pueblo was possibly occupied from the 1200's to the 1500's AD. (Wendorf, 62) Wendorf separated room uses at the site into habitation, storage, kiva-like, and kiva rooms. Habitation rooms had hearths and other floor features and tended to be on upper floors. Storage rooms tended to have no floor features and were commonly on lower floors. Kiva-like rooms had fire pits, ventilators, and deflectors. Kivas had slab-lined fire pits, ventilators, deflectors, sipapus, floor cysts, wall niches, "loom holes", post holes, and wall paintings. In general, kivas were circular and subterranean. (Wendorf, 45-50)

Marjorie F. Lambert wrote a report about excavations done at Paa-ko Pueblo (LA 162) in New Mexico from 1935-1937. Lambert

personally supervised excavations at this site in 1936. Paa-ko was first occupied in the early 1300's AD and continued to be occupied into the historical period. Lambert classified rooms at Paa-ko into store rooms living/work rooms, and ceremonial rooms. Store rooms had no floor features, and usually no plaster or doors. Living/work rooms had floor features such as hearths and bins and usually had doors and plaster. Ceremonial rooms were kivas. (See Stubbs and Wendorf above) (Lambert, 11)

James Hill wrote a report about Broken K Pueblo in which he described room use. Broken K is located in Arizona and was excavated in 1962-1963. This site has been dated to approximately 1150-1280 AD. (Hill, 7) Hill separated rooms into three groups: habitation rooms, storage rooms, and Kivas. Habitation rooms were large, had slab lined fire pits, mealing bins, ventilators, and the majority of the recovered artifacts (pottery, stone tools, flakes, and other artifacts). Habitation rooms also had most of the food garbage remains (both flora and fauna). Storage rooms were smallest, lacked any features in general and had small amounts of artifacts. Kivas were ceremonial and were of about the same size as habitation rooms. However, kivas had significantly less artifacts than habitation rooms. (See Stubbs and Wendorf for kiva description). In general, Hill noted that the distinctions between rooms aren't always clear cut. (Hill, 37-46)

Dean J. Saitta studied the Pettit site in New Mexico which was excavated between 1972-1976. The Pettit site was a 154 room pueblo dated to 1190 to 1250 AD. Saitta's study covered 67 of the rooms. (Saitta, 385) Saitta created a five part room typology

including habitation, storage, manufacturing, limited activity, and kiva rooms. Habitation rooms had hearths, ash/roasting pits, bins, utilitarian artifacts (grinding tools, stone tools, pottery, etc.), doors, and niches. Saitta noted that some habitation rooms had manufacturing debris, and variable floor construction. Storage rooms lacked floor features, were connected to habitation rooms, and occurred with the same frequency as habitation rooms. Manufacturing rooms had a set size (5.72 square meters), and had greater amounts of worked raw material debris. Tools were found under construction. Limited activity rooms had limited kiva-like features including ventilators, central hearths, and deflectors. These rooms commonly had few artifacts. Kivas at this site were circular or D-shaped, and, in addition to the features listed above (in Wendorf), the kivas had benches, altars, and stone floors. Two burials were found in kivas at the Pettit site. In order of size, the storage and work rooms were smallest, habitation rooms were next largest, limited use rooms were second to largest, and kivas were largest. (Saitta, 392-401)

Julie C. Lowell studied Turkey Creek Pueblo, a 13th century pueblo located in Arizona. This pueblo had 335 rooms and 314 were excavated in the 1950's. Lowell identified three general room types: storage, habitation, and miscellaneous activity rooms. (kivas were left out of the room use study because they are easily identified and their use was primarily religious). Storage rooms were small, had roof hatches, lacked floor features, and lacked domestic artifacts in general (pottery, stone tools, etc.). Storage rooms made up about 52% of the total rooms.

Habitation rooms were the largest, had square slab-lined hearths, roof hatches, plaster on the walls, post holes, and occasional burials. Habitation rooms were generally the most square shaped, had high quantities of domestic artifacts, and made up about 18% of the total rooms. Miscellaneous activity rooms were mid-sized, had circular hearths, post holes, burials, roof hatches, and domestic artifacts. Miscellaneous activity rooms made up about 30% of the total rooms. (Lowell, 87-92)

Alan P. Sullivan III studied room function at Grasshopper Pueblo. This site is located in Arizona and was occupied between 1300 and 1400 AD. (Ried, 687) Using a statistical method of analysis, Sullivan established that room size was perhaps the best indicator of original room function. Room size also seemed to correlate closely with roofing material. Sullivan found that large rooms had pinion pine roofs and were usually habitation rooms. Small rooms were roofed with juniper and were usually storage rooms. (Sullivan, 95-98)

J. Jefferson Ried and Stephanie M. Whittlesey also studied Grasshopper Pueblo from reports of excavations done from 1973 to 1982. Of the 95 excavated rooms, 64 rooms fit well into their room typology. (Ried, 687-690) This typology consisted of 9 functional room types: specialized habitation, generalized habitation, storage, storage/manufacturing, manufacturing, limited activity-food processing, limited activity-manufacturing, ceremonial, and kiva rooms. Specialized habitation rooms were used for food processing, had slab lined hearths, mealing bins, pottery, miscellaneous tools, and had little storage area beyond

small stone bins. Generalized habitation rooms were similar to the specific habitation rooms, but more storage space and raw materials were present. Storage rooms had stored food or tools and large numbers of pots. These rooms usually had no floor features or domestic tools and were the most abundant type. Storage/manufacturing rooms had many pots or stored implements and had stored raw materials. These rooms had no floor features and were somewhat larger than storage rooms. Manufacturing rooms had no storage or habitation materials but had abundant refuse from worked raw materials (such as flakes). Limited activity-food processing rooms were very small and only used for cooking or grinding corn. Limited activity-manufacturing rooms had small amounts of manufacturing refuse. Ceremonial rooms had circular slab hearths, ash boxes, but lacked other kiva-like features. Kivas had the features of ceremonial rooms, little habitation or storage debris and had the general kiva features listed under Wendorf(above).(Ried, 692-697) Ried estimated that the average household size was 2-3 rooms.(Ried, 694)

