

Excavation at the Haynie Site (5MT1905) by the Crow Canyon Archaeological Center Annual Report 2020

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Introduction

This report describes excavation conducted by the Crow Canyon Archaeological Center (Crow Canyon) at the Haynie site (5MT1905) during 2020. The Haynie site (5MT1905) is an ancestral Pueblo community center located on a 5-acre preserve owned by The Archaeological Conservancy (TAC). The La Plata Open Space Conservancy (LPOSC) manages the conservation easement. During 2020 Crow Canyon excavated under a permit (#77170) from the State of Colorado Office of Archaeology and Historic Preservation.

Crow Canyon's work at the Haynie site is part of the Northern Chaco Outliers Project (NCOP), a multi-year research project initiated in 2016 that focuses on the Lakeview community in southwestern Colorado (Figure 1). The Lakeview community consists of four great houses, a great kiva, numerous residential "small sites," and landscape features. Multi-great house communities are an important but poorly understood facet of the Chaco and post-Chaco periods in the northern San Juan region. In addition to the Lakeview community, archaeologists identify northern multi-great house communities at Aztec Ruins (Brown and Paddock 2011; Lekson 2015; Turner 2015, 2019; Van Dyke 2007), Mitchell Springs (Dove 2014; Smith 2009), and Lowry Pueblo (Kendrick and Judge 2000). The NCOP seeks to understand the origins, internal social dynamics, and external connections of the Lakeview community ca. A.D. 850–1225 (Ryan 2016). More broadly, this research examines how aggregated villages gave way to dispersed communities focused on great houses, especially within the context of the larger Chaco and post-Chaco world.

There are four great houses within the Lakeview community (Figure 2)—two at the Haynie site (5MT1905), the Ida Jean site (5MT4126), and Wallace Ruin (5MT6970). Crow Canyon has worked at the Haynie site since 2016. The Ida Jean site includes a great kiva and was investigated in the 1970s (Brisbin and Brisbin 1973). The Wallace Ruin is owned by Bruce and Cynthia Bradley, who have excavated at the site for over 50 years (Bradley 1988, 1992, 1993, 2010, 2015; Bradley and Bradley 2019, 2020). In addition to work at the Haynie site, Crow Canyon laboratory staff, volunteers, and participants are processing and analyzing artifacts from the Wallace Ruin and Ida Jean site.

Like most organizations, the 2020–2021 COVID-19 pandemic significantly disrupted Crow Canyon's public-oriented fieldwork and educational programming. Normally, the excavation season at the Haynie site runs from April through October and involves dozens of school groups, high school and college field schools, Earthwatch volunteers, and adult participants. This year, we had no participants from any of those sectors. Crow Canyon staff conducted all the fieldwork described in this report.

Appendix A describes our research and outreach during the 2020 season. Appendix B is our curation agreement. Appendix C is a list of personnel who contributed to the NCOP during 2020.

The Haynie Site

Crow Canyon began fieldwork at the Haynie site in 2016. Current archaeological knowledge of the site is based on four seasons of test excavations, artifact and sample analysis, architectural documentation, and remote sensing (Charles 2017; Diederichs 2018; Fadem et al. 2019; [Fladd et al. 2018](#); Shackley 2017, 2018; [Simon et al. 2017](#); [Throgmorton et al. 2019](#); Webster 2019). The

data from the last four years is augmented by previous research at the Haynie site by Crow Canyon staff and other researchers from 2008 to 2015 (Brisbin n.d., Glowacki and Ortman 2012; Ryan 2013). This information is supplemented by notes and records stemming from non-professional excavation at the site between the 1930s and the 1990s (Chappell Note Book, Vols 1 and 2; Crosmer 2015, Haynie n.d.).

The Haynie site is a deeply stratified multi-component ancestral Pueblo community center that was inhabited for at least 400 years between A.D. 800 and 1200 (Figure 3). While prior survey demonstrates that there are Basketmaker III (A.D. 500–760) residential sites at the edges of the Lakeview community, work at Haynie has yet to identify structures or features from that period. Pottery sherds dating to the Basketmaker III period have been found at Haynie, but many of these sherds could also be attributed to the early Pueblo I period.

Throughout the Basketmaker III period, ancestral Pueblo people lived in dispersed communities that covered several square miles. Most settlements contained only one or two households, but some contained public architecture and multiple residences—like the Dillard site. You can read more about Crow Canyon’s work on Basketmaker III communities here ([Diederichs 2020](#)). During the Pueblo I period (A.D. 760–890), settlement patterns changed dramatically, and ancestral Pueblo people constructed dense, aggregated villages with 60–200+ inhabitants. Crow Canyon fieldwork has identified Pueblo I sherds across the entire Haynie site, and our excavations at the west end of the site (Figure 3—Block 100, Area A) have identified portions of a Pueblo I roomblock. We do not know the full scale of the Pueblo I component at the Haynie site, but we suspect it was similar to large villages documented in the Dolores River valley, which is located about 8–16 kilometers to the north. Additional nearby Pueblo I villages include Mitchell Springs (Dove 2014; Smith 2009) and several sites on Mesa Verde. You can read more about an early Crow Canyon project that excavated a Pueblo I roomblock here ([Lightfoot and Etzkorn 1993](#)).

The Mesa Verde region experienced a significant decline in population during the early Pueblo II period (A.D. 890–1030) (Wilshusen 2002). This depopulation event likely occurred as a result of political instability common within early villages, as well as a period of poor environmental conditions. Ancestral Pueblo people left many of the Pueblo I villages, but not all of them. Pottery and radiocarbon dates demonstrate that people inhabited the Haynie site throughout the early Pueblo II period ([Throgmorton et al. 2019](#)). We have identified an early Pueblo II roomblock and pitstructure at the northwest edge of the site (Figure 3—Block 100, Areas C1-C3) and midden deposits from that period have been found in several places (Figure 3—Block 100, Area C4, Area D). Notes and records from previous, non-professional work at the Haynie site describe numerous whole ceramic vessels that appear to be early Pueblo II in age (Haynie n.d., Chappell Note Book Vols 1, 2). We have not yet determined whether the Haynie site was reinhabited ca. A.D. 930–940 after a short hiatus (a pattern observed at several sites in the area), or if people lived continually at the site throughout the Pueblo I-Pueblo II transition (a much less common pattern).

During the middle Pueblo II period (A.D. 1030–1100), population rebounded in the central Mesa Verde region and great houses began to serve as community centers. There is evidence for at least one early great house in the Lakeview community. The core of the Wallace Ruin dates to the first half of the eleventh century and was probably a two-story structure with a distinct, well-fitted tabular masonry style often associated with early great houses (Bradley and Bradley 2020).

Photos, notes, and other evidence from the excavation of the Haynie west great house in the 1980s show several interior rooms with a similar masonry style (Haynie n.d.) and provide evidence that there may have been an early great house at Haynie, too. Middle Pueblo II ceramics (i.e. Mancos Black-on-white) are very common at the Haynie site, but we have identified few definitively middle-Pueblo II structures. The extent of non-great house residential architecture at the Haynie site during the middle Pueblo II period is an important question that requires further study, and it remains to be seen how much influence Chaco Canyon had on the earliest phases of great house construction in the Lakeview community.

During the late Pueblo II period (A.D. 1100–1140), Chaco-style great houses appeared across much of the northern San Juan region, first in the Middle San Juan at Salmon Pueblo and Aztec (Reed and Brown, eds 2018; Turner 2019), and then more widely throughout southwestern Colorado and southeastern Utah. You can read about Crow Canyon work at other northern Chaco outliers here ([Ryan 2015a](#)) and here ([Ryan 2015b](#)). Most of the standing great house architecture at the Haynie site dates to the late Pueblo II period, as does the Ida Jean site and the later construction phases at Wallace Ruin. Crow Canyon has investigated the remnant foundations of the Haynie west great house (Figure 3—Area C4, Area D), and fieldwork continues to build connections between the maps and notes from non-professional work in the 1980s–1990s and the archaeological remains visible today. Crow Canyon is tacking between fieldwork, lab work, and examination of prior excavation records to address questions in the research design (Ryan 2016), particularly addressing the relationship between different great houses within the Lakeview community.

The early Pueblo III period (A.D. 1140–1225) began with a significant drought. Following a poorly understood period of reorganization, people throughout the region people coalesced into larger, denser settlements. You can read about Crow Canyon work at a Late Pueblo II-Pueblo III settlement here ([Kuckelman 2003](#)). Both Wallace Ruin and Ida Jean show evidence of continued use into the early A.D. 1200s. We have not yet identified much evidence of an early Pueblo III occupation at Block 100 of the Haynie site aside from pottery sherds indicative of that period (McElmo and Mesa Verde Black-on-white). Based on surface evidence, Pueblo III period deposits may be more prevalent near the Haynie east great house, although notes and maps from the 1980s (Haynie n.d.) suggest there may have been a small Pueblo III component to the west great house, as well.

