THE TREMONT HOUSE (5DV2954): HISTORICAL ARCHAEOLOGICAL INVESTIGATIONS OF AN EARLY HOTEL IN DENVER, COLORADO

by

Richard F. Carrillo
Sarah J. Pearce
Stephen M. Kalasz
Daniel A. Jepson

With Contributions by:

Debra Angulski
Elaine Anderson
Margaret A. Van Ness
Lori E. Rhodes

Foreword by:

Dr. Susan M. Collins
Colorado State Archaeologist

Prepared by:

Archaeological Unit
Colorado Department of Transportation
Daniel A. Jepson, Principal Investigator

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Richard F. Carrillo: Historical Archaeologist and Project Principal Investigator

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ABSTRACT

Archaeological investigations were undertaken in 1988 and 1989 at the site of the Tremont House Hotel (5DV2954), a historic structure foundation remnant located near Cherry Creek several blocks north and west of present-day downtown Denver, Colorado. The Tremont House was one of the city's first quality sleeping and dining establishments, and was in operation continuously from 1859 until it was flooded and razed in 1912. Threatened by the realignment and reconfiguration of the adjacent Speer Boulevard viaduct, the site was initially identified by CRS Sirrine Civil Engineers, Inc., and subsequently subjected to test and full-scale mitigative excavations by the Colorado Department of Transportation Archaeological Unit. This report details the results of the mitigation phase of investigations.

A sampling strategy based on the excavation of probabilistic (random) and non-probabilistic (intuitive) 1 meter-square pits was employed at the site. This scheme resulted in the excavation of 108 out of a possible 579 square meters defined within the proposed road construction impact area, which encompassed most of the site proper. Intact foundation walls of the original structure and two distinct structural additions were exposed, as were two cellars, a variety of other architectural features, and thousands of artifacts. Archival research, excavations, and subsequent data analysis revealed that the hotel underwent several stages of construction--and concomitant social status--between 1859 and approximately 1890. The Tremont House was a premier hotel from the time of its inception through the mid-1870s, but thereafter declined to second-tier status as Denver's main commercial and residential district shifted away from the Cherry Creek floodplain to higher ground to the southeast. By the time of its destruction, the Tremont was surrounded by warehouses and an immigrant shantytown. Although it continued to function as a boarding house and restaurant in its later years, the hotel apparently catered strictly to denizens of the lower social classes.

Subsequent to the completion of mitigative excavations and prior to the initiation of road construction, most of the site's extant foundation walls were destroyed by a backhoe, and the area was filled with clean soil to create a uniform road base. Although a small portion of the site remains intact west of the realigned segment of Speer Boulevard, little worthwhile information would be garnered from additional work in this area. No further actions at 5DV2954 are required.

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Cover photo: Tremont House Hotel, circa early 1860s. Courtesy of the Colorado Historical Society.

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CDOT Archaeological Unit personnel (excluding co-authors and contributors) who participated in excavations and/or laboratory analyses consist of Dr. Kathy Cushman, Bruce McClelland, Carol Meoni, Ed Stein, and Leslie Johnson. Mr. McClelland also illustrated the ceramic maker's marks included herein. O D Hand, Assistant Staff Archaeologist, coordinated field personnel and activities and provided technical assistance during report production; his contributions to this project were invaluable.

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Faunal, macrobotanical, and statistical data analyses were conducted under consulting arrangements with Dr. Elaine Anderson, Margaret A. Van Ness, and Centennial Archaeology, Inc., respectively. Thanks go to Drs. Carron Meaney, Charles Preston, Michael Bogan, and Charles A. Repenning for allowing review of faunal collections under their care for comparative purposes. Others who shared specific knowledge about the

site, regional history and archaeology, and/or allowed access to specific reference materials were Dr. Jonathan Kent (Metropolitan State College), Anne Bond (Curator of Material Culture, Colorado Historical Society), and the staff of the Denver Public Library. Dr. Susan Collins (Colorado State Archaeologist) is recognized for her continued support of the project, and for generously consenting to write the forward for this report.

FOREWORD: HISTORICAL ARCHAEOLOGY AND PUBLIC INVOLVEMENT IN DENVER

Urban archaeology is relatively new to Denver, and the Tremont House excavation in 1988-89 was the first extensive project to combine professional coordination, governmental support, media attention, and public participation. It is a privilege to introduce this volume, the "final" project report, although the information presented here will undoubtedly serve as primary data for many future comparative studies. This report offers a baseline for the historical archaeology in our capital city, and the project can serve as a model for harnessing public enthusiasm to produce substantive results.

Earlier investigations in the historical archaeology of Denver were small in scale and relatively quietly executed. David Gillio and Douglas Scott excavated a brick-lined shaft (5DV1) on the grounds of the Forney Museum, in the South Platte Valley, closing their report with a timely recommendation (1971:33):

> The potential of historic archaeology in urban Denver should be pursued before early records are obliterated by construction of buildings with deep foundations.

In 1973, the keepers of the Molly Brown House notified the University of Colorado regarding the discovery of a flagstone-covered feature, and Douglas Scott and E. Charles Adams excavated what proved to be a domestic grease trap (Scott and Adams 1973).

In the early 1970s, Colorado archaeologists expressed concerns about the razing of the Auraria neighborhood in anticipation of construction of the new higher education center. Professor Jack Smith approached the Denver Urban Renewal Authority and the Department of Housing and Urban Development regarding the potential for historical archaeology on the grounds of the new campus. Although he received the moral support of the Colorado Historical Society for this endeavor, the pertinent agencies were unwilling to commit financial support to an archaeology project in advance of new construction (Mullen 1977). It should be noted in passing that this struggle was simultaneous with both the Colorado Archaeological Society's legislative campaign to create the State Archaeologist position in Colorado, and with Historic Denver's highly successful, but very difficult, effort to create the Ninth Street Historic District on the Auraria campus. It seems fair to say in retrospect that the community's organizational infrastructure was not ready for an intensive historical archaeology program in the early 1970s, when so much of early Denver's architecture--as well as buried cultural features and strata--was rapidly disappearing.

With the leadership of Colorado State Archaeologist Bruce Rippeteau, historical archaeology commenced in 1976 at Four Mile House, located four miles southeast of the capitol, on the Smoky Hill Trail between Denver and Kansas City (Nissley 1979). Following Claudia Nissley's subcontracted test excavations, Elizabeth Morris of Colorado State University, Mark Guthrie and Sarah Nelson of the University of Denver, and Jonathan Kent of

Metropolitan State College all worked on the grounds of the City and County of Denver's Four Mile Historic Park. Staff archaeologists from the Colorado Historical Society also provided a variety of monitoring services relating to utility improvements there.

Only in the late 1970s did central Denver finally see its first historical archaeology project performed in compliance with the National Historic Preservation Act. With funding from the Environmental Protection Agency, Floyd Patterson and his company, Cultural Resource Consultants, monitored construction of a storm sewer system in what is now known as Lower Downtown (Patterson 1977a, 1977b, 1979; Patterson and Garcia 1977; Collins 1979).

Even after construction, buried resources on the open portions of the Auraria campus lured its archaeology faculty, who conducted field schools for student training (DeSart 1981; J. Kent, personal communication to S. Collins). It is fortunate that the Tremont House foundations were not affected by the Auraria construction, but were protected by pavement. How ironic that one of Denver's many parking lots served a preservation purpose!

When Speer Boulevard was realigned, Auraria lost a few parking spaces, and archaeologists finally had an opportunity for a large-scale exploration of Denver's early history through its material artifacts. This project excited the imagination of numerous volunteers, site visitors, the press, and local officials. Mayor Pena's press conference on the Tremont House project was a particularly memorable event. The Colorado Department of Transportation is to be commended for its willing support of the work conducted in compliance with the National Historic Preservation Act. Denver is richer for adding the dimension of artifact tangibility to its history. It has been a pleasure to encourage this endeavor.

Susan M. Collins
Colorado State Archaeologist
September 1993

CHAPTER 1

INTRODUCTION

Administrative Background and Project Objectives

Remains of the Tremont House Hotel (5DV2954), Denver's premier sleeping, dining, and entertainment establishment during the 1860s and early 1870s, are located south of Cherry Creek in the city's lower downtown area approximately 0.5 mi. (0.8 km) southeast of Cherry Creek's confluence with the South Platte River. Its legal location is in the NE¼ of Section 33, Township 3 South, Range 68 West (Figure 1). At the time of its initial discovery and subsequent test excavations (1988) and mitigation (1989), the remnants of the Tremont House were situated beneath an asphalt parking lot at the northwest corner of 13th Street and Auraria Parkway (in-bound). As a result of subsequent road construction associated with the realignment of nearby Speer Boulevard (outlined below), the segment of 13th Street fronting the Tremont House was effectively obliterated, as was most of the site proper. Small portions of the Tremont's foundation walls remain intact, buried beneath a greenbelt adjacent to Speer's southbound lanes.

In 1987 the Colorado Department of Highways (now Colorado Department of Transportation, hereafter referred to as CDOT), in cooperation with the City and County of Denver, proposed Project BRM 1406(6)/CC 01-0000-24, Speer Viaduct Replacement. The project entailed substantial construction and realignment along a portion of Speer Boulevard, a major northwest-southeast-trending traffic artery which spans the South Platte and connects Interstate 25 (I-25) to downtown Denver. In part, project plans called for replacement of the existing Speer viaduct with an at-grade roadway slightly west of its original alignment, as well as for the addition of various aesthetic and safety improvements along the entire corridor.

Cultural resource investigations for the project involved a sequential phased approach, as follows: (1) surface inventory of the entire proposed construction corridor, (2) preliminary archival research and test excavations in areas identified during survey as potentially containing important historical features, (3) additional archival research and locality-specific testing (e.g., at the presumed site of the Tremont House Hotel), (4) assessing the significance of all identified sites with regard to National Register of Historic Places (NRHP) eligibility, and (5) mitigation of adverse effects to any site identified as historically significant and therefore eligible for inclusion on the NRHP.

Initial investigations along the project corridor were completed in 1987. This work consisted of a general surface inventory by the CDOT Archaeological Unit (Angulski et al. 1987) and a subsequent historical overview (Herbst 1987) and survey (Carrillo et al. 1987) by CRS Sirrine Civil Engineers, Inc. (CRSS), consultant to the City and County of Denver. Given the location of the project area in an urban setting that

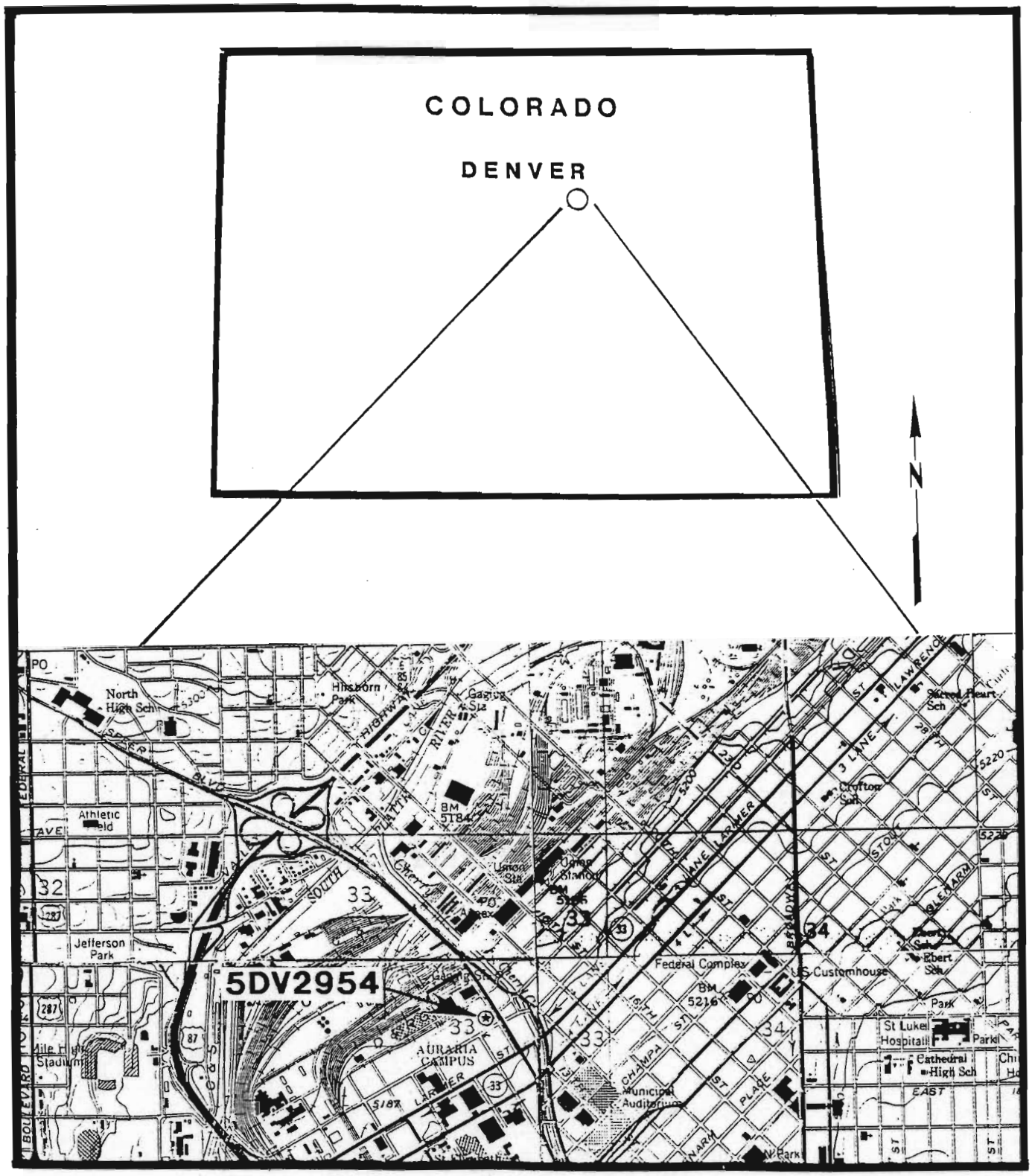


Figure 1 - Portions of the Arvada, Fort Logan, Englewood, and Commerce City, Colorado 7.5' USGS Topographic Quadrangles showing the location of site 5DV2954.

had been subjected to a variety of commercial, residential, and industrial uses for over a century, it became evident that historical archaeological sites, represented by building foundations and other architectural and non-architectural features, would not necessarily be visible on the ground surface. A limited testing program was therefore initiated by CRSS at two areas within the proposed right-of-way (Carrillo et al. 1987; Chapter 3, this volume). One historical archaeological artifact concentration (site 5DV2669) was identified beneath the Speer viaduct proper, while the other test location near the confluence of Cherry Creek and the South Platte River yielded only mid-twentieth century refuse. This information suggested that potentially significant archaeological remains--in particular those associated with the Tremont House Hotel--might be present near the south end of the viaduct. The completion of archival research and additional test excavations by CDOT in 1988 (including a remote sensing program) identified the exact location of the Tremont House within the project corridor. This in turn lead to the conclusion that construction associated with the Speer Boulevard realignment would inevitably impact the remaining integrity of the site.

On the basis of data collected through archival research and subsurface test excavation, CDOT judged the Tremont House to be eligible for nomination to the NRHP. A recommendation to that effect was forwarded to the Colorado State Historic Preservation Office (SHPO), which concurred with this assessment in February 1989. Concomitantly, a data recovery plan to mitigate adverse impacts to the site was prepared by Historical Archaeologist Richard F. Carrillo, under the auspices of CDOT (Carrillo et al. 1989). This document was approved both by the SHPO and the Advisory Council on Historic Preservation (ACHP) soon thereafter.

The CDOT Archaeological Unit performed mitigative excavations at 5DV2954 between March 15 and May 7, 1989, almost exactly 130 years from the date of the original construction of the Tremont House. Data analysis was undertaken during the ensuing summer and fall. Richard F. Carrillo served as project Principal Investigator, coordinating all field and laboratory analyses, and CDOT Assistant Staff Archaeologist O D Hand was Field Supervisor. Former CDOT Archaeological Unit Director Debra Angulski administered the project and served as interagency liaison between 1987 and early 1992, and periodically assisted in the field during the 1989 mitigation. Ms. Angulski was succeeded in this capacity in 1992 by Daniel A. Jepson, present Archaeological Unit Director and Principal Investigator. Crew members were Bruce McClelland, Carol Meoni, Kathy Cushman, Ed Stein, and Jepson; CDOT Staff Historian Sally Pearce also helped with the excavations on several occasions. Consultants to the project included Elaine Anderson (faunal analysis), Margaret A. Van Ness (macrobotanical analysis), and Centennial Archaeology, Inc. (statistical analyses and data manipulation). CDOT Chief Geologist John B. Gilmore provided information regarding geomorphology/soils. CDOT Staff Paleontologist Steven M. Wallace performed initial faunal analyses for Tremont House materials subsequent to the 1988 testing phase. The manuscript was edited by Jepson and Assistant Archaeologist Lori E. Rhodes.

Three main project objectives were established prior to initiation of the mitigation phase, all of which were a direct outgrowth of the testing program(s) and resultant recommendations:

(1) to conduct data retrieval through excavations such that the provisions of the site-specific research design (Carrillo et al. 1989) were fulfilled.

(2) to analyze the data obtained through excavation. These data included, but were not limited to, defining the vertical and horizontal extent and complexity of the site; information relating to the geomorphic as well as cultural and social history of the Tremont House; and assessing early Denver architectural composition, dietary trends, and behavioral variability/culture change; and

(3) to synthesize the project mitigation in a comprehensive report.

Funding for the Tremont House testing and mitigation project was provided jointly by the Federal Highway Administration (FHWA), utilizing Federal Discretionary Bridge Replacement Funds, the City and County of Denver, and CDOT.

All artifacts collected during the testing and excavation phases at the Tremont House are reposited permanently at the Colorado Historical Society, Denver. Field notes, photographic negatives, artifact analysis sheets, and other project records are on file at the Office of Environmental Services, Colorado Department of Transportation, Denver. Relevant aspects of the fieldwork, historical research, artifact analyses, and specialist studies undertaken as part of the data recovery effort are presented in the ensuing chapters.

Legal Mandates

Funding for the Speer Viaduct Replacement project was provided by both the state and federal governments, and consequently investigations at the Tremont House were guided by an array of state and federal statutes. Portions of the following section are excerpted from Kalasz et al. (1992).

The Colorado Historical, Prehistorical, and Archaeological Resources Act of 1973 (as amended) established for the state of Colorado title to archaeological sites on state-owned lands, and empowers the State Historical Society of Colorado to issue permits for investigation of such sites. The Colorado State Archaeologist is specifically assigned responsibility by the act for administering the issuance of permits. The Colorado Register of Historic Places Act of 1975 established a state register of historic places as well as criteria for inclusion of properties on the register. The act directed that significant sites be protected from any actions initiated by agencies of the state of Colorado. The State

Historical Society of Colorado is given the responsibility of administering the provisions of the law and maintaining the state register of historic places.

The Act for the Preservation of Antiquities (1906), or "Antiquities Act," first established the federal government's responsibility for protection of prehistoric and historic ruins on federal lands. The Archaeological Resources Protection Act (ARPA) of 1979 (as amended) strengthens and updates the Antiquities Act, and among other things mandates assessments of impacts, sets requirements for permitting, and stipulates penalties for violation of its terms. Federal statutes most pertinent to the Tremont House investigations, however, are the National Historic Preservation Act (NHPA) of 1966 (as amended) and the Archeological and Historic Preservation Act (AHPA) of 1974. NHPA established the National Register of Historic Places in its modern form and directs various federal agencies and departments to take into account the effects of undertakings on districts, sites, buildings, structures, or objects that are included on, or eligible for, the National Register. The responsibility of the federal government in this regard extends to undertakings that involve expenditure of federal funds and issuance of federal licenses and permits. The National Register criteria for evaluation of properties are enumerated in 36 CFR 60.4. Consideration is given to "districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association," and that exhibit one or more of the following criteria:

(a) are related to events that have made a significant contribution to the broad patterns of our history;

(b) are associated with the lives of persons significant in our past;

(c) bear a pattern of distinctive characteristics of historic, architectural, archaeological, engineering or cultural significance; and/or

(d) have yielded or may in the future yield information important in history or prehistory.

From NHPA has developed the so-called 106 review process (referring to Section 106 of the act), which provides for cooperative assessment, review, and comment among the SHPO, ACHP, and federal agencies with regard to impacts to, and treatment of, threatened sites.

AHPA directs federal agencies to mitigate the adverse effects on or preserve significant sites threatened by federal undertakings, including federally funded or licensed projects. Among other provisions, AHPA established guidelines for funding to be expended on mitigation of adverse impacts to National Register-listed or -eligible sites when those sites are threatened by federal actions.

Research Constraints

Constraints on the research were minimal and project delays infrequent. Mitigation was performed during late winter and early spring, and weather-related delays hampered only the early stages of work. Given the site's high visibility along a major thoroughfare near several college campuses and the downtown Denver business district, public visitation was an expected--but not detrimental--challenge. Widespread publicity of the excavations (i.e., a formal press release) was withheld until shortly before the project was terminated, primarily due to incidents of vandalism experienced during the previous testing phase. An eight-foot chain link fence was erected around the site prior to the start of excavations, which served both as a safety precaution (due to the presence of numerous excavated pits as the project progressed) and also as a deterrent to vandals and transients. No vandalism occurred during the seven weeks of field work.

Management Summary

Mitigative excavations were undertaken at the site of the Tremont House Hotel (5DV2954) in the City and County of Denver, Colorado. Threatened by realignment and reconfiguration of the nearby Speer Boulevard viaduct, the site was assessed as eligible for nomination to the National Register of Historic Places under Criterion D, as enumerated in 36 CFR 60.4 (outlined above). The site exhibited potential to contribute data to a variety of research themes, including, but not limited to, the composition and evolution of western architectural styles throughout the latter half of the 19th century, social and cultural practices and change in a frontier community, and behavioral variability as reflected in artifact density and variety. Physical remains at the site were limited to subsurface foundation walls, two intact cellars, 21 other architectural features, and a large quantity and assortment of domestic and commercial artifacts.

Excavation and subsequent data analysis revealed that the site consisted of the original structure foundation as well as substructures and features of two building additions. Archival research indicated that the hotel was in operation continuously between 1859 and 1912, and that it was flooded and razed in or about the latter year. Discrete activity zones were identified at the site on the basis of architectural and artifactual data, coupled with historical references. These data corresponded to utilization of a particular structure or addition (or sections thereof) for specific purposes within an identifiable time frame.

The research potential of the Tremont House, most of which lies within the disturbance zone of the viaduct replacement project, has been realized. Subsequent to the completion of mitigative investigations, all foundation walls were destroyed and replaced with fill dirt to form a homogenous road base. The southbound lanes of Speer Boulevard now overlie the Tremont House locale. Small portions of shallow foundation

walls remain intact immediately west of the roadway, but these segments retain little data potential. No further work is recommended at the site.

CHAPTER 2

ENVIRONMENTAL SETTING

Physiographic and Geological Considerations

The Speer Viaduct Replacement corridor, including the location of the Tremont House Hotel (5DV2954), is situated within the primary drainage system of the South Platte River. The major tributary within the project area is Cherry Creek, a perennial north-flowing watercourse that heads in the Palmer Divide region southeast of Denver. One-half mile north of the Tremont House, Cherry Creek enters the South Platte, which thereafter trends generally northeastward towards its confluence with the North Platte River in western Nebraska.

The greater Denver metropolitan area is situated in the Piedmont section of the Great Plains Physiographic Province (Fenneman 1931). The Colorado Piedmont, a structural and topographic basin encompassing much of eastern Colorado east of the Rocky Mountains, separates the mountains from the High Plains section to the east (Osterkamp et al. 1987:166-171). The Piedmont is distinguished from the High Plains by its lower elevation, which resulted from the removal of Tertiary alluvium by the South Platte and Arkansas River systems (Thornbury 1965). Underlying the alluvial sediments is the geologic structural depression that comprises the Piedmont known as the Denver Basin, which was formed during the Laramide Orogeny in Late Cretaceous and Early Tertiary times (Bradley 1987:215). As a result of this pattern of alluvial erosion, a broad, gentle valley (or more appropriately, "basin") was formed, bordered on the west by the foothills of the Rocky Mountain Front Range and on the east by undulating shortgrass plains several hundred feet higher in elevation.

The Colorado Front Range, extending for approximately 200 miles (320 km) from the Arkansas River to the Colorado-Wyoming state line, is the major range of the eastern mountain belt. It consists of a complexly faulted anticlinal arch composed primarily of Precambrian crystalline rocks, namely granites, schists, quartzites, and gneisses. The Front Range is bounded on the east by a foothill belt 2 to 3.5 mi (3-6 km) wide, in which Paleozoic and Mesozoic rocks dip steeply eastward into the Denver Basin. Although the distinction between the foothills region and Colorado Piedmont is somewhat blurred, the former term is most commonly used when referring to prehistoric archaeological complexes, whereas the latter denotes a specific environmental zone.

Northeastern Colorado lies within a broad belt of prairie soils that extends throughout the Great Plains from western Texas, northward into southern Canada. Lighter-colored brown soils characterize the drier, more westerly part of this region (Gibson and Batten 1979:111). As noted by Kalasz et al. (1992:8), "soil characteristics vary greatly within this region as a function of, among other factors, parent material,

drainage, elevation, and precipitation and other climatic variables." The sandy alluvium encountered in the project corridor reflects its proximity to two substantial watercourses.

Present Environment

The present climate of the study area and its immediate vicinity can be characterized as semiarid-continental, and is variable due to extreme topographic and elevational fluctuations. Elevational extremes range from 14,264 foot (4348 m) Mt. Evans northwest of Denver, to the vast expanses of High Plains which encompass the eastern one-third of Colorado and have an average elevation of slightly over 5,000 ft (1524 m). The project area is located at an elevation of approximately 5,190 ft (1582 m).

The mountains serve to moderate the range of temperature extremes in the Denver Basin compared to further east on the plains (Berry 1968:596; Ruffner and Bair 1985:418). This is evident in a comparison of general weather conditions for the High Plains of eastern Colorado with those of Denver. It is not uncommon for the plains to experience daytime summer temperatures above 100° F (37.8° C), with winter temperatures dropping to -15° F (-26° C) (Berry 1968:596). Temperature records for Denver indicate that the city only reaches or surpasses 100° F approximately once every five years. January is typically the coldest month for the Denver region with an average temperature of approximately 30° F (-1° C) (Ruffner and Bair 1985:418). The annual average of 15.3 in (382 mm) of precipitation in Denver is slightly greater than that recorded for the eastern Colorado plains (Enmap Corporation n.d.; Ruffner and Bair 1985:420).

Present vegetation within non-urbanized areas of the High Plains consists primarily of shortgrass prairie, including the following common taxa: needlegrass (*Stipa comata*), blue grama (*Bouteloua gracilis*), buffalo grass (*Buchloe dactyloides*), prickly pear (*Opuntia* sp.), yucca (*Yucca glauca*), lupines (*Lupines* sp.), beardtongue (*Penstemon* sp.), and psoralea (*Psoralea* sp.). Riparian habitats are usually dominated by plains cottonwoods (*Populus sargentii*), and willows (*Salix* sp.). Although modern urban landscaping has largely replaced native vegetation throughout the study area, the area was undoubtedly characterized in early historical times by this shortgrass/riparian ecotone. Costello (1979:iv) describes the prehistoric and early historic Colorado plains as "almost uninterrupted mixed prairie, excepting the sand hills, fringes of broadleaved trees, and fragments of tall grass prairie along the eastern stream courses."

Native fauna of the Colorado Piedmont and High Plains includes an array of vertebrate and invertebrate species. Large mammals consist almost entirely of artiodactyls and include bison (*Bison bison*)--which once numbered in the millions but were practically exterminated in the nineteenth century--antelope (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), white-tailed deer (*O. virginianus*), and elk (*Cervus elaphus*). The mountain lion (*Felis concolor*) is found along the western

prairie margin. Medium-sized and small mammals consist of carnivores such as bobcat (*Felis rufus*), coyote (*Canis latrans*), red fox (*Vulpes fulva*), swift fox (*V. velox*), and black bear (*Ursus americanus*) (along the western margin only), as well as racoon (*Procyon lotor*), badger (*Taxidea taxus*), black-footed ferret (*Mustela nigripes*), and skunks (genera *Spirogale* and *Mephitis*); jackrabbits (*Lepus townsendi, L. caligornicus*), eastern and desert cottontails (*Sylvilagus floridanus, S. auduboni*), and an array of rodents (Kalasz et al. 1992:9, after Gilbert 1980; Armstrong 1972, 1987; Burt and Grossenheider 1976). A wide variety of avifauna is also found in the region, including various raptors. Reptiles are well represented (i.e., bullsnake [*Pituophis melanoleucus*], western or prairie rattlesnake [*Crotalus viridis*], racer [*Colubar constrictor*], and numerous lizard species and amphibians) (Shaw and Campbell 1974).

Historical Environment, 1859 - 1915

The historic environment of the project area exhibited several factors conducive to early historic settlement. Perhaps most importantly was the presence of the confluence of two major watercourses, Cherry Creek and the South Platte River, in an otherwise semi-arid region. Three primary environmental factors are identified as having been responsible for influencing the occupation of the Denver region from its early historic period to the present: (1) actual environmental trends and events, such as rainfall patterns and temperature fluctuations; (2) human perception of the environment, which often did not reflect reality; and (3) the use of technology to alter the environment, either intentionally or accidentally. All three factors were important to Anglo migration to the region and greatly influenced the lifestyles they adopted.

Climatic Trends and Events: Climatic trends and events include a wide variety of causes and effects. Often it is not a single climatic variable, rather a combination of several, which blend together to create a given condition. The duration of a climatic episode can be a few minutes, such as a hail storm, or several thousand years, such as an ice age. Also, climatic trends and their effects can be regional (i.e, a tornado), or can affect vast expanses of land, as do the changes of the seasons. The results of climatic change often persist long after the episode has passed, and these factors must be considered when reconstructing past climates.

Precipitation is one of the most important climatic variables on the High Plains. Although other factors, such as temperature extremes, wind conditions, and insect invasions, have affected settlement and life regionally, drought has undoubtedly been the most influential. Droughts occur in the western Great Plains approximately every 20 years, or every other decade (Albert and Wyckoff 1984:1; Bowden et al. 1981:494; Warrick and Bowden 1981:114-115). Although "drought" can be defined in several ways (Bark 1978:11; Felch 1978:25; Riefler 1978:63; Tannehill 1947), in this report drought is considered a period of less than average available moisture which is extreme enough to cause cultural adjustment.

The general twenty-year cycle is illustrated in Table 1, with Great Plains droughts occurring, with some exceptions, in the 1850s, 1890s, 1910s, 1930s, 1950s, and 1970s, all of which were drier than normal decades. Particular years or periods within these decades, such as 1894 and the entire 1930s, were extremely dry. The 1870s period does not coincide with this cycle, but 1874 in particular was a year of drought conditions in many parts of the Great Plains (Baltensperger 1979:44, 47; Bark 1978:16). The non-drought decades exhibited years of generally average or above-average precipitation.

TABLE 1

HISTORY OF DROUGHTS ON THE WESTERN GREAT PLAINS

Year(s)	Reference(s)
1850s	Lawson 1976:32
1859 - 1860	Dick 1937:212
1860	Bark 1978:15; Tannehill 1947:35
1874	Baltensperger 1979:44, 47
1880 - 1881	Baltensperger 1979:44, 48
1881 - 1887	Bark 1978:19
late 1880s	Bark 1978:17, 19; Bowden et al. 1981:494
1890s	Warrick and Bowden 1981:114
early 1890s	Bark 1978:17, 19; Bowden et al. 1981:494; Mehls 1984:126
1890	Baltensperger 1979:49
1893 - 1895	Baltensperger 1979:49; Bark 1978:19
1894	Bark 1978:17
late 1890s	Albert and Wyckoff 1984:1
1910s	Bowden et al. 1981:494; Albert and Wyckoff 1984:1; Warrick and Bowden 1981:114
1910	Bark 1978:19
1911	Bark 1978:19
1913	Bark 1978:19
1930s	Albert and Wyckoff 1984:1; Bark 1978:19; Bowden et al. 1981:494; Warrick and Bowden 1981:114
1933 - 1936	Bowden et al. 1981:494
1931 - 1938	Hurt 1979:139
1950s	Albert and Wyckoff 1984:32; Bark 1978:19; Warrick and Bowden 1981:114
1951 - 1957	Albert and Wyckoff 1984:1
1952 - 1956	Bowden et al. 1981:494
1970s	Bowden et al. 1981:494; Warrick and Bowden 1981:114
mid 1970s	Warrick and Bowden 1981:111

Certain years, such as between 1825 and 1845 (Lawson 1976:30), the 1880s (Baltensperger 1979:44, 48), the mid-1860s to the mid-1880s (Bark 1978:16-17), and 1941 (Albert and Wyckoff 1984:32), experienced particularly wet years in some parts of the Great Plains.

Factors other than precipitation also influenced settlement and subsistence patterns on the Great Plains. The year 1874 is remembered for the great grasshopper plague (Baltensperger 1979:47; Bark 1978:16; Dick 1937:203-206), an insect invasion that was a disaster for many farmers:

> The grasshoppers alighted in such large numbers on the corn that the stalks bent toward the ground. The potato vines were mashed flat. The sound of their feeding was like a herd of cattle eating in a cornfield (Dick 1937:205).
>
> When the insects left a few hours later, the whole country was a scene of vast ruin and desolation. The jaunty waving fields of corn in twelve hours time were reduced to bent over stalks entirely denuded of their leaves (Dick 1937:206).

Dick (1937:206) notes that the grasshoppers returned in 1875, 1876, and 1877, but they were never again as bad as in the summer of 1874.

Historic Perceptions of the Great Plains Environment: Actual and perceived environmental conditions on the western Great Plains were not always consistent. From the first publicized explorations of the western Great Plains in the early 1800s to the drought conditions that prevailed in the 1930s, reports combining western Great Plains environmental reality and myth reached populations in the eastern United States. Both the "myth of the desert" and the "myth of the garden" filled early reports and influenced who migrated westward and for what reason (Baltensperger 1974, 1979; Emmons 1971; Lawson 1976; Lewis 1965a, 1965b, 1966, 1979; Morris 1926; Parker 1964; Smith 1950). Many early settlers sought to transplant their eastern lifestyles to their new homes in the West. It was these efforts to maintain lifestyle continuity, while concomitantly making the necessary adaptive adjustments, that influenced many aspects of life on the Plains during the nineteenth and early twentieth centuries.

Several of the earliest western Great Plains explorers from the United States had less than favorable assessments of the area's potential. In 1810 Zebulon Pike wrote that "in time it may become as celebrated as the sandy desert of Africa," and Stephen H. Long concluded in 1822 that the land was "almost wholly unfit for cultivation and, of course, uninhabitable by a people depending on agriculture for subsistence" (Bark 1978:14). The western boundary of this "desert" (Lawson 1976:4-5) encompasses present-day metropolitan Denver.

The idea that the western Great Plains was the "Great American Desert" (a phrase initially coined by Major Long) persisted through the 1800s (Carrillo 1986). As late as 1878, John Wesley Powell believed that the land between the 100th meridian and the Pacific Ocean, with the exception of a part of the Pacific Northwest, held little promise:

> In this area many droughts will occur; many seasons in a long series will be fruitless, and it may be doubted whether, on the whole, agriculture will prove remunerative (Powell 1879).

Previously held perceptions of western North America changed dramatically in the second half of the nineteenth century. An 1881 report concerning the climate of Colorado describes perfect, enjoyable, and healthful conditions and concludes that "in all cases where the physical and mental systems are worn down by overwork or general debility, the recovery is marked and rapid" (Baskin 1880).

By the second half of the nineteenth century numerous settlers had established farms on the Great Plains. The majority of individuals who settled the plains in the 1870s and 1880s were from the Corn Belt (Iowa, Illinois, Indiana, and Ohio) and brought with them midwestern agricultural techniques (Baltensperger 1979:44). These techniques often involved reliance on non-irrigated single crops, most often corn. After the drought of 1874, and during many subsequent water shortages, many farmers periodically switched to a mixture of more drought-resistant crops, including some types of wheat and other smaller grains (Baltensperger 1979:45-51).

Drought conditions during the late 1880s inspired several myths concerning rainfall on the Great Plains, the majority of which suggested that farmer's activities could increase rainfall. Often these myths were encouraged by companies or institutions that served to benefit from population growth in the West. Among these was pluviculture, or, the "rain follows the plow" concept. This widespread notion convinced many individuals that civilization brings increased rainfall. Rainmaking also became popular during this period (Emmons 1971; Hollon 1966:143, 146; Lockeretz 1981:20-21). A legislative attempt, the Timber Culture Act of 1873, supported tree planting, and was based on the concept that trees encouraged rain (Hollon 1966:144-145). Several of these myths persisted well into the twentieth century. Unfortunately, many agricultural practices that became popular as a result of adherence to these myths were environmentally harmful, and several contributed to the development of the Dust Bowl conditions of the 1930s (Lockeretz 1981).

Environment, the Economy, and Technology, 1890-1920: Colorado experienced continual economic expansion from 1859 into the early 1890s; however, the period of growth and development began to stabilize around 1890 and this trend continued through the early 1900s (Mehls 1984; Friedman 1985; Carrillo 1990). Both ranching and dryland farming had also experienced a period of growth due to a series of wet years beginning in the mid-1880s. During this time, a rapid influx of settlers into the region

occurred due to the presence of abundant fertile land and plentiful water. The results of this migration and general prosperity were short-lived for two fundamental reasons: (1) rapid movement into the Great Plains region led to a glut in the grain market and prices fell rapidly; and, (2) the abundant rainfall of previous years ceased and crop failures resulted. These occurrences, in conjunction with the Silver Panic of 1893, created many problems that forced ranchers and farmers to abandon their land. The individuals most intensely affected were dryland farmers who comprised the last to arrive in the area. Most had borrowed money to get their farms started, and many went further into debt in the mid-to-late 1880s by again borrowing to expand their land holdings for maximum production. As grain prices fell, the loan obligations created a diminished income (Mehls 1984:123-127).

The period from 1900 to 1920 was one of diversified new development and change. Urban centers such as Denver experienced new growth, while economic pursuits such as farming expanded in new directions as experimentation with crops and techniques continued. Settlers once again looked to the Great Plains as a desirable place to farm. The spread of dryland farming was accelerated by the onset of World War I. The United States became a major agricultural supplier of farm products, especially wheat and corn, to many European nations. Passage of the Homestead Acts of 1909 and 1916 resulted in farmers pouring onto the Great Plains between 1910 and 1920. As a result of government action and a series of wet years in the mid-to-late 1910s, prosperity appeared available to anyone willing to accept public land and plant crops. This period resulted in significant changes for Colorado, rivaling the gold rush era in terms of the impacts to regional history. As the decade of the 1920s dawned, the prevailing attitude reflected continued prosperity, an attitude that was to be short-lived (Mehls 1984:144-150).

CHAPTER 3

REVIEW OF PREVIOUS WORK

Historical Archaeology in Denver

Historical archaeological excavations in Denver have primarily been academic undertakings conducted in conjunction with archaeology field schools. The first documented excavation, consisting of two test pits, was performed in 1981 by the University of Colorado at Denver in the area of the Tivoli Brewery, located southwest of the Tremont House. Cultural material recovered during the excavation is reported in general terms, such as "bones, brick fragments, glass fragments, horseshoes, square nails, railroad spikes, [and] bone buttons" (DeSart 1981:4-5). The only definitively diagnostic items were the cut nails, which pre-date 1890, so it is possible that the entire deposit could pre-date 1890. Even with this limited information, it was noted that artifacts such as ceramics, which dominate the Tremont House inventory, were missing.

Subsequent excavations undertaken in the general area by Dr. Jonathan Kent of Metropolitan State College revealed artifacts dating to a later time period than that of the Tremont House. Excavations at the site of the First German Presbyterian Church, located on the Auraria Campus southwest of the Tremont House, revealed late 1870s and early 1880s artifacts. The excavations conducted at the site of the Hungarian Flour Mill, located between 7th and 9th Streets and Wazee Street, revealed secondary trash deposits dating to the early 1900s (J. Kent, personal communication 1989).

Speer Viaduct Historical Archaeology Survey and Test Excavations

In April 1987 a historical archaeological survey was conducted along the proposed route of the Speer Viaduct Replacement Project (Figure 2). The scope of work, as outlined by CRS Sirrine Civil Engineers, Inc. and presented in Carrillo et al. (1987), included the following tasks:

(1) Conduct field investigations to locate any historical archaeological properties within an area corresponding to the limits of disturbance for the Speer Viaduct Replacement Project.

(2) Conduct an evaluation of any historical archaeological properties to be potentially affected in order to determine eligibility to the NRHP.

(3) Prepare a report with survey findings and recommendations for mitigation, if necessary, prior to initiating construction activities.

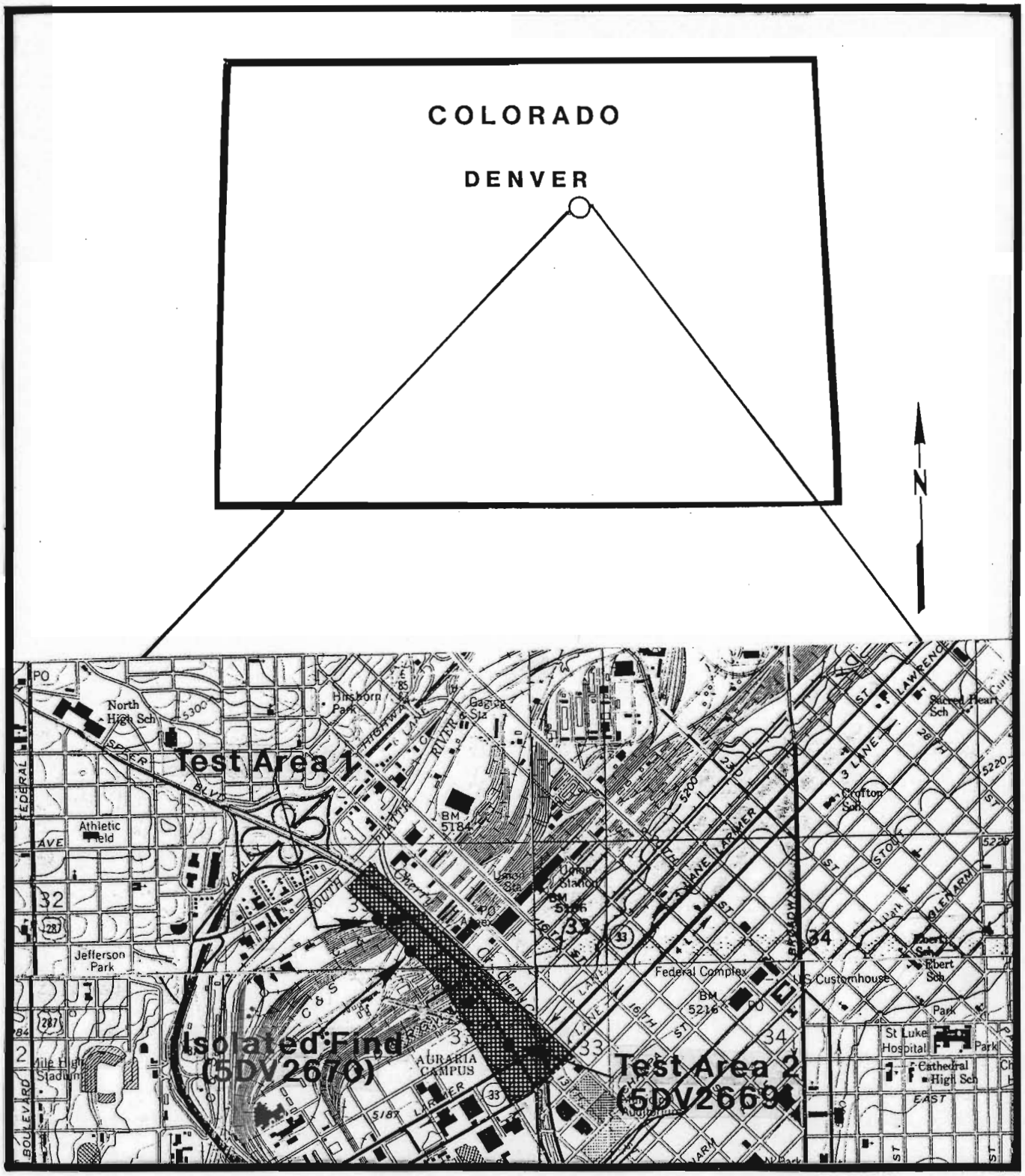


Figure 2 - Location of the Speer Viaduct Replacement Project archeological survey and test excavation areas.

(4) If eligible properties are to be affected by the project, assist in the preparation of a data recovery plan acceptable to the Colorado State Historic Preservation Officer (SHPO) and the ACHP.

(5) Submit the data recovery plan to the OAHP and the ACHP for review for compliance and content (Carrillo et al. 1987).

The location of the project area in an urban setting was a primary factor influencing the field methodology, as was the condition of historic resources within the study corridor. Building foundations and other indicators of subsurface remains were generally not visible on the ground surface. Field reconnaissance, therefore, included both an on-the-ground survey and limited archaeological testing at selected locations within the right-of-way where conventional hand testing methods could be utilized (i.e., those areas not capped with asphalt). The visual reconnaissance failed to locate any historical archaeological sites, although one isolated historical artifact (5DV2670) was found (Figure 2).

Due to the abundance of concrete and asphalt cover, only two areas within the Speer Viaduct Replacement Project right-of-way were chosen for archaeological testing (Figure 2). Limited subsurface materials were recovered.

Test Area 1

A 1 m x 2 m test pit, located in the floodplain near the confluence of the South Platte River and Cherry Creek, was excavated to a depth of approximately two meters below the present ground surface (bpgs). Although the upper strata of this pit contained some modern debris dating to the 1930s and 1940s (when the railyards were expanded into this area), no relevant historical remains were observed. The soil consisted of typical alluvial deposits containing sand and water-worn cobbles of various sizes. This area probably represents a previous channel of the South Platte River. During the early settlement of Denver the confluence of the South Platte River and Cherry Creek was located immediately northwest of Wewatta Street, only two blocks from the Tremont House. The South Platte shifted to its present location as a result of a severe flood in 1912.

Test Area 2

Test Area 2 was located beneath the Speer Viaduct on the east side of 13th Street, near its intersection with Walnut Street. This area represented one of the few locations within the project area that was not paved or disturbed by railroad activity. A series of 15 shovel test pits, each averaging 30 cm in diameter, were excavated to a depth of 30 cm bpgs. The tests revealed numerous fragments of window glass, brick, cut nails, and other building materials, as well as ceramics and bottle glass. Although the remains were mainly fragmentary, the presence of diagnostic artifacts signaled the potential for

additional buried deposits. The remains were designated site 5DV2669. Archival research revealed no significant historical or archaeological information on the site location, and it was assessed as not eligible to the NRHP (Carrillo et al. 1987:20).

The results of the survey and test excavations provided only limited information concerning the specific location and nature of possibly buried historical remains within the right-of-way. However, the fieldwork did provide insights regarding future historical archaeological reconnaissance in the project area. Based on a review of historical records, documents, and maps, it was evident that the remains of several potentially significant historical structures could be located within the corridor for the proposed Speer Boulevard realignment. Of particular note was the Tremont House, an early Denver hotel, originally located on the west side of 13th Street. Site 5DV2669 was located on the opposite (east) side of 13th Street, but at the same basic elevation as the Tremont House. The modern location of the Tremont House consisted of a paved parking lot used by Auraria Campus students (Figure 3).

Based on the limited data obtained from the two test areas (particularly Test Area 2), it was proposed that extant archaeological remains, perhaps consisting of foundations and artifacts dating to the initial settlement period of Denver, could be present beneath the asphalt. According to historical records, the location of the Tremont House had apparently not been extensively disturbed between the time the hotel was torn down in 1912 and the paving of the parking lot. The probability was therefore considered high that important features, potentially representing a site or sites meeting NRHP criteria, could be exposed during the Speer Viaduct Replacement construction project (Carrillo et al. 1987:2).

Ground Penetrating Radar Study at the Presumed Location of the Tremont House

Ground-penetrating radar (GPR) is a method of remote sensing which entails seismic reflection of low frequency electromagnetic signals (Heimmer 1992:7, 37). When electromagnetic signals are introduced into the ground via a surface transmitting antenna, radar energy is absorbed or reflected by subsurface materials depending primarily on their electrical properties. The approximate nature and shape of a subsurface feature (or "anomaly") can be determined based on the magnitude and frequency of the received signal, and depth is calculated according to the signal delay time, or "transit time" (e.g., the time difference between the initiation of signal transmission and its detection by the receiving antenna).

A GSSI SIR-8 GPR system was employed in the fall of 1988 at the supposed site of the Tremont House in an effort to test the 1987 survey observations (Carrillo et al. 1987). Attempts were made to locate walls or other anomalies associated with the hotel structure (Figure 4). A 5 m x 5 m grid was established over the parking lot as a control for the investigation. As predicted, anomalies (interpreted as wall foundations) were

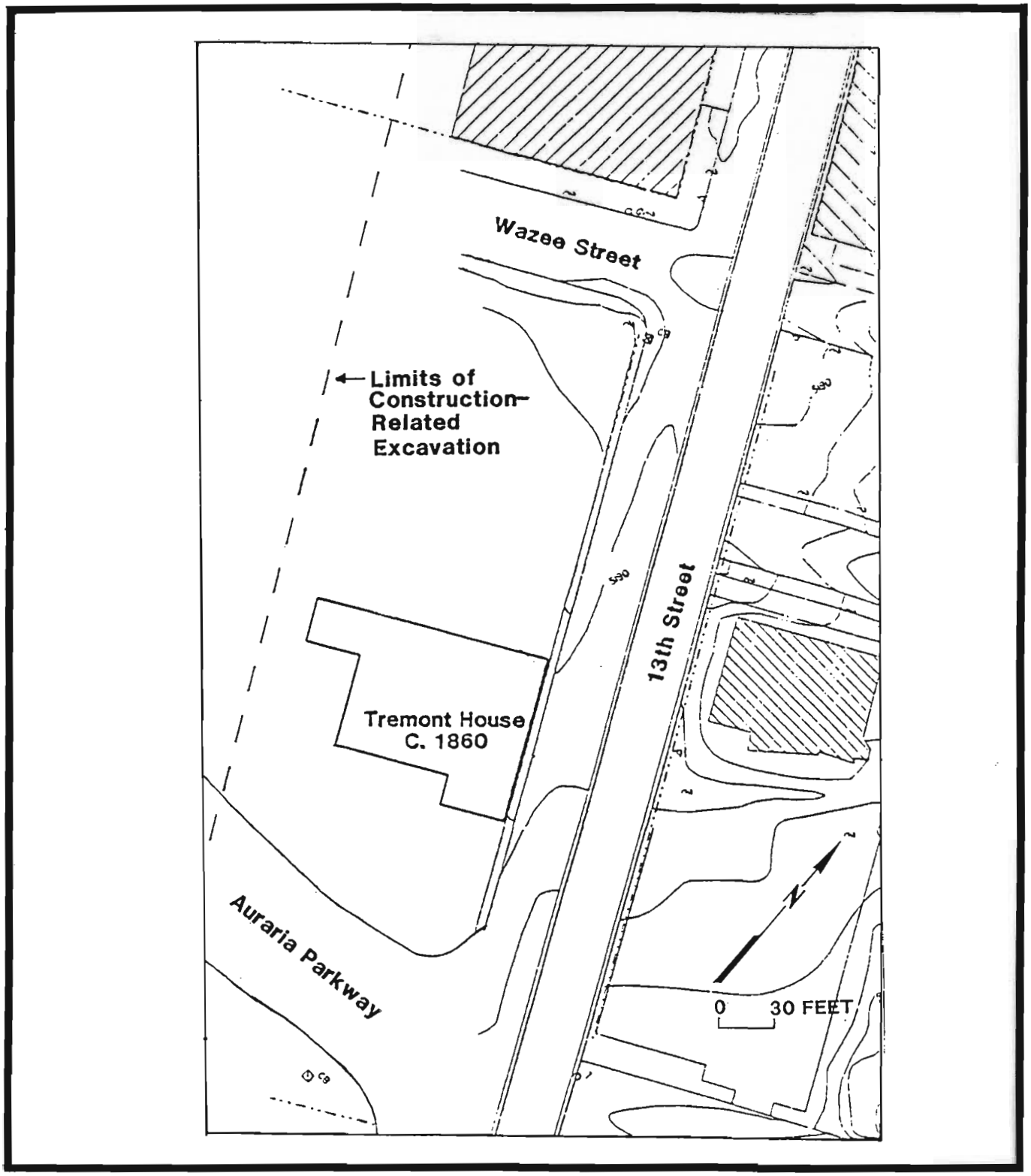


Figure 3 - Location of the Tremont House Hotel within project right-of-way.

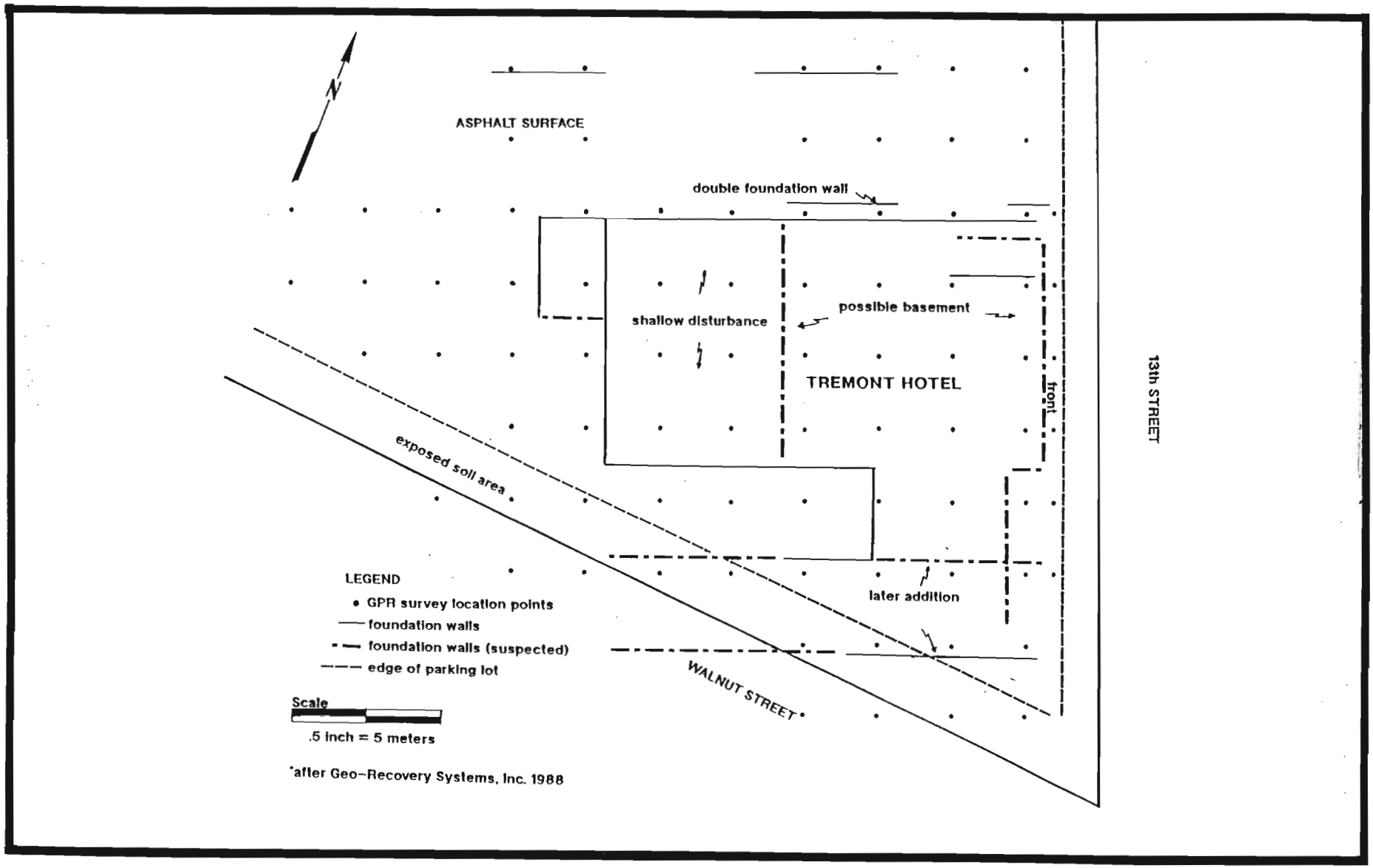


Figure 4 - Map Showing Results of the Ground Penetrating Radar Study.

identified that appeared to be consistent with the historically documented shape and dimensions of the Tremont House. Depth of penetration ranged from four to seven feet (1.2-2.1 m) across the site. Deep data retrieval obtained from an area thought to be the interior of the hotel indicated a possible basement complex (Heimmer 1988).

Test Excavations at the Tremont House

In late December 1988 and early January 1989, test excavations were completed at the location of the Tremont House. Testing was feasible only during this period, since the parking lot was not used during the school holiday break. Two goals, both exploratory in nature, guided the archaeological test excavations. The first involved an attempt to verify the existence of foundation walls and other subsurface features indicated by historical research and the ground penetrating radar study. Based on this information the second task, that of arriving at an NRHP-eligibility determination for the site, was accomplished.

The following test excavation procedures, developed in cooperation with the OAHP, were implemented during the initial exploratory phase at the Tremont House:

(1) Test excavations initially employed a backhoe to remove specified sections of the asphalt pavement.

(2) In selected locations, monitored backhoe units were excavated. These locations, identified by both the GPR study and historical research, appeared to be areas potentially containing extant architectural and archaeological feature remains (such as wall locations, cellars, privies, etc.), as well as related artifacts associated with the Tremont House.

The areas where foundations had been predicted and anomalies noted during the GPR survey were investigated using a backhoe and hand tools (Figure 5). These archaeological tests verified that the GPR anomalies were indeed foundation remnants. The backhoe was used to remove the overburden to a point immediately atop the walls, which were then exposed using a trowel and wisk broom such that architectural details (such as brick placement and orientation) were defined. Portions of 12 distinct walls were exposed using this technique. Associated artifacts were provenienced according to the general area of their location. A site planview map was produced using a Leitz transit and taped distances. This data helped to establish the physical relationships between the various walls such that the general extent and architectural layout of the structure could be defined. These data were incorporated into the data recovery plan for the site. The initial tests revealed architectural features consisting of brick foundations in association with artifacts dating to the 1870s-1880s period of the hotel's existence.

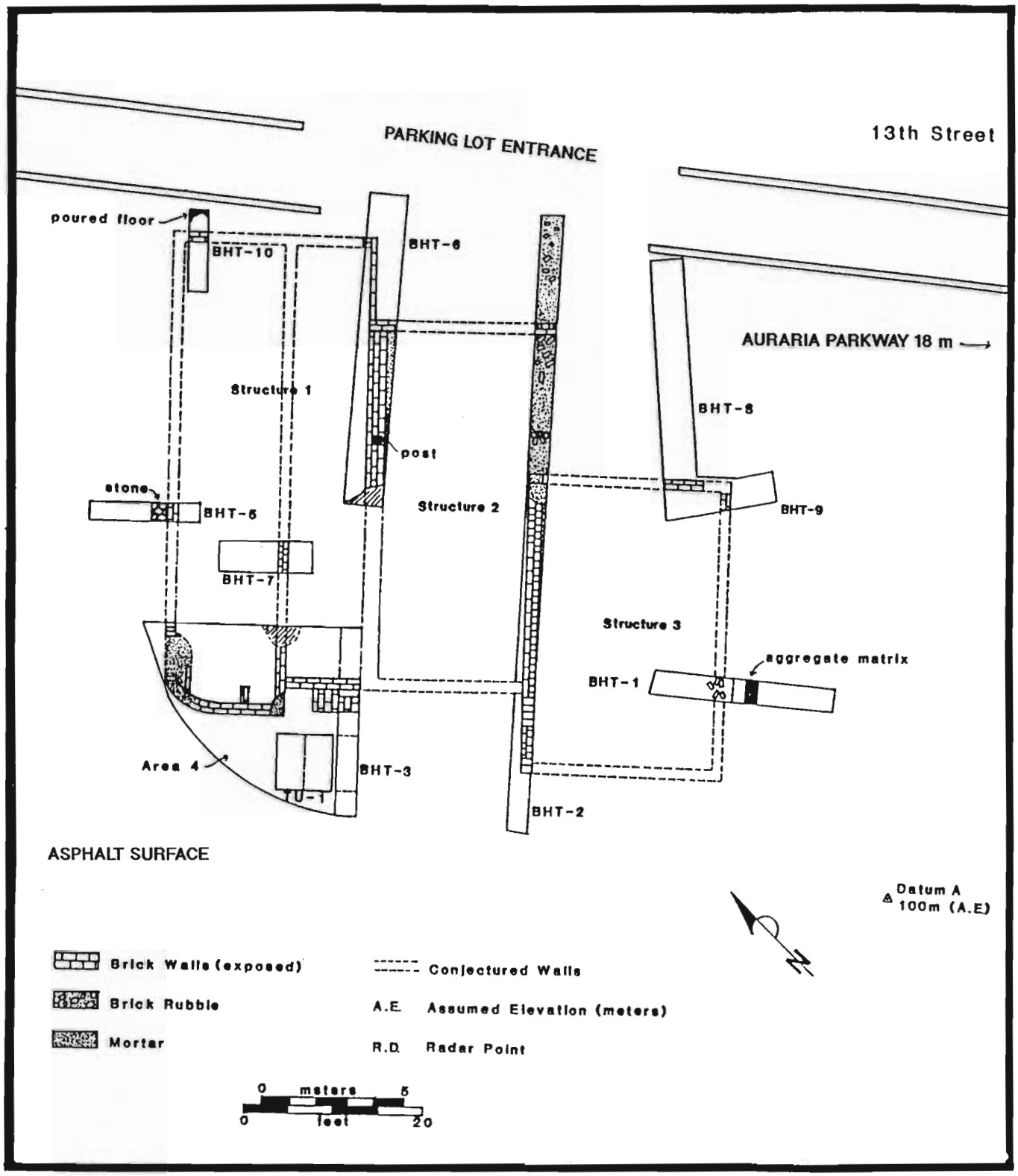


Figure 5 - Map of 1989 test excavation program at the Tremont House.