W.W. Hill produced an ethnography of Santa Clara Pueblo located in New Mexico. In his chapter on material culture, Hill listed several observed room functions. These functions included kitchens, living/entertainment, storage, and bed/guest rooms. This pueblo was several stories high and each family had about two rooms (over three was rare).(Hill, 73-74)

Julia Jorgensen studied room use at Table Rock Pueblo in Arizona. This pueblo had 42 rooms and was occupied between 1300-1450 AD. Jorgensen constructed a room use typology based on the



following categories: living rooms, storage rooms, ceremonial rooms, and special use rooms. Living rooms were of medium size, had the widest variety of cultural artifacts (ceramics, stone tools, food remains), hearths, and some manufacturing and food processing tools. Storage rooms were small, had few cultural artifacts, few floor features, and little manufacturing debris but occasionally had storage bins and remains of stored materials such as food. Ceremonial rooms were largest, had limited manufacturing debris, and had the characteristics associated with kivas (see Wendorf above). Special use rooms were focused on agricultural activities, hunting activities, house construction, or quarrying activities, possibly in a storage or maintenance type of use. Jorgensen noted that many of the room uses blended into each other. (Jorgensen, 158-160)

E. Charles Adams studied room use at the living Hopi town of Walapi in 1975-1977. This study was applied to an archaeological site, the 17th century Zuni town of Hamikuk. This was a 103 room pueblo, and 97 rooms were excavated. (Adams, 44-48) From his studies, Adams created a six part typology. The room uses he listed are as follows: storage, religious storage, granary, habitation, piki house, and non-kiva religious rooms. True kivas are excluded because their structure and function are easily identifiable. Storage rooms had no fire pit, were located on the first floor, had small top or side entries, had no windows, and held food or less-used tool remains. Religious storage rooms were similar to storage rooms but held religious implements. Granaries were similar to storage rooms but only held food remains.

Habitation rooms were on the top floor, had fire pits, large doors, grinding bins, and other domestic artifacts (ceramics, stone tools, etc.). Piki houses had an oven complex with oven, chimneys, ash pits, pot rests, pots and piki stones. Piki rooms were heavily soot-blackened. Religious non-kiva rooms were large rooms, had fire pits, loom holes, and were somewhat habitation-like. (Adams, 49) Adams added that habitation rooms were second largest, and that storage rooms were smallest. The rooms were grouped according to 2-3 storage rooms per habitation room. (Adams, 51)

Part Four:  
The Room Uses and Associated Criteria Chosen for this Study

After reading the data and opinions presented in studies done on room use, several potential room uses and likely criteria can be suggested for Pueblo Blanco. Generally, room uses could be separated into two large groups: specific use rooms and general use rooms. Specific use rooms could include kivas, storage rooms, and work rooms. General use rooms could include less formal ceremonial rooms, and habitation rooms.

Kivas would possibly have all or some of the following characteristics: they would be the largest rooms, circular or D-shaped, and commonly subterranean. They could have vent shafts, deflectors, hearths, adobe or stone walls, and plastered walls. Other potential characteristics could be sipapus, benches, post holes, and religious objects.

Storage rooms would most likely have some or all of the following characteristics: they would commonly be on the ground floor, they would be small rooms, and would likely have no outside doors or windows. Other features of storage rooms could be an absence of hearths, floor pits, and less domestic type artifacts. Store rooms could have the remains of stored materials.

Work rooms could have some or all of the following characteristics: they would possibly be mid- to small-sized and hold refuse, raw materials, and tools from manufacturing. Some work rooms might be differentiated by specific function, such as lithic working, ceramics production, maize grinding, or cooking

## The Room Uses and Their Associated Criteria

### Kivas

Largest  
Circular/D-Shaped  
Subterranean \*  
Vents  
Deflectors  
Hearths  
Adobe/Stone Walls  
Plaster  
Sipapu \*  
Benches \*  
Postholes \*

### Storage

Ground Floor  
Small  
No Windows/Outside Doors  
No Hearths/Floor Pits  
Less Domestic Artifacts  
Stored Materials \*

### Work Rooms

Mid/Small Sized  
Manufacturing Refuse  
Manufacturing Raw Materials/Tools  
Differentiated by Function \*  
(lithics/grinding/ceramics/cooking)

### Ceremonial Rooms

Largest(non kiva)  
Plaster  
Soot Blackened  
Some Kiva Features  
(Vents/hearths/deflectors)  
Religious Objects \*

### Habitation Rooms

Third Largest  
Common On Second Story  
Plaster \*  
Soot Blackening \*  
Hearths  
Storage/Garbage Pits \*  
Many Domestic Artifacts  
(flaked stone tools/hammerstones/  
ceramics/manos/metates/awls)  
Food Refuse (flora/fauna)

\* These features are variable or less common.

rooms.