Environmental Setting

The NCOP study area includes an environment defined by the surrounding drainages and by current agricultural use of the land. The Haynie site is located at 1,911 m (6,270 ft) and sits at the toe of a ridge to the north of, and just above, a shallow, broad valley within Simon Draw. The head of Simon Draw is located about 6 km north of the Haynie site. Simon Draw empties into McElmo Creek 4 km southwest of the Haynie site.

The soils of the valley bottom are primarily Ramper and Mickett clay loam, while the ridge tops include soils of the Gladel-Pulpit complex. Suitability for agriculture appears to depend greatly on very local slope, aspect, and drainage conditions, but in general these soils are among those with the greatest agricultural potential in the entire region (Van West 1994:162–167). Today the valley bottom is plowed and irrigated and produces primarily alfalfa/grass hay. Small,

undisturbed areas are present in the valley, and these are covered in sagebrush, lesser amounts of greasewood and saltbush, and some riparian vegetation that includes cottonwood, willow, cattails, and sedges. The Chaco-style great houses and the midden deposits at the Haynie site are covered mostly with greasewood, sagebrush, saltbush, and grasses. Sandstone ridges flank and rise above the valley floor, and these ridges support pinyon-juniper woodland.

Excavation, Documentation, and Recording System

To assist in reading this report, this section describes Crow Canyon's system for excavation, documentation, and recording. In 2009, Dr. Susan Ryan and other Crow Canyon archaeologists established a permanent, primary site datum. Based on this datum, they used a total station to lay out a grid across the entire Haynie site. The "0,0" origin point is located southwest of the property's southwest corner, thus all grid coordinates have a "northing" and "easting" number (e.g., 400N 300E). In 2016, we used a high-resolution TopCon Hifer II High Resolution GNSS Geodetic Receiver to obtain more precise coordinates for the primary datum and backsite. The Haynie site is divided into architectural blocks—the west great house and surrounding remains are referred to as "Architectural Block 100."

Most of Crow Canyon's excavations at the Haynie site occur within excavation units (EU) of defined size (e.g., 2-x-4-m, 1-x-1-m) oriented to cardinal directions. We refer to excavation units by the size of the unit and the coordinate of the southwest corner (e.g., "3-x-2-m unit, 459N 376E"). Field archaeologists choose unit size and orientation based on the archaeological remains under investigation. Occasionally, the field crew conducted excavations that were less concretely defined than grid units—these are referred to as "segments" and assigned a number (e.g., Segment 5). We typically use segments to expose partially buried walls or to extend a grid unit to capture the corner of a room or structure.

During Haynie site excavations, we often place several grid units and/or segments adjacent to one another. Contiguous grid units and segments are generally used for exploring structural remains. Crow Canyon also excavates random 1-x-1-m sample units in suspected midden deposits. Finally, we often use smaller 1-x-2-m or 2-x-2-m test units to target specific archaeological features identified through remote sensing, pedestrian survey, or archival work (for example, units of this size were used to seek remains of mechanically-disturbed areas of the west great house). We refer to clusters of excavation units as "excavation areas" and we assign each excavation area a letter (e.g., Area A, Area B).

Within excavation units, we excavate strata by natural layers, subdividing strata into 10-cm levels. Archaeological contexts that represent distinct natural and cultural deposits or construction events are designated a "study unit" or "SU." The study unit is the key unit of analysis within the Crow Canyon documentation and recording system. There are three kinds of study units: Arbitrary (ARB), Structure (STR), and Nonstructure (NST). Arbitrary units tend to be deposits with edges that are either difficult to define or are a result of natural processes, (e.g., fallen wall debris, or wind and water-laid post-occupational sediments). Structures include both surface structures and subterranean pit structures and kivas. We give each room within a multi-room surface habitation an individual structure number. Nonstructures typically include "constructed" deposits that are not structures, such as middens and use surfaces. We give each

newly defined study unit one of these three designations depending on its origin and assign it a number.

The following descriptions of Crow Canyon's 2020 excavation efforts are organized by excavation area and study unit. Each excavation area includes several study units. Some study units are found within multiple excavation areas or excavation units. For example, Arbitrary 179 is mechanically redeposited architectural and cultural material from the west great house that a previous landowner used as fill to create a level yard west of the 1980s-era manufactured home. It is the upper stratum of several excavation units in Architectural Block 100.

Excavations at the Haynie Site

Crow Canyon worked in a limited number of units this season because of the lack of school groups, field schools, Earthwatch volunteers and archaeology research participants. All excavations occurred in Architectural Block 100. We chose to focus on Areas A and B, leaving Areas C1, C2, and C4 (the location of most excavation during the 2019 season) covered for the entire 2020 season. Area A includes a large, 4-x-8-m excavation unit, several segments, and a series of units colloquially referred to as "the Apple Tree Units." Figure 4 shows the location of these units and segments, and Table 1 provides a list of units Crow Canyon worked in during 2020. Table 2 provides a list of study units used during the 2020 field season, as well as short descriptions of those study units.

Sequence of Excavation within Area A

In 2017, Crow Canyon began work on a group of excavation units in Area A west of the modern house ([Simon et al. 2017](#)). Remote sensing identified anomalies thought to be surface rooms in that area (Charles 2017). Excavation revealed several superimposed rooms, including Structure 186 and Structure 193 (Figure 5), and work on these two structures continued through 2017-2018 ([Simon et al. 2017](#); [Fladd et al. 2018](#)). An additional cluster of anomalies to the north of these two structures led Crow Canyon to begin work on a 4-x-8-m excavation unit in 2018.

During the 2019 field season, work continued on 4-x-8-m unit 424N 378E and we discovered Structure 1047 (Figure 5) ([Throgmorton et al. 2019](#)). We created a 2-x-1-m unit to clarify the relationship between the south end of Structure 1047 and deposits west of Structures 186 and 193 (Figure 4). The only additional work conducted on Structure 186 and Structure 193 during 2019 was the excavation of Segment 10, a shallow trench that followed the south wall of Structure 186 and sought to define the boundaries of the room (Figure 4).

In 2020, we recommenced work within all of Area A with three primary objectives: 1) understand the stratigraphic relationship between Structures 186, 193 and 1047, and 2) determine the orientation of the roomblock that Structures 186 and 193 were located within, and 3) complete documentation on structures and features within open excavation units in Area A. The 2019 excavations had revealed intact cultural deposits at the south end of Structure 186, so we extended Segment 10 to include those room fill deposits (Figure 4). Structure 186 was a surface room superimposed atop Structure 193 (Figure 5). Following the complete documentation of the remaining floor surfaces and masonry in Structure 186, we removed segments of the wall to facilitate excavation of remaining deposits within Structure 193. We also recommenced work

north of Structure 193, where a wall stub suggested that architecture continued northward. This work identified Structure 1063—a surface room contiguous with Structure 193—and Structure 1049, a poorly preserved surface room north of and connected to Structure 1063 (Figure 5).

The orientation and extent of the roomblock containing Structures 186, 193, 1049, and 1063 was still unclear, particularly as Structure 1047 was located northwest of these surface structures and one of the walls in Structure 1063 was abutting the masonry lining of Structure 1047. Having gained a thorough understanding of the extent of redeposited fill (Arbitrary 179) from the west great house through three years of testing, we chose to use a backhoe to strip back this mixed and disturbed overburden deposit from Area A. Backhoe stripping occurred in two segments (Segment 21 and 23).

Segment 21 was placed at the south and west edges of the Area A grid units (Figure 4). We encountered the PVC piping and gravel base layer of a post-1970s septic system, but successfully reached intact ancient deposits (Arbitrary 176) under about one meter of overburden throughout much of the segment. Following backhoe stripping, we hand-excavated a third segment (Segment 22; Figure 4) to expose a suspected wall alignment that was partially covered by Arbitrary 176 (colluvial post-occupational deposits). This hand trench identified the west walls of two additional surface rooms, Structures 1066 and 1067 (Figure 5). Backhoe stripping obviated the need for 2-x-1-m unit 422N 381E, which was terminated; after backhoe stripping revealed the ventilator shaft for Structure 1047 a new grid unit (2-x-2-m unit 422N 380E) was placed in roughly the same location as the old 2-x-1-m unit, albeit in a stratigraphically lower position below the redeposited overburden (Figure 4).

Segment 23 stripped overburden from the northern and northeastern edge of Area A (Figure 4). We determined that overburden was much shallower here, and quickly encountered masonry wall alignments 10–20cm below the surface (Figure 5). These walls must have been exposed at some point in the recent past, for the 1970s– to 1990s–era sprinkler lines were laid alongside and below the tops of two wall segments. The wall alignments delineate a masonry roomblock with at least two or three surface rooms (Figure 5; these rooms do not yet have structure numbers). This roomblock is directly north of Structure 1047 and is presumably related to that pitstructure. Segment 23 also identified a long, north-south trending wall segment east of Structures 1047, 1049, and 1063 (Figure 5; this wall does not yet have a structure number). It is not yet clear what this wall segment articulates with, but it appears to be situated stratigraphic above Structures 1049 and 1063.