In addition to the tasks outlined above, a 2 m x 2 m test pit (Test Pit 1) was systematically excavated in order to: (1) define the depth and complexity of the site, both as a guide for future archaeological exploration as well as to estimate financial parameters for its completion; and (2) obtain stratigraphic data and period artifacts from in situ contexts. Test Pit 1 was located in the northwest corner of an area in which the GPR indicated a potential feature (Figure 5). The depth of the feature was comparable to the depth indicated by the radar and was tentatively interpreted as a basement (Figure 6).

The Data Recovery Plan

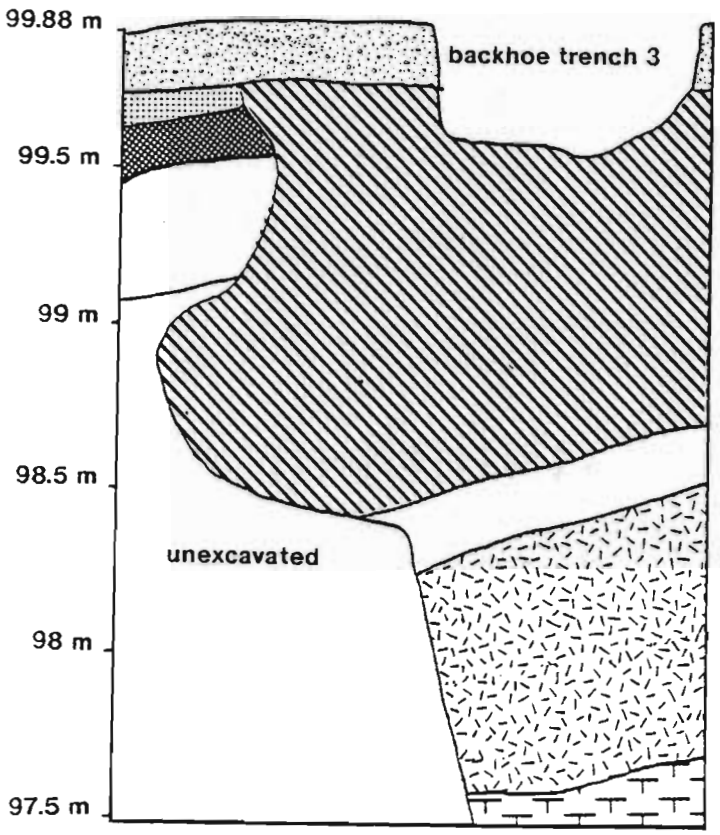
In order to create an adequate road base on which to construct the proposed at-grade segment of Speer Boulevard, CDOT Engineers determined that construction excavations would necessarily extend to a depth of five feet (1.5 m) below the existing ground surface. Consequently, all subsurface brick foundations associated with the Tremont structure(s) would need to be completely removed and replaced with homogeneous fill for the roadway foundation. As a result, significant archaeological remains associated with the Tremont House would be totally destroyed by these construction activities.

A data recovery plan was developed to ensure that adverse effects to the NRHP-eligible resource would be negated through its implementation. The data recovery plan was established in agreement with the ACHP's "Recommendations for Archaeological Data Recovery" (Part III) and 36 CFR Part 66.

The Tremont House Data Recovery Plan, outlined in Carrillo et al. (1989), was structured in a phased approach. Test excavations to that point had provided sufficient data to formulate an NRHP eligibility determination, but had not fully delineated the areas associated with the original building from those resulting from later additions. The initial phase of data recovery, therefore, involved placement of 1 m^2 and 2 m^2 mitigation pits, the intent being to define those areas that would probably yield the most comprehensive data during subsequent block excavations (later data recovery phases). In particular, work focused in those areas thought to contain information applicable to the research goals outlined in the data recovery plan.

Conclusions

The ensuing chapters outline the results obtained during implementation of the data recovery plan. The results are initially keyed to information outlined in the historical overview (Chapter 4), which places the Tremont House within both a national and regional economic and political context. As expected, when characterized in conjunction with environmental factors, the late 19th/early 20th century historic context



LEGEND

- Parking Lot Foundation Subsoil
- 1912 Flood Deposit
- Feature A: Probable Vandal's Pit
- Feature B: Pre–1890 Metal Pipe And Associated Trench
- Feature C: Probable Pre–1890 Refuse Pit
- Alluvial Sand Deposits
- Alluvial Sand Deposit (Sterile)

Scale

0 m .50 m 1 m

*Elevations given as meters below surface; surface is designated as 100 m.

Figure 6 - Soil profile of south wall, Test Pit 1 (1989 testing program).

affected the cultural and social system in Denver during the Tremont's existence, and this is evident in the archaeological record. The architectural chronology of the Tremont House is revealed using historical maps, newspaper accounts, and other sources. Additionally, site-specific archaeological patterns are explored which chronicle the hotel's architectural evolution, as well as broader changes in social and economic conditions derived from a functional and temporal assessment of the artifact inventory.

CHAPTER 4

HISTORICAL OVERVIEW OF COLORADO, DENVER, AND THE TREMONT HOUSE

Introduction

Prior to the discovery of gold in the Rocky Mountains in the 1850s, the land located within the present political boundaries of Colorado was situated in four separate territories. The area west of the Continental Divide was part of Utah, a portion of the southeast belonged to New Mexico, and the remainder of the eastern section was administered by Kansas and, to a lesser extent, Nebraska (Hafen 1948:199).

The region first gained national attention during the first decade of the nineteenth century. Subsequent to their journeys across the northern plains to the Pacific Ocean between 1803 and 1806, reports by Merriwether Lewis and William Clark circulated throughout the east which told of the wonders and wealth of the far West. Given the great demand for animal furs at that time, Anglo-Americans began to realize the tremendous financial opportunities available from trapping animals and trading and selling their pelts in the Rocky Mountain West. These reports stirred entrepreneurs to look at the vast, generally uncharted area west of the Mississippi River as a great storehouse of natural resources to be exploited. Between the 1820s and mid-1840s, over two dozen trapping and trading outposts were established from New Mexico north to Montana, including several in Colorado (Billington 1967:444-463; Carrillo and Mehls 1992). The federal government, through the U.S. Army Corps of Topographical Engineers, sent out dozens of exploratory parties to survey the western lands. By the 1830s occasional military patrols to the Great Plains and Rockies worked to ensure peaceful coexistence between the expanding white population and indigenous peoples (regardless of the effects of emigration on the latter). From the adventures of Zebulon Pike to Stephen A. Long's expedition of 1820 and beyond, officials in Washington, D.C. took an increasing interest in the West (Goetzmann 1979:32-48; Hafen 1929:220).

In Colorado, the discovery of gold in the Rocky Mountain region in the late 1850s represented the beginning of a period of significant change and upheaval. Impacts from the influx of Anglo-American settlers and their increasing economic power base were felt regionally as well as nationally. Mining was the major economic activity that contributed to the establishment of Denver and surrounding towns in the Rocky Mountain region, although agriculture became increasingly important as the population base rapidly increased.

Events of the early years of Denver's development, and the subsequent changes which occurred into the first decade of the 20th century, are outlined in various documentary sources, including census records, maps, newspaper accounts, and diaries.

The nature of available archival source material is a crucial aspect of historical research, as it serves to guide one's perspective when developing the processes of archaeological data retrieval.

In this chapter, attention is initially focused on relevant aspects of general United States history and the important environmental, economic, political, and social variables (such as the Civil War and the Silver Crisis of 1893) that transpired between 1859 and 1912, during which time the Tremont House was an active part of the community. Major economic influences during this period, both on national and regional levels, are stressed. In addition, the regional political climate, featuring such things as the push for statehood, are examined as variables influencing change. One vital trend was the population increase between approximately 1859 and 1910, which resulted in Denver becoming the major economic center on the High Plains.

Denver's architectural evolution is reflected through construction stages and trends region- and nationwide, of which several are readily apparent locally: 1) log cabins; 2) frame structures with stone foundations and cellars; and, 3) brick structures with cellars. Aspects of each stage, in particular the latter two, are reflected in the architectural history of the Tremont House. The Tremont underwent several architectural changes and renovations during its existence, until a combination of rapidly shifting economic trends and natural phenomena eventually resulted in its demise.

The historical time periods outlined in Buckles and Buckles (1984) are introduced in order to develop a well-balanced context that includes historical periods as well as archaeological data. It is necessary to define historical links to archaeological data in order to develop research considerations that will place past events into a clearly defined framework useful in both a scientific and lay context. Toward this end, historical periods are often delineated using major economic or political events as temporal bookends (e.g., Buckles and Buckles [1984] define the 1860 to 1876 period as the "Gold Rush to Statehood Period").

Historical Research Methods

For specific information regarding the Tremont House, the best source of information often proved to be early newspaper accounts. Special events, important visitors, and news about new construction and improvements to the building were found in columns on local news. Advertisements also provided information about renovations. The Rocky Mountain News, which began publication at approximately the time of the Tremont's initial construction, was the most consistent source of information. Because the Denver Public Library's index to the newspaper is not particularly informative, daily issues published during times of significant events were scanned, and those of other periods were spot checked. Additionally, transcripts of newspaper articles and advertisements relating to the Tremont House, also obtained from early issues of The

Rocky Mountain News, were graciously made available by Mr. Alan J. Kania of Parker, Colorado.

Sanborn Fire Insurance Maps, updated approximately every 10 to 15 years, were useful in identifying the shape, size, material, and functions of various portions of the building (illustrating, for example, the locations of the saloon, kitchen, and parlor). Structural additions were recorded on these maps as well as any changes in use through time. The Colorado Historical Society has the original bound versions of the maps, with updates pasted on the pages. This literally allowed a glimpse beneath later architectural revisions, and led to an estimation of the date of certain alterations to the building proper or its surroundings. Other maps, such as Baist's Real Estate Atlas of Denver and assorted planviews of the city, helped verify location, size, and general appearance of the Tremont.

Various city publications provided information about the Tremont House. The Denver City Directory, published beginning in 1874, identified the address and use of the hotel, and provided a general time frame for its destruction. The Colorado State Business Directory (1873-1912) also verified the use of the structure. Denver Municipal Facts, another city publication, contained information about the flood of 1912. Unfortunately, publication of the magazine ceased in September of 1912, only a month after the flood. Building Permit Applications for the period 1889-1935, located at the Denver Public Library, were also reviewed, but contained little pertinent information.

Historic photograph collections at both the Colorado Historical Society and Denver Public Library were consulted, but only the Historical Society files contained a frontal photo of the entire Tremont House (taken about 1860; Figure 7). Other photographs show only portions of the hotel and the surrounding area. However, these were useful to document changes both to the building and neighborhood. Several pictorial histories of Denver contain additional historic photographs of portions of the Tremont House.

General information about Denver was found in numerous books addressing the city's history. The earliest of these was Baskin's History of the City of Denver, Arapahoe County, and Colorado, published in 1880. Additional information was discovered by perusing newspapers and magazines from the period. Specific information about the architecture of Denver was found in Brettel (1973). Regional mining history was derived primarily from Fell (1979), Young (1970), King (1977), and Linghenfeller (1975). Two general history books, Handlin (1968) and Morris (1976), provided information about U.S. history. Additionally, both general and specific information was gleaned from several documents in the Colorado Research Context series, specifically (Mehls 1984) and (Hill 1984).

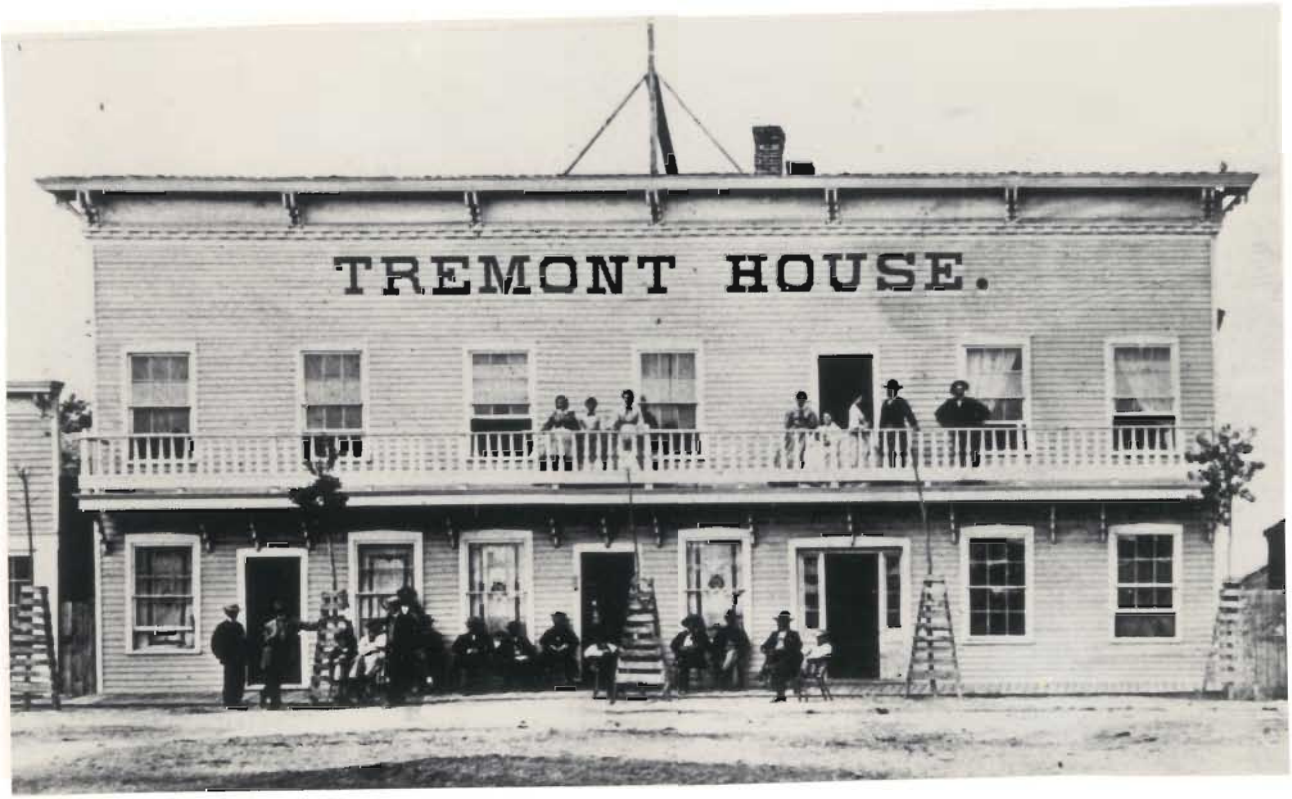


Figure 7 - Early 1860s photograph of the Tremont House; view to west-southwest. Courtesy of the Colorado Historical Society.

General United States History, 1859 - 1915

Throughout the mid-nineteenth century the United States focused on westward territorial expansion. The principal of Manifest Destiny, which invoked white America's supposedly preordained right to colonize the entire North American continent, was the political doctrine attached to the moods, motives, and rationalizations of the time. Expansionism dominated the presidential campaigns of the 1840s and early 1850s. Following on the heels of the success of the Mexican-American War in the late 1840s, the discovery of gold in California in 1848 served as the critical impetus spurring rapid expansion into the newly acquired western territories. There appeared to be no limit to the Anglo-American triumphs across the country, and concomitant promises of material gain (Lamar 1977:704-705). By the mid 1850s, however, the slavery issue began to confuse the goals of expansionism. The primary question revolved around whether Manifest Destiny, and all it entailed, would include the spread of slavery as a social and political tenet. The Wilmot Proviso of 1848 and the Compromise of 1850 were legislative measures that addressed this matter. The former, although never enacted, sought to exclude slavery from territory acquired during the Mexican War; the latter established several precedents: California was to be admitted to the Union as a free state, New Mexico and Utah as "right-to-choose" territories, and slavery was to be abolished in Washington D.C. A new fugitive slave law also was passed during this time.

In 1854, the Kansas-Nebraska Act created the territory of Nebraska as a free state. Subsequent southern opposition resulted in an amendment that divided the land into two territories: Kansas and Nebraska. Nebraska would remain free while Kansas would likely be settled by slave-holding Missourians (as noted above, Colorado was at that time part of the Kansas Territory). In August, 1858, adoption of the Lecompton Constitution, which recognized slavery, would have admitted Kansas to the Union as a slave state. However, Kansas voters rejected the constitution and elected to remain a territory. It was not until 1861 that Kansas was admitted to the Union as a free state.

Abraham Lincoln, running for the Republican nomination for president in 1858, stated in his famous ""A House Divided" speech that the nation could not survive as a united entity if it remained separated over the slavery issue. In early 1860, southern leaders threatened to secede from the Union over slavery. As a result, the Democratic party split, with northern supporters selecting Stephen A. Douglas as their candidate and southern sympathizers electing John C. Breckenridge to represent their interests. This division in the Democratic vote assured victory for the Republican candidate, Abraham Lincoln.

In late 1860 South Carolina, followed by ten other southeastern states, seceded from the Union and formed the Confederate States of America. Jefferson Davis was elected president of the Confederacy in 1861. On April 12, 1861, the shore batteries under the command of General Pierre G.T. Beauregard opened fire on Fort Sumter in Charleston harbor to begin the Civil War (Hafen 1948:199-221; Mehls 1984:40).

During this turbulent period gold was discovered in the Rocky Mountain West, an event which produced a series of political and economic developments facilitating and encouraging mineral extraction and resultant exploitation of the land. Major factors crucial to these developments included (1) the political development of the territory and the state; (2) the advent of large-scale Anglo-American settlement in the Colorado Territory; (3) the effect of this settlement on Native American populations; (4) the development and evolution of agriculture; (5) the development of the early transportation system; and (6) the impact of the railroad.

Political Development of the Territory and State of Colorado

Organization of the Colorado Territory coincided with the onset of the Civil War. In early 1859 newly arrived emigrants to the region began formulating ideas and rallying support for creation of a new state or territory. The popular belief held that a legally constituted government would provide more effective regional control, and the new residents would therefore not be directly responsible for their own safety and welfare. Additionally, creation of a territory would necessitate unifying the disparate mining districts under one administrative unit. Until the Colorado Territory was established, mining districts in northeastern Colorado north of the fortieth parallel were under the jurisdiction of the Nebraska Territory, but were essentially beyond its effective control. Early Colorado settlers (e.g., pre-1859) had therefore established the Territory of Jefferson. Although the newly established government was not sanctioned by Washington, a constitution was drafted, a governor elected, and a delegate seeking official territorial recognition was sent to Congress (Mehls 1984:30-40). The extralegal territory had considerable support by its residents because it assured stability and order in the region, and also served as the initial step toward the creation of a sanctioned territory.

Congress was not able to deal with the Colorado issue in 1859 because of the more pressing problems created by increasing friction between the northern and southern states. It was not until late 1860, during which time the thirty-sixth Congress was awaiting the inauguration of Abraham Lincoln, that Colorado's request for territorial status was accepted. The people of Colorado, believing an attempt would be made by the Confederate States to invade its gold regions, remained loyal to the Union. After debating borders and names, the request was passed by Congress on February 28, 1861. Two days later President James Buchanan concurred, but left the appointment of territorial officials to his successor.

William Gilpin, a prominent politician, soldier and entrepreneur, was named the first territorial governor by President Lincoln, whom Gilpin had supported in the 1860 election. Nearly twenty years earlier, Gilpin had been a member of Captain John C. Fremont's western expedition. However, Gilpin left Fremont in Oregon in 1844 and returned east via Bent's Fort, thereby getting his first view of what was to become Colorado. In addition to his political loyalty to the president, Gilpin was awarded the

governorship due largely to his prominence as a westerner and familiarity with the Colorado region. Armed with a set of oral instructions regarding his administrative duties in the critical first months of the territory's existence, he was inaugurated on May 27, 1861 (Lamar 1977:442).

After Gilpin's arrival he toured several regional settlements and mining camps. He also administered a territorial census, which revealed a total population of 25,331, 3,000 of whom resided in Denver. By the beginning of the Civil War, immigration quickly declined as large numbers of individuals returned east to participate in the fighting (Hafen 1948:283).

Colorado's first General Assembly convened in Denver on September 9, 1861. Most of this session was devoted to the enactment of a civil and criminal code, and the establishment of 17 counties and allotment of county machinery (Hafen 1948:284).

The issue of statehood arose shortly after creation of the Colorado Territory, which resulted in many local as well as national battles. Within the territory many groups favored statehood for ultimate political stability and continued economic growth. Conversely, others were concerned with the prospect of increased taxation, in addition to the possibility that a military draft for the Union Army would be extended to the new state. Nationally, a faction of the Republican party known as the "Radical Republicans" was concerned about its fate in the elections of 1864. As a result, members of this group were directly responsible for defeating Colorado's initial bid for statehood under the pretext that the territory did not have a sufficient population to qualify. However, their real concern was that the new state would vote Democratic, which would ensure their defeat. Four years later the same group of Republicans found themselves in need of extra Congressional votes, and looked to Colorado to provide them. When the statehood issue again went before Congress in the late 1860s it passed, but President Andrew Johnson refused to sign an enabling act creating the state because he realized the political intentions of his enemies in Congress.

Between 1868 and 1875 the statehood issue was set aside as attention focused on pursuing local interests in business, agriculture, mining, and other industries (Mehls 1984:41). It was not until 1876 that national Republican needs jibed with the needs of local interests. On July 1 of that year the territorial electorate overwhelmingly voted its approval for statehood. President Grant issued the proclamation of statehood on August 1, 1876 (Lamar 1977:243).

Anglo-American Settlement in the Colorado Territory

Gold was discovered along Cherry Creek in 1858, and by the spring of 1859 the first of approximately 100,000 fortune-seekers began the trek to the Rocky Mountain region, rallied by the famous slogan "Pikes Peak or Bust." This activity was short-lived, however, with approximately half failing to complete the journey west. Of those who

did arrive, many became discouraged within a few months and returned east to their homes. Despite this rampant disillusionment, the more hardy and adventurous began new lives as miners (Carrillo 1986:11-18). Hafen (1948:176-177), describing the conditions of those who remained, notes that not all who came were entirely discouraged. Many of the new arrivals stayed in the general area, and towns that originally consisted of temporary tent communities grew to include crude log and frame homes, stores, hotels, and saloons. This growth occurred not only in Denver but also in other locations along the Front Range and adjacent mountain areas. These settlements evolved into such towns as Boulder, Central City, Fort Collins, Colorado Springs, Pueblo, and other communities where gold had also been found (Carrillo 1986:16). Newly established businesses were supplied with merchandise and equipment by wagon trains from points east.

Economic mechanisms that regulated the production and transportation of food and other necessities to the region became well established in 1859. These mechanisms consisted of (1) the transportation of eastern-manufactured goods by wagon from Missouri River towns; (2) the procurement of wild game locally; (3) the production of processed food from local sources; and (4) the manufacture of local products. These production systems became more efficient in the succeeding ten years, prior to the introduction of rail transportation to the region. Most goods and supplies were hauled by large ox trains from Missouri River towns. As such, the price of manufactured goods and foodstuffs was quite high, and there are indications that wild game provided a large part of the local diet as an alternative. The January 11, 1860 edition of the Rocky Mountain News contained an article which read in part: "Game is abundant in our markets just now, and can be purchased at very reasonable prices. Venison, 7 and 8 cents per pound [0.5 kg], bear meat, 30 to 50 cents per pound [0.5 kg], turkeys, very large and fat, $1 and $2 each, grouse and ducks, 50 cents per pair" (Hafen 1948:184).

As early as June 1859 locally grown spring vegetables were being marketed. By August, garden vegetables of quality equal to those in established Midwestern and Eastern settlements were available. In September, watermelons, muskmelons, cabbage, and squash from farms in the area of the Huerfano and Arkansas Rivers and Fountain Creek, as well as other locations, were being sold in Denver. By 1860 the Arkansas and Huerfano valleys and other areas within the territory were supplying beef and dairy products. Sheep and vegetables were also supplied from settlements in northern New Mexico and, by the mid-1860s, from the Purgatoire Valley region (Carrillo 1986:17-18, 1990).

Despite the demand for local produce and livestock generated by newly emerging towns along the Front Range, settlement in Colorado remained sparse in the early 1860s due to local Indian problems and the Civil War. For the next five or six years, the nation's attention was absorbed by the Civil War and Reconstruction. At the same time, other forces were transforming the country, as industrial and commercial developments made significant advances. During the 20 year period following the Civil War, the

United States expanded from an agricultural nation producing raw materials for European markets, to being one of the world's great manufacturing powers.

After the Civil War ended, Anglo-American migration westward began in earnest. The last half of the 1860s was crucial in terms of the historical development of the Great Plains. The military presence in the Colorado Territory was critical to settlement in that they provided protection for immigrants traversing the plains via the South Platte and Santa Fe Trails, as well as in the Rocky Mountain gold fields and associated settlements. Plains Indians were being actively subjugated and placed on reservations; bison had been almost totally exterminated by Anglo hunters in order to satisfy fashion demands by Easterners and Europeans for buffalo robes, thereby eliminating the foundational element of Plains Indian survival. A traditional way of life that had endured for centuries was thus coming to an end (Kenner 1969:112-114).

Impact of Settlement on Native American Populations

In the late 1840s and early 1850s only a few settlers, mainly New Mexican Hispanics, lived in the San Luis Valley near the headwaters of the Rio Grande River. Similarly, the Arkansas River valley supported only a few scattered settlements of former mountain men and traders, including a few women, who practiced subsistence agriculture. The initial Anglo-American settlements of this period were located primarily in the middle and lower portions of the Arkansas River valley and along its tributaries, including the St. Charles, Huerfano, and Purgatoire Rivers, and were restricted to the area east of present-day Pueblo and west of present-day Lamar (Mehls 1984; Carrillo 1990; Carrillo et al. 1991).

After the Mexican-American War of 1848, William Bent abandoned his original adobe post on the Arkansas River and moved 38 miles downstream, near present day Lamar, where he constructed a stone trading post and began to haul freight for the U.S. Army. In the early 1850s, the U.S. Army had begun to build a series of military posts in the newly acquired territory to control the possibility of revolt by the Hispanic populations who had occupied areas of the Southwest for 250 years, and to protect the new settlers from Native American raids (Mehls 1984; Carrillo 1990).

During the late 1840s and early 1850s a temporary truce existed between the indigenous groups and Anglo-American settlers. The attendant increase in contact between the two groups inevitably produced conflicts, as travelers from the east and midwest traversed the region on their way to the California gold fields. In the Colorado region, Utes and Apaches were the primary source of trouble for most of the new settlements. As a result, in 1852 Fort Massachusetts was constructed in the San Luis Valley to protect the new settlers. The situation became more uneasy in the summer of 1854 when a smallpox epidemic struck the Muache Ute, who blamed the rapidly spreading sickness on infected blankets distributed to them at the Indian agency. On Christmas day the Muache Ute and their Jicarilla Apache allies, led by Chief Blanco,

attacked the trading post at Pueblo, killing most of the residents (Mehls and Carter 1984; Carrillo 1990).

In 1857 William Bent erected a temporary stockade and established a ranch at the mouth of the Purgatoire River. This defensible location, enlarged in 1860, represented the first permanent Anglo-American settlement in Colorado. (The community of San Luis, at the southern end of the broad San Luis Valley, was established in 1852 by indigenous Hispanics.) Other individuals soon began to establish ranches in the Arkansas River Valley.

The initial discovery of gold along Cherry Creek near present-day Denver, and the subsequent Rocky Mountain gold rush in the late 1850s, led to the development of mining camps. The major camps soon became towns, and the permanent settlement of the Colorado Territory began. The vast changes created at both the national and regional levels due to the founding of Denver and surrounding mining communities is evidenced, in part, by population influxes into other portions of Colorado. A shift occurred from a subsistence based economy to commercial agriculture, as did the rapid development of an efficient regional transportation network. The few original ranches in existence were joined by new settlements, especially after the 1862 Homestead Act was enacted by Congress. These settlements became important sources of food supplies for Denver and the other newly emerging mountain towns, especially during the critical period of the Civil War. Unfortunately, this situation also served to exacerbate poor relations between white settlers and the Native Americans. The decade of the 1860s, especially the early portion, was one of persistent turmoil (Mehls 1984; Carrillo 1990).

Between 1861 and 1864, the wagon traffic produced by miners traveling the South Platte Trail (a branch of the Oregon Trail), and via the Santa Fe Trail along the Arkansas River, created significant problems with the Native American populations. In 1861 the Southern Cheyenne and Arapaho signed the Fort Wise Treaty, which ceded their traditional hunting land east of the Front Range to the U.S. government in exchange for a smaller reservation extending along the Arkansas River from Sand Creek to the Huerfano River in southeastern Colorado. Many of the younger Indians refused to accept the treaty. Hunting parties ranged beyond the borders of the new reservation and raids along the South Platte River continued to occur. U.S. Army reprisals followed, and the situation deteriorated throughout early 1864 (Lamar 1977:196-197).

The Cheyenne-Arapaho War, which occurred on the high plains of Colorado, Kansas, and Nebraska in 1864 and 1865, resulted from pressures created by the 1859 gold rush and subsequent Anglo incursions onto Native American lands. In the late spring of 1864, the Cheyenne attacked and burned the Iron Springs stage station, located on the Mountain Branch of the Santa Fe Trail in present-day southeastern Colorado. Attacks on stage stations and travelers increased throughout 1864, especially along the South Platte Trail, and the murder of the white family led to a series of events that resulted in the Sand Creek Massacre.

The Sand Creek Massacre of 1864, wherein over 100 Cheyenne and Arapaho were slaughtered by the U.S. Cavalry, incited violent reprisals. Intensive raiding of settlers spread along the Santa Fe Trail, and communication and commerce between Denver and the mining camps to the west was essentially severed. Julesburg, located in extreme northeastern Colorado, was raided and burned in early 1865. In the fall of 1865, after a year of the bloodiest warfare in central Great Plains history, the Cheyenne agreed to the Treaty of the Little Arkansas, which gave them a new reservation between the Arkansas and Cimarron Rivers. The treaty effectively ended the conflict for most Indians living south of the Platte River (Lamar 1977:196-197; Mehls 1984; Carrillo 1990).

Following the Treaty of the Little Arkansas, many Cheyenne were displaced yet continued the pattern of raiding settlements and/or homesteads. In October 1867 the Treaty of Medicine Lodge (near present-day Medicine Lodge, Kansas) was negotiated with leading representatives of the Southern Plains tribes, including the Comanche, Kiowa, Arapaho, Cheyenne, and other smaller groups. The treaty established a reservation in western Oklahoma between the Arkansas and Cimarron Rivers and called for Native American groups to give up land claims in Kansas. This agreement also allowed stage lines and railroads to pass through hunting grounds. As with earlier treaties, this compact was short-lived as warriors refused to relinquish the Kansas hunting grounds; in the summer of 1868, raids began to occur again. The Saline and Solomon Valleys in Kansas, and the Arkansas and lower Purgatoire Valleys in southeastern Colorado were particularly hard hit (Lamar 1977:560-561; Carrillo 1990).

A major military campaign, led by Major General Philip Sheridan in the winter of 1868-1869, captured the unsuspecting Indians in their permanent winter camps (one part of the campaign was initiated from Fort Lyon on the Arkansas). As a result, most of the Southern Cheyenne and Arapaho were relocated to a new reservation at Fort Cobb, Oklahoma. Consequently, the major threat to settlers in the region had been removed by 1870. However, a few minor incidents involving small groups of Native Americans, primarily in southeastern Colorado, occurred until the mid-1870s (Lamar 1977:560-561; Carrillo 1990).

Agricultural Development, 1860 - 1890

The development of agriculture on the Great Plains began in the late 1850s. Many ranches and a number of towns were established prior to introduction of the railroad, and most continued to prosper after rail service was available. In these towns, irrigation ditches were dug during the early 1870s to supply the farms and towns. Cattle ranching also brought wealth and development to the region (Hafen 1948:327).

After the mining boom, the major factor influencing regional settlement was the inherent potential of the semi-arid plains, particularly for stock raising and farming. The livestock industry flourished, with sheep and cattle driven to Denver and surrounding towns to be sold. Prior to the Civil War, crossbreeding the New Mexican chaurro sheep

with the American merino species had created a market for the improved meat and wool that resulted from the mix. By 1886, Colorado stock growers owned approximately 2,000,000 head of sheep, many of which were a direct result of this genetic amalgam (Carrillo 1990).

The open range cattle industry was also introduced into Colorado early in the 1860s. This period witnessed a period of large-scale cattle drives in the Trans-Mississippi West. By the beginning of the Civil War the industry was becoming established, but stalled during the mid-1860s when the Union blockade of the South prevented drives out of Texas. Part of the demand for beef production was taken up by newly established ranches in southeastern Colorado. During this time, longhorn cattle ran wild on the Texas prairies such that, by 1866, they had increased to about five million head (Lamar 1977; Carrillo 1990).

The cattle industry began in earnest after the Civil War, with cattle drives initiating in Texas and heading north to Kansas railheads, for eventual distribution in eastern markets. Drives also were undertaken in Colorado between Front Range communities and emerging mining towns. Many Confederate veterans who returned to economically depressed Texas were induced to round up wild cattle and drive them to markets. Although cattle sold for only four dollars a head in Texas, cattle populations in the east had been decimated by the war, and the animals sold for 40 to 50 dollars a head. In addition, the northern and western army outposts, Indian reservations, mining towns, and understocked range land created a considerable demand for cattle (Lamar 1977:174-175; Carrillo 1990).

The years between 1866 and 1885 mark the period when large cattle drives became a popular method of transport for the cattle industry. Livestock trails often followed Indian or pioneer trails and depended extensively on the availability of grasslands and water. The trails generally extended north or west from Texas. In 1866 Charles Goodnight and his partner, Oliver Loving, pioneered a 1,126.5 km (700 mile) route from west of Fort Worth, Texas, to Fort Sumner, New Mexico. From there, Loving moved north to Colorado on what became known as the "Goodnight-Loving Trail." Two hundred sixty thousand head were driven north to the railheads and ranges of the Great Plains in 1866 (Figure 8). In 1867 Goodnight drove another herd to Colorado and began a ranch on the Apishapa River in southeastern Colorado. Other ranches were developed in similar fashion during the late 1860s in southern Colorado (Lamar 1977:175; Carrillo 1990).

By 1880, the cattle boom paralleled that of the mining industry. The potential for quick profits of 25% to 45% attracted capitalists from the eastern United States and Great Britain. British and Scottish capital helped launch the some of the largest cattle companies on the Great Plains (Lamar 1977:181).

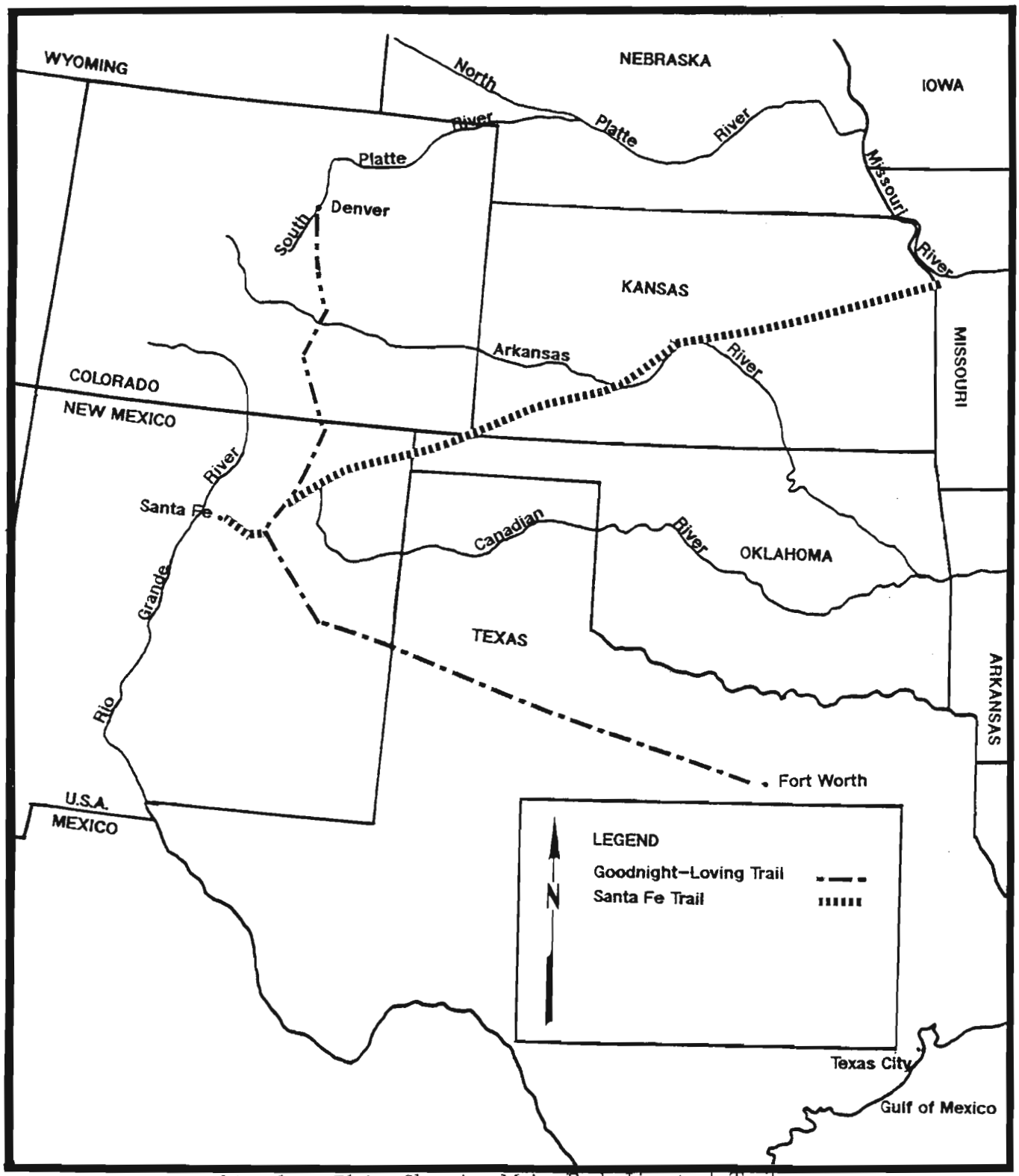


Figure 8 - Map of Southern Plains Showing Major Early Livestock Trails.

The Prairie Cattle Company Ltd., a Scottish syndicate, was formed in 1880 to invest in the American western cattle industry. By 1882 it had purchased the JJ Ranch in southeastern Colorado for $625,000, and had acquired other ranches in New Mexico and Texas. By the early 1880s, the company owned 906,500 ha (2,240,000 acres) in Colorado alone. The company's land holdings encompassed 3,500 square miles and contained approximately 54,000 cattle and 300 horses (Carrillo 1990).

A significant aspect of the open range cattle industry was the practice of securing watering areas such as springs, sometimes illegally. The illegal fencing of large tracts of public land led to violent disputes, especially with sheep ranchers, over ownership of water and land (Carrillo 1990; Lamar 1977:182).

A series of transitions occurred within the open range cattle industry in the 1880s as the demand for beef continued to increase. The rapid development of the industry contributed to significant problems such as overstocking and overgrazing. All available land had been used to the point where even marginal prairie had been overgrazed. However, profits were so high, especially during the first half of the 1880s, that cattlemen were not yet concerned about potential losses. Eventually a combination of environmental and cultural factors, such as hard winters and an increase in sheep ranching and homesteading, brought an end to the open range cattle industry (Lamar 1977:182). Between 1885 and the end of 1887, the Great Plains region was hit by a series of droughts and hard winters, both of which were particularly detrimental to the cattle industry (Carrillo 1990). For example, the Prairie Cattle Company suffered losses every year between 1886 and 1895. From a high of 113,155 head in 1884, its herd was depleted to 83,970 by 1888. By the beginning of the twentieth century the company again made profits, but the hard times had made it clear that more advanced procedures for caring for livestock were needed. These procedures included fencing the open range and the introduction of new and hardier breeds of cattle (Friedman 1985:92-93; Lamar 1977:182).

The Early Transportation System, 1859 - 1870

The need for imported goods in new Colorado towns was met by pioneer freighters using wagon caravans. Although overland freighting had begun as early as the 1820s with the establishment of the Santa Fe Trail, the construction of military posts and mining camps during the 1850s created a heavy demand on the transportation companies. The firm of Russell, Majors, and Waddell was the largest freight company at the time of the gold rush. In 1858 the firm utilized 3,500 wagons, 40,000 oxen, 1,000 mules, and over 4,000 men in its transportation operations (Lamar 1977:1190). The road along the Platte River was the favorite route from the eastern states. Alexander Majors, co-owner of the freighting firm, described in detail the organization of a wagon train operation:

> The organization of a full-fledged train for crossing the plains consisted of from twenty-five to twenty-six large wagons that would carry from three to

> three and a half tons [2.7 to 3.2 metric tons] each, the merchandise or contents of each wagon being protected by three sheets of thin ducking, such as is used for army tents. The number of cattle necessary to draw each wagon was twelve, making six yokes or pairs, and a prudent freighter would always have from twenty to thirty head of extra oxen, in case of accident to or lameness of some of the animals. In camping or stopping to allow the cattle to graze, a corral or pen of oblong shape is formed by the wagons, the tongues being turned out, and a log chain extended from the hind wheel of each wagon to the fore wheel of the next behind, etc. Thus making a solid pen except for a wide gap at each end, through which gaps the cattle are driven when they are to be yoked and made ready for travel... The entire train of cattle, including extras generally numbered from 320 to 330 head and usually from four to five mules for riding and herding. The force of men for each train consisted of a wagonmaster, his assistant, the teamsters, a man to look after the extra cattle, and two or three extra men as reserve to take the places of any men who might be disabled or sick... They walked by the side of their teams, as it was impossible for them to ride and keep them moving with regularity. The average distance traveled with loaded wagons was from twelve to fifteen miles (19 to 24 km) a day (Hafen 1948:186).

The expense associated with hauling freight from Missouri River towns to the West was considerable. As an example, freight costs averaged "...$1.30 for every one hundred pounds (45.4 kg) carried one hundred miles (160.9 km) in summer, and $4.00 for the same distance in winter" (Lamar 1977:1054). Therefore, 100 pounds (45.4 kg) of goods freighted from Kansas City to Denver--a distance of approximately 600 miles (966 km)--might average between $7.80 and $24.00 depending on the time of year it was shipped:

> In 1858 Russell, Major and Waddell alone contracted with the government to deliver up to fifteen million pounds. Each year prior to the completion of the transcontinental railroad the amounts carried by the freighters increased; by 1865 an estimated 125 million pounds of merchandise was being transported in a single year by all the freighting outfits. Without this service, the United States Army would have found it impossible to protect the frontier, and many mining districts in the West could not have survived. At the same time, the cost of delivery, based upon weight and distance, was largely responsible for the high cost of living (Lamar 1977:1190).

Despite the high cost, the freighting of merchandise and equipment to the Rocky Mountains increased considerably between 1850 and 1865. In 1850, at the beginning of American control of the Southwest, 9,072 metric tons (10,000 tons) of freight were hauled from the Missouri River to the Rocky Mountains in over 3,000 wagons. By 1865 the

amount of merchandise hauled overland was approximately 57,150 metric tons (63,000 tons) per year, or about 21,000 wagon loads (Hafen 1948:187-188).

Impact of Railroad Development, 1870 - 1915

By 1870 the population of the Colorado Territory had reached nearly 40,000. In 10 years Denver's population had nearly doubled, from 2,600 residents in 1860, to 4,759 in 1870 (although the city's transient population of miners and assorted homesteaders made an accurate count difficult, as outlined below). Several factors contributed to the population growth during this period. The end of the Civil War five years earlier had allowed, and in many cases encouraged, easterners to migrate west in large numbers. In addition, Plains Indians had largely been removed to reservations outside the territory. There were also improvements in mining technology, and the agricultural potential of the region had been demonstrated. The rapid advance of people to the frontier region was greatly facilitated by the expanding reach of railroads, which allowed efficient transportation of emigrants and freight (Hafen 1948:323). Throughout the 1860s a substantial portion of the raw materials and merchandise that supported Colorado's settlers were transported to Denver by wagon and warehoused and distributed from that central location. Ultimately, however, the railroad would dictate which community would distribute the freight. The Continental Railroad Bill, passed in 1862, provided for the construction of a transcontinental railroad and opened the door to unlimited growth west of the Mississippi. Denver's leaders lobbied for the transcontinental railroad to pass through their city and over the mountains on its way to the Pacific Coast. The Union Pacific Railroad, however, chose the less mountainous northern route through Cheyenne, Wyoming. A local company, composed of segment of Denver's power elite, was organized to build the 106-mile Denver Pacific spur from Denver to the Union Pacific line in Cheyenne. The line was completed in 1870.

After the Denver Pacific connected Denver and Cheyenne, the ensuing development and prosperity worked to transform the young city. Meanwhile, in 1872 the Kansas Pacific Railroad reached Denver through its northeastern Colorado route. The presence of rail transportation stimulated increased immigration, and Denver's citizens became confident of a great future for their city and territory. Denver's population of about 5,000 in 1870 doubled by 1872, and by 1874 its population had reached 20,000 (Hafen 1948:328; Lamar 1977:296-298).

After construction of the Denver Pacific line was completed, the Denver and Rio Grande (D&RG) was formed by the Union Pacific, with plans to tap the Southwest with a narrow-gauge railroad and extend into Mexico City. Although the plan did not completely materialize, the line reached the town of Pueblo in 1872 and provided Denver with access to southern Colorado's coal, lumber, construction stone and firebrick clay resources. The D&RG extended as far as El Morro (Trinidad) on the Upper Purgatoire by the mid-to-late 1870s, which in turn allowed further exploitation of the coal resources in that portion of the state (Lamar 1977:296-299; Carrillo et al. 1991). With the

introduction of the railroad into Colorado, a more efficient support base was established, which contributed to distribution of food and supplies to the expanding Front Range population. In contrast to the expensive shipping costs charged by wagon freighting companies, railroad freight rates allowed for reasonable shipment of eastern and midwestern goods. The average charge to ship 907.2 kg (1 ton) of freight 1.6 km (1 mile) by railroad was 2.88 cents in 1881; this figure had dropped to 0.77 cents by 1907 (Lamar 1977:994). A comparison of 1881 railroad and overland freight company rates shows that, for the same amount of goods transported an identical distance, the latter charged nearly 10 times more.

The National and Regional Economy, 1865 - 1890

During the period 1865 to 1890, the Gross National Product (GNP) more than doubled as a result of rapid population increase nationwide, which resulted in more people entering the workplace, in turn stimulating the economy. Manufacturing became the major industry as the demand for goods during and after the Civil War increased. Not only were consumer goods in demand, but also materials for railroads, buildings, and heavy equipment. Without doubt, the country's rapid economic expansion between 1850 and 1890 was directly tied to the development of a national communication and transportation system. Improved communication and transportation lowered the costs of agriculture and industrial products, while the increased output caused population to spread and created opportunities for investment. Industrial expansion went hand in hand with the exploitation of mineral resources.

Improved transportation and communication networks also facilitated the expansion onto the western frontier. In the 1850s, the line of white settlement had barely crossed the Mississippi River. Obstacles to settlement included the view that the "Great American Desert," with its poor soil, lack of trees and water, and semi-arid climate, was unfriendly to agriculture; the notion that mountains were not only natural barriers to settlement, but also a dangerous area unsuitable for families; and the constant threat of Indian attacks.

The lure of gold and riches eventually led many to overcome these fears. News accounts of vast wealth in the mountains encouraged numerous miners to head west. Still, it was not an ideal place to bring a family, and the permanent population grew slowly. After the first few years of placer mining, which required very little financial support and materials, the mining frontier in the Rockies developed into a major industry.

The methods and requirements of mining changed as miners followed gold and silver bearing lodes, developed new methods of separating and processing minerals, and sought better methods to ship the ores. As a result, more financial resources were

needed to provide for new, expensive equipment, and miners were forced to sell shares in their claims to raise capital. This created an active speculative and investment market.

The continuing development of the transportation and communications system encouraged further expansion and settlement in the West. The telegraph and the telephone, both developed by the 1870s, provided contact between the western frontier and the east and west coasts. The expanded railroad lines, which now reached the west coast, contributed to the development of an elaborate distribution pattern by which manufactured goods were moved across the country. Innovative ways to supply the rural markets also arose (i.e., the establishment of the Sears Roebuck and Montgomery Ward catalogs).

By the 1890s, the United States had made unparalleled material achievements thanks to the age of industrialization. There were, however, other problems brewing in the country. Two of the more visible were the ever increasing gap between the wealthy and the poor, and the rise of individualism coupled with the disregard for the common welfare. These social problems led to the reform movement at the turn of the century.

Despite the doubling of the GNP, fiscal problems dominated the country's attention between 1890 and 1894. Most of the concern revolved around the silver question, which had obvious impacts on Colorado's mining industry. In 1890 the Sherman Silver Purchase Act was passed, requiring the U.S. Treasury to buy silver. The result was a drain in the gold reserves as people paid in silver and withdrew gold. The hoarding and withdrawal of gold to Europe produced the Silver Crisis of 1893. The act was repealed in 1893, but by then it was too late. The gold supply would not be replenished for at least another two years.

The 1893 financial crisis did have some positive results as it led to new development in the agricultural and industrial fields. A period of experimentation and re-adaptation of crops emerged. The rise of the sugar beet and fruit industries, for instance, could be directly tied to the economic crisis. Agencies such as the U.S. Department of Agriculture and the Agricultural College at Fort Collins also advanced dryland farming methods and gave special emphasis to the development of hybrids suited to dry farming. The most notable of these included the introduction of new wheat strains, especially Russian varieties, which were better adapted to arid environments.

As memories of the disastrous 1880-1890s faded, settlers again made their way to the Great Plains. In 1909, this movement was aided by a combination of favorable governmental, economic, agricultural, and environmental factors that contributed to the intensive settlement of the eastern Colorado plains. One element was the Enlarged Homestead Act of 1909, followed by the Stock Raising Act of 1916, which allowed for 129.5 and 259.0 ha (320 and 640 acres), respectively, of government owned land to be patented by individuals for farming and ranching purposes. Additionally, manufacturing continued to be dominant as established businesses expanded, became more efficient,

and accelerated operations. High agricultural prices were prompted by increasing user demands and the promotion of product availability attributable to the railroad. Finally, the environment cooperated, with a few years of above-average rainfall (Mehls 1984:143; Carrillo 1986).

Early History of Denver

During the summer of 1858, two groups of miners were prospecting along the South Platte River and its tributaries. William Green Russell, leading a group from northern Georgia, met and joined forces with a group from Missouri at the confluence of Cherry Creek and the South Platte. Failing to find gold at that location, all but 13 of the 104 men returned east in July. Green Russell and his brothers remained behind with the group and, continuing to prospect, found a gold placer in nearby Dry Creek. Later that fall, the Russell brothers returned to the banks of Cherry Creek to settle for the winter. On October 30, 1858, the Auraria Town Company was organized, named after the Russell brothers' hometown of Auraria, Georgia.

Another group, from Lawrence, Kansas, arrived at Dry Creek in September and established a town they called Montana City, but the settlement was short-lived due to its poor location. The Lawrence group then relocated to Cherry Creek and organized the St. Charles Town Association on a one-mile square plot of land, located across from Auraria on the east bank of Cherry Creek. However, the group returned to Kansas for the winter without constructing a single cabin. In November, a group from Leavenworth and Lecompton, Kansas, took over the St. Charles town site, assuming it had been abandoned. The Denver City Company, organized on November 22, 1858, was named in honor of then Kansas Governor James W. Denver. The principal thoroughfare was named Larimer Street, after the group's leader, William Larimer.

With the onset of winter, one-half of the Russell group returned to the East for supplies. The men who remained spent the last few months of the year building shelters for the winter. Both towns hoped to be the center of activity in the spring, when new prospectors would arrive on the banks of Cherry Creek in search of gold. The spring of 1859 indeed brought an increase in population, and new buildings sprang up in the two little towns along the banks of Cherry Creek, as the influx of miners and visitors created an early need for housing and services. By the time the Rocky Mountain News published its first issue in April 1859, Auraria consisted of 150 homes, three stores, two hotels, one bakery, one print shop, two saloons, two meat markets, a blacksmith, a carpenter, a tinsmith, and a tailor (Figure 9).

The earliest structures were crude cottonwood log shacks chinked with mud, with log chimneys plastered with heavy adobe, dirt floors, and no glass windows. Bricks were used in construction in late 1859, after Thomas Warren opened the first Denver brickyard. The streets of Denver and Auraria were ungraded, with no lawns, flowers, or

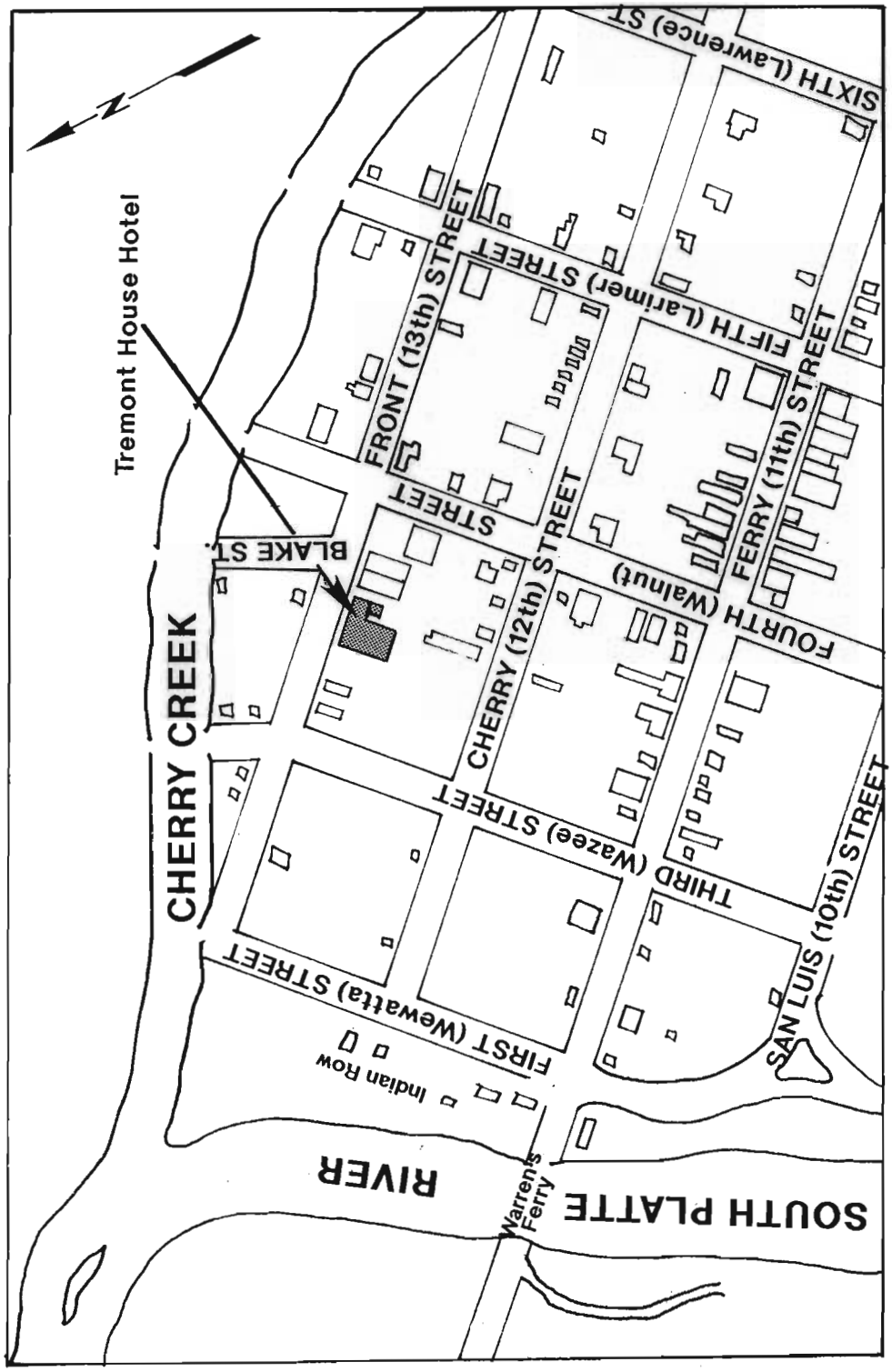


Figure 9 - Map of Auraria in 1860 (after W. L. Maze map, 1936). Courtesy of the Colorado Historical Society.

trees. Sidewalks were simple dirt trails along the edge of the road. Water was carried by barrel from the creek or was obtained from privately dug wells.

When compared to the great cities of the East, the two towns were crude, dirty, disorganized, expensive, and culturally deprived. One 1860 visitor commented "in New York, our one-story house, fourteen feet by twenty with eight feet of shed for a kitchen, would be an indifferent stable; here it is a palace" (Ashley 1936:6). However, despite the primitive appearance of the two settlements, there were numerous trappings of civilization. Billiards, chess and debating clubs, a circulating library, news stands, horse racing, poetry readings, and religious services were available to early residents of Denver and Auraria.

By 1860, the two towns were engaged in fierce competition. Denver City had grown faster than Auraria and had more hotels, saloons, and businesses. This was due in part to the ability of the Denver City Company to bring the Leavenworth and Pikes Peak State Company to their side of the creek. Auraria was more residential, but managed to support a small business district. The issue was settled only when the two towns were united under one name, Denver, on April 15, 1860. Auraria then became known as West Denver.

As the year progressed, log homes gave way to frame and brick structures, with wooden floors, glass windows, and shingle roofs. Numerous two-story business blocks were constructed in both parts of town, and more businesses opened. One out of every three buildings contained a saloon (Figure 10).

However, it would not be until the arrival of the railroad in 1870 that significant advances would occur (i.e., street grading), as well as the installation of gas in 1871, water pipes in 1872, and electricity in 1880. The city began to "assume metropolitan airs":

> Distinct commercial and residential sections emerged with a central business district around Blake, Larimer, Market, and Fifteenth Street, and a stylish residential area southeast from Fourteenth and Arapaho, where John Evans's house set the pattern for merchants, promoters, and land speculators. Following a serious fire in April 1863, the city rebuilt in an improved style. In the business area, two- and three-story brick structures replaced wooden frame houses after the municipality forbade construction with wood downtown. Residential areas blossomed with two-story houses in Victorian styles, while the completion of an irrigation ditch in 1865 made possible the planting of trees and lawns. The whole effect delighted visitors, who found this 'square, proud, prompt little place' an oasis of architectural quality in the dreary West (Abbott et al. 1982:67).

Figure 10 - Photograph of Blake Street, West Denver, in 1868; view to the west. Note the Tremont House at far left. Courtesy of the Colorado Historical Society.

During the period between 1860 and 1870, over $27 million worth of gold came out of the mountains. During this time Denver became a regional business and cultural center, although it's population remained very transient. The population of Denver in 1860 had grown, but was still well under 5,000. It was estimated that during the 1860s, between 100,000 and 150,000 unattached men passed through Denver on their way to the gold fields and mining camps. The Rocky Mountain News, in an article dated September 6, 1860, indicated that "The Broadwell, the Platte, the Tremont, the Vasquez, and the Jefferson Hotels, are all doing a good business for this dull season" (Rocky Mountain News 1860:3). In 1865 the rates charged at most of the Denver Houses, such as the German House, Bell House, Denver House, Colorado House, Bennett House, and others, including the Tremont House, were as follows:

Day Board, per week	$14.00
Single Meals	$ 1.00
Lodging, per night	$ 1.00
Transient Board, per day	$ 4.00

(Rocky Mountain News 1865:1, 4)

The transient population continued to predominate, as the permanent population had added only 10 individuals by 1870. This group no doubt brought revenue and stimulated business in Denver, but this type of population also restricted economic growth. The miners came into town to spend their newly found riches on gambling, liquor, prostitutes, and room and board. But, because they did not own property, they could not be taxed and they had no vested interest in the community. Streets remained ungraded and treacherous in bad weather. There was no system in operation to obtain public water from the river. Tallow candles were the only form of lighting.

Transportation was the key to growth and development in Denver. In the years prior to the arrival of the railroad, the only means of transportation was by stagecoach or freight wagon. The first stage line opened for business in 1859. By 1860, there were three competing lines bringing contact with the rest of the country. But stages moved slowly, and consequently it took a great deal of time for information and news to reach the isolated community.

Supplies, especially construction materials and food items, were hard to get and often very expensive. Glass and nails remained expensive throughout the decade. Brick was an inexpensive building material because it could be made on-site in Denver. Milled lumber became cheaper and more readily available after the Excelsior Mill opened in 1861.

Until the mid-1860s, the availability of certain food items such as fruits and vegetables was irregular, and the quality questionable. Both were unattainable in 1858, but by the summer of 1859 local gardens provided fresh produce, although prices were high. Adequate growing seasons in 1861 and 1862 made vegetables readily available,

but a drought in 1863 decimated most of the crops and raised prices again. The year 1864 saw an improvement in produce quality, but crops were once again lost in 1865, this time by grasshoppers. Around this time, the City Ditch was built to carry water into town. In an effort to beautify the desert-like community, a portion of this water was made available to residents for lawns and trees.

In addition to the produce grown locally, some items were shipped from the Missouri River Valley, New Mexico, and Utah, but prices were high and shipments irregular. Flour, sugar, cornmeal, potatoes, lard, bacon, and beef were plentiful, although quality and price varied. Butter and cheese were also readily available. Wild game, such as venison, rabbit, turkey, and prairie hens, were common food items until they were no longer available in the immediate area due to the effects of development on wild habitats. After about 1865, settlers turned to domestically raised cattle and hogs.

As previously mentioned, Denver built an extension line to the main track of the Union Pacific railroad in Cheyenne, Wyoming in 1870, finally tying into the nation's transportation and communication network. As a result, mail service improved, and yard goods, building supplies, fashions, periodicals, and books became more readily available. By 1872, the population that had remained relatively stable for a period of 10 years quickly doubled.

During the period 1870 to 1900, over $224 million worth of gold and $541 million worth of silver was removed from the mining districts in Colorado. This immense wealth spurred population, building, and business booms in Denver. The arrival of the railroad in 1870 was also a major factor in the rapid expansion. Denver quickly became the hub of Colorado's rail network. Boosterism, made easier by improved communication with the eastern cities, attracted new businesses, entrepreneurs, and investors and led to a boom in economic growth.