Ceremonial rooms could have some or all of the following characteristics: they would probably be largest of the non-kiva rooms, they might have plastered walls, and could have soot blackening. These rooms would have some, but not all, of the kiva features. For example, they might have ventilators, hearths, and deflectors. Religious items or domestic artifacts might be found within these rooms.

Habitation rooms could have some or all of the following characteristics: they would be the third largest room, below ceremonial rooms, but above storage and work rooms. Habitation rooms would be more common on the second story. Habitation rooms also might have plastered walls, hearths, storage pits, garbage pits, soot blackening, and a full range of domestic artifacts and food refuse. The artifacts could include flaked stone tools and hammerstones, ceramics, manos, metates, and awls. The food refuse could include both floral and faunal refuse.

An important point to make about these room uses is that they are totally arbitrary. These room uses and their associated criteria are wholly based on a survey of studies done by other archaeologists and ethnographers, and therefore may not apply completely to Pueblo Blanco. This point is especially important when the small data size of this study is considered (only three rooms). Therefore, the rooms in the following analysis may only partially apply to the above criteria.

Part Five:  
The Uses of Rooms in RB 16 and RB 9

An application of the above listed room uses requires that archaeological data be studied. This data is in the form of artifacts, botanical samples and room features recorded in field notes from the 1992 field season. The presentation of this evidence in the form of an inventory and lists of room features will be most effective for this purpose. However, two important points should be made at this time. First, the artifacts excavated from the rooms were not all deposited in the room at the same time. These artifacts represent a series of depositional events. In order to separate these artifacts, an interpretation of the natural layers will be included. This interpretation will be based on a correlation of these natural layers and the excavated artificial levels. Levels were excavated to depths of 15 cm. each. Second, none of the rooms excavated in 1992 and included in this study were actually complete rooms. This is as a result of erosion into the arroyo. This is a point which has tended to confuse the process of assigning rooms to a particular room use. In addition to the actual excavated rooms, an attempt will be made to interpret the possible use of any former upper story rooms. This will be purely speculation but is helpful in determining the full range of prehistoric activities present at the site.

Roomblock 9 Room 1 contained a variety of artifacts and features. Natural layers and artificial levels can never be totally correlated to one another. However, in general, the

## Correlation of Natural Layers to Levels

### Roomblock 9 Room 1

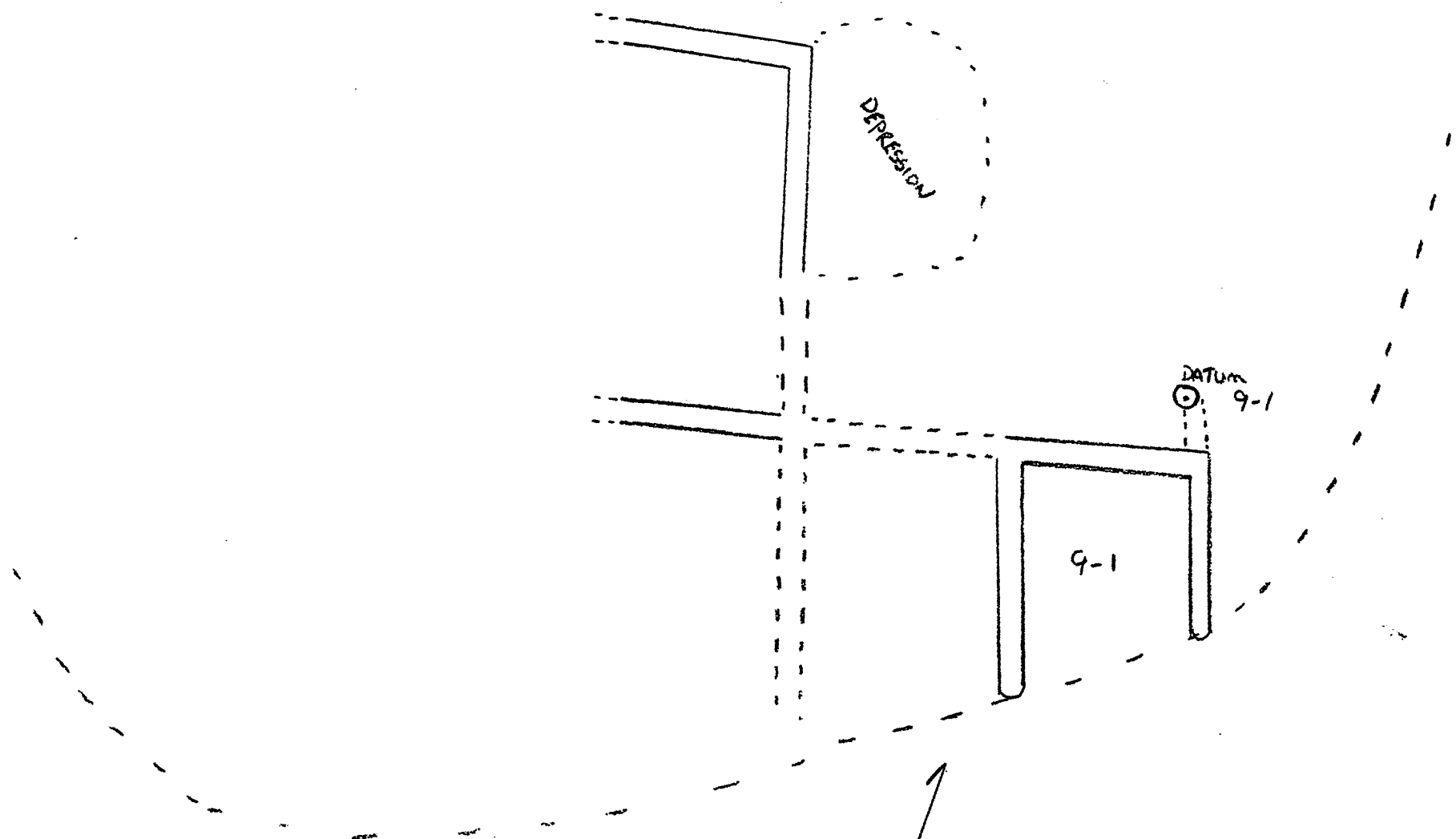
Layer I	Surface level
Layer II	Levels 1/2/3
Layer III	Levels 4/5