Backhoe stripping greatly assisted in determining the layout and relationship of the structures, features, and surfaces within Area A. Structures 186, 193, 1049, 1063, 1066, and 1067 appear to be back rooms within a single large surface structure (Figure 5, see also Figure 16). Structure 1047 is a later pitstructure that partially cuts through Structures 1049 and 1063 and is associated with several masonry surface rooms to the north identified in Segment 23 (Figure 5, see also Figure 16). Structure 1047 has an associated ventilator shaft to the south that is surrounded by a prepared extramural surface (Nonstructure 1072) that abuts the walls of Structure 193 and 1063.

Having clarified the orientation and stratigraphic relationships of the structures, we turned our attention to completing excavation within Structures 193 and 1063, and we began excavating Structure 1047, approximately two-thirds of which were exposed in 4-x-8-m unit 424N 378E (Figure 5). We started with the western half of the exposed portion of the pitstructure (Segment 14), hand excavating a test trench (Segment 13) to identify changes in stratigraphy (Figure 4).

We placed Segment 25 to determine the location of the east wall of Structure 1047, and thus its approximate shape, dimensions, and orientation (Figure 4). Excavation within Structure 193 revealed that it had been significantly remodeled during its use, and we designated the earliest floors and foundations of this surface room Structure 1073 (Figure 5).

Study Units within Area A

This section describes the study units investigated within Area A during the 2020 field season. No absolute or relative dates are available from laboratory analyses yet. Sherds observed during excavation suggest that the sequence described in this section occurred between approximately A.D. 800 and 1050, during the Pueblo I to early Pueblo II period. We describe the study units in approximate order of deposition (e.g., the presumed oldest deposits listed first and the most recent last) to facilitate discussion of super-positioning.

Nonstructure 1064

Nonstructure 1064 is a probable midden deposit identified in a test window within 4-x-2-m unit 420N 382E. It is beneath Arbitrary 1029 and also appears to pre-date Structure 1073, as a footer trench related to the construction of that room rests on or within Nonstructure 1064. Cultural deposits identified at the base of a posthole in Structure 1063 resemble Nonstructure 1064. These tentative observations suggest there may be an earlier midden lying beneath Structure 1063 and 1073; confirmation of this requires further investigation.

Structure 1073

Structure 1073 designates the earliest construction phase in a sequence that includes Structure 193 (Figure 5, see also Figure 16). It is a surface room with coursed masonry walls and evidence of two floor surfaces. The west and north walls of Structure 1073 consist of only a couple courses of stone—the walls of Structure 193 rest directly atop these stubs. The south wall of Structure 1073 was retained after the remodeling episode that created Structure 193. The east wall is partially visible in the profile of the excavation area. The eastern, upslope portion of Structure 1073 seems to be resting on sterile reddish soil, but caliche-rich fill was brought in to create the western portion of the room (possibly because of underlying Nonstructure 1064). The lowest floor surface of Structure 1073 has not yet been fully investigated, but the upper, second floor surface had six postholes, an upright stone near the east wall that may have served as a step for the entryway, and an intact floor assemblage that included a Moccasin Gray jar (Figure 6 and Figure 7). The postholes indicate the roof was supported on posts, not the walls. Structure 1073 is directly overlain by Structure 193, which used the wall stubs of Structure 1073 as footers and retained the same basic wall alignments and orientation.

Structure 1063

Structure 1063 designates an adobe-walled surface room with evidence of two floors north of and contiguous to Structure 1073 (Figure 5). Wall abutments indicate that Structure 1063 was

built after Structure 1073—the south wall of Structure 1063 is adobe that was placed directly against the existing exterior face of the north wall of Structure 1073. The walls of Structure 1063 are primarily adobe, with occasional upright slabs at the base. The east and west walls have large pieces of unshaped sandstone set in rough courses to form the core of the adobe wall. All extant walls show signs of thick, grey clay plastering which is well preserved to a height of 40cm in the northeast corner of the room. The initial floor of the structure was made of fine, compacted reddish sediment, and had three postholes with adobe collars indicating the roof was supported on posts (Figure 8). The presumed location of the fourth posthole was removed by construction of Structure 1047. There was a door in the north wall corresponding to this floor. A small burned patch was present in the center of the floor. The second floor was constructed on loose fill that covered the postholes indicating a change in roofing technique, and the door was plugged with posts and adobe during this phase of use (Figure 9). A poorly preserved, clay lined firepit was the only feature associated with the second floor surface. A layer of midden-like fill and burned roofing debris overlay the second floor surface. Structure 1063 was filled with wall fall corresponding to Arbitrary 1029, and the northwest corner of Structure 1063 was removed by the construction of Structure 1047.

Structure 1049

This is a surface room north of and contiguous to Structure 1063 (Figure 5). It has not yet been investigated, but faint adobe wall alignments can be discerned in both plan and profile, and the door in the north wall of Structure 1063 leads into Structure 1049. Most of Structure 1049 was removed by the construction of Structure 1047.

Structure 1066

This is a surface room located south of Structure 1073 (Figure 5). Its north wall is formed by the south wall of Structure 1073/193. The west wall of Structure 1066 was identified by Segment 22 (a hand-excavated trench). Only a couple courses of the west wall are evident but there is little indication of wall fall (Figure 10). The interior of this room has not been exposed. The area where Structure 1066 meets Structure 1067 is poorly preserved, but the rooms appear to be connected.

Structure 1067

This is a surface room located south of Structure 1066 (Figure 5). Like Structure 1066, only the lowest course or two of the wall is visible and there is little evidence for wall fall (Figure 10). The southwest/southern corner of Structure 1067 was visible within 2-x-1-m unit 413N 386E. The area where Structure 1066 and 1067 meet is poorly preserved, but the rooms appear to be connected. There is no evidence of a room south of Structure 1067.

Arbitrary 1029

Arbitrary 1029 is a stratum of wall fall characterized by large, unshaped and irregular blocks of sandstone, chunks of hard reddish-orange clay and chunks of hard grey-green clay. It constitutes the upper fill of Structure 1063 and appears to fill Structure 1049 as well. A thin layer of Arbitrary 1029 is present west of Structure 1073/193. This material is in the appropriate stratigraphic and horizontal position to be the wall fall from Structures 1049 and 1063—however, it is distinctly different in appearance from the lower walls of those structures, which are a purplish, charcoal-rich adobe. Perhaps the walls of Structure 1063 were significantly remodeled between the use of the first and second floors. Arbitrary 1029 is not evident within Structure 1073/193. In 4-x-8-m unit 424N 378E, Arbitrary 1029 was cut through by the construction of Structure 1047.

Structure 193

Structure 193 is the second construction phase in a sequence that includes Structure 1073 (Figure 5, see also Figure 16). It is a masonry surface room with evidence of two floor surfaces separated by a thin layer of sediment. The walls of Structure 193 originate on foundations formed by the stubs of the walls of Structure 1073 (Figure 11). It is possible that Structure 1073 had partially collapsed before site inhabitants excavated into the rubble, identified the old wall foundations, and erected Structure 193 in the same orientation and on the same wall alignments. Fill exterior to the west wall of Structure 193 (e.g. Arbitrary 176) is disturbed and in plan view appeared to be an ancient trench, consistent with excavating into the rubble of a collapsed room. Arbitrary 1029 was completely absent from within Structure 193, despite its proximity to the presumed origin of this material, possibly because it was removed to make room for Structure 193. The northern and western walls of Structure 193 are rough, unfaced, and uneven on their exterior, and the appearance of the stones suggests they may have been placed against existing fill (Figure 11). The upper floor of Structure 193 was poorly preserved and ephemeral. The first, lower floor of Structure 193 included a slab and adobe-line hearth that was flanked by two small-diameter (2–3 cm) pits of unknown function, and two postholes were to either side of a pit feature that may have been an entry way in the southeast corner of the room (Figure 12). The floor was not well preserved aside from in the southeast corner of the structure.

Structure 186

Structure 186 is stratigraphically above Structures 193/1073 and Structure 1066 (Figure 5, see also Figure 16). It is a masonry surface room with walls executed in a similar style to Structure 193 and evidence of two floor surfaces. The north wall was poorly preserved, but an alignment of unshaped stones extending north from the northwest corner of Structure 186 suggests there may have been another structure to the north. The room extends eastward out of the currently open excavation units. The floors were poorly preserved and best documented within Segment 10. The lower, earlier floor was placed on compacted fill (Figure 13), while the upper floor was an ephemeral re-use surface atop windblown sediments. Structure 186 does not follow the same wall alignments as Structure 193—the walls of Structure 186 were placed on fill within the earlier structure, and it is possible that portions of the east wall of Structure 193 were dismantled

to make space for Structure 186. The roof and wall fall of Structure 186 gave way directly to Arbitrary 179 (disturbed, redeposited material from the 1980s).

Structure 1047

Structure 1047 is a sub-rectangular masonry-lined pitstructure with ventilator shaft located to the south (Figure 5). Structure 1047 cut through Arbitrary 1029 and through Structures 1049 and 1063. The eastern, upslope side of Structure 1047 is placed against presumed sterile sediment. The masonry of Structure 1047 is rough and unshaped, utilizing copious amounts of clay mortar. In a few places, it appears that chunks of Arbitrary 1029 were used to construct the wall. Structure 1047 is filled by Arbitrary 176, a laminated colluvial deposit that contains cultural material (Figure 14). Only the post-occupational fill in the western portion of Structure 1047 has been excavated. Structure 1047 is likely associated with a masonry roomblock located directly north in Segment 23.