The increase in out-of-state investors coming into the region resulted in more information about Colorado Territory and Denver being spread back to the East. Individuals were therefore encouraged to come to Denver in large numbers. The majority of investment capital went into transportation, real estate, banking, utilities, and manufacturing. Mining speculation was relatively minor in comparison.

The arrival of the Denver & Rio Grande Railroad in 1871, and the construction of other railroads through the expanded Platte Valley in the 1880s, changed the early character of the area, as noted in the previous section. By the late 1880s, this part of Denver had developed into an important wholesale and warehousing market. By the turn of the century, most of Denver's wealthy had left the older neighborhoods along the South Platte and moved "uptown", toward the State Capitol, where they built large fancy mansions. At the same time, major industries such as the Anheuser-Busch and Blatz Breweries opened up new facilities on Wazee Street adjacent to the railroad yards. Many small businesses and industries, including hotels and boarding houses, livery stables,

foundries, and blacksmith and repair shops sprung up to service the railroad lines. Coal yards and stonecutting works represented industries that located adjacent to or within the railroad yards north of Wazee (Carrillo et al. 1987:6).

By the turn of the century factories, warehouses, railroad yards, and aging housing now lined the banks of the South Platte River. The poor were left behind to move into the old neighborhoods. In the one-half-mile square area between Colfax Avenue, Speer Boulevard, and the South Platte River, nearly 8,000 people, one-quarter of whom were immigrants, inhabited the crowded boarding houses, small frame homes, and old hotels in 1890. Eastern European Jews began to settle in the area in the 1880s after the German and Irish populations moved uptown. By the early 20th century, this area was predominately Jewish.

The late nineteenth century also witnessed the emergence of a commercial section on Blake Street east of 13th Street called "Chinatown". The main part of this district consisted of a series of common wall brick buildings on the north side of Blake. In actuality, this block represented the third Chinatown district in Denver. The first had been located on 16th Street between Wazee and Blake, and the second on 20th and 21st Streets between Market and Blake (the latter district eventually relocated between Market and Larimer Streets and gained notoriety as the vice-filled "hop alley.") The existence of chinese laundries in the 13th Street vicinity indicates that Chinese occupied West Denver from the early 1870s, after the introduction of the railroad. Denver's Chinese population grew gradually until the turn of the century, when a total of 3,000 inhabitants were counted. Over the next two decades, the Chinese districts were repeatedly raided and many of the occupants forced to leave the city. As a result of the constant intimidation of the Oriental community, the Chinese population dwindled to about 160 by 1930 (Carrillo et al. 1987; Hermsen 1990; Carrillo et al. 1991).

The so-called "power elite" who ran the city made improvements (such as street paving) to their own neighborhoods and the business district, but left the rest of the city to fend for itself. When Mayor Robert Speer took office in 1904, he began the "City Beautiful" movement, waged a war on poverty, and expanded many of the services to include the poor neighborhoods left out by the power elite. To improve the appearance of the community as well as modernize the city, many older brick businesses were torn down and replaced by larger, more elaborate commercial structures. West Denver, however, remained a lower class neighborhood full of small, run-down brick and frame houses.

The low lying area of West Denver, bordered by Cherry Creek on the north and the South Platte River on the west, was a frequent victim of flooding. Major floods in Cherry Creek occurred in 1864, 1876, 1885, and 1912 (refer to Appendix A). Each time, West Denver was devastated by raging flood waters, yet the community was repeatedly rebuilt. The July 1912 flood swept many of the small frame and brick homes off their foundations. Of those that remained intact, over 75 buildings were ordered demolished

by the city building inspector because they were determined unsafe. The Tremont House was one of the victims scheduled for demolition.

Between 1900 and 1910, the population of Denver increased nearly 60% due to the large influx of immigrants. By 1920, the growth rate had slowed but was still on the rise. The population of Denver in 1920 was 256,491, and was just about evenly split between men and women. This was in contrast to the 1870 population of 4,759, 76% of whom were men.

The early 1900s marked a period of railroad consolidation in the Platte Valley during which the principal lines came under the control of the Denver & Rio Grande and the Colorado & Southern Railroads. These two companies subsequently expanded their railroad facilities, which served to encourage further industrial development in the area. Wazee Street became a solid warehouse district early in the twentieth century, and additional warehouses went up west of the 14th Street Viaduct, replacing the stone yards originally located there. Several buildings were connected to additions located under the viaduct, and were evidently built after completion of the viaduct in 1898. The streets south of Wazee were characterized by similar warehouse and manufacturing expansion on a smaller scale (Carrillo et al. 1987).

The residential elements in this increasingly industrialized area were gradually pushed further west. By the 1940s, factory and warehouse development had displaced virtually all of the early day residences east of 11th Street. In 1944, the 1300 blocks of Wazee and Blake were demolished to accommodate expansion of the Wazee Market, a wholesale produce market which eventually extended from 9th to 13th Streets between Wazee and Walnut. In the early 1970s, many of the remaining historic buildings in the area were demolished to allow construction of the Auraria Higher Education Center. At the same time, the extensive late nineteenth/early twentieth century railroad complexes of the Platte Valley yards began to disappear as buildings were abandoned and demolished (Carrillo et al. 1987).

Social and Economic History of the Tremont House

Hotels were plentiful in early Denver due to the transient nature of the population. The construction of hotels, inexpensive boarding houses, and temporary apartments was an important aspect of Denver real estate. On February 1, 1859, David Smoke opened his cabin at 10th and Larimer as the El Dorado, the first hotel in Denver. A short time later, in the spring of 1859, Charles Blake and Andrew Williams opened a large cabin as a store and hotel on Blake Street between 14th and 15th. Called the Denver Hotel, this establishment was the predecessor to the more popular and well-known Elephant Corral. Another early hotel, the Broadwell House at 16th and Larimer, was also built in 1859.

It was to the small pioneer settlement of Auraria that the widowed Mrs. Maggard came in the fall of 1859. She had survived two Indian attacks on her trip west from Missouri by wagon train, and earned her nickname "Mother Maggard" for the care she took of her fellow passengers on the long trip west. A shrewd businesswoman, she offered to feed the 30 travelers at two dollars a head. Upon her arrival in Auraria in 1859, she opened a boarding house (later the Tremont House) and became known as the first woman booster of Denver because of her active campaign to encourage more pioneers to settle in Denver.

She named her house the Temperance Hotel and was famous for her buffalo tongue pot pies with cabbage and bacon. Business was so good initially that Mrs. Maggard built an addition to her boarding house in the early summer of 1860. But during a time when one out of every three buildings contained a saloon, a temperance hotel was bound to fail. In July of 1860, she sold the building to Nelson Sargent and a partner named Bradford.

Mrs. Maggard moved to Colorado City and opened another hotel called Mother Maggard's Hotel, which was also known for its superior food. In 1861 the first legislature met in Denver and named Colorado City as the territorial capitol. When the second legislature met in 1862, its members stayed at Mother Maggard's. During the battle to relocate the capitol to Denver, one argument was heard that Colorado City should remain the capitol because "Denver was trying to hog all the governing," and besides, "there's a woman running Maggard's Hotel and she knows how to cook!" (Hafen Vol II 1948:560). As the argument continued, the legislature was lured to Mother Maggard's under the pretense of compromising the issue and locked up for nine days until they solved the matter.

Nelson Sargent and Bradford remodeled the hotel, added a bar, and reopened under the name Tremont House. The Rocky Mountains News, in its August 27, 1860 issue, reported that:

> The Subscribers, Proprietors of the above House (formerly known as the Temperance House) having completely renovated and refined it in modern style, would solicit the patronage of their friends and the public generally. Having added a Bar, well stocked with the choicest beverages of the Eastern Market, and all the comfort of a first-class hotel. We mean that the Tremont shall rank second to none" (Rocky Mountain News 1860:1).

The origin of the name may derive from an earlier log cabin owned and operated by David Taylor of Boston as the Tremont Hotel. Located along the creek in Auraria, a 1901 newspaper article called Taylor's Tremont Hotel the first hotel built in Denver.

Sharing the block (bounded by 3rd and 4th Streets on the north and south, and Front and Cherry Streets on the east and west) with the Tremont House in 1860 were

two hotels, the Missouri House and Star Hotel, William Dunn's grocery store, an undertakers parlor, a business block, gun shop, several law offices, livery stables, and a lumber yard. All were false front, wood frame buildings.

On May 27, 1861, the Tremont House was gaily decorated for the inaugural reception for the new Territorial Governor, William Gilpin. A large crowd gathered in front of the hotel as Governor Gilpin gave his inaugural speech from the second floor balcony. Gilpin's term was brief, as he was replaced in the spring of 1862 by John Evans of Chicago. Once again, the crowd gathered in front of the Tremont House as the new governor gave an impromptu speech.

The Tremont House was in its heyday during the early 1860s. Sargent and his wife turned the hotel and its food into the best in Denver. Three articles written in the spring and late summer of 1862 attest to the hotel's popularity. The June 9 article reports that:

> Caution
>
> The writer of this has boarded at the Tremont House in this city for a week or two, and is now afflicted with a severe gout. The rich delicacies and high living furnished by Judge Sargent, are too much for the Junior; but he hopes soon to be able to resume his rations at the Tremont. If you can't stand good-living, don't go to the Tremont (Rocky Mountain News 1862:3).

The article of August 13 reads as follows:

> Tremont House
>
> New hotels are a good thing, and we hope every one of them will be filled to overflowing and compelled to enlarge, but the writer is of the opinion that it will be hard to strike a better one than the old Tremont, under the management of Judge Sargent. The Judge makes no sudden, nor astonishing starts; a big Sunday dinner and "knives and forks' for the balance of the week, but it is a steady thing straight along day after day and week after week. A genuine "groaning board," loaded down with all the luxuries and substantials of the season. If one wants to note the progress of the season, by the advent of new and rare vegetables and other luxuries, all he has to do is to notice the Judge's table, or con over his bill of fare and he'll be posted. The first that enters the market finds its way to his kitchen, and thence, to the dining room, fixed up in the most choice and tempting style. Of the parlors, suits of rooms and other accommodations of the Tremont, it is unnecessary for us here to speak. They are well known, and no further inventory is necessary until that large addition is built, which the increasing business of the house already

demands. We do not suppose any of the guests of the Tremont are going to rush away from it, or we would advise them not to. We would like to copy the everyday bill of fare but have it not at hand just now (Rocky Mountain News 1862:3).

The third 1862 article appeared one week later on August 20 and reported on the arrival of Mrs. Sargent. It reads:

The Tremont

We thought that improvement in the management of the Tremont could hardly be made, but the arrival of Mrs. Sargent to preside over the destinies of the house has dissipated that opinion. Mrs. S. has been here but a few days, yet her handi-work is everywhere visible. Lady guests and families will particularly notice and appreciate her kind attentions (Rocky Mountain News 1862:3).

The hotel survived both the 1863 fire, which destroyed much of East Denver's commercial district, and the 1864 flood, which caused severe damage in low lying West Denver. Photographs of the flood show the hotel surrounded by flood waters one to five feet deep. A newspaper account of June 1, 1864, describes:

Twas not until daylight that the choked up Cherry Creek completely spread itself and formed independent confederations, one stream running down Front Street [in front of the Tremont], deep and impetuous enough to launch a good sized building from its foundation...(The Weekly Commonwealth 1864).

Yet newspaper accounts do not mention actual damage to the Tremont, and it remained open for business with only minor repairs and renovations. In the January 3rd, 1865, issue of the Rocky Mountain News, an advertisement suggests that Nelson Sargent had completed a renovation of the hotel. It reads as follows:

The Proprietor of the above House, having completed it in modern style, would solicit the patronage of his friends and the public generally. Having added a bar, well stocked with the choicest beverages of the Eastern market and all the comforts of a first class hotel and supply the table with the best the market affords. I mean that the Tremont shall rank second to none in the Territory. -- N. Sargent (Rocky Mountain News 1865:4).

That 1865 advertisement is similar to the one which first appeared in the August 27, 1860, edition of the newspaper (see above). Sometime prior to December 21, 1865, after ownership for over five years, Sargent sold the hotel. Charles F. Parkhurst was listed as the owner in 1865 and 1866 (Rocky Mountain News 1865:4).

On December 26, 1865, the Rocky Mountain News reported about a social event that had occurred the previous evening, Christmas 1865. An insight is provided into the social scene in Denver:

Social Life in Denver

> Yesterday's season of enjoyment was a time most favorable for observing the social relations of our citizens. Music, mirth, fun, happiness, and a pretty large modicum of dissipation ruled the hour. So the day passed and the evening witnessed gay and happy groups assembling for the dance. The most reoberobe party was given at the Tremont House, and a happier reunion of the respectable and fashionable elite of Denver never assembled or enjoyed a brighter hour of pleasure. We have never looked upon a more brilliant party. Jolly corpulent jurisprudence hob-nobbed with fascinating, bewitching beauties, whose bright eyes beamed with delight and gaiety, sweet music, graceful dancing, enenuster of wit, and the twaddle of small talk filled the time until the "small hours 'ayant the 'twall" admonished the festive assemblage that another Christmas was past, and the carriage loads of pleasure tired revellers wended their way to their respective homes. This company, upon whom it was a pleasure even to look adding as they were to the ... and enjoyment of a pure social life, was the bright side of Denver society (Rocky Mountain News 1865:1).

This particular article is also very interesting in that it describes a prevalent social situation of the period, apparently common only to select members of the cultural elite. In this same article, the writer continues to describe a different social situation which occurred later in the evening in another portion of town, bringing to mind raucous Hogarthian scenes typical of the 18th century. He goes on to write:

> We now shift the scene, and with the permission of the reader, will endeavor to portray the recreation of the profligate, the frail, and the dissolute. Accompanied by a friend, and being assured of protection by the police, our reporter went to a festive gathering of the depraved kind, ye gods what a gathering! The foulest blasphemers in the shrill treblient female voices, range through the building, causing the heart of the sensible or sympathizing hearer to ache with pity for these creatures, whom to call women were an insult upon humanity. Frantic screams, oaths, curses and yells, filled the hall, while whisky's foul breath enveloped the dancers in a smokey fog through which, the bleared eyes and bloated faces of frail women gleamed malignantly, defiantly, and most beastly. The old Five Pelmis of New York, never present a scene of total depravity exceeding the display made last night at the International. We are not adequate to its description, and therefore draw a veil over its horrors, hoping that kind humanity and official vigilance will work out the much

needed reform here in Denver, that will prevent a recurrence of such scenes (Rocky Mountain News 1865:1).

In the January 2, 1866 issue of the Rocky Mountain News, Parkhurst advertised that the hotel had been renovated. The advertisement reads as follows:

> The present proprietor, having put this popular house in renewed order, would inform travelers from the States and the Mountains that its facilities for comfort and accommodations to transient resident boarders are not excelled in Colorado. His rooms are finely furnished, his tables supplied with the choicest viands and substantials of the market, and the office bar stocked with genuine wines, liquors, and cigars. Billiard Room, Reading Room, Bath Rooms and Barber shop attached. A full share of patronage solicited and satisfaction guaranteed by - Chas. F. Parkhurst, Prop'r (Rocky Mountain News 1866, pg. 3).

By April 22nd, 1866, the Tremont House was closed for two weeks for repairs (Rocky Mountain News 1866). On May 22, an advertisement appeared in the newspaper with Parkhurst taking on a partner. The ad reads:

> Tremont House, Front Street, Colorado
> Parkhurst & Shepard, Proprietors
> This house having been thoroughly renovated, is now in complete order and ready for the accommodation of Travelers and the public generally, and the present Proprietors would inform the Travelers from the States and Mountains that they will use their best endeavors to make this House a HOME, and second to none in Colorado. The Rooms are WELL FURNISHED, the tables supplied with the choicest viands and substantials the market affords. The Bar is stocked with the best LIQUORS AND CIGARS. Billiard Room Reading Room, Bath Room and Barber shop attached. A liberal share of patronage solicited, and satisfaction guaranteed (Rocky Mountain News 1866:1).

By July 24, 1866, Messrs. Parkhurst and Shepard sold their interest in the Tremont to David W. Powers, who had come to Colorado in 1863 from Boston. Under new management, the hotel was once again renovated, repainted, papered, and cleaned. The "new" hotel offered "Tucker's Celebrated Spring Mattresses" as well as the best food in town. Fresh game from the mountains and plains supplied venison and elk to the table, along with rabbit, turkey, and prairie hens. Locally raised cattle and hogs were utilized when wild game became sparse around town. An article in the January 14, 1867, issue of the Rocky Mountain News attests to the fact that more locally raised beef was being served at the Tremont House by 1867:

> The largest beef ever slaughtered in Denver is now hanging on the hooks, at Buttrick's meat market, in West Denver. It weighed, when dressed, eleven hundred and fifty-six pounds, and is from a grass-fed steer six years old. We noticed the Tremont House card sticking on one hind-quarter, weighing two hundred and eighty-four pounds, which shows well for the care that establishment takes of its boarders. Mr. Buttrick kills nothing but American cattle, eschewing as unfit for his customers the diseased cattle from Texas, as he announces in an advertisement to-day. Our readers, in America, will scarcely credit the fact that Colorado can produce such grass-fed beef, in the middle of January, as may be seen at his market... (Rocky Mountain News 1867:4).

In May 1867, Powers sold the hotel to W.Q. Brown, who enlarged the hotel by 25 new rooms. Business was obviously good, and in July Brown took on a partner by the name of Brastow. Nelson Sargent regained control of the hotel in 1869. An interesting aspect in the mid-1860s is that despite the continuing construction activity and expansion at the Tremont House and other hotels, rates were dropping. The day rates, which were $14.00 per week in 1865, had dropped to $10.00 by 1866. By 1869 the price for day board had dropped to $7 per week for day boarders, and had gone from a high of $4.00 per day for transients to $1.00 per day (Rocky Mountain News 1865, 1866, 1869). A man by the name of McCarty became the next proprietor in 1870 and remodeled the hotel several times during his ownership. The June 13, 1871, edition of the News notes that the Tremont Hotel was still considered one of the best hotels in Colorado, and was highly recommended to the traveling public. One other Denver hotel, the Broadwell, was also mentioned. Others consisted of the Barton House in Georgetown and the El Paso house in Colorado City. In 1872, the Rocky Mountain News reported that McCarty had refitted the building inside and out such that old timers would not recognize it. In 1874, an issue of the newspaper mentioned yet another addition to the building, which included a baggage room, a reading room, and a wash room. These improvements, together with the new billiard hall, made the Tremont a complete hotel (Figure 11).

In August 1874 McCarty put the Tremont House up for sale. After the second longest period of lasting ownership of three and one-half years, McCarty sold the hotel in 1875 to W. C. Rippey, although McCarty remained in charge as host (Rocky Mountain News 1875:4). W.C. Rippey operated the hotel through the mid-1870s and saw the building survive another major flood, on July 25, 1875. Once again, the low lying areas of West Denver were inundated. But damage was less severe that the 1864 flood and most buildings suffered only minor damage. The trend of frequent ownership changes would continue throughout the next few years.

As the years went on, the Rocky Mountain News reported less and less about the first class quality of the hotel. The next newspaper entry regarding the Tremont House does not occur until July 13, 1878. It reads: "The Tremont house has been sold to Frank Kenry. The price paid is said to have been $6,000." Frequent ownership changes and

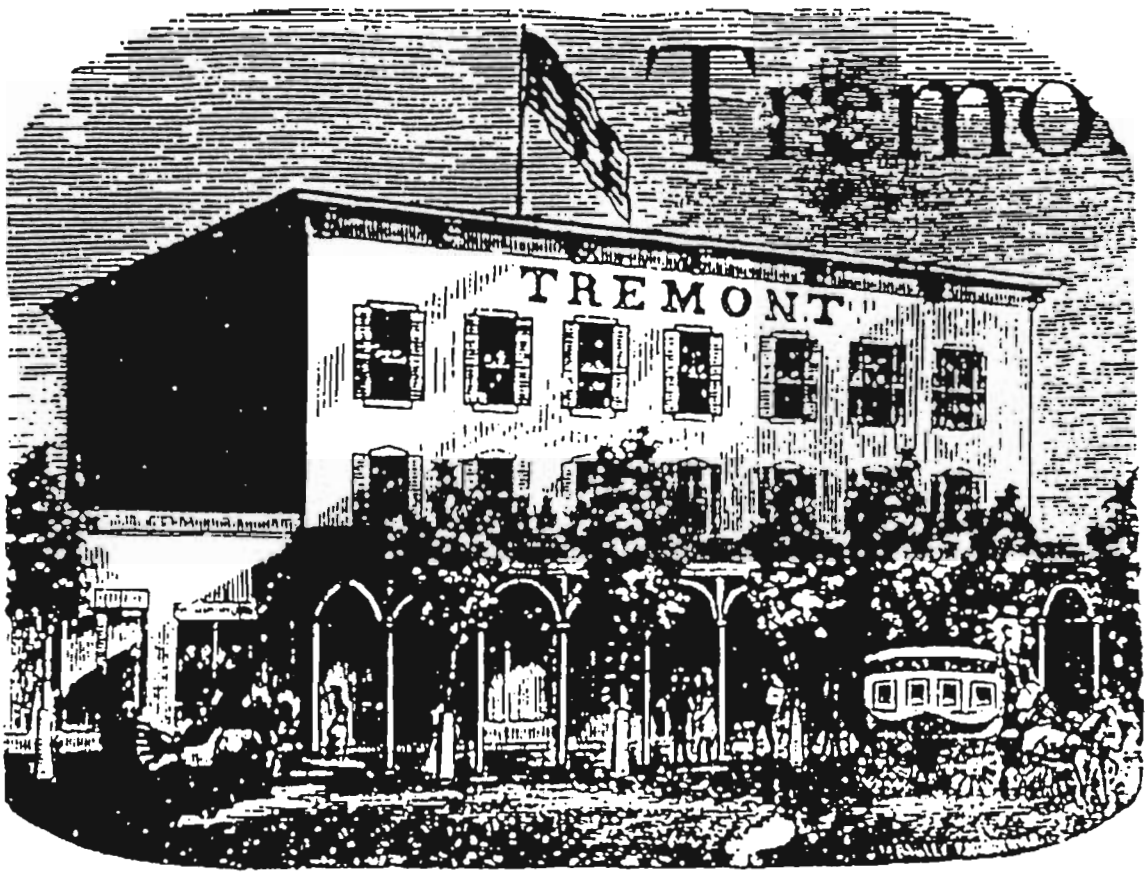


Figure 11 - Tremont House (1870s); from Cherry Creek Gothic, by Sandra Dallas. Courtesy of the Denver Public Library Western Collection.

alterations, combined with the change in population in West Denver, were beginning to take a toll on the grand old hotel.

By 1880, the Tremont House had lost its standing as one of Denver's premier hotels. Newer, bigger, and fancier hotels were being built in East Denver, taking away the customers of the smaller hotels in West Denver. The Windsor Hotel at 18th and Larimer opened in 1880, followed by the Albany in 1885, the Metropole in 1891, and the Brown Palace in 1892. Slowly, West Denver was being overtaken by warehouses and railroad yards. Affluent residents moved uptown towards the State Capitol (built between 1890 and 1894), leaving the West Denver neighborhoods to immigrants and various ethnic groups.

Frequent floods took a toll on the West Denver area, occurring again in 1878 and 1912. It has been said that West Denver never fully recovered from the 1864 flood, when many businesses relocated to higher ground, leaving little new development on the west side of Cherry Creek until the warehouse building boom of the 1890s.

In 1890, the Rocky Mountain News published a story about the history of Auraria and West Denver. In it, the Tremont House was described as one of the great hotels where "scenes were pretty lively at times, and not a few of the schemes which have since done much for the advancement of the city were incubated within the walls." Nelson Sargent was credited with bringing the hotel to its finest hour, but in 1890 the newspaper reported that "he has lost status in recent years and 20 years have passed since [the Tremont] lost rank."

The year 1912 marked the last appearance of the Tremont House in Denver City Directories. At that time, it was serving mainly as a boarding house, with a saloon still operating on the first floor. In January 1912, the Denver Post reported that the owners of the Tremont Bar were suing the American Forge Works next door for damages. The American Forge Works had purchased the 1859 Missouri House, which was located next door to the Tremont, and had converted it into a machine shop. The front of the old log hotel, which had previously been used as a gambling resort, was boarded up. The Tremont Bar complained that the pounding of the machinery was spoiling their beer. Six months later, both buildings would be destroyed by flood.

On the afternoon of July 14, 1912, flood waters from an afternoon downpour raged down Cherry Creek, inundating the West Denver area with water several feet deep. The area hardest hit was bounded by 10th Street, Curtis Street, Cherry Creek and the Platte River. Most frame and less substantial brick buildings were torn off their foundations by the river, leaving thousands homeless. Other more substantial buildings were heavily damaged. The Denver Republican reported that two days after the flood, the Tremont Bar had mud and sand piled as high as the bar, and that by 6 p.m., after a crew had worked all that day, there was still at least two feet of mud left.

The damage was so severe in many instances that the day after the flood, the building inspector condemned between 50 and 75 buildings on either side of Cherry Creek and the Platte River. On July 21, 1912, a headline in the Denver Post stated that "Old Turner Hall and the Tremont Ordered Wrecked." The article went on to say that building inspector George Kermode condemned as unsafe 75 buildings, including the Tremont House, and ordered the owners to begin tearing them down within five days or the fire department would do so.

During its early years, the Tremont House was considered one of the premier hotels, not only in Denver but throughout the Colorado Territory. Its popularity contributed to the successful growth that Denver experienced. Ironically, the city's growth in turn contributed to the decline of the Tremont House, as well as that of West Denver at large, as the clientele changed from Denver's elite in the 1860s and 1870s, to European immigrants of lower social stature between the 1880s and the turn of the century.

Historical Architectural Overview

Early Denver Architecture

Denver architectural styles can be classified as typical of the late nineteenth century. Influenced by trends on the east coast and in Chicago and Minneapolis, early Denver buildings can best be described as classical in character, restrained in style, and uniform in appearance. Red brick arches, repetitive bay construction, simple brick cornices, and an overall lack of ornamentation were characteristics of the city's early architecture.

Initially, buildings were cheap wooden structures of a temporary nature. Pioneer-era structures built during the city's first year were small, free-standing cabins, built with cottonwood and willow logs cut from the river bank. These structures were built for shelter, not longevity. By 1860, long wooden sheds with false fronts and raised porches serving as wooden sidewalks were common, often being grouped together along dirt streets to give a sense of community.

Not all early structures were frame, however. Brick clay was abundant and actually cheaper than wood. The first brick building was a powder house built in the fall of 1859. Brettel (1973) states that "the early use of brick makes it one of the only quintessential Denver features of local architecture." The local reddish brick, uniform in size and contrasting with a light, almost white mortar, was a common feature found in 1860s architecture. After the 1863 fire, new frame buildings were banned in the commercial district.

The late 1860s saw improvements but no real expansion. Residents concentrated on replacing the old pioneer-era structures damaged from fires and floods with more substantial brick buildings. Some elements of a more formal architectural style began to creep into building construction, particularly through the use of segmental and Gothic arches. Denver also developed a more urban appearance, with carefully laid out streets lined by solid well-built brick structures.

On the whole, however, architecture in 1860 Denver was less than exciting. It was characterized by one material, one color, one basic style--a simplification of eastern Victorian architecture. Early commercial structures as well as hotels were best described as "brick boxes suitable to their often changing function" (Brettel 1973:71). Elaborate ornamentation on cornices and around windows and doors was virtually non-existent. Even signs were minimal. Plain brick facades left little room for advertising, and thus signboards along the cornice were often white with the building name painted on. Other businesses hung signs off the facade of the building.

Because contact with the East was infrequent, photographic examples of new architectural styles were unavailable for much of the decade. It was not until the 1870s and the arrival of the railroad that more elaborate architectural styles found their way into Denver architecture. Catalogs, newspapers, and photographs provided information about new trends in Eastern architecture which could be applied to construction in Denver.

The Second Empire style of architecture quickly became dominant after 1870. Characteristic features included a centrality of composition, window caps, and metal cornice brackets. The use of metal in construction, particularly with tin cornices and cast iron storefronts, was a symbol of modern progress and was also readily accessible. Overall, buildings became more eclectic in design. Professional architects also arrived in town and a new period of designed buildings was introduced. The period between 1880 and 1893 witnessed the emergence of a city developing its own architectural personality.

Construction History of the Tremont House

The Tremont House originally was a two-story, wood frame building with a side gable roof behind a clapboard sided false front. Its dimensions were 40 feet by 50 feet and it faced east on B Street (later known as Front Street and 13th Street). In June 1860, the first owner, Mrs. Maggard, built a two-story frame addition, 22 feet by 80 feet, on the north side, cross-sectioning the original gabled roof and forming an L-shaped structure.

The windows consisted of six over six, double hung sash affairs with slightly pedimented window surrounds, reminiscent of the Greek Revival style. The main entrance featured four-paned sidelights on either side of the wood frame door. A second story door opened onto a balcony with a turned balustrade supported by decorative brackets. The cornice was simple, overhanging and supported by paired decorative

brackets. The two chimneys were brick, and a flagpole extended above the center of the facade.

The frame structure apparently survived the 1864 flood (the 1863 fire had been limited to East Denver), as photographs taken after the flood in 1864 and 1865 show the two story frame structure still standing and unchanged. Newspaper accounts of the flood and its aftermath do not refer to structural damage to the building. Advertisements mention cleaning and renovating the interior, but no word is given regarding the loss of the building. It is therefore assumed that the Tremont House suffered no significant damage during the 1864 flood.

Sometime between 1865 and the early 1870s, the frame structure was replaced by a three-story brick building. The change is documented in photographs of the area. A photograph dated 1865 shows the frame structure, and a later one dated 1871 shows the three story brick building. The frame building was not refaced with brick because the roof shape changed from gable to flat. Additionally, the Sanborn Insurance Map indicates the building was entirely brick.

The rebuilding of the Tremont House could have occurred in June 1867 when the Rocky Mountain News reported that the hotel had been enlarged by 25 new rooms. However, no mention is made that the building had been torn down and a new one built, and there was no significant gap between articles and advertisements which might indicate total reconstruction of the building. In fact, the hotel continued to advertise in the newspaper, so it must be assumed the hotel was open for business. As noted in the previous section, newspaper articles frequently referred to remodeling, improvements, and renovations to the building without listing specific details. It is possible that the building was replaced in 1867, but the newspaper chose to report only the addition of 25 rooms and not total reconstruction; the latter scenario appears highly unlikely.

Another possible explanation is that the 1871 photograph was incorrectly dated. The Rocky Mountain News reported in 1872 that the new owner, McCarty, had renovated the building inside and out such that it was no longer recognizable to old timers. The newspaper said "it looked like a new building." A difference of several years on the date of a historic photograph is not unrealistic or impossible and could be the solution to this question. The three-story brick building that appeared under the name Tremont House in the early 1870s featured a sloping flat roof, a plain bracketed cornice, shaped lintels and shutters on upper story windows, arched windows and entrance with keystones on one side of the ground floor, and a typical nineteenth century commercial storefront with clerestories, kickplates, and a recessed entrance on the other side. A colonnaded porch supported a second floor balustraded balcony. The dimensions of this building are unknown.

In 1874, another addition was placed on the structure, and included a baggage room (12 ft x 20 ft), a reading room (18 ft x 18 ft), and a washroom (12 ft x 20 ft). It is

presumed that the baggage and washrooms were added to the rear of the hotel. The reading room may have been part of an existing section of the building.

The next major change to the building occurred between 1874 and 1887. The building appears on the 1887 Sanborn Insurance Map as a two-story, L-shaped structure (Figure 12). This is verified by a sketch of the hotel in the 1890 article on the history of Auraria in the Rocky Mountain News. An unsubstantiated report states that the third floor was removed and the building stuccoed about 1878. The lack of photographs of the building and the surrounding area during this time period hampers verification of this information. The 1887 Sanborn map indicates that the two-story brick building had a one story frame addition on the rear with a frame porch, a one-story frame addition to the dining room in the rear, and a two-story frame porch on the rear of the office/saloon area. Outbuildings consisted of a frame shed, a two-story brick structure, a possible barn, and a one-story brick shed.

Between 1887 and 1890, a two-story brick addition was constructed on the south side of the rear of the building. The saloon remained in the front of this section, and a frame staircase, possibly a fire escape, was located on the rear of this new addition. A portion of the two-story frame porch was removed, as was the two-story brick outbuilding/barn. A tin shed was built in its place. A frame pump shed was also added to the rear (Figure 13). No changes were made to the exterior of the building between 1890 and 1903, the next date of publication for the Sanborn Insurance Maps. Figure 14 shows the 1903 map.

The final Sanborn map available for this area is dated 1929. This map shows a frame shed standing in the rear of the lot on which the hotel stood, and later maps show the lot being used only as a junkyard and storage area by the American Forge Works (Figure 15). No substantial buildings were built on the lot following the demolition of the Tremont House Hotel in 1912.

Summary

The historical information presented above contains important details that can be used to create chronological architectural summaries relevant to the Tremont House Hotel. In Table 2, documented traits of early Denver architecture, gleaned from historical accounts of the city's early development, are reiterated. Also listed are events directly affecting the Tremont House, as well as a chronology of architectural changes and renovations that the hotel experienced. The latter two lists are derived from historical accounts specifically relating to the Tremont House. Changes in the material culture comprising the site over time would almost certainly have affected archaeological patterning. It was expected that archaeological data, reflecting any or all of the Tremont House's historically documented material and architectural changes, could exist at the

site. The architectural summaries were therefore developed to assist in structuring and evaluating such remains.

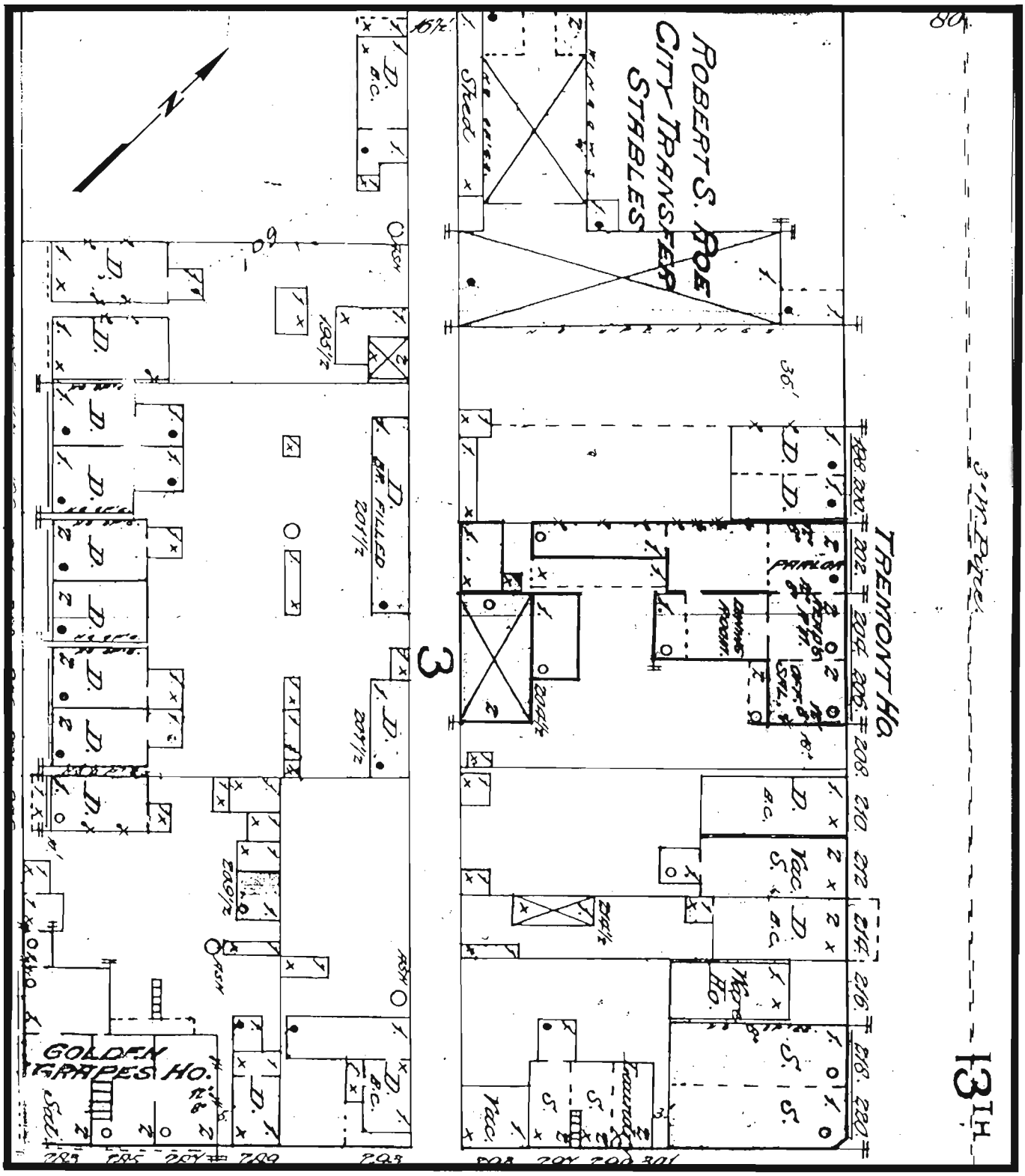


Figure 12 - 1887 Sanborn Insurance Map showing location and extent of the Tremont House.

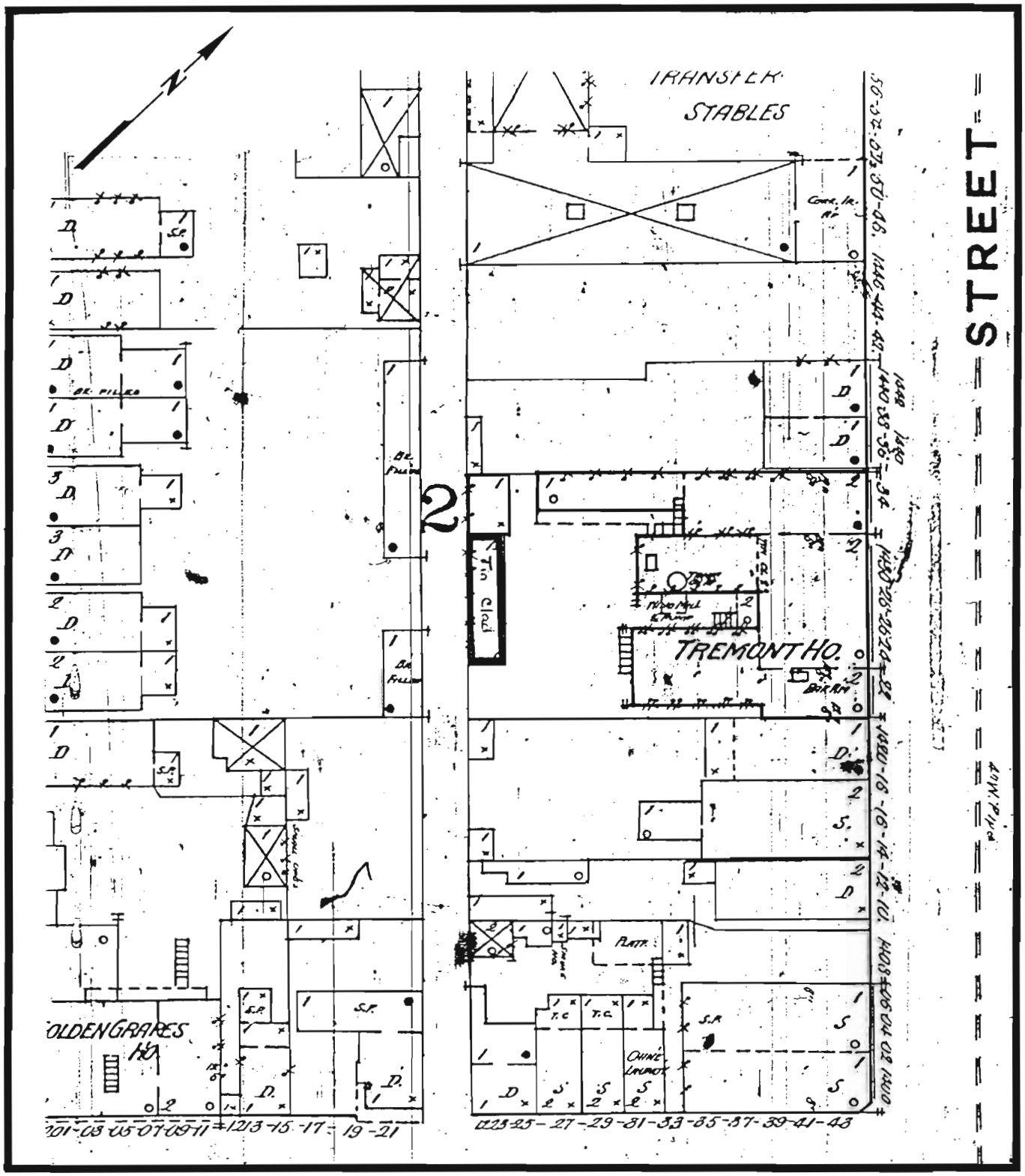


Figure 13 - 1890 Sanborn Insurance Map showing location and extent of the Tremont House.

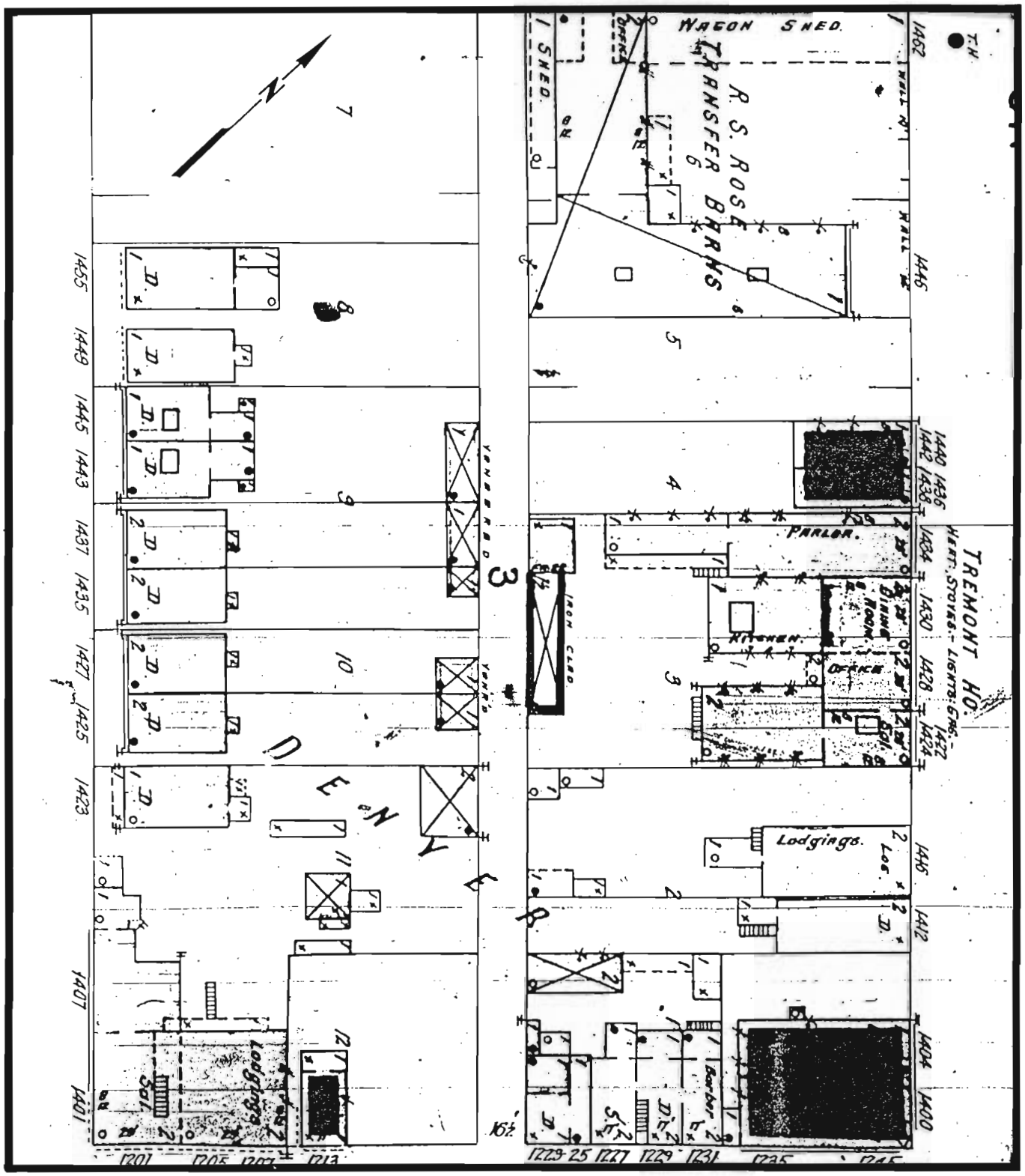


Figure 14 - 1903 Sanborn Insurance Map showing location and extent of the Tremont House.

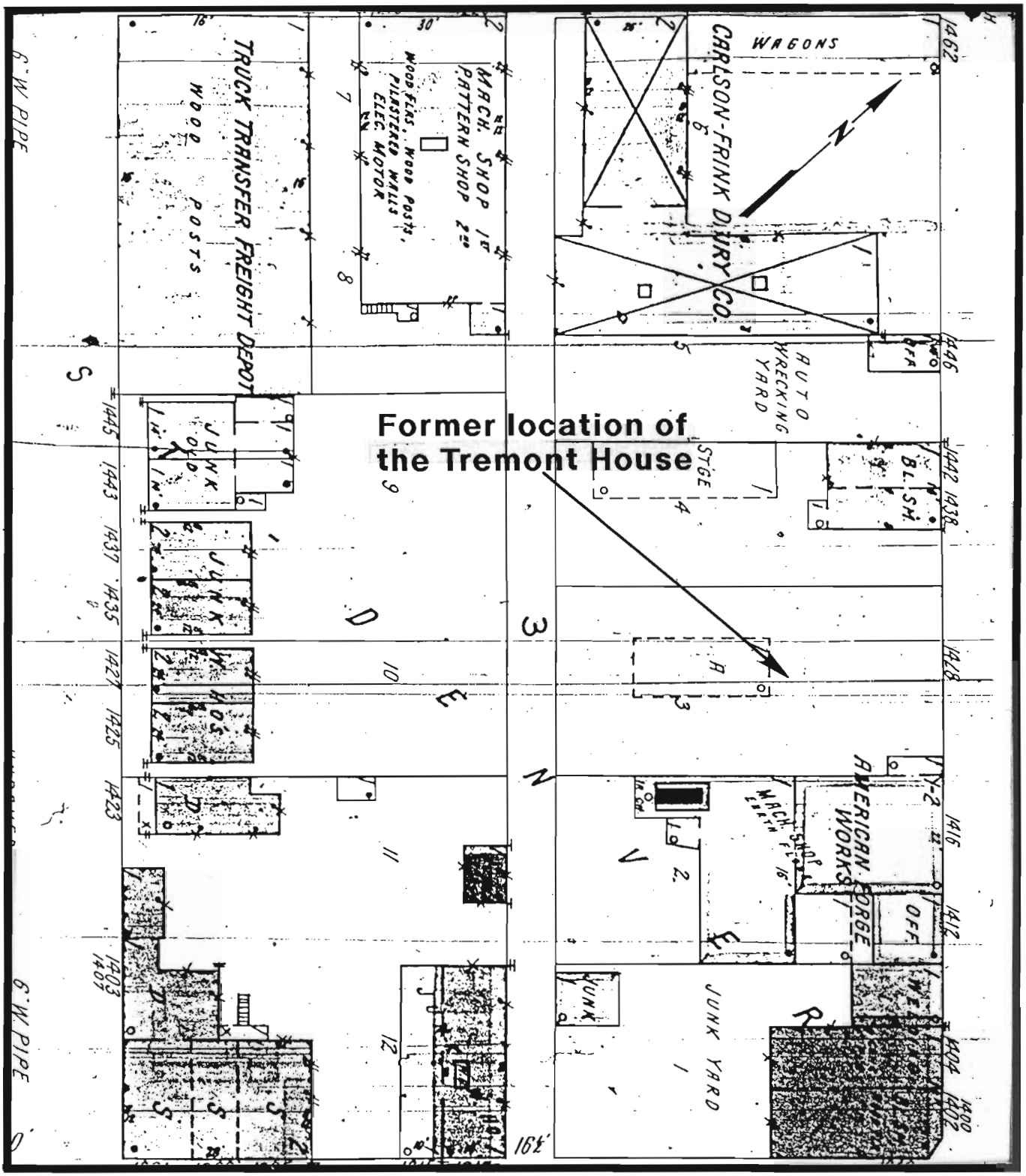


Figure 15 - 1929 Sanborn Insurance Map showing the former location of the Tremont House.

TABLE 2

CHRONOLOGICAL ARCHITECTURAL SUMMARIES

Date	General Traits of Early Denver Architecture	Tremont House Material History	Tremont House Architectural Chronology
1859	Crude cottonwood log architecture w/ mud chinking (plastered log chimneys, dirt floors, no window glass); first Denver brickyard opened late in the year	"Temperance Hotel" (boarding house)	2-storey wood frame structure (40 ft x 30 ft)
1860	Brick architecture (local reddish brick, a light-almost white-mortar, uniform size)	"Tremont House" (hotel run by Nelson Sargent)	2-storey frame addition to north side (80 ft x 22 ft)/ hotel remodeled-bar added
1860-1864		"One of the best hotels w/ food in Denver"	
1864		First major flood-hotel area flooded to a depth of 1-5 ft	
1865	Frame and brick structures (wooden floors, glass windows, shingle roofs)		
1867-1872			Major renovation-frame structure possibly torn down replaced w/ 3-storey brick
1874			Addition of baggage room and washroom (each 20 ft x 12 ft) possibly to rear of structure/addition of reading room (18 ft x 18 ft)
1874-1887			Major changes-third storey possibly removed and building stuccoed; south addition w/ saloon possibly added (construction in 1878?)
1875		Second major flood (damage less severe than in 1864)	
1878		Third major flood	
1887-1890			2-storey addition to rear (west side of south addition)
1912		Fourth major flood	Hotel closed/demolished

CHAPTER 5

THEORETICAL ORIENTATION, RESEARCH DESIGN, AND DATA EXPECTATIONS

Introduction

A research design to guide investigations at the Tremont House was developed subsequent to completion of the 1987 and 1988 survey and test excavation phases, respectively, as part of a comprehensive management plan devised prior to mitigative excavations. Initial field observations served to direct the creation and implementation of the data retrieval plan; archaeological report guidelines devised by the Colorado Historical Society (OAHP 1986) and Advisory Council on Historic Preservation (1980) were consulted and followed. Relevant historical research domains--and the mechanisms for addressing specific questions pertinent to each--were derived primarily from Buckles and Buckles (1984).

Theoretical Orientation

The study of urban localities as a potentially valuable source of information about early technology, lifestyles, and economics is an emerging subdiscipline within historical archaeology (Dickens 1982; Staski 1982, 1987; Pastron and Hattori 1990), and one which shares many characteristics with the analysis of mining sites (Hardesty 1988; Mehls et al. 1991). Prior to the mid-to-late 1980s in Colorado and other western states, little attention was given to crucial research elements in the field of historical archaeology. These include, but are not limited to, the remnants of historic residential, commercial, and religious structure foundations and related features (such as privies, outbuildings, trash dumps, etc.), in addition to associated artifactual remains. Similar to prehistoric archaeological sites, sites from the historic period often have the potential to provide important data about environmental, economic, social, and other natural and cultural phenomena that affected the activities of their inhabitants.

Several precedents exist to guide the examination of remains obtained from sites such as the Tremont House. Previous studies provide models that address relevant archaeological aspects of frontier settlement patterns and processes (Lewis 1977, 1984; Hardesty 1980, 1981, 1985, 1988; Mehls et al. 1991; Carrillo et al. 1991). These models have been demonstrated on both eighteenth century sites in the eastern United States, and nineteenth century sites in the West. Presently, the U.S. Department of the Interior is drafting procedures for the conduct of historical archaeological studies under its supervision (National Park Service 1991).

The theoretical orientation guiding analysis of the Tremont House mitigation results incorporates concepts outlined by Hardesty (1988), Lewis (1984), Mehls et al.

(1991), and others. Although initially developed to address other types of frontier sites (related to themes of trading, ranching, industry, military, and transportation), many aspects of these studies are applicable to urban sites as well. General archaeological patterning (i.e., site formation and evolution, technological adaptations through time) generally differ only in the extent to which each characteristic applies to a particular site type. One trait common to nearly all Victorian-era sites in the United States, however, is their reliance on, and reflection of, the national and regional economic environment within which they were created and operated.

In his study of mining sites and districts, Hardesty (1988) proposes that historical archaeological studies utilize a framework based on a coevolutionary model of adaptive change as a method of site evaluation. Because of its universal applicability, portions of the mining model serve as the theoretical basis for discussing the temporal and functional framework of the Tremont House.

The early history of Denver was directly influenced and driven by the economics of mining. Development of the mining frontier had a tremendous impact on the city, encouraging the creation of vast integrated regional, national, and international networks. As development progressed, various elements of these processes were reflected in material conditions, such as those observed in architectural and artifactual remains. These, in turn, can provide more specific information regarding such issues as population trends, social conditions, ethnicity, and diet. The archaeological elements relating to different evolutionary stages that transformed Denver from a tent city to a thriving metropolis within a period of less than 50 years were expected to be specifically reflected in the material remains of the Tremont House.

The Economic Model: A Brief Overview

An economic model was developed using Hardesty's (1988) mining and Kirch's (1980) adaptation models for the purpose of explaining various economic impacts that could be demonstrated by the Tremont House remains. Generally, Denver served as the entrepot for all of the mining towns in the region, with items being shipped to and from the city. This created a conduit that integrated a variety of economic networks working within several frontier economic systems.

The urban frontier represents a so-called "ecological theater" with two distinctive characteristics. First, it constitutes a network of islands with direct ties to a common national system. The newly emerging frontier towns of Auraria and Denver in the early 1860s, for example, were developing as a direct result of mining activity, and can be viewed as one of a network of islands associated with the mining frontier.

Second, the urban frontier involves an ecological population of individuals interacting with each other as well as the environment. Ecological populations (1) are confronted by the same set of environmental challenges and selection pressures; (2)

transmit and share adaptive information among themselves on a regular basis; and (3) share the same patterns of behavioral response to the environment. This commonality of challenges and adaptations helped to standardize frontier environments (Hardesty 1985:215, 1988:111-112).

Lewis (1984:12-13, after Hardesty 1980), describes the process of colonization from an ecological perspective:

> Frontier development...may be examined in the light of...ecological principles that attempt to explain the adaptive significance of certain aspects of behavior associated with colonization. [One such principle is] competitive exclusion, [which] refers to the inability of organisms using the same resources to coexist permanently, requiring that they change habitats or environmental lifestyles. On all frontiers...population pressure on resources eventually results in competition requiring one or both of two modifications, the exclusion of competing societies or a change in the patterns of resources used. The latter may lead to ethnic segregation of a resource use,... but it also may result in a reorganization of resource procurement and redistribution... This economic restructuring is one of the basic processes contributing to the increasing level of socioeconomic complexity observed in the colonization gradient.

Lewis (1984:22) indicates that the frontier settlement pattern results from a desire to locate in areas accessible to trade and communication routes, and is a consequence of population growth and shifting economics through time. Other studies have led to the construction and testing of a model that defines three developmental stages of a frontier area, from its earliest settlement to its final incorporation into a parent state (Hudson 1969; Swedland 1975). This model is similar to one developed by Kirch (1980:101-156), who examined the effect of cultural adaptations on islands. Hardesty (1988) adapted the latter model to mining sites. The following represents an integration of the Hudson/Swedland and Hardesty models.

Both models describe the process of adaptation as a sequence of three predictable stages. According to Hudson (1969), the first stage "is one of colonization, in which the new area is first occupied by the intrusive population." Settlement density at this time is low and the settlement pattern random (but not entirely isolated from the trade and communication network), and the preadapted behavior of the colonist entering a new environment is defined. This initial stage contains low variability and represents a poor adaptation by the colonist to a new set of problems. Thus, a population situated in a stable environment and having a low degree of initial adaptive variability, such as a colonizing or pioneering group, may undergo rapid change until a state of improved adaptability occurs (Hardesty 1988; Mehls et al. 1991).

In the second stage, spread and coping occur, which consist of population increase and settlement growth, respectively. During this period, experimentation and innovation (problem solving) occur and behavioral variability results. Because settlement tends to spread out from earlier population centers, its distribution becomes clustered. With increased population expansion, vacant land is occupied (Lewis 1984:22; Hardesty 1988).

The final stage of the colonization process is marked by competition over the finite resources of an area shared by settlements. It represents the "adapted" behavior of the colonists. Solutions that successfully solve environmental problems are retained and the unsuccessful ones abandoned. Another situation of low variability is thus expected, but with a considerably better environmental adaptation strategy in place (Hardesty 1988).

At this stage, competitive exclusion of groups and activities usually occurs and settlements with a disadvantageous economic position may decline or become abandoned. One result of competition is an even spacing of settlements. The reorganization of a frontier area resulting from competition may be seen, in part, as an attempt to stabilize the economic environment to permit maximum settlement density. As Lewis (1984:22-23) notes:

> An increase in the complexity and scale of economic networks and technological modifications of habitat mark the introduction of 'buffering' processes necessary to achieve such stability... It has been observed that population density is related directly to the social and economic function of communities in the areas they serve. Normally, in a stable settled area, a hierarchy of community types is present, each of which performs certain functions... In a frontier area, the population density is initially too low to support an elaborate functional settlement hierarchy. Most economic, social, political, and religious activities are concentrated in key settlements called frontier towns. These settlements serve as centers of trade and communications within the colony, and by means of their direct connection with the colony's entrepot, link the frontier directly with the parent state (1984:22-23).

The links between entrepot and the colony take place through transportation, communication, demographic, and economic networks. These make up three kinds of interaction spheres, each serving to condition the response of social systems to geographic isolation. The three spheres include: (1) materials, (2) population, and (3) information.

(1) The materials interaction sphere is a network established to facilitate the transportation of all materials between the frontier towns and the major population centers. The network includes the processes both that serve to

deliver necessary supplies and equipment from the manufacturers to the frontier towns--which, in turn, support the mining operations--and additionally, that deliver the extracted materials from the mines to the major centers (Hardesty 1988:1).

(2) The population interaction sphere is oriented toward the establishment of a "population pool" through a migration network, linking the United States and Europe, as well as other places within the mining frontier (Hardesty 1988:3).

(3) The information interaction sphere represents one of the most important aspects of the world system. Information structures are brought about through the exchange of information, ideas, and symbols. Hardesty argues that the completion of the transcontinental telegraph in 1860, coupled with the completion of the transcontinental railroad in 1869, integrated the information sphere with the material interaction sphere. The integration of the two spheres created new ecological structures (Hardesty 1988:5).

Frontiers can be defined by "boom and bust" cycles that work at two levels. These cycles operating at the local level are often directly related to inconsistencies in the local revenue producing networks. An example of this level would be a particular mine that initially produced enough gold to make its operation economically feasible, and later underwent a period when little or no mineral was found. The "boom and bust" cycles, which work at the island network level, occur as a result of "punctuations," or correlated episodes, directly related to world system technological or economic change. Examples of this change are the introduction of the transcontinental telegraph and railroad into the West. Additionally, under the selective pressure of a changing environment, a population, regardless of its initial degree of adaptedness, may undergo continual change. Regardless, the pattern of change over a period of time is discontinuous or steplike and occurs simultaneously throughout the frontier. The change usually is a result of successful innovations, which rapidly expand and replace older forms of technology (Hardesty 1985:215; 1988:111-112).

Two different types of adaptive or "coping" strategies are expected in frontier environments: opportunism and resiliency or flexibility, of which the former is most pertinent to the present study. Opportunistic strategies can take the form of a set of rules which serve to maximize resource gains. Such strategies are evidenced by a sudden change in the market place. Expansion into new geographical areas comprises one of the most common opportunistic strategies. This strategy also entails resource intensification, including an increased capital investment in land and labor, as well as an increase in resource specialization. This may occur as a result of partnerships, cooperatives, and sharing of tools and labor in an attempt to gain access to a larger supply of resources. An important result of this strategy is described by Hardesty (1988:112):

> Several abrupt shifts in the behavior of colonists are expected to take place as the opportunistic strategy is put into effect such as revolutionary changes in settlement pattern and household organization. Kirch's (1980) model of cultural adaptation also suggests that opportunistic strategies will reduce the amount of variability in the behavior of settlements and households; the reason is the rapid adoption of the most effective strategies. At the same time, population growth should rapidly increase. Revolutionary shifts to opportunistic coping strategies, then, are expected to take place...

The coevolutionary model of change and variability in a frontier situation is oriented toward the individual. Human behavior is viewed as being "creative" in that it rapidly and drastically creates new ecological theaters using principles and ideologies which "transform nature into culture" (Hardesty 1988:114). The coevolutionary relationship occurs when individuals with the highest adaptive or fitness values have the best opportunity to increase their behavior over a period of time. This occurs at the expense of individuals with a lower fitness. As a result, each new theater or occurrence has a distinctive pattern of differential fitness. The initial cultural baggage thus defines the direction of evolutionary change by creating a positive feedback loop (Hardesty 1988:114).

The fact that processes of change often incite a new evolutionary direction is thought to be related to the occurrence of unique historical events. These events act as "kickers" or boosters that dramatically alter the predominant ideologies by which social institutions and technologies operate. These may take the form of "political upheavals or revolutions, technological innovations, military conquests, and religious movements" (Hardesty 1988:114). Hardesty continues his explanation of this process:

> The new ideologies instantly create new ecological theaters. On the 19th century mining frontier such "leaps" often took place on the heels of (1) technological innovations, such as the railroad, the telegraph, and new milling or mining techniques; (2) geological events, such as the discovery of new ore bodies; (3) economic events, such as changes in the market prices of precious metals; and (4) ideological events, such as the spread of Victorianism. The sudden leap to a new ecological plateau or structure creates another pattern of differential fitness, changing the sorting process and bringing about a new direction of evolutionary change. Evolution on the mining frontier can be viewed...as a sequence of historically unique "quantum leaps" working in tandem with a rather mechanical process of selection (1988:114).

