I, Kristin Marie Barry, hereby submit this work as part of the requirements for the degree of:
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The New Archaeological Museum: Reuniting Place and Artifact

This work and its defense approved by:

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The New Archaeological Museum: 
Reuniting Place and Artifact

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Abstract

Although various resources have been provided at archaeological ruins for site interpretation, a recent change in education trends has led to a wider audience attending many international archaeological sites. An innovation in museum typology is needed to help tourists interpret the artifacts that been found at the site in a contextual manner.

Through a study of literature by experts such as Victoria Newhouse, Stephen Wells, and other authors, and by analyzing successful interpretive center projects, I have developed a document outlining the reasons for on-site interpretive centers and their functions and used this material in a case study at the site of ancient Troy.

My study produced a research document regarding museology and design strategy for the physical building, and will be applicable to any new construction on a sensitive site. I hope to establish a precedent that sites can use when adapting to this new type of visitors.
Acknowledgements

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1.0 Introduction

The on-site museum or interpretive center associated with an archaeological excavation site is a much-debated building type in the current discourse of architecture. Though they are becoming a new construction trend at even the smallest archaeological excavations, and even existing site museums are a cause for concern and study, special attention must be paid to the projects beyond the typical architectural consideration. Limited site placement allowances, regional and/or national politics, architectural styles surrounding the site, and frequently changing and varied programmatic needs are just a few of the concerns that any building project on an active excavation site needs to address. Beyond the typical construction method and style concerns, visitor comfort is a key priority to the positive functioning of any new museum, though something that is typically overlooked in the initial design process.

The ancient site of Troy in Turkey [Figure 1.0.1] is no exception to these concerns. It is in dire need

Figure 1.0.1 - Aerial photo of Troy (Illium) archaeological site

of an updated and expanded interpretive center in close proximity the site\(^2\) to help the large flow of people who come through the site each year to understand and view the unearthed artifacts and architecture in a regional, temporal, and cultural context.

Because the concept of the interpretive center is still a fluid one, a literature study encompassing the current methods of museum design and their relationship to the artifacts that they display is a positive step in helping to shape a new interpretive center typology. Contextual education-- which I am defining here as the education and display/representation of an artifact within a temporal, regional and cultural context, and its place in the archaeological world-- is the heart of the study, including how this contextual education is completed, and what means are necessary to represent artifacts and architectural remains in such a way. The study is broad enough to include antiquities and art museums, especially centralized ones to establish reasoning behind moving toward on-site museums. After determining the reason behind the move towards interpretive centers for the reason of contextual education, I have examined what functions are necessary within the facility to accomplish this type of interpretation. I hope to answer questions regarding the definition of an interpretive center or on-site museum, how to ensure visitor comfort through architecture, and methods of building appropriate to structures on sensitive sites.

To complete the study, I used the knowledge and reasoning developed previously to perform a case study at the site of ancient Troy in Turkey. The museum and interpretive center project there will help to illustrate the way that contextual education can be accomplished in a new project, and provide a precedent for the archaeological world looking to make this shift at other sites. I examined precedents such as the new Acropolis museum in Athens and the interpretive center at Delphi because of their importance to the design of new or updated construction on sensitive and active excavation sites. They also show an influence of non-regional design and the influence of non-national designers. All physical precedents relate to the output of my study for the new interpretive center at Troy.

My design for the site includes all necessary architectural drawings, as well as the process that I took to arrive at that design. The process and methodology includes everything from

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\(^2\) The museum encompassing the majority of the artifacts is over 25 kilometers away in the city, and many other important artifacts are spread throughout museums both within Turkey and internationally.
programming the new building to concept and schematic sketches associated with its circulation patterns, gallery designs, and overall detailing of the architecture, as well as the influence of the Troy weaving metaphor within the design of the building. Through this design, I have integrated all the functions that were deemed necessary in the theoretical portion of the thesis and used the knowledge gained to produce a working model in contextual education.

My background research and material for the entire process includes literature related to museum design and theory, as well as theory associated with new construction on ancient sites. I also examined Turkish architectural design and construction materials, as well as current site museum projects, both successful and not successful ones.

In full, I have produced a heavily researched document regarding the reasons for moving toward contextual education of archaeological artifacts and its impact on large, centralized museums and smaller, on-site facilities, as well as defined the major functions of these new facilities and the reasoning behind each function. Last, I presented a design in the form of a case study that is influenced by all theoretical and physical precedents listed above, and will be an example for future architects to use when developing similar projects at archaeological sites; because this typology is fairly new to the architectural word, my project can act as a working precedent, due to both the sensitive site and the visitor accommodation. The final outcome is a comprehensive physical and theoretical model for the method of educating tourists in everything from art and antiquities to ancient cultures through architecture.
2.0 Why an On-site Facility?

“People are perversely fascinated by the sight of crumbling temples, of abandoned cities overgrown with shrubs, of marble heads peering out through the sand, of roads grown silent.” Gregory Jusdanis

Museums have for hundreds of years been the key to the understanding of ancient cultures and artifacts. Though the museum can take several forms and identities, the general understanding is that they are a place to provide education to the public and facilitate discourse among all types of academics and interests. Though the smaller functions of the history or artifact museum have changed over the last 25 years, the main purpose behind them remains to display and preserve those artifacts, antiquities and art that have been brought through their doors. However, the argument within the current discourse of museology is what type of museum is most beneficial to displaying archaeological artifacts, and whether the location and size of the museum plays a part in the public’s understanding of these artifacts.

The archaeological museum was also born out of the public’s interest in seeing what had been discovered at archaeological sites, mainly in regard to what was considered to be valuable. Gold jewelry, ornate carvings and pottery were popular to be seen because they demonstrated the immense wealth and development of these ancient civilizations. Little attention was paid to the context in which these artifacts were originally produced or later rediscovered, and therefore museums such as the British Museum in London and National Archaeological Museums in other countries were appropriate models for displaying archaeological artifacts. These large, central museums brought the knowledge of ancient cultures to the masses in a broad, wide-ranging way. Objects were typically arranged chronologically and by culture, with little information about that culture except for the tiny card next to the artifact with its catalogue number and possibly the location in which it was found. The public was able to see the amount of wealth that had been brought into the country by its own archaeologists and the museum worked similar to a treasury; new finds of greater interest were brought in and displayed, thus assimilating the amount of artifacts to the power and intellect of the particular nation housing them. Unfortunately, one of the problems associated with the discovery of new objects was the lack of space available to present the original finds alongside the new ones. Many objects were then placed in storerooms, unable to be seen by the public and difficult for researchers to gain access to.

Another problem associated with the old paradigm of the archaeological museum is the lack of provenance associated with many of the older artifacts in these museums. Kenneth Lapatin presents this issue in depth in his book *Mysteries of the Snake Goddess: Art, Design and the Forging of History*. The book discusses a prized artifact named the Boston Snake Goddess [Figure 2.0.1] and the controversy surrounding her authenticity, as the documentation surrounding her existence and excavation has been questioned, and calls attention to the problem of establishing and documenting artifact provenance. Unfortunately, the problem with replicating or forging antiquities has been prevalent for some time, and the case of the Boston Snake Goddess, a now-established forgery, is certainly not a lone one. When objects are taken from archaeological sites and shipped throughout the world, as was the tradition with many, the documentation can be misplaced, or easily forged, thus making it difficult to track the original artifacts excavated at the site. By establishing on-site facilities where these artifacts can be housed and presented with documentation, there is less of a chance of the artifacts being looted or replaced to be sold on the black market while in transit to other museums. Even when

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artifacts are shipped properly internationally, many are displayed without mention of the origin of their location, or without the documentation present, also allowing for them to be displayed without provenance.

It must also be considered that in the 19th century many advanced nations from Europe and North America were typically in charge of the excavation of many of the most famous sites. These were the countries that had enough financial backing to be able to travel to a foreign area and bring back ‘treasure,’ usually with the benefit of having their name attached to an important discovery. Many of the countries that housed the sites, namely Greece and Turkey, were considered to be unstable, and out of concern for the safety of the artifacts, they were exported to countries deemed to have better security and resources to preserve them. This offered the public a glimpse into the life of the wealthiest members of the ancient cultures, and allowed people to imagine the incredible lifestyle of those living in the time period, which is what generated the most excitement. Because at the time mass cultural consumption did not exist like it does in current times, there was no other mechanism for the public to view these types of artifacts. The work of interpreting the entire site was left to the archaeologists and researchers at the sites because most, though open to the public, had little traffic from outside visitors. The greater mobility of people in this day in age with the development of mass public transportation and the media has allowed for more visitors to be aware of the archaeological sites and able to visit them. The exportation of artifacts is no longer necessary since people are now able to visit excavation sites and view the artifacts in their original regional context.

Though the wealthy mentality existed for quite some time, recent changes in education trends have also allowed the general public a more extensive look into the lives of the ancient cultures, including the lives of the normal citizens, something that was not well represented in the earlier national museums. In an article titled *Heritage/Cultural Attraction Atmospherics: Creating the Right Environment for the Heritage/Cultural Visitor*, several authors discuss the change in mentality that led to the increased interest in historical cultures and archaeology:

...the late 1990s has witnessed a renewed interest in travelers to rediscover the past (Boyd 2002). This fascination with historical attractions has led to the generation...
of a niche market defined as cultural and heritage tourism in which reliving the past has become a critical tourist experience.  

Acting almost as a second renaissance, this rediscovery of ancient civilizations has increased the general public’s interest in traveling abroad to see what they consider to be a piece of their own culture, or even someone else’s culture. The desire to reconnect with an individual’s heritage has spurred a renewed interest in tourism in general, thus making the time appropriate to establish a precedent at these archaeological sites for how to handle the new amount of people and attention.  

Because the interest in ancient cultures and civilizations has increased in the last several years, more and more archaeological sites, even the smaller ones, are being opened to the public. Mark Bonn goes on to describe this interest further in his article by stating:

Recently, many cultural/heritage attractions and sites have undergone a type of reformation. The past decade has seen an important paradigm shift for many of these types of attractions, transforming them into places of instruction and educational centers, as opposed to display houses (Cook 2001). Researchers have discovered that the educational component is a significant motivation for visitors to heritage sites…  

This demographic shift from specialized researchers to the general public presents a different type of audience, and it is up to the individual archaeological sites to ensure that the public comes away from the experience with a thorough knowledge of the site. This change in demographics has lead to the idea that archaeological sites should be displaying artifacts in a contextual manner, related to time, culture, and region. It appears that the way to accomplish this is not through exporting the artifacts to other countries to be displayed in a common building, but to have individual site museums at each archaeological site so that the artifacts can be viewed in that contextual manner.  

Stephen Well addresses the change in the average ability to visit various museums in his book Rethinking the Museum. He describes the changes in “transportation, computation and communication” as leading to the development

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of new museums, an event happening much quicker than it would have originally in the age of the national museum. Though his essays are in response to the development of American museums, the concept behind the practical recreation of transportation is relevant to the idea of visiting international archaeological sites. Every day, people are able to travel much further than they originally could because of the development of new transportation technologies. Though traveling, especially internationally, used to be exclusively for the upper class, it has become much more affordable in recent years, which allows for a wider range of people to travel to these sites. Also, many children from an early age are now being educated in the classical civilizations in public schools, thus leading to a greater interest in seeing these cultures first hand as the students grow into adults.

This change in visitors also slightly affects the intended purpose of the typical museum. Since the average person visiting an archaeological site now has a wider range of information regarding the culture at their disposal, but not necessarily a specialized understanding of a particular site, the role of the museum must shift slightly to address this new audience. The main purposes of the museum will always have to include housing and preserving the artifacts entrusted to its walls, but now it must also become an interpretive center to help those without extensive knowledge interpret and understand the artifacts and cultures associated with its galleries. Wells goes on to state the importance identifying this new function in relation to the public’s acceptance of the facility:

> In developing justifications for the public support of museums, we have too often forgotten that their ultimate importance must lie not in their ability to acquire and care for objects—important as that may be—but in their ability to take such objects and put them to some worthwhile use. In our failure to recognize this, we run the danger of trivializing both our institutions and ourselves.