### Roomblock 16 Room 4

Layer I	Surface Level and Levels 1/2
Layer II	Levels 3/4/5
Layer III	Level 6

### Roomblock 16 Room 5

Layer I	Levels 1/2/3/4
Layer II	Levels 5/6/7
Layer III	Levels 8/9


$$\nearrow$$


PUEBLO BLANCO LA 40  
ROOM BLOCK 9 ROOM 1  
PLANE TABLE MAP



surface level and layer I correlate. Levels 1, 2, and 3 correlate to layer II, and levels 4 and 5 correlate to layer III (See diagram).

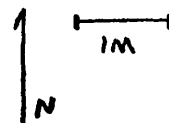
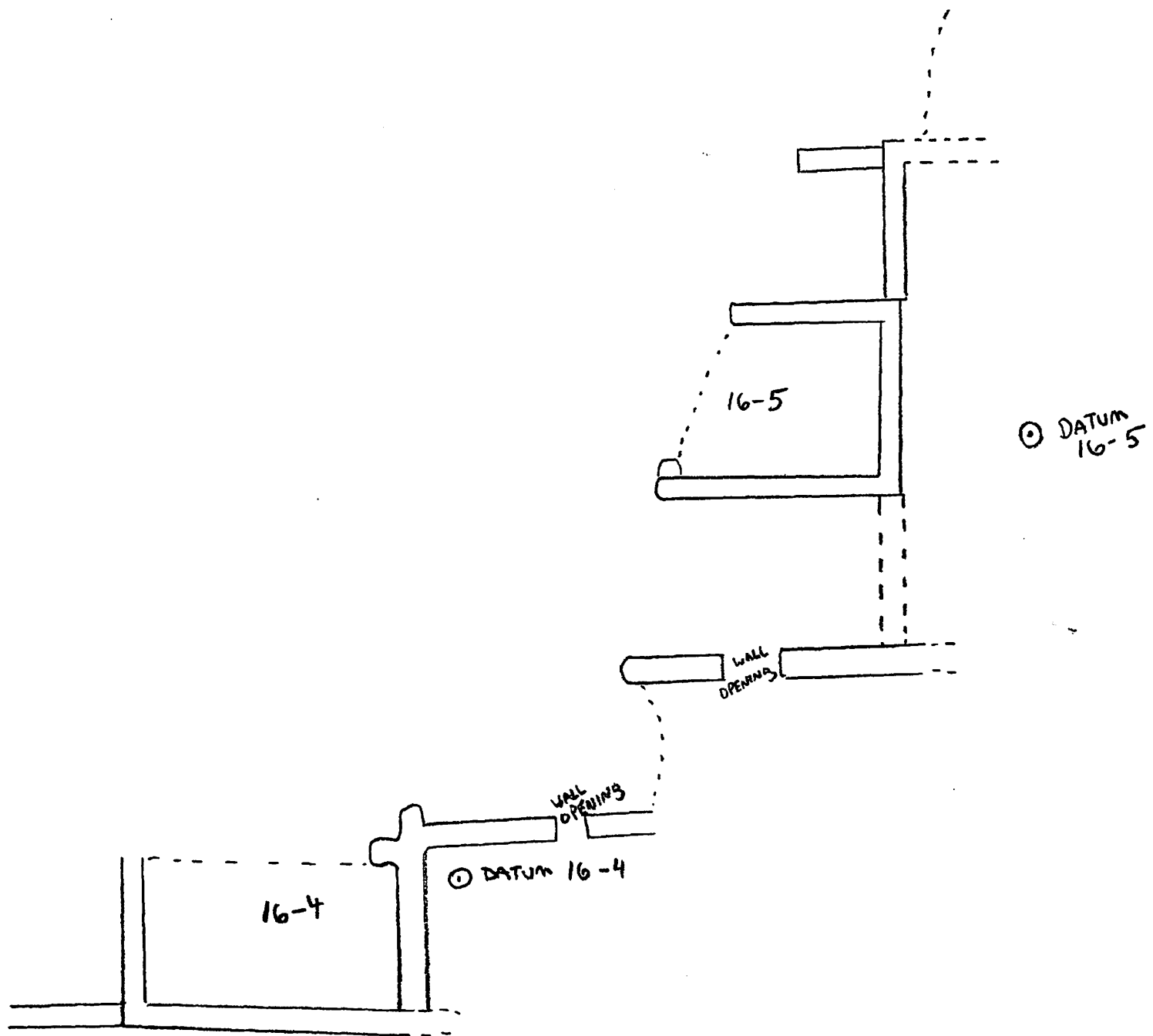
Luckily, when this room was excavated, artifacts were found in direct contact with the floor. These artifacts are listed as part of layer III or level 5 (see inventory). An interpretation of layer III and levels 4 and 5 demonstrates that this material was deposited after the room had been abandoned and cleared of any portable or useful artifacts. The artifacts found on the floor were broken and easily replaced domestic artifacts. For example, a hammerstone and blackware sherds were found on the floor. Food refuse, such as bone, charcoal, and pinion nut shells, were also found on the floor. In addition, a hearth feature was found on the floor. The soil in this level was primarily wind-blown and contained adobe chunks, roof beams, charcoal, and domestic-type artifacts from the upper floor.