The temporal, economic, and ideological context within which the Tremont House operated is reflected by the creation and evolution of the urban frontier in Colorado, as outlined above. The ensuing research design addresses a variety of

analytical domains pertinent to the Tremont House specifically, framed by the theoretical axioms developed during previous studies.

Research Design

Historical Archaeological Research Concerns

Four primary research concerns, outlined in Buckles and Buckles (1984), were identified in the original research design (Carrillo et al. 1989:73-76) and serve to define the Tremont House mitigation data recovery plan. Specific areas of consideration include: (1) the definition of resources within specific temporal contexts; (2) the identification of data gaps that currently exist for the resources and historical periods in question; (3) the development of a systematic theoretical framework by which the archaeological information can be examined; and (4) the evaluation of future needs based on the current state of knowledge of the resources. Although these research domains are defined independently, each overlaps considerably with the others due to their implicitly broad analytical themes.

Temporal Context: The Tremont House was in operation during three general historical periods, as defined by Buckles and Buckles (1984:33-47): (1) Gold Rush to Statehood: 1860-1876; (2) Statehood to Silver Crash: 1877-1893; and (3) Post-Silver Crash to World War I: 1894-1916. Mehls (1984:I-20 - I-54) has developed a separate framework of historical periods based more on specific themes. These include (1) Gold Rush and Territorial Period (1859 - 1876); (2) Years of Conflict (1860 - 1869); (3) Trails and Transportation (1859 - 1870); (4) Development and Expansion of the Rail Network (1865 - 1895); and (5) Urban Frontier (1860 - 1900), in addition to other broad themes, such as ranching and farming.

These two thematic strategies were utilized to construct a general temporal context for the Tremont House. Aspects of a third temporal framework, based on the use and occupation of southeastern Colorado between the 1600s and the present, were then incorporated (Carrillo 1990). This latter framework, which has relevance to Colorado in general, subdivides the American period (1849 - present) into six subperiods, of which the first three are pertinent. These subperiods are defined as follows: Subperiod I (1849 - 1859), starting with the onset of American political control of the region and continuing through the pre-Civil War era (this subperiod also coincides with the first wave of Anglo-American settlement in eastern Colorado); Subperiod II (1860 - 1890), incorporating the first major homesteading era in eastern Colorado; and Subperiod III (1891 - 1915), extending to the end of the pre-World War I era.

The bracketing dates are based primarily on historical events of national significance. The single exception to this is the temporal distinction between Subperiods II and III (1890/1891), which has greater regional significance (i.e., closing of the

American frontier, Silver Panic of 1893). It should be noted that a problem may occur in attempts to establish a one-to-one relationship between the historical periods and archaeologically-derived material culture, since in many instances the manufacture of a certain item encompasses more than one historical period (Carrillo 1990).

Data Gaps: Buckles and Buckles (1984:39-52) identify a number of data gaps for Colorado which they believe can be addressed through historical archaeology. Five of these data gaps were recognized as being potentially relevant to the Tremont House investigations. The first three involve business/commercial structures in Colorado that date to the Gold Rush to Statehood period (1860 - 1876). Two other data gaps refer to the full range of historical periods represented by the Tremont House between 1859 and 1912. Relevant data gaps include the following:

(1) Identification of the "earliest" structures now remaining in Colorado from the 1860 to 1876 period.

(2) Identification of industrial-related material culture (such as Colorado bottles and bricks), which can be used as horizon markers.

(3) Identification and investigation of actual models of the diverse occupations of the period. According to Buckles & Buckles (1984:33-38), as time passes the attrition of resources increases, making this task one of high priority.

(4) Identification of technological and stylistic changes that occurred during these periods, which can be used as baseline data for material culture studies and diagnostic artifact identification.

(5) Identification of sites related to social, political, and other types of events important to the history of the state.

Theoretical Topics: Buckles and Buckles (1984:8) indicate that theoretical questions for historical archaeology in Colorado should be concerned with "systematizing and classifying phenomena with the objective of seeking comparability in taxonomy and methods and producing low-order propositions related to patterns of phenomena and explanations for relationships."

Six general theoretical topics are defined which are considered relevant to the Tremont House investigations:

(1) Cultural resources reflect impacts of past cultural traditions in strategic decisions employed for making cultural adaptations.

(2) Representations of behavior as documented in written records will be in conflict with reconstructions of behavior through the synthetic approach of historical archaeology.

(3) Patterns of conspicuous consumption are identifiable through the values of styles used in hardware of domiciles (and other structures), and in the general inventory of artifacts, in urban areas.

(4) Diagnostics can be identified as horizon markers (technological innovations) for each period.

(5) Quantitative formulas should be devised to predict, from material remains, significant changes in social structure that correlate with changes in population densities.

(6) Structures made of various materials or based on different architectural principles have predictable longevities that can be used to understand length of occupation of any given structure (Buckles and Buckles 1984:9-13). This can only occur in conjunction with the use diagnostic artifacts.

Future Research Needs: Archaeological research at the Tremont House satisfies aspects of five (out of a comprehensive list of 45) future research needs that Buckles and Buckles (1984:13, 14, 16-18) suggest may be addressed by historical archaeological studies in Colorado. These include:

(1) Identification of diagnostic artifacts for each period that could be used as "horizon markers."

(2) The identification of horizon markers related to local industries. Such industrial markers include electrical systems, telephones, local brick-making plants, bottle making, and utilities (i.e., water and gas).

(3) Development of models for phenomena other than thematic systems which have relevance to material culture and are complementary to thematic system differences. Such models can be related to the topographic zone adaptations, guidelines for estimating population, guidelines for designing research relative to social-structural and ideologically-related behavior, settlement patterns and types, activity sets, ethnic group identifications and rules for definition of important persons and/or events.

(4) Development of precise methods for dating sites within the historic period.

(5) Research emphasis at the level of pattern and system analyses. Historic sites which have been intensively investigated by archaeologists in the state tend to have been investigated at site specific levels and not components of patterns or systems of greater magnitude. Site investigations should consider how the information can contribute to understanding ranges of behaviors, processes of culture change, and other questions of greater significance.

Specific Research Goals

Research questions specific to the Tremont House, developed in consideration of the data gaps and future needs identified above, will accomplish the following goals:

(1) Define the architectural composition and artifactual variability of the Tremont House. The architecture relating to early 1860s structures in Denver is poorly documented. It was recognized that the recording of architectural features at the Tremont House (i.e., foundations and cellars) can illuminate specifics of construction techniques. The relationship between later hotel additions and their associated diagnostic artifacts may help define the evolutionary architectural development of the Tremont House.

- Does the spatial distribution of historical artifacts dated by relative means correspond to historically documented construction and abandonment of particular hotel sections?

- Does the artifact assemblage recovered from dated contexts suggest actual change in Tremont House material culture through time? For example, do artifacts recovered from earlier components suggest a reliance on goods imported from Eastern industrial centers, while those from later contexts suggest an emphasis on local production venues?

(2) Obtain dietary data using artifactual, faunal, and macrobotanical remains. It was known from testing data that the faunal remains at the Tremont House suggest a pattern of wild game consumption between 1859 and the 1870s. The study of a population's diet and nutrition can provide insight into the social, economic, environmental, and population pressures, as well as technological innovation, foreign trade, and domestic exchange (see ACHP 1980:35).

- Do faunal remains and artifacts from dated contexts within the site suggest a change in subsistence and related activities through time? For example, is there more wild game associated with earlier

components at the site and more domesticated animals associated with later contexts?

Archaeological Expectations and Considerations

Hardesty (1988) describes two universal temporal sequences that typically occur in the evolution of mining sites, both of which can be observed archaeologically. When slightly modified, each is applicable to urban situations. Consequently, two general periods, representing different adaptations, were expected to be evident in the archaeological record of the Tremont House: (1) a pre-railroad period (1859 - 1870), whose social and economic patterns are defined as having a "pioneer urban structure;" and (2) a post-railroad period (1870-1912), embodying a "corporate urban structure." These formative periods are similar to those identified as a "prospector structure" and "corporate industrial structure" for mining sites (Carrillo et al. 1991, after Hardesty 1988).

The pioneer urban structure is identified by "the relative absence of large scale communication and transportation networks, such as the railroad and telegraph, that could create regional, national, and world systems" (Hardesty 1988:115). The pioneer urban structure is further defined by (1) the use of a non-industrial technology with resources that can be undertaken by single individuals or small groups; (2) low capitalization; (3) a dispersed control structure that is focused on individuals; (4) low potential yield; and (5) low spatial autocorrelation (less cooperation between groups and increased individual actions). All five represent historical events oriented around individual "islands" that are more or less independent of each other (Hardesty 1988:115).

In addition, the pioneer urban structure contains significant implications for identifying patterns relative to individual fitness. Such "leveling" mechanisms contribute to limiting individual differences in urban success. They include readily accessible building locations, low yield and dispersion, and low capitalization. The demographic and social organization of camps associated with the "pioneer urban structure" further reflect the minimal differences in fitness as manifested by small size, an egalitarian social structure, mostly adult males, and minimal variation among households (Hardesty 1988:115-116).

Conversely, the corporate urban structure is defined by the following economic variables: (1) high capitalization; (2) industrial technology with specialized tools and processes; (3) high spatial autocorrelation, with large networks of ore bodies integrated into large regional, national, and world systems that tended to change together rather than separately; (4) high potential yields; and (5) centralized control structure (Hardesty 1985:225, 1988:116).

It is proposed that the Tremont House initially constituted an integral part of the "pioneer urban structure" between the years 1859 and about 1875. Subsequent to that

time, the "corporate urban structure" was responsible for the rapid changes that altered the character of the Auraria area and the Tremont House in particular.

Archaeological Structure: Observations of the archaeological remains from the Tremont's various periods and/or structures involve identifying objects or features (i.e., the remains of buildings, trash dumps, and other attributes) and noting how they are oriented in three-dimensional space. Frontier social interactions are inferred from the morphological characteristics of the remains. Observations are essentially limited to "(1) where the [object or feature] is found, (2) what is found next to or around it, and (3) what its physical characteristics are" (Hardesty 1988:9). All other information is inferred. The most rudimentary assessments of feature morphology in the archaeological record consist of non-complex inferences about time and activity. Direct observations of the morphological attributes of such features simultaneously utilize observations about morphology and activity that are taken from the documentary record (Hardesty 1988:9).

The cornerstone of defining archaeological features is the feature system, defined as "a group of archaeologically visible features and objects that is the product of a specific human activity." Feature systems do not necessarily occur in groups, but may instead be distributed over an area. These can be viewed as the historical archaeological site equivalent of the activity locus (Binford 1987:62), but with the addition of ethnographic and documentary information about morphology and activity (Hardesty 1988:9-11).

Urban Site Formation and Structure: Three primary concepts should be considered in order to understand the site formation and structure of urban sites. They include (1) occupation, (2) expansion, and (3) mutilation.

First, an urban context is composed of geographical clusters of city blocks, which may contain archaeological sites occupied during much earlier historic periods. Buried architectural remains of stores, hotels, saloons, livery stables, house sites, trash dumps, privies, roads, etc., along with their associated artifacts, can be organized into feature systems. Based upon known historical considerations, archaeological feature systems at the Tremont House are thought to represent the different time periods of the hotel, encompassing the earliest historic periods of Denver (as reflected by products of initial construction, additions, and renovations).

Second, in urban frontier environments changes occurred in rapid succession. The initial buildings (tents, log cabins, frame, and adobe structures) were often either quickly replaced or expanded, modified, and/or renovated. Expansion involved the utilization of new locations, such as former yard areas away from the original site center, as well as new building materials.

The cycles of occupation and expansion within the urban district resulted in two important archaeological characteristics relating to the pioneer urban structure: (1)

vertical "layers or components" of feature systems; and (2) "horizontal stratigraphy" (Hardesty 1988:11-12; Mehls et al. 1991). Vertical components are made up of one or more feature systems from the same time period. Horizontal stratigraphy involves the horizontal separation of features on a site. Trash scatters, for example, may contain remains from one occupation arranged over the site area, which may or may not be vertically stratified. Because constant renovations and additions were being undertaken, the foundations may represent one or more occupations. As a result of occupation and expansion cycles, the third characteristic comprising the urban site structure, mutilation of earlier features, occurred (Hardesty 1988:12).

Mutilation is a characteristic of the "industrial urban structure" in which cycles of occupation, expansion, and reoccupation at urban sites may either partially or totally destroy earlier features. Only minimal numbers of features associated with an earlier occupation may actually be present on a site. These so-called "relic" features may occur on any portion of a site, although they typically are located either in the center or along a lateral edge. This characteristic necessitates that a methodology used for an urban site evaluation plan include evenly distributed field searches for surviving feature systems. In this manner, the structure of urban sites is viewed as a series of discontinuous surviving remnants of multiple occupations and feature systems, instead of as a continuous accumulation of historic debris (Hardesty 1988:12).

CHAPTER 6

ARCHAEOLOGICAL FIELD METHODOLOGY

Introduction

The field methods selected for use during the Tremont House mitigation phase employed data retrieval techniques designed for a historic, rather than prehistoric, archaeological locality. Information obtained through archival research, the ground penetrating radar study, and subsurface test excavations--all of which were used to identify the location of the site and evaluate its significance--were considered when formulating the methods for mitigative excavations. Generally accepted historical archaeological procedures were chosen to guide the data collection efforts. These methods were modified to generate information relevant to the research design and analytical goals of the Tremont House specifically, as presented in Chapter 5. All excavation methods, including recordation, identification of stratigraphic, associational, and environmental relationships, and analytical techniques are described to allow reconstruction of the methodology by future researchers.

Overview of Data Retrieval

The investigations were structured in a phased field and laboratory approach, as originally outlined in Carrillo (1989:78-79). Phase I involved the placement and digging of excavation units based on probabilistic and non-probabilistic sampling strategies. It was initially proposed that non-probabilistic (intuitive) units be placed within each of three potential structures, as well as within an anticipated northern structure. A fifth area of investigation included a cellar that had been recognized during test excavations. Thereafter, locations of probabilistic (random) sample units were identified. These units provided temporal markers as well as pertinent architectural information.

Phase II involved expanding excavation units into larger excavation blocks in areas where artifacts and architectural features indicated additional work was warranted.

In Phase III, the recovered cultural material was categorized, tabulated, and the data computerized. Artifact distributions from the probabilistic sample units were statistically analyzed, while artifacts from the non-probabilistic sample units were used to date the structure. Laboratory methods are outlined separately in Chapter 8.

Field Methods

As noted in preceding chapters, the Tremont House site area was paved with asphalt and utilized as a parking lot during most of the 1970s and 1980s. Therefore, no

evidence indicative of intact subsurface cultural remains was visible. Although this asphalt blanket hampered initial efforts to identify and characterize the hotel, it also served to protect the site from local artifact collectors, many of whom routinely vandalize historic localities in search of bottles and other materials.

Preliminary preparations for data recovery involved encircling the site area with a six-foot-high (1.83 m) chain-link fence. This was completed in order to prevent parking on and immediately adjacent to the site, to protect passing pedestrians, and to deter vandalism, particularly at night. In addition, the area was monitored by both university and city police.

A front-end loader was employed to remove asphalt within the barricaded area (Figure 16). Large slabs of asphalt were dislodged and temporarily mounded at the south end of the site, away from all areas proposed for formal excavations. This process was accomplished in approximately one-half day.

Subsequent to removal of the asphalt casing, the site area was in a condition whereby the general archaeological methodology could be implemented.

As noted above, the field methodology proposed for the Tremont House mitigation was developed using the original research design as the basis for data recovery (Carrillo 1989). The following procedures represent generally accepted methods implemented to facilitate the mitigative investigations. The procedures employed included (1) definition of structures using wall foundations, (2) establishment of a grid system over the entire site, and (3) selection of specific grid units for excavation based on a sampling strategy.

Wall Foundation Relocation and Exposure

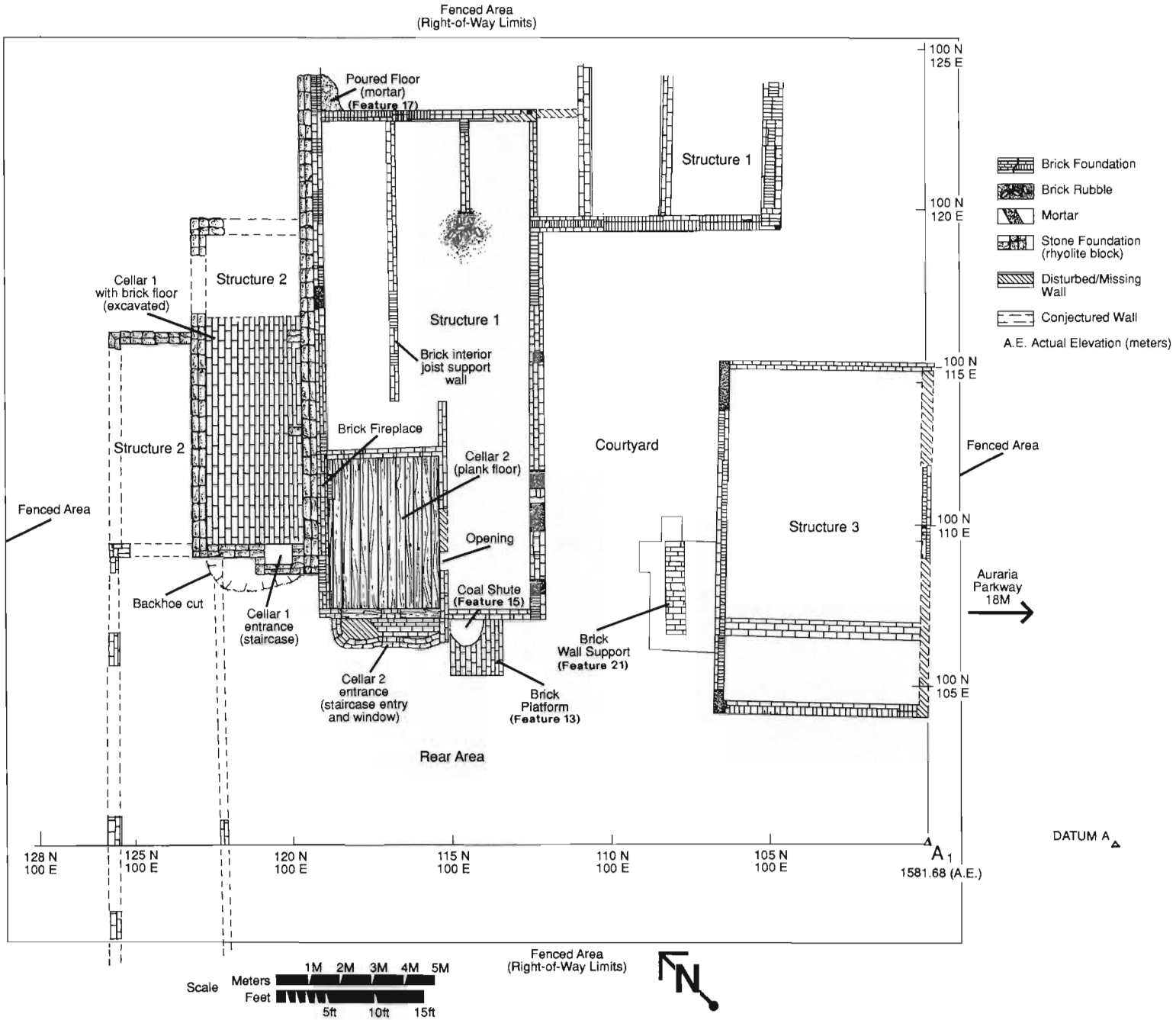
Archaeological test investigations indicated that the extant remains of the Tremont House represented wall sections of three probably distinct structures. Most of the walls associated with these structures were adequately defined during the testing phase (Figure 17). However, remnants of a fourth possible structure were also present, located along the eastern margin of the hotel complex. It was therefore necessary to define the nature and extent of this structure, and if in fact it was a separate hotel addition or merely an eastern extension of a previously defined structure.

A site sketch map created during the testing phase was used to relocate each of the previously identified brick and stone foundation walls (Carrillo 1989). Four steps were then followed to reexpose the foundations: (1) a backhoe test trench was dug perpendicular to conjectured wall locations; (2) once the walls were relocated (each had been covered with black plastic prior to back-filling), the backhoe was again used to strip the soil along the wall locations and fully reveal extant alignments; (3) the front-end loader removed non-cultural overburden from the remainder of the site area, excavating

Figure 16 - Removal of asphalt blacktop prior to excavation; view to northeast.

13th Street

FIGURE 17 - MITIGATION PLANVIEW MAP SHOWING EXPOSED AND CONJECTURED STRUCTURE FOUNDATION REMNANTS AND ASSORTED FEATURES.



to the tops of the more fully exposed foundation walls; and (4) the remaining soil was cleared with shovels and trowels to reveal the tops and portions of the sides of the walls. All artifacts located during this process were provenienced relative to the wall orientation of a particular defined structure (i.e., north wall, Structure 2).

Establishment of an Excavation Grid System

Subsequent to exposing the foundations, a series of points were superimposed over the entire site in a grid pattern to facilitate horizontal excavation control. The grid was staked in five meter intervals and subdivided into 1 m^2 units as necessary during the course of the excavation. The site grid was further divided into six horizontal sampling strata (not to be confused with vertical cultural strata), which generally conformed to the three known architectural structures, as well as other features defined during testing (Figure 18). The main site datum, which had been established during site testing, was relocated and utilized as the general control point. This point was located near the southwest corner of the site, and was designated Datum A.

Initially, a subdatum (A1) was established near Datum A as a vertical control point for the excavations. The actual elevation of Datum A1 (1581.68 m) was derived from known elevations on the top of two nearby fire hydrants, one located at the intersection of 12th Street and Wazee, the other at 12th Street and Walnut.

Due to the original plat of Auraria, which consisted of streets running either parallel or perpendicular to Cherry Creek, the grid overlaying the Tremont was not oriented to the cardinal directions. The town site was initially aligned such that structures were oriented approximately 45 degrees west of north. In order to align excavation units with the general structural orientation of the hotel's walls, the grid system was laid out parallel to the architectural remains. For the purposes of this study, the Tremont House is considered to face east.

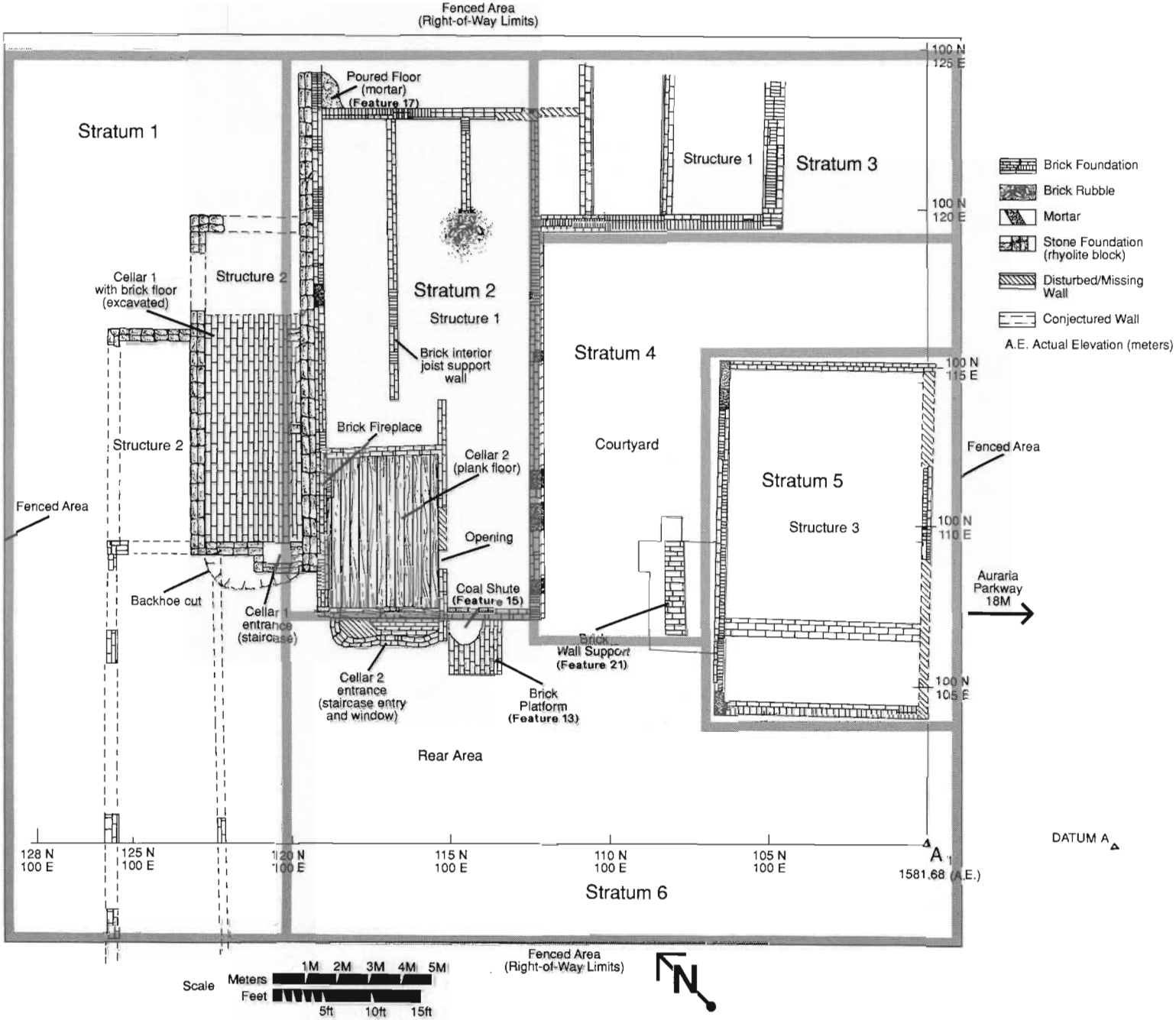
Datum A1 was assigned the coordinate 100N/100E on the North-South/East-West grid. The N/S baseline was established on grid line 100E, which runs along the west side of what would have been the rear of the hotel. The baseline extended from 100N/100E to 128N/100E, a distance of 92 ft (28 m). Additionally, the E/W baseline was established on the 100N grid line, which parallels the interior perimeter of the fence line along the south edge of the site. It extended from 100N/100E to 100N/125E, a distance of 82 ft (25 m). The site area encompassed a total of 7,544 square feet (700 square meters) (Figure 19).

Selection of Excavation Units Based on Sampling Strategy

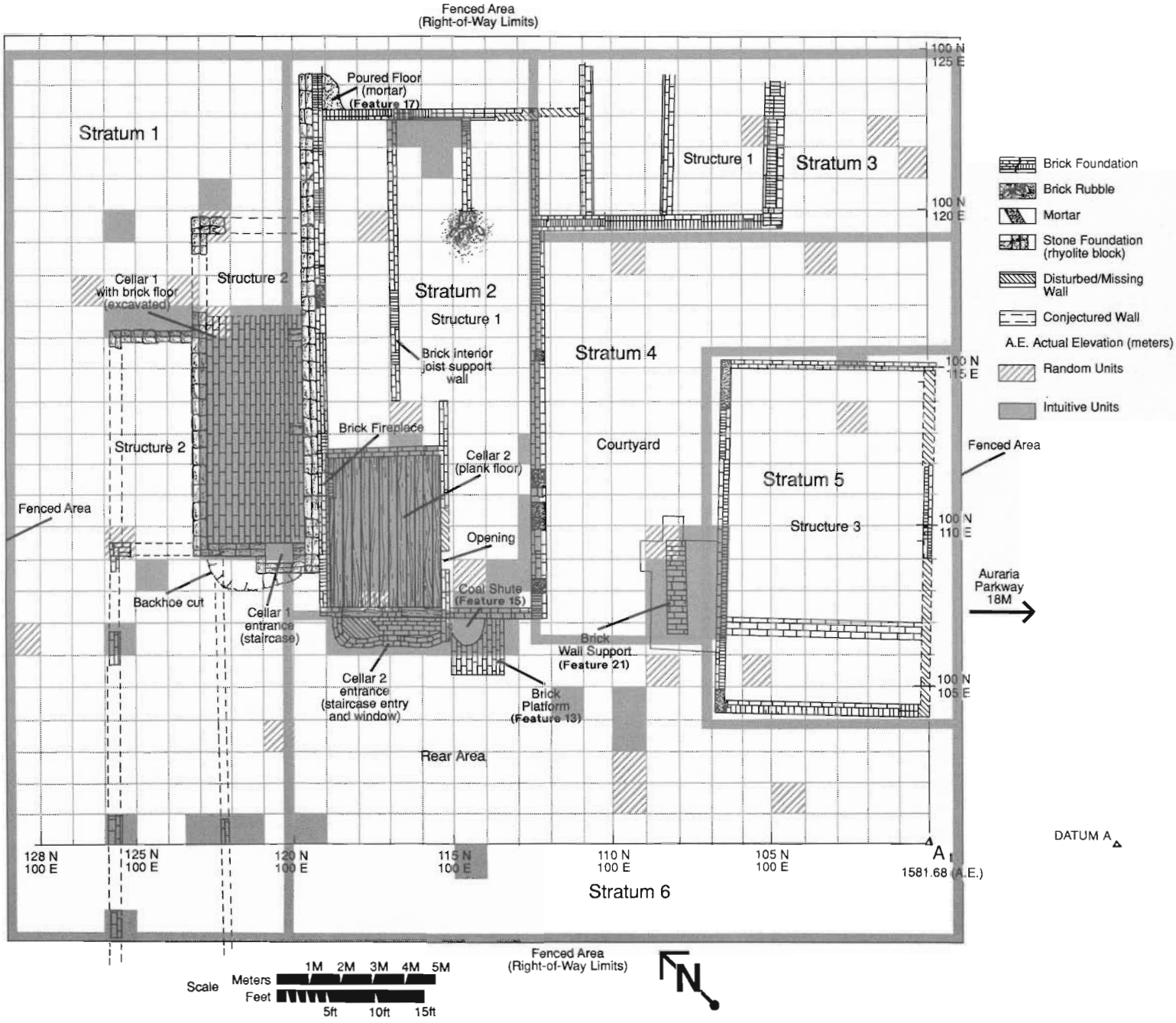
Given the large size of the site, it was determined that excavation of the entire hotel complex was not possible. Consequently, a general sampling scheme was developed involving a combination of probabilistic (random) and non-probabilistic

TREMONT HOUSE MITIGATION MAP
(5DV2954)

Locations of Sampling Strata 1 thru 6 -- Figure 18



Locations of Random/Intuitive Grid Excavation Units -- Figure 19



(intuitive) sampling techniques, as noted above. The locations of probabilistic excavation units were generated through the use of a stratified random sample, which ensured more complete coverage both of the structure interior (represented by the defined brick foundations), as well as the exterior areas that comprised the yard. This sampling strategy allowed comparably collected data to be used to establish intrasite patterning, thus revealing a synchronic view of activity areas. Additionally, the relationship of vertically provenienced cultural material to natural stratigraphic sequences facilitated a diachronic view of changes in activities over time (Mueller 1975; S. Kalasz, personal communication 1989; Carrillo et al. 1989).

The probabilistic sampling scheme incorporated a total of 579 one-meter-square units (121 of the original 700 units encompassed previously identified walls, and were excavated by backhoe). A 5% statistical stratified random sample (29 units) was generated from a table of random numbers. However, only 23 random units (4%) were actually excavated due to a combination of time constraints and field decisions to expand intuitive units (Figure 20).

In conjunction with the probabilistic sampling design, a non-probabilistic (intuitive) sample of specific areas was implemented in order to expose larger contiguous block areas and obtain data regarding architectural composition. In an effort to maximize data recovery, the non-probabilistic sample was structured in a flexible manner. For example, if an area was encountered during non-probabilistic sampling that indicated the presence of additional wall segments, features, or artifacts nearby, further investigations were focused in that location. Consequently, the total number of intuitive units to be excavated was not designated prior to the start of mitigation. Intuitive excavation units were purposefully positioned in the interior of each of the three known structures (Structures 1-3), and artifactual data recovered from those locations were used primarily to date the original structures as well as all subsequent additions. Intuitive sampling involved full or partial excavation of 100 1 m x 1 m units (71 complete units, 29 partial units). A total of 85 square meters was excavated as part of the non-probabilistic sample.

Seven intuitive units were expanded to 4 m x 4 m excavation blocks. The exact extent of these excavated areas was determined based on the project director's evaluation of an individual area's potential for meeting project research goals. Overall excavation in the block areas halted when data recovery became redundant.

These test and block excavations encompass Phases I and II of the original data recovery plan.

Figure 20 - Overview of excavations with Structures 1, 2, and 3 exposed; view to west-southwest.

General Excavation Methods and Recording Procedures

Excavations were conducted in one-meter-square grid units, with the southwest corner of each unit serving as the control point. Each unit was excavated in arbitrary 10 cm levels until culturally sterile soil or an architectural feature (such as a cellar floor) was encountered. Deposits of homogeneous rubble, consisting primarily of discarded brick and mortar, were often removed as one level until a material or soil change was encountered. Cultural features were excavated separately within the unit, although arbitrary levels were maintained. Vertical control was established using a level line, extending from the control point of each unit. The actual elevation of each unit was determined prior to excavation and was recorded as meters above sea level.

Soil from each level was screened through one-quarter-inch wire mesh. Artifacts identified during this process were collected and bagged separately according to level and artifact type (i.e., glass, bone, ceramics, etc.). Soil samples for macrobotanical analysis were collected from the cellar floors and any additional intact cultural surfaces.

Due to time constraints, it was necessary to enlist a backhoe to remove a majority of the overburden from the two cellars. This "bulk" excavation was conducted only after each cellar had been tested with controlled excavation units to determine the type of deposits present, and to identify the location of both the floor and walls. The entire process was monitored, so that any features or cultural deposits encountered by the backhoe could be collected separately for each cellar. Particular attention was paid to the provenience of diagnostic artifacts. Soil deposits from each of the cellars were removed to within approximately 30 cm of the floors. At this point, controlled excavation techniques were resumed in order to clear the remaining deposits.

A standard CDOT excavation level form was completed for each 10 cm level. This form included descriptions of both soil and cultural characteristics, in addition to a scaled plan map to record the location of provenienced artifacts, soil anomalies, architectural and non-architectural features, etc. Features were identified as any non-portable cultural remain, commonly including, but not limited to, walls, cellars, trenches, pipelines, and vandal's pits. These were recorded on standard feature forms and accompanied by a scaled plan map. Scaled profile maps were drawn of designated excavation units, as well as of each cultural feature actually associated with the hotel. Recent vandal's pits were not profiled.

As the excavation progressed and additional portions of the hotel were exposed, a scaled site map was produced using a Leitz transit in combination with taped distances. Each wall, room, and feature was located in relation to the site datum and plotted on the map. An accompanying description was made for each of the walls, which identified method of construction, alterations, and junctures with adjoining walls and structures.

Post-Excavation Monitoring

The culmination of controlled excavations at the Tremont House resulted in subsequent destruction of most of the site. In order to realign Speer Boulevard over the site, it was necessary to remove all foundation walls so that the road prism would settle properly. A backhoe was used to remove all foundation walls within the construction impact zone. This activity was monitored by CDOT Archaeological Unit personnel. Artifacts unearthed during this process were assessed in the field and diagnostic materials were collected. Since no accurate horizontal or vertical control existed during this phase, provenience is not available for these materials.

CHAPTER 7

RESULTS OF FIELD INVESTIGATIONS

Introduction

As noted in the previous chapter, the 700-square-meter grid established over the site was subdivided into six sampling strata. These strata were developed to correspond with the three known structures, as well as other features defined during testing.

Of the 700 excavation grid units, 121 were removed with the backhoe during initial efforts to expose known and supposed wall segments. The remaining 579 units were used to construct the "sampling universe" for the probabilistic sampling strategy. The 23 random excavation units (a 4% sample) were distributed as follows: Stratum 1 (Structure 2) - 7 excavation units; Stratum 2 (Structure 1) - 4 excavation units; Stratum 3 (Structure 1, southeastern portion or ell) - 3 excavation units; Stratum 4 (courtyard area between Structures 1 and 3) - 3 excavation units; Stratum 5 (Structure 3) - 2 excavation units; and Stratum 6 (rear yard area west of Structures 1, 2, and 3) - 4 excavation units (Figure 19).

In addition, selected areas were more extensively examined utilizing intuitively placed units. This method resulted in variable amounts of excavation within each architectural feature, including total excavation (Cellar 2 of Structure 1), partial excavation (Cellar 1 of Structure 2), and selective excavation (within Structures 1, 2, and 3) (Figure 20).

The following section consists of structure and feature descriptions. Artifactual descriptions and analyses are presented in Chapter 8. The most productive method for examining the results of field research is an integrative approach, whereby archaeological patterning of architectural remains and associated artifacts is accomplished concomitantly. Site synthesis is undertaken in Chapter 10.

Structure and Feature Descriptions

As noted previously, three distinct but conjoined structures--which collectively comprised the Tremont House at various times between 1859 and 1912--were investigated during the archaeological data recovery program. Number designations were arbitrarily assigned to the structural remains during the testing phase, and do not represent temporal indicators. The temporal sequence of the structures (oldest to youngest), based on the results of the excavations, is as follows: (1) Structure 2 and associated Cellar 1, (2) Structure 1 and associated Cellar 2, and (3) Structure 3. It is

suggested the reader refer to Figures 17, 18, and 19 as an orientational guide throughout the following narrative.

Structure 1

Structure 1, located in sampling Strata 2 and 3, consisted of an extensive brick foundation with a basic ell configuration and cellar remains. The eastern portion of the structure, containing the ell and making up the original front of the hotel, had been previously destroyed during widening of 13th Street. Structure 1 occupied the central and eastern portions of the Tremont House site. A rear yard area (located in sampling Stratum 6), is adjacent to the structure on the west (refer to Figure 17). This structure is thought to represent a portion of the hotel constructed sometime between the mid-1860s and early 1870s.

The northern portion of Structure 1 (an east-west oriented rectangular foundation) measured 7.2 m N/S x approximately 20 m E/W. The dimensions of the southeastern portion (ell) were 8 m N/S x approximately 8 m E/W. The configuration of the foundation indicated that this structure had been planned and constructed as a complete unit rather than in stages. The archaeological work undertaken within this structure consisted of clearing the brick foundations to initially define both the perimeter and the interior floor joist support walls. Additionally, four random excavation units were placed within the main portion of the structure, corresponding to sampling Stratum 2. The ell, characterizing the southeastern portion of the structure, was initially assigned to sampling Stratum 3, as it was thought to represent a different structural addition. The separation allowed the ell to be examined as an individual area, so the assumption that it represented a complete structure could be tested. Three random units were excavated within and immediately south of the ell, all of which were contained in sampling Stratum 3.

The northwest corner of Structure 1 contained a cellar (Cellar 2) measuring 4 m N/S x 5.3 m E/W. Approximately 2 m deep (Figure 21) and exhibiting a plank floor (Figure 22), Cellar 2 was originally identified from a single random excavation unit, and thereafter completely excavated using a series of intuitive units placed along the cellar's west wall. Evidence of architectural variation, representing a later addition, was observed in the form of a staircase entry and window along the western (rear) wall (Figures 23 and 24). The cellar interior contained a fireplace on the north wall (Figures 25, 26, and 27). The rear of Structure 1, south of the staircase entry and window, also contained a coal chute (Feature 15) with a brick platform (Feature 13) (Figure 28). The chute had been associated with a subterranean plank-lined coal storage area located to the west of Structure 1 (Figure 29). Both had subsequently been abandoned and the area used as a trash midden (Figure 30).

As noted above, only the western wall remnants of the ell portion of Structure 1 remained intact due to earlier roadway construction. In the northeastern corner of

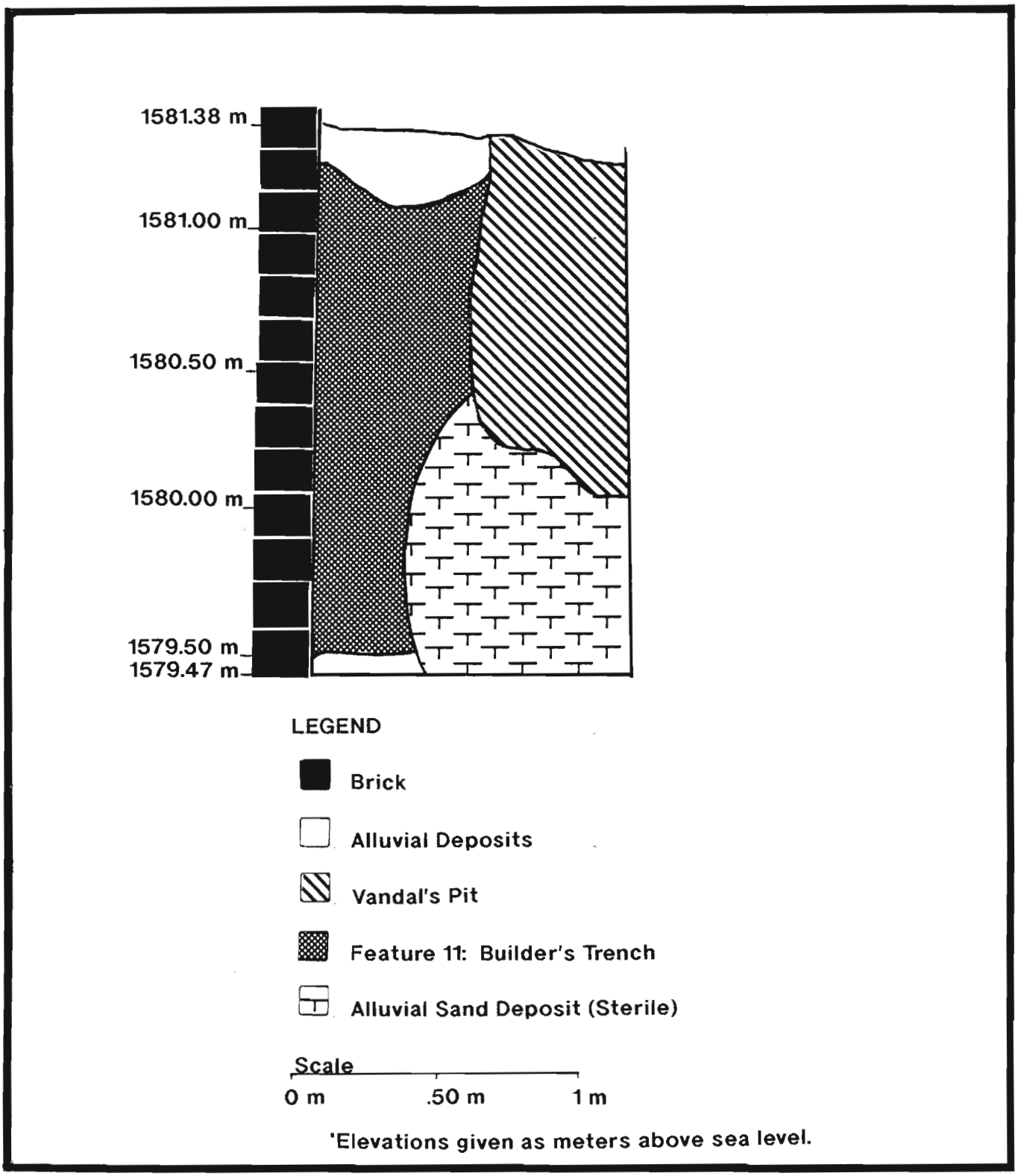


Figure 21 - East wall soil profile, Random Unit 376 (114N/108E).

Figure 22 - Cellar 2, plank floor; view to east.

Figure 23 - Cellar 2, entryway prior to excavation; view to west.

Figure 24 - Cellar 2, entryway post-excavation; view to west.

Figure 25 - Cellar 2, fireplace flue at left; view to east.

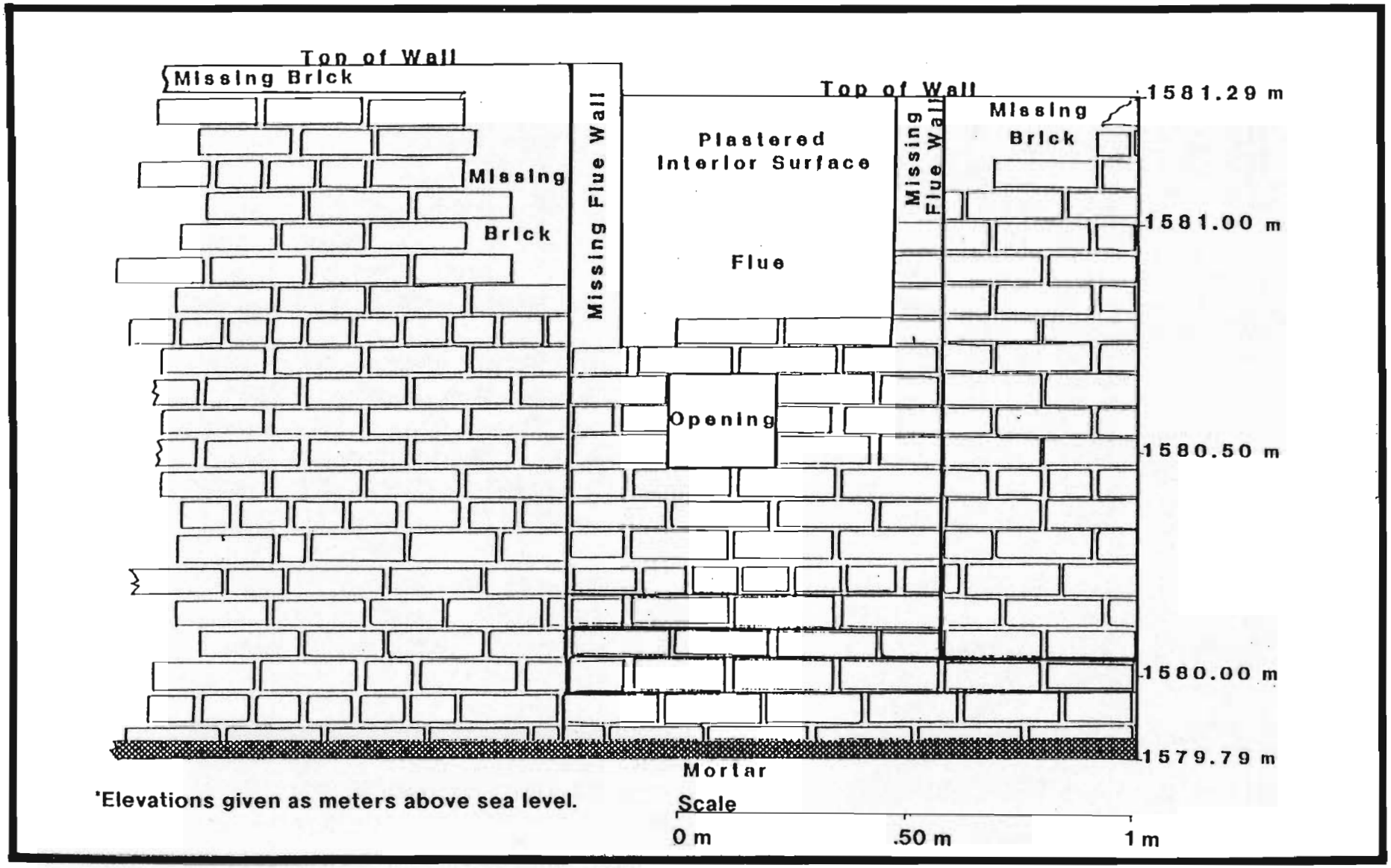


Figure 26 - Cellar 2 north wall profile (Intuitive Units 325, 310, and 302; 118N/110E, 111E, and 112E).

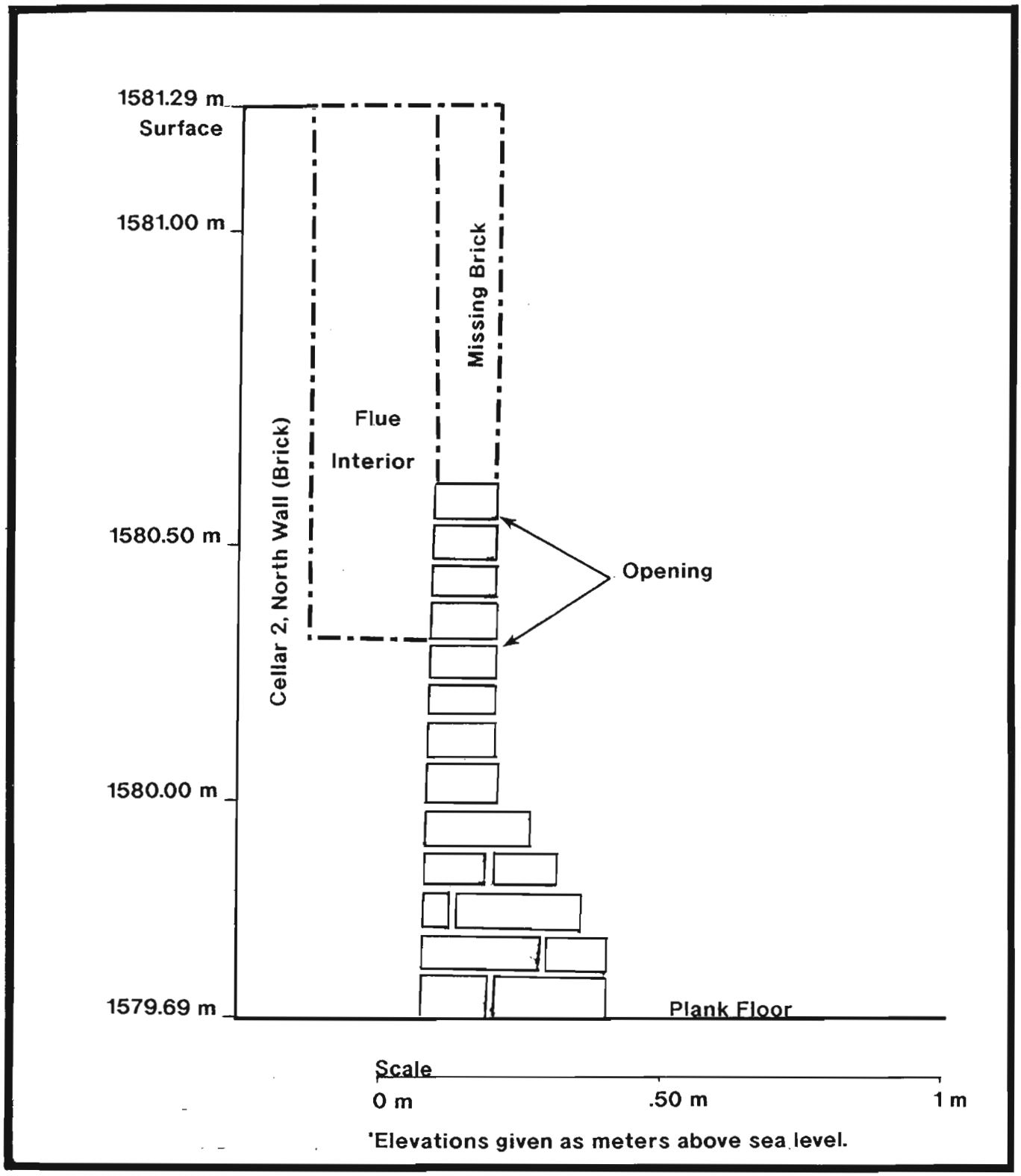


Figure 27 - Profile of flue in north wall, Cellar 2 (Intuitive Unit 301; 118N/111E).

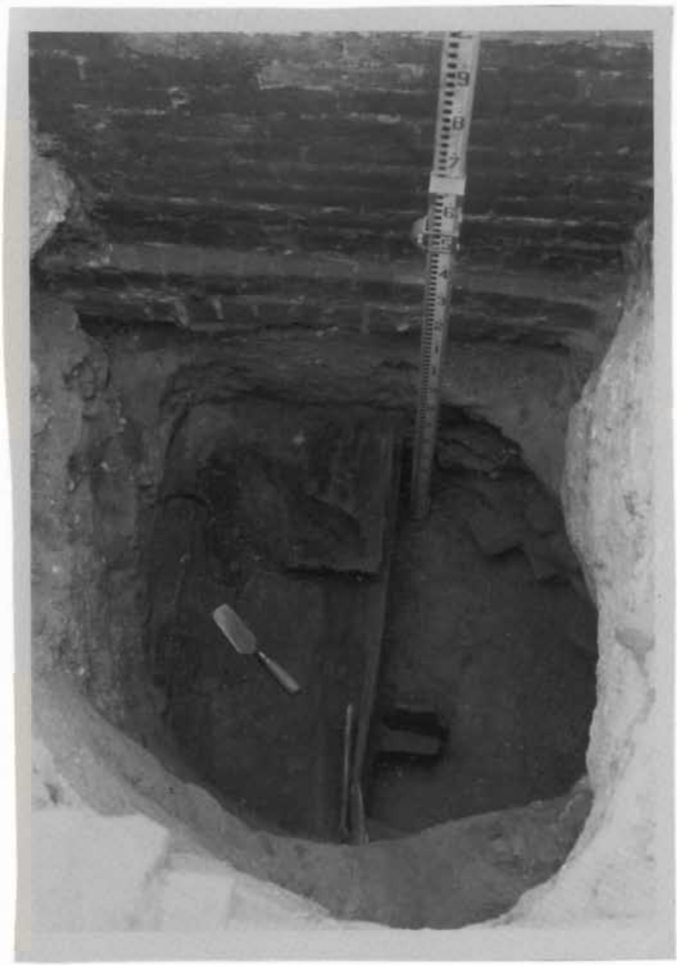


Figure 28 - Cellar 2, coal chute (Feature 15).

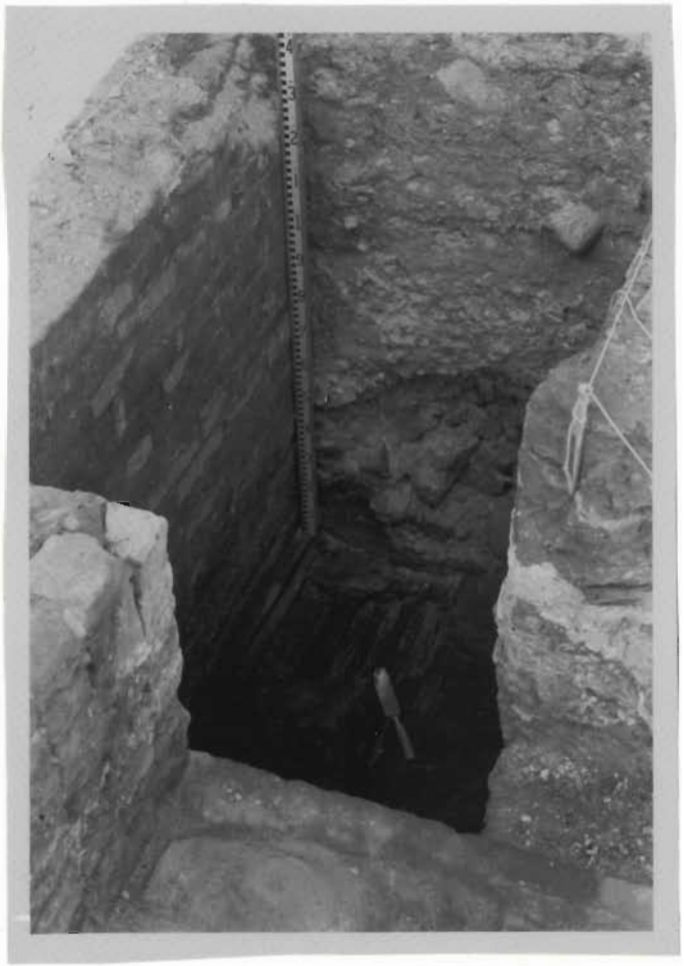


Figure 29 - Cellar 2, plank lined coal storage area.

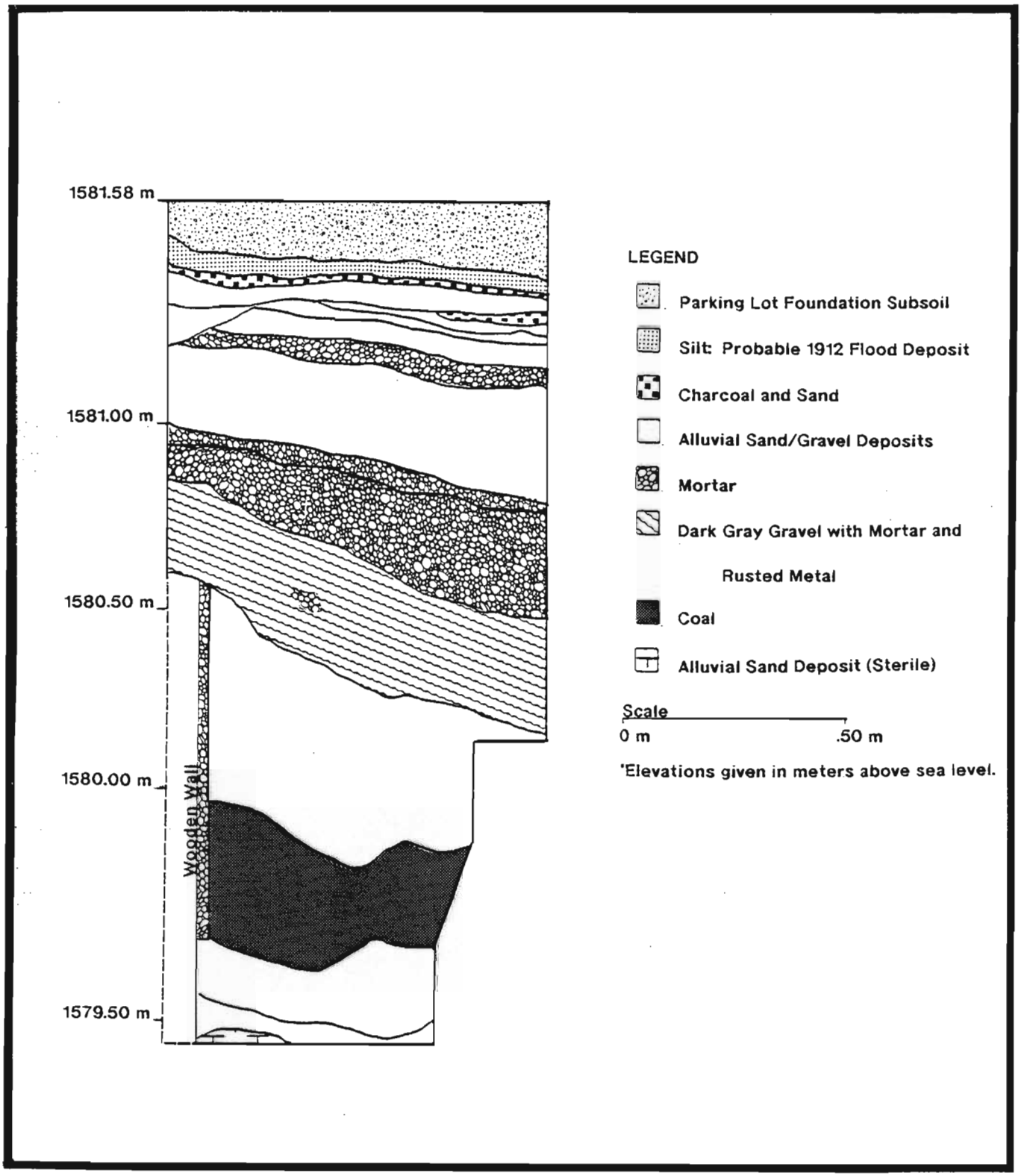


Figure 30 - West wall soil profile, Intuitive Unit 462 (111N/104E).

Structure 1, a section of a poured lime mortar floor (Feature 17) was discovered along one of these wall remnants.

Structure 2

Structure 2, located in sampling Stratum 1, consisted of a rhyolite stone foundation and brick-floored cellar (Cellar 1) situated north of and adjacent to Structure 1. The distinctive rhyolite, a volcanic rock quarried from the Palmer Divide south of Denver, characterized the earliest construction phase at the hotel (ca. 1859-mid-1860s). The north (brick) wall of Structure 1 paralleled and abutted the south (shaped rhyolite) wall of Structure 2, both of which extended eastward toward 13th Street.

The central portion of Structure 2 measured 4 m N/S x 11.2 m E/W and approximately 1 m deep (Figure 31). Seven random excavation units were located in sampling Stratum 1, both within and adjacent to the structure. Structure 2 contained two additions. The first consisted of a secondary stone foundation extending to the north, with dimensions of 2.6 m N/S x 7 m E/W. Only portions of these perimeter walls were exposed. The second consisted of a linear brick addition, with a width of 3.7 m N/S and an unknown overall length (foundation remnants continued to the west outside of the fenced mitigation area) (Figures 32 and 33). All of these wall segments were incorporated in Structure 2 since, based on historical documentation, the original hotel was known to have undergone periodic expansion.

Similar to Cellar 2, Cellar 1 was excavated by expanding one random unit into a block of intuitive units. A considerable amount and variety of artifacts were located on or near the brick floor (Figure 34). The deposition in this cellar consisted primarily of flood sediments from 1912 and debris resulting from the razing of the building soon thereafter (Figure 35). The western portion of the cellar contained a staircase remnant, indicating an entry similar to that found in Structure 1 (Figures 36 and 37).

Structure 3

Structure 3 was located in sampling Stratum 5 near the southern site boundary, and was separated from Structure 1 by a narrow courtyard in sampling Stratum 4. The rear yard area, encompassing sampling Stratum 6, borders Structure 3 on the west. Structure 3 represents the last addition to the hotel, which occurred between 1887 and 1890.

Structure 3 measured 6.1 m N/S x 11.1 m E/W. Excavations in this area consisted of informally clearing foundation walls as well as formal excavation of two random units within Structure 3, corresponding to sampling Stratum 5. Additionally, three random units were excavated within the courtyard to the north and east of the structure in sampling Stratum 4, while the rear yard area was investigated with four random units, placed near Structure 3 in sampling Stratum 6.