10 The museum becoming more than just a storage and display facility is something that has been widely addressed in text, but not necessarily in the architectural community, where the problem could essentially be resolved. Through the use of architecture, the building aspect of the museum becomes an essential role in helping along the interpretation of the artifacts, thus leading to a more diverse and integrated building design and education. Using architectural site design and


features to spotlight important areas of the site, simulate lighting conditions, or reconstruct ancient architectural remains, as well as incorporate the majority of the displays into the design of the building, will help the artifacts and museum be a unified entity.

Once this new interpretive function of a museum is established, the question becomes how to address it. The museum must now be used as an interpretive tool to help present artifacts in a contextual way. One of the most important of these contexts is the idea of geographical or regional context. This becomes one of the main reasons for creating a museum on individual archaeological sites instead of having a centralized, large-scale museum. This presents the idea that artifacts can be better understood if they are presented closely to the geographical location in which they were made, traded, or discovered. When artifacts are taken from this location, it is difficult for an individual with less specialized education to mentally place these objects back into the regional context that helps to identify them. The “other side of the coin” is for an artifact that was part of a shipment for trade in the ancient world. Though the artifact can be found to have been used in that area, the materiality may not related to the surrounding landscape at all, demonstrating the importance of trade to that region. If trade was an important aspect of daily life, then that can be seen by the artifacts found or not found within the geographical context of the site. In sum, the series of artifacts discovered at a particular site gives a picture of the past life of that area, with all its geopolitical, economic and cultural influences. If the artifact is isolated from its assemblage and moved halfway around the world, it says very little except to itself form a type of commodity.

Similar to the need for geographical context is that of religious and cultural context. Traditionally, most ancient cultures depended a great deal on religion for their society to function, and consequently many artifacts and architectural remains are related to the religious practices of that particular culture. Because religion is so controversial in modern times, it is important to the understanding of the ancient culture that religion be presented in an accurate and non-threatening way. By removing religious artifacts from the context in which they are originally born, the purpose of these artifacts can easily be misinterpreted by visitors not educated in the details of ancient religions. In Towards a New Museum by Victoria Newhouse, the issue of removing religious artifacts and sculpture to be presented in art museums instead of on-site museums is discussed in the
article *The Museum as a Sacred Place*. Newhouse addresses the collection in the Louvre in Paris to demonstrate how taking these artifacts out of their original location “isolates” them. The public is able to appreciate the beauty of them, but not fully understand their importance and purpose when taken out of the regional, religious, or architectural setting. As Newhouse later summarizes for Eric Flischel, “[He] points out that today’s art museums do not replace these historic settings: removed from the architecture that they are created for, works are organized according to an established hierarchy…” Though Flischel intends this comment to be a positive argument for removing artifacts, it appears to at least prove the point once they are taken out of that context, they lose the majority of their meaning because another one is placed on them by curator of their new setting. Also, with antiquities, they usually relate to their site surroundings in some way, something that modern artwork does not always incorporate.

The relationship of artifacts to architectural remains is also an important one when attempting to display artifacts in a geographically contextual manner. Kevin Lynch addresses this important aspect of archaeology in his book, *What Time is this Place*, when he discusses the importance of preserving the past for the future. According to Lynch, the best way to learn from the past is through archaeology, and the best way to learn from the archaeology is through context. Much archaeological data is gathered essentially through the trash and building remains of previous inhabitants, and Lynch believes that it is in the relationship of this collected data that we really learn about the culture, and from this that we gather the majority of our information. By taking these elements away from each other, the connection is lost between them, and data, as well as an overall understanding of the culture is less likely to be complete.

However, there is a growing need for museums to also become involved in the communities of which they are an integral part. Though educating tourists in a historical and regional context is the first big step, ignoring the current culture of the area would not be beneficial to the success of the interpretive center. Because of this, many larger institutions founded for the purpose of furthering discourse and design of museums have begun to also assert the need of local, contextual display methods, and for the facility to also address the current conditions of the region. According to Stephen Wells, the International Movement for a New Museology is just

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13 Lynch, Kevin. *What Time is this Place*. 44
one of many touting the reform of museum culture in their publication *MINOM Communiqué*, where they state: “Many museums collect, preserve and exhibit, but they remain separate from the present economic, social and cultural context, avoiding the mission of participating in the development of the societies they serve.”14 One of the big concerns of some archaeologists is the development of the site altogether, which includes events that took place after antiquity. These conditions also need to be demonstrated to the visitors so as to show the history of the location in its entirety, all the way up through modern times. To ignore this aspect would be to ignore an integral piece of the evolution of the site, and would be a detriment to the education that the facility would provide. By placing the interpretive center in relation to the ancient remains and also within the context of the modern site, the visitors are able to see the progression of time periods. Also, by addressing the current political, economical or social environment within the temporary exhibit space, the facility is able to engage the community and provide foreigners with a broad overview of the modern region, and therefore possibly how it stemmed from ancient influences. With large-scale, centralized museums, the idea of region is lost. Museums attempting to mesh several completely separate civilizations into one building do not have the space to show the evolution of those cultures all the way through modern times; something that is facilitated through a small, regional museum.

However, while the addition of on-site interpretive centers at archaeological sites appears to be a positive change from the large-scale centralized museums when it comes to education and experience of the visitors, the impact on the archaeological site itself cannot be ignored. In their article *Public exposure: for better and for worse*, Racheli Merhav and Ann E. Killebrew address the issues associated with the new flux in tourism to these excavation sites. Though both work primarily with archaeological sites in Israel, many of the negative and positive effects can be associated with any active excavation site that has public access. By allowing tourists to experience the architectural remains and artifacts together in a contextual manner, it opens up the site to the pros and cons of the public experiencing the site in that way.

First, Merhav and Killebrew address the negative aspects of allowing visitors to experience a site first hand. These include wear and tear, additional tourist amenities, vandalism, and over-

commercialization among other effects. The wear of the site is a constant concern for both archaeologists and preservationists. With the constant presence of visitors, extra measures must be taken to ensure that architectural remains and artifacts are not disturbed by the public traffic. Looting and pillaging from archaeological sites has been a longstanding tradition, even though it is not only discouraged, but also illegal. Many modern archaeological sites are in more ruin than they would have been originally because of peoples’ desire to leave with souvenirs from their trip. These keepsakes once included small pieces chipped from ancient buildings, or even artifacts that were not properly secured on that site. Melanie van der Hoorn also discusses the public’s fascination with keeping architectural remains in her article *Exorcising Remains: Architectural Fragments as Intermediaries between History and Individual Experience*:

It seems that people confer on these fragments some inherent metonymic qualities, as if the parts could stand for the whole and the fate of the pieces would seal the fate of the complete building... Of course, these stones do not possess such strength in themselves, but they can be strategically used to convey symbolic messages in this direction.

Because there is a huge public want for cultural connection, having pieces of some of the most ancient pieces of classical culture in one's private possession can be seen as a way of preserving the visitor's place in that culture. Though this idea is romantic for the individual, it is obviously highly detrimental to the archaeological site, as it begins to diminish from having pieces removed. Therefore, careful planning must be done to provide the visitor with a satisfying experience feeling close to the culture of the site without providing the opportunity for poached architecture. For the archaeological site, this can include paths that draw the visitor's attention to the ruins without their ability to physically touch the materials. When looking into an interpretive center, artifacts will be on display in a manner conducive to their preservation, but without visitors being able to handle or disturb them. If designed specifically to engage the visitor in the preservation, the public may be able to see the archaeologists administering preservation techniques on certain artifacts through a glass barrier to ensure the safety of the artifacts, while drawing attention to their need to be specially preserved. This is a function that would be much easier to introduce in the
smaller setting of an on-site interpretive center, as compared to a larger, centralized museum, because the traffic passing the display would be less and would be in direct relation to the context of that particular archaeological site.

Other types of vandalism are a concern that administrators of archaeological sites and museums face, however, as previously mentioned, by engaging the community in the site and the interpretive center, the sense of pride for the heritage site would hopefully deter local vandalism. Vandalism by foreigners is still a concern, but by limiting the access that visitors have to the exterior of museum buildings and architectural remains, the chance of vandalism diminishes.

The concern of over-commercialization is relevant to some of the more famous archaeological sites, but is something that will hopefully be remedied by the inclusion of an interpretive center. Such as with Ancient Troy in Turkey, the myth far overpowers the general public’s knowledge of the importance of the site, which would lead some to only draw those types of conclusions from a cursory visit of the site. However, with the proper facility in place, not only can the researchers in charge of the site educate the visitors on the true daily life of the inhabitants of Troy, but they can also provide a boundary for the commercialization of the site. With the concern of over-commercialization comes what Merhav and Killebrew refer to as altering the spirit of the site through exposure to the public. The are referring to the inclusion of new facilities to the sites—such as an interpretive center—and can see this new construction as “permanently changing the atmosphere and spirit of a historic location.”¹⁷ This would be the biggest concern for the addition of physical architecture, but can be remedied by not placing the new architecture within a certain distance of the architectural remains. It is true that new facilities would need to be created specifically for tourists, but with proper design, these can be easily incorporated into the site so that they do not stand out in such a way that is detrimental to the existing architecture.

Another factor in the development of a new type of museum is the way that the public prefers to experience what is on display. Different material is being presented in education, thus creating a broader audience with knowledge of ancient civilizations, but there has also been a change in the way that material is presented in education, directly related to the advancement of certain technologies. In the quickly changing

¹⁷ Merhav, Racheli and Ann E. Killebrew. p 17.
world of technology, advances in everyday display methods mean that the visitors of new museums and interpretive centers expect more technologically. In *The Museum Refuses to Stand Still*, Kenneth Hudson explains how new technology expectations impact museums: “…the museum-going public has changed a great deal. Its range of interests has widened, it is far less reverent and respectful in its attitudes, it expects electronics and other modern technical facilities to be available as a matter of course...” This essentially states that the general public expects the museum or interpretive center to be up to, if not exceeding, the standards technologically, of the common educational institution. This is an area that would be most beneficially used in smaller on-site facilities, because the technologies and electronics used can relate directly and solely to the site that the interpretive center is a part of. The cost of upkeep is lower than in a large centralized facility, because there is less information to cover using these new technologies.

A great example of beneficial technological progression is the new use of 3D digital modeling software. Recently, many interpretive centers have begun to utilize the software to better display reconstructions of archaeological remains. By being able to visually construct and animate these ancient buildings, visitors can see how the site would have looked at various time periods, and also how these buildings would have been placed in the surrounding landscape. This is something that would be much more difficult if using the technology in a large-scale centralized museum with no relation or connection to the ancient site. The site of Ename in Belgium [Figure 2.0.2] is an interpretive area that has been helping to display the key points of archaeology through technology. The site contains an open-air museum and small interpretive center, as well as a large church dating back to the Ottonian period. By the collaboration of archaeologist Dirk Callebaut and architect John Sunderland, Ename has become a case study example of how technology can be integrated into an interpretive center to help associate the architectural ruins with the ancient and modern landscape. In their article *Ename: new technologies perpetuate the past*, Callebaut and Sunderland describe the importance of utilizing technology at an interpretive center and the benefits that this inclusion creates: “…the material relics can be interpreted in their context in a concrete way.” Because contextual education is the main reason behind on-site


interpretive centers, Ename provides a new way of addressing that education in a way that will be conducive to modern-minded tourists. The site provides digital reconstructed models [Figure 2.0.3] that visitors can see displayed over images of the current conditions of the site, showing the change in architecture and planning through the different periods that the site was inhabited. This gives visitors a detailed explanation of the site's importance through the different eras and addresses the issue of presenting the information in a way that would make the general public understand it. Callabaut and Sunderland refer to this method as “non-intrusive interpretation”\textsuperscript{20} and feel that it benefits a wider range of people than conventional display methods. It also provides for less construction impact on the archaeological site, while still allowing visitors to experience the ruins in a contextual manner.