Arbitrary 1065

Arbitrary 1065 is a small deposit of collapsed structural debris with ill-defined boundaries. It lies atop Nonstructure 1072 and Arbitrary 1007, and it may be the remains of the superstructure of the Structure 1047 ventilator. It consists of a chunks of white caliche and pinkish clay within a charcoal-rich loamy matrix.

Nonstructure 1072

Nonstructure 1072 is an extramural surface created by the caliche deposit designated Arbitrary 1007. Nonstructure 1072 forms a rough semi-circle extending from the southern wall of Structure 1047. The surface is best preserved on its eastern side, where a series of small circular features filled with darker sediment may be the remains of postholes. Further investigation is necessary to determine if these features are natural (rodents) or cultural. Nonstructure 1072 has been badly affected by a large rodent burrow. Stones from the ventilator of Structure 1047 are visible poking through Nonstructure 1072, but the ventilator is not “on center” for either the south wall of the pitstructure or the prepared extramural surface. Excavation below Nonstructure 1072 may reveal evidence of more than one phase of ventilator construction.

Arbitrary 1007

Arbitrary 1007 is the thick caliche deposit that created Nonstructure 1072. This deposit forms a semi-circle extending from the south wall of Structure 1047. It is resting on top of other, as-of-yet poorly defined deposits of cultural origin, including melted plaster from the exterior of the east wall of Structure 1063, and a dark, ashy layer than may be part of Nonstructure 1064. Rodents have badly disturbed the central portion of Arbitrary 1007, especially in the vicinity of the ventilator shaft of Structure 1047.

Arbitrary 176

Arbitrary 176 lies beneath Arbitrary 179 and atop Structure 1047 and Arbitrary 1029. It rests against the west side of Structures 193 and 186 and covered the lowest remaining courses of the walls of Structures 1066 and 1067. Arbitrary 176 is best defined within Structure 1047 and future investigation may determine that the deposits near Structures 193, 1066, and 1067 should be given a separate designation. Arbitrary 176 is characterized by alternating layers of tan silty laminations and grey-brown clay sediments. It contains artifacts and occasional stones and blobs of adobe. It is approximately 1m thick within and above Structure 1047. We interpret Arbitrary 176 to be colluvial deposits washing into the open pit of Structure 1047 after it collapsed or was dismantled. The quantity of artifacts in Arbitrary 176 implies that a midden may have been some of the parent material for these deposits, or that Haynie site residents may have used the area surrounding Structures 1047, 1063, 193, 1066, and 1067 as a sheet midden after those structures were no longer inhabited.

Arbitrary 179

This Study Unit refers to deposits resulting from the mechanical excavation of the west great house in the 1970s–1980s. It lies immediately below the thin (1–5 cm) layer of topsoil and contains blocks of architectural sandstone, hard chunks of clay and unburned adobe, many artifacts, and modern/recent items such as broken glass, beverage cans, electrical wire, and miscellaneous metal objects. Stratigraphic evidence suggests that there were two episodes of heavy equipment work that created Arbitrary 179. In 4-x-8-m unit 424N 378, upper and lower Arbitrary 179 deposits are separated by a dark, crumbly, organic-rich lens about 2–3 cm thick that probably represents topsoil formation and the presence of an irrigated, grass-covered yard. Deposits below this lens contain less trash and rest unevenly atop Arbitrary 176. We think this first layer of redeposited debris represents leveling and smoothing of an uneven, pot-hunted surface between 1964–1978. The upper deposits contain more 1980s trash and are redeposited debris related to the destruction of the west great house in 1985. Arbitrary 179 is thin (maximum of 10–15 cm) at the northeastern edge of Segment 23 and east of 4-x-8-m, 424N 378E but becomes progressively deeper further west and southwest.

Study Units within Area B

Area B includes the majority of the 1-x-1-m probability squares that were intended to sample an area within potential midden deposits. A few probability units became incorporated into what is designated Area A after encountering architecture. Crow Canyon completed most of these probability squares between 2017 and 2019, with only three remaining uncompleted during the 2020 season. An additional judgmentally selected 1-x-2-m test unit is located to the southwest of the 1-x-1-m probability squares. During the 2020 field season, we completed the three remaining 1-x-1-m test units, but not the 1-x-2-m unit.

Arbitrary 182

Arbitrary 182 refers to the sandstone bedrock that underlies the natural and cultural deposits at the Haynie site. Bedrock is exposed in the southwest corner of the Archaeological Conservancy property. The redeposition of great house rubble (Arbitrary 179) has obscured the original topography of the site, so it is not clear how extensive bedrock exposures were in the past. We encountered bedrock at the base of all three 1-x-1-m test units completed during the 2020 season.

Arbitrary 1070

Above bedrock (Arbitrary 182) in Area B was a deposit of white caliche designated Arbitrary 1070.

Nonstructure 1069

Nonstructure 1069 is a compacted, dark greyish-brown silty sediment containing a moderate quantity of artifacts. It contains small caliche and charcoal flecks. Based on its consistency and composition, it is thought to be a midden deposit, though it is unlikely that this deposit is undisturbed. We encountered a few historic artifacts in this stratum, and the lack of clear stratification suggests that the deposit has been disturbed (Figure 15). It may be a midden associated with the structures identified in Area A.

Arbitrary 1068

Arbitrary 1068 appears to be a redeposited version of Nonstructure 1069. It directly overlays Nonstructure 1069, and is a darker, more consistently gray, compacted silty sediment. Arbitrary 1068 contains historic artifacts (glass, white ware pottery, nails, barbed wire, milled wood) consistent with an early-to-mid 20th century date. We think that Arbitrary 1068 may be redeposited backdirt from looting in a midden during the 1930s-1950s.

Arbitrary 179

Arbitrary 179 rests directly on top of Arbitrary 1068, forming one of the clearest stratigraphic boundaries at the site. Arbitrary 179 is approximately 80–110 cm thick at the west edge of Area B.

Artifact Analysis

Crow Canyon staff, participants, and volunteers catalog and analyze the flaked stone, ground stone, and ceramic artifacts recovered during excavation. This year, no participants assisted in laboratory analysis and Crow Canyon's volunteer program was much smaller than in previous years. We send out chronometric samples for radiocarbon or dendrochronological dating. In-house cataloging and analysis of artifacts for the Haynie site is in progress. In total, staff, participants, and volunteers have catalogued more than 7,610 bags of artifacts and samples from

the site so far. To date, we have analyzed 7,310 flaked-lithic artifacts and 47,100 sherds from the Haynie site. The pottery types identified at the Haynie site indicate primary use of the site during the Pueblo I and Pueblo II periods.

Discussion of Preliminary Results from the 2020 Season

Crow Canyon's work at the Haynie site in 2020 focused on Area A of Architectural Block 100. We sought to understand the stratigraphic relationships between several superimposed structures identified during excavation in 2017–2019. We also wanted to determine the orientation of the roomblock that contained Structures 186 and 193. Finally, we intended to complete the documentation of structures, surfaces, features, and stratigraphy in Area A and Area B.

Excavation and documentation in 2020 succeeded in clarifying the sequence of construction and use of the structures identified within Area A. Speaking broadly, Area A includes portions of a Pueblo I roomblock (Structures 186, 193, 1049, 1063, 1066, 1067, 1073) that saw repeated remodeling events throughout the Pueblo I period and possibly into the early Pueblo II period (Figure 16). A preliminary comparison of pottery from Structures 1073, 193, and 186 revealed that Structures 1073 and 193 floor surfaces had typologically indistinguishable assemblages, while Structure 186 was later based on the presence of late Pueblo I-early Pueblo II design elements on white ware and the presence of Mancos Gray jar sherds. Structure 1063 is thought to be roughly contemporaneous with Structure 1073. Determining whether Structure 1063 was still in use when Structure 193 was constructed will require additional analysis of pottery and chronometric samples recovered from their fill.

A large, sub-rectangular masonry-lined pitstructure (Structure 1047) intrudes upon Structures 1049 and 1063 and probably dates to the early or middle Pueblo II period (Figure 16). Several surface rooms to the north of Structure 1047 may be contemporaneous with the pitstructure, but their date and relationship with other structures remains to be determined. A combination of natural and cultural post-occupational sediments covers most of the structures in Area A. Preliminary examination of ceramic sherds in these deposits suggest they began to accumulate in the middle Pueblo II period, a tentative indication that people no longer used this part of the Haynie site for residential purposes.

Crow Canyon's efforts to determine the orientation of the roomblock containing Structures 186 and 193 revealed a much larger and more complex building than anticipated. The extent of the roomblock is unknown, but its initial configuration appears to have included at least five contiguous surface rooms (Structures 1049, 1063, 1073/193, 1066, and 1067). Structure 186 was the last structure inhabited in this part of the roomblock. It may have been a reoccupation following a short hiatus as it was placed atop both Structures 193 and 1066 and does not follow the existing wall alignments, although it does have the same general orientation to the east shared by the other surface rooms of the roomblock.