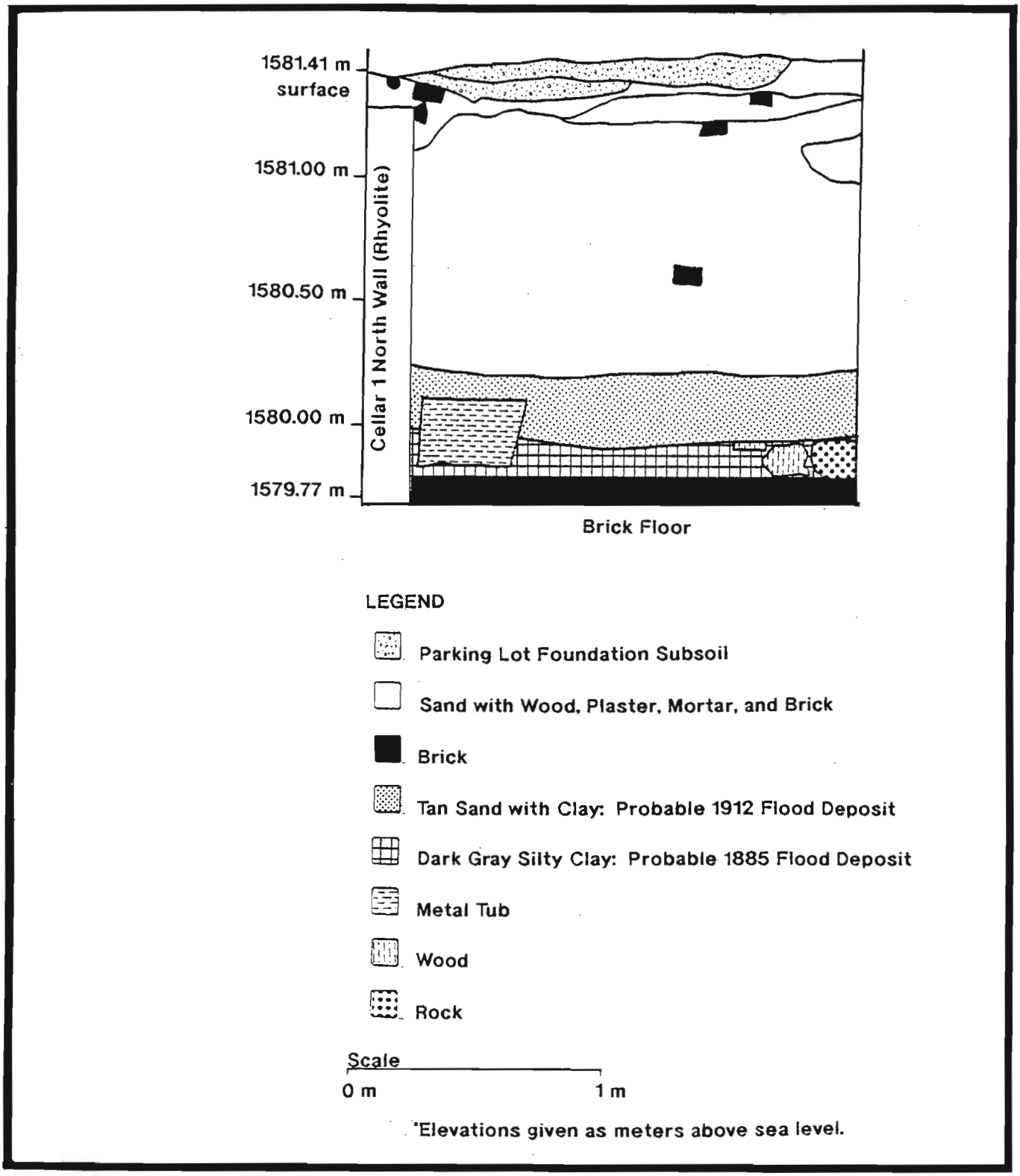


Figure 31 - East wall profile, Intuitive Unit 212 (Cellar 1) (122N/115E).

Figure 32 - Structure 2, brick wall within linear addition.

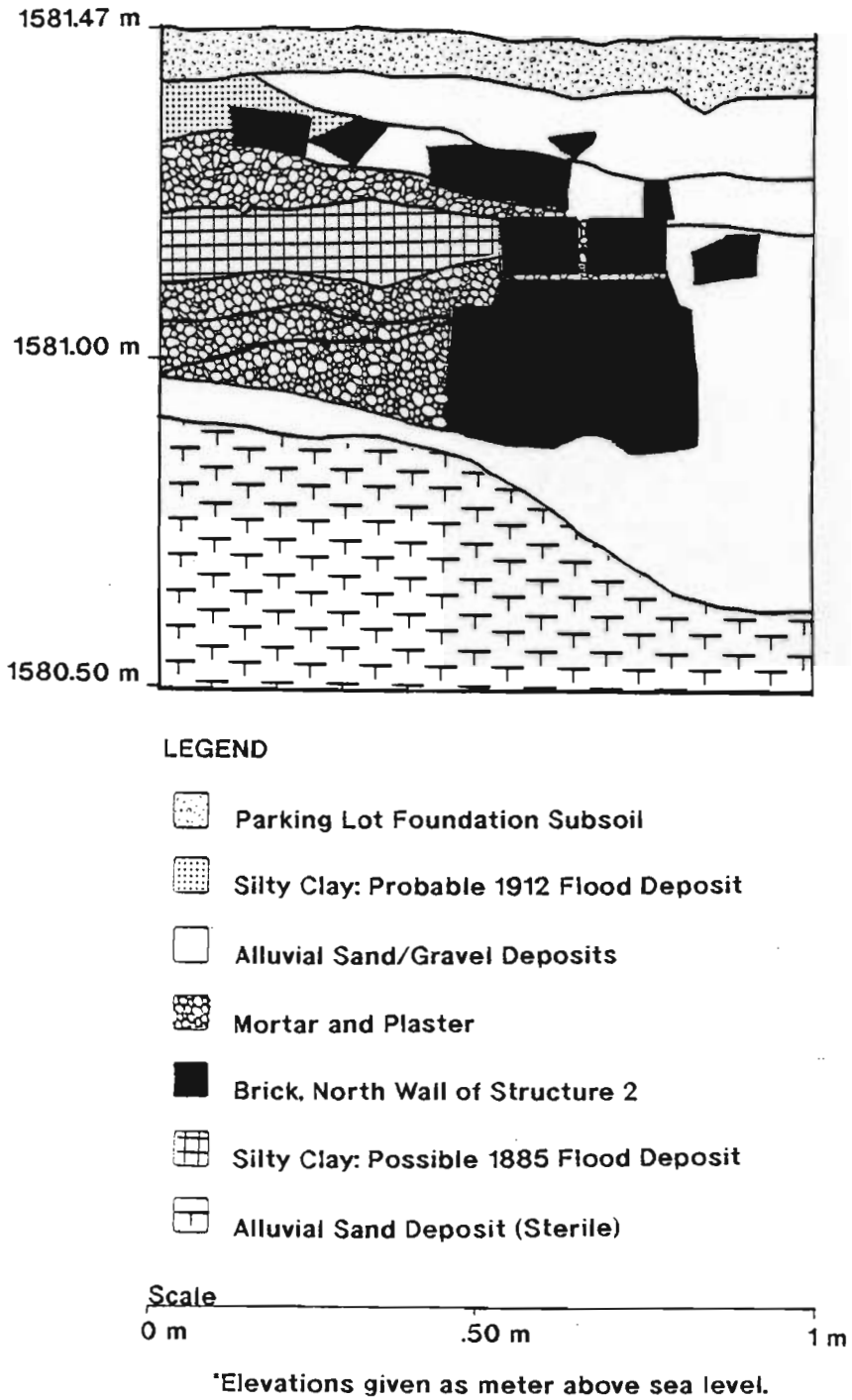


Figure 33 - West wall soil profile, Intuitive Unit 554 (125N/100E).

Figure 34 - Cellar 1, bottles in situ.

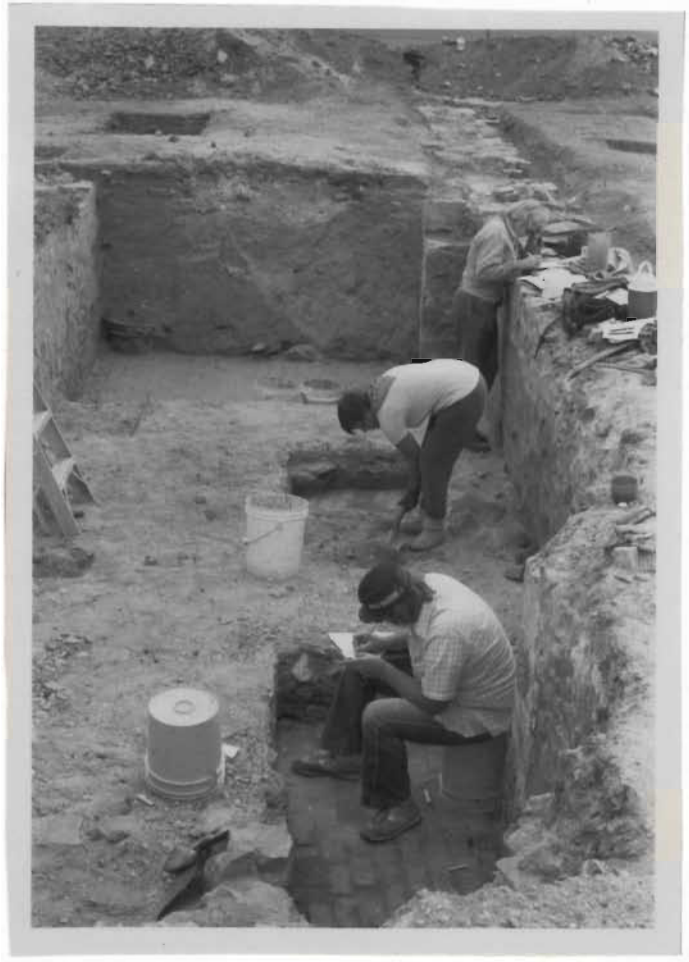


Figure 35 - Excavation in progress in Cellar 1, view to east; flood deposits visible in profile at far end of cellar.

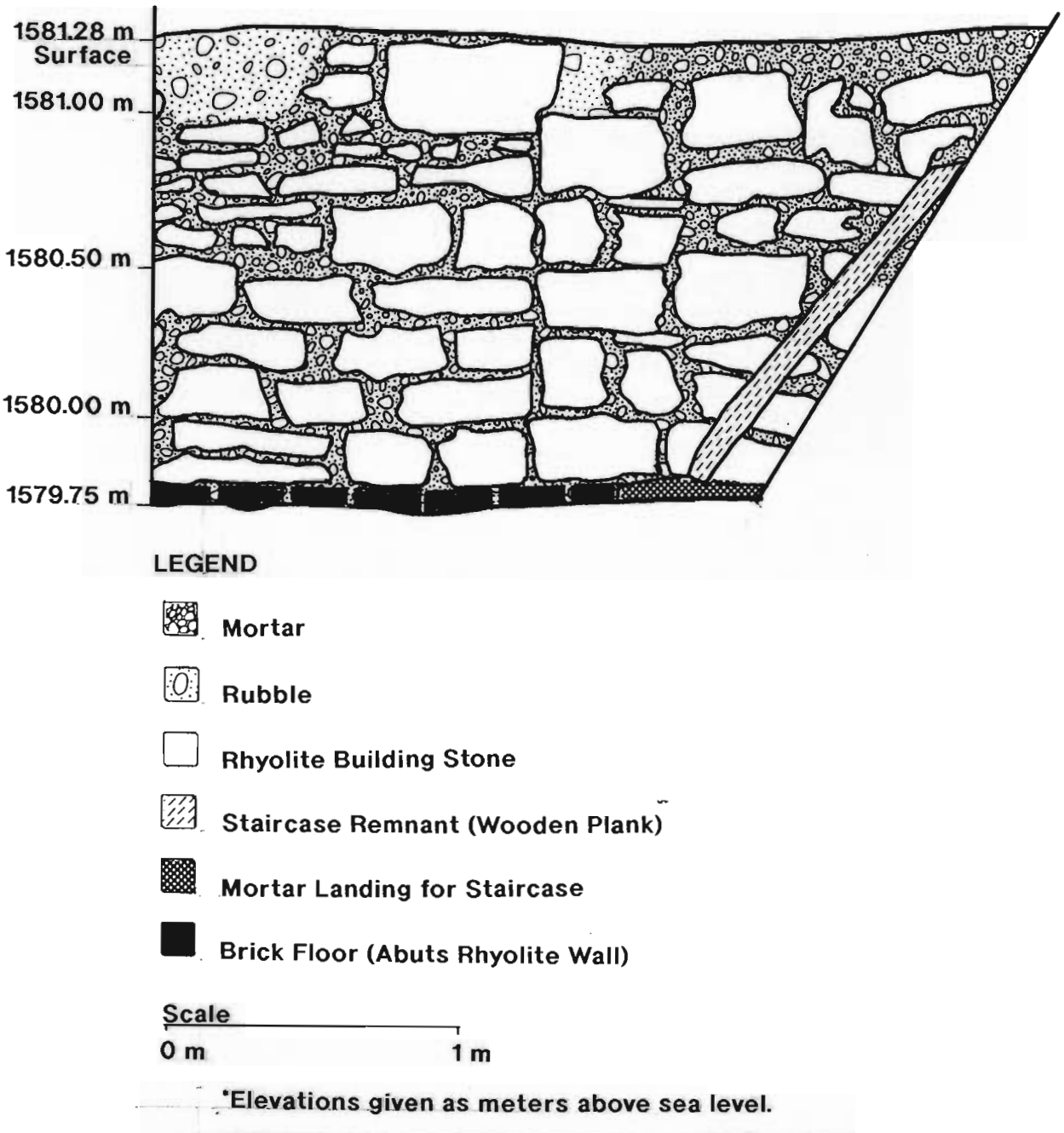


Figure 36 - Profile of south wall staircase entry in Cellar 1 (Intuitive Unit 348; 120N/109E).

Figure 37 - Cellar 1, view to west; note brick floor, foreground, and staircase entry, background center.

Although the foundation of Structure 3 was brick, it did not appear to have a solid footing. Buckling, probably attributable to flooding, is evident in the profile of the north wall (Figure 38). A major portion of the wall along the south side of the structure had been disturbed by a reinforced concrete foundation associated with the post-1912 American Forge Works (Carrillo et al. 1987). Additionally, a brick arched wall (Feature 21), built parallel to the north wall of Structure 3, is thought to represent a base to support wooden buttresses (Figure 39).

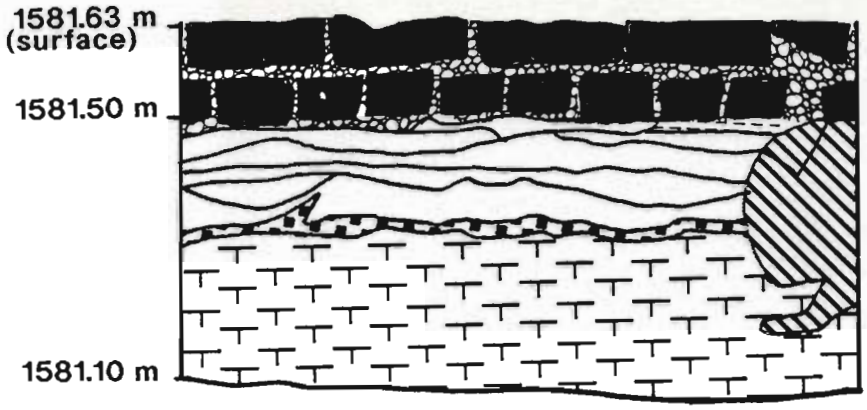
Structure 3 contained little deposition, although many of the artifacts located in the interior excavation units and during wall clearing appeared to be associated with time periods earlier than that of the structure (Figure 40). This observation was particularly true for artifacts found along the east wall of the structure.

Architectural and Non-Architectural Features

Located within and adjacent to the three main structures, 22 architectural and non-architectural features were identified during the mitigation phase. Detailed descriptions are presented below, and Table 3 lists the features by general function and location within the excavation grid. The more prominent features can be found on the excavation map (Figure 17). Specific grid coordinates and numbers assigned to excavated random units (RU) and intuitive units (IU) are listed in Table 4.

Feature 1: Feature 1 consisted of a wood-lined drain pipe trending east-west through the rear yard area (Random Unit [RU] 541, Intuitive Unit [IU] 512, and IU 483), northwest of Structure 3 and southwest of Structure 1. The total extent of the pipe, as defined by the planks forming the drainage system, was undetermined on either end. Portions of the pipe had been destroyed by vandals, during the razing of the hotel, and/or by the Forge Works that occupied the site after 1912. Not all excavation units potentially traversed by the pipe were dug. The pipe, which was 15 cm wide, sloped downward from the east end to depths of 38-56 cm below the present ground surface (bpgs) (an actual elevation of 1581.39-1581.21 m), and toward the west end to depths of 36-68 cm below the modern ground surface (1581.41 - 1581.09 m). The upper feature fill was dark gray, similar to the surrounding sediment. A gray silt and clay layer overlaid a sand and gravel deposit, and most associated artifacts were found in the lowest 5 cm. Artifacts consisted of bone, glass, ceramics, metal, and miscellaneous items such as pieces of shell and marble.

Feature 2: This feature consisted of a circular depression, possibly representing a vandal's pit. The depression occupied the northwest quadrant of a random unit located in the courtyard area, less than 1 m west of the ell portion of Structure 1. The feature measured 60 cm N/S x 45 cm E/W, and extended from the surface to a depth of approximately 87 cm bpgs (1581.45-1580.58 m). The pit contained a light grayish brown coarse sand with gravels, distinguished from the surrounding matrix by a difference in consistency. No artifacts were recovered from the feature fill.



LEGEND

- Brick
- Mortar
- Metal
- Alluvial Sand Deposits
- Probable Vandal's Pit
- Ash Lens
- Alluvial Sand Deposit (Sterile)

Scale

0 m .50 m 1 m

*Elevation given as meters above sea level.

Figure 38 - South wall soil profile, Intuitive Unit 600 (106N/109E).

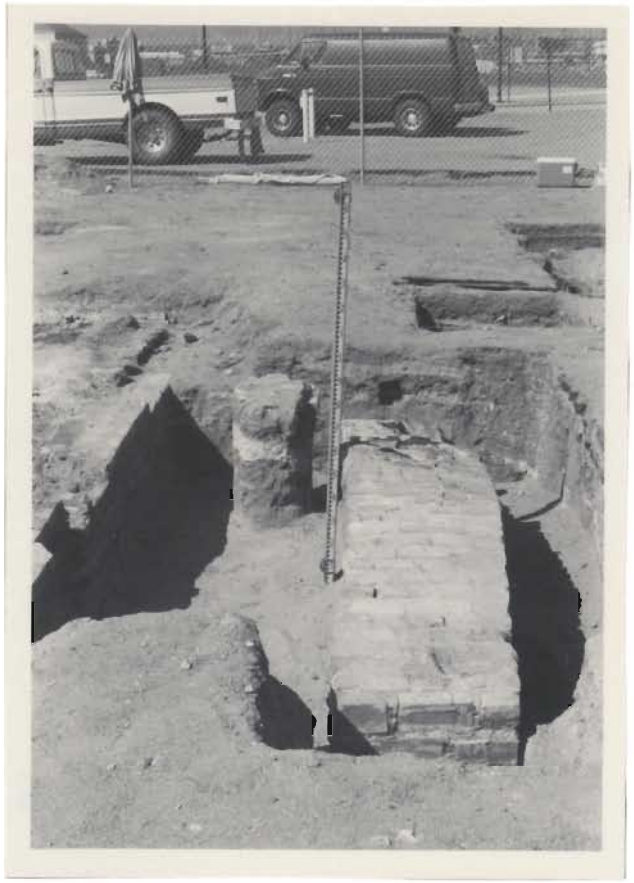
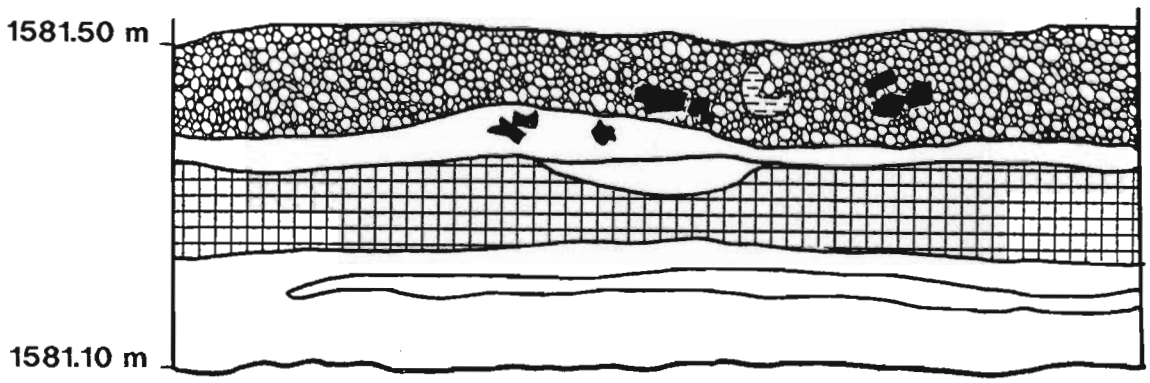


Figure 39 - Brick stabilizing arch (Feature 21) for Structure 3 north wall; view to west.



LEGEND

Mortar

Brick

Brush (?) Fragment

Alluvial Sand/Gravel Deposits

Dark Gray Clay: Probable 1885 Flood Deposit

Scale

0 m .50 m 1 m

*Elevations given as meters above sea level.

Figure 40 - North wall soil profile, Random Unit 442 (Structure 3) (105N/105E).

TABLE 3

ARCHITECTURAL AND NON-ARCHITECTURAL FEATURES

Feature Number	Location	Description
1	RU 512 - 109N/102E RU 541 - 109N/101E IU 483 - 109N/103E	Wood Lined Drain Pipe
2	RU 146 - 109N/118E	Vandal's Pit
3	RU 356 - 108N/109E	Builder's Trench
4	RU 146 - 109N/118E	Wood Covered Gas Pipe
5	RU 356 - 108N/109E	Metal Pipeline
6	RU 356 - 108N/109E	Rubble Filled Pit
7	RU 376 - 114N/108E IU 377 - 113N/108E IU 585 - 112N/108E	Vandal's Pit
8	RU 260 - 116N/113E	Vandal's Pit
9	RU 440 - 108N/105E	Brick Pavement
10	RU 398 - 117N/107E IU 397 - 118N/107E IU 580 - 117N/106E IU 581 - 118N/106E	Vandal's Pit
11	RU 376 - 114N/108E IU 377 - 113N/108E IU 585 - 112N/108E	Builder's Trench
12	RU 440 - 108N/105E	Builder's Trench (possibly associated with Feature 5)
13	IU 587 - 114N/106E IU 597 - 114N/107E IU 598 - 113N/107E IU 599 - 113N/106E	Brick Pavement
14	IU 303 - 116N/111E IU 327 - 116N/110E	Vandal's Pit
15	IU 587 - 114N/106E IU 597 - 114N/107E	Coal Chute (in Feature 13)

TABLE 3

ARCHITECTURAL AND NON-ARCHITECTURAL FEATURES (continued)

Feature Number	Location	Description
16	IU 96 - 122N/120E	Builder's Trench
17	IU 588 - 115N/122E IU 590 - 114N/122E IU 595 - 115N/121E	Poured Mortar Feature (Step or Foundation?)
18	IU 116 - 125N/119E	Wood Lined Pit
19	IU 560 - 119N/100E	Metal Pipelines and Trench
20	IU 560 - 119N/100E	Wooden Drain Pipe
21	RU 356 - 108N/109E IU 357 - 107N/109E IU 380 - 108N/108E IU 381 - 107N/108E IU 402 - 108N/107E IU 403 - 107N/107E IU 421 - 108N/106E IU 422 - 107N/106E IU 600 - 106N/109E IU 620 - 106N/108E IU 621 - 106N/107E IU 622 - 106N/106E	Brick Stabilizing Arch

TABLE 4

TREMONT HOUSE EXCAVATION UNITS

RANDOM UNITS		
Unit Number	**Grid Coordinates**	**Sampling Stratum**
62	105N/122E	3
65	101N/122E	3
89	100N/121E	3
119	122N/119E	1
123	117N/119E	2
146	109N/118E	4
152	103N/118E	4
158	126N/117E	1
161	123N/117E	1
187	122N/116E	1
260	116N/113E	2
270	102N/113E	5
343	125N/109E	1
356	108N/109E	4
376	114N/108E	2
398	117N/107E	2
410	128N/106E	1
440	108N/105E	6
442	105N/105E	5
475	120N/103E	1
512	109N/102E	6
541	109N/101E	6
546	104N/101E	6
INTUITIVE UNITS BY LOCALE		
CELLAR 1 (C1)		
188	121N/116E	1
189	120N/116E	1
190	119N/116E (N 1/2 only)	2
212	122N/115E	1
213	121N/115E	1
214	120N/115E	1
237	122N/114E	1
238	121N/114E	1
239	120N/114E	1
255	122N/113E	1
256	121N/113E	1
257	120N/113E	1
279	122N/112E	1
280	121N/112E	1
281	120N/112E	1
298	122N/111E	1

TABLE 4

TREMONT HOUSE EXCAVATION UNITS
(continued)

Unit Number	Grid Coordinates	Sampling Stratum
CELLAR 1 (C1) (continued)		
299	121N/111E	1
300	120N/111E	1
322	122N/110E	1
323	121N/110E	1
324	120N/110E	1
346	122N/109E	1
347	121N/109E	1
348	120N/109E	1
612	119N/115E (N 1/2 only)	2
613	119N/114E (N 1/2 only)	2
614	119N/113E (N 1/2 only)	2
615	119N/112E (N 1/2 only)	2
616	119N/111E (N 1/2 only)	2
617	119N/110E (N 1/2 only)	2
No number	119N/109E (N 1/2 only)	2
CELLAR 2 (C2)		
301	118N/111E	2
302	118N/112E (W 1/2 only)	2
303	116N/111E	2
325	118N/110E	2
326	117N/110E	2
327	116N/110E	2
349	118N/109E	2
350	117N/109E	2
351	116N/109E	2
373	118N/108E	2
374	117N/108E	2
375	116N/108E	2
397	118N/107E	2
399	116N/107E	2
580	117N/106E	6
581	118N/106E	6
592	*116N/112E (W 1/2)	2
602	117N/111E	2
603	117N/112E (W 1/2 only)	2
604	115N/112E (NW 1/4 only)	2
605	115N/111E (N 1/2 only)	2
606	115N/110E (N 1/2 only)	2
607	115N/109E (N 1/2 only)	2
608	115N/108E (N 1/2 only)	2
609	115N/107E (N 1/2 only)	2
610	116N/106E	6

TABLE 4

TREMONT HOUSE EXCAVATION UNITS (continued)

Unit Number	Grid Coordinates	Stratum
CELLAR 2 (C2) (continued)		
611	115N/106E	6
COURTYARD AREA (Cyrd)		
357	107N/109E	4
380	108N/108E	4
381	107N/108E	4
402	108N/107E	4
403	107N/107E	4
421	108N/106E (E 1/2 only)	4
422	107N/106E (E 1/2 only)	4
REAR YARD AREA (RA)		
462	111N/104E	6
464	109N/104E	6
483	109N/103E	6
560	119N/100E	6
619	114N/99E	6
STRUCTURE 1 (S1)		
377	113N/108E	2
585	112N/108E (N 1/2 only)	2
587	114N/106E	6
588	115N/122E	2
589	*116N/112E (E 1/2)	2
590	114N/122E (N 1/2 only)	2
591	116N/122E	2
593	112N/112E (N 1/2 only)	2
594	112N/110E (N 1/2 only)	2
595	115N/121E	2
596	112N/109E (N 1/2 only)	2
597	114N/107E	2
598	113N/107E	2
599	113N/106E	6
STRUCTURE 2 (S2)		
184	125N/116E	1
185	124N/116E	1
186	123N/116E	1
368	124N/108E	1
413	125N/106E	1
554	125N/100E	1
556	123N/100E (S 1/2 only)	1

TABLE 4

TREMONT HOUSE EXCAVATION UNITS (continued)

Unit Number	Grid Coordinates	Stratum
STRUCTURE 2 (S2) (continued)		
557	122N/100E	1
558	121N/100E	1
601	125N/97E	1
STRUCTURE 3 (S3)		
600	106N/109E (N 1/2 only)	5
618	102N/115E (W 1/2 only)	5
620	106N/108E (N 1/2 only)	5
621	106N/107E (N 1/2 only)	5
622	106N/106E (NE 1/4 only)	5
GENERAL LOCATIONS		
96	122N/120E	1
116	125N/119E	1

* **Intuitive 1 m x 1 m unit was assigned two unit numbers: 589 refers to the half in Structure 1; 592 refers to the half in Cellar 2.**

Feature 3: This feature was a builder's trench that extended in an east-west direction less than 1 m north of Structure 3. The trench, constructed to afford workers sufficient room to maneuver during placement of subsurface features, was associated with the construction of an east-west trending brick arch located in the courtyard area (Feature 21). The builder's trench was approximately 60 cm wide and extended along the north edge of the arch. Feature 3 was identified on the basis of a change in fill from the surrounding dark gray coarse sand to a much lighter sediment. The trench was well defined in profile as it sloped downward toward the north end of the unit. The trench contained no artifacts.

Feature 4: Feature 4 consisted of a portion of a circular/oval depression containing milled lumber planks, which may have originally enclosed a gas pipe. The feature was located along the southern wall of RU 146 in the courtyard area west of the ell portion of Structure 1. The feature measured 25 cm N/S x 60 cm E/W, and occurred at a depth of 47 cm to 74 cm bpgs (1580.98-1580.71 m). Only a small portion of the feature was exposed in the unit, but a metal gas pipe apparently extended beneath the lumber and into the south unit wall. Feature fill consisted of a dark brown moderately compact silty sand, distinguished from the lighter colored and less compact surrounding matrix. No artifacts were found in association with the feature.

Feature 5: This feature was comprised of an east-west trending metal pipeline which extended through the courtyard near Structure 3, and was revealed in the northern portion of RU 356; portions of the line were later identified in the southern portion of RU 440, located 3 m directly to the west. Three excavation units were located between RU 356 and RU 440, but none were excavated to the depth of the pipeline. In RU 356, the pipe was less than 5 cm wide and was located at a vertical depth of 1580.73-1580.69 m. Feature 3, the builder's trench associated with the brick arch, was located in a separate part of RU 356, at a level slightly above that of the pipeline. In RU 440, the pipeline occurred at a depth of 1580.72 - 1580.67. Fill in both cases was a light tan coarse sand with gravels. No artifacts were found in direct association with the feature.

Feature 6: This feature consisted of an irregularly shaped rubble-filled pit. The pit extended across RU 356, and varied from 20 cm wide in the western half of the unit to 56 cm wide along the eastern wall of the unit. Here, it joined with the metal pipeline (Feature 5) just to the north. Both of these features were identified in the same general level, with the pit specifically located at a depth of 1580.60-1580.20 m. Although not directly superimposed, Feature 3 was located stratigraphically above the pit, with approximately 16 cm of fill separating the two features.

Feature 6 fill consisted of a dark grayish brown coarse sand with rust colored sediments, while the surrounding matrix was light tan in color. Artifacts included numerous pieces of metal, along with glass, bone, and one whole apothecary bottle. Also noted were small bits of wood that may represent the remains of a deteriorated plank. The pit's function is unknown.

Feature 7: Feature 7 consisted of a large vandal's pit, which appeared to have been dug in "tunnel" fashion from south to north in the interior of Structure 1, just south of Cellar 2. The pit measured approximately 190 cm N/S by 70-90 cm E/W, and its depth varied from 30 cm to almost 1 m bpgs. The feature essentially obscured the stratigraphy in the upper levels of the three units. Feature fill consisted of a mottled grayish brown coarse sand with gravels, as distinguished from the surrounding light brown matrix. The pit contained modern remains, such as fast food containers, in addition to a variety of historic refuse (i.e., bottle and window glass, shoe fragments, nails, buttons, bone, one coin, and one glass bottle stopper). The pit was probably dug in the 1960s or 1970s, and the component mixing undoubtedly occurred when it was backfilled.

Feature 8: This feature was a small vandal's pit exposed within Structure 1, just outside the east wall of Cellar 2. The pit measured approximately 45 cm N/S x 60 cm E/W, and extended into the west wall of RU 260. Fill consisted of a dark gravelly mix that contained many pieces of asphalt, along with artifacts such as heavily corroded nails, window glass, and one piece of shoe sole leather.

Feature 9: Feature 9 consisted of an area of brick pavement located in the courtyard area 1 m north of Structure 3 and the associated arch support (Feature 21). Although pieces of brick were scattered across RU 440 in an east-west direction, the main cluster was in the western half of the unit, extending 70 cm north from the south unit wall. The brick feature probably extended westward into the adjoining unit, which was not excavated. Vertical depths for the feature were 1581.55-1581.46 m. The feature fill was characterized by red bricks encompassed by a dark gray coarse sand with rubble and pebbles. A light tan clay sediment surrounded the feature on the north. One bone fragment was found in association with the feature. The function or association(s) of the brick pavement is unknown.

Feature 10: This feature was a large vandal's pit located in the northwest corner of Cellar 2, within Structure 1. The pit encompassed portions of four units (RU 398, IU 397, IU 580, and IU 581). The feature measured 114 cm N/S x 80 cm E/W, and occurred at a vertical depth of 1580.82-1580.30 m. The feature was primarily defined on the basis of contrasting the fill sediments (light gray to tan sand) with the surrounding matrix (white to ash gray brick and mortar). Also, a cellophane cigarette wrapper, indicative of modern activity, was found in the feature fill. Historic artifacts included nails, ceramics, glass beads, window glass, bone, one button, and one fragment of a marble wash stand.

Feature 11: This feature consisted of the edge of a disturbed builder's trench associated with a north-south trending wall, which formed part of the southwestern corner of Structure 1. The trench was evident along the west walls of IU 585, IU 377, and RU 376. Feature 11 extends only 10-20 cm into these three units, with the majority of the trench located in the two units adjacent to the west (IU 597 and IU 598) that contain the wall itself. Approximate feature depths were 1580.23-1579.20 m. Feature fill consisted of a

loosely compact coarse brown sand, with artifacts including nails, bone, one button, and a small amount of glass.

Feature 12: This feature was a builder's trench located in RU 440. The trench may have been associated with Feature 5, a metal pipeline identified in both RU 356 and RU 440. These units are located in the courtyard area just north of Structure 3 and its associated brick arch support (Feature 21). Feature 12 occupied the northern half of RU 440 at a vertical depth of 1581.00-1580.28, in the same general level as the pipeline. The trench, which sloped downward toward the north, extended entirely across RU 440 in an east-west direction. The trench fill consisted of dark grayish brown coarse sand, in contrast to a light tan sterile sand which appeared to surround the metal pipeline. Trench fill contained numerous types of artifacts, including ceramics, metal, bone, glass, buttons, and a cartridge.

A very small portion of Feature 9, the brick pavement, was present at this level along the extreme western wall of RU 440. The brick overlays the trench and pipeline fill in this small area.

Feature 13: This feature consisted of an area of brick pavement outside the southwest wall of Structure 1, adjacent to the southwest corner of Cellar 2. The pavement occupied much of IU 587 and IU 599 and extended westward past the unit walls. In this area, fill was removed down to the level of the brick pavement in order to identify its extent, but no units were systematically excavated. The feature also extended eastward up to the wall of Structure 1. This area was investigated by excavating the western portions of IU 597 and IU 598. The eastern portions of these units were not excavated because they fell within the structure's interior.

The pavement measured 1.11 m N/S x 1.20 m E/W, and occurred at a depth of 1581.21-1579.18 m. The matrix surrounding the feature was clearly stratified and consisted of grayish brown coarse sand with coal chunks, a large amount of brick and asphalt debris, pockets of gray clay, and lenses of light tan sand. Around the perimeter of the feature fill, a layer of coal was identified. The fill associated with the feature contained a large amount and variety of artifacts, including metal, glass, ceramics, buttons, bone, marble, mica, nails, a bone-handled brush, an apothecary bottle, egg shell, a chimney liner, and a portion of a shoe.

A semi-circular depression lacking brick was located in the northeastern portion of the otherwise unbroken pavement. A wooden plank was encountered near the center of this area extending from east to west. The sediment south of the plank was different from that to the north, and at a depth of 1579.57 m more wood and an abundance of coal were discovered. This area was determined to be a coal chute and was assigned a separate feature designation (Feature 15).

Feature 14: Feature 14 was yet another vandal's pit located inside the southeast corner of Cellar 2, within Structure 1. The pit measured 37 cm N/S x 46 cm E/W in the west half of IU 303 and adjacent unit IU 327. The pit occurred at a vertical depth of 1581.25-1580.93 m. Feature fill consisted of a mixture of mortar, plaster, and brick rubble, with artifacts that included one piece of glass, one shell button, and miscellaneous pieces of metal. The bottom of the pit was difficult to identify due to its similarity to the surrounding rubble matrix.

Feature 15: As noted above, Feature 15 is a coal chute characterized by a partially wood-lined semi-circular break in the northeastern corner of Feature 13, the brick pavement. It abutted both the southwestern corner of Cellar 2 and the southwestern wall of Structure 1. A brick arch was present where the feature abutted the wall of Structure 1. The coal chute extended under the arch as well as the structure wall. Feature 15 measured approximately 1.10 m north-south by 1 m east-west, and occurred at a depth of 1579.78-1579.52 m. In some areas, the feature wall was defined by a vertical wooden plank connected to horizontal planks at the base which formed a floor. Feature fill was a black coarse sand with abundant coal fragments. A drinking glass was the only artifact located in the fill.

Feature 16: This feature was a builder's trench located along the west wall of IU 96, just outside the northeast corner of Cellar 1. The trench extended throughout the IU 96 at a depth of 1580.80-1580.32 m. It was irregular in shape and appeared to correspond to the depth of the wall that defined the northeast corner of the cellar. Feature fill contained miscellaneous pieces of broken glass, metal fragments, and some charcoal.

Feature 17: Feature 17 was a step or foundation remnant composed of fibrous plaster located within Structure 1, in the south half of IU 595 and the extreme southwestern portion of IU 588. The feature was "L" shaped and abutted a short segment of brick foundation trending east-west within Structure 1. Surrounding fill yielded iron, glass, and bone fragments, although the glass fragments are thought to pre-date the feature.

Feature 18: This feature consisted of a wood-lined pit located north of and adjacent to the east end of Cellar 1, possibly representing a cellar that was utilized as a dump. The pit was evident in the southern portion of IU 116 at a depth of 1580.91-1580.01. The northern perimeter of the feature was entirely faced with wood. Deposits within the feature were stratified, apparently reflecting separate dumping episodes. Fill included a high quantity of glass fragments (primarily window and bottle) and rusted metal. Unbroken artifacts observed included a whole bottle, horseshoe, lamp base, pipe stem, button, and a shoe.

Although Feature 18 was supposedly situated outside Structure 2, it was curious that the wood frame facing aligned with the north wall of that structure's addition. Its depth indicates that this may represent an additional cellar, a proposition also supported by the vertical position of the wood facing and the slope of the stratified deposits. It is

suggested that the feature may have been part of a larger structure, possibly a cellar, that was centered further south.

Due to time constraints, Feature 18 was only partially excavated. A full investigation of the feature would have necessitated the expansion of IU 116. Monitoring the area during site destruction was proposed instead.

Feature 19: Feature 19 consisted of a trench containing two metal pipes. The feature was located in the rear yard area (IU 560) at the extreme western edge of the grid. The trench, which was about 40 cm wide, was identified in the southeast corner of the unit and ran in a northwesterly direction. Near the unit's north wall, the trench ran under a wooden drain pipe (Feature 20). The trench presumably continued beyond the unit's southeast corner and north wall, although the adjacent units were not excavated. The top of the feature was somewhat obscured by disturbance due to vandalism, although the trench's vertical depth was recorded as approximately 1580.83-1580.57 m. Feature fill consisted of coarse sand distinguished from the surrounding sterile yellow sand by color and texture variations. Glass, ceramic, metal, bone, and other miscellaneous artifacts were present in the feature fill. A vandal's pit, evident in the southeast corner of the unit, had caused disturbance to that portion of the feature.

Feature 20: This feature was comprised of a wooden drain pipe positioned in an east-west orientation across the north wall of IU 560. The pipe was about 18 cm wide and occurred at a depth of 1581.07-1580.96 m. As noted above, the wooden drain pipe was superimposed on the Feature 19 trench containing two metal pipes. Much of the wood associated with the feature was deteriorated. Artifacts in the feature fill included metal, bone, glass, and a button fragment. A segment approximately 45 cm wide through the center of the feature had been disturbed by vandalism.

Feature 21: This feature consisted of a brick arch in that probably functioned to stabilize or support the north wall of Structure 3. The arch, which was actually located in the courtyard area, measured 60 cm N/S x 3.30 m E/W and was 70 cm in height (at a depth of 1581.73-1581.03 m). It was three courses high and three bricks wide, and exhibited decomposing red brick of various hues. Portions of the arch were missing, presumably destroyed during or after the building was razed. The feature appeared to bend laterally, perhaps from the strain of supporting the original structure.

The proximity of the arch to the north wall of Structure 3 suggests that the feature may have functioned to buttress the base of that wall. In this scenario, heavy timbers would have been set against the arch, angling obliquely upward to meet the north wall of Structure 3. The arch would have aided in the absorption of stress, which could account for its bowing away from the Structure 3 foundation wall. Another possible explanation for this sag could be construction/destruction activities following usage but prior to excavation. No artifacts were noted in direct association with the arch.

CHAPTER 8

ANALYTICAL TECHNIQUES AND RESULTS

Introduction

This chapter describes the laboratory methods and taxonomies used in the analysis of artifacts, and thereafter presents tabulations and statistical manipulations within specific data files. Information pertaining to a wide range of historic artifacts, including faunal and macrobotanical remains, is presented, and classification schemes, terminologies, and variables are fully defined.

The artifacts excavated from Structures 1-3 and their associated features, as well as surrounding exterior areas, were statistically analyzed to derive a contextual framework for the site. It was then possible to compare and contrast features in terms of their temporal and functional contexts, which tended to be specific to certain activity loci.

Statistical manipulations and database management operations performed for this study were completed using dBase III and SYSTAT software packages. Descriptive statistics pertaining to Analysis of Variance (ANOVA) tests were produced through the STATS module (Wilkinson 1988:705-720).

The Tremont House database is divided into three file types to allow separate analyses of temporally diagnostic and functionally defined historical artifacts, and faunal remains. A total of 26,538 artifacts and 3,779 faunal remains comprise the entire cultural assemblage. The former includes 2,062 temporally diagnostic and 24,476 functionally defined artifacts. The latter contains nearly 30 distinct genera and/or species. The completion of the statistical artifact analysis satisfies Phase III of the original data recovery plan (Carrillo et al. 1987).

Methodological Orientation

The examination and analysis of artifacts from the Tremont House involved a consideration of each structure and feature with regard to its associated artifactual material, recovered both from internal as well as external contexts. This methodology is based on the premise that an integrative approach allows for the identification of differential feature variability and assemblage distributions. As a result, general aspects of past social and temporal behavior can be deduced (Binford 1972; Schiffer 1977; South 1977a, 1977b; Lewis 1984; Hardesty 1988). Central to this premise is the belief that archaeological patterns can be examined within a general historical framework incorporating primary documentary information (i.e., plats, diaries, census records, etc.) as well as secondary materials (i.e., general and specific period histories and biographies) (Hardesty 1988).

Binford (1972) urges that changes in cultural systems should be investigated in the context of the particular adaptive situation affecting the human population being observed. To profitably study process, cultural systems need to be isolated and analyzed in terms of their physical, biological, and social dimensions. He further indicates that the social dimension is most frequently excluded from such considerations. The study of the Tremont House artifacts attempts to address this often neglected social dimension.

The basic analytical approach consisted of isolating and defining the content, structure, and range of the cultural system to which the Tremont House belongs, in terms of its ecological relationships within a region. It is recognized that the extent of such regions often varies because cultural systems differ greatly in the limits of their adaptive range and milieu. As systems become more advanced, wider ecological ranges are often encompassed and extrasocietal interaction becomes more complex and widespread (Binford 1972:137).

Archaeological method and theory advanced by Hardesty (1980, 1988), Lewis (1984), and others places archaeological sites such as the Tremont House within an integral general frontier system framework. The frontier is conceptualized as an ecological community under transformation due to internal forces, technological patterns from outside dispersal centers, and progressive integration into regional, national, and international economic systems (Hardesty 1980:67). This perspective served as a methodologically feasible and relevant framework for examining the archaeological patterns of artifacts from the Tremont House, especially with regard to their associated structures and features. Results of the study can be compared with those observed at other frontier sites which functioned within similar ecological contexts.

Analytical Database Organization

Artifacts recovered from the Tremont House were grouped into three distinct types of database files. These artifacts were excavated from structures, features, and exterior areas using the stratified random sample and intuitive sample described in Chapter 6. The three types of databases used to categorize the artifacts include:

(1) Lot Find Data: Generally, non-diagnostic artifacts were considered lot find. They consist of bulk collections from excavation units, levels, and features whose general attributes can be used for classification purposes. These artifacts (i.e., bottle glass and ceramics) were grouped into functional lots and counted. Further breakdowns were attempted for specific groups, such as bottle glass, because a number of items within this group evidenced general diagnostic attributes, such as glass color. This information allowed for the formulation of at least a range of potential artifact manufacture dates.

(2) Diagnostic Artifact Database: This database consists of items that exhibit stylistic, morphological, and/or technical evidence specific to a particular time period. This, in turn, refines the age ranges for time periods during which specific artifacts already are known to be manufactured. An attempt was also made to utilize the diagnostic artifacts to assign structures and features to specific temporal periods.

(3) Ancillary Specimen Database: The database of the ancillary field specimens consists of a detailed listing of the faunal material recovered during the excavations. This information, in conjunction with the artifactual data, was used to outline general dietary patterns derived from the various site areas, which differed both temporally and spatially.

Using nearly 2100 temporally diagnostic artifacts, the excavation units were examined and various levels within these units were assigned initial occupation dates. Specific areas yielded evidence of differential mean beginning occupation dates, varying both vertically and horizontally. All temporally sensitive artifacts within a specific vertical level were examined, and their horizontal distributions were also considered. This allowed (1) identification of the hotel's various building episodes, which served to highlight the evolution of architectural patterning; and (2) an outline of differential patterning of subsistence remains, which addresses the consumption of wild game vs. domesticated animals through time.

Functional Structure for Artifact Classes

A functional artifact classification study was prepared so that artifact assemblages and general function could be identified for each of the areas within the Tremont House site. This procedure reflects a methodological approach currently popular in historical archaeological analyses (South 1977a, 1977b; Sprague 1980; Lewis 1984; Hardesty 1988; Andrefsky 1990; Mehls et al. 1991; Carrillo et al. 1991). South (1977a, 1977b) points out that understanding past lifeways, culture history, and culture process through the analysis of material cultural remains is one of the main concerns of archaeologists. A recognition of broad cultural patterns through quantitative studies is the methodological approach best suited to arrive at such an understanding.

In order to discover and investigate activities and broad patterns of cultural behavior at historic sites, a classification scheme based on the functional aspects of artifactual remains, rather than material and morphology, is required. For instance, the functional interpretation of a specific bottle may differ if based on the container type as opposed to the actual contents. Since bottles are manufactured to hold liquids as diverse as rum and perfume, Sprague (1980:259) suggests that archaeologists should be "more concerned with the use, meaning, and function of the [various ingredients] than with the form and technology of the bottle holding the liquids." The functional classification

system adopted for the Tremont House artifact study reflects the concern for arriving at interpretations of cultural meaning:

> In the final analysis, the purpose of a historic site study is to contribute to our understanding of the culture as a whole. This requires a knowledge of the function of cultural elements discovered at that site. Logically therefore from the point of view of the anthropologist, function is the highest and most productive basis for site analysis (Sprague 1980:252).

Whenever possible, materials were classified into functional groups as they were being identified and cataloged during laboratory processing. Within each functional group, the use of categories allowed for more specific functional assignments. These groups and categories were devised, with some modification, using other established classification schemes (Carrillo 1985; Andrefsky 1990; Mehls et al. 1991). They were also based upon a thorough review of the types of artifacts associated with other urban and rural historic occupations in southeastern Colorado, along the Colorado Front Range, and in Wyoming. In southeastern Colorado, sites such as Las Animas City (Earles et al. 1987), historic sites within the Pinon Canyon Maneuver Site (Carrillo 1989, 1990), and the site of Boggsville (Carrillo and Barnes 1990) provide comparable examples. In addition, other regional sites were considered, such as the Big Dry Creek Cheese Ranch in Douglas County (Carrillo et al. 1987), historic sites identified in conjunction with the 20th and 23rd Street Viaduct Replacement Projects in Denver (Carrillo 1991a, 1991b), and the Copperton and Battle townsites in Wyoming (Mehls et al. 1991). Historical archaeological sites in Nevada and California also were considered.

Six basic functional groups were utilized: (1) Activities, (2) Architecture, (3) Household/domestic, (4) Leisure/recreation, (5) Personal, and (6) Subsistence. These groups were further divided into associated categories that, in both general and specific terms, reflect the actual activities constituting the overall group (Table 5). For example, the Architecture group contained a higher number of artifacts than any other, and artifacts assigned to this group were therefore subdivided into two more specific categories, Building Hardware and Building Material. The categories range from those identified in the general Activities group, (i.e., agriculture/farming, livestock, maintenance/construction, transportation, etc.), to more specific classifications such as those constituting the Subsistence group (food procurement, preparation, storage, and consumption, as well as non-artifactual ancillary field specimens, such as bone and faunal remains). Artifacts from the lot find, diagnostic artifact, and ancillary specimen databases were structured using the above groups and categories.

Once the functional groups and categories were devised, specific attributes most amenable to functional identification and analysis for each artifact class were identified. These attributes, which are discussed in detail below, include (1) bottle/jar glass contents, (2) ceramic type or ware and item type or vessel form, (3) cartridges, (4) tin can types, and (5) specific item types within the class of general historical artifacts.

TABLE 5

FUNCTIONAL ARTIFACT GROUPS AND CORRESPONDING CATEGORIES

Functional Groups	Functional Categories
Activities	Transportation Agriculture/Farming Livestock Maintenance/Construction Other (not specific)
Architecture	Building Hardware Building Material
Household/Domestic	Clock/Watch Decorative Furnishings Furniture Illumination Telephone Related Writing Accessories
Leisure/Recreation	Alcohol/Drinking Musical Instruments Smoking/Tobacco Sporting Goods Toys
Personal	Adornment Baggage Coins/Tokens Clothing Footwear Health/Hygiene
Subsistence	Food Procurement Food Preparation Food Storage Food Consumption Food Remains

Results of the Functional Artifact Study

It should be noted that not all artifacts were classifiable by function. For example, unidentifiable glass fragments or miscellaneous scrap metal, although included in the total artifact calculations, are not incorporated into the functional study. In addition, it is often difficult to assign one specific function to a particular artifact:

> The artifact may have a number of functions, perhaps simultaneously, in the culture of its origin. Quite often, therefore, the function of an artifact is

determined not only by its form but also by the context in which it was found. A functional approach forces the investigator to make certain interpretations during the artifact analysis as well as after its completion. In order to place an artifact in its proper category, it becomes necessary to think about the object's function and its relationship to other artifacts. Cultural reconstruction, then, actually begins in the analytical state. The cultural meaning of the artifact becomes an important consideration in its analysis (Sprague 1980:252).

The following discussion focuses on the artifact classes utilized in the functional study. Tables are also presented which correlate individual artifacts within those classes with their assigned functional groups and categories. In some cases, an explanation for the choice of a particular functional classification is included, and any problems with multiple function artifact types are outlined.

Bottle/Jar Glass: The contents of bottle and jar glass items proved to be the attribute most useful for providing functional interpretations in this class of artifacts. Table 6 lists the particular contents of bottle/jar glass items identified during laboratory processing, and the corresponding function assigned to each. In most cases, these assignments are

TABLE 6

BOTTLE/JAR GLASS CONTENTS AND FUNCTIONS

Contents	Functional Group	Functional Category
chemical/poison	Activities	Other
ink/mucilage	Household/Domestic	Writing Accessories
beer	Leisure/Recreation	Alcohol/Drinking
whiskey	Leisure/Recreation	Alcohol/Drinking
other spirits	Leisure/Recreation	Alcohol/Drinking
snuff	Leisure/Recreation	Smoking/Tobacco
cosmetics	Personal	Adornment
medicine	Personal or Activities	Health/Hygiene or Livestock
condiments	Subsistence	Food Preparation
canning jar	Subsistence	Food Storage
milk	Subsistence	Food Consumption
soda/mineral water	Subsistence	Food Consumption
soft drink	Subsistence	Food Consumption
undetermined beverage	Subsistence	Food Consumption
undetermined food	Subsistence	Food Consumption

logical and self-explanatory. However, one category that exhibited possible multiple functions was medicine. Although most of the medicine bottles were placed within the Health/Hygiene category of the Personal group, specific artifact descriptions indicated that a few medicine bottles contained veterinary medicine. These items were therefore assigned to the Livestock related category of the Activities group.

Figures 41 through 53 exhibit a representative sample of the glass bottles and jars recovered during the Tremont House excavations. Table 7 follows Figure 53 and presents specific data for each illustrated artifact.

Ceramics: Developing functional interpretations for the ceramic artifact class proved to be somewhat more complicated than for the bottle/jar glass items. Ceramic ware was the attribute initially used to identify function. Specific item type, or vessel form, was then considered to more accurately place the artifact within a functional category (Table 8).

Most of the ceramics were classified within the Subsistence functional group. However, some items required special consideration regarding their functional group and category assignments. First, coarse and semi-coarse earthenwares, such as redware, buffware, and yelloware, typically found in the form of large utilitarian bowls, were assigned to the Food Preparation category of the Subsistence group. An exceptional case involved a redware vessel that had been specifically described as an unglazed flower pot. In this situation, the artifact was classified within the Other category of the Activities group.

Stoneware vessels were even more problematic. While primarily related to food storage, stoneware items may have contained substances that were not consumed, such as ink or bleach. If these types of contents were identifiable for an item, the appropriate functional assignment was made, normally to a category within the Activity group. Conversely, if a stoneware vessel were identified by form rather than contents (i.e., a jug with a restricted opening), the artifact was assigned to the Alcohol/Drinking category of the Leisure/Recreation group (since it was assumed to have contained alcohol). A stoneware crock, however, probably used as a food container, was assigned to the Food Storage category of the Subsistence group. Tablewares--specifically whitewares, ironstones, and porcelain in plate, cup, and bowl form--were all placed within the Food Consumption category of the Subsistence group for more obvious reasons.

Figures 54 through 58 include a representative sample of the various types of ceramic wares and vessel forms identified at the Tremont House. Table 9 follows these figures and presents specific data for each illustrated artifact. Maker's marks, which served to date many of these artifacts, are illustrated in Figures 59-77.

Cartridges: All firearm cartridges were assigned to the Food Procurement category of the Subsistence group. This decision was made based on the results of one of the

Figure 41 - Beer bottles.

Figure 42 - Brandy or cordial bottles, left and center, beer bottles, right.

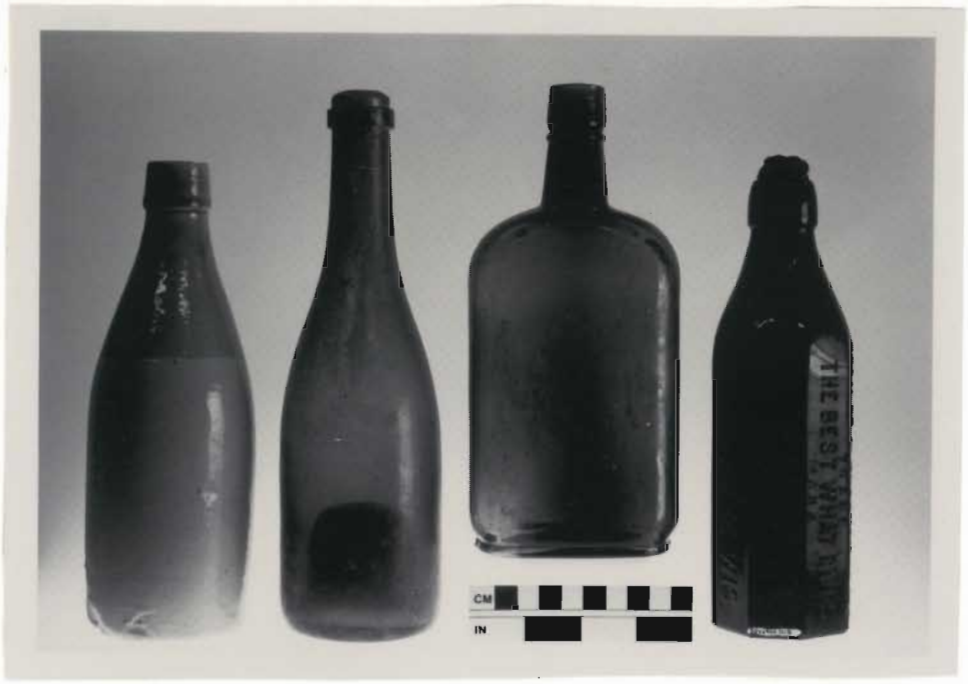


Figure 43 - Ceramic beer container, left, champagne or wine bottle, center left, and whiskey bottles, right.

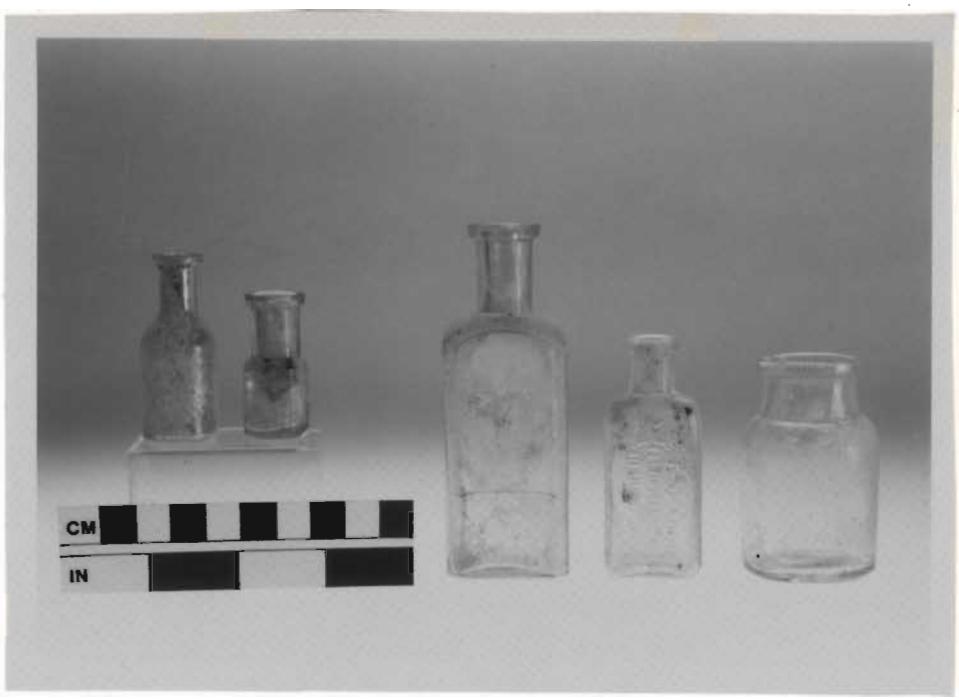


Figure 44 - Bitters and pill bottles, left and right, respectively.

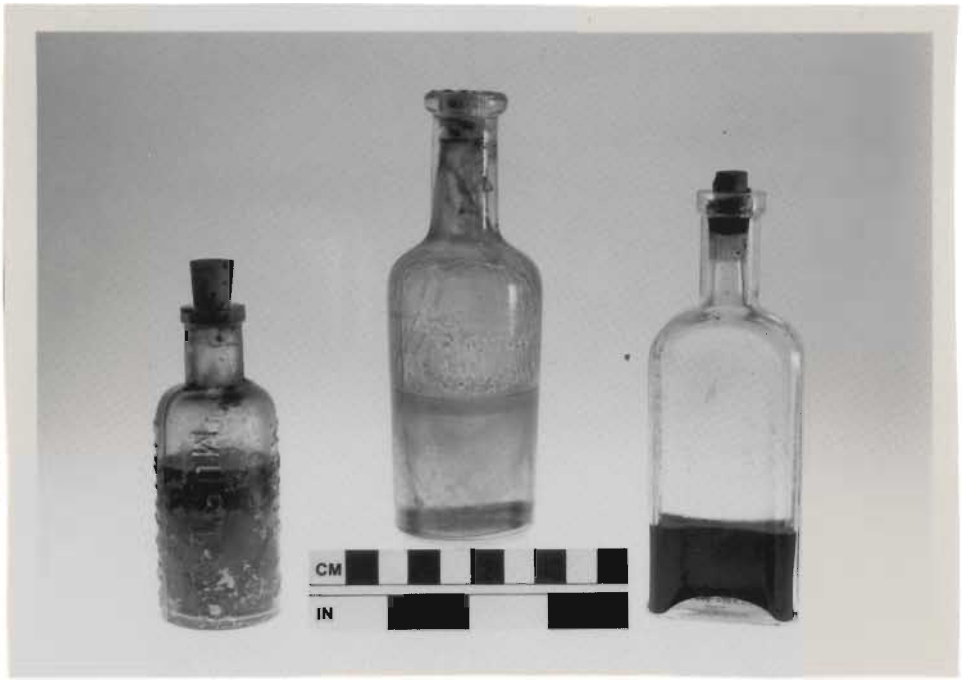


Figure 45 - Bitters bottle, left, and liniment bottles, center and right.