There are many reasons for the design world to make the shift from large, centralized museums to smaller and more personal on-site interpretive centers. Whether for the benefit of contextual education in artifacts and culture, or the new community involvement and support, the interpretive center typology is an architectural method of responding to the change in tourist numbers and education. However, the next

\textsuperscript{20} Callebaut, Dirk and John Sunderland. P. 53.
question becomes what essential functions these
new interpretive centers need to address.
3.0 The Functions of the Interpretive Center

Though it appears to be imperative that some traditional museums begin to make the typological shift to local interpretive centers at archaeological sites for contextual education reasons, the question then becomes whether the functions of the interpretive centers change drastically from those of the large, centrally located museums. A number of authors have written on the vast array of functions for museums, and many of these functions can be applied to the new, on-site interpretive center typology.

In Towards a New Museum, Victoria Newhouse begins the chapter The Museum as a Sacred Place by explaining the origin of the modern museum:

The noted historian Nikolaus Pevsner date the word museum in its modern sense to the Italian collector Paolo Giovio in 1539, though it did not enter the English language until 1683, in reference to the Ashmolean in Oxford. The early museums, unlike today’s, were not open to the general public; only patrons deemed acceptable by the collectors, and the occasional artist, could gain access. The guiding principle of the collections was aesthetic: they were meant to entertain.21

Much has changed about the museum since the inception of this concept. They are now primarily public entities, and though they are still aesthetic and meant to entertain, much more information is available to the visitor through the architecture and displays. Also, with the emergence of the interpretive center as a type of museum, the building and artifacts become interactive with the public, a concept that did not appear until rather recently. Though some characteristics of the original museum concept can be used when establishing a new museum, others much change to incorporate the functions and aspects that interpretive centers require today.

As building and other technologies advance, the traditional antiquities museum appears to have become obsolete in a sense, a thought that was demonstrated by the creators of the interpretive center at Ename. However, looking at centralized museums from a functional standpoint, there are many important ideas that can be taken from these examples to help create a working new interpretive center. In An Emerging New Paradigm, Stephen Wells addresses J.V. Noble’s five functions of a museum22 from his Museum Manifesto: “to collect, to conserve, to study, to interpret and to exhibit.” Noble refers to these as each being part of a whole

that cannot function without every piece. Though this definition covers most types of museums and their functions, Wells goes on to present another researcher’s idea of essential museum functions, which appears to take the originals and combine some. The other researcher, Peter van Mensch, gives the absolute functions of a museum as:

...to *preserve* (to collect being viewed as simply an early step in that process), to *study* (a function that remains unchanged), and to *communicate* (the third function being a combination of Noble’s final two, i.e. to interpret and to exhibit).

Both museologists’ characteristics are important to the idea of museology and interpretive center design because these functions include those for the public and also the other visitors to the building, namely, researchers, historians, and archaeologists. The preservation of antiquities and artifacts is usually the forethought of most visitors’ minds, and the communication of these artifacts is related to how the visitors are able to view and experience the artifacts, another function that is standard in history or art museums. Combined, these two lists of museum functions will be beneficial to the design of a new interpretive center, because its purpose is very similar to that of the museums that van Mensch and Noble are citing.

Along with the general functions that a successful interpretive center must encompass, the building itself must be viewed as a comfortable, functional entity, something that has a symbiotic relationship with the architecture of the building. Visitor comfort and administrative function must be forefront in the design, and in turn, the design will encourage and promote the essential functions of the museum. The facility must also act as one part of a whole that also includes the archaeological site that the center is associated with. The two—and any other entity included in the total education of a culture—must act as a functioning whole and be able to not only relate to each other, but also combine to provide for the ultimate educational experience. This planning function can also be viewed as looking at circulation patterns and architectural connection between all the necessary spaces.

One function that is less documented among museologists and researchers is the use of the museum as a restorative environment. This can be characterized as an area to reflect, to meditate, or to generally regroup one’s thoughts. Though

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this term is usually used in reference to art museums, antiquity museums and interpretive centers can also assume some of that role with their relationship and draw for the public. The interpretive center does not need to draw only for the purposes of education, but also for the general personal benefit that the environment will give to the visitor, allowing that person to really absorb and take in the information that is being presented in a comfortable way.

Any of these functions remains essential to the success of a new interpretive center typology and can be utilized as integral to the process of contextual education. Incorporating each of these functions in a way that allows them to interact and enhance each other will be beneficial to the overall functioning of the building and ultimately the functioning of the site as a whole.

3.1 Study

The ability to use the facility for study is something that not all modern museums incorporate, and is a function of large, central museums that can be used locally to assist in the education of more people with the inability to travel to the central museum. Because on-site museums and interpretive centers tend to be established close to smaller communities and not always centrally located, having the buildings contain the study function will add another asset to those outlying communities. That way, the interpretive center becomes involved in the community in which it is housed, and encourages the local population to be a part of the continuing success of the on-site facility. This will subsequently encourage the local population to take an interest in the upkeep of the building and surrounding archaeological site as well.

Along with local inhabitants using the museum to study, there is also a need for archaeologists from all over the world to be able to use the interpretive center for study. Because the on-site museums will house important artifacts, they must be accessible to top researchers in the area of study since these are the people who will be doing the original research that will yield the interpretation of the artifacts for visitors.

Manfred Lehmbruck acknowledges that connection between the public and the museum as “an interaction between sociological self-representation and self-realization,” which becomes a sort of social experiment. He insists that the museum should include a study of the patrons as part of the design process, because these are

the people that the facility must ultimately speak to. By first looking into who the main users of the museum or interpretive center will be, the better response that the designers can take to those exterior influences. First establishing that the museum will be used not only as a public entity to display artifacts, but also a research facility within the local and larger community of scholars, will lead to a design that is better incorporated into the community and therefore more successful overall. Similarly to Wells, Lehmbruck establishes that ultimately the purpose of the facility needs to be outlined first.

After having established that a connection with the surrounding community as an important function of the interpretive center, the question then becomes why. Wells acknowledges this concern in *An Emerging New Paradigm* by stating:

> It is no longer adequate simply to say that this interpretive/exhibition function—essentially a museum’s public program—is important because I contributed to (in Robert Hughe’s wryly turned phrase) “human betterment.”

Essentially Wells is commenting that the function needs to be present for a reason greater than for the greater good. The function must act as an essential piece of the museum as a whole to better help it function, not solely to show that it has an association with the public for the sake of having the association. Lehmbruck would most likely agree that sociologically, this function has to be better defined for actual design than just included to satisfy a requirement. The type of association within the community and the reason for it is far more intricate than most designers give it credit for.

### 3.2 Preservation

Though the integration into the community is one of the important aspects of museums and interpretive centers, the need to preserve is also one of great importance, especially when related to archaeological sites. The artifacts and architectural remains can be thousands of years old, and are usually already in some form of decay. Therefore, one of the most important functions of an on-site facility would be to not only halt this deterioration, but, through preservation techniques, hopefully reverse some of the damage that has taken place. Integrating the aspect of preservation into public areas in a museum or interpretive center would not only provide ample area for researchers and archaeologists to work, but also bring to the attention of the public and surrounding community that deterioration is a concern with archaeological sites, and the steps

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that must be taken to counteract it. The *preserve* function is one that can also be used with open-air archaeological parks that integrate an on-site interpretive center, because the public would be able to view preservation of architectural remains alongside that of artifacts and antiquities. This adds to the contextual education of the site and open-air museum as one entity, while demonstrating one of the essential functions of the interpretive center typology.

The preservation function is also important because it acts as a working timeline with the culture that is represented in the interpretive center. Beyond the physical function of preservation, the interpretive center must help with the preservation of the culture, especially an ancient one. Through an interpretive center and the education that it provides, the public can continue to live through the eyes of an ancient culture, something that is lacking in many standard museum exhibitions. By preserving the artifacts and communicating with them, the culture—be it architecture, artifacts or daily activities—of a civilization is saved for future generations to enjoy or learn from. Also, as Kevin Lynch explains in *What Time is this Place*, learning from history is something that is necessary for future generations because in simplest terms, history repeats itself.

Historical events and decisions tend to have modern day and future connections and it would be a waste to not utilize this knowledge for the future. He explains:

> Past events are indeed often relevant to present possibilities. They may explain causes or point to likely outcomes. Or, they may give us a sense of proportion to help us bear our present difficulties.²⁷

By preserving the past, we better understand its relationship to our future, and can begin to make decisions based on this past that help us succeed in the future. Without staying connected to, or preserving a previous culture, we refuse to acknowledge its influence on our present day situation, which will ultimately cause us to fail as a modern culture. An interpretive center keeps this culture and knowledge alive through educating the public on the problems and resolutions of those who came before.

Steve Henrikson, a curator at the Alaska State Museum and specialist of Northwest Coast Indian Art, also addresses the need to preserve culture and how the community is involved in this in his article *A Like with the People: The Alaska State Museum*. The museum collects artifacts and art from Alaskan, Russian and American natives, but also incorporates the community into the

²⁷ Lynch, Kevin. *What Time is this Place*. P. 36
educational programs and curator functions of the museum. Henrikson writes that “Alaskan Natives have great influence in the conduct and the direction of museum programmes” so as to ensure the accuracy and completeness of the collection.28 The community also utilizes the facility to educate its children about the culture into which they were born. This assures the preservation and continuation of the descendents while educating the outside public alongside them. Henrikson also comments that, “museums are generally viewed as hostile mausoleums, inaccessible to all but a select few, keeping the people’s spiritual and ceremonial treasure locked away,”29 however, in many cases, they are providing a safe place for the artifacts to be kept. Though the removal of artifacts from their original location is sometimes called into question, this particular interpretive center keeps the artifacts within the community. That way, the preservation of the actual physical artifact is ensured, as well as the preservation of the culture to which it belongs through the continuing education of its children as well as outside visitors.

3.3 Communication

The communication aspect of interpretive centers is one that has been debated extensively in the current discourse of museology. However, the concern is not the need for communication, but instead that form that this communication takes. The new emergence of the interpretive center typology addresses that very question through the explanation that communication is the key to the public understanding and accepting the facility and the culture that it houses. The communication in this sense is done through in-depth contextual education, whereas in centralized museums, the education would be done through general static display.

The Sukuma Museum in the United Republic Tanzania is used as a reference in the reworking of the interpretive center to better communicate material in the article History, Context and Identity at the Sukuma Museum by Mark H.C. Bessire. Bessire, a Fulbright scholar in Museum Studies, focuses on the idea that the display of objects is imperative to the public’s understanding of them. He states that the purpose of revisiting what has already been done with the displays and artifacts is, “to gain better understanding of the permanent collection by reconciling its history, context, and identity within the museum setting.”30 This in-depth look into the current display and that way that it could better communicate is necessary, as trends

29 Henrikson, 94
and people are constantly changing. Most of the same information needs to be presented, however, the presentation methods need to be up to date in order to influence and communicate with a modern population.

Though the intention behind the communication appears to be positive in this case, Bessire also goes on to discuss the methods of communication that the museum utilizes, which are not viewed as successful when compared with modern interpretive center practices. Complimenting each artifact and display is a description of that artifact, which places it in a historical and regional context, however, these are used to give the individual pieces an order of importance, something that modern interpretive centers tend to stray away from. The Sukuma museum also incorporates the local Catholic church, something that is very important to the history of the area, but also the very thing that overpowered the original hierarchy within the culture of the Republic of Tanzania. With the church using the museum as a communication tool, the focus shifts from the artifacts and becomes more of a religious or politically driven scenario.

There are a few communication positives with the Sukuma museum, one of which is that the histories and descriptions associated with the artifacts are published in native languages, as well as English, so that they are not taken completely away from the local population. This desire to place the artifacts in the local context also encompasses the inclusion of a “photograph of the object in situ,” which is the next best thing to being able to have the visitors view it in its original physical location. Bessire also mentions that the museum is working on associating the permanent collection with the local community and population, something that possibly should have happened at the inception of the facility, but is nonetheless a step in the right direction.