The size and orientation of these rooms suggests they are the “back” rooms of the roomblock, which implies that there are larger, surface “front” rooms located to the east of the currently open excavation units (beneath an apple tree, a septic line, and a propane tank). The arcing orientation of these five surface rooms is consistent with plan maps of large, arc-shaped Pueblo I structures that open to the south or southeast. As mentioned, the full scale of this Pueblo I roomblock is unknown, but extrapolation from the existing architecture suggests it may have extended

northeastward beneath the west great house. If so, Structure 1024—a pitstructure of suspected Pueblo I or early Pueblo II age—may be associated with the roomblock. Former landowner Claudia Haynie’s notes (Haynie n.d.) on the deconstruction of the west great house may provide additional evidence for the northern/northeastern portion of the roomblock.

The available evidence indicates a change in room function and the use of space within the roomblock over time. The original floor surfaces in both Structure 1063 and 1073 lacked formal hearths, consistent with their position in the “back” of the roomblock, a space typically associated with storage in Pueblo I structures. The later floor surface of Structure 1063 had a clay lined hearth, while the floor of Structure 193 (a remodel of 1073) did as well, indicating a change in the function of both rooms over time. These two rooms also provide evidence of change in roof construction technology. In both Structure 1063 and 1073, the roof was originally supported not on the walls, but on posts set in the corners or around the interior perimeter of the structure. There were no postholes associated with the late floor surface in Structure 1063, suggesting that the roof was reconfigured to rest atop the walls of the room. There are two postholes within Structure 193 flanking a suspected entryway, but it is unknown whether there were postholes in the corners of the structure to support the roof.

If the roomblock containing Structures 1049, 1063, 1066, 1067, 1073/193, and 186 was similar to other Pueblo I roomblocks, it likely housed several households. At least two typical “room suites” are represented by the rooms Crow Canyon has identified. The habitation unit comprised of Structure 1047 and the surface rooms to the north (assumed, but not demonstrated, to be contemporaneous with the pitstructure) represent a departure from the orientation and layout of the large Pueblo I roomblock. In contrast to a multi-household structure, Structure 1047 and the surface rooms to the north appear to be a single household unit oriented to the south.

Tables and Figures

Table 1. Excavation Units investigated within Areas A, B, and E during 2020.

Area	Size (m)	N	E	Date Opened	Date Closed	Comments
A	1-x-1	420	384	4/13/2017	in progress	
A	1-x-1	420	385	9/6/2017	in progress	
A	4-x-2	420	382	9/7/2017	in progress	
A	2-x-2	421	384	5/3/2017	in progress	
A	2-x-2	422	380	8/5/2020	in progress	
A	2-x-1	422	381	9/26/2019	7/17/2020	Unit closed prior to backhoe stripping
A	1-x-1	423	384	5/3/2017	in progress	
A	1-x-1	423	385	4/13/2017	in progress	
A	4-x-8	424	378	5/23/2018	in progress	
A	Segment 10			8/13/2019	7/7/2020	
A	Segment 13			9/17/2019	in progress	
A	Segment 14			9/17/2020	in progress	
A	Segment 21			7/21/2020	7/22/2020	Segment used for backhoe stripping
A	Segment 22			7/22/2020	11/3/2020	Hand trench closed after mapping of wall segments
A	Segment 23			7/24/2020	11/3/2020	Used for backhoe stripping, closed at end of season
A	Segment 25			9/24/2020	9/24/2020	Hand trench closed upon identification of STR 1047 wall
A/B*	1-x-1	414	384	4/13/2017	7/17/2020	Unit closed prior to backhoe stripping
A/B*	1-x-1	414	385	4/13/2017	7/17/2020	Unit closed prior to backhoe stripping
A/B*	2-x-1	413	386	9/16/2019	7/17/2020	Unit closed prior to backhoe stripping
B	1-x-1	411	374	4/20/2017	10/22/2020	Bedrock reached
B	1-x-1	414	372	4/17/2020	11/3/2020	Bedrock reached
B	1-x-1	415	374	4/20/2017	11/5/2020	Bedrock reached
E	2-x-1	388	410	5/13/18	8/29/2020	Unit deemed unlikely to reveal intact deposits without significant unnecessary effort.
*These units were included with Area B in the 2019 Permit Report but following the discovery of STR 1067 it made sense to include them with Area A for ease of discussion.						

Table 2. Study Units investigated within Areas A and B during 2020.

Type	Number	Area Used	Description
ARB	176	Area A	Naturally and culturally redeposited colluvial material post-dating STR 1047
ARB	179	Areas A & B	Mechanically redeposited cultural material from the west great house. Contains material from 1970s–1990s.
ARB	182	Area B	Sandstone bedrock
STR	186	Area A	A masonry surface room post-dating STR 193
STR	193	Area A	A masonry surface room pre-dating STR 186 and post-dating STR 1073
ARB	1007	Area A	Sterile caliche-rich material used to create NST 1072, an extramural surface associated with the ventilator shaft of STR 1047
ARB	1029	Area A	Adobe and sandstone wall-fall above and within STRs 1049 and 1063
STR	1047	Area A	A sub-rectangular, masonry-lined pitstructure post-dating STRs 1049 and 1063
STR	1049	Area A	An adobe surface room north of STR 1063 and pre-dating STR 1047
STR	1063	Area A	An adobe surface room north of STR 1073/193 and pre-dating STR 1047
NST	1064	Area A	A cultural deposit (midden?) possibly pre-dating STRs 1073 and 1063
NST	1065	Area A	Collapsed structural debris related to the ventilator of STR 1047
STR	1066	Area A	A surface room (probably masonry) south of STR 193/1073, pre-dating STR 186
STR	1067	Area A	A surface room (probably masonry) south of STR 1067
ARB	1068	Area B	Backdirt from looting in NST 1069. Compacted dark grey silty loam containing historic artifacts from early-to-mid 20 th century.
NST	1069	Area B	A midden deposit resting atop caliche/bedrock
ARB	1070	Area B	A caliche deposit atop decaying sandstone
NST	1072	Area B	An extramural surface surrounding the ventilator for STR 1047
STR	1073	Area A	A surface room (probably partial masonry) pre-dating STR 193 and STR 186