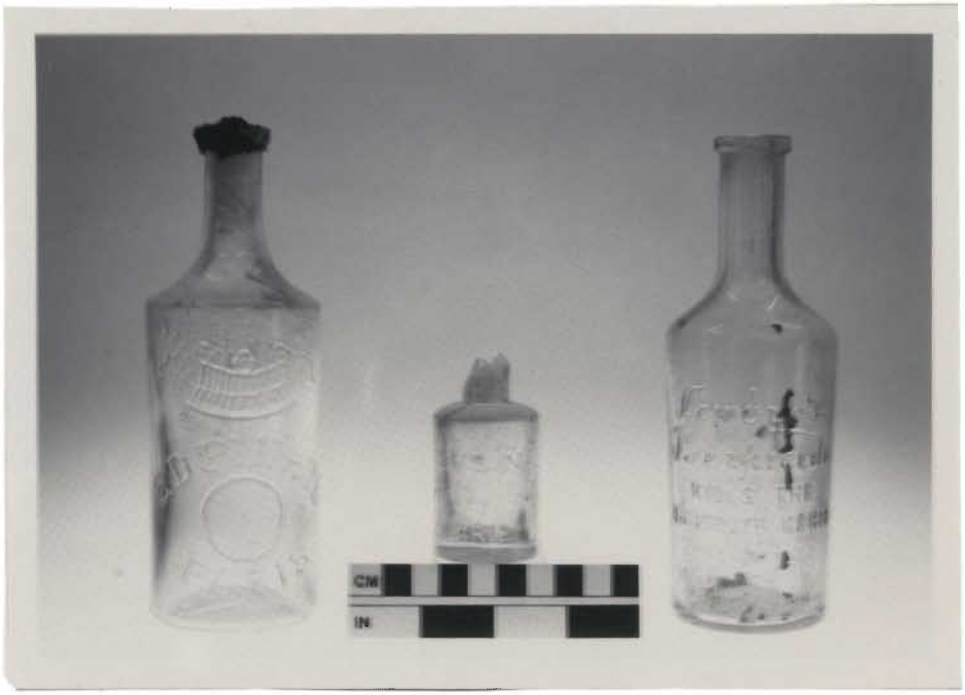


Figure 46 - Perfume and personal hygiene bottles.

Figure 47 - Bitters and rubbing alcohol bottles.

Figure 48 - Bitters, liniment, medicinal syrup, and shoe polish bottles.

Figure 49 - Food storage bottles with lids.

Figure 50 - Preserve or pickle, honey, and lemonade bottles, left to right, respectively.

Figure 51 - Seltzer or mineral water bottles.

Figure 52 - Worcestershire sauce bottles.

Figure 53 - Condiment bottles.

TABLE 7

INDIVIDUAL BOTTLE/JAR GLASS ARTIFACT DATA

Figure/ Catalog #	Location	Contents	Description	Trademark(s)
41a/1151	RU 187	Beer	Aqua bottle, made w/automatic bottle machine, crown finish	C.A. Lammers Denver Colo. "This Bottle Never Sold"
41b/3270	IU 322	Beer	Clear bottle, made w/automatic bottle machine, crown finish	"Coors-This Bottle Never Sold"
41c/3539	Structure 2, Cellar 1	Beer	Lt. aqua bottle, made w/automatic bottle machine, crown finish	"Neefs/Registered-This Bottle Never Sold"
42a/3520	Structure 2, Cellar 1	Brandy/Cordial	Aqua bottle, circle mold, brandy or wine finish	"Endlich and Good, Denver City, CT"
42b/3607	Bulldozer	Brandy/Cordial	Plain aqua bottle, closed mold, english ring finish	No trademark
42c/3550	Structure 2, Cellar 1	Beer	Aqua bottle, made w/automatic bottle machine, crown finish	No trademark
43a/3631	Bulldozer	Beer or ale-unpasteurized	Ceramic bottle (yelloware)	No trademark
43b/1214	IU 464	Champagne or wine	Olive green bottle, handblown, laid on lip finish	No trademark
43c/1982	IU 350	Whiskey	Amber bottle, closed mold, straight wine or brandy finish	"Cummings Beverageware Flask"
43d/3578	Bulldozer	Beer or ale	Amber paneled bottle, metal and soft rubber top	"The Best What Gives"

TABLE 7

INDIVIDUAL BOTTLE/JAR GLASS ARTIFACT DATA (continued)

Figure/ Catalog #	Location	Contents	Description	Trademark(s)
44a/3413	Structure 3, S Wall	One shot bitters or pills?	Small clear vial, closed mold, flat/patent finish	No trademark
44b/1349	IU 464	Bitters or pills?	Small clear vial, flat/patent finish	No trademark
44c/3003	IU 560	Bitters or medicinal syrup	Clear paneled bottle, closed mold, flat/patent finish	No trademark
44d/1542	IU 188	Pills?	Clear bottle, closed mold, flat/patent finish, embossed	"F.J. Lord, Cor 11th & Larimer Sts. Denver, Colo."
44e/3141	Feature 13	Pills?	Small clear glass jar, closed mold, flat/patent finish	No trademark
45a/3567	Bulldozer	Liniment (contents original)	Aqua bottle, flat/patent finish	"Mexican Mustang Liniment, Lyon MFC Co., New York"
45b/2551	IU 238	Lemon oil/glycerine (contents original)	Clear bottle w/cork stopper	"Larkin Co. Buffalo"
45c/2592	IU 326	Bitters? (contents original)	Clear paneled bottle w/ cork	"2 oz. Full Measure"
46a/1543	IU 188	Toilet water	Clear bottle w/ metal top, embossed	"E.D. Pinaud, Paris"
46b/130	TU 1	Perfume	Incomplete clear bottle, no finish, embossed	"Lubin Parfumeur"
46c/2577	IU 608	Liquid dandruff cure	Clear bottle, flat/patent finish, embossed	"Newbro's Herpicide, Kills the Dandruff Germ"

TABLE 7

INDIVIDUAL BOTTLE/JAR GLASS ARTIFACT DATA (continued)

Figure/ Catalog #	Location	Contents	Description	Trademark(s)
47a/591	BHT 6	Hair dressing-alcohol/coconut oil	Aqua bottle, gothic panels, bead finish	"Burnett's Cocoaine:Boston" ("A Perfect Hair Dressing")
47b/1508	IU 462	Bitters or medicinal syrup	No further data	"E.B. Foote M.D., New York City, N.Y.: Office 110 Lexington Avenue Cor of East 28th St. New York"
47c/3601	Bulldozer	Bitters?	Aqua bottle, square panels, flat/patent finish	"Hale's Honey of Horehound and Tar"
48a/2237	IU 618	Medicinal syrup?	Aqua bottle, embossed	"A.J. White, Curative Syrup"
48b/3643	Bulldozer	Bitters	Aqua bottle, ring or oil finish, embossed	"Shiloh's Consumption Cure, S C Wells, Leroy N.Y."
48c/3606	Bulldozer	Liniment for human or beast	Green bottle, arrow panels, ring or oil finish	"Gargling Oil, Lockport, N.Y."
48d/1531	IU 188	Chemicals or pharmaceuticals	Amber bottle, closed mold, collared ring finish	No trademark
48e/2253	IU 279	Chemicals or pharmaceuticals	Aqua bottle, closed mold, glass stopper intact	No trademark
48f/2254	IU 279	Shoe polish (black or brown)	Aqua bottle w/sponge, made w/automatic bottle machine, bead finish	No trademark
49a/2826	IU 303	Storage items	Aqua Mason jar, made w/automatic bottle machine, has "Owen's Ring"	No trademark (Mason Jar)
49b/2860	IU 298	Storage items	Aqua jar, made w/ semi-automatic bottle machine	"Ball Mason"
49c/2547	IU 238	Storage items	Clear Mason jar w/thin neck, made w/ semi-automatic bottle machine, embossed	"Mellin's Food Co. Boston, U.S.A., Large Size"
49d/2033	IU 351	Mason jar lids	Opal glass and zinc	No trademarks

TABLE 7

INDIVIDUAL BOTTLE/JAR GLASS ARTIFACT DATA (continued)

Figure/ Catalog #	Location	Contents	Description	Trademark(s)
50a/1154	IU 188	Preserves/pickles	Clear jar, paneled, flat/patent finish	No trademark
50b/2157	IU 615	Honey	Clear jar w/lid, paneled	"Colorado Honey Prod. Assn., Denver"
50c/2942	IU 618	Acid phosphate for lemonade	Cobalt blue bottle, paneled, flat/patent finish	"Rumford Chemical Works"
51a/2534	IU 324	Seltzer or mineral water	Clear bottle, blob top w/"Hutchinson Spring Popper"	"A.D. Simmons Denver Colo."
51b/3002	IU 560	Seltzer or mineral water	Clear bottle, blob top w/"Hutchinson Spring Popper"	"Standard Bottling Co., Denver Colo."
51c/2236	IU 618	Seltzer or mineral water	Aqua bottle, blob top w/"Hutchinson Spring Popper"	"J. Schueler, Denver, Colo."
52a/1153	IU 188	Worcestershire sauce	Large aqua bottle, club sauce finish	"Lea & Perrin's, Worc. Sauce"
52b/3130	IU 116	Worcestershire sauce	Aqua bottle, no stopper, double ring finish, might be copyright infringement of "Lea & Perrins"	"Parker Bros. London Club Sauce"
52c/1467	IU 462	Worcestershire sauce	Aqua bottle w/glass stopper	"Lea & Perrin's, Worc. Sauce"
52d/1448	IU 462	Worcestershire sauce	Bottle w/ glass stopper	"Lea & Perrin's, Worc. Sauce"
53a/3575	Bulldozer	Mustard	Clear glass jar	No trademark ("French Barrel" mustard jar)
53b/3639	Bulldozer	Ketchup	Incomplete aqua condiment bottle, closed mold, fluted	No trademark
53c/3623	Bulldozer	Peppersauce?	Aqua condiment bottle, gothic panels, double ring finish	No trademark ("Cathedral" condiment bottle)
53d/1588	IU 189	Peppersauce	Clear ringed bottle, double ring finish	No trademark

TABLE 8

CERAMIC ATTRIBUTES AND FUNCTIONS

Attribute	Functional Group	Functional Category
Ceramic Type or Ware:		
buffware	Subsistence	Food Preparation
redware	Subsistence	Food Preparation
yelloware	Subsistence	Food Preparation
stoneware	Subsistence	Food Storage
ironstone	Subsistence	Food Consumption
bluish tint ironstone	Subsistence	Food Consumption
porcelain	Subsistence	Food Consumption
ivory tinted whiteware	Subsistence	Food Consumption
whiteware	Subsistence	Food Consumption
Item Type or Vessel Form:		
jug	Subsistence	Food Storage
jug/crock	Subsistence	Food Storage
storage container	Subsistence	Food Storage
bowl	Subsistence	Food Consumption or Food Preparation
cup	Subsistence	Food Consumption
plate/saucer	Subsistence	Food Consumption
serving vessel	Subsistence	Food Consumption

comparative studies cited above. Specifically, the majority of cartridges recovered from the Copperton and Battle townsites in Wyoming were found to be associated with hunting. Carrillo (1989) further outlines the rationale for placing the cartridges within the subsistence-functional domain.

Tin Cans: Tin can type, as indicated by the original contents of the can, proved to be the attribute most amenable to functional classification (Table 10). It should be noted that cans classified within the Subsistence group were further assigned to functional categories based upon whether the contents were usually consumed alone (Food Consumption category) or more often used in combination with other food ingredients (Food Preparation category).

Historic General Artifacts: Item type provided the most important functional information for this class of artifacts. Table 11 lists each of the item types coded during laboratory processing of the historic artifacts, in addition to the functional group and category assigned to each. Several of the types listed had more than one associated function. For example, artifact lists generated during laboratory processing revealed that the building material item types consisted of artifacts such as hinges, screen, brick, bolts,

Figure 54 - Earthenware crocks.

Figure 55 - Ironstone and other ceramics.

Figure 56 - Ironstone ceramic plates.

Figure 57 - Ironstone ceramic bowls.

Figure 58 - Ironstone ceramic vessels.

TABLE 9

INDIVIDUAL CERAMIC ARTIFACT DATA

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
54a/1271	IU 303	Crock	Brown earthernware crock w/interior and exterior slip	No trademark
54b/3537	Structure 2, Cellar 1	Crock	Grey earthernware crock w/albany slip around neck, lip, and interior	"Eugene McCarthy, 3460 Humboldt St., Denver, Colo."
54c/2861	IU 298	Crock	Greyware crock w/salt glaze, writing stenciled on w/cobalt blue paint	"The John Thompson Grocery Co. 1121-1129 Fifteenth St. Telephone 1136 Denver, Colo."
55a/193	TU 1	Tea saucer	Ironstone saucer	"Meakin"
55b/1272	IU 188	Chamber pot lid	Ironstone lid	No trademark
55c/3557	Structure 1, Cellar 2	Storage crock	Cobalt blue and grey ceramic crock fragments w/raised relief designs	No trademark
55d/2591 & 2601	IU 617 & 300	No specific data	Multicolor spongewear fragments w/relief design	No trademark
55e/1366	IU 581	Measuring crucible	Ceramic crucible	"2 1/4 In. Battern Works England"
56a/3636.4	Bulldozer	Salad plate	Small Ironstone plate	"Powell & Bishop"
56b/3636.1	Bulldozer	Dinner plate	Ironstone plate	"Royal Patent Ironstone"
56c/2205	IU 399	Serving platter	Ironstone platter	George Jones"

TABLE 9

INDIVIDUAL CERAMIC ARTIFACT DATA
(continued)

Figure/ Catalog #	Location	Contents/Use	Description	Trademark(s)
57a/167	TU 1	Gravy bowl	Ironstone St. Denis bowl	"T & G Meakin"
57b/2762	IU 351	No specific data	Ironstone bowl	"E.P.P. CO"
57c/3632	Bulldozer	Fruit dish	Ironstone dish	"K.T. & K." China
57d/3636.6	Bulldozer	Finger bowl	Shallow Ironstone bowl	"Meakin Bros. & Co."
58a/3512	Structure 2, Cellar 1	Pitcher	Small Ironstone pitcher	"K.T. & K." East Liverpool Ohio
58b/3618	Bulldozer	Pitcher	Large Ironstone pitcher	"Ironstone China Extra Quality"
58c/2808	IU 189	Sugar bowl	Ironstone bowl w/lid, decorated w/transferprinted flowers and gold gilt border	No trademark
58d/2318	IU 257	Tea cup	Ironstone St. Denis unhandled cup	No trademark

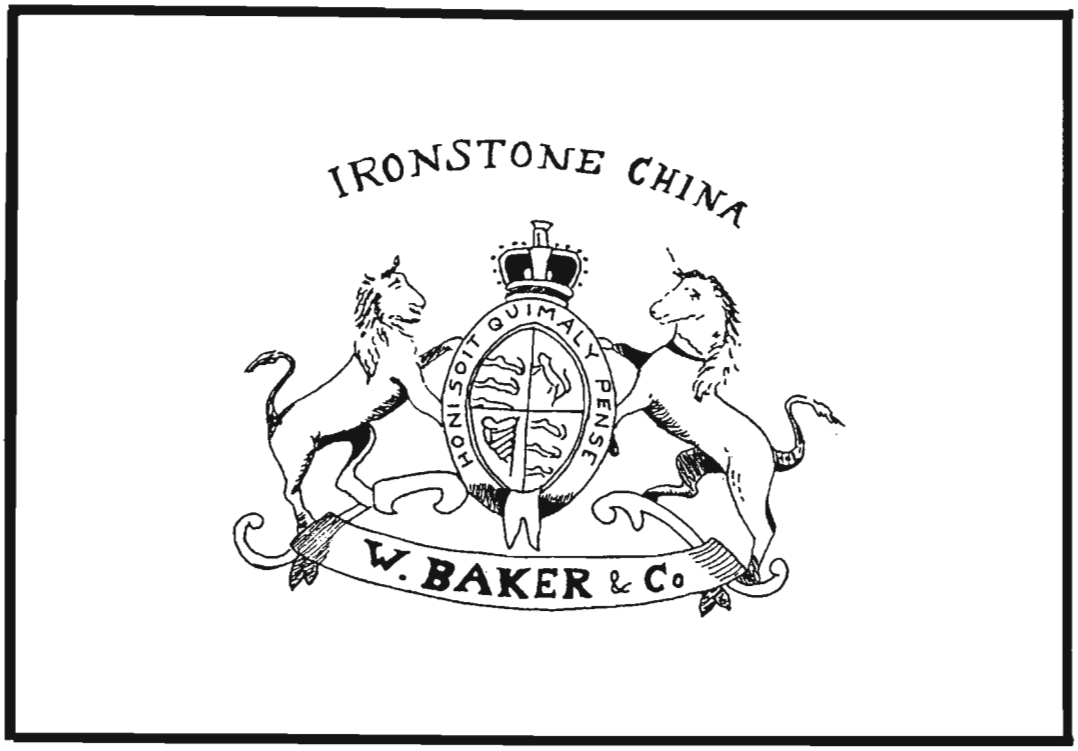


Figure 59 - Ceramic Maker's Mark: W. Baker & Co. (1839-1932, England).

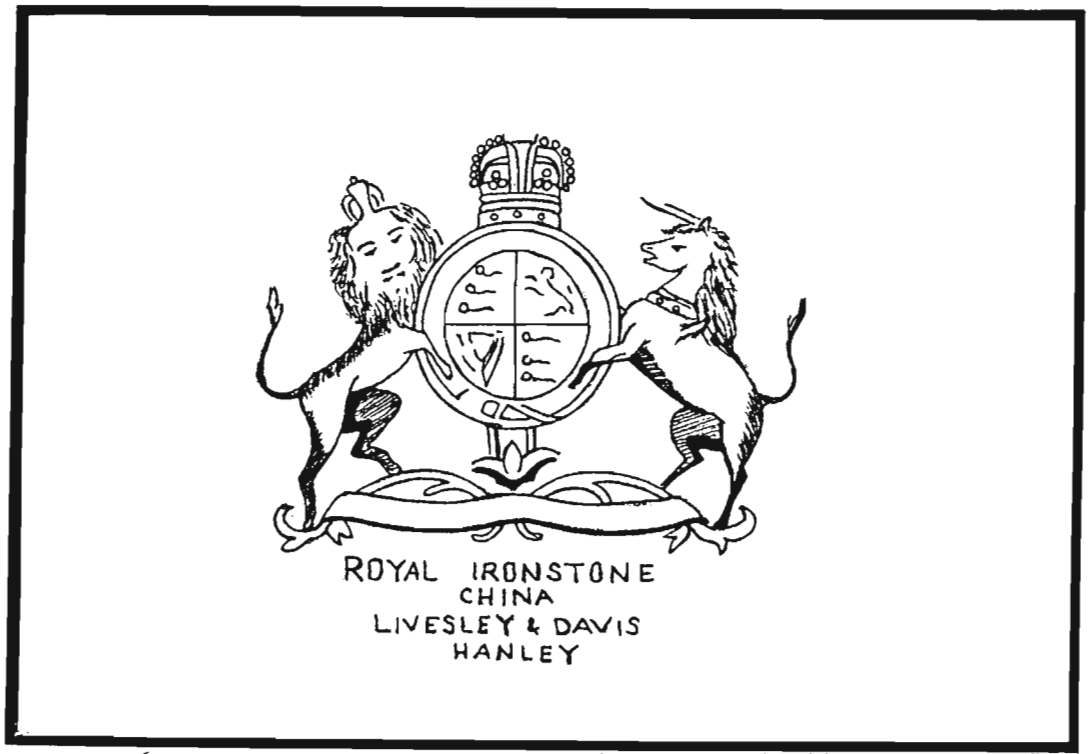


Figure 60 - Ceramic Maker's Mark: Livesly & Davis (1844-1851, England).

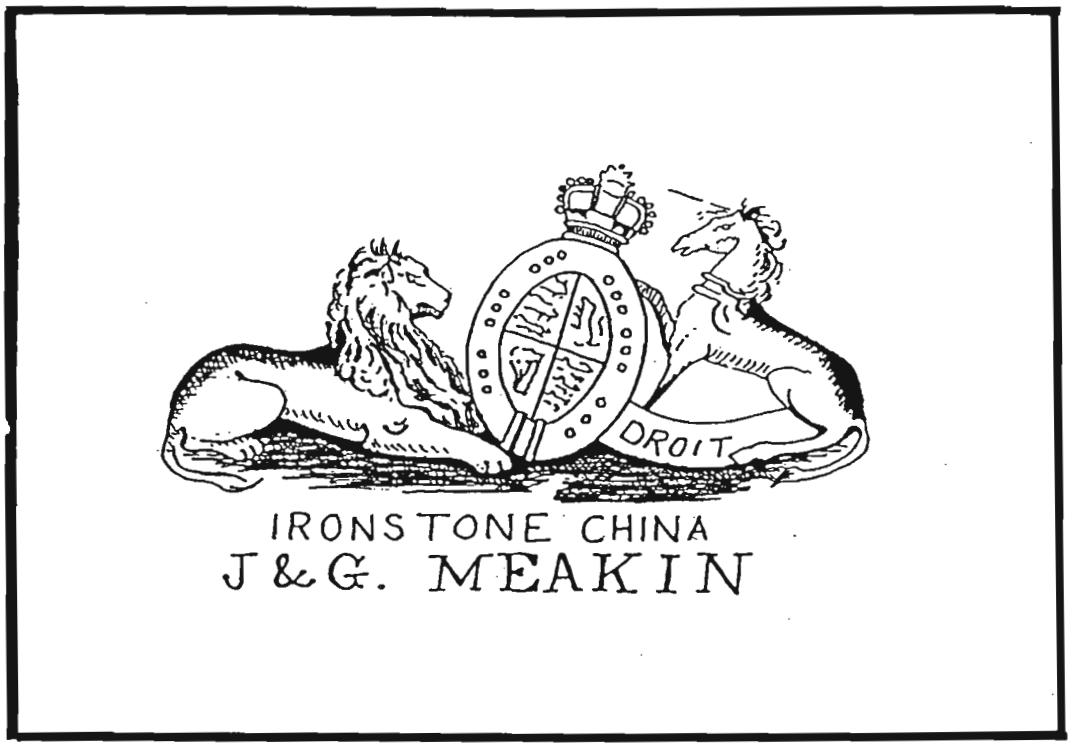


Figure 61 - Ceramic Maker's Mark: J. & G. Meakin (1850-1890).

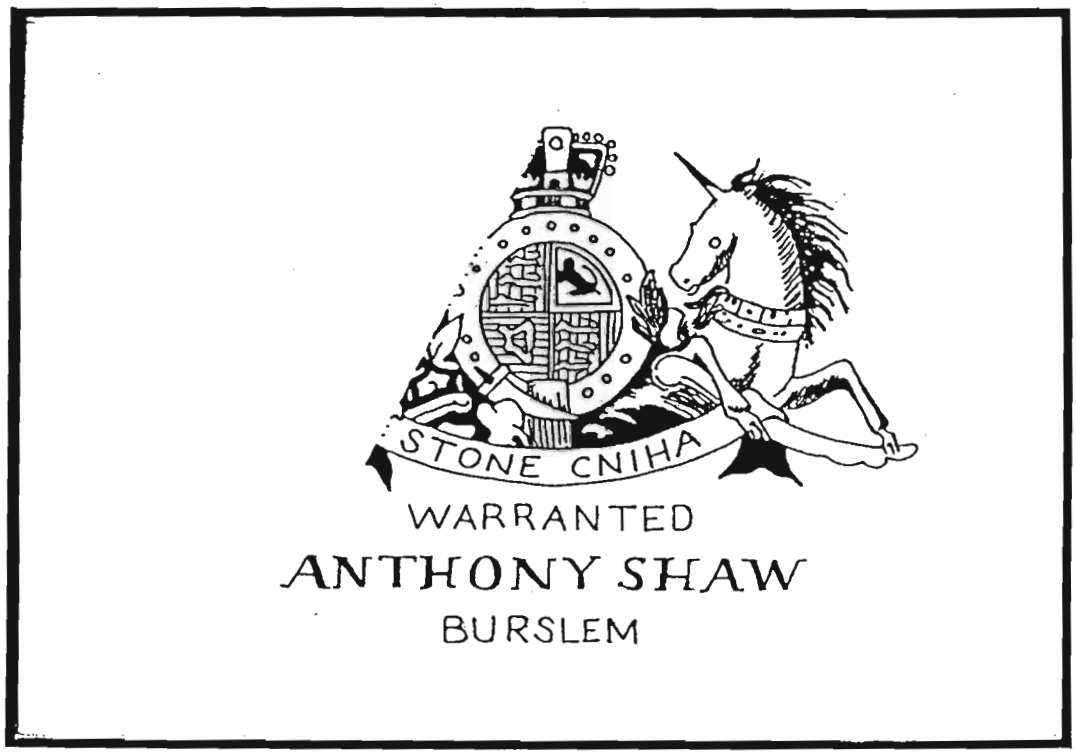


Figure 62 - Ceramic Maker's Mark: Anthony Shaw (1851-1900, pre-1882 design).

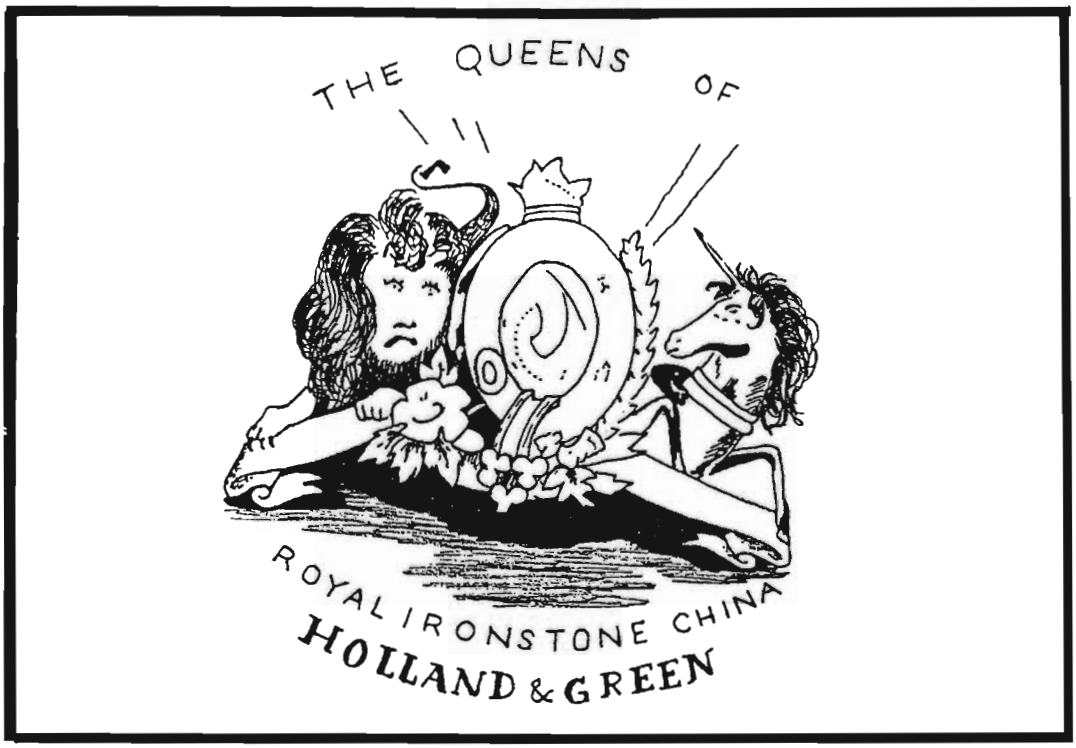


Figure 63 - Ceramic Maker's Mark: Holland & Green (1853-1891, England).

Figure 64 - Ceramic Maker's Mark: Mayer & Elliot (1858-1861, England).

Figure 65 - Ceramic Maker's Mark: George Jones (mid to late 19th century, England).

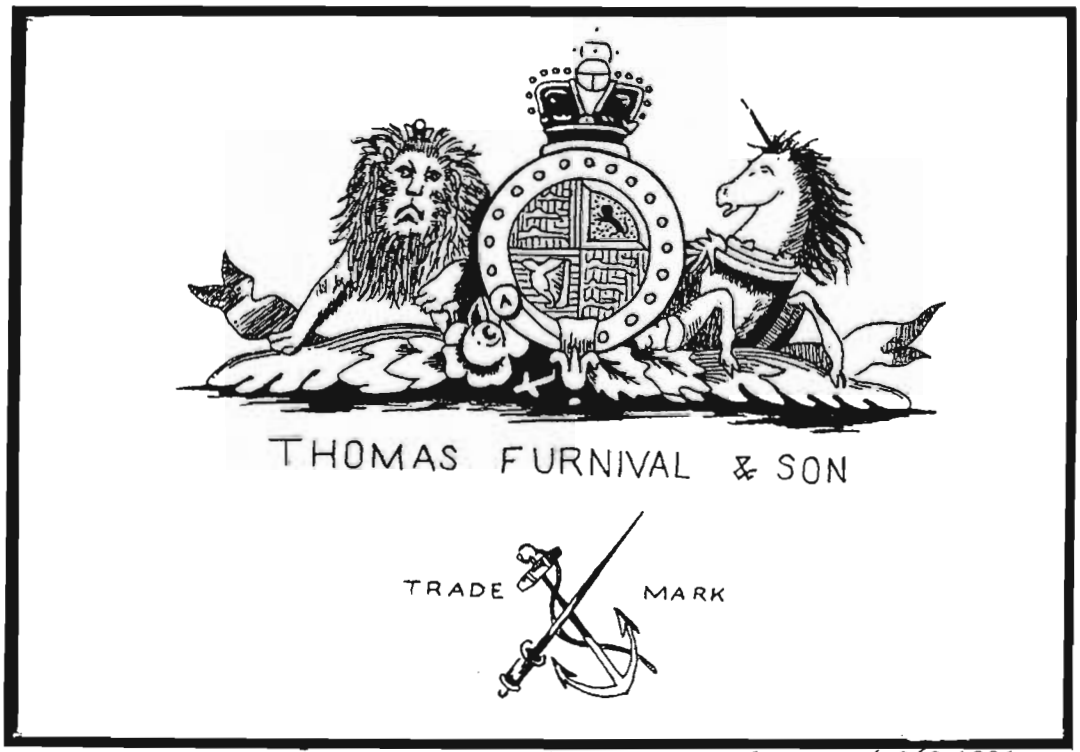


Figure 66 - Ceramic Maker's Mark: Thomas Furnival & Son (1862-1891, England).

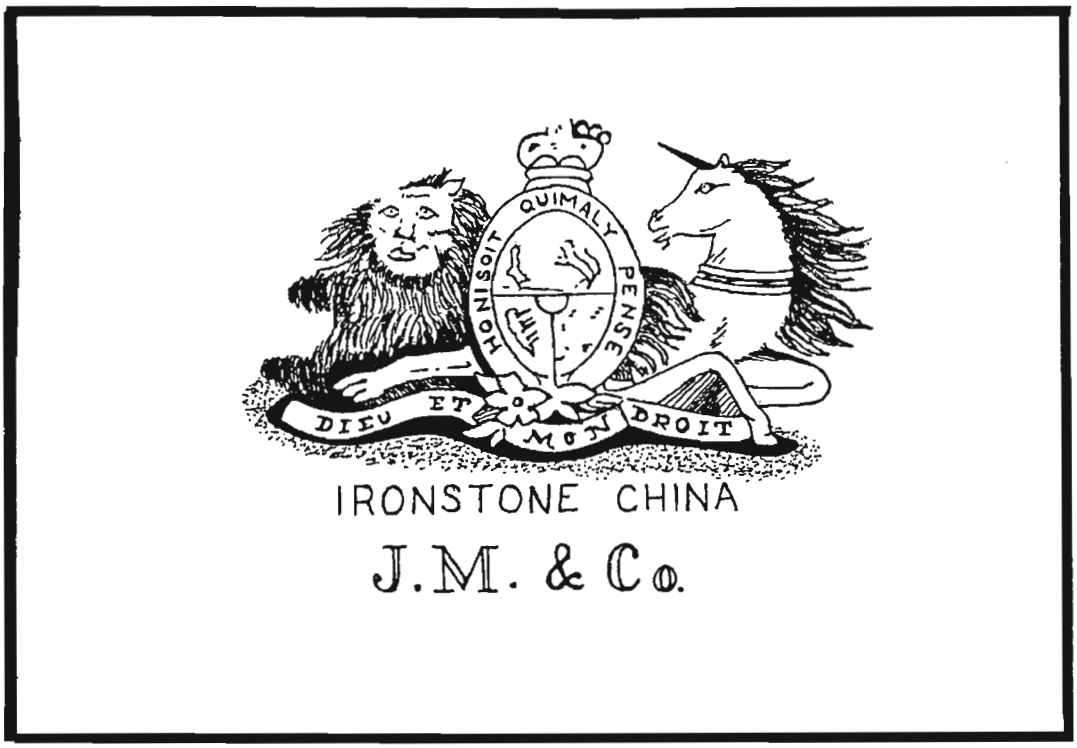


Figure 67 - Ceramic Maker's Mark: J.M. & Co. (1863-1890, United States).

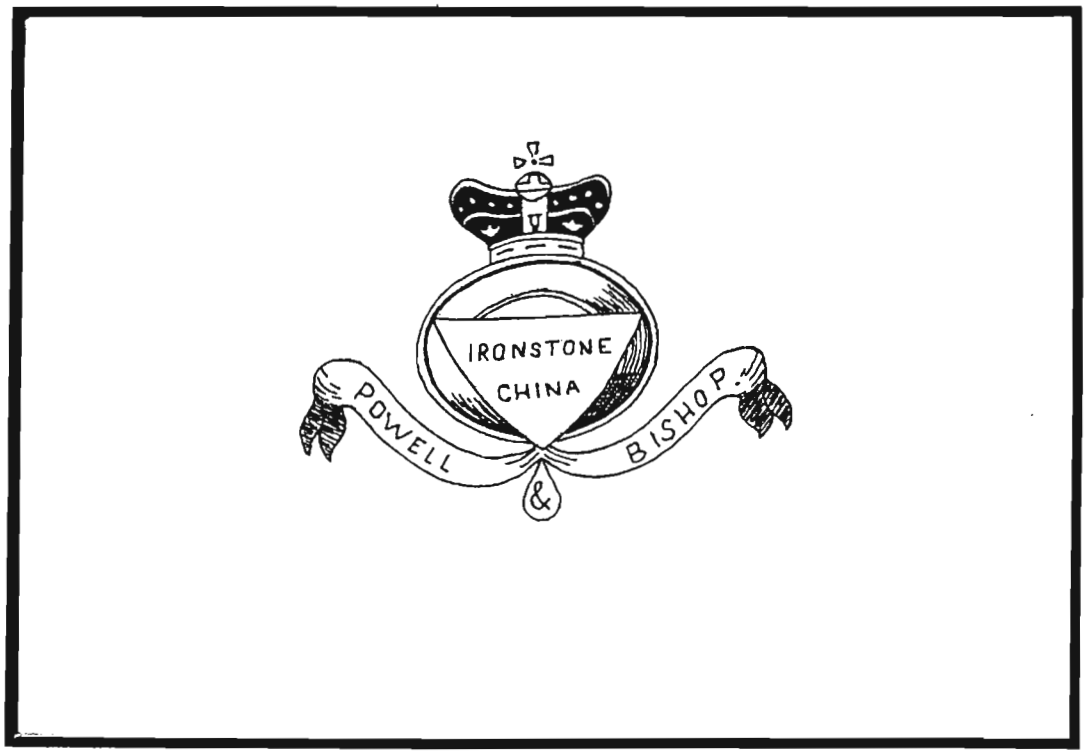


Figure 68 - Ceramic Maker's Mark: Powell & Bishop (1867-1878, England).

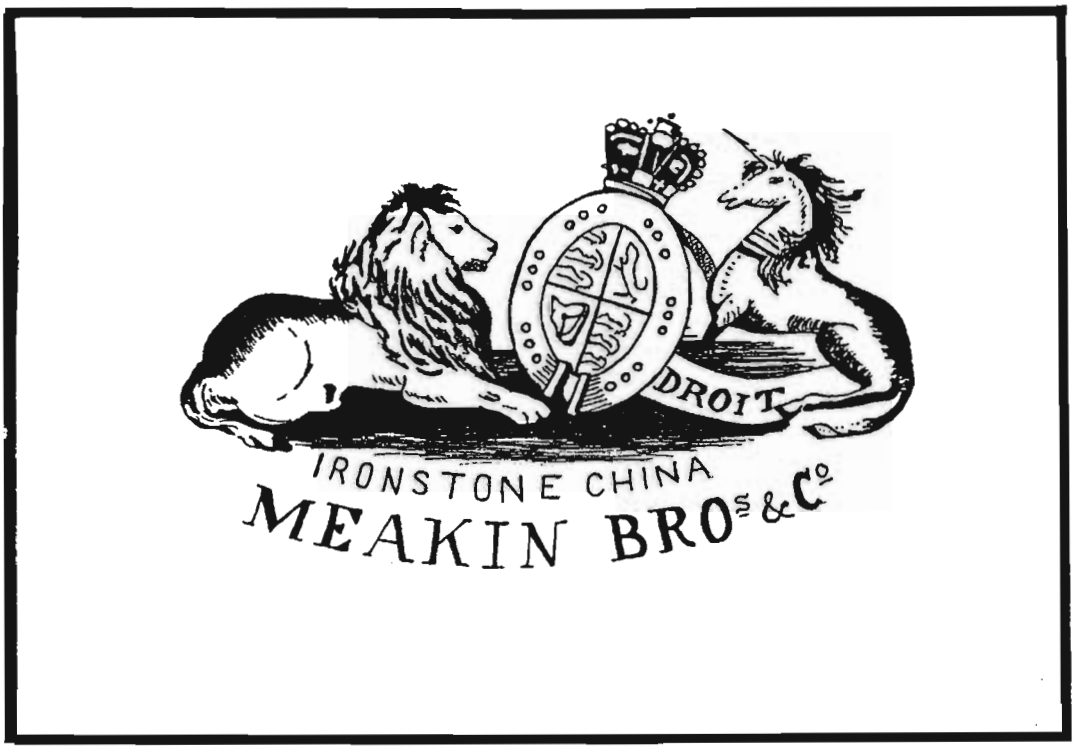


Figure 69 - Ceramic Maker's Mark: Meakin Bros & Co. (1873-1890).

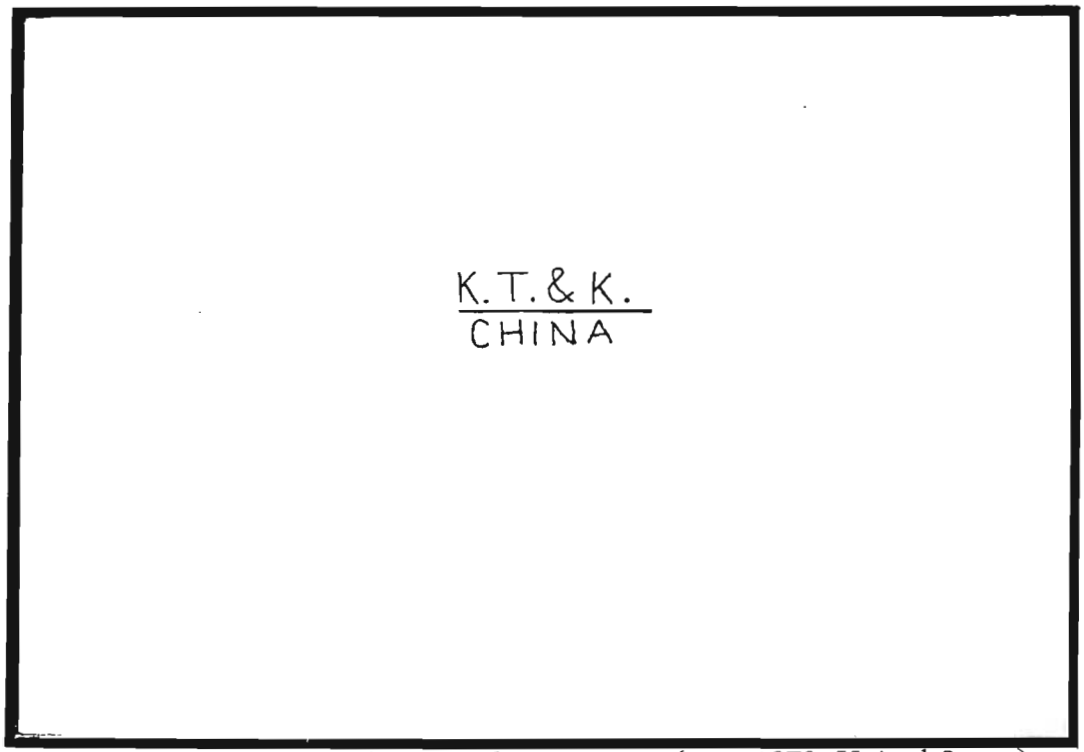


Figure 70 - Ceramic Maker's Mark: K.T. & K. (post-1873, United States).

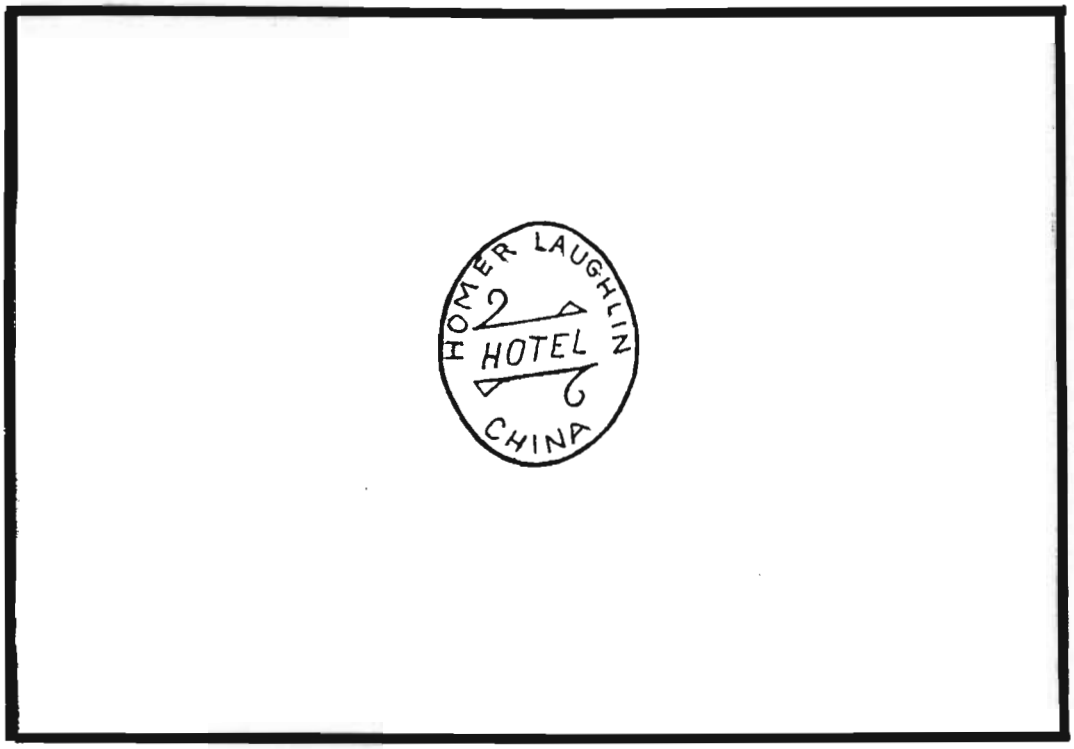


Figure 71 - Ceramic Maker's Mark: Homer Laughlin (post-1874, United States).

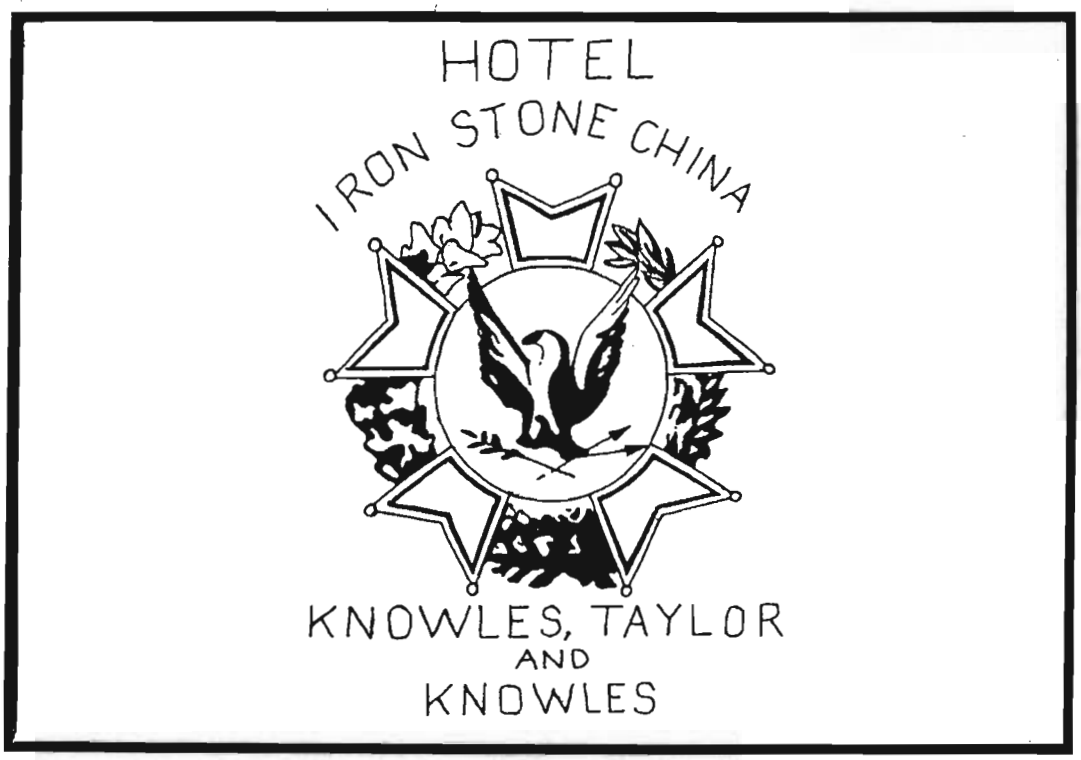


Figure 72 - Ceramic Maker's Mark: Knowles, Taylor, and Knowles (1878, U.S.).

Figure 73 - Ceramic Maker's Mark: Alfred Meakin (1881+).

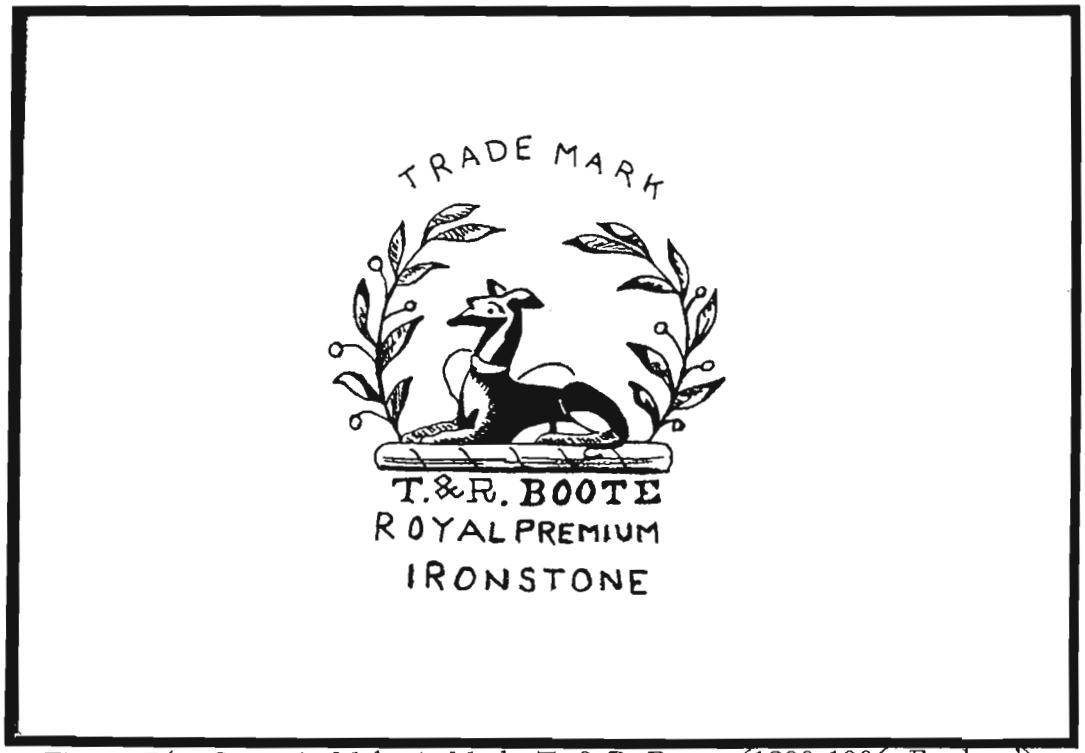


Figure 74 - Ceramic Maker's Mark: T. & R. Boote (1890-1906, England).

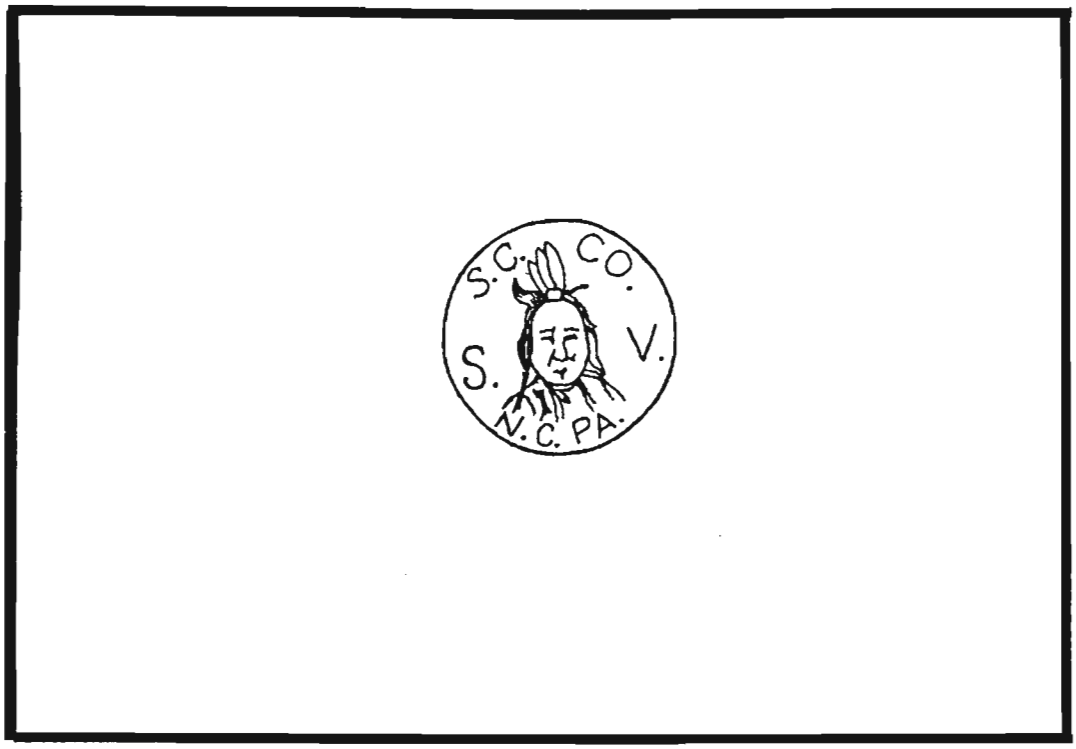


Figure 75 - Ceramic Maker's Mark: Shenango China Co. (1901-present).

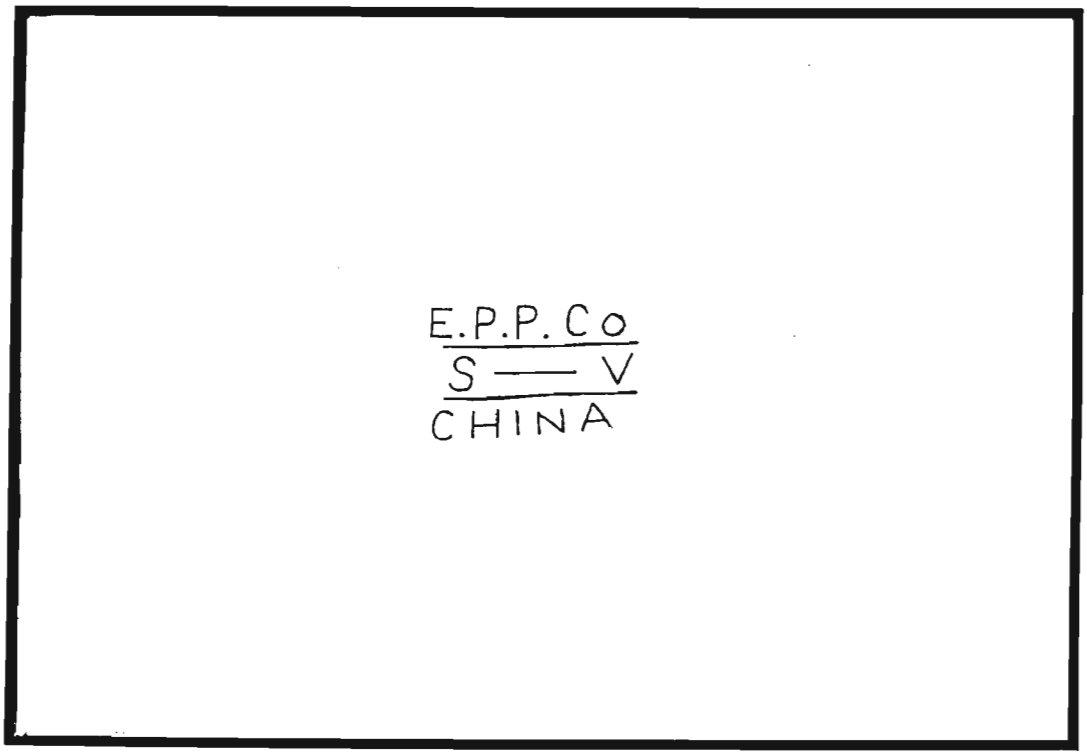


Figure 76 - Ceramic Maker's Mark: E.P.P. Co. (no date available).

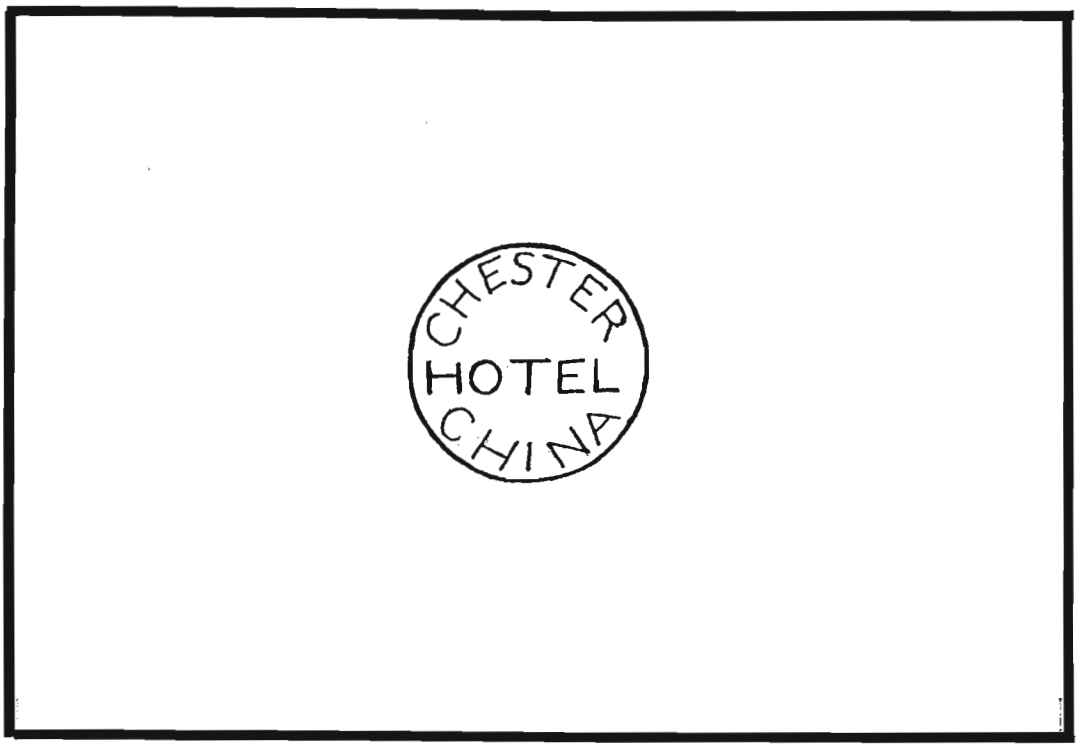


Figure 77 - Ceramic Maker's Mark: Chester Hotel China (no date available).

TABLE 10

TIN CAN TYPES AND FUNCTIONS

Type of Can	Functional Group	Functional Category
antifreeze	Activities	Transportation
fuel (gasoline, kerosene)	Activities	Transportation or Maintenance/Construction
motor oil	Activities	Transportation
branding liquid	Activities	Livestock
hot patch	Activities	Maintenance/Construction
paint	Activities	Maintenance/Construction
soap/cleanser	Activities	Maintenance/Construction
waxing compounds	Activities	Maintenance/Construction
moth balls	Activities	Other
sterno	Activities	Other
beer	Leisure/Recreation	Alcohol/Drinking
snuff	Leisure/Recreation	Smoking/Tobacco
tobacco	Leisure/Recreation	Smoking/Tobacco
shoe polish	Personal	Footwear
baking soda/powder	Subsistence	Food Preparation
cocoa	Subsistence	Food Preparation
condiments	Subsistence	Food Preparation
evaporated/condensed milk	Subsistence	Food Preparation
honey/molasses	Subsistence	Food Preparation
lard/shortening	Subsistence	Food Preparation
spices	Subsistence	Food Preparation
candy	Subsistence	Food Consumption
coffee	Subsistence	Food Consumption
food (undetermined)	Subsistence	Food Consumption
fruit/vegetables	Subsistence	Food Consumption
juice	Subsistence	Food Consumption
oysters	Subsistence	Food Consumption
potted meat	Subsistence	Food Consumption
sardine	Subsistence	Food Consumption
soda beverages	Subsistence	Food Consumption
syrup	Subsistence	Food Consumption
tea	Subsistence	Food Consumption
tuna	Subsistence	Food Consumption
vienna sausages	Subsistence	Food Consumption

TABLE 11

HISTORIC GENERAL ARTIFACTS AND FUNCTIONS

Type of Item	Functional Group	Functional Category
automobile parts	Activities	Transportation
buggy/wagon parts	Activities	Transportation
farm related machinery	Activities	Agriculture/Farming
horse/tack	Activities	Livestock
hand tools	Activities	Maintenance/Construction
barrel hoops/parts	Activities	Other
bucket parts/washtubs	Activities	Other
coal/charcoal	Activities	Other
electricity/battery	Activities	Other
hose (non-auto)	Activities	Other
insecticide/pesticide	Activities	Other
mousetrap	Activities	Other
fencing related (staples)	Activities	Other
machine cut nails	Architecture	Building Hardware
wire nail	Architecture	Building Hardware
locks/keys/clasps/doorknobs	Architecture or Household/Domestic	Building Hardware or Furniture
window glass	Architecture	Building Material
plumbing items	Architecture	Building Material
watch/clock parts	Household/Domestic	Clock/Watch
picture frame	Household/Domestic	Decorative Furnishings
furniture/upholstery	Household/Domestic	Furniture
lamp/lantern part	Household/Domestic	Illumination
light bulb	Household/Domestic	Illumination
telephone/parts	Household/Domestic	Telephone related
literature/paper & writing supplies	Household/Domestic	Writing accessories
musical instruments	Leisure/Recreation	Musical Instruments
tobacco related	Leisure/Recreation	Smoking/Tobacco
sporting goods	Leisure/Recreation or Subsistence	Sporting Goods or Food Procurement
toy	Leisure/Recreation	Toys

TABLE 11

HISTORIC GENERAL ARTIFACTS AND FUNCTIONS (continued)

Type of Item	Functional Group	Functional Category
eye glasses	Personal	Adornment
jewelry	Personal	Adornment
baggage (purse, suitcase)	Personal	Baggage
coins/tokens	Personal	Coins/Tokens
button	Personal	Clothing
clothes fasteners	Personal	Clothing
shoe/parts	Personal	Footwear
medicine	Personal	Health/Hygiene
comb, etc.	Personal	Health/Hygiene
cartridges	Subsistence	Food Procurement
pots, pans	Subsistence	Food Preparation
stove/parts	Subsistence	Food Preparation
baskets	Subsistence	Food Storage
dishes and glasses	Subsistence	Food Consumption
utensils (spoon, fork)	Subsistence	Food Consumption

and nuts. In this particular functional classification system, hinges were considered building hardware and bricks were identified as building material, although both are categories of the Architecture group. Locks, keys, and clasps could be considered either building hardware (Architecture group) or furniture (Household/Domestic group). In addition, several different item types were assigned to the Sporting Goods category of the Leisure/Recreation group during laboratory processing. According to artifact lists, these included gun parts, which were assigned a subsistence (food procurement related) function for the same reasons as cartridges. Every effort was made to determine the exact nature of the specific item types as they were cataloged, in order to ensure that the appropriate functional assignments would be made. If a specific functional association could not be determined for a particular artifact, then no functional group or category was assigned.

Figures 78 through 103 illustrate a number of the historic general artifacts that were recovered during excavations. The figures are arranged by assigned functional group and category, following the sequence presented in Table 11. Various artifacts within the Architecture, Household/Domestic, Leisure/Recreation, Personal, and Subsistence functional groups are represented. Table 12 follows these figures and presents specific data for each illustrated artifact.

Spatial Analysis of Functional Artifacts

This portion of the analysis focuses on spatial distribution of the eight functionally defined groups and categories. The analytical sample consists of 24,476 artifacts within 296 cases. A case within the functional artifact files represents all artifacts recovered from a specific grid unit, level or feature provenience sorted into the eight categories. Functional patterning within the site boundaries is discerned primarily through observations of mean numbers of artifacts within each group/category per case. The functional group/category values thus effectively serve as variables. Table 13 provides the descriptive statistics pertaining to the entire 296 case analytical sample. The small number of items in the Household/Domestic and Leisure/Recreation groups severely limits their analytical value in this phase of the study.

Horizontal Distribution

Horizontal distribution patterning of functionally defined artifacts is initially viewed using the results of the stratified random sample. The randomly selected units within six sampling strata yielded 7,442 artifacts associated with 75 cases. Table 14 provides statistics pertaining to the raw numbers of artifacts at the stratum and case levels.

Table 15 presents the ANOVA results for the six strata according to the number of artifacts per case within each of the eight groups/categories. The group/category values thus serve as the dependant variables to be analyzed with cases grouped by stratum. An

Figure 78 - Doorknobs and keys.

Figure 79 - Writing accessories (pencil fragments and ink bottles).

Figure 80 - Die and guitar pick.

Figure 81 - Pipe stem and bowl fragments.

Figure 82 - Toy doll fragments.

Figure 83 - Pieces of toy tea sets.