The communication of artifacts also poses a problem within an interpretive center when the situation includes a modern culture attempting to design for and represent an ancient culture. History is a matter of interpretation and the purpose of the interpretive center or museum is to communicate that history in an unbiased way; however, it is nearly impossible to do so, essentially because we can never fully step out of our twenty-first century mindset and into that of one thousands of years ago. Stephen Wells also cites this as an issue surrounding the general communication of ideas and culture in An Emerging New Paradigm. Citing a conference entitled The Poetics and Politics of
Representation, Wells quotes a passage from the description:

Poetics, in this case, may be understood as identifying the underlying narrative/aesthetic patterns within exhibitions. The politics of representation refers to the social circumstances in which exhibitions are organized, presented and understood.31

Representation is the key to communication, however, museum and interpretive center curators are entrusted with figuring out how to represent certain artifacts or antiquities. The ultimate goal is for them to do this in such a way that the information is presented to the public in the most accurate way possible, while keeping the modern bias to a minimum. Though the aesthetics of the displays might be easy to come by, communicating social situations is much more difficult to accomplish and have people understand.

Related to the question of how to represent culture is the incorporation of politics into the communication function of a museum, something that is unfortunately very common in archaeological interpretive centers. Historically, when excavation teams uncovered artifacts in other countries, if the country was deemed to be unsafe, the artifacts were exported to the archaeologist’s home country for safekeeping. Though this was common practice in early archaeology, most modern countries are equipped to safely house the artifacts that are found within their borders. However, some countries still housing early exported artifacts are reluctant to return them to their country of origin because of their long-standing incorporation into the permanent collections of some large national museums. Currently, on-site interpretive centers are being designed at stable archaeological sites in what were once unstable countries, with some gallery spaces being designated for housing lost antiquities that were exported sometimes more than 100 years ago. The inclusion of galleries for this purpose is a direct political statement communicating a request for the return of the artifacts taken. The museum is then used as a communication tool for a larger political argument, but nonetheless a relevant one.

This particular struggle is seen most recently at The Acropolis in Athens. The new interpretive center near the base of the hill has been designed and constructed with a large gallery on the top floor designated for housing the original metopes from the Parthenon, as well as other sculpture from the Acropolis architecture; the entire collection

is known as the Elgin Marbles. At the beginning of the 19th century, an English Earl received permission from the Ottoman government to export the marbles back to their country, where they were later bought by the British government. The antiquities have been on display in the country since, spending most of the time in the world famous British Museum. However, now that Greece has become a unified and stable country, the government expects the return of this piece of their cultural heritage and is expressing so with the inclusion of the gallery designed especially for the Marbles in the Acropolis Museum. By leaving this gallery empty, the Greek government sends a message to visitors and the rest of the world that the Marbles are rightfully theirs and they insist on their return. This also helps to communicate to tourists the politics of archaeological excavation and the history behind many of the countries involved, an education that does not always take place within every interpretive center.

3.4 Functional Design/Comfort
Though much thought goes into the three main educational and social functions of the interpretive center, how to design one that is comfortable for all patrons is another concept important to the success of the facility, architecturally. By looking into psychology, sociology and circulation patterns, as well as other factors, researchers have begun to design these facilities to best accommodate the typical visitor. Manfred Lehbruck, a museum architect and sociology enthusiast, addresses the issues surrounding museum circulation design and sociology in his article, Museum, Psychology and Architecture. The main focus is on the use of architecture and design in attempting to create a comfortable learning environment in interpretive and museum facilities. In his belief that the “museum’s fundamental tasks are to arouse and sharpen sensitivity,” he uses psychology to facilitate these tasks in design. Because museums heavily incorporate both the environment and the mind, they form a connection between design and perception that will be useful in the study of museum function.

By studying circulation patterns and trends, Lehbruck is able to establish certain imperatives that a museum design must have to allow the visitor to be educated in the most conducive way possible. One of these important guidelines is the necessity of always knowing where the body is in relation to the whole. This means that the visitor should be able to see the majority of the gallery spaces in the museum and then be able to


navigate them in the way of his or her choosing. This appears to highlight the concept of an open museum plan, which Lehmbruck is not necessarily endorsing. Because two types of people exist—those who wish to be led and those who wish to explore for themselves—the museum must be able to accommodate both types for all visitors to be happy within that space. This entails a different type of function than those previously mentioned, but also an important one when examining museum design and purpose.

3.5 Mental Restoration

The restorative function of the museum is not one that has been widely discussed because it is not what most deem to be an essential function of the museum. However, by including it as a possible function for an interpretive center, it could bring patrons into the facility, as well as help them to better absorb the material that is being presented. Stephen Kaplan, a Psychology and Electrical Engineering professor, Lisa V. Bardwell, a research scientist, and Deborah B. Slakter present this as a research study in their article The Museum as a Restorative Environment. Though they insist that this function is not imperative to the success of the interpretive center, they do stress that it could help in the personal education of some visitors:

> The museum may, in addition to its educational function, play a restorative role. It may, in other words, create a sense of peace and calm that permits people to recover their cognitive and emotional effectiveness.

The article revolves around the museum’s ability to combat a type of mental fatigue, usually associated with prolonged concentration on a certain subject. In the case of an interpretive center with an adjacent archaeological park, the indoor facility, if designed correctly, can act as a restorative environment for the patrons who have just spent a long amount of time focused on the outdoor site. By rejuvenating the visitors with the indoor experience, the interpretive center may be saving the tourists from leaving with a less than satisfied impression of the entire site if they had become exhausted from the concentration outdoors.

To be able to restore the mind with the museum, it must encompass a number of characteristics. First, according to the article, it must be fascinating, something that stimulates the brain further, but does not tire it out. Also, the building must not be very complex in the layout, so as not to cause more fatigue to the typical visitor. The researchers cite this as an example after interviewing patrons of several museums: “Visitors who reported

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34 Lehmbruck, Manfred. 60-64
understanding the plan well enough to tell someone else where to locate it, left the museum more restored and less harried than those who did not."36 One of the other interesting conclusions that the researchers made was that using the museum as a restorative environment in no way impacted negatively on the education that was meant to take place there. It appears that this is a function that can be added without destroying any of the other functions that are necessary for a successful interpretive facility, and would therefore be a benefit.

3.6 Research Conclusions

The essential purpose and functions of interpretive centers and on-site museums appear to be shared by most museologists and researchers in the subject area. The standard functions of study, preservation and communication are the most widely accepted, however, the way that the building functions, and the possible new technique of mental restoration is one that could soon be seen as mainstream when discussing how to design a museum. By the continuing research in the area, these functions can be put to the test in a design case study for an on-site interpretive center at a well-known archaeological site.

4.0 Precedent Studies

Studying and analyzing successful and also unsuccessful built museum projects is one of the most important steps to developing a new interpretive center project. Many projects incorporate specific features that enhance the overall architectural success of the project and allow visitors an integrated and enjoyable experience. However, these projects can also be an educational tool in themselves by providing a design learning experience in which particular features do not add to the general achievement of the building project as a whole. The analyses provide a more in-depth look into the finished interpretive center and how the new typology can be improved.

4.1 The New Acropolis Museum at Athens

The New Acropolis Museum at Athens by Bernard Tschumi is a contemporary example of how to incorporate a museum into an ongoing excavation of an ancient site, as well as display the found artifacts in an extremely successful manner. Originally designed for a competition administered by the Greek government, the 21,000 square meter building was expected to be finished in 2004 in time for the Athens Olympic games. The design revolves around a few key concepts that incorporate the building techniques of the modern times and the ancient beautiful qualities that are to be housed inside it.

The one of the main concepts behind the design according to Tschumi is a tectonic and programmatic element included in the building. This is celebrated by his incorporation of a difficult site at the base of the Acropolis into an architectural opportunity through the design of a very simple but specific building, intentionally reminiscent of ancient Greek building practices. The rooms themselves are programmed for precise purposes and artifacts, allowing for careful planning of displays before the structure itself is even built. Though this allows for very aesthetically incorporated exhibits, it also causes a difficulty for redesign of displays if for some reason they need to be moved. However, the intention behind the architecture is a positive step in incorporating architecture into the learning experience of the patron. One exemplary example of artifact integration is the Parthenon room [Figure 4.1.1], where the Parthenon Marbles will be displayed in the exact location and placement they would be on the actual Parthenon, allowing the viewer to see the marbles in as accurate a context as possible, while still allowing them to be protected from weather conditions by being located in the building. The cardinal orientation of the marbles on the original site was one aspect behind the
design of the Parthenon room, as well as location on and around the original building atop the Acropolis. Because of the glass curtain walls surrounding the room, the contextual education is furthered by having almost exact lighting conditions that the marbles would have originally had atop the Acropolis hill. Though for the sake of preservation the lighting is actually controlled, the visual to the visitor is reminiscent of the original condition, showing the sculptures in an ideal condition. This is a successful way of integrating architecture and what is displayed inside it.

Another concept behind the design is the promenade [Figure 4.1.2], a typical museum spatial organizer, but done in a very pleasing way in this building, both aesthetically and functionally. The promenade encourages a very specific circulation through the building touching on the periods of archaeology on the Acropolis in chronological order. This allows the visitor to understand the progression of the buildings and artistic practices of the different time periods and how they relate to each other without the viewer having to navigate the path and progression his or herself, as can often come with a differently planned museum. Because the path is identified for the visitor, some patrons will be uncomfortable by being forced to travel in a certain path, which
is one problem that I will be attempting to rectify in my interpretive center design. This path begins in an entryway that includes all non-exhibit spaces such as museum store and auditorium, and also leaves room for temporary exhibit spaces, allowing the museum to expand if needed, or else display traveling exhibits that relate to the Acropolis. With this layout, the spaces not intended for archaeological purposes are all together and not interrupting the flow of the promenade as it navigates the remainder of the building.

A very successful feature of the promenade and gallery spaces is the large amount of natural light used in the design [Figure 4.1.3]. Not only does this provide for a more comfortable experience, but also since the light is brought in through large window walls, patrons are able to look out at the ancient Acropolis hill from the museum below and develop a visual connection to the antiquities. Along these walls are artifacts that can be left in light, creating a continuous flow of the exhibits instead of a break in artifacts for a hallway; such is the case in many modern museums where too much natural lighting is a concern. At the very top of the museum, in the Parthenon Gallery, the visitor is not only able to see the actual Parthenon marbles, but also the Parthenon on the Acropolis as it stands today, with a large amount of natural

Figure 4.1.3 - Transparency diagram illustrating glazing
light surrounding the features. The window walls in this room also provide access out to an outdoor viewing area where visitors can take photos of the Acropolis hill. A caution to all the window walls would be the excessive heat brought on by sunlight in Greece, which has a similar climate to Turkey, but these specific walls were designed for the climate, allowing for a reduction in transmitted heat into the building and also providing what some reviewers refer to as “ideal light for sculpture viewing.” This building definitely brings in an integration of popular features, such as natural light and view and incorporates them into a difficult climate to make the experience great for the visitor.

The architectural design of the façade of the building is another successful example of museum architecture. Because of its location adjacent to the famous Acropolis, the museum could have been a failure if it detracted from the beauty of the ancient site. However, this museum incorporates the jagged rock at the bottom of the Acropolis into the architecture. There is a balance between the building architecture and that of the existing Acropolis, not only in surface materials used, but also the climate conditions that were mimicked in the galleries. The viewer not only feels like he or she is outside with the large amount of natural sunlight, but can also see the entire surrounding exterior, which helps to negotiate the enclosure of the building. Also, the building uses mostly glass and marble [Figure 4.1.4] as a way of incorporating one ancient building material into the design and having the other major material be an enhancement, not detract from the marble. This allows for a clean transition from the ancient architecture on the hill into the modern architecture at the base, a very significant feature for any museum of ancient studies. The other utilized material is a form of pre-cast concrete that reflects the modern city of Athens, which also surrounds the site and can be used as a reference to the building blocks that create the fortress of the Acropolis holding the hill in place.