Layer II and levels 1/2/3 were characterized by abundant domestic-type artifacts, such as manos, metates, and sherds. Food refuse (corn cobs, pinion nuts, and bones), charcoal, adobe chunks, and wall-fall were also present. This layer perhaps represented the wholesale collapse of the upper floor room at some time after the accumulation of the lower level. Layer I and the surface level were the final materials to be deposited. This layer perhaps represented trash deposits created by pueblo people of nearby roomblocks. While this layer had abundant domestic artifacts, they do not likely relate to room use in this room or the upper floor.

Based on the above evidence from layer III, levels 4 and 5, the floor, and especially the hearth feature, the lower floor room seems to best fit into the habitation category. Based on the evidence from layer II and levels 1/2/3, the upper floor also seems to fit into the habitation category.

At this point, the notes taken by N. Nelson in 1914 afford a unique opportunity. Nelson excavated a room in roomblock 9 and recorded what he found. While this room is not officially part of the study and has no official room number, based on his evidence, this room seems to best fit the storage category. This conclusion is based primarily on the lack of any floor features. Floor features are generally very important indicators of non-storage room use. However, this room assignment is purely speculative.

The layers and levels of roomblock 16, room 4 can be roughly correlated. In general, layer III correlates with level 6. Layer II correlates with levels 3/4/5, and layer I correlates with the surface level and levels 1/2 (see diagram). An interpretation of layer III and level 6 shows a sequence of events almost identical to roomblock 9, room 1. Subsequent to the abandonment of the room and removal of any useful or portable objects, a layer of wind-blown dust accumulated on the floor. Approximately 50 sherds, several flakes, and some bone were located on the floor (see inventory). Several features were also located on the floor. Feature 2 (F2) and F3 were possible human burials. These features were left unexcavated. F4, F5, F7, and F8 were floor pits, generally filled with sherds, bone, charcoal, and ash.



PUEBLO BLANCO LAHO  
ROOM BLOCK 16 ROOMS 4 AND 5  
PLANE TABLE MAP

These pits may have been storage or garbage pits. Significantly, one of the only two dates for Pueblo Blanco (1505 +vv) was found within Feature 8. Within layer III and level 6, were included high concentrations of domestic artifacts, such as ceramic vessels, flakes, and manos. Corn cobs were also found within this layer. It is possible that some of this material may have been cast into this room as garbage, but the most likely origin of this material was the second floor. As the floor disintegrated, objects may have fallen through.

Layer II and levels 3/4/5 can be interpreted as the more rapid collapse of the upper story room. This layer was filled with wall-fall and adobe. The artifacts from this layer were of the domestic type such as manos, flakes, and ceramics. Domestic food refuse, such as corn cobs, bones, and pinion nut shells, were also present. An interesting aspect of this layer was feature 1 (F1). This seemed to be the remains of a collapsed mealing bin (18 slabs) for grinding corn.

Layer I, the surface level, and levels 1/2 demonstrated that this layer was a continuation of the wall-fall collapse. Many building stones and adobe were present in this layer. This layer contained numerous domestic-type artifacts which may have been from the upper story but may also have been garbage deposits. One important aspect of the room, not actually part of any layer, but located in the southern wall, were two small niches or vents.

From the above evidence, the lower floor best fits into the habitation category. While no hearth feature was found on the floor, the pits, niches, and domestic artifacts seem to support

this conclusion. The upper floor appears to fit the habitation category. The mealing bin and large numbers of sherds were the most important factors in this designation.

The layers and levels of roomblock 16, room 5 can be correlated as follows: levels 8 and 9 with layer III, levels 5/6/7 with layer II, and levels 1/2/3/4 with layer I (see diagram). The depositional sequence of this room was somewhat different from the other two rooms. Levels 8/9 and layer III were deposited on this room's floor after it was abandoned. Much of the soil in this layer was wind-blown dust. Wall-fall, adobe, and wood were common throughout this layer. In addition, this layer contains high concentrations of domestic artifacts such as ceramics and flakes. Domestic food refuse in the form of corn cobs and bones were present in this layer (see inventory). Unfortunately, the floor in this room was weakly defined and was partially destroyed during excavation. Therefore, no floor contact artifacts or features were discovered. However, several ashy deposits were located near and above the floor level. In profile, the floor was seen to be below a thin layer of ash and charcoal well-spread throughout the room. This evidence seemed to indicate that the room burned near the time of its collapse.