Figure 84 - Marbles.

Figure 85 - Marbles.

Figure 86 - Charms and pendants.

Figure 87 - Currency: 1852 two-cent piece, far left; 1863 Indian-head penny, center left; nickel (date unknown), center right; "Wayside Inn" token (value or function unknown), far right.

Figure 88 - Buttons.

Figure 89 - Buttons.

Figure 90 - Fastener and footwear fragments.

Figure 91 - Eyeglass lenses, above, and syringe, below.

Figure 92 - Assorted shell, upper left; ring, upper center; bead, upper right; bone handled toothbrush and hair brush, below.

Figure 93 - Hair combs.

Figure 94 - Assorted cartridges and bullets.

Figure 95 - Whet stone, above, and knife, below.

Figure 96 - Spoons.

Figure 97 - Bowl and other glass fragments.

Figure 98 - Glass goblet, left, and tumblers, center and right.

Figure 99 - Goblets.

Figure 100 - Glass pitchers.

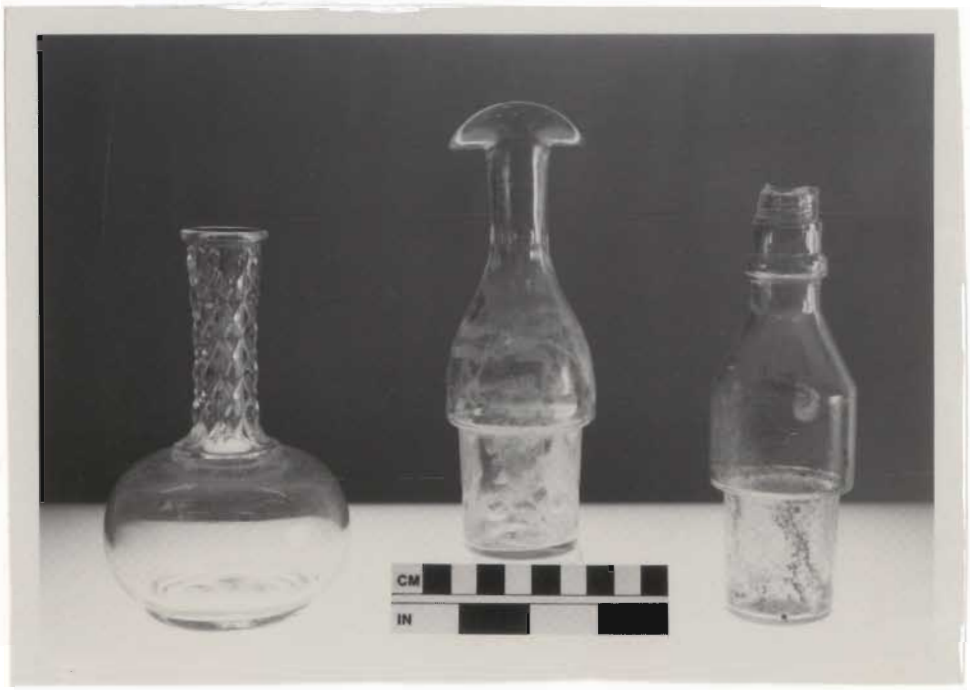


Figure 101 - Decanters and casters.

Figure 102 - Glass bottle stoppers.

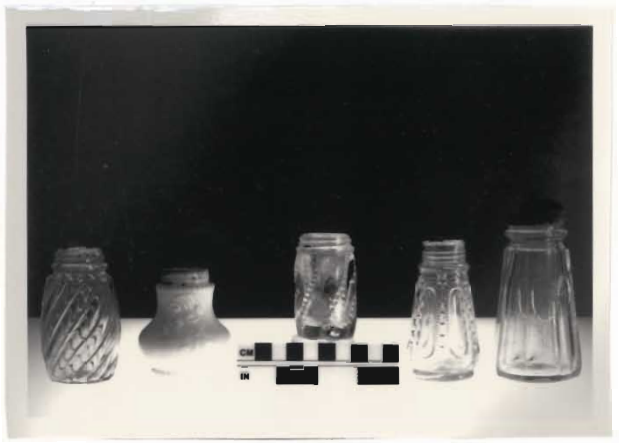


Figure 103 - Glass condiment containers.

TABLE 12

INDIVIDUAL HISTORIC GENERAL ARTIFACT DATA

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
78a/1847	IU 596	Door key to Room #6	Metal key	"Mortise Lock Key"
78b/1348	IU 464	Bureau or wardrobe key	Brass key	No trademark
78c/3515	Structure 3, N Wall	Doorknob	White porcelain doorknob	No trademark
78d/947	RU 187	Doorknob	Brown ceramic doorknob w/marble finish	No trademark
79a/3477	IU 188	Pencil	Wooden pencil w/lead	No trademark
79b/1319	IU 464	Pencil	Partial wooden pencil	No trademark
79c/1398	IU 462	Pencil	Pencil lead	No trademark
79d/3645	Bulldozer	Ink	Aqua glass bottle	"Sanford's"
79e/3646	Bulldozer	Ink	Aqua glass bottle	No trademark
80a/2795	IU 189	Die	"Celluloid" die	No trademark
80b/152	TU 1	Die	Bone die	No trademark
80c/93	TU 1	Die	Bone die	No trademark
80d/2271	IU 239	Guitar pick	"Celluloid" pick	"Pick a Howard"
81a/909	RU 270	Pipe stem	Hard rubber and metal pipe stem	No trademark
81b/2753	IU 255	Pipe stem	"Celluloid" pipe stem	No trademark
81c/2527	IU 324	Pipe stem	"Amber" screw pipe stem	No trademark
81d/?	unknown	Pipe bowl	Ceramic pipe bowl	No trademark
81e/3146	Feature 21	Pipe bowl	Ceramic pipe bowl	No trademark
81f/1495	IU 462	Pipe bowl	Ceramic pipe bowl	No trademark

TABLE 12

INDIVIDUAL HISTORIC GENERAL ARTIFACT DATA
(continued)

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
82a/1699	IU 189	Doll	Enamelware doll's head	No trademark
82b/2005	IU 554	Doll	Cast metal (lead?) toy soldier	No trademark
82c/2013	IU 601	Doll	White porcelain doll arm	No trademark
82d/1159	RU 270	Doll	White ceramic doll leg	No trademark
82e/122	TU 1	Doll	Tiny white porcelain doll arm	No trademark
82f/149	TU 1	Doll	Glass doll eye - incomplete	No trademark
83a/1129	RU 398	Toy teacup	Enamelware toy teacup, white w/roses	No trademark
83b/1123	RU 187	Toy cup	Enamelware toy cup, white w/roses and daisies	No trademark
83c/3563	Structure 1, Cellar 2	Toy teapot	Blue enamelware toy teapot	No trademark
84a/1845	IU 596	Marble	Brown/white swirled glass marble, machine made	"Cerise Agates" (manufactured by M. Gropper & Sons Inc., Ottawa, Ill.)
84b/2675	IU 587, 598, 597, & 599	Marble	Clear glass marble w/colored swirls	No trademark
84c/3214	Structure 1, N Wall	Marbles	Very large clear glass marble w/colored swirls;clear glass marble w/colored bands	No trademarks
84d/2638	RU 546	Marble	Green "Mica"	"Mica"
85a/2037	IU 96	Marble	Large brown Rockingham ware crockery marble	No trademark
85b/3456	IU 541, 512, 483	Marble	Small brown Rockingham ware marble	No trademark
85c/2215	IU 609	Marble	Small blue Rockingham ware marble	No trademark
85d/3018	IU 560	Marble	Olive/green calcareous limestone marble	No trademark

TABLE 12

INDIVIDUAL HISTORIC GENERAL ARTIFACT DATA
(continued)

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
86a/151	TU 1	Charm	Green glass w/incised relief of a lion, some gilt inlay visible	No trademark
86b/1462	IU 462	Charm	Yellow glass heart	No trademark
86c/2085	IU 554	Pendant	Metal religious pendant	"To Mary Conceived Without Sin, Pray For Us Who Have Recourse To You, 1830"
87a/131	TU 1	Coin	Two cent piece	No trademark
87b/755	RU 152	Coin	One cent piece	No trademark
87c/655	RU 356	Coin	Five cent piece	No trademark
87d/2796	IU 189	Token	Inn token	"Wayside Inn"
88a/2884	IU 601	Button	Black glass button	No trademark
88b/1209	RU 512	Button	Black "Jet" button	No trademark
88c/2700	IU 587, 597, 598, 599	Button	Glack glass button	No trademark
88d/1993	IU 554	Buttons	Two bone buttons: 2 hole-suspenders, 4 hole-men's underclothing	No trademark
89a/3014	IU 560	Buttons	Two "fancy" white agate buttons	No trademark
89b/3127	IU 116	Button	"Dotted" white agate button	No trademark
89c/2189	IU 558	Buttons	Four assorted plain agate buttons	No trademark
89d/2165	IU 348	Buttons	Two assorted shell or "pearl" buttons	No trademark
89e/2788	IU 299	Button	Fancy shell or "pearl" button	No trademark
89f/2695	IU 587, 597, 598, 599	Button	Fancy shell or "pearl" button	No trademark

TABLE 12

INDIVIDUAL HISTORIC GENERAL ARTIFACT DATA (continued)

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
90a/752	RU 440	Clothes fastener	Metal fastener	No trademark
90b/3017	IU 560	Darning needle	Needle w/engraved design	No trademark
90c/2267	IU 256	Child's shoe	Pink leather shoe	No trademark
90d/3630	Bulldozer	Man's boot	Brown leather boot fragments	No trademark
91a/2055	IU 297	Eyeglass lens	Octagonal clear glass lens, magnifies objects	No trademark
91b/1169	RU 270	Eyeglass lens	Oval clear glass lens, magnifies objects	No trademark
91c/1525	IU 188	Syringe	Clear glass syringe w/red soft rubber, blunt point	"Red Cross Double Washed Improved Syringe"
92a/3670	IU 188	From necklace or hand mirror	Eight sea shells, ranging from Greenland to Massachusetts	No trademark
92b/1874	IU 596	Ring	Metal (red?) ring	No trademark
92c/1692	IU 185	From necklace?	Round pink glass bead	No trademark
92d/3424	Structure 1, N Wall	Toothbrush	Engraved bone toothbrush	No trademark
92e/1534	IU 188	Nail brush	Bone brush handle	No trademark
93a/3608	Bulldozer	Comb	"Unbreakable" hard black rubber comb	No trademark
93b/3169	IU 300	Hairpins	Imitation tortoise shell "celluloid" hairpins	No trademark
93c/2012	IU 601	Decorative hair combs	Three black hard rubber combs	No trademark

TABLE 12

INDIVIDUAL HISTORIC GENERAL ARTIFACT DATA
(continued)

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
94a/1075	RU 541	Cartridge	.22 BB cap for gallery shooting	No trademark
94b/3072a, 3072c	IU 618	Cartridges	.44 Webley revolver cartridge, .38 Smith & Wesson cartridge	No trademarks
94c/774	RU 546	Cartridge	.44-.95 Peabody rifle cartridge	No trademark
94d/1461	IU 462	Cartridge	.56-.56 Spencer rifle bullet (used by Union soldiers in Civil War)	No trademark
94e/2632	RU 89	Cartridge	.38 Short Rimfire cartridge for pocket revolvers	No trademark
95a/203	TU 1	Whet stone	No additional data	No trademark
95b/FS 251	IU 462	Knife	Wood and metal knife fragments	No trademarks
96a/1560	IU 303	Spoon	Nickel silver spoon	No trademark
96b/1076	RU 541	Spoon	Pewter?, "Tipped pattern" spoon	No trademark
96c/2029	IU 302	Serving spoon	Unidentified metal spoon	No trademark
97a/2543	IU 238	Bowl	Pressed glass bowl fragments w/several design patterns	No trademark
97b/2804	IU 189	Compote lid	Pressed glass lid from mold, w/geometric design	No trademark
97c/65	TU 1	Lamp base	Clear pressed glass lamp base	No trademark
98a/1470	IU 462	Sherry or cordial glass	Glass from larger set, "Bull's Eye" design	No trademark
98b/119	TU 1	Tumbler	Plain clear glass tumbler	No trademark
98c/2646	RU 546	Tumbler	Plain clear glass tumbler	No trademark
99a/196	TU 1	Goblets	Two goblets, plain and design mold	No trademark
99b/1509	IU 462	Goblet	Stippled goblet made w/automatic machine, cheap quality	No trademark

TABLE 12

INDIVIDUAL HISTORIC GENERAL ARTIFACT DATA
(continued)

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
100a/2035	IU 351	Cruet	Clear pressed glass designed cruet, sturdy, excellent quality	No trademark
100b/2030	IU 351	Syrup pitcher	Clear molded glass pitcher, thick, excellent quality	No trademark
100c/2241	IU 162	Cruet	Clear pressed glass cruet, geometric design, excellent quality	No trademark
100d/ 1529	IU 188	Syrup pitcher	Clear glass pitcher, plain w/metal cap	No trademark
101a/1527	IU 188	Cordial decanter	Pressed glass decanter	No trademark
101b/1592	IU 189	Cruet	Handblown cruet from caster set, hand etched designs, excellent quality	No trademark
101c/3529	Structure 1, Cellar 2	Cruet	Plain screw top cruet from caster set, made w/automatic machine, poor quality	No trademark
102a/3496	IU 189	Stopper-probably cruet	Pressed glass fancy bottle stopper	No trademark
102b/2807	IU 189	Stopper	Plain glass "mushroom tincture" stopper	No trademark
102c/2798	IU 189	Cruet stopper	Pressed glass "Bull's Eye" design stopper	No trademark
102d/1456	IU 462	Stopper	Aqua glass stopper	"Lea & Perrins"
102e/1341	IU 464	Stopper	Aqua glass stopper, made from mold ("Parker Bros"?), not top quality	No trademark

TABLE 12

INDIVIDUAL HISTORIC GENERAL ARTIFACT DATA
(continued)

Figure/ Catalog #	Location	Contents/ Function	Description	Trademark(s)
103a/1530	IU 188	Salt/pepper shaker	Swirl pattern clear glass shaker, made w/automatic machine	No trademark
103b/2800	IU 189	Salt/pepper shaker	Milk glass shaker w/mold designs, made w/automatic machine	No trademark
103c/2805	IU 189	Salt/pepper shaker	Clear glass stippled shaker, thick, fine quality	No trademark
103d/2809	IU 189	Salt/pepper shaker	Clear pressed glass shaker, made w/automatic machine	No trademark
103e/3513	Structure 2, Cellar 1	Salt/pepper shaker	Thick clear handblown glass shaker w/metal top, excellent quality	No trademark
104a/1591	IU 189	Red chili peppers	From a peppersauce bottle	N/A
104b/2025	IU 601	Egg shells	No further data	N/A
104c/2156	IU 615	Coconut shell	No further data	N/A
104d/2260	IU 256	Peach pits	May date to present	N/A

TABLE 13

ARTIFACT GROUP/CATEGORY DESCRIPTIVE STATISTICS

Artifact Group/Category	Frequency	Percent
Activities Group (ACTIV)	10,111	41.31
Building Hardware Category (BHARD)	6,611	27.01
Building Material Category (BMAT)	5,025	20.53
Household/Domestic Group (DOMES)	262	1.07
Alcohol/Drinking Category (ALCREC)	1,164	4.76
Leisure/Recreation Group (LEISREC)	62	0.25
Personal Group (PERS)	490	2.00
Subsistence Group (SUBSIS1)	751	3.07
Total	24,476	100.00

TABLE 14

SAMPLING STRATUM DESCRIPTIVE STATISTICS

Sampling Stratum	Number of Cases	Artifact Total	Mean Artifacts Per Case
1	18	2,513	139.611
2	15	967	64.467
3	5	174	34.800
4	14	1,111	79.357
5	10	581	58.100
6	13	2,096	161.231

additional ANOVA of the total number of artifacts associated with each case is also included in Table 15. In this manner, statistically significant differences in the distribution of functionally defined artifacts among the six strata are identified. A .05 significance level was selected for the ANOVAs because of the small sample size. The Personal functional group ANOVA does not include Stratum 3 because no artifacts of this type were recovered from that area.

Table 15 results indicate that the strata differ only in numbers of Activities (ACTIV) and Subsistence (SUBSIS1) group items. Figure 104 plots the mean number of artifacts per case for these two variables within each stratum. There is obviously a great disparity between the two groups in terms of numbers of associated artifacts. Items assigned to the Subsistence group (SUBSIS1) are generally poorly represented within the random units. This is in contrast to those classified under the Activities group (ACTIV). However, Strata 1 and 6 are characterized by the highest values in terms of both groups. Despite its small size, the stratified random sample data suggest there is a statistically valid basis for inferring functional differences within the site boundaries.

As with the temporally diagnostic artifacts described below, more specific observations pertaining to the horizontal distribution of functionally defined artifacts are presented following the introduction of non-random intuitive units to the analysis. Artifacts associated with all excavated grid block units, random and intuitive, are assigned to groups based on their location within one of seven locales delineated subsequent to excavation. The introduction of artifacts recovered from intuitive units excavated to define architectural features substantially increases the analytical sample, with 21,394 artifacts, comprising 266 cases, utilized for this portion of the analysis. Table 16 provides initial descriptive statistics pertaining to the overall numbers of artifacts associated with each locale.

Table 17 provides ANOVA results for each functional group/category variable, with the cases grouped by locale. An ANOVA of the total number of artifacts per case among the locales is also included. A .01 significance level is selected for the ANOVAs because of the large sample size.

Table 17 data indicate statistically significant differences among the seven locales in all functional groups/categories except Household/Domestic and Leisure/Recreation. The associated Frequency (F) values are not sufficient to reject the null hypothesis of no difference among the locales, in terms of numbers of artifacts within these two groups. These two groups are therefore not included in the following observations.

Figure 105 plots the mean number of artifacts per case by locale for items in the Activities group (ACTIV), Building Hardware category (BHARD), Building Material category (BMAT), and Artifact Total group (TOT). This figure thus emphasizes the groups/categories with the highest mean artifact values. Figure 106 plots identical types of data for the Alcohol/Drinking category (ALCREC), Personal group (PERS), and

TABLE 15

ANALYSIS OF VARIANCE FOR FUNCTIONAL GROUP/CATEGORY VALUES BY SAMPLING STRATUM

Measurement	Between Groups	Within Groups	Test Statistics
Analysis of Variance 1: Activities Group (ACTIV)			
DF	5	69	F = 2.753
Sum of Squares	56697.406	284191.261	Probability = .025
Mean Square	11339.481	4118.714	
Analysis of Variance 2: Building Hardware Category (BHARD)			
DF	5	69	F = 1.038
Sum of Squares	6492.632	86294.648	Probability = .402
Mean Square	1298.526	1250.647	
Analysis of Variance 3: Building Material Category (BMAT)			
DF	5	69	F = 0.391
Sum of Squares	1741.138	61377.609	Probability = .853
Mean Square	348.228	889.531	
Analysis of Variance 4: Household/Domestic Group (DOMES)			
DF	5	69	F = 1.064
Sum of Squares	3.460	44.860	Probability = .388
Mean Square	0.692	0.650	
Analysis of Variance 5: Alcohol/Drinking Category (ALCREC)			
DF	5	69	F = 2.323
Sum of Squares	1088.536	6467.251	Probability = .052
Mean Square	217.707	93.728	
Analysis of Variance 6: Leisure/Recreation Group (LEISREC)			
DF	5	69	F = 0.439
Sum of Squares	0.493	15.507	Probability = .820
Mean Square	0.099	0.225	
Analysis of Variance 7: Personal Group (PERS)			
DF	5	69	F = 1.331
Sum of Squares	16.088	196.484	Probability = .268
Mean Square	4.022	3.023	

TABLE 15

ANALYSIS OF VARIANCE FOR FUNCTIONAL GROUP/CATEGORY VALUES BY SAMPLING STRATUM (continued)

Measurement	Between Groups	Within Groups	Test Statistics
Analysis of Variance 8: Subsistence Group (SUBSIS1)			
DF	5	69	F = 2.944
Sum of Squares	134.772	631.815	Probability = .018
Mean Square	26.954	9.157	
Analysis of Variance 9: Artifact Total			
DF	5	69	F = 1.931
Sum of Squares	140653.914	1004937.233	Probability = .100
Mean Square	28130.783	14564.308	

DF = Degrees of Freedom

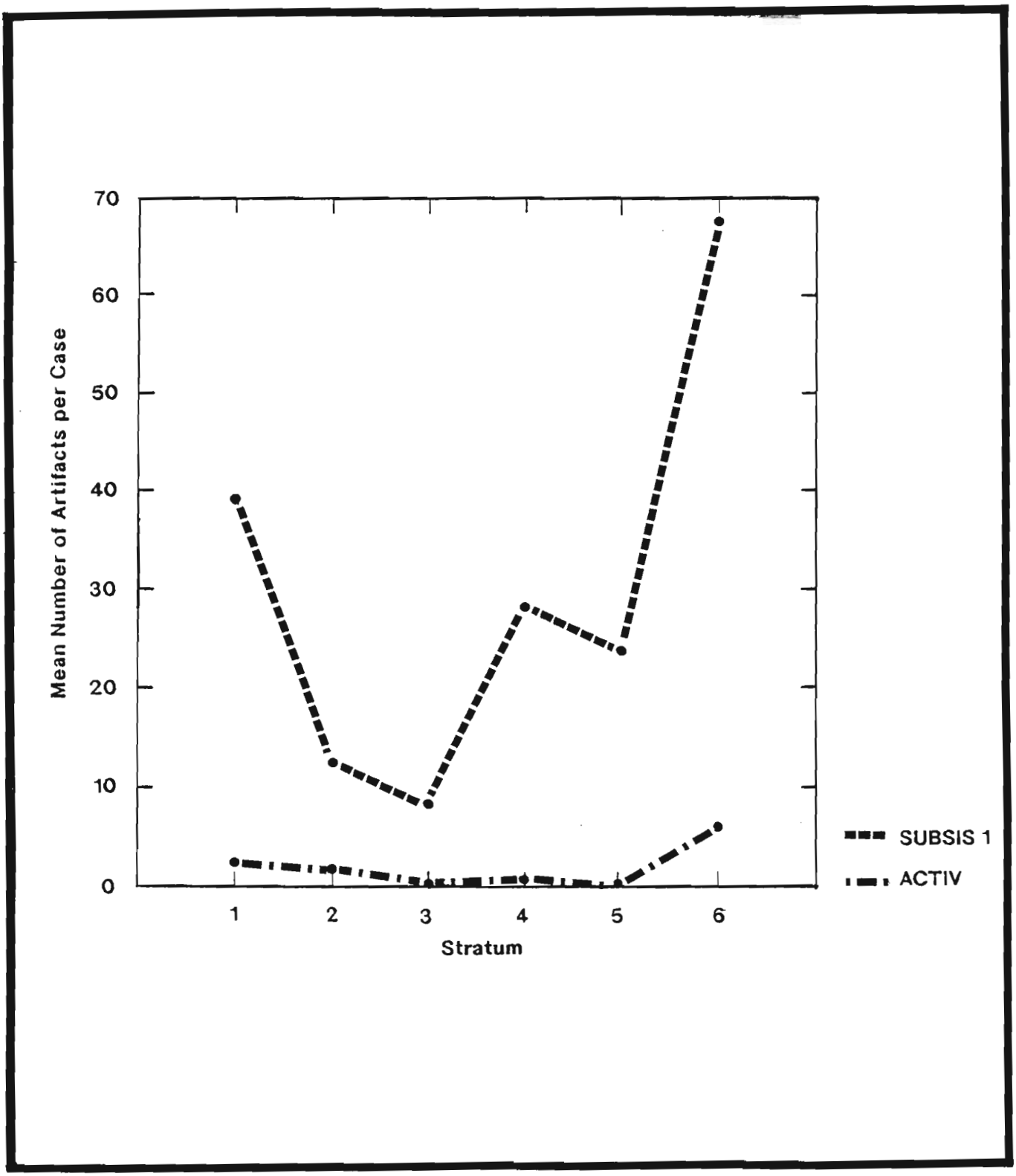


Figure 104 - Graph Depicting Mean Number of Subsistence (SUBSIS 1) and Activity (ACTIV) Artifacts by Sampling Stratum.

TABLE 16

LOCALE DESCRIPTIVE STATISTICS

Locale	Number of Cases	Artifact Total	Mean Artifacts Per Case
Cellar 1 (C1)	56	2,681	47.875
Cellar 2 (C2)	49	1,792	36.571
Courtyard (Cyrd)	20	1,406	70.300
Rear Area (RA)	38	5,691	149.763
Structure 1 (S1)	38	1,702	44.789
Structure 2 (S2)	53	6,874	129.698
Structure 3 (S3)	12	1,248	104.000

TABLE 17

ANALYSIS OF VARIANCE FOR FUNCTIONAL GROUP/CATEGORY VALUES BY LOCALE

Measurement	Between Groups	Within Groups	Test Statistics
Analysis of Variance 1: Activities Group (ACTIV)			
DF	6	259	F = 8.164
Sum of Squares	117303.368	620220.617	Probability = .000
Mean Square	19550.561	2394.674	
Analysis of Variance 2: Building Hardware Category (BHARD)			
DF	6	259	F = 6.969
Sum of Squares	32967.530	204198.936	Probability = .000
Mean Square	5494.588	788.413	
Analysis of Variance 3: Building Material Category (BMAT)			
DF	6	259	F = 3.015
Sum of Squares	13682.105	195877.880	Probability = .007
Mean Square	2280.351	756.285	

TABLE 17

ANALYSIS OF VARIANCE FOR FUNCTIONAL GROUP/CATEGORY VALUES BY LOCALE (continued)

Measurement	Between Groups	Within Groups	Test Statistics
Analysis of Variance 4: Household/Domestic Group (DOMES)			
DF	6	259	F = 2.635
Sum of Squares	280.451	4594.199	Probability = .017
Mean Square	46.742	17.738	
Analysis of Variance 5: Alcohol/Drinking Category (ALCREC)			
DF	6	259	F = 8.187
Sum of Squares	3149.154	16603.497	Probability = .000
Mean Square	524.859	64.106	
Analysis of Variance 6: Leisure/Recreation Group (LEISREC)			
DF	6	259	F = 1.071
Sum of Squares	1.672	67.366	Probability = .380
Mean Square	0.279	0.260	
Analysis of Variance 7: Personal Group (PERS)			
DF	6	259	F = 4.406
Sum of Squares	349.668	3425.670	Probability = .000
Mean Square	58.278	13.227	
Analysis of Variance 8: Subsistence Group (SUBSIS1)			
DF	6	259	F = 4.016
Sum of Squares	862.490	9270.352	Probability = .001
Mean Square	143.748	35.793	
Analysis of Variance 9: Artifact Total			
DF	6	259	F = 8.974
Sum of Squares	521912.464	2510580.679	Probability = .000
Mean Square	86985.411	9693.362	

DF = Degrees of Freedom

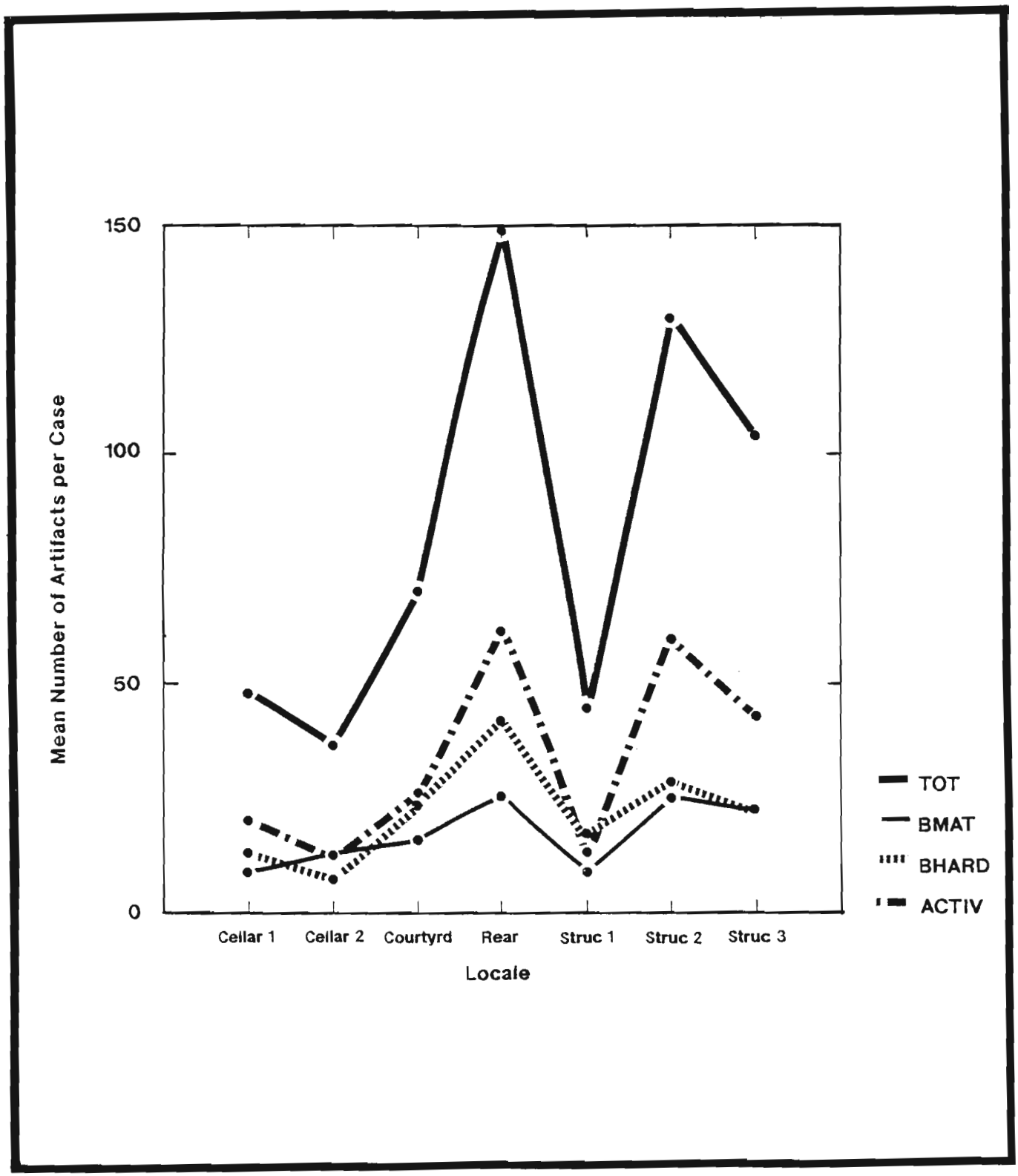


Figure 105 - Graph Depicting Mean Number of Building Material (BMAT), Building Hardware (BHARD), Activity (ACTIV), and Total Artifacts (TOT) by Locale.

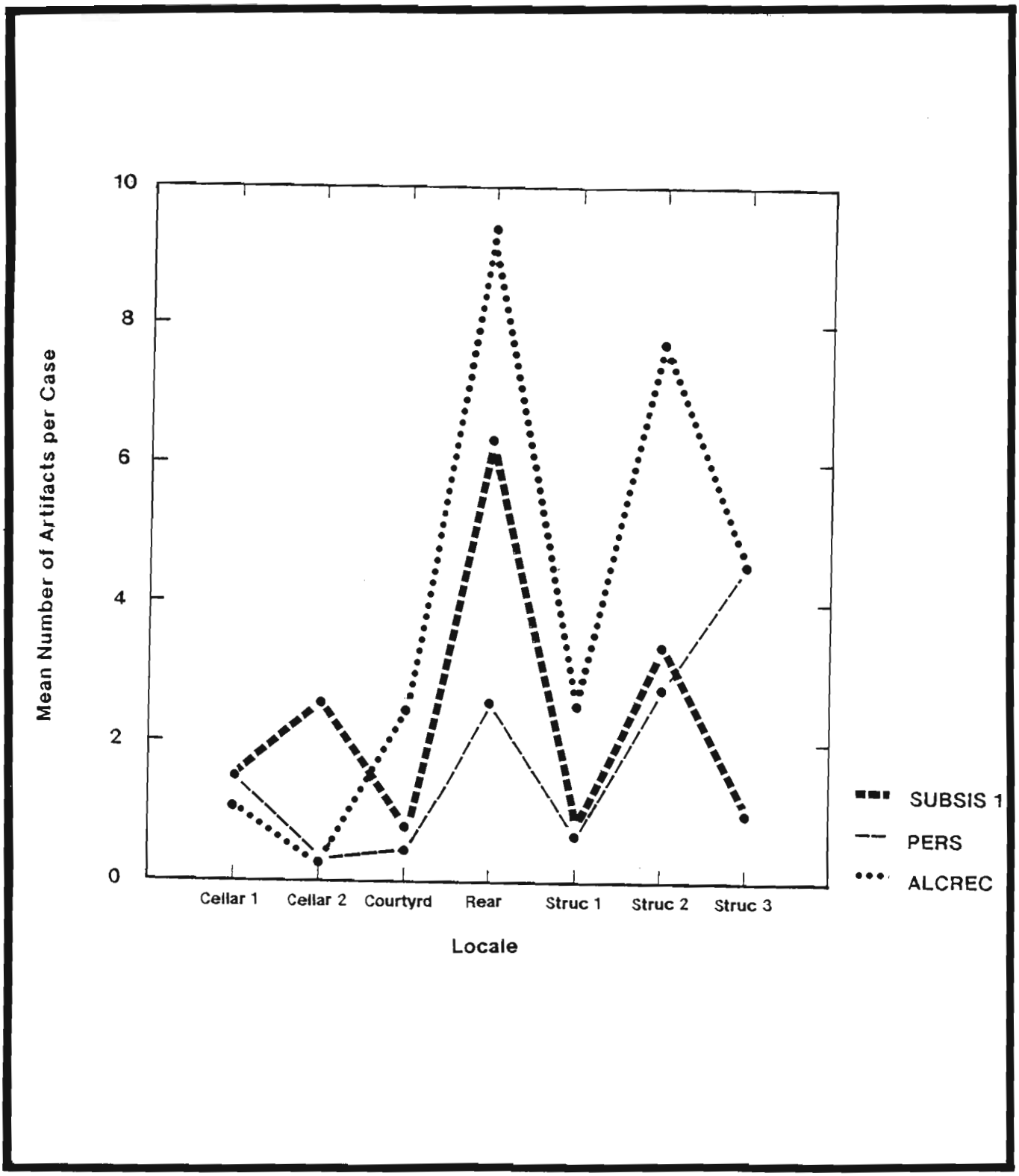


Figure 106 - Graph Depicting Mean Number of Subsistence (SUBSIS 1), Personal (PERS), and Alcohol/Recreation (ALCREC) Artifacts by Locale.

Subsistence group (SUBSIS1). These are the groups/categories with the lowest mean artifact values.

Patterning in the data associated with this larger combined random and intuitive unit sample exhibits similarities with that of the smaller stratified random sample. In particular, the figures reveal that the Rear Area and Structure 2 locales have the highest total mean artifact values, in addition to the highest values for most functional categories. These locales roughly correspond to the Strata 1 and 6 areas, which produced similar results within the preceding analysis of random units. Structure 3 exhibits the next highest total mean artifact value. Figure 106 reveals an unusually high mean artifact value for Personal group items and a contrastingly low Subsistence group item value within this locale. Both cellar locales have unusually low Alcohol/Drinking group item values in comparison to other locales. Cellar 2, however, has one of the higher Subsistence group item values.

Vertical Distribution

The combined random and intuitive unit sample is utilized to discern overall patterns in the vertical distribution of functionally defined artifacts. However, one case represents a combined level (levels 6 and 7) from which 76 artifacts were recovered. This case is removed from the analytical sample, which therefore consists of 265 cases (a total of 21,318 artifacts recovered from nine levels). As in preceding text, this section emphasizes observations of mean numbers of artifacts per case within the eight functional groups/categories and one total artifact category. For this analysis, however, the cases are grouped by level number. Table 18 provides initial descriptive statistics pertaining to the overall numbers of functionally defined artifacts associated with each level.

Table 19 provides ANOVA results for each functional category with the cases grouped by level. An ANOVA of the total number of artifacts per case among the nine levels is also included. A .01 level of significance is selected for the ANOVAS because of the large size of the sample. Alcohol/Drinking group and Building Hardware category ANOVAs do not include level 9 because an insufficient number of artifacts within these groups/categories were recovered to measure variance. The Leisure/Recreation group ANOVA does not include levels 7 and 9 for the same reason. This situation accounts for the lower number of degrees of freedom in these particular ANOVAs.

The results of the ANOVAs indicate no statistically significant differences among the levels in the Household/Domestic, Leisure/Recreation, Personal, and Subsistence groups. The following observations therefore do not include these groups. Figure 107 plots the mean number of artifacts per case by level for the Activities (ACTIV) and the Total Artifact (TOT) groups. Figure 108 plots the same data for the Alcohol/Drinking, Building Hardware, and Building Material categories. Both graphs are consistent in the presence of two distinct peaks in mean artifact values at levels 2 and 8. Similarly, a

TABLE 18

LEVEL DESCRIPTIVE STATISTICS

Level	Number of Cases	Artifact Total	Mean Artifacts Per Case
1	43	3,211	74.674
2	48	7,762	161.708
3	49	4,408	89.959
4	51	2,998	58.784
5	29	1,095	37.759
6	23	687	29.870
7	14	563	40.214
8	6	456	76.000
9	2	138	69.000

TABLE 19

ANALYSIS OF VARIANCE FOR FUNCTIONAL GROUP/CATEGORY VALUES BY LEVEL

Measurement	Between Groups	Within Groups	Test Statistics
Analysis of Variance 1: Activities Group (ACTIV)			
DF	8	256	F = 5.622
Sum of Squares	110135.511	626850.511	Probability = .000
Mean Square	13766.939	2448.635	
Analysis of Variance 2: Building Hardware Category (BHARD)			
DF	7	255	F = 4.595
Sum of Squares	26504.481	210101.496	Probability = .000
Mean Square	3786.354	823.927	

TABLE 19

ANALYSIS OF VARIANCE FOR FUNCTIONAL GROUP/CATEGORY VALUES BY LEVEL (continued)

Measurement	Between Groups	Within Groups	Test Statistics
Analysis of Variance 3: Building Material Category (BMAT)			
DF	6	259	F = 3.015
Sum of Squares	13682.105	195877.880	Probability = .007
Mean Square	2280.351	756.285	
Analysis of Variance 4: Household/Domestic Group (DOMES)			
DF	6	259	F = 2.635
Sum of Squares	280.451	4594.199	Probability = .017
Mean Square	46.742	17.738	
Analysis of Variance 5: Alcohol/Drinking Category (ALCREC)			
DF	6	259	F = 8.187
Sum of Squares	3149.154	16603.497	Probability = .000
Mean Square	524.859	64.106	
Analysis of Variance 6: Leisure/Recreation Group (LEISREC)			
DF	6	259	F = 1.071
Sum of Squares	1.672	67.366	Probability = .380
Mean Square	0.279	0.260	
Analysis of Variance 7: Personal Group (PERS)			
DF	6	259	F = 4.406
Sum of Squares	349.668	3425.670	Probability = .000
Mean Square	58.278	13.227	
Analysis of Variance 8: Subsistence Group (SUBSIS1)			
DF	8	256	F = .754
Sum of Squares	233.143	9897.196	Probability = .644
Mean Square	29.143	38.661	
Analysis of Variance 9: Artifact Total			
DF	8	256	F = 6.040
Sum of Squares	481487.276	2550986.181	Probability = .000
Mean Square	60185.910	9964.790	

DF = Degrees of Freedom

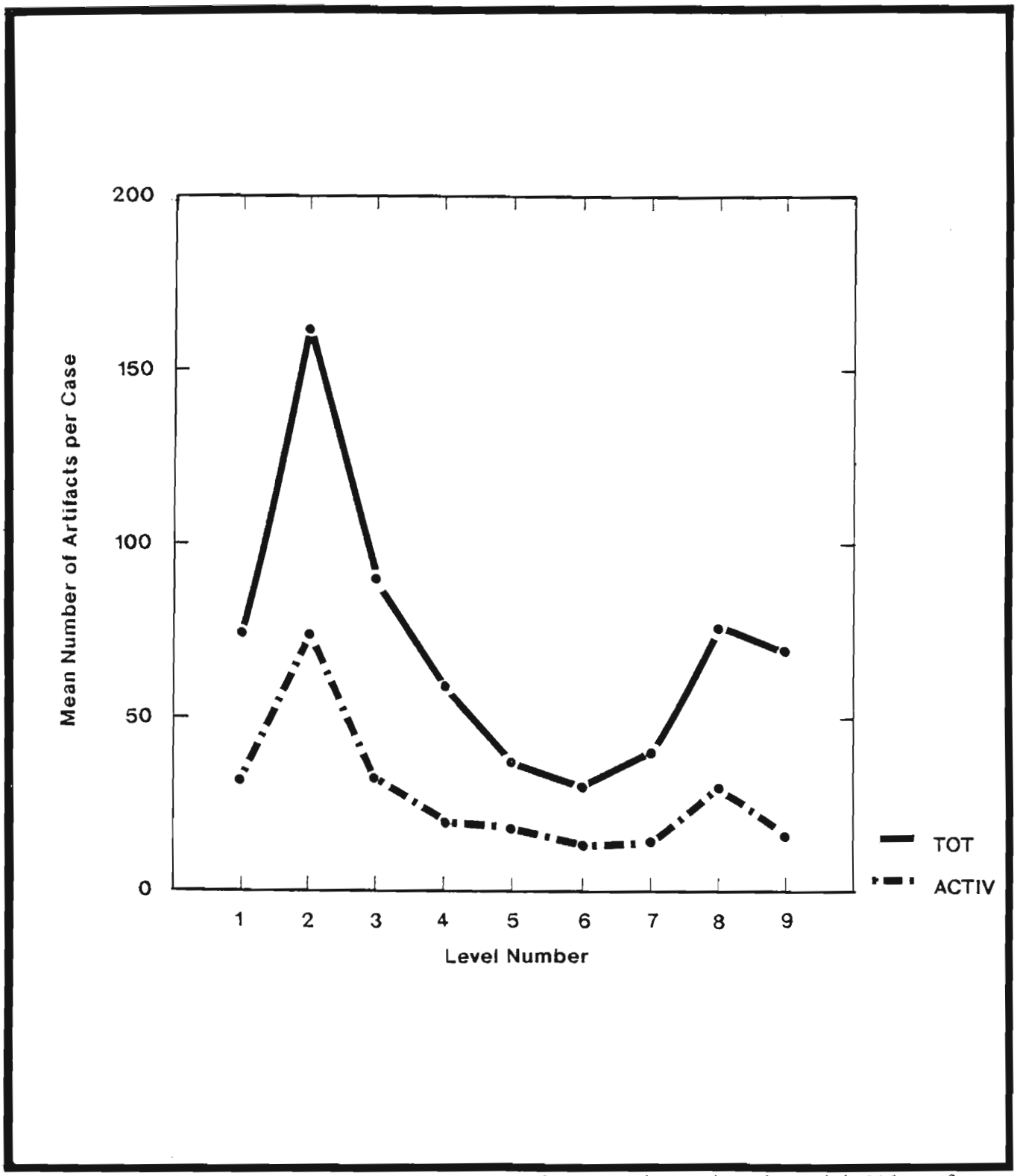


Figure 107 - Graph Depicting Mean Number of Activity (ACTIV) and Total (TOT) Artifacts by Level.

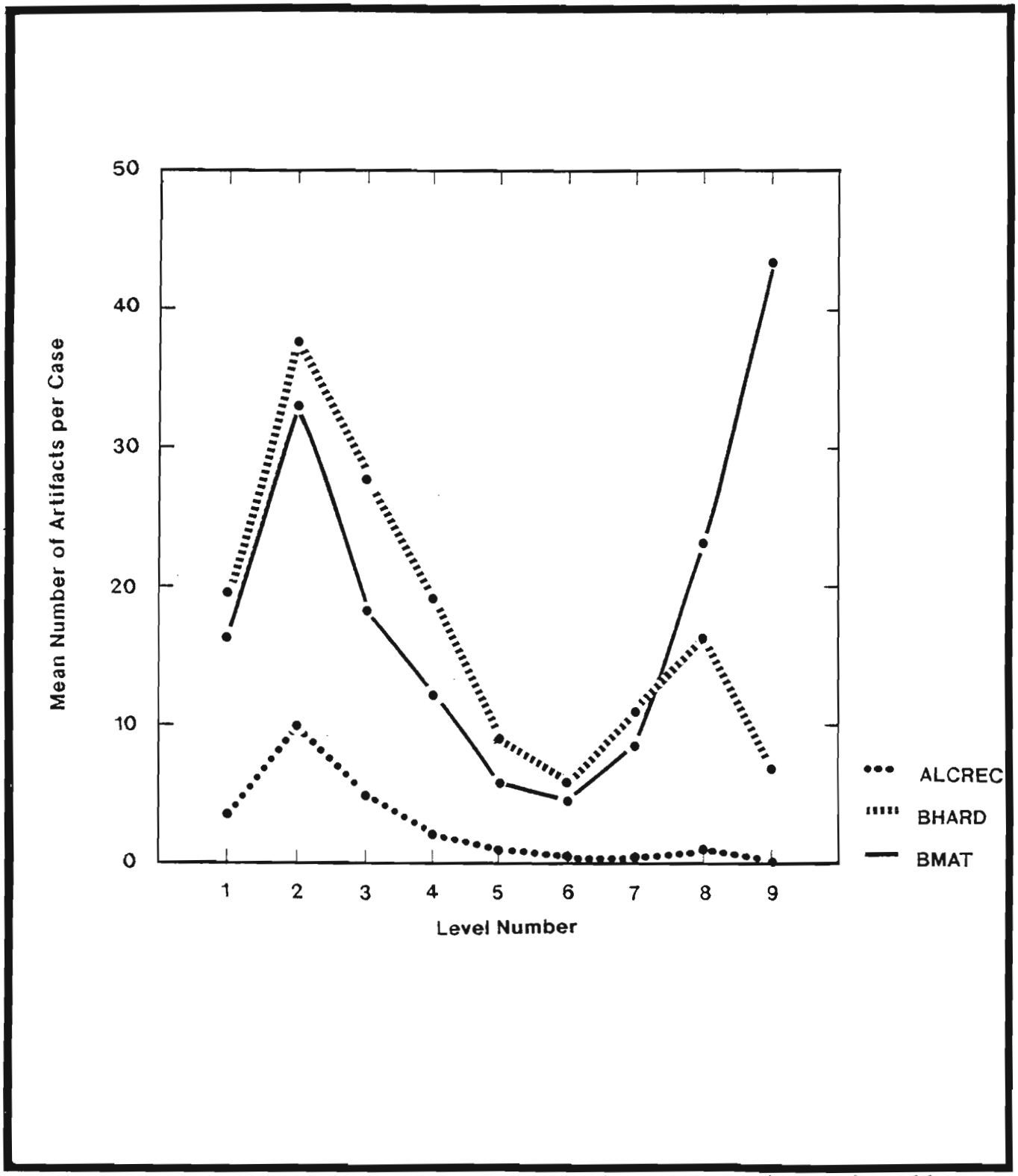


Figure 108 - Graph Depicting Mean Number of Alcohol/Recreation (ALCREC), Building Hardware (BHARD), and Building Material (BMAT) Artifacts by Level.

common low point or trough is discernible at level 6. The deeper component is characterized by lower mean artifact values than the upper for all groups/categories except Building Material.

Temporal Structure for Artifact Classes

The analysis of temporally diagnostic artifacts is a means by which relative dates are assigned to discrete horizontal and vertical proveniences within the Tremont House site boundaries. Originally, 2072 diagnostic artifact cases were identified. Of these, 10 cases with beginning manufacturing dates later than 1912 were removed from the sample, since they were presumed to be the result of post-abandonment disturbance. A case within the diagnostic artifact files may represent data associated with a single artifact (such as an entire bottle), or with several fragments within a specific provenience (such as brown bottle fragments) that were perceived by the analyst to represent a single diagnostic artifact. Similarly, all artifacts associated with a particular feature (such as a privy or drainage pipe) were collected as a unit, which often encompassed several horizontal/vertical proveniences. Materials associated with features were thus separated from those artifacts recovered from more precise grid unit and level proveniences. Feature associations are analyzed in a separate section. Varying excavation and collection strategies employed at the site necessitate dividing the entire sample of 2062 diagnostic artifact cases into three additional files.

Initially, a file was created to represent diagnostic artifacts systematically recovered from excavation grid units associated with specific horizontal and vertical proveniences. This file, containing 1201 cases, therefore yields information most amenable to research interests. Data associated with diagnostic artifacts recovered from archaeological feature contexts are contained within a second file comprised of 114 cases. A third file, comprised of 757 cases, contains data associated with diagnostic artifacts recovered from backhoe trenches, vandal pits, and other questionable proveniences, which tend to be of limited analytical value.

Figure 109 presents a histogram illustrating the density distribution of beginning manufacturing dates associated with the entire sample of 2062 cases. It is provided as a baseline view of Tremont House relative dates. Each bar in the graph represents the number of diagnostic artifact cases assigned beginning manufacturing dates within a specific five-year period. In this manner, potentially significant peaks and troughs (modality) in the distribution of relative dates can be discerned. The figure reveals that artifacts with beginning manufacturing dates between 1855 and 1859 are by far the most well-represented. Specifically, 37.73% of the entire sample (778 cases) were assigned a beginning manufacturing date of 1859. Lesser peaks are apparent between 1875 and 1884, and additionally between 1895 and 1899.

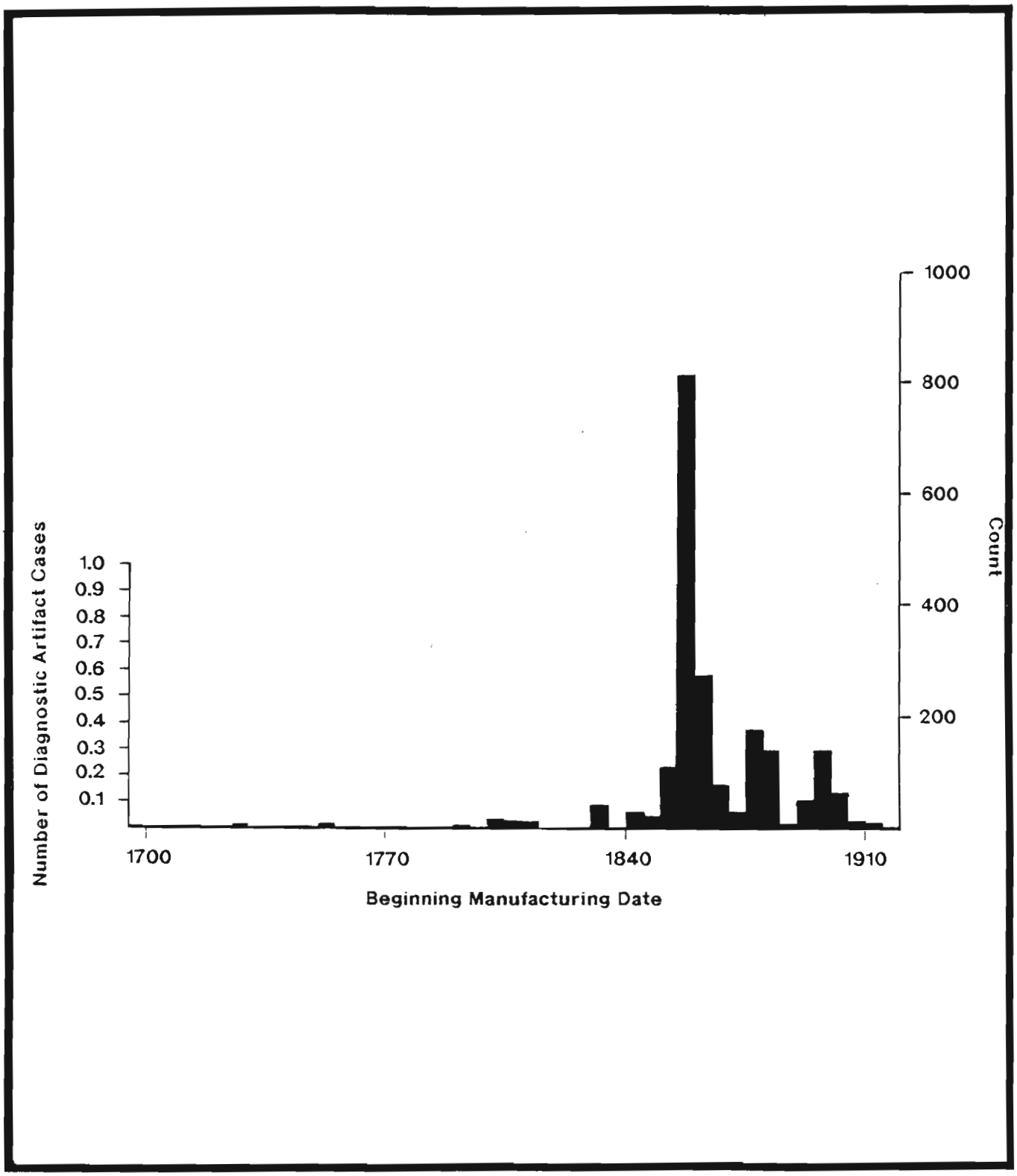


Figure 109 - Histogram Depicting Beginning Manufacturing Dates for Entire Sample of Temporally Diagnostic Artifacts.

Horizontal Distribution

Table 20 focuses on 204 temporally diagnostic artifact cases recovered from a stratified random sample of the Tremont House excavation grid block (refer to Chapter 7 for archaeological sampling and excavation methods). The statistics presented are based on beginning manufacturing dates assigned to the various historical artifacts recovered only from the random units within each of the six sampling strata (refer to Figures 18 and 19). A one-way analysis of variance (ANOVA) accompanies this table so that the statistical significance of the differences among the strata may be assessed.

The group means presented in Table 20 suggest that Strata 4, 5, and 6, encompassing most of the southern and western portions of the site, contain slightly earlier materials than do Strata 1, 2, and 3, occupying the northern and most of the central and eastern portions of the site. However, the random sample unfortunately yielded only a small number of temporally diagnostic artifacts, particularly for Strata 2 through 5, and the ANOVA results indicate that these numbers are not statistically significant. That is, the F value is not large enough to indicate a real difference in mean beginning dates, not attributable to random variations, among the six strata. Therefore, any inferences regarding relative dates associated with the six defined strata based on materials recovered solely from the random units must be considered extremely tentative.

Additional measures are employed to further explore possibilities for temporal distinctions in the horizontal distribution of relatively dated materials. First, diagnostic artifacts recovered from intuitive excavation units selected to define architectural features are introduced to increase the size of the sample. Therefore all 1201 diagnostic artifacts recovered from the systematic grid block excavation are utilized. Second, the defined sampling strata are further subdivided into discrete areas, here termed "locales" (such as structures, cellars, and exterior areas), delineated after a subjective assessment of features identified during excavation (such as buried walls and floors).

Seven locales, designated Cellar 1 (C1), Cellar 2 (C2), Courtyard (Cyrd), Rear Area (RA), Structure 1 (S1), Structure 2 (S2), and Structure 3 (S3), are delineated on the site map (refer to Figure 17). Summary statistics pertaining to the beginning manufacturing dates assigned to 1201 diagnostic artifacts recovered from all random and intuitive excavation units within these seven locales are presented in Table 21.

The results presented in Table 21 correspond to those derived only from the stratified random sample (Table 20) in that they suggest the southern and western portions of the site are associated with the earliest materials. Table 21 ANOVA results indicate that the differences among the seven locales, in terms of the beginning manufacturing dates of diagnostic artifacts, are statistically significant. The single exception to the inference that northern, eastern, and central portions of the site are later than other site areas is Cellar 2, located in the central site area within the walls defining Structure 1. The mean beginning manufacturing date associated with Cellar 2 is more

TABLE 20

SUMMARY STATISTICS AND ANALYSIS OF VARIANCE FOR BEGINNING MANUFACTURING DATES BY SAMPLING STRATUM

Summary Statistics	Sampling Strata					
	1	2	3	4	5	6
Number	75	25	6	23	16	59
Minimum	1725	1850	1840	1800	1750	1750
Maximum	1904	1902	1880	1895	1895	1895
Mean	1867.9	1869.7	1865.8	1861.7	1858.1	1858.6
SD	24.786	15.494	14.716	22.329	35.097	22.391
Analysis of Variance:						
Measurement	**Between Groups**			**Within Groups**		
DF	5			198		
Sum of Squares	4355.467			110831.372		
Mean Square	871.093			559.754		
Test Statistics	F = 1.556 Probability = 1.740					

SD = Standard Deviation
DF = Degrees of Freedom

TABLE 21

SUMMARY STATISTICS AND ANALYSIS OF VARIANCE FOR BEGINNING MANUFACTURING DATES BY LOCALE

Summary Statistics	Locales						
	C1	C2	Cyrd	RA	S1	S2	S3
Number	268	156	37	264	69	329	78
Minimum	1725	1700	1800	1725	1800	1725	1750
Maximum	1909	1906	1895	1895	1907	1902	1895
Mean	1870.5	1861.5	1862.8	1860.2	1867.1	1865.2	1862.8
SD	20.724	28.127	18.750	21.858	18.800	19.765	21.732
Analysis of Variance:							
Measurement	**Between Groups**			**Within Groups**			
DF	6			1194			
Sum of Squares	16996.497			564128.614			
Mean Square	2832.749			472.470			
Test Statistics	F = 5.996 Probability = .000						

SD = Standard Deviation
DF = Degrees of Freedom

closely related to the Structure 3, Courtyard, and Rear Area portions of the site, located to the south and west (refer to Figure 17).

Vertical Distribution

This section provides information pertaining to the vertical distribution of 1194 temporally diagnostic artifacts recovered from the Tremont House grid block excavations. Seven cases from the original sample of 1201 were removed because of their association with mixed levels. Figure 110 plots the mean beginning manufacturing dates associated with each level; the y-axis of the graph extends from the most shallow level (1) to the deepest level (9). The results suggest a drop-off in mean beginning manufacturing dates below level 6. To assess the statistical significance of these data, an ANOVA of beginning manufacturing dates was conducted using the temporally diagnostic artifacts grouped by level. Table 22 presents the results of this test. The F value does not permit rejection of the null hypothesis, suggesting that there is no real difference among the groups, other than that due to random variation, at the selected .05 level of significance. Therefore, the materials dated by relative means do not appear to represent temporally distinct vertical proveniences.

TABLE 22

ANALYSIS OF VARIANCE FOR BEGINNING MANUFACTURING DATES BY LEVEL

Measurement	Between Groups	Within Groups	Test Statistics
DF	8	1185	F = 1.927
Sum of Squares	7432.083	571146.926	Probability = .053
Mean Square	929.010	481.981	

DF = Degrees of Freedom

Table 23 data result from a cross-tabulation of diagnostics recovered from the seven locales by individual level. These data reiterate the lack of temporal distinctions on the vertical plane within all of the areas defined by excavation.

Faunal Remains

Faunal remains, like historical artifacts, were categorized during laboratory processing. The following information was recorded on faunal data sheets: field specimen/catalog number; level; species; element; age (juvenile/adult); side (right/left);

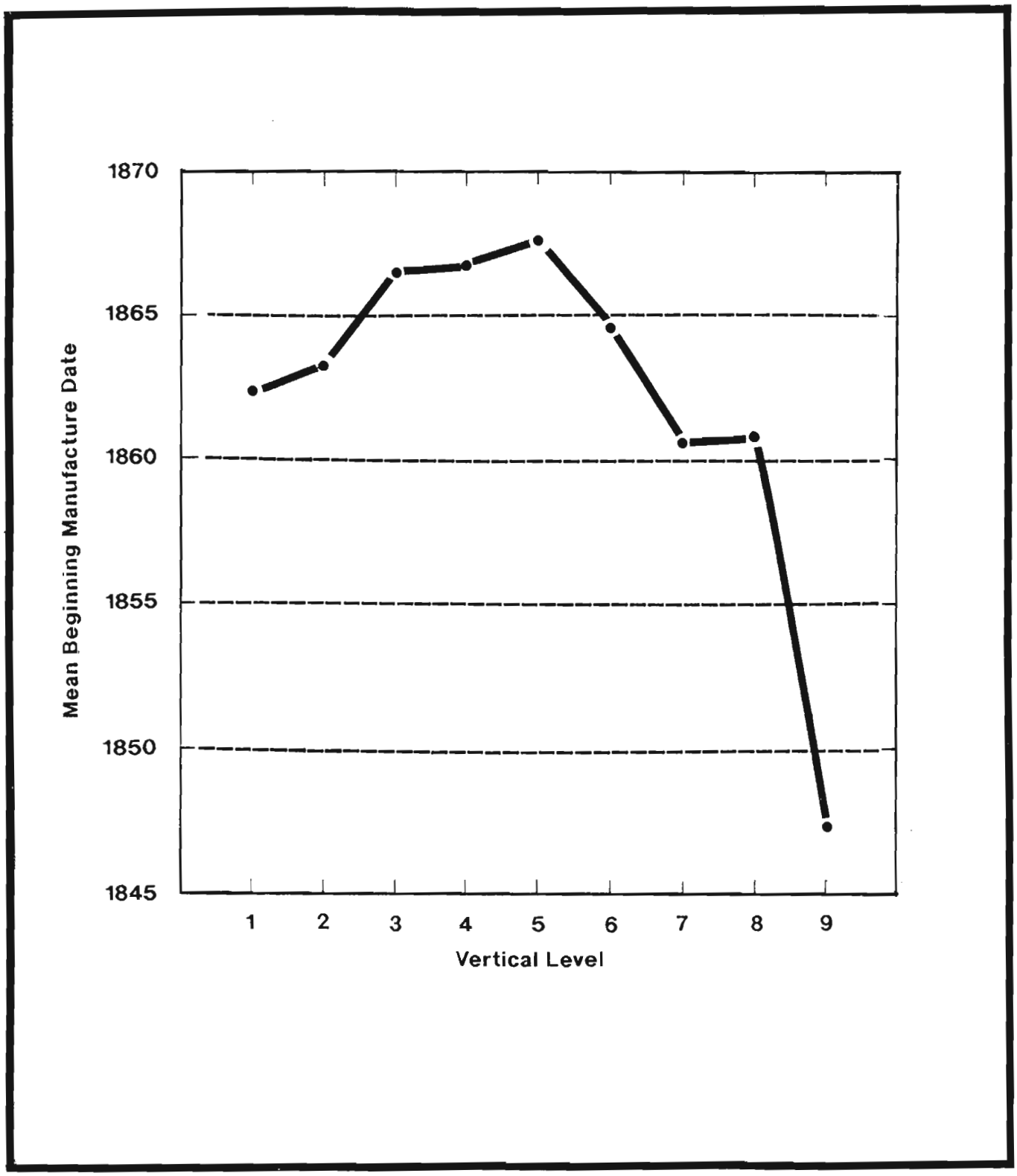


Figure 110 - Graph Depicting Mean Beginning Artifact Manufacturing Dates by Level.