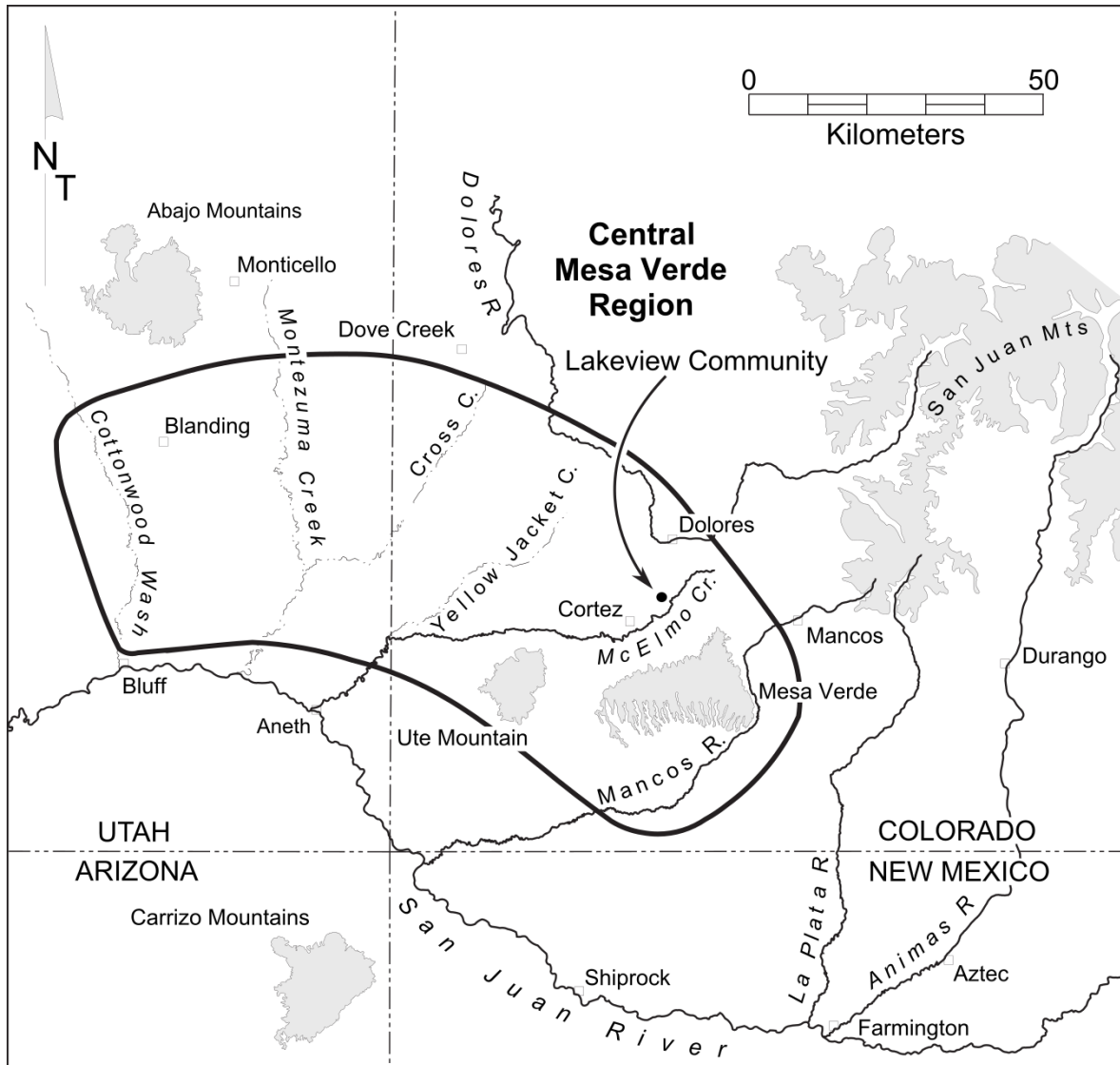


Figure 1. Location of the Lakeview community in southwestern Colorado

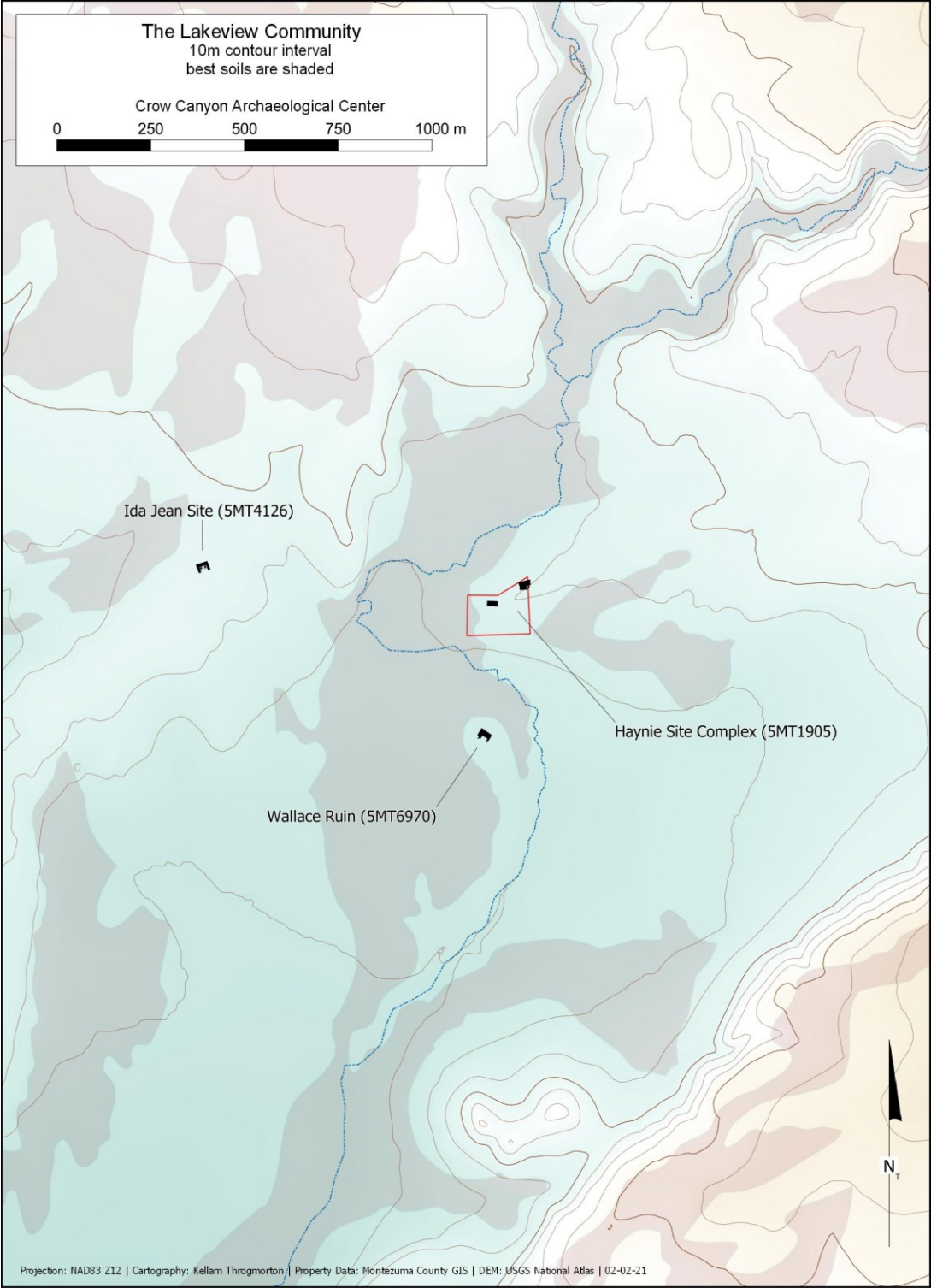


Figure 2. Topographic map showing location of the Haynie site within the Lakeview community.

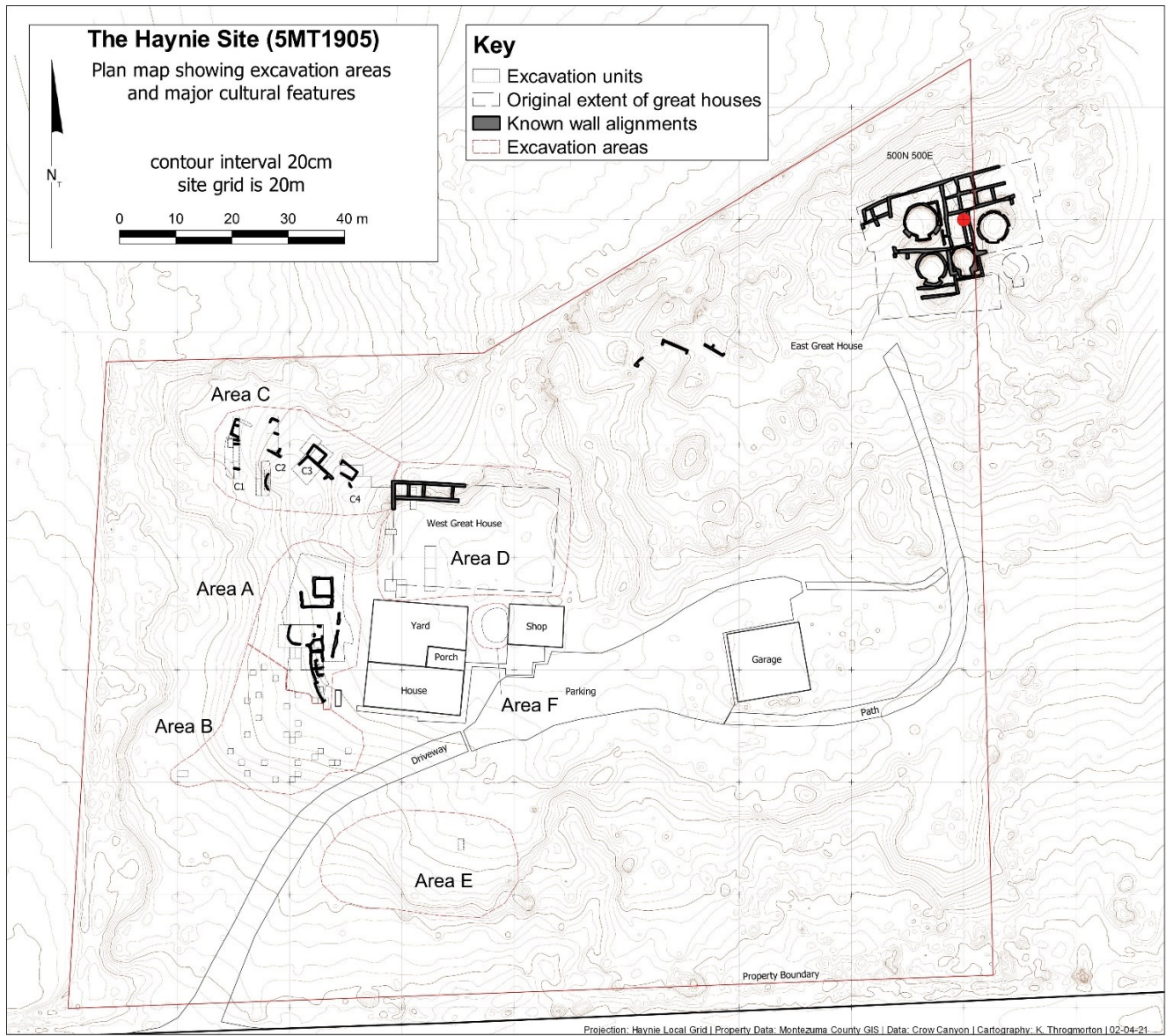


Figure 3. Plan map of the Haynie site, showing excavation areas and major cultural features.