The site plan of the new museum is a good example of how to deal with preserving certain areas of an archaeological site, while still building fairly close to it. The shape of the lower level of the museum is taken from severe angles in site conditions where archaeological digging is still occurring and the soil cannot be disturbed. The building is able to then sit between many ancient sites without disturbing current excavation, a benefit to the site as well as the visitors because they are able to view real excavation taking place on a daily basis in the summer. Building around
ancient monuments is a major problem in places such as Greece where so many ancient sites exist and the need for storing and showcasing archaeological finds is at a high. The Tschumi design proves to be successful in working with the current and future excavations of the area and incorporating them into the design instead of working around them to ignore them completely.

In general, the New Acropolis Museum is a fantastic precedent to use when looking into how to incorporate the study and excavation of ancient artifacts into architectural form, and also how to integrate that form into the surrounding context of the city as well as the ancient site. The natural light and designed flow of the spaces allow for a self-guided tour of the area and a great view to the original site that the artifacts came from. The museum offers several detailing features to make it a pleasant experience for any visitor, even if they are not architects or archaeologists.

4.2 The Interpretive Center at Delphi

The ancient sanctuary of Delphi, Greece has long been a source for extensive findings in the archaeology world. From the sanctuaries for Apollo and Athena Pronaia to the massive stadium and theater high on the hill, the site has
been thoroughly researched and excavated by French archaeologists since its rediscovery in 1893. Because of the large quantity of artifacts being unearthed at Delphi, a new interpretive center was needed to help the antiquities within their original context. As Delphi is located atop a mountain within fairly rocky terrain [Figure 4.2.1], the site can most definitely be considered sensitive and difficult to develop. The ancient complex also spreads over a large portion of the traversable area on the mountain, leaving little room for any new construction. Therefore, when the original interpretive center was renovated, architects needed to use creative thinking in the planning of the structure. Following other precedents set before them, the outcome was a linearly-progressive museum, with one main spine and galleries located off of that spine. The long, stepping down form of the building [Figure 4.2.2] appears to bridge the mountain peaks with the valley below. This technique also allows for the building to slightly step down in scale so that it is proportional to the surrounding ancient buildings. It does not appear are overpowering as it could it, and it is also easily within the difficult constraints of the site.

To integrate the structure further, light stone block is used as a veneer, which is very similar
to the blocks used to build the structures at Delphi [Figure 4.2.3]. The color is similar to that of the earth in the area and helps to blend the building in even further, not allowing it to take precedence over the other buildings on the site. The design is simple and flowing and really appears to accentuate the surrounding architecture, not detract from it. While the exterior features allow for the building to fit within the context of the site, the interior design is as much or more important to the display of the antiquities themselves. The interpretive center uses light in an extremely positive way, allowing for the artifacts to be highlighted both individually, and as a comprehensive collection of objects. The layout of the building allows for a large amount of natural light, which really helps to not only make the visitor comfortable, but also accentuate the found artifacts. One room where this is definitely present is the room of the Charioteer of Delphi. Once a part of a large and intricate sculpture, the remaining charioteer is the high point of the Delphi collection, and it therefore displayed prominently at the end of the hall [Figure 4.2.4], in the last exhibit space. With a large skylight above, the charioteer glows in the diffused sunlight, with smaller exhibits and pictures around, showing it within its cultural context, while the light shows it in its original prominence.
After exiting the Charioteer Room, the promenade files passed a large wood model of Delphi, depicted as it would have been in ancient times. This appears to be the last piece in the puzzle after viewing all the various antiquities and architectural pieces displayed in the center. What was seen is now put into the local context right before returning outside to look over the still-existing building foundations of the reconstruction model.

Though the interpretive center at Delphi is much smaller than the one needed at Troy, it shows excellent intent on tying the museum into the landscape and showing the artifacts and architecture in a regional and historical contextual way. Much can be learned from the distribution of sunlight to help highlight the artifacts in a natural way, while still taking precautions to protect them. Using the local stone to blend the old and new buildings also had a positive impact on the local community, hopefully creating more regional and national pride in the site.

4.3 SunWatch Indian Village and Archaeological Park
SunWatch Indian Village and Archaeological Park is one of many Ohio archaeological parks devoted to the research, excavation and interpretation of the Fort Ancient period Native Americans. Discovered in the 1960’s on a site previously known as the Incinerator Site, the SunWatch area was originally destined for the expansion of a local sewage treatment plant. Thanks to the efforts of John Allman and Charles Smith, amateur archaeologists, the site was saved and consequently excavated.

The site itself dates back to around 1200 AD when it was inhabited by the Fort Ancient Indians, a group of early farmers inhabiting many other sides in Ohio and the Midwest. As the Indians were dependent on various natural resources, the Great Miami River, located beside the site was likely one of the factors in the selection of this particular location. The soil around the river was fertile and ideal for farming, which allowed for plenty of planting area and subsequently good nutrition.

The village, partially reconstructed over the remains of the original buildings, was a carefully planned elliptical community. The development was designed in zones, one each for burials, buildings, work places and a stockade. The overall area of the remains of the village is roughly 3 acres. In the center of the complex is the Central Plaza, an oval complex, most likely used for
community gathering space. The center of the plaza houses a 40 foot red cedar pole [Figure 4.3.1], and it is believed that rituals, games and dancing took place around the pole in the central area. A short distance away, four additional shorter poles were arranged linearly, perpendicular to the center pole. This combination of poles is thought to have been a central solar calendar.

The entire site consists of eighteen structure foundations, originally built of wattle and daub construction, of which the south houses have been reconstructed [Figure 4.3.2]. Though the archaeological site no longer has active seasonal excavation, the visitor is able to see from changes in elevation where digging has taken place in the complex. An interpretive center and administration building [Figure 4.3.3] resides in a prairie of native plants. The prairie itself is meant to appear as it did in the time of the village inhabitation. The entire site works with the interpretive center as an open-air museum, tying into the exhibits inside the building.

Since excavations began in 1971, SunWatch Indian Village has been a educational opportunity for anyone interested in the lives, art and history of the Fort Ancient Indians. The complex is fully functioning as an interpretive center and open air museum, offering the visitor a concise history and
exploration into the background of its inhabitants. The experimental archaeology done at the site, including the reconstruction of several of the main structures allows for an interactive approach to historical interpretation.

Design Analysis: The circulation through the building functions very well, allowing the visitor to pass all the main exhibits. The museum area is easily accessed from the front entrance and the path through the rooms creates a comprehensive view of the history, artifacts and other presentations. The small display area [Figure 4.3.4] is divided into sections based on categories of exhibits with focuses on archaeology, culture, architecture and anthropology. However, the museum is too small to house everything needing to be displayed. Exhibits, though functional are squeezed together, making the museum rather cramped.

The circulation continues through the museum and out onto a sundeck overlooking the reconstruction and excavation area [Figure 4.3.5]. The visitor can see the entire site from this deck, as well as the re-growth prairie. This helps to put the reconstructed buildings in a contextual landscape. By including this feature, the visitor is able to move from the museum of artifacts seamless into where they were
found. This assists in the temporal and contextual education of the visitors and makes understanding the Fort Ancient People much easier for those with little education in the area. After leaving the deck to go down to the village, the visitor travels along a path with high plant life blocking the view to the village except for small intentional peeks at it. By traveling through the natural landscape, the visitor begins to understand the village in a historically contextual way. The only views into the village are beyond the natural re-growth prairie, allowing the village to be seen as it would have when it was originally inhabited.

The open-air aspect of the complex is very controversial for archaeologists and historians because reconstruction is not always viewed as the correct form of interpretation. However, as well as reconstruction several buildings, other original foundations exist so that the visitor can learn from both the ruins and the reconstructions. Overall, however, the effect of the reconstructed houses provides a probably accurate look into the daily lives of the Fort Ancient Indians.

EXTERIOR: The interpretive center exterior is an ideal solution to the one of the most common problems with archaeological architecture. New construction on an excavation site should not overpower or draw focus from what is being presented in the form of artifacts or architectural ruins at the site, so any new construction must be done with a careful consideration or the area around it. The SunWatch interpretive center uses natural materials on the exteriors with colors closely related to that of the waddle and daub reconstructed houses. Blending in to the re-growth of the prairie, the building contains all major functions needed to run the site, but does not in any way overpower the ancient architecture below it. It is integrated into the landscape, allowing for the visitor to enjoy the overall view to and from the site.

INTEGRATION: The interpretive center also allows the visitor to feel engaged with the outdoor site by the inclusion of an outdoor viewing area, which runs the entire length of the excavation area. The deck allows for views from an elevated area, which enables the visitor to the entire complex as a whole from slightly above, allowing for an ideal picture of the site plan. The visitor exits the museum out onto the deck, where he or she then travels down to the reconstructed complex. The ramp down to the complex goes through the re-growth prairie, allowing the viewer to engage in the surroundings of the complex as it would have been at the time of the Fort Ancient Indians. Informative signs are speckled throughout the trail
offering historical timelines of the occupation of the site with more known worldly events, and also with information regarding the landscape and the practices of the Fort Ancient Indians.

INTERIOR: The interior of the interpretive center is a small example of a museum, but a significant one. The researchers at SunWatch have essentially reconstructed the daily life of the Fort Ancient Indians within the small area, allowing for the visitor to be educated in everything from cooking the native plants, to clothing and shoes. Small dwelling areas are reconstructed also with a typical domestic arrangement of goods [Figure 4.3.6]. In the center of the museum is a small-scale model of the entire SunWatch outdoor site with all buildings that have produced evidence reconstructed as they once were. This model is visible from all areas of the museum and is interactive with a recording describing certain areas of the complex while that area is being lit from above. Within the museum area there is also a small theater with a short film about the Fort Ancient Indians. This helps to introduce visitors to the entire experience by covering many topics in a short period of time.

RECONSTRUCTION: With the extensive amount of artifacts and resources that the archaeologists have uncovered at SunWatch, researchers were...
able to reconstruct and contextually place many of the artifacts for visitors to see in a fairly accurate way. These reconstructions are accompanied by a recorded and written explanation of all the objects being presented. This method of exhibit presentation helps the visitors to observe the artifacts in an original setting, allowing them to picture the daily life of the Fort Ancient Indians, something which helps with the general education and experience of the visitors. Surrounding the reconstructed exhibits are areas showing the methods and results of the archaeological work. Some areas show partially excavated animal carcasses, and lead the visitor through the process of uncovered remains [Figure 4.3.7]. That way, the viewer gets a sense of the step-by-step process of archaeology and is able to place all aspects in a contextual manner.

SunWatch is a great example of what American archaeologists and designers have done to assist in the education of the Fort Ancient Indians. The interpretive center and its connection with the open-air museum provide visitors with a unique experience and a great contextual resource on the daily lives of this civilization.

4.4 Precedent Study Conclusions
Though each interpretive center is unique in
design and methodology, all represent successful examples of displaying artifacts and architectural remains in a contextual manner. Each deals with the surrounding sensitive landscape in an appropriate way, by providing new construction within viewing distance of the archaeological site, without drastically disturbing the ancient remains. However, these projects must also be viewed and interpreted with caution, as none of them are in the country of Turkey, and therefore each has different regional and political implications than Ancient Troy. Overall, the projects all represent aesthetically pleasing new construction on ancient sites and key elements from each can be incorporated into the interpretive center at Troy.
5.0 Ancient Troy: A Case Study
Now that it has been established that on-site interpretive centers can revolutionize the way that artifacts and architectural remains are presented to the public, the typology needs to be tested in a case study to establish what architecture can do to facilitate the public’s contextual education. Ancient Troy in Turkey is a perfect archaeological site to use because of its well-known status in the mythological ancient world, and the modern understanding, or rather misunderstanding, of what is actually historically accurate regarding the site. Through this case study, I hope to set an example for other archaeological sites, regarding what they can do architecturally to present information to the public in a way that is conducive to the visitors’ understanding of the ancient civilization.