TABLE 23

MEAN BEGINNING MANUFACTURING DATES BY LOCALE AND LEVEL

	Locales						
	C1	**C2**	**Cyrd**	**RA**	**S1**	**S2**	**S3**
Level 1							
N (=138)	0	29	5	30	9	43	22
Mean	N/A	1856.6	1868.8	1860.8	1863.8	1866.7	1861.4
Level 2							
N (=284)	14	5	15	93	12	101	44
Mean	1863.1	1862.2	1860.0	1860.4	1869.8	1865.8	1862.8
Level 3							
N (=222)	40	9	10	45	38	76	4
Mean	1868.1	1870.7	1868.6	1861.3	1867.1	1867.6	1868.0
Level 4							
N (=258)	158	10	2	13	3	70	2
Mean	1869.0	1848.7	1845.0	1863.4	1872.0	1864.4	1895.0
Level 5							
N (=113)	53	8	5	3	5	34	5
Mean	1878.0	1857.8	1860.8	1859.3	1869.4	1856.1	1853.0
Level 6							
N (=80)	0	42	0	32	0	5	1
Mean	N/A	1864.1	N/A	1863.7	N/A	1875.2	1859.0
Level 7							
N (=64)	1	30	0	31	2	0	0
Mean	1866.0	1867.0	N/A	1854.8	1854.5	N/A	N/A
Level 8							
N (=29)	1	15	0	13	0	0	0
Mean	1859.0	1862.3	N/A	1859.2	N/A	N/A	N/A
Level 9							
N (=6)	0	2	0	4	0	0	0
Mean	N/A	1858.0	N/A	1841.8	N/A	N/A	N/A

part (whole, proximal, distal, midsection, fragment); utilization (butchered, cooked, burned); rodent-gnawed; and general comments about the specimen.

As a result, at least two species of fish, over 12 species of avi-fauna, and 14 mammal species were identified from the Tremont House remains (Appendix B, Table B-1). (Several indeterminate species within established genera are also included.) Three thousand seven hundred seventy nine partial and complete bones were recovered, of which 3,193 were mammal, 507 bird, and 79 fish. Most species were used as food in the hotel restaurant; however, Norway rat, dog, cat, and coyote are not considered to have been food sources (though one rat bone showed evidence of having been cooked). The Norway rat was the most abundant species in the entire faunal collection, although cattle was the most prevalent domestic species, and chicken was the most common fowl.

In many cases it was not possible to definitively identify a bone because it was either too fragmentary, had been altered beyond recognition, or was generally not diagnostic. Such specimens were referred to as Indeterminate, and comprised 73.8% of the total sample (2,789 bones). General faunal classifications in this category were possible, however. Fish constituted 2.8% of the Indeterminate sample, bird 11%, rodent less than 1%, Leporid 2%, and Indeterminate artiodactyl 84%. Indeterminate artiodactyl remains comprise 62% of the entire faunal assemblage. Most of the artiodactyl bones were fragmentary, and consequently it was often impossible to distinguish specific species. The absence of certain game animals--such as wapiti and bighorn sheep, which would be expected on the restaurant menu--may be explained by the generally fragmentary nature of the remains.

Three hundred seventy eight bones belonged to juvenile animals. These specimens were characterized by completely separate or only partially fused epiphyses, smaller size, and rough surface texture. Thirty two immature bones of *Bos taurus* were recovered, indicating that veal was served in the restaurant. Young lamb is indicated by 17 immature bones. It is possible the restaurant also served roast suckling pig, given the presence of 64 immature pig bones.

Of the 3779 bones, there were 391 complete specimens (10.3%), 173 proximal ends (4.6%), 106 distal ends (2.8%), 1099 midsections (29.1%), and 2010 miscellaneous fragments (53.2%). Eight hundred specimens exhibited evidence of butchering (21.2%), 1235 had been cooked (32.7%), and 168 displayed signs of burning (4.4%). Given the presence of various skull parts and footbones (with the notable exception of pig's feet) in the faunal assemblage, it is evident that at least a small amount of butchering took place on the premises.

Seventy nine fish bones, mainly vertebrae, were recovered, representing at least two species, as noted above. Trout (*Salmo* sp.) is present, and numerous scales recovered from flotation samples (discussed in the following subsection) probably belong to Northern Pike (*Esox* sp.), a non-native species.

At least 12 species of avi-fauna are represented. Of the 507 bird bones, 80 are chicken (*Gallus gallus*) and 71 are turkey (*Meleagris gallopavo*). Because of the substantial size range of turkeys, it was not possible to determine whether they were wild or domestic birds. Game birds appeared frequently on the menu and included Canada Goose, duck, Greater Prairie Chicken, Ruffed Grouse, Sage Grouse, Bobwhite, Common Snipe, Rock Dove, and Ring-necked Pheasant. The Ring-necked Pheasant is the only species that is not native to Colorado, and thus represents an imported food item. The Greater Prairie Chicken is the most common game bird represented in the collection. Whether these specimens were acquired from hunters or wild game dealers is unknown.

Of the 14 mammal species identified, eight were feral species (including six game animals--cottontail, jackrabbit, bear, deer, pronghorn, and bison), two were pets or scavengers (dog and cat), three were domestic species (pig, sheep, and cattle), and the Norway rat, which was a commensal introduced by, and allowed to flourish because of humans. Gnaw marks attributable to rats were noted on 293 mammal bones.

It is apparent that wild game, including both birds and mammals, was an important and frequent item on the menu. At the time of the Tremont's early operation, bison still roamed the eastern plains, deer and pronghorn were numerous in the immediate region, and bear, bighorn sheep, and wapiti were fairly common in the mountains. All the game birds would have been available on the plains or in the foothills.

A more detailed summary of the results of the faunal analysis is presented in table form in Appendix B.

Analytical Results

Analyses of the Tremont House faunal assemblage is oriented toward describing the overall range of remains, discerning temporal change in the hotel's culinary practices, and identifying functionally discrete areas within the site. In particular, trends in the use of domestic versus wild animals are emphasized.

Table 24 provides descriptive statistics pertaining to the 3779 specimens recovered from all proveniences, sorted within their respective taxa. Fragments were classified according to species whenever possible.

The following tabulations are derived from a sample of 3555 bones recovered from specific horizontal (i.e., grid unit) and vertical (i.e., level number) proveniences. A total of 224 specimens recovered from features are not included; analytical results derived from these materials are presented in a separate section. Small numbers of specimens are associated with many species. This situation necessitated further consolidation, with resultant faunal groupings containing numbers more suitable for

TABLE 24

FAUNAL SPECIES DESCRIPTIVE STATISTICS

Species	Frequency	Percentages
Indeterminate Fish	79	2.09
Branta canadensis (Canada Goose)	6	0.16
Indeterminate Goose	1	0.03
cf *Aythya valisineria* (Canvasback)	1	0.03
Indeterminate Duck	1	0.03
Tympanuchus cupido (Greater Prairie Chicken)	24	0.64
Bonasus umbellus (Ruffed Grouse)	1	0.03
Centrocercus urophasianus (Sage Grouse)	2	0.05
Dendrogapus obscurus (Blue Grouse)	6	0.16
Gallus gallus (Chicken)	80	2.12
Colinus virginianus (Bobwhite)	4	0.11
Phasianus colchicus (Ring-necked Pheasant)	1	0.03
Meleagris gallopavo (Turkey)	71	1.88
cf *Capella gallinago* (Common Snipe)	1	0.03
Columba livia (Rock Dove, Domestic Pigeon)	1	0.03
Indeterminate Bird	307	8.12
Sylvilagus sp. (Cottontail)	8	0.21
Lepus sp. (Jackrabbit)	62	1.64
Leporid (Cottontail/Jackrabbit)	55	1.46
Cynomys ludovicianus (Black-tailed Prairie Dog)	2	0.05
Rattus norvegicus (Norway Rat)	154	4.08
Indeterminate Rodents	4	0.11
Canis familiaris (Dog)	3	0.08
Canis cf *latrans* (Coyote)	1	0.03
Ursus americanus (Black Bear)	1	0.03
Felis cattus (Domestic Cat)	30	0.79
Indeterminate Artiodactyl	2344	62.03
Sus scrofa (Pig)	172	4.55
Odocoileus sp. (Deer)	19	0.50
Antilocapra americana (Pronghorn)	9	0.24
Ovis aries (Domestic Sheep)	58	1.53
Bos taurus (Domestic Cattle)	206	5.45
Bison bison (Bison)	65	1.72
Total	3779	100.00

deriving observations pertinent to specific research questions. Table 25 presents revised statistics resulting from classification based largely on faunal group and specimen status regarding wild or domestic animals. The specific taxa within each of the ten new groups are as follows:

1) Fish - Trout, Pike

2) Wild Bird - Canada Goose, Canvasback, Indeterminate Duck, Greater Prairie Chicken, Ruffed Grouse, Blue Grouse, Bobwhite, Ring-necked Pheasant, Common Snipe, Rock Dove

3) Domestic Bird - Chicken

4) Undetermined Bird - Indeterminate Bird, Turkey, Indeterminate Goose

5) Small Mammal - Cottontail, Jackrabbit, Cottontail/Jackrabbit

6) Bear - Black Bear

7) Wild Artiodactyl - Deer, Pronghorn, Bison

8) Domestic Artiodactyl - Pig, Sheep, Cattle

9) Undetermined Artiodactyl - Indeterminate Artiodactyl

10) Non-food Faunal Remains - Indeterminate Rodent, Black- tailed Prairie Dog, Norway Rat, Dog, Cat

The statistics outlined in Table 25 indicate a higher percentage of domestic than wild animal remains. Only 790 specimens within the sample of 3555 are identifiable as either wild or domestic; thus, the great majority represents undetermined and non-food faunal remains.

Table 26 focuses on species counts and percentages within three of the most important and diverse faunal groups defined above: Wild Artiodactyls, Domestic Artiodactyls, and Wild Birds. The tabulations reveal that domestic artiodactyls are characterized by high percentages of cattle and pigs and relatively low percentages of sheep. The wild artiodactyl bone is dominated by bison specimens. The wild bird statistics reveal a diverse species list with an especially high percentage of greater prairie chicken bone.

Table 27 consists of a row by column contingency table presenting the distribution of wild versus domestic specimens by locale. Most locales are associated with small numbers of total specimens (i.e., where the sample number is less than 50)

TABLE 25

FAUNAL GROUP DESCRIPTIVE STATISTICS

Group	Frequency	Percentage
Fish	78	2.19
Wild Bird	44	1.24
Small Mammal	123	3.46
Bear	1	0.03
Wild Artiodactyl	85	2.39
Subtotal: (Wild Animals)	331	9.31
Domestic Bird	72	2.03
Domestic Artiodactyl	387	10.89
Subtotal: (Domestic Animals)	459	12.91
Undetermined Bird	361	10.15
Undetermined Artiodactyl	2218	62.39
Non-Food Faunal Remains	186	5.23
Subtotal: (Undetermined & Non-Food Animals)	2765	77.78
Total	3555	100.00

TABLE 26

FAUNAL SPECIES DESCRIPTIVE STATISTICS FOR SELECTED FAUNAL GROUPS

Species	Frequency	Percentage
Wild Bird Group:		
Canada Goose	5	11.36
Canvasback	1	2.27
Indeterminate Duck	1	2.27
Greater Prairie Chicken	21	47.73
Ruffed Grouse	1	2.27
Blue Grouse	6	13.64
Sage Grouse	2	4.55
Bobwhite	4	9.09
Ring-necked Pheasant	1	2.27
Common Snipe	1	2.27
Rock Dove	1	2.27
Total	44	100.00
Wild Artiodactyl Group:		
Deer	16	18.82
Pronghorn	9	10.59
Bison	60	70.59
Total	85	100.00
Domestic Artiodactyl Group:		
Pig	158	40.83
Sheep	51	13.18
Cattle	178	45.99
Total	387	100.00

TABLE 27

DISTRIBUTION OF WILD VERSUS DOMESTIC ANIMAL REMAINS BY LOCALE

	Wild		Domestic		Row Totals	
Locale	Count	Row Percent	Count	Row Percent	Count	Row Percent
Cellar 1	10	45.45	12	54.55	22	100.00
Cellar 2	2	28.57	5	71.43	7	100.00
Courtyard	12	30.00	28	70.00	40	100.00
Rear Area	145	41.79	202	58.21	347	100.00
Structure 1	19	25.68	55	74.32	74	100.00
Structure 2	130	46.93	147	53.07	277	100.00
Structure 3	13	56.52	10	43.48	23	100.00

Test Statistic and Coefficient:	Pearson Chi-square	Kendall Tau-b
Value	15.856	0.063
Degrees of Freedom	6	
Probability	0.015	

and consequently render any conclusions questionable. The chi-square test statistic indicates a significant relationship between locale and the presence of wild versus domestic animal bone using a .05 level. For row by column contingency tables, Hurst-Thomas (1986:423-426) recommends the tau-b coefficient as a means for measuring the strength of a statistically significant relationship. The tau-b value suggests that the Table 27 relationship is a weak one. All locales with the exception of Structure 3 are associated with higher percentages of domestic than wild species. Structure 1 has an especially high percentage of domestic animal bone.

Table 28 provides counts and percentages of 3555 faunal remains according to their vertical distribution. The results indicate the highest percentages of bone are associated with levels 2, 3, and 4. Levels 8, 9, and a combined level (6/7) are removed from further consideration below because of the small numbers of associated faunal remains.

Table 29 focuses on the distribution of wild versus domestic animals by level number. A total of 787 specimens from levels 1-7 are considered for this tabulation. The associated chi-square value indicates a statistically significant relationship at the .05 level. The tau-b coefficient suggests a weak relationship, although it is stronger than that associated with Table 27. Small samples (i.e., again, numbering less than 50) are associated with levels 1 and 7. In those levels with larger samples (levels 2-6) a trend toward decreasing use of wild game through time is suggested. The lower levels (4-6) are characterized by nearly identical percentages of wild versus domestic animal remains. The upper levels (2 and 3) are associated with significantly higher percentages of domestic animal bone.

Table 30 presents statistics associated with specific species recovered from the lower levels (4-7) and the upper levels (1-3), respectively. In terms of domestic species, percentages of chicken and sheep remain fairly constant throughout the levels. However, a higher percentage of pig than cattle is associated with the lower levels. Alternatively, cattle rather than pig is more prevalent within the upper levels. In terms of wild animal species, fish, and to a lesser extent bison, have noticeably higher percentages in the lower levels. Percentages of cottontails/jackrabbits increase in the upper levels. The diversity of wild birds that were utilized appears greater in the lower levels, but overall the small number of specimens identified renders this conclusion very tentative.

Overall, the upper level assemblage is represented by 362 specimens, of which 248 (68.5%) represent domestic fauna and 114 specimens (31.5%) represent wild fauna. In contrast, the lower level assemblage consists of 425 specimens, of which 210 specimens (49.4%) represent domestic animals and 215 specimens (50.6%) represent wild fauna.

TABLE 28

VERTICAL DISTRIBUTION OF FAUNAL REMAINS

Level	Frequency	Percentage
1	132	3.71
2	643	18.09
3	1197	33.67
4	667	18.76
5	302	8.50
6	457	12.86
6/7	1	0.03
7	142	3.99
8	8	0.23
9	6	0.17
Total	3555	100.00

TABLE 29

DISTRIBUTION OF WILD VERSUS DOMESTIC ANIMAL REMAINS BY LEVEL

	Wild		Domestic		Row Totals	
Level	Count	Row Percent	Count	Row Percent	Count	Row Percent
1	13	56.52	10	43.48	23	100.00
2	34	28.57	85	71.43	119	100.00
3	67	30.45	153	69.55	220	100.00
4	115	51.34	109	48.66	224	100.00
5	37	49.33	38	50.67	75	100.00
6	53	51.46	50	48.54	103	100.00
7	10	43.48	13	56.52	23	100.00
Test Statistic and Coefficient:			**Pearson Chi-square**		**Kendall Tau-b**	
Value			36.351		0.140	
Degrees of Freedom			6			
Probability			0.000			

TABLE 30

DISTRIBUTION OF FAUNAL SPECIES BY VERTICAL LEVEL

	Upper Levels		Lower Levels	
Species	Count	Column Percent	Count	Column Percent
Fish	19	16.67	59	27.44
Canada Goose	2	1.75	3	1.40
Canvasback	1	0.88	0	0.00
Indeterminate Duck	1	0.88	0	0.00
Greater Prairie Chicken	7	6.14	14	6.51
Ruffed Grouse	0	0.00	1	9.47
Blue Grouse	2	1.75	3	1.4
Sage Grouse	0	0.00	2	0.93
Bobwhite	3	2.63	1	0.47
Ring-necked Pheasant	0	0.00	1	0.47
Common Snipe	0	0.00	1	0.47
Rock Dove	0	0.00	1	0.47
Cottontail/Jackrabbit	49	42.98	74	34.42
Bear	1	0.88	0	0.00
Deer	10	8.77	6	2.79
Pronghorn	2	1.75	7	3.26
Bison	17	14.91	42	19.53
Total (Wild Animals)	114	100.00	215	100.00
Chicken	36	14.52	36	17.14
Pig	73	29.44	84	40.00
Sheep	26	10.48	25	11.90
Cattle	113	45.46	65	30.95
Total (Domestic Animals)	248	100.00	210	100.00

Macrobotanical Analysis

Fourteen macrobotanical samples collected from various subsurface proveniences across the site were processed using a water flotation technique. The purpose of macrobotanical collection and analysis is to recover and identify culturally significant remains to aid in defining both native and domesticated plant use. Macrobotanical remains are defined as all non-charcoal, potentially identifiable vegetable parts that are visible through a binocular scope at 10x magnification. The water flotation process is based on the principle that organic remains float on the surface when a soil sample is submerged and agitated in water.

In two cases, samples were subdivided by provenience to separate remains into the upper or lower portions of a large vertical level. In this manner, samples from Levels 5 and 6, for example, were processed as samples 5A and 5B, and 6A and 6B, respectively. The total sample quantity thus increased to 16.

Flotation sample size prior to processing ranged from 1.0 to 1.8 liters. Processing involved pouring a sample into a five gallon plastic bucket, which was then filled with water and agitated. The floated remains (light fraction) were poured onto a 0.5 mm screen. This process was repeated, usually three to five times, until little or no debris floated. The light fraction was then air dried on newspaper-lined cardboard flats. The part of the sample which either did not float or pass through the 0.5 mm screen was gently water-screened using a 2.0 mm mesh. All debris that did not pass through this screen (heavy fraction) was also air dried. Both the light and heavy fractions of each sample were examined under a binocular scope at 10x magnification. All remains judged to be potentially cultural, with the exception of charcoal, were separated from each sample. Seed identification was based on the macrobotanical analyst's comparative collection.

Eleven of the 16 samples yielded definitively or possibly identifiable macrobotanical remains. All of these remains (a total of 315 items) consist of uncharred seeds, representing a minimum of seven taxa. These consist of 284 raspberry or blackberry (*Rubus*) seeds, 18 goosefoot (*Chenopodium*) seeds, 7 nightshade family (*Solonaceae*) seeds, 1 grass family (*Poaceae*) seed, and 5 unidentified seeds.

Small unidentifiable uncharred bone fragments were recovered from several of the flotation samples. In addition, approximately 100 fish scales and five probable egg shell fragments were also observed in sample 6A. Glass fragments and rusted pieces of metal were common in samples from the upper levels at the site.

The raspberry/blackberry and nightshade family seeds probably represent actual use of these plants as foodstuffs, whereas the goosefoot and grass family seeds most likely are residual specimens derived from plants growing in the area during the hotel's

operation. The nightshade family seeds probably represent tomato seeds, although they could also be tobacco or chili pepper seeds.

A more detailed summary of the macrobotanical analysis is presented in table form in Appendix C.

CHAPTER 9

SYNTHESIS: HISTORICAL AND ARCHAEOLOGICAL RESULTS

Introduction

This chapter integrates both historical and archaeological data compiled during the Tremont House study. Individually, each discipline represents only a portion of the picture, whereas the use of a synthetic approach ensures that a detailed record of life at the Tremont House emerges. This integrated research effort also serves to elucidate a general account of life in Denver during the latter half of the nineteenth and early twentieth centuries.

In the following sections, historical archaeological results (described in Chapter 7 and analyzed in Chapter 8) are evaluated in the context of specific research questions and considerations posed in Chapter 5. Discussions are naturally founded on the historical overview presented in Chapter 4, which provides a framework for interpreting the archaeological information.

Archaeological Implications for the Research Design

Historical Archaeological Research Concerns

In Chapter 5, a theoretical framework was developed to facilitate the systematic examination of archaeological data retrieved from the Tremont House. Four primary research domains, each of which represents issues pertinent to historical archaeology in Colorado and adjacent High Plains locales, define the structure of the Tremont House data recovery plan. These domains--Temporal Context, Data Gaps, Theoretical Topics, and Future Research Needs--are synthesized and summarized below. For the sake of clarity specific research concerns are discussed individually; however, given a complex and dynamic historical cultural system, there is obviously considerable thematic overlap.

Temporal Context: Only one general research concern was identified--the definition of resources within specific temporal contexts.

Discussion: Aspects of three separate temporal classification schemes were combined to categorize the Tremont House. These include frameworks established by Buckles and Buckles (1984:33-47), Mehls (1984:I-20 - I-54), and Carrillo (1990). Each of the existing temporal classification schemes consists of historical periods defined on the basis of political, economic, and/or environmental events. One inherent flaw in this scheme involves attempts to establish a one-to-one relationship between a historical period and an individual artifact or group of artifacts recovered from archaeological

contexts. In most instances, the manufacture of certain items may encompass one or more historical periods, and artifacts often cannot be assigned a one-to-one correlation.

This problem was encountered with the Tremont House artifacts. During initial stages of the artifact analysis, it was thought that confusion could be avoided by using only the initial manufacturing date for a specific artifact type; however this was not entirely the case. While most of the diagnostic artifacts had beginning manufacturing dates between 1855 and 1859, the end dates extended beyond the terminal occupation of the hotel (ca. 1912). For example, 37.73% of the entire sample was assigned a beginning manufacturing date of 1859. Two lesser peaks, indicating later beginning manufacturing dates, were apparent--one between 1875 and 1884, and another between 1895 and 1899.

The high percentage of earlier artifact dates (ca. 1850s and 1860s) is apparently attributable to differential dumping patterns. During the hotel's early period, for example, it appears that vacant lots adjacent to the site area--particularly to the north, west, and south of the original structure--were used for dumping refuse. An abandoned coal shute within the hotel (Feature 15), dating to the 1860s and early 1870s, was apparently also used to dispose of 1850s-1860s manufactured artifacts. The hotel's rapid growth during the 1870s led to the utilization of these former dumping areas for additional construction. This competition for space evidently made it necessary to dispose of most post-1870s trash elsewhere (off-site). Much of the later (post-1870s) material recovered at the site was found in Cellar 1 of Structure 2 and, in fact, represents artifacts left in place after the 1912 flood and subsequent razing of the hotel.

Data Gaps: The goal of this research domain, as specified in the Research Design, is to define data gaps that currently exist for specific resources and historical periods. Five data gaps, derived from Buckles and Buckles' (1984:39-52), are identified as relevant to the time periods represented by the Tremont House. All five can be addressed, at least in part, using data from the archaeological investigations. The following discussion is limited to a brief statement of the contribution of the Tremont House excavations to each data gap.

The first three data gaps relate to business/commercial buildings from the Gold Rush to Statehood period (1960 - 1876):

(1) Identification of the "earliest" structures now remaining in Colorado from the 1860 to 1876 period.

Discussion: The Tremont House yielded some of the earliest intact historic settlement period materials ever recovered in Colorado. The urban nature of these remains provides an opportunity to study the evolutionary development of the hotel in response to changing environmental and economic conditions that affected Denver from its inception through the turn-of-the-century.

(2) Identification of industrial-related material culture (such as Colorado bottles and bricks), which can be used as horizon markers.

Discussion: Cultural remains recovered from the Tremont House excavations include artifacts produced in Colorado, particularly in Denver, during specific time periods. These artifacts were found in association with larger quantities of other diagnostic artifacts, which were produced throughout various regions of the United States and Europe. (All diagnostic artifacts are fully described in Chapter 8.) This combination of materials places the Tremont House within a series of local, regional, national and international economic market systems that exhibited varying changes through time. Although some of the diagnostic artifacts can be utilized as horizon markers, they cannot be assigned to a historical period on a one-to-one basis (as discussed above).

(3) Identification and investigation of actual models of the diverse occupations of the period. According to Buckles & Buckles (1984:33-38), as time passes the attrition of resources increases, making this task one of high priority.

Discussion: The information derived from the Tremont House will serve as a benchmark for comparison with archaeological patterning observed at other historic sites, both in Denver proper as well as in urban environments subject to similar stages of historical development. The contribution of the site to such models is further discussed in Chapter 5.

(4) Identification of technological and stylistic changes that occurred during these periods, which can be used as baseline data for material culture studies and diagnostic artifact identification.

Discussion: Chapter 8 contains an extensive listing of functionally defined and temporally diagnostic artifacts recovered from the site, as well as associated photographs, descriptions, and sketches. Included are objects associated with the entire temporal span of site occupation. This assemblage provides a considerable quantity of baseline data for future studies.

(5) Identification of sites related to social, political, and other types of events important to the history of the state.

Discussion: Diagnostic artifacts, in conjunction with the architectural diversity, allows an examination of the use of space at the Tremont House and clarifies the hotel's evolutionary development. The contribution of the Tremont House to this general data gap can be viewed in two ways. Historically, research has confirmed the hotel's significance in the development of Denver. Archaeologically, a large sample of the hotel's material goods was retrieved, thereby providing a view of the day-to-day site activities. Both aspects, united through historical archaeological methods, result in an expanded knowledge of the early history of the city.

Theoretical Topics: The goal of this research domain is the development of a theoretical framework by which archaeological information can be systematically examined. Six general theoretical topics, derived from Buckles and Buckles (1984:8), were identified as being applicable to the Tremont House excavations. Data retrieved from site investigations proved relevant to all six topics, and the site's contribution to each is briefly discussed below:

(1) Cultural resources reflect impacts of past cultural traditions in strategic decisions employed for making cultural adaptations.

Discussion: Individuals who came West brought with them diverse cultural backgrounds from the eastern and midwestern United States, as well as from Europe and other points around the globe. Regardless of their points of origin, however, the initial wave of settlers all confronted a similar series of adaptive hurdles. This adaptive process, which involves the ecological and environmental challenges faced by all frontier populations, is described in the theoretical orientation in Chapter 5. Specifically, the economic model outlines a series of adaptive stages including colonization, spread and coping, and competition. When considered within the context of the economic model, the adaptive process observed at the Tremont House appears to include all stages, with the initial colonization/settlement stage playing the most predominant role.

(2) Representations of behavior as documented in written records will be in conflict with reconstructions of behavior through the synthetic approach of historical archaeology.

Discussion: This statement became particularly evident when comparing newspaper reports concerning the Tremont House. During the 1860s and 1870s, there were many articles and advertisements in the Rocky Mountain News and other newspapers that indicated the importance of the Tremont House. Subsequent to 1880, however, the hotel fell out of favor as new hotels, businesses, and houses were built in Capitol Hill and other new neighborhoods east of Cherry Creek. Denver's newspaper coverage shifted its focus to the new areas where social activities--once common at the Tremont House--were then being held. Perusing only newspaper accounts, one might assume that the hotel closed during this period. In reality, the neighborhood surrounding the hotel (Auraria) became home to a warehouse district inspired by the railroad, which was inhabited by a large and diverse immigrant population. These immigrants, however, tended not to be mentioned in newspaper articles, nor were product advertisements directed at them. Archaeological indications of course disprove any suggestion of the hotel's demise, and instead reveal that the Tremont House was a functioning business until 1912 (albeit catering to a different clientele than in its heyday).

(3) Patterns of conspicuous consumption are identifiable through the values of styles used in hardware of domiciles (and other structures), and in the general inventory of artifacts, in urban areas.

Discussion: A pattern involving the extensive use of manufactured artifacts, known as "conspicious consumption" and equated with the Victorian Era, was evidenced at the Tremont House (see Chapter 8). It appears that even during the ca. 1860s-early 1870s period, when Denver was dependent on animal-powered transportation to supply it with manufactured items and other products, the economic climate encouraged the import of such items. The demand for all types of products was great, and regardless of cost, Denver was being adequately supplied. The presence of European items (i.e., ceramics, wine, perfume, etc.), and other imported fare (i.e., oysters) suggests that although Denver's population remained stable during this period, the transient mining population provided adequate economic incentive to escalate procurement of luxury items, regardless of cost.

(4) Diagnostics can be identified as horizon markers (technological innovations) for each period.

Discussion: As outlined above under Temporal Context, the chronological frameworks developed to structure the second half of the nineteenth Century in Colorado make use of historical periods denoted by political, economic, and/or environmental events. The intermixing of these periods by artifact manufacturing dates makes a one-to-one correlation of "artifact to period" problematic. Consequently, although some diagnostic artifacts recovered from the Tremont House excavations can be utilized as horizon markers, none can be specifically assigned to only one historical period. The results of the Tremont House study indicate that further work is necessary in order to rectify these two seemingly different perspectives.

(5) Quantitative formulas should be devised to predict, from material remains, significant changes in social structure that correlate with changes in population densities.

Discussion: The Tremont House artifact database, described in Chapter 8, represents an initial baseline for future urban historical archaeological studies in Denver. Although the population densities in Denver changed considerably, especially after ca. 1870, further data are required from comparable sources in order to identify the specific variables that may be responsible for these changes.

(6) Structures made of various materials or based on different architectural principles have predictable longevities that can be used to understand length of occupation of any given structure (Buckles and Buckles 1984:9-13). This can only occur in conjunction with the use of diagnostic artifacts.

Discussion: This theoretical topic cannot be easily addressed since the variables responsible for the selection of different types of construction techniques must be taken into account. The Tremont House was constructed of a variety of materials (including

stone, brick, milled lumber, etc.), and it is evident that considerable architectural changes occurred at the hotel throughout its existence. These changes are apparently attributable to the population increase that continued between 1870 and approximately 1900. Commonly accepted historical theory outlines a pattern of construction involving stone as the initial building material in this period. At the Tremont House, however, the general foundation outline, along with historical descriptions of the hotel, suggest that a different sequence occurred involving the use of brick prior to and/or contemporaneous with stone.

As noted above, diagnostic artifacts indicate the use of vacant or abandoned areas for refuse dumping during the initial phases of the hotel (ca. 1860s-1870s). These dumped artifact remains were not extensively disturbed by the subsequent utilization of these areas for construction, in the ca. 1870s and later. Consequently, artifact distributions tend to substantiate the validity of this topic.

Future Research Needs: The primary goal of this research domain, as defined in the Research Design, is the evaluation of future needs based on the current state of knowledge. Out of a list of 45 future needs for Colorado historical archaeology, as identified by Buckles and Buckles (1984:13, 14, 16-18), six were selected as relevant to the Tremont House. The archaeological research at the site addresses, in part, all six of the defined future needs, as briefly discussed below:

(1) Identification of diagnostic artifacts for each period that could be used as "horizon markers."

Discussion: See "Theoretical Topics," theme #4, above.

(2) The identification of horizon markers related to local industries. Such industrial markers include electrical systems, telephones, local brick-making plants, bottle making, and utilities (i.e., water and gas).

Discussion: A series of locally produced artifacts, primarily bottles, were identified and are fully described in Chapter 8. Early evidence of utility use consisted of a series of trenches dug to install water and gas lines. This was not completely unexpected since the American hotel industry is acknowledged to have pioneered the use of mechanical equipment, comforts, and gadgets into architectural designs. "[Hotels] were the first to install indoor plumbing, gaslight (later electric lights), central heating, and the elevator" (Hawke 1988:244).

(3) Development of models for phenomena other than thematic systems which have relevance to material culture and are complementary to thematic system differences. Such models can be related to the topographic zone adaptations, guidelines for estimating population, guidelines for designing research relative to social-structural and ideologically-related behavior,

settlement patterns and types, activity sets, ethnic group identifications and rules for definition of important persons and/or events.

Discussion: Information derived from the Tremont House excavations provides baseline data for studies such as these. As previously stated, studies comparing the Tremont House data with information from other urban contexts may result in new approaches to the development of systematic "models" for artifact examination. Buckles and Buckles (1984) indicate that low order propositions are initially utilized during the exploratory phase of historical archaeological research of a particular site type. This report addresses this initial stage by developing basic patterns deduced from architectural and artifact observations, and implementing them as working hypotheses. They are thus offered as avenues for future inquiry.

(4) Development of precise methods for dating sites within the historic period.

Discussion: The wide array of artifacts recovered from the Tremont House, which are associated with the perceived Victorian "conspicuous consumption" episodes, appears at first glance to provide an excellent mechanism for developing dating techniques for historic sites. The problem, however, lies in the fact that an inventory of the entire assemblage of artifacts that generally appear on historic sites is first necessary. Presently, settlement period artifacts can be dated within two general time periods: ca. 1860s - 1890s and ca. 1900 - 1940s. The latter date range is influenced by the arbitrary, and constantly changing, 50-year cut-off date for categorizing a site as "historic" and for establishing NRHP eligibility. The development of a more precise dating technique awaits more and better detailed historic site excavations from this period.

The Tremont House diagnostic artifact analysis, which focused only on initial artifact manufacturing dates, was partially successful, with the derived dates indicating that approximately one-third of the discarded artifacts represented the early (ca. 1860s-1870s) hotel occupation. This information led to: the development of interpretations regarding the general architectural trends of the hotel; the creation of theories explaining differential dumping patterns through time; and the construction of an overall understanding of space utilization at the hotel.

Still, because of the problems previously mentioned with correlating historical periods with individual artifacts or artifact groups, creative methods are needed for both dating and interpreting the results of archaeological excavations.

(5) Research emphasis at the level of pattern and system analyses. Historic sites which have been intensively investigated by archaeologists in the state tend to have been investigated at site specific levels and not as components of patterns or systems of greater magnitude. Site investigations should consider how the information can contribute to

understanding ranges of behaviors, processes of culture change, and other questions of greater significance.

Discussion: This report attempts to address these research concerns, while progressing beyond a site-specific context. The incorporation of general ideas and definitive issues for Colorado historical archaeology--particularly those that relate to economic and environmental factors--has been accomplished. This framework was then utilized to interpret the artifact patterns that were observed archaeologically. The synthesis presented in this chapter serves to outline the results of archaeological site investigations, while attempting to address questions concerning behavior and processes of culture change.

Specific Research Goals

Two additional research goals specific to the Tremont House were developed as an adjunct to the primary research domains discussed above: (1) to define the architectural composition and artifact variability of the Tremont House, and (2) to obtain dietary data using artifactual, faunal, and macrobotanical remains. These goals were delineated in Chapter 5, and will not be repeated in detail here. Instead, the focus of this section is on the individual research questions generated by these concerns, and the synthesis of archaeological data.

Architectural Composition and Artifact Variability

- Does the spatial distribution of historical artifacts dated by relative means correspond to historically documented construction and abandonment of particular hotel sections?

- Does the artifact assemblage recovered from dated contexts suggest actual change in Tremont House material culture through time? For example, do artifacts recovered from earlier components suggest a reliance on goods imported from Eastern industrial centers, while those from later contexts suggest an emphasis on local production venues?

Historical Data: A detailed architectural history of the Tremont House, compiled using historical documentation, was presented in Chapter 4. The highlights, involving the major construction changes and additions, are reiterated below to assist the reader in interpreting the ensuing integration of archaeological data.

The descriptions of the Tremont House derived from historical documents (primarily newspaper accounts) indicate that the hotel originally consisted of a two-story, wood frame structure, built around 1859. In June 1860, a two-story frame addition was constructed on the north side of the original hotel, forming an L-shaped structure.

Sometime between 1865 and the early 1870s, evidence indicates the frame structure may have been replaced by a three-story brick building. In 1874, other additions are documented, including a baggage and washroom added to the rear of the hotel, and a reading room, which may actually have been part of an existing section of the building. The next major changes to the building occurred between 1874 and 1887, when the Sanborn map indicates that the two-story brick building had a one story frame addition on the rear with a frame porch, a one-story frame addition to the dining room in the rear, and a two-story frame porch on the rear of the office/saloon area. Outbuildings consisted of a frame shed, a two-story brick structure, possibly a barn, and a one-story brick shed. Between 1887 and 1890, a two-story brick addition was constructed on the south side of the rear of the building. The saloon remained in the front of this section, and a frame staircase, possibly a fire escape, was located on the rear of this new addition. A portion of the two-story frame porch was removed, as was the two-story brick outbuilding/barn. A tin shed was built in its place. A frame pump shed was also added to the rear. No changes were made to the exterior of the building between 1890 and 1903, the next date of publication for the Sanborn Insurance Maps.

Archaeological Data: It was not possible to make determinations based on the archaeological data which account for all of the historical and architectural episodes described above. Generally, evidence of three basic structural foundations was discovered: Structure 1, a brick L-shaped foundation; Structure 2, a rectangular stone foundation attached to Structure 1; and Structure 3, a free-standing rectangular brick foundation. Structures 1 and 2 contained cellars (Cellar 1 in Structure 2 contained a brick floor, while Cellar 2 in Structure 1 contained a wooden plank floor).

There are contradictions between the historical descriptions and the archaeological results. For example, based on historical documentation, the L-shaped foundation comprising Structure 1, which is entirely brick, was originally thought to have been built in the late 1860s. Structure 2, the stone foundation, was initially thought to represent the original structure. In both cases, however, the archival dimensions and descriptions do not match the physical remains.

Instead, archaeological indications are that Structure 2 probably represents the northern addition--the first alteration to the original hotel--with Structure 1 being the initial structure. This scenario sheds new light on historical accounts regarding the use of stone prior to the construction of Denver's first brickyard in 1860. At the Tremont House, it appears that both brick and stone were being used contemporaneously for a period of time.

Structure 3, constructed between 1887 and 1890, represents a separate addition, although the Sanborn maps show it as being attached to Structure 1 at the southeast corner.

Artifact Patterning: Seven locales were defined for separate areas of potentially diverse activity at the Tremont: Cellar 1 (C1), Cellar 2 (C2), Courtyard (Cyrd), Rear Area (RA), Structure 1 (S1), Structure 2 (S2), and Structure 3 (S3). (See Chapter 8 for summary statistics pertaining to the beginning manufacturing dates assigned to diagnostic artifacts recovered from all random and intuitive excavation units within these seven locales.)

The results presented below are based solely on artifacts recovered from the stratified random sample units, which suggest that the southern and western portions of the site are associated with the earliest materials. This categorization of the western area is based on remains associated with an abandoned coal shute (Feature 15, located immediately west of Structure 1 in the Rear Area). This feature was utilized prior to the early 1870s, and contained numerous artifacts that dated to the ca. 1860s period.

Additionally, the area where Structure 3 was located may have contained a different structure prior to 1887. Evidence of burning was observed in the exterior area east of Structure 3. This also may have been used for dumping refuse, especially if the area had been vacant for some time prior to construction of Structure 3. The foundation of Structure 3 was not deeply entrenched. Additionally, the interior area of Structure 3 did not contain a cellar and thus had not been extensively disturbed, and the artifactual remains were therefore relatively intact and reflective of earlier activity.

The ANOVA results indicate that the differences among the seven locales, in terms of the beginning manufacturing dates of diagnostic artifacts, are statistically significant. The single exception to the inference that northern, eastern, and central portions of the site are later than other site areas is Cellar 2, located in the central site area within the walls defining Structure 1. The mean beginning manufacturing dates associated with Cellar 2 are more closely related to artifacts found in the Courtyard, Rear Area, and Structure 3, all located to the south and west.

As with the temporally diagnostic artifacts, observations regarding the horizontal distribution of functionally defined artifacts are illuminated by the analyses. Artifacts associated with all excavated grid block units, both random and intuitive, were assigned to groups based on their location within one of the seven locales described above. The addition of artifacts recovered from intuitive units, primarily excavated to define architectural features, substantially increased the analytical sample to 21,394 artifacts comprising 266 cases.

The data indicate statistically significant differences among the seven locales in all functional groups/categories except Household/Domestic and Leisure/Recreation. These two groups are therefore not included in the following observations. The mean number of artifacts per case by locale for items in the Activities group (ACTIV), Building Hardware category (BHARD), Building Material category (BMAT), and Artifact Total group (TOT) were plotted, and the groups/categories with the highest mean artifact

values were emphasized. Identical types of data for the Alcohol/Drinking category (ALCREC), Personal group (PERS), and Subsistence group (SUBSIS1) were also plotted.

Patterning in the data associated with the combined random and intuitive unit sample exhibits similarities to the smaller stratified random sample. The Rear Area and Structure 2 locales have the highest total mean artifact values, in addition to the highest values for most functional categories. These locales roughly correspond to the Strata 1 and 6 areas, which produced similar results in the analysis of random unit materials. Structure 3 exhibited the next highest total mean artifact value. It revealed an unusually high mean artifact value for Personal group items and a contrastingly low Subsistence group item value within this locale. Additionally, both cellar locales had unusually low Alcohol/Drinking group item values in comparison to other locales. Cellar 2, however, had one of the higher Subsistence group item values.

Summary: The architectural composition, as defined by a combination of historical documentation and archaeological data, can be summarized as follows:

(1) In terms of the hotel's architectural evolution, Structure 1 (exhibiting a brick foundation), rather than Structure 2, is believed to have been the original hotel building. Archaeological data revealed that Structure 1 conforms most closely with the historical descriptions of the original structure (i.e., its L-shaped appearance and general dimensions). This structure contained a cellar with a wood plank floor (Cellar 2) which appears to have been used as living quarters, possibly by a maintenance individual who was responsible for distributing coal to a main furnace, or to individual room stoves. Cellar 2 had a rear entry that was added to the original structure, perhaps during a later renovation when this area was no longer used for coal storage/distribution. There is evidence that the rear wooden storage bin (coal chute, Feature 15) began to be used as a trash dump in the 1870s. The generally subsistence-related artifacts recovered from this cellar had earlier dates similar to those from the Courtyard, Rear Area, and Structure 3.

(2) Structure 2 was the next segment constructed, and was attached to Structure 1 on the north. Structure 2 consisted of both stone and brick foundation sections and contained Cellar 1, which exhibited a brick floor. The subsequent west addition of this structure was also brick. The cellar had a rear entrance at the west end, similar to that in Cellar 2. In contrast to Cellar 2, however, this cellar was in use through ca. 1912.

(3) Located south of Structure 1, Structure 3 was the last structure, or addition, to be built. It was not attached to Structure 1, although the Sanborn map shows them connected. The east exterior portion of this structure evidenced burning. It is possible that a ca. pre-1887 structure existed in

this location, and later burned, although this must be considered tentative. However, the construction of Structure 3, with a shallow brick foundation and no cellar, did not create much disturbance in this area. It is alternately possible that prior to the construction of Structure 3, this area was vacant and offered a convenient location for dumping earlier trash. This may explain the early artifact dates associated with the structure.

(4) Although historical documents suggest that the original wood frame structure was razed and subsequently rebuilt entirely with brick in the 1870s, no archaeological evidence exists to support this hypothesis. If this were the case, more uniformity would be expected in the extant structure foundations. Instead, indications are that the evolution of the hotel involved additions constructed to the north and south of Structure 1, the original building.

Tremont House Dietary Information

- Do faunal remains and artifacts from dated contexts within the site suggest a change in subsistence and related activities through time? For example, is there more wild game associated with earlier components at the site and more domesticated animals associated with later contexts?

Discussion: The analysis of faunal remains recovered from the Tremont House was oriented first toward describing the range of species present, followed by a consideration of their horizontal and vertical context. The association of remains within the seven locales defined above was explored in an attempt to identify functionally discrete areas within the site. Stratigraphic levels were then examined for their faunal associations so that individual species could be correlated with temporal periods. Diagnostic artifact distributions were utilized to establish dates for levels. In this manner, any temporal changes in the hotel's culinary practices could be discerned, with a particular emphasis on trends in the use of domestic versus wild animal species. Specific data regarding faunal species counts and statistical analyses are presented in Chapter 8.

Two primary observations are noted:

(1) The wild animal remains revealed some interesting patterns. Fish, bison, and Greater Prairie Chicken constituted the major groups recovered from earlier contexts. Through time, however, rabbits became the dominant species. This trend may reflect over-exploitation of larger game animals and birds. Wild and domestic species apparently played equally important roles. During the early years of the Tremont House, wild game was supplemented by a variety of domestic animals. Pig was the principal domestic species during the earlier period, while cattle became predominant during the later years of hotel operation. This shift is likely

attributable to the cattle drives from Texas after the Civil War, and to the regional development of the cattle industry on Colorado's eastern ranges.

2) Sheep were not present in significant numbers. This is a unique phenomenon, as sheep were available from New Mexico in the early 1860s, and from southeastern Colorado by the mid-1860s. This trend may reflect a matter of preference by the Tremont House clientele rather than product availability.

Summary and Conclusions

The archaeological record at the Tremont House has outlined a series of patterns that have considerable implications for continued historical and archaeological research in the region. Whereas the written historical record necessarily imparts an image of the social, political, economic, and religious values of a time and place filtered through the perspective of the predominant worldview, the archaeological record allows contact beyond mere images and perceptions to examine the actual locations where documented events transpired and participants interacted. Early Denverites brought with them behavior patterns learned elsewhere--how to construct houses, prepare food, conduct business, and dump refuse (among other things)--which were adapted to a frontier environment. The results of these behaviors, and their subsequent evolution into a unique cultural system, can be explored in archaeological contexts.

The archaeological research undertaken at the Tremont House serves to illuminate a variety of features within the cultural microcosm of the South Platte River Basin. Perhaps the most important changes that occurred in this continuum were related to the transportation system. Given the isolation of the High Plains, the lack of local industry, and the high cost of goods shipped by wagon from points east, early urbanites were compelled to purchase expensive imported manufactured goods. Whereas rural areas often did not have access to many of these imported items (as reflected in archaeological contexts from these types of sites [Carrillo et al. 1991]), the Tremont House archaeological record confirms the extensive exploitation of goods manufactured on the Eastern seaboard and in Europe. This is an excellent indication that the animal-driven transportation system, albeit more expensive to operate, functioned to provide Denver with an array of imported goods regardless of cost. Subsequent to the 1870s of course, when rail transportation to Denver became well established, an even higher percentage of imported items began to enter the system, in addition to goods and services developed by a burgeoning regional industrial base. This evidence indicates the transition from the initial pioneer urban structure to the corporate industrial structure, with all its attendant functions (i.e., railroad building, communication advances). These historical changes made tremendous impacts upon the evolution of Denver, and these modifications are reflected in the archaeological remains of the Tremont House.

This manuscript attempts to incorporate relevant contemporary theoretical and methodological issues in American archaeology, and in particular historical archaeology, that are presently being discussed and/or formulated (e.g., Binford 1972, 1987; Hodder 1991; Gibbon 1989; Renfrew and Bahn 1991; Tilley 1990). Far from addressing only empirical data about the past, of course, material culture also possesses information about cognitive social processes (i.e. beliefs and symbolic concepts, ideology) (Deetz 1977; Glassie 1968; Hodder 1991; Gibbon 1989; Tilley 1990). By using a multivariate approach incorporating archival and archaeological data, a "contextual" archaeological framework is produced which attempts to unify all information through the archaeologist, who acts as mediator and interpreter. This approach thus allows research that extends beyond the contemporary empirical limits placed by processual historians and archaeologists. Researching non-material aspects allows themes related to social structure, for example, to be more thoroughly studied and understood. It is not necessary to rely strictly on quantitative data to accomplish this, as qualitative methods may in fact be more conducive to illuminating the archaeological data. Complemented by written records, historical archaeology constitutes a unique scientific hybrid with a broad scope and appeal.

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APPENDIX A

HISTORICAL DATA FOR MAJOR DENVER FLOODS

TABLE A-1

HISTORICAL ACCOUNTS OF MAJOR DENVER FLOODS

Date	Remarks
Spring 1844	Jim Bridger stated that the flood extended "from the bluff on Cherry Creek to the extreme bluff on the South Platte River". Damage severity unknown.
May 20, 1864	Major water - one foot deep at 15th and Blake. Estimated at over two feet deep at 13th and Larimer, using waterline on building in photo. South Platte River also flooded. Waves 15 - 20 feet high reported in Cherry Creek. Deposits of sand and gravel were left in places. Lots of structural damage suffered by buildings constructed in and near Cherry Creek channel. Timber bridges at Larimer, Blake, and Holladay were washed out and debris formed a dam, which caused flooding on east and west sides of the stream. A total of 19 deaths reported.
July 20, 1875	Water estimated to be half as high as flood of 1864. Water rose gradually over a four day period. No failed bridges or deaths reported.
May 22, 1876	Both Cherry Creek and the South Platte were reported to have water almost as high as the flood of 1864, but less damage. Debris from failed bridges upstream accumulated against the Larimer St. bridge forming a dam, with little overflow below Larimer. The flood might have been worse than the flood of 1864 if snow and cold had not prevented rapid runoff of very heavy precipitation. No deaths reported.
May 22, 1878	Considered by many residents to be as severe as flood of 1864, but damage was not as great due to the channel being wider, deeper, and clearer. Also, there was no flooding on the South Platte to impede Cherry Creek. Some piling and planking was installed along the channel (as shown in a photo of Larimer crossing). All bridges washed out within a few minutes, apparently all were still made of timber. Rocky Mountain News stated that no water would have been out of banks above the Rio Grande crossing except for the bridges going out and forming a dam. Two deaths reported.
July 20, 1885	No historical account available-damage minor.
July 26, 1885	Considered to be the third largest flood up to this time. Onset is described as a wave of water with heavy debris from bridges and buildings. City bridges were now steel and withstood the floodwaters, but most were overtopped. All railroad bridges were washed out. Maximum flow was estimated at 20,000 cubic feet per second (CFS) at Curtis bridge. No deaths reported.
August 17, 1888	No historical account available-damage minor.
August 4, 1897	No historical account available-damage minor.
August 6, 1897	No historical account available-damage minor.
April 29, 1900	No historical account available-damage minor.
August 11, 1911	No historical account available-damage minor.
June 9, 1912	No historical account available-damage minor.

TABLE A-1

HISTORICAL ACCOUNTS OF MAJOR DENVER FLOODS (continued)

Date	Remarks
July 14, 1912	Main flood followed the onset of a storm in the Denver area by five hours and resulted from heavy precipitation in the Franktown-Parker area. Cherry Creek had started to recede and probably had overflowed in the Denver area when the main flood arrived. Gaging station on the South Platte 1000 feet below Cherry Creek showed a 2.5 foot rise in an hour, followed by an oscillation of 0.5 feet, and then a rapid increase of 2.5 feet resulting from the failure of the timber bridge at York street. The maximum depth at the crest of the flood was 11 feet at the Bannock street bridge. A peak discharge of 25,000 CFS was indicated at Goldsmith Gulch, but thought to be too high. Maximum discharge in the creek was estimated at 11,000 CFS. The channel was walled from Downing to Blake but not below. Wall construction was in progress from Lawrence to Blake at the time. Overflowing of the banks in the walled portion above Downing was credited with producing "more sand and drift than would otherwise have been the case". Three timber bridges between Wazee and the mouth of the creek caught debris and backed up water but did not go out. Debris included bridge timbers, buildings, paving from streets and driveways, trees, etc. Damage was estimated at $250,000 TO $500,000. Two deaths reported.
July 22, 1922	Did not overtop walls-no damage reported.
August 3, 1933	Largest Cherry Creek flood on record and last to flood Denver. Flood resulted from failure of Castlewood Dam near Franktown. Water level at Denver tramway car house was seven inches higher than the July 1912 flood. Flood was described as an eight foot wall of water. Estimated discharge near South Platte River was 16,500 CFS. Damage was estimated at around $800,000. No deaths reported.

APPENDIX B

TREMONT HOUSE FAUNAL REMAINS

TABLE B-1

TREMONT HOUSE COMPREHENSIVE FAUNAL LIST

Class Pisces - Fish
- cf *Salmo* - Trout
- cf *Esox* - Pike

Indeterminate Fish

Class Aves - Birds

Order Anseriforms
- Family Anatidae - Ducks, Geese, Swans
  - *Branta canadensis* - Canada Goose
  - Indeterminate Goose
  - cf *Aythya valisineria* - Canvasback
  - Indeterminate Duck

Order Galliformes
- Family Tetraonidae - Grouse, Ptarmigan
  - *Dendragapus obscurus* - Blue Grouse
  - *Bonasus umbellus* - Ruffed Grouse
  - *Tympanuchus cupido* - Greater Prairie Chicken
  - *Centrocercus urophasianus* - Sage Grouse
- Family Phasianidae - Quail, Pheasants
  - *Colinus virginianus* - Bobwhite
  - *Phasianus colchicus* - Ring-necked Pheasant
  - *Gallus gallus* - Chicken
- Family Meleagridae - Turkey
  - *Meleagris gallopavo* - Turkey

Order Charadriiformes
- Family Scolopacidae - Snipe, Sandpipers
  - cf *Capella gallinago* - Common Snipe

Order Columbiiformes
- Family Columbidae - Pigeons, Doves
  - cf *Columba livia* - Rock dove, Domestic Pigeon

Order Passeriformes - Perching Birds
- Indeterminate Passeriform

Indeterminate Bird

Class Mammalia - Mammals

Order Lagomorpha
- Family Leporidae - Hares, Rabbits
  - *Sylvilagus* sp. - Cottontail
  - *Lepus* sp. - Jackrabbit
  - Leporid - Cottontail/Jackrabbit

Order Rodentia
- Family Sciuridae - Squirrels
  - *Cynomys ludovicianus* - Black-tailed Prairie Dog
- Family Muridae - Old World Rats and Mice
  - *Rattus norvegicus* - Norway Rat
- Indeterminate Rodent

Order Carnivora
- Family Canidae - Dogs, Wolves, Foxes
  - *Canis familiaris* - Dog
  - *Canis latrans* - Coyote
- Family Ursidae - Bears
  - cf *Ursus americanus* - Black Bear
- Family Felidae - Cats
  - *Felis cattus* - Domestic Cat

Order Artiodactyla
- Family Suidae - Pigs
  - *Sus scrofa* - Pig
- Family Cervidae - Deer, Wapiti
  - *Odocoileus* sp. - Deer
- Family Antilocapridae - Pronghorn
  - *Antilocapra americana* - Pronghorn
- Family Bovidae - Cattle, Sheep, Goats
  - *Ovis aries* - Domestic Sheep
  - *Bos taurus* - Domestic Cattle
  - *Bison bison* - Bison
- Indeterminate Artiodactyl

TABLE B-2

TREMONT HOUSE FAUNA BY LEVEL AND FEATURE

Species	Levels/Features													
	1	2	3	4	5	6	7	8	9	TF	F21	NWB	F1B	F11
Sylvilagus sp. * +		X	X	X		X								
Lepus sp. * +	X	X	X	X	X		X							
Leporid * +	X	X		X		X								
Cynomys ludovicianus *			X	X										
Rattus norvegicus	X	X	X	X	X	X				X				
Rodent				X										
Canis familiaris			X	X			X			X				
Canis latrans *										X				
cf *Ursus americanus*			X											
Felis cattus				X	X									
Sus scrofa +		X	X	X	X	X	X	X		X	X	X		
Odocoileus sp. * +	X		X	X							X			
Antilocapra americana * +		X	X		X									
Ovis aries +	X	X	X	X	X	X				X		X		
Bos taurus +	X	X	X	X	X	X				X	X	X		X
Bison bison * +			X	X	X	X	X	X		X				
Artiodactyl +	X	X	X	X	X	X	X	X	X	X	X		X	X
Gallus gallus +	X	X	X	X	X	X				X	X			
Meleagris gallopavo +	X	X	X	X	X	X	X						X	
Dendragapus obscurus * +	X		X	X		X		X						
Colinus virginianus * +	X		X											
Tympanuchus cupido * +		X	X	X	X	X								X
Aythya valisineria * +			X											
Branta canadensis * +			X	X			X							
Centrocercus urophasianus * +				X										
Phasianus colchicus * +				X										

TABLE B-2

TREMONT HOUSE FAUNA BY LEVEL AND FEATURE
(continued)

Species	Levels/Features													
	1	2	3	4	5	6	7	8	9	TF	F21	NWB	F1B	F11
Bonasus umbellus * +				X										
Duck * +			X											
Goose				X										
Capella gallinago				X										
Columba livia				X										
Bird	X	X	X	X	X	X	X			X	X			X
Fish * +	X	X	X	X		X	X						X	

* = wild species
\+ = food species
TF = trench fill
F21 = vicinity of Feature 21
NWB = North wall balk
F1B = Feature 1 bottom
F11 = Feature 11

TABLE B-3

TREMONT HOUSE FAUNAL SUMMARY

Species	Number of Specimens	Minimum Number of Individuals (MNI)
Fish	79	-
Branta canadensis	6	2
Goose	1	1
Aythya valisineria	1	1
Duck	1	1
Tympanuchus cupido	24	3
Bonasus umbellus	1	1
Dendragapus obscurus	6	2
Centrocercus urophasianus	2	1
Gallus gallus	81	9
Colinus virginianus	4	1
Phasianus colchicus	1	1
Meleagris gallopavo	71	8
Capella gallinago	1	1
Columba livia	1	1
Bird	307	-
Sylvilagus sp.	8	1
Lepus sp.	62	5
Leporid	55	-
Cynomys ludovicianus	2	1
Rattus norvegicus	154	58
Rodent	4	-
Canis familiaris	3	2
Canis latrans	1	1
Ursus americanus	1	1
Felis cattus	30	2
Sus scrofa	172	18
Odocoileus sp.	19	3
Antilocapra americana	9	2
Ovis aries	58	11
Bos taurus	206	22
Bison bison	65	9
Artiodactyl	2344	-

TABLE B-4

MAMMAL FOOD SPECIES

Species	Adult	Juvenile
Sylvilagus	1	-
Lepus	16	3
Sus scrofa	42	64
Odocoileus	6	3
Antilocapra	3	5
Ovis aries	15	17
Bos taurus	26	32
Bison bison	16	13

TABLE B-5

SKELETAL ELEMENTS USED FOR FOOD

Skeletal Element	Beef	Pork	Lamb	Buffalo	Deer	Pronghorn
Femur	31	17	2	8	3	1
Tibia	13	7	6	-	-	2
Innominate	28	3	6	4	1	-
Ribs	28	28	21	-	16	-
Arm*	14	15	7	6	3	-
Scapula	10	2	4	2	2	-
Vertebrae (all)	43	5	6	9	1	-
Long bone	15	2	1	-	-	-
Feet	6	73	6	12	1	5

*** Humerus, Radius, and Ulna**

TABLE B-6

WILD BIRDS USED FOR FOOD

Branta canadensis - Canada Goose
cf *Aythya valisineria* - Canvasback
Indeterminate Duck
Dendagapus obscurus - Blue Grouse
Bonasus umbellus - Ruffed Grouse
Tympanuchus cupido - Greater Prairie Chicken
Centrocercus urophasianus - Sage Grouse
Colinus virginianus - Bobwhite
cf *Capella gallinago* - Common Snipe
cf *Columba livia* - Rock Dove/Pigeon
Meleagris gallopavo - Wild Turkey

APPENDIX C

TREMONT HOUSE MACROBOTANICAL REMAINS

TABLE C-1

MACROBOTANICAL SAMPLE PROVENIENCES

Sample Number	Horizontal Location	Vertical Location	Feature	Comment
1	109.36-109.48N/ 102.00-102.10E	1581.12-1581.09	1	from bottom of drain
2	119.82-120.00N/ 100.50-102.10E	1581.07-1580.96	20	feature fill
3	107N/106E	1581.61-1581.44	21	light gray to dark gray pebbly silty sand
4	111N/104E	1581.37-1581.26	N/A	dark gray fill
5A	111N/104E	1581.26-1581.16	N/A	upper portion of Level 3
5B	111N/104E	1581.09-1581.00	N/A	lower portion of Level 3, tan gray coarse seed
6A	111N/104E	1580.75-1580.65	N/A	upper portion of Level 6-no rust
6B	111N/104E	1580.60-1580.50	N/A	lower portion of Level 6 from rust area
7	111N/104E	1580.05-1579.95	N/A	
8	111N/104E	1579.55-1579.45	N/A	
9	111N/104E	1579.39-1579.35	N/A	
10	102N/113E	1581.58-1581.49	N/A	column sample
11	102N/113E	1581.49-1581.45	N/A	column sample
12	102N/113E	1581.45-1581.34	N/A	column sample
13	102N/113E	1581.34-1581.18	N/A	column sample
14	102N/113E	1581.18-1581.16	N/A	column sample

TABLE C-2

FLOTATION SAMPLE SIZE AND CHARCOAL AMOUNTS

Sample Number	Original Volume	Light Fraction Volume*	Heavy Fraction Volume*	Light Fraction Charcoal**	Heavy Fraction Charcoal**
1	1.6	.015	.220	T	0
2	1.7	.030	.120	L	0
3	1.5	.013	.370	H	T
4	1.5	.012	.410	L	0
5A	1.5	.008	.370	T	0
5B	1.6	.001	.370	H	0
6A	1.4	.040	.240	L	0
6B	1.5	.020	.400	T	0
7	1.5	.004	.180	L	0
8	1.6	.010	.560	M	T
9	1.8	.040	.300	L	T
10	1.0	.020	.290	L	T
11	1.0	.004	.220	L	0
12	1.1	.001	.630	T	T
13	1.2	.002	.160	L	0
14	1.0	.012	.040	M	0
Total	22.5	.232	4.88		

* **Volume Amounts in Liters**

** **Charcoal Amounts:**

T = **trace (less than 1% charcoal by volume)**
L = **light (1-10%)**
M = **moderate (11-50%)**
H = **heavy (51-90%)**
A = **abundant (over 91%)**