Layer II and levels 5/6/7 appeared to be another period of wall-fall activity. This layer contained many building stones, adobe, and wood fragments. The artifacts and food refuse in this layer were of the domestic type, such as ceramics, flakes, pinion nuts, bones, and corn cobs. Layer I and levels 1/2/3/4 appeared to be a third wall-fall period. However, this layer contained

less wall-fall than lower levels and contained obvious wind-blown deposits. The artifacts represented in this layer were of the domestic type and are probably the result of garbage deposition. As a result of the weakness in the definition of the floor in this room, assignment of a room category was difficult. It is possible that this room may have been either a storage or a habitation room. However, the lack of any well-defined floor features, which would have been observable even with the destruction of the floor, indicates that this was probably a storage room. The upper floor was probably a habitation room. When this room burned, the upper floor's contents fell through to the lower floor. Therefore, most of the lower floor's artifacts were from the upper story.

To summarize, the lower story of RB 9 RM 1 was a habitation room, and the upper story was also a habitation room. The room previously excavated by Nelson in 1914 was a storage room. The lower story of RB 16 RM 4 was a habitation room, and the upper story was also a habitation room. The lower story of RB 16 RM 5 was a storage room and, the upper story was a habitation room.

**Part Six:**  
**Complete Inventory of Roomblock 9 Room 1**  
**and Roomblock 16 Rooms 4 and 5**

# ROOMBLOCK 9 ROOM 1 CERAMICS

RB	RM	LVL	BLK	GLZ	RIM	BSC	Rim	Tiny	PLN	Rim	Rest
9	1	S	59	10	0	1	0	0	0	0	26
9	1	I	47	1	0	0	0	0	0	0	33
9	1	1	8	0	0	0	0	0	0	0	1
9	1	2	21	0	0	0	0	0	0	0	1
9	1	3	17	1	0	0	0	0	0	0	0
9	1	II	97	3	0	1	0	0	0	0	5
9	1	4	20	2	0	0	0	0	0	0	1
9	1	5	17	1	0	0	0	0	0	0	8
9	1	III	161	4	0	0	0	0	0	0	31
9	1	IV	0	3	0	0	0	0	0	0	1
			447	25	0	2	0	0	0	0	107

RB: Roomblock

RM: Room

LVL: Level or Layer

BLK: Blackware/ utilitarian

GLZ: Glazeware

BSC: Biscuitware

PLN: undecorated



# ROOMBLOCK 9 LITHICS

RB	RM	LVL	Frag	UTF	NF	PP	HS	Mano	MT	SL	Core
9	ET	S	0	0	0	0	0	0	1	0	0
9	1	S	3	7	0	1	0	2	1	0	2
9	1	I	0	1	0	0	0	0	1	1	0
9	1	1	0	0	0	0	0	0	0	3	0
9	1	2	1	0	0	0	0	0	0	0	0
9	1	II	1	3	0	0	0	3	2	1	0
9	1	4	1	0	0	0	0	0	0	0	0
9	1	5	0	2	0	0	1	0	0	0	0
9	1	III	1	2	0	0	0	0	0	0	0
9	1	IV	1	1	0	0	0	1	0	0	0
			8	16	0	1	1	6	5	5	2

RB: Roomblock

LVL: Level or Layer

UTF: Utilized Flake

PP: Projectile Point

MT: Metate

GS: Groundstone

RM: Room

Frag: Fragments

NF: Non-Utilized Flake

HS: Hammerstone

SL: Slab

ET: East Transect

# ROOMBLOCK 9 ROOM 1 BOTANICAL AND FAUNAL REMAINS

RB	RM	LVL	Deer	Trky	Misc	Corn	PIN
9	1	S	0	1	0	0	0
9	1	I	0	0	1	0	0
9	1	3	0	4	1	0	5
9	1	II	0	0	2	0	11
9	1	5	0	0	0	0	2
9	1	III	2	3	1	0	0
9	1	IV	0	0	0	1	0
			2	8	5	1	18

Trky: Turkey

PIN: Pinon nut

Note: All numbers represent number of identified specimens.

# ROOMBLOCK 16 ROOM 4 CERAMICS

RB	RM	LVL	BLK	GLZ	Rim	BSC	Rim	Tiny	PLN	Rim	Rest
16	4	S	20	8	0	0	0	11	2	0	0
16	4	1	2	6	1	0	0	0	0	0	0
16	4	2	18	11	0	0	0	0	0	0	10
16	4	I	19	2	0	0	0	4	0	0	0
16	4	3	12	4	1	0	0	0	0	0	5
16	4	4	11	10	1	0	0	13	0	0	1
16	4	5	118	18	1	10	3	30	0	0	0
16	4	F1 5	28	0	0	0	0	0	0	0	0
16	4	II	111	20	1	0	0	25	0	0	0
16	4	6	581	45	4	15	1	434	6	0	10
16	4	F4 6	3	2	0	0	0	4	2	0	0
16	4	F5 6	18	11	0	0	0	8	8	1	0
16	4	F7 6	4	3	0	0	0	5	6	0	0
16	4	F8 6	34	5	0	9	9	32	7	0	0
16	4	III	113	59	9	1	0	13	33	1	1
16	4	7	6	4	0	0	0	11	6	0	2
16	4	8	10	4	1	1	0	6	4	0	0
16	4	9	3	2	0	0	0	13	1	0	0
			1111	214	19	36	13	609	75	2	29