5.1 Background
Contextual education regarding ancient civilizations encompasses a number of subjects with a connection to that civilization that many museums may not originally see as related. One of these subjects is the ancient and modern regional context of the site as a whole. For Troy, the history and development of the region surrounding the site is as layered and complex as the site itself. Though for many on-site museums a look at the architectural styles of existing buildings and their historical context would help to integrate the new interpretive center into the ancient landscape and modern town, when dealing with a site as complex and varying as the culture of Troy, a certain neutrality is needed with regard to architectural style so as not to privilege any particular phase in the site’s history, or group of people inhabiting it at the time. Even in ancient times the site was heterogeneous in architecture, and the new construction should help to emphasize that by not picking a particular style related to the ancient architecture.

5.1.1 General History
The country of modern Turkey is relatively new in relation to other countries in its general proximity, but it has one of the longest and richest cultural traditions and evolutions in the world. Once occupied by over 13 different cultures, Turkey’s extensive architectural and cultural histories have influenced not only the modern country, but also how we interpret the ancient civilizations that once resided there.

The Republic of Turkey [Figure 5.1.1]—its official name—is considered transitional, as it lies between Europe and Asia and houses the Sea of Marmara, the transition point between the two

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37 Troy is believed to be at the center of Homer’s famous poem, *The Iliad*. 
continents. Because of this location, the modern culture contains a mix of both Asian and European ancient cultures, and allows Turkey to act as an ambassador to both continents, through the influence of these ancient cultures.38

One of the most important sections of Turkey that provides a great deal of information about the country’s history is the area included in the vast Anatolian peninsula [Figure 5.1.2]. Settlements from various cultures here date back to the early Neolithic period, from which inhabitation continued into modern times.39 Various groups from the ancient Greeks to the Semitic peoples resided in this area at one time or another and each left an important mark on the landscape, either through architectural remains or artifacts representing daily life. The Hittites were the first empire to control a large portion of Anatolia, dating all the way back to the 18th century BC, after which came the Phrygians, the Cimmerians, the Lydians, and the Lycians.40 Around the same time period, the Ionians were settling in another section of Anatolia, bringing with them the influence of the Greeks that would continue until

the area was taken over by the Persians in the 6th century BC. Eventually the area was recovered by the Greeks when Alexander led his conquest through in the 4th century BC. The last real empire to take control of Anatolia, and consequently a large portion of Turkey before the early modern period, was the Roman Empire in the 4th century CE, when Constantine I united the area into the Byzantine Empire, placing the capital of the empire in Byzantium, which later became modern Istanbul. Once a nomadic people from Central Asia, the actual Turks established themselves in Anatolia, setting the foundations for the Byzantine and eventual Seljuk Empire, which ended because of the Mongols.

Osman I was the first to reestablish an empire in the area, which began the Ottoman Empire, one of the longest and most influential architectural periods in Turkish History. The Ottoman Empire became involved with WWI as a German ally; that decision is what led to its eventual downfall through the Treaty of Sèvres, following its defeat by the Allied Powers, who eventually occupied a large portion of the country. This occupation was protested by the local people and led to the Turkish National Movement in the 1920’s. The Movement spurred a Turkish War for Independence, intent on reversing the stipulations set down by the Treaty of Sèvres, and by 1923, the Republic of Turkey was united and established, owing in large part to the workings of Mustafa Kemal Pasha, better known as Atatürk.

The colorful Turkish past has left the remains of many different architectural styles throughout the country, however visitors can see the most influence from the Ottoman Empire because of its recent date. These histories mix to form a unique architecture with influences mainly from the east [Figure 5.1.3]. However, in recent years, another more western style has begun to emerge in the country as well, with the inclusion of a number of skyscrapers and high-rise buildings [Figure 5.1.4].

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44 Kinross, Patrick (1977). The Ottoman Centuries: The Rise and Fall of the Turkish Empire. Morrow.
in the largest and most populated cities. Each individual building appears to showcase features from one or more culture, making the cityscape an eclectic blend of the old and new building forms.\textsuperscript{46} It was the ambition of Atatürk to encourage the Turks to look toward the future while revering the past as an origin of the people and culture, and this ideal is very apparent in its architectural representation.\textsuperscript{47}

Revering the past in Turkey is easy, as the country accommodates a number of archaeological excavations within its boundaries, including the famous sites of Çatal Höyük [Figure 5.1.5], Ephesus [Figure 5.1.6] and Ancient Troy (Illium). Each year, tens of thousands of visitors come to the country specifically to experience the home of these ancient cultures and become a part of the current history of Turkey.

Because of its rich remains, Turkey has always been an area of vast importance in the archaeological world, not only for famous sites such as Troy (Illium), Çatal Höyük and Ephesus, but also because of the wide range of cultures that once resided in its varied landscape. Modern Turkey has been the home to a minimum of


\textsuperscript{47} Libero, Chiara. \textit{Turkey: The Land of the Crescent Moon}. White Star S.P.A., Vercelli, Italy. 2006. p.16
thirteen different civilizations over the last several millennia. These cultures have left behind extensive traces of evidence across the Turkish landscape, creating a considerable need for archaeological study and display for modern scholars. To meet this need, the Turkish government has established a system for managing archaeological site museums, which helps to set a precedent for new, developing site museums in the country. This management model, written by members of the Museum Studies Graduate Program, addresses many needs of the site museum, including an important definition of a site museum given by the government, rough square footage and space requirements, and examples of current, successful small scale site museums that have already been constructed.

Turkish law, one of the oldest in the world regarding archaeological sites, states that the role of site museums is ‘to protect and to evaluate those cultural and natural properties requiring protection and carry the quality of state property.’ Though this is really presented as a way of keeping antiquities in the country of Turkey and guarding against display of these artifacts in other museums, it helps to assure the presentation of these antiquities in a contextual manner; specifically, likely in the place from which they were excavated and established. In the same set of laws, the state property is defined as ‘all movable and immovable cultural and natural assets requiring protection found in or on lands in Turkey,’ which encompasses any antiquities found at archaeological sites. This assures the protection of these artifacts by the government, discourages selling antiquities on the black market, and encourages state property to be displayed in its country of origin. Though these guidelines keep the artifacts within the region they were excavated, as previously stated, there is more that can be done with site museums to assure a quality and expansive experience for archaeological site visitors.

5.1.2 Specific History

The city of ancient Troy has a rather unique history even within the Turkish archaeological world. Believed to be the site of the Trojan War that Homer was describing in his great epics, people have come from all over the world to experience the archaeological ruins for themselves. However, whether the current archaeological
site known as Troy is the famous location of the possibly-mythical Trojan War, or a site considered fascinating just on its archaeological merit alone, it will forever be an area of constant study in the architectural and archaeological professions.

Though the legend of Troy is compelling in itself, whether Homer’s stories are true or not, the actual archaeological site recognized as Troy is unique without the background of the story. Also known as Truva in modern Turkish, and Illium to the ancient Romans (but referred to as Hisarlik, which means “the fortress” before the excavations in the 19th century), Troy encompasses thousands of years of architectural and artistic history, dating all the way back to around 3000 BC. The archaeologists have uncovered the remains of what they believe to be many different layers of civilization at Troy, the most recent dating to the Byzantine period; the site was abandoned for good in the Middle Ages.  

Michael Wood, author of In Search of the Trojan War, explains a great deal about the entire history of the site while examining the appeal that rediscovering it has had to generations of people. He is quick to point out that the site was never really forgotten, citing that it was acknowledged in travel journals from the Middle Ages, as well as from a Spanish ambassador as late as 1403. However, though these travelers to the area documented what remained at the site, there was still skepticism about whether the site that was described was really that of the ancient mythological city.

The modern rediscovery is also still under much debate in the archaeological world. Though the credit has traditionally been given to Heinrich Schliemann, an amateur German archaeologist, there is some evidence to suggest that it was really Frank Calvert, an American consul, and his family that first identified Hisarlik as the location of the ancient citadel. Having studied the Homeric epics in-depth, the Calvert family was quick to begin the search for Troy by identifying other key geographical features named in the stories. Though the Calvert brothers differed slightly in the exact location of Troy, the well-respected family purchased the land around the site in the mid-1800s after Frank determined that there were more ruins hidden beneath the soil of New Illium atop Hisarlik [Figure 5.1.7], something that he shared with Heinrich Schliemann. Determined to excavate the hill, Calvert applied for funding from the British Museum, but they were skeptical about funding the project and repeatedly asked for more information. Unable to gain funding for

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the excavation, Calvert was only able to excavate a portion of the hill and was therefore unable to prove that Hisarlik was the site of the ancient city, thus enabling the Heinrich Schliemann, another avid Homerian to first excavate the site as Troy.53

Though not much is known about Schliemann’s training in archaeology -- that branch of science was new and fairly unprecedented in the modern world -- he was a great scholar of Homer and very interested in the romantic aspect of classical civilizations, especially the one associated with ancient Troy. However, even though the site was established and Schliemann was able to gain an excavation permit, he did not have full reign to excavate exactly as he pleased. The requirements included Schliemann himself paying the excavation costs and leaving the architectural ruins in the state that they were found. Ever the strong-headed individual, Schliemann ignored many of the requirements set down by the Turkish government at the time. He demolished existing later structures to gain access to the Bronze Age material, the time period that Homer was believed to have been describing. Consequently, though much knowledge was gained about the Aegean Bronze Age, other artifacts and architecture were

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destroyed in his quest. The overall gain from the rediscovery of Troy is evident in the revolutionary knowledge that researchers now have about the daily lives of the Trojans, however the detriment that this caused to the site through Schliemann’s questionable methods is still a notorious example of poor excavation technique. Today, the site remains pockmarked with the evidence of previous excavations, irreversible damage to the several layers of civilization [Figure 5.1.8].

Wood also identifies the major concerns regarding the interpretation of what remains lie at the site of Troy in *In Search of the Trojan War*. What exists at the site today is solely dependent on what the original excavation teams deemed to be important and what has since been preserved as such. Therefore, our understanding of the site consists of what Schliemann, and later archaeologists Dörpfeld and Blegen, wanted us to understand through their research. That alone raises the issue of the history of the site, since history itself is an interpretation and can be biased. The existing categorization and mapping of Troy was done over several years, and though the maps are still used today, different excavations have taken place, as well as further mapping and master

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planning of the area, with a reference to the original intentions behind the excavation of the site. The remains of the earlier excavations can still be seen today, especially the large trenches that Schliemann originally dug through several layers of the site, and though they are a permanent reminder of obsolete excavation methods, they are also most likely responsible for the discovery and documentation of Ancient Troy.

As it exists today, the understanding of Troy is that the most important age for its development was the Aegean Bronze Age, just as Schliemann believed, most likely late into it. This would have been the time period that Homer was describing in his epics, which helped to locate the city, and J. V. Luce describes it as “one of the major strongholds and trading centers of Asia Minor in the Late Bronze Age.” This description helps to identify just how important Troy would have been in ancient times, even without being associated with Homer’s epics. The current archaeology is helping to interpret not just the most important ages in the history of the city, but also the everyday life of the normal citizen. The excavations and documentation are currently being carried out by researchers from the University of Tübingen, which has been running the site since 1987 AD. The researchers and archaeologists feel that it is in the everyday workings of Troy, in addition to its high achievements, that public would really find an interest because of the vast knowledge of this that each new artifact is presenting.

Through their discoveries the archaeologists have been able to determine that weaving was a large part of the daily life of the Trojans, as demonstrated by the large number of loom weights and spindle whorls that have been found [Figure 5.1.9]. Also, the architecture at Troy presents a different picture from many Aegean sites, where the Hellenistic and Classical architecture is what generally remains and is most recognized. Though Troy also had a Classical Age, the Bronze Age civilization was very well developed and presents a different type of architectural remains that would be interesting and unique to the average visitor, however possibly difficult to visualize. To assist in the interpretation of the levels of Troy, University of Cincinnati’s CERHAS (Center for Electronic Reconstruction of Historical and Archaeological Sites), and the Troia Projekt at the University of Tübingen, reconstructed each of the layers to demonstrate what the buildings may have looked like, something that is difficult for the general public to conceive without the use of a visual aid. These reconstructions [Figure 5.1.10] also help to show

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the size and power of the city during its greatest profitable age. Though the epics and stories are definitely the most known by the public, the actual history of Troy is a vast and complex timeline, with interesting areas of study outside the typical Classical archaeological site. The opportunity to educate the public on this history lies in what can be done through an architectural solution to facilitate expressing these key historical periods.