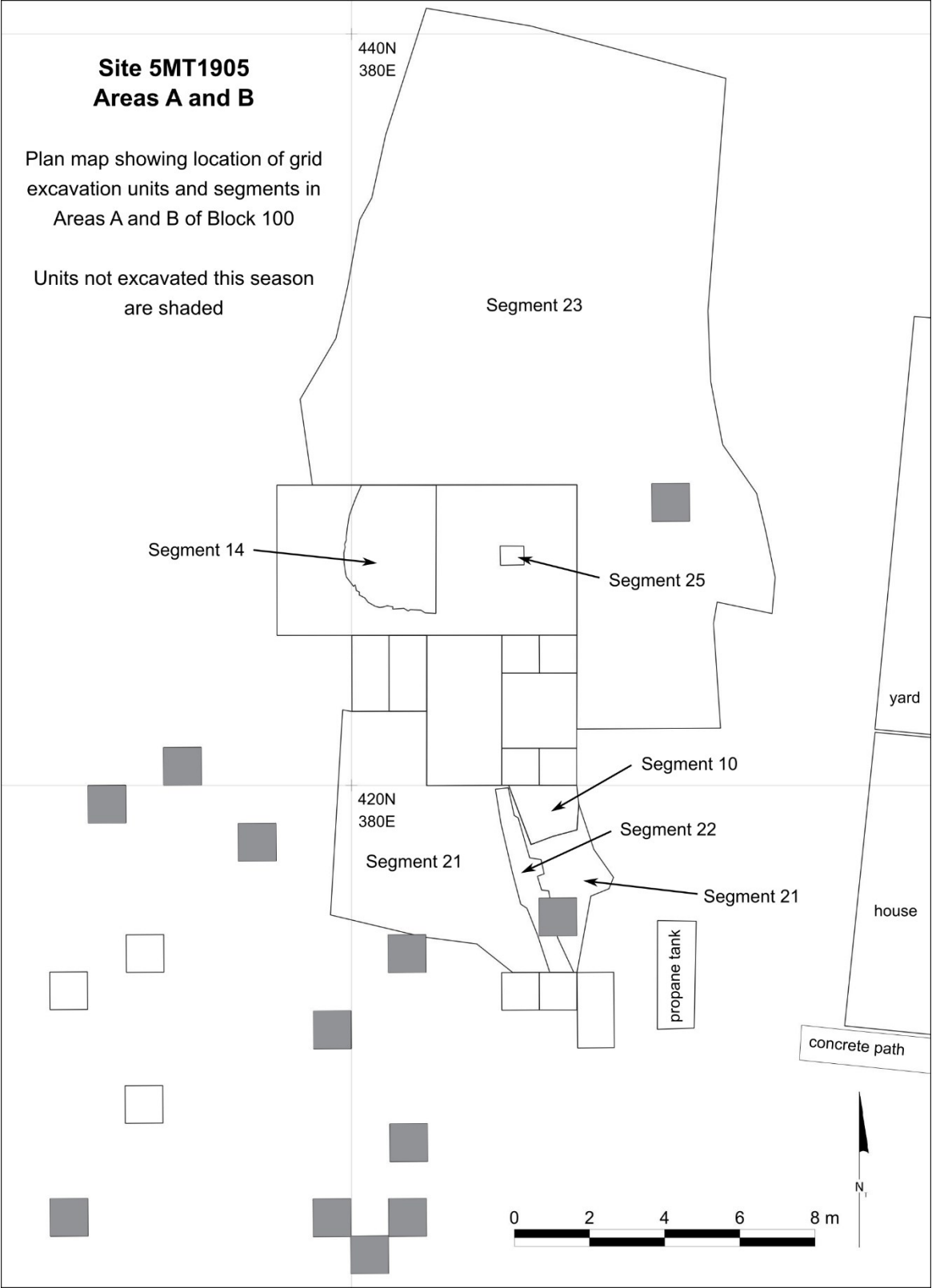


Figure 4. Plan map showing location of grid excavation units and segments within Block 100, Areas A and B.

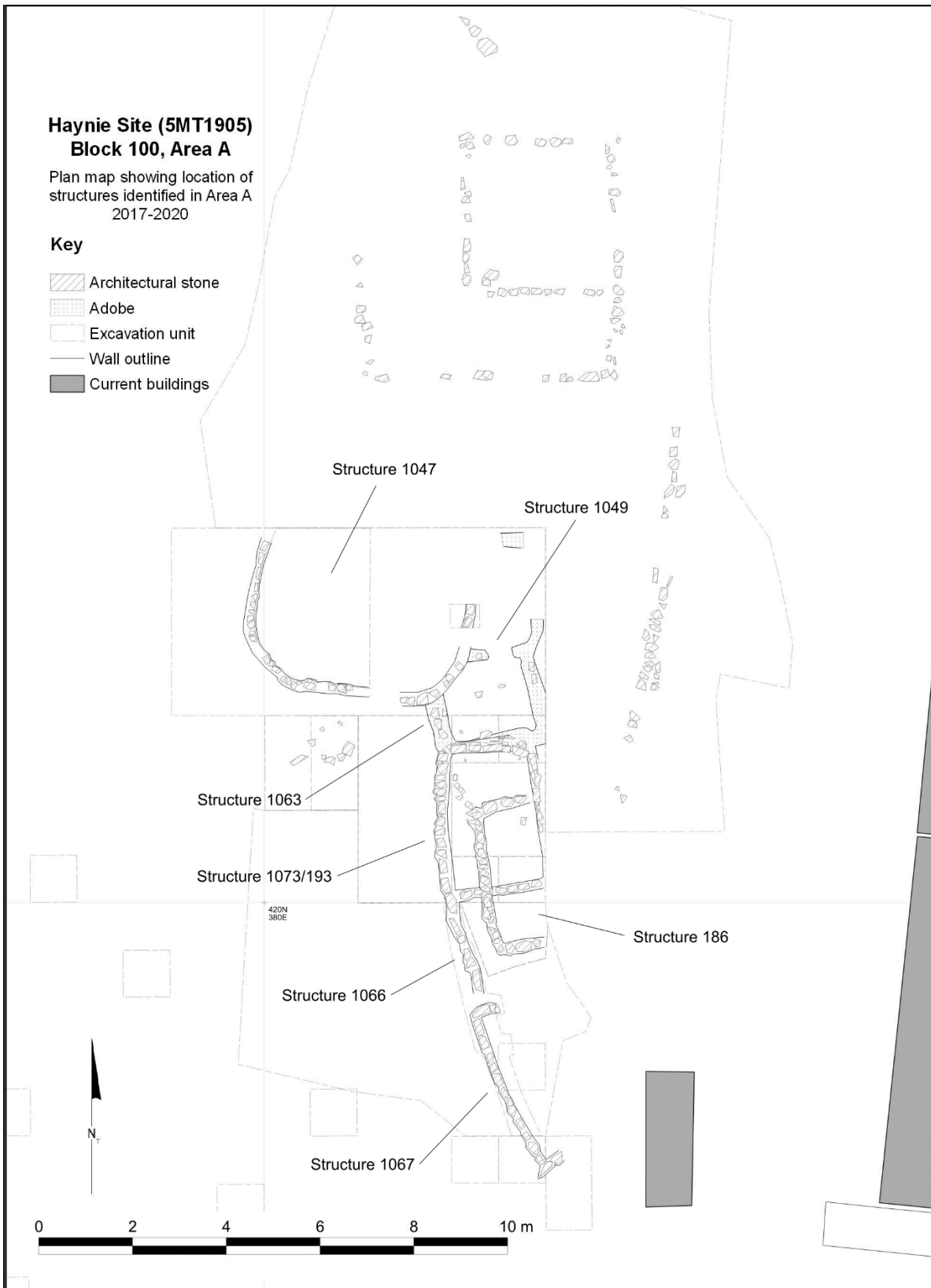


Figure 5. Plan map showing location of structures identified in Block 100, Area A.



Figure 6. Plan view of Structure 1073, Surface 1, showing floor features and floor assemblage (Moccasin Gray jar has been removed). Rectangular holes at top, right, and bottom are test windows.



Figure 7. Photo of a Moccasin Gray jar during excavation within Structure 1073, Surface 1.



Figure 8. Plan view of Structure 1063, Surface 2, showing floor features and floor assemblage. Structure 1047 intrudes on northwest corner of Structure 1063 (upper right of photo).



Figure 9. Plan view of Structure 1063, Surface 1, showing floor features and floor assemblage. Western-most portion (top center of photo) removed as test window to expose room stratigraphy. Feature 1 (a fire pit) has not been excavated and is visible as a grey circular area. Structure 1047 intrudes on northwest corner of Structure 1063 (upper right of photo)



Figure 10. Photo looking north along the west wall of Structure 1067 and 1066. Note septic line intruding upon structures. Stacked masonry below PVC was added to keep septic gravel base from eroding downslope.



Figure 11. Face view of exterior wall of Structure 193, showing rough, unfaced masonry placed atop foundation formed by earlier Structure 1073 wall base.



Figure 12. Plan view of Structure 193, Surface 2, showing preserved floor features after excavation. Visible are a hearth (right) and two postholes flanking a pit of unknown function (lower left).