RB: Roomblock

RM: Room

LVL: Level or Layer

BLK: Blackware/ utilitarian

GLZ: Glazeware

BSC: Biscuitware

PLN: undecorated

# ROOMBLOCK 16 ROOM 4 LITHICS

RB	RM	LVL	FCR	Frag	UF	NT	PP	Mano	MT	SL	Misc
16	4	S	0	1	0	0	0	0	0	0	1
16	4	1	0	0	0	1	0	0	0	0	0
16	4	2	1	1	0	2	0	1	0	0	0
16	4	I	0	1	2	0	0	0	0	0	0
16	4	4	0	0	1	0	0	0	0	0	0
16	4	5	0	0	0	0	0	2	0	0	0
16	4	F1 5	0	0	0	0	0	0	1	15	1
16	4	II	0	0	1	0	1	0	0	3	0
16	4	6	1	6	0	18	0	2	0	0	8
16	4	6 F5	0	0	0	4	0	0	0	0	0
16	4	6 F7	0	0	0	1	0	0	0	0	0
16	4	6 F8	1	3	2	0	0	0	0	0	0
16	4	III	0	0	5	6	0	0	0	0	1
16	4	7	0	0	8	0	0	0	0	0	0
16	4	8	0	0	1	2	0	0	0	0	0
16	4	9	0	0	0	4	0	0	0	0	0
			3	12	12	38	1	5	1	18	11

RB: Roomblock

LVL: Level/Layer

Frag: Miscellaneous fragment

NF: Unutilized flake

HS: Hammerstone

SL: Slab

RM: Room

FCR: Fire-cracked rock

UF: Utilized flake

PP: Projectile Point

MT: Metate

Misc: All others

ROOMBLOCK 16 ROOM 4 BOTANICAL AND FAUNAL REMAINS

RB	RM	LAY	Deer bone	Trky	Misc	Corn	PIN
16	4	2	1	0	7	1	1
16	4	3	0	0	2	12	1
16	4	4	0	0	2	4	0
16	4	II	0	0	12	0	0
16	4	6	4	0	26	23	0
16	4	F5 6	0	5	5	0	0
16	4	F8 6	0	0	6	0	0
16	4	III	0	2	16	1	0
16	4	7	0	0	1	0	0
16	4	8	0	0	0	1	0
16	4	9	1	0	1	1	0
			6	7	78	39	2

Trky: Turkey

PIN: Pinon nut

Note: Numbers represent number of identified specimens

# ROOMBLOCK 16 ROOM 5 CERAMICS

RB	RM	LVL	BLK	GLZ	Rim	BSC	Rim	Tiny	PLN	Rim	Rest
16	5	I	7	7	0	0	0	0	0	0	0
16	5	3	2	5	B	0	0	5	0	0	2
16	5	II	8	8	0	0	0	0	0	0	4
16	5	4	11	4	B	0	0	0	0	0	2
16	5	III	212	42	2	2	0	25	33	0	0
16	5	5	1	7	1	0	0	0	0	0	0
16	5	6	1	4	0	0	0	0	0	0	0
16	5	7	12	6	2	0	0	0	0	0	0
16	5	8	11	11	2	0	0	0	0	0	0
16	5	9	143	7	0	0	0	0	2	0	0
16	5	IV	22	18	0	2	0	11	6	1	8
			430	119	7	4	0	41	41	1	16

RB: Roomblock

RM: Room

LVL: Level or Layer

BLK: Blackware/ utilitarian

GLZ: Glazeware

BSC: Biscuitware

PLN: undecorated

# ROOMBLOCK 16 ROOM 5 LITHICS

RB	RM	LVL	Frag	UTF	NF	Mano	MT	SL	OB	Core	GS
16	5	3	0	0	1	0	1	0	0	0	0
16	5	4	0	1	0	0	1	0	0	0	0
16	5	I	0	0	4	0	0	0	0	1	0
16	5	7	0	0	1	0	0	0	0	0	0
16	5	II	0	2	1	0	0	1	0	0	1
16	5	8	0	0	2	0	0	0	1	0	0
16	5	9	0	1	5	0	0	1	0	0	0
16	5	III	0	2	28	0	0	0	0	0	0
16	5	IV	0	0	3	0	0	0	1	0	0
			0	6	45	0	2	2	2	1	1

RB: Roomblock

LVL: Level/Layer

UTF: Utilized flake

MT: Metate

OB: Obsidian

RM: Room

Frag: Miscellaneous fragment

NF: Unutilized flake

SL: Slab

GS: Groundstone

ROOMBLOCK 16 ROOM 5 BOTANICAL AND FAUNAL REMAINS

RB	RM	LVL	Deer	Trky	Misc	Corn	PIN
16	5	I	0	0	1	0	0
16	5	5	0	5	0	0	1
16	5	6	0	1	0	0	0
16	5	7	0	0	0	0	1
16	5	II	2	0	1	1	0
16	5	8	0	1	0	0	0
16	5	9	1	9	28	1	0
16	5	III	4	0	0	2	0
16	5	IV	2	0	2	3	0
			9	16	32	7	2

Trky: Turkey

PIN: Pinon nut

Note: Numbers represent number of identified specimens



Part Seven:  
The Social and Cultural Implications of Room Use at Pueblo Blanco

Perhaps the most important part of archaeological research is not the explanation of what has happened chronologically at a particular site, but what cultural information this series of events demonstrates about the prehistoric society being studied. Ultimately, this information could be applied to larger questions in anthropology and used cross-culturally. However, for the purpose of this study, a limited cultural perspective will be applied.