5.2 The Landscape and Site
The landscape surrounding Troy also presents a vast architectural opportunity for any new construction to the area. Though the main archaeological site remains atop a small hill, the majority of the surrounding National Park is rolling countryside with a far off view to the Dardanelles to the northwest [Figure 5.2.1]. J.V. Luce describes the landscape that visitors see when approaching the famous site in his book *Celebrating Homer’s Landscapes: Troy and Ithaca Revisited*:

Visitors nowadays come by road from the east, where the approach is level and easy. If one looks to the left just before entering the main archaeological site, one sees a tree-dotted area that also formed part of ancient Troy. A broad apron of ground here extends southwards from the Pergamos for about five hundred yards, sloping gently
downwards to the plain on three sides. This landscape surrounding the architectural remains represents a connection to the ancient Trojans in a number of ways. The views of the landscape are intact, even though the coastline would have been much closer and likely visible from the ancient city. By retaining these distant views and landscape, and because of the identification of the area as a National Park, that connection is preserved for future generations.

Also, an in-depth look into this landscape through the museum helps in the contextual education of the reason behind the main citadel lying atop a small hill. Though it is imperative to the education of the visitors that some of the galleries include at least a distant view to the archaeological site, placing the interpretive center in the a way that interrupts the view from it would actually end up being detrimental to the entire purpose of contextual education.

Though Luce’s poetic description leaves the reader with a very romantic view of the area, Michael Wood also describes the landscape surrounding the ancient site and how the archaeological ruins are seen by the typical traveler to the area:

The first thing that you notice is that the ruins exist at several levels and that there is not, as it were, one single Troy. This is compounded by the difficulty of distinguishing features of the different phases of Troy and of seeing where the surviving remains fit together; there is no coherent picture.

This is a description that is very important because it essentially defines the reasoning behind the need for an interpretive center. Though the archaeological remains and landscape are compelling to visitors, there is little within them naturally that provides education about the reason behind their state. An interpretive center would address that connection with the landscape and help to make rectify the confusion that the archaeological site creates with its current state.

Though much as been done at the excavation site to assist in the way-finding of tourists [Figure 5.2.2], a new facility is still needed to provide a further look at the levels of the site and the reasoning behind their creation. Wood describes how the overall condition of the site has been changed, leaving it, in a way, incomprehensible:

For a start, most of the site is now destroyed: classical builders erecting a new civic centre leveled the hill and swept away much of the interior of the earlier cities.

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Archaeology has done the rest; of necessity archaeology destroys the very thing it examines, for to find out facts it must remove the evidence by lifting it out of the ground. So, as the visitor strolls over the site today, only a few jagged pinnacles give an idea of the original height of the hill before excavators attacked it from 1870 [AD] onwards.

It is important to remember that though these architectural and archaeological ruins represent much to the researchers and historians working with them on a daily basis, the general public will not be able to identify what was present in the ancient world, and what occurred through early archaeological methods. This is typical of polychronic archaeological sites where demolition or even reconstruction has occurred, and the interpretive center would also need to address this type of change in landscape, even though it did not occur in the region naturally. Because of Troy’s extended history in the ancient and modern landscape of Turkey, extensive information will need to be portrayed in an interesting way, so as not to leave the tourists feeling overwhelmed with the complexity of the entire archaeological site and its practices, as well as its place within the historical context of the country.

Figure 5.2.2 - Existing signs posted around the archaeological site providing tourist information
Another conflict associated with the site is the protection of the surrounding active excavation area and the location of Troy within a national park. The Republic of Turkey has established a zoning system associated with new archaeological construction to ensure that architectural artifacts and ruins that are unexcavated remain intact and undisturbed. Consequently, though it would be beneficial to locate the building as close to the excavation as possible for educational purposes, it would set a bad precedent to build within zones 1 and 2 of the site [Figure 5.2.3] possibly damaging unexcavated remains. Therefore, a site with a visual connection to the ruins that does not disturb the excavation site is necessary, even if not optimal for educational purposes. The surrounding national park must also be preserved, because of its availability for visitor hiking and exploring. Damaging the view into and out of the national park would compromise the park as a whole, and ultimately be detrimental to the archaeological site as well.

After observing and diagramming three different possible sites, the best area for new construction appears to be to the south east of the archaeological site, in a small olive grove [Figure 5.2.4]. The area is downhill from the site, so even building a multi-storied structure would
not interfere with the view from atop the ruins. However, because of its location at the bottom of a hill, the rise from the ground level at the site to the archaeological ruins is close to 30 meters, most likely requiring an observation deck of some kind to see the site as a whole, though it still maintains nice views across the lower city of Troy II [Figure 5.2.5] and into the base of the archaeological site. The olive trees occupying the area now, though native, can be moved and replanted in another area with little difficulty and disturbance to them. Also, because the building would be facing the archaeological site at the north side, this provides ideal natural lighting for the antiquities being housed inside it, and for staff workspaces. By facing the north, the galleries are able to have windows out to the site if necessary without letting in a large amount of direct sunlight that would be both harmful to the artifacts, and uncomfortable for the visitors attempting to look out to the archaeological site. The side of the building facing the south can then control the direct sunlight for optional solar gain purposes without interrupting the view from the galleries.

Another consideration when designing new construction anywhere Turkey is the high level of seismic activity in the country. Any new construction must be safe for visitors and staff, as
well as the artifacts, and be able to withstand an earthquake. Also, as stated in *Damage and Failure Pattern of Prefabricated Structures After Major Earthquakes in Turkey and Shortfalls of the Turkish Earthquake Code*, any architect must be careful when specifying a prefabricated structure because for the specific seismic intensities in Turkey, they are most likely to fail, especially because the requirements to meet in the codes are not adequate.\(^\text{59}\) As far as construction is concerned, the design should stay away from a prefabricated structure and also go above and beyond the requirements in the code to ensure the absolute safety of visitors to the site and building.

5.3 The Politics of Troy

Though the national and international politics surrounding this ancient site are in general not a focus of this thesis, it is necessary to mention those directly related to the architecture of the new interpretive center. As previously mentioned, it was customary in early archaeology for artifacts to be removed from a country deemed unsafe, and Schliemann’s excavation at Troy held no exception. Though at the time of his breaking ground the country was united, Schliemann was not intent on keeping the entire wealth that he found within the country, even when under the eye of an official from the state overseeing the excavation and removal of artifacts.

During the excavation, a large collection of gold objects was uncovered and named Priam’s Treasure, after the famous Bronze Age king of Ancient Troy. The discovery included diadems, jewelry and cups [Figures 5.3.1-2]. The majority of these items were quickly removed from the site without the knowledge of the Turkish official and later discovered to have been taken to Athens and deposited in a bank. Schliemann account of the incident is somewhat skeptical to scholars, however, because it involves his wife, who was later determined to not have been present at the site during the discovery. *The World’s Greatest Archaeological Treasures*, edited by Paul G. Bahn, describes the situation being resolved when it was discovered that the pieces had been removed:

> Furious at the theft the Turkish officials instituted legal proceedings against Schliemann, resulting in a hefty fine. Although he paid the fine and in total some 50,000 francs to become the legal owner of the treasures, Schliemann was unable to return to Troy for several years to resume his excavations.\(^\text{60}\)

Schliemann later donated the treasure to a Berlin

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\(^{60}\) Bahn, Paul G. *The World’s Greatest Archaeological Treasures*. Barnes and Noble. New York. 64
museum, where it was later lost for over 50 years following the destruction of Berlin in World War II. Then, in the early 1990s, Russia admitted to keeping the famous artifacts, which now remain on display in a museum there.61

Though exporting artifacts was common practice in early archaeology, now that Turkey is stable and attempting to establish itself back in the archaeological world, it is widely believed that Priam’s Treasure should return to Troy, to be part of the permanent collection of the interpretive center there. The collection is so large and impressive that it would not only help in the education of one of the more important time periods for the Trojans, but also attract people just wishing to examine such a glorious and expensive collection of artifacts. In the Concept Master Plan for the archaeological site of Troia, a section on the Troy Museum outlines how the current researchers feel about the reacquisition of the treasure:

The Moscow exhibition last year of the so-called “Treasure of Priam,” which Heinrich Schliemann found at Troy, caused much comment in the international media. Less well known is the fact that the finds from Troy are spread out worldwide in more than 50 different collections and museums. If a museum were

built at Troy there would be strong pressure to reunite these objects. The finds could be displayed close to their original context; the evocative relationship between culture and place would be restored for all to enjoy.\textsuperscript{62}

Though the Master Plan was written nearly ten years ago, the struggle continues for the inclusion of a new museum or interpretive center with a focus on the artifacts that have been taken from the site since its rediscovery.

Currently, the Turkish government is insisting on the treasure being returned to its country of origin, especially since it was acquired by Schliemann in a less than honest manner, with Russia refusing to part such an elaborate exhibit. The new interpretive center at Troy would serve as a political statement in much the same way as the New Acropolis Museum did in regards to the Elgin Marbles. Demonstrating that the new facility will be extremely secure and exhibit the collection to its fullest potential could help to provide the Turkish government with reason to regain the treasure, citing contextual education as another reason for its return. Though the politics behind the entire situation are much more complicated, designing a specific space for Priam’s Treasure that is both secure and appealing is a relevant design implication that needs to be addressed in the case study.

5.4 Architectural Programming

Now that the generalities of design such as history, landscape, and site conditions, have been addressed, the planning of the physical facility can begin. Because of the specific requirements of site museums, the Program of Spaces must be carefully thought out so as to provide the optimal space to help convey the culture of the Trojans to the general public. Referencing other successful archaeological sites and interpretive centers, helps to create an overview of necessary spaces. The administrators of Ancient Troy have also played a key role in the planning of a new facility, so important features have been derived from their master plan, including the necessary spatial requirements and functions of many of the new needed areas.

According to Nevra Ertürk and \textit{A Management Model for Archaeological Site Museums in Turkey}, there are many museums in the country with an association to famous archaeological sites, but only five that can be considered actual site museums based on their location and the material that they are presenting. These facilities are listed

as “the Side Museum in Antalya, the Gordion Museum in Ankara, the Miletus Museum, the Aphrodisias Museum in Aydin and the Hierapolis Museum in Denizli,”\textsuperscript{63} and provide the Turkish community with an in-depth look into the ancient culture and implications surrounding each of the sites. According to Ertürk, facilities such as the Ephesus and Pergamum museums at Izmir display artifacts outside of those discovered at the archaeological sites with which they are associated, and are therefore not defined as site museums in this particular article.

Looking at the five facilities that are listed, though they are in completely different areas from each other, they share many similar programmatic elements between them, usually associated with the administration of the interpretive center. The most commonly seen areas, that appear to be necessary to the functioning of the interpretive center, and their average area are:

- Administrative office(s) -- 50 m²
- Restoration laboratory – 30-50 m²
- Documentation archives – 100 m²
- Permanent Exhibition galleries – 200-1000 m²
- Storage area – 180-200 m²

Because these particular museums are much smaller than the one planned for ancient Troy, the gross areas for Troy will need to be much larger than those of the existing on-site facilities, however, proportionally there is much to learn from the size of the building compared to the size of the archaeological site, and how much material these interpretive centers need to incorporate. Though these site museums are not ideal precedents when examining architectural form, from a planning aspect they encompass everything that needs to be arranged within the form for the interpretive center to function as a part of the excavation site, as well as a museum for the public. Also, these site museums all relate in style to the culture or regional community that they are incorporated with, which is an interesting characteristic to respond to, and something to be taken into consideration when establishing new architecture into an existing style.