Figure 13. Plan view of Structure 186, Surface 2, after excavation, showing southwest corner of structure. Eastern portion of structure (to left in photo) has not been excavated.



Figure 14. Oblique view of Structure 1047, showing masonry lining wall (visible at bottom and at right of photo) and stratigraphy of structure fill. Trench at center of photo is Segment 13, and trench just visible beneath tarp is Segment 25, within which the east wall of Structure 1047 is just visible.



Figure 15. Profile view of 1-x-1-m unit 414N 372 E, showing Nonstructure 1069 (grey stratum) above caliche at base of unit.

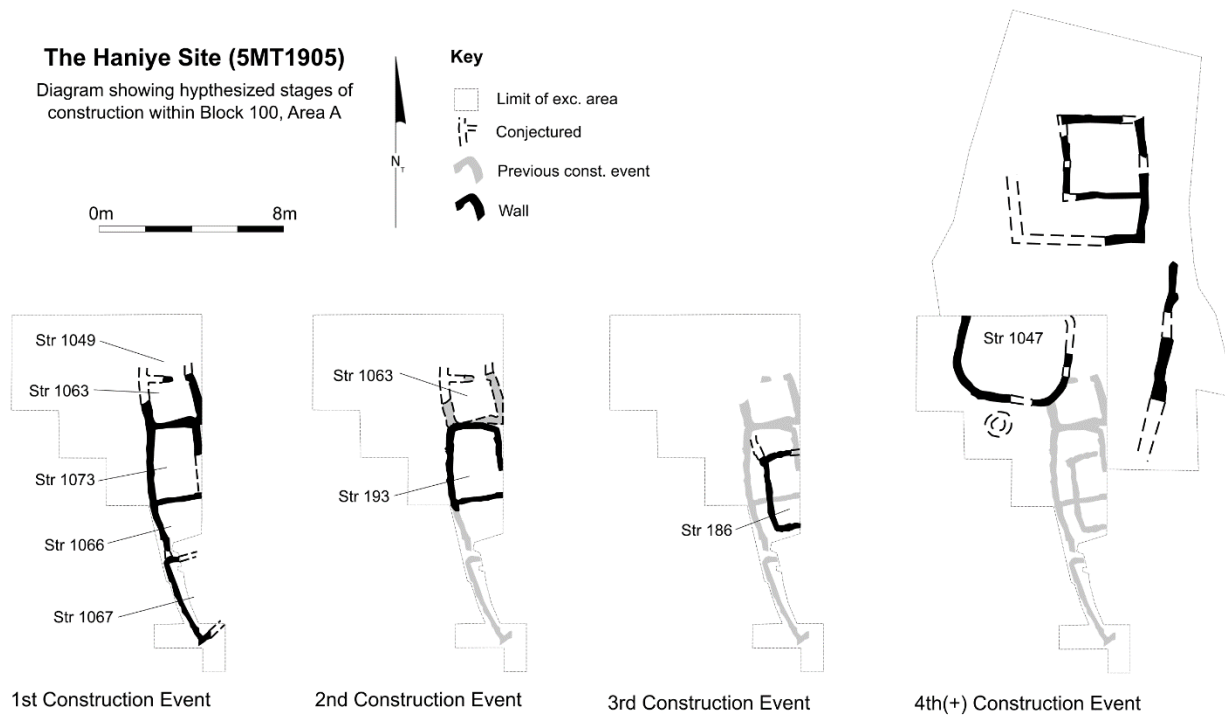


Figure 16. Diagram showing hypthesized phases of construction within Block 100, Area A. Exact dates are not known, but construction events 1–3 probably occurred between A.D. 800-950, and event 4+ between A.D. 950 and 1050. It is not known if Structure 1047 is contemporaneous with unnumbered rooms to north and wall to east.

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Appendix A – Research and Outreach

Public archaeology resides at the heart of Crow Canyon’s mission. For over 30 years, in-person educational programming and participant archaeology has been a cornerstone of our outreach efforts. Because of the COVID-19 pandemic Crow Canyon had no in-person participant programming in 2020. In response, we shifted much of our public outreach to digital platforms, such as a webinar series, social media posts, and short live-streamed presentations from the field and the lab.

Crow Canyon staff gave five presentations that focused on the NCOP and included research at the Haynie site. The *Durango Herald* covered the formalization of the conservation easement for the Haynie site property. Nine social media posts provided educational content and information about Crow Canyon’s work at the Haynie site. In addition to the research presentations and social media output described in these tables, Crow Canyon’s education staff produced a brochure with information on the Haynie site, and a short description of ongoing Northern Chaco Outliers Project field and lab work was included with the 2019 *Annual Report* (which was launched in September of 2020).

Research presentations involving the Haynie site given by Crow Canyon staff during 2020.

Name(s)	Venue	Place and Date	Title of Paper/Poster
Kari L. Schleher and Kellam Throgmorton	Colorado Archaeological Society Meeting	Cortez, CO 1/7/2020	“2019 Update on the Northern Chaco Outlier Project”
Kari L. Schleher and Kellam Throgmorton	Four Corners Lecture Series	Online March 26, 2020	“The Northern Chaco Outliers Project: 2019 Update”
Kellam Throgmorton, Tim Wilcox, and Steve Copeland	Crow Canyon Annual Meeting	Online October 7 th , 2020	Virtual tour of Haynie site with field crew during online Annual Meeting
Kellam Throgmorton, Tim Wilcox, and Steve Copeland	n/a	Haynie site, Cortez October 30 th , 2020	Socially-distanced tour of the Haynie site for local professional archaeologists (18 total visitors)
Kellam Throgmorton, Tim Wilcox, and Steve Copeland	n/a	Haynie site, Cortez October 28 th , 2020	Socially distanced tour of the Haynie site for Mesa Verde National Park Interpretive staff (4 visitors)

Local media coverage of the Haynie site during 2020.

Name(s)	Venue	Place and Date	Title of Article
Susan Ryan and Kellam Throgmorton	<i>Durango Herald</i> <i>The Journal</i>	Durango/Cortez October 31, 2020	“Native American Ruin Northeast of Cortez gets Permanent Protections” by Jonathan Romeo (County and Environment Reporter for <i>Durango Herald</i>)

Social media output involving the Haynie site during 2020.

Name(s)	Description	Venues	Month
Kari Schleher	Projectile point made from petrified wood, either unfinished or was made with only one notch	Instagram	March
Kari Schleher, Susan Montgomery	Finds Friday: Laboratory processing	Facebook, Instagram	July
Kari Schleher	Flotation samples (bags in lab)	Facebook	July
Kellam Throgmorton	Finds Friday: "Dolores" projectile point and bracelet fragment	Facebook	September
Susan Ryan, Kellam Throgmorton	Haynie Site Designation (REF: <i>Durango Herald</i> article https://durangoherald.com/articles/352254)	Facebook	December
Ben Bellowado	Finds Friday: Wolf Mandible	Facebook	November
David Boyle, Adam Kackstetter	#collaboration	Facebook, Twitter, YouTube	October
Steve Copeland	Finds Friday: Azurite (post)	Facebook, Instagram, Twitter	October
Steve Copeland	Finds Friday: Azurite (video)	Facebook, Instagram	October

Appendix B – Curation Agreement

Crow Canyon entered into an agreement with the Canyons of the Ancients Visitors Center and Museum (formerly the Anasazi Heritage Center), Dolores, Colorado, for the curation of collected materials from the Haynie site. The Canyons of the Ancients Visitors Center and Museum will take possession of these materials after the completion of fieldwork and analyses as stipulated in the research design for the NCOP (Ryan 2016).

Appendix C – Personnel

Permanent Crow Canyon Field and Laboratory Staff

Susan Ryan, PhD – Chief Mission Officer
Kellam Throgmorton, PhD – Supervisory Archaeologist
Kari Schleher, PhD – Laboratory Manager
Benjamin Bellorado, PhD – Laboratory Manager
Jamie Merewether – Collections Manager
Grant Coffey, MA – Database Manager
Tim Wilcox, MA – Field Archaeologist
Steve Copeland – Field Archaeologist
Kate Hughes, MA – Laboratory Analyst
Susan Montgomery – Laboratory Analyst
Daniel Hampson – Laboratory Analyst
Tyson Hughes – Educator
Winona Cordova, MA – Education Enrollment Manager
Paul Ermigiotti – Educator
Rebecca Hammond – Educator

Research Institute at Crow Canyon Staff

Kyle Bocinsky, PhD – Director
Mark Varien, PhD – Executive Vice President
Michelle Turner, PhD – Post-doctoral Researcher

IT Support Staff

Dylan Schwindt – Systems Administrator
Jerry Joplin – Application Support Administrator

Social Media and Outreach

Sarah Payne – Chief Outreach Office
Strategies 360 – Marketing and Advertising
Taylor Hasbrouck – Explorations Coordinator, Crow Canyon Webinar Series Coordinator

Cultural Explorations Staff

David Boyle – Explorations Coordinator
Adam Kackstetter – Explorations Coordinator

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