One interesting and useful method of analyzing the significance of room uses at Pueblo Blanco is to construct a range of activities which were going on in the rooms and the community. Unfortunately, only two of the five proposed functional room types were found in this analysis. Therefore, speculation on a range of activities will be restricted to habitation and storage rooms.

In combination, habitation and storage rooms suggest a range of several activities which went on throughout the rooms and the community. At the most basic level, the activity of room construction is suggested. This activity would have been an enormous task because of the requirements to gather large volumes of raw materials such as adobe, stone, and wood. In addition, the actual task of constructing the room would have been too large for one person. The size of this job, therefore, suggests that a larger group, such as an extended family or perhaps the community, may have cooperated in room construction.

The artifacts themselves reflect the technical knowledge of the inhabitants of Pueblo Blanco. Stone tools made of flaked stone such as obsidian or chalcedony appear in the rooms. The large numbers of sherds uncovered in the rooms attest to the importance of ceramic production at Pueblo Blanco. Finally, manos and metates, important tools for grinding corn, were used and likely produced at Pueblo Blanco. These artifacts were possibly made by specialists in the community and traded for food or other resources at Pueblo Blanco or other pueblos (see inventory).

Activities associated with the diet and economy at Pueblo Blanco were also suggested by the room uses. Deer bones, turkey bones, pinion nuts, and corn cobs made up the majority of the faunal and floral remains associated with diet (see inventory). This diet implies that people at Pueblo Blanco were engaged in hunting and gathering, agriculture, and animal domestication. (Wetterstrom, 32) In addition, community or family groups may have been organized to carry out these tasks. Finally, the purely domestic activities of food storage and food preparation were suggested by the room uses and artifacts. Food preparation in particular was characterized by blackware cooking vessels and corn grinding tools. These activities were possibly carried out by a nuclear family unit or perhaps an extended family unit.

Nothing discussed within this final section is particularly earth shaking in terms of general P IV society. In general, Pueblo Blanco conforms well to what is expected in New Mexico during this time period. However, this type of information is still valuable because it serves to support the ideas and

hypothesisists about P IV society currently held.

## Works Cited

### Books/Articles Directly Related to Room Use

Adams, Charles E.

1983 "The Architectural Analogue to Hopi Social Organization and Room Use, and Implications for Prehistoric Northern Southwestern Culture". American Antiquity 48(1).

Hill, James

1970 "Broken K Pueblo: Prehistoric Social Organization in the American Southwest". The Anthropological Papers of the University of Arizona, (18) University of Arizona Press, Tuscon, AZ.

Hill, W.W.

1982 An Ethnography of Santa Clara Pueblo, New Mexico. University of New Mexico Press, Albuquerque, NM.

Jorgessen, Julia

1975 "A Room Use Analysis of Table Rock Pueblo, Arizona". Journal of Anthropological Research, 31.

Lambert, Marjorie F.

1954 "PAA-KO: Archaeological Chronicle of an Indian Village in North Central New Mexico". School of American Research Monograph (19), Parts I-V, Santa Fe, NM.

Lowell, Julie C.

1988 "The Social Use of Space at Turkey Creek Pueblo: An Architectural Analysis". The Kiva, 53(2).

Nelson, Nels

1914 Personal notes from excavations at Pueblo Blanco, New Mexico.

Ried, J. Jefferson and Stephanie M. Whitlesey

1982 "Households at Grasshopper Pueblo". American Behavioral Scientist, July/August, 25(6).

Saitta, Dean

1991 "Room Use and Community Organization at the Pettit Site, West Central New Mexico". The Kiva 56(4).

Stubbs, Stanley A. and W.S. Stallings Jr.

1953 "The Excavation of Pindi Pueblo, New Mexico". Monographs of the School of American Research (18), Santa Fe, NM.

Sullivan, Alan P.

1974 "Problems in the Estimation of Original Room Function: A Tentative Solution from the Grass Hopper Ruin". The Kiva 40(1-2).

Wendorf, Fred

1953 "Salvage Archaeology in the Chama Valley, New Mexico". Monographs of the School of American Research (17).

### Other Works of Related Interest

Beck, Warren A. and Ynez D. Haase

1969 Historical Atlas of New Mexico. University of Oklahoma Press

Cordell, Linda S.

1984 Prehistory of the Southwest. Academic Press Inc, Boston.

Hamlen, Patricia

1993 "Patterns of Life at Pueblo Blanco: Determining Occupation and Abandonment Through the Use of Ceramic Surface Collection Analysis". Masters Thesis, Northern Illinois University, unpublished.

Meyer, Grant

1992 Reconnaissance Investigations of Geomorphic, Stratigraphic, and Cultural Relations in the Canada Del Medio Below Pueblo Blanco, Ojo Hedionda Quadrangle, New Mexico. Dept of Geology, Albuquerque, NM.

Morain, Stanley

1977 Vegetation and Land Use in New Mexico. New Mexico Bureau of Mines and Mineral Resources, New Mexico Division of the Institute of Mining and Technology [Map].

Nelson, Nels

1914 "Pueblo Ruins of the Galisteo Basin". Anthropological Papers of the American Museum of Natural History 15, Part 1.

Wetterstrom, Wilma

1986 Food, Diet, and Population of Prehistoric Arroyo Hondo Pueblo, New Mexico. School of American Research Press, Arroyo Hondo Archaeology series, 6.

Williams, Jerry

1986 New Mexico in Maps. Univ. of New Mexico Press, Albuquerque.