Interpretive centers and on-site museums in other countries can also be positive examples when it comes to programming a new one, because some of them are more proportional to the size of the museum at Troy. As well as being more appropriate in terms on overall usable area, they


can also add accessory functions to the program that are not necessarily essential, but instead would give more flexibility to the everyday uses of the facility, such as an auditorium, conference rooms, and a library. The New Museum of the Acropolis, and the interpretive center at Delphi are considered to be successful interpretive centers in the Mediterranean. Though they differ greatly in size, their programs are very similar in terms of required functions needing to be housed there. The newly renovated interpretive center at SunWatch Archaeological Park in Dayton, Ohio is also a good precedent when looking into how a museum’s aesthetics relate to the culture being exhibited. Its overall relationship to the archaeological site is not as appropriate as a precedent, however the circulation from the interpretive center down into the archaeological site is well planned and successful. These precedents help to show how others have begun to design interpretive centers with contextual education in mind, however, one must keep in mind that the zoning for these sites is much different than for Troy, and that the interpretive centers and museums were able to be located much closer to the actual archaeological site.

Whereas outside sources help to gauge where the new interpretive center at Troy will fit into the current interpretive center typology, the Concept Master Plan, prepared by Elizabeth H. Riorden, is the main resource that should be used for programming, as it states exactly what functions the researchers have determined the new facility should have. The master plan is “based on a set of ‘ground rules’ which comes from years of experience at Troia.” The researchers who have experienced how the current archaeological site and interpretive center work for the last several years are the best resource for what needs to improve from the current paradigm and should be taken into consideration. In the Master Plan, they devote a section to the new Troy Museum, citing a number of reasons for constructing a new one near the site, besides the implied additional gallery and display space that it would add:

The new museum would provide a unique opportunity for scientists as well as general visitors. The excavations uncover vast quantities of material which must be stored until it can be studied by specialists; much of this material (ceramic shards, bones, stone objects, etc.) may never be displayed to the public, yet if properly catalogued, conserved, and stored it is a “gold mine” for the archaeologists of today and tomorrow. The new museum should include storage

Including the storage and workspace in the interpretive center would add the “study” component to the facility, as was previously established in the implied necessary functions of any interpretive center. That way, the museum would be interactive as much with the archaeological community, as a place for visitors to learn more about the archaeological site.

In 2006, after the documentation of the Master Plan, Professor Riorden held a design studio at the University of Cincinnati in Cincinnati, Ohio, also associated with the new museum at Troy, where she developed a working program to be used for design purposes. This thesis uses that document, modified slightly, for the purposes of the design of the new interpretive center as it is a very complete and well thought-out program. However, some spaces and gross areas do change slightly to accommodate the fact that the proposed construction site has since changed.

The working program for the new interpretive center focuses around three main categories of spaces, including public spaces, staff spaces and gallery spaces, broken down as such:

Site Amenities:

Parking and Access—the site for the Museum must be developed to accommodate complex movement of both visitors and staff. Staff will arrive mostly by private automobile, and require parking near the Staff Entrance, away from the Public Parking, and without causing interference with the loading area (see more below). Landscaping elements should be used to screen these functions. The Public will arrive by various means: by private car, by tour bus, or on foot from the mini-van stop in the town at the competition proposed site (see site plan). After parking the car or bus, those wishing to proceed immediately to the site will purchase a site ticket at an outdoor, covered structure, then proceed by way of a marked path through the ancient gateways of Troy. It will also be possible to proceed into the museum through a marked entrance by the ticket structure.

Staff Parking: 12 spaces Public Parking (cars): 12 spaces Tour Bus parking: 6 spaces (allow 4 x 15 meters for ea., plus back-up and turning space. Pull over for shuttle bus (mini-van)- near Museum Public Entrance- provide shelter from sun and/or rain, seating for 6 persons: 20 m2 covered

Loading Area—the Museum will occasionally handle large heavy objects, as well as the contents of temporary exhibitions. Loading Dock, adjustable height (from 0.6 to 1.2 m. high); overhead clearance of 5.0 m. above the truck grade required for any overhang, if used. Service Drive, to keep loading and trash removal separate from visitors and staff. Space for future dumpster.

Outdoor Sculpture Court—some of the more durable architectural fragments (Roman granite columns, Ottoman grave stones etc.) can be displayed in an attractive garden setting. This may be split between an area accessible from the entrance, and an area

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67 As written by Elizabeth Riorden for 23ARCH753, Summer of 2006, with modifications
accessible from within the Gallery area only. 
Sculpture Court: 240 m²

Outdoor Dining/roof terrace—so as to not compete with local restaurants, the café (both indoor and outdoor seating; kitchen/service area) should be in an area accessible from within the Gallery area only. 
Outdoor Dining: 240 m²

Fence and Gates—
The site will be surrounded by an attractively designed fence, with retractable gates for the two entrances (Public and Service); the fence should be integrated with landscaping element.

BUILDING (net areas in square meters)
The Museum Interior is divided in three Zones: Total 5200 m²
Zone 1: normal public spaces
Zone 2: normal staff spaces
Zone 3: high security/climate control gallery spaces and gallery support

Zone 1, Public Spaces: 900 net m²
Vestibule: as required
Lobby: 250 m²
- information Kiosk
- seating for 10
Museum Shop: 250 m²
Toilets: 70 m²
Meeting Room, seating for 15-20 persons: 80 m²
Large Auditorium, seating for 60 persons: 250 m²

Zone 2, Staff Spaces: 710 net m²
Director’s Office: 70
Administration, 2 @ ea. 35 m²: 70 m²
Curators, 2 @ ea. 35 m²: 70 m²
General Staff (open office): 300 m²
Conference room, seating for 12: 40 m²
Library/work room: 40 m²
Lunchroom: 30 m²
Office storage: 30 m²
Copy Room: 30 m²
Staff Toilets: 30 m²

Zone 3, Galleries and Gallery Support: 2280 net m²
Galleries—part of a proposal should be an “exhibit concept” for the Troy material. This can be based on the chronology, or it can be arranged thematically. Other concepts are also welcome. Spatial volume should be considered, be appropriate and complement the exhibit concept, as should lighting. The Galleries should include:

- a black-box area to seat 20 for a continually looping film
- much computer-based material will be available to compliment the object displays
- objects of extreme size-variation, from tiny carved ivory pins, to large pithoi (ceramic storage vessels) are to be displayed; vitrines and lighting must be flexible.

Permanent Exhibition: 800 m²
Temporary Exhibition: 200 m²
Café: 180 m²
- indoor/outdoor seating
- kitchen/service

Gallery Support: 300 m²
- registration
- conservation
- secured shipping and receiving
Museum Storage: 400 m²
Excavation Depots and Workroom: 400 m²

Following the program development of required areas and their sizes, I did adjacency diagrams [Figure 5.4.1] to show how the rooms should interact with each other and the security points. Because of the high level of security needed, rooms had to be arranged in such a way that allowed for the maximum safety of all of the artifacts. Also, though some staff areas needed to be private, such as offices for the administrators, other areas were intended to be viewable to the public, so that they could better understand the process of preserving the sites and artifacts. The restoration room and...
workroom are two areas that should have a transparent barrier so visitors to the museum can see the work in progress. Placing these within the same general location as the galleries allows the public to associate the artifacts that they are seeing on display with how artifacts are restored and preserved. Also, with a view from the galleries both into the restoration area and out to the site, the association is made between the artifacts being worked on and where they were found.

5.5 Aspects of Design

The design of the new interpretive center at Troy is an in-depth study of the various architectural features needing to be addressed in the development of the new interpretive center typology. Though the focus of this discovery section is on designing new facilities, the aspects of design also feature concerns addressed in DG XII Programme: Retrofitting of Museums for Antiquities in the Mediterranean Countries, an article outlining the priority architectural concerns based on the retrofitting of the museum at Delphi. These aspects include:

- Daylighting
- Passive heating and especially passive cooling
- Natural ventilation
- Use of innovative energy-saving artificial lighting components
- Use of efficient energy management systems
- Use of environmentally friendly materials

Figure 5.4.1 - Adjacency diagram representing major programmatic spaces and security points
These features will help the museum function better as a whole, while being environmentally friendly to the region.

5.5.1 Form
As previously mentioned, the exterior form of an interpretive center at an archaeological site can draw attention away from the ancient remains, which really should be the primary focus of the site. Therefore, the form of the museum needs to be carefully planned so as to provide its intended function while being appropriately styled and aesthetically pleasing. I have categorized museum forms as falling into five different areas of plan design, with most museums and interpretive centers fitting into one of the five categories or being a combination of one or more of them. The categories include: blobular (precedents include the High Museum of Art in Atlanta and the Denver Art Museum), linear (precedents include the Delphi Interpretive Center), clover leaf (precedents include Städtisches Museum Abteiberg, Mönchengladbach), light court (precedents include the National Gallery of Art and the New Museum of the Acropolis), and figure eight (precedents include the British Museum and the Kobenhavn Glyptotek).

The figure eight [Figure 5.5.1] style is one of the oldest and most formal arrangements that many museums tend to employ. Following classical architectural arrangement, the style represents a progression of gallery spaces, which also allows for some visitor circulation decisions, but mostly controls the circulation path of the patrons. The support spaces can be located adjacent to the gallery spaces, easing the burden on the museum staff, however, these support spaces then take up important square footage, making the actual footprint of the building sprawling, something more appropriate for large centralized museums and not necessarily archaeological interpretive centers. There is also a very clear plan pattern to follow for the style, not allowing for much interpretation for individual site design. Also because of the strict style, there is no real connection to the site, something imperative to archaeological interpretive centers. The monumentality of the style is a concern as well because it can draw unnecessary focus from the archaeological site and the extensive footprint can have too much of an impact on such a sensitive site.

The light court [Figure 5.5.2] style is also a fairly traditional one, however, it appears to be more adaptable to the changing conditions of an archaeological or any other sensitive site. The circulation pattern is typically focused around a naturally lit interior courtyard, which provides light into multiple floors of open gallery space. This interior courtyard can take any form, allowing the plan to be manipulated to fit any site, which would be a benefit to new construction on an archaeological site. However, problems include not being able to easily control the amount of natural light coming from the skylight, and considerations must be taken to ensure the safety of artifacts that are impacted by their location with regards to the skylight. Also, to use the natural courtyard as efficiently as possible, the support spaces are typically moved to the exterior walls of the building, sometimes blocking the view from the museum out to the site.

The linear [Figure 5.5.3] arrangement seems to be one of the more successful examples of contemporary interpretive center design because of the ability to control the circulation through a spine if necessary, while at the same time accommodating those visitors who want to wander. The Interpretive Center at Delphi employs this type of design, allowing for natural lighting...
by skylights in many of the galleries, and specific views out to the archaeological site. The museum composition is very successful, allowing for patrons to view the artifacts in an efficient and interesting way.

The *cloverleaf* composition [Figure 5.5.4] is a more modern arrangement of spaces and is not as common as the previous typologies. The multiple galleries are focused around a central point in plan, thus creating what appears to be a clover from above. Though this helps to integrate several galleries with one another, it makes circulation between those central points more difficult, and can be confusing to patrons. It also creates a rather large footprint since the galleries are connected horizontally and not necessarily vertically. However, the combination of the *cloverleaf* style and other styles can come across as a very successful project, because adding in another component may facilitate the circulation between control points.

The last arrangement is that of the *blobular* form [Figure 5.5.5], which is essentially exactly how it sounds. The footprint of the building typically does not follow any particular style and just spreads to encompass the necessary programmatic functions of the museum. Benefits of this style are, of course,
that it is up to the individual designer where to put the spaces because he or she does not need to conform to a plan layout, and because of this, the exterior form can also take any shape. This condition is ideal for archaeological sites because the footprint can be manipulated to accommodate the sensitive site. The only issues associated with the *blobular* form are that there are not always specific gallery partitions, making it difficult to arrange artifacts chronologically or through any other mean, and also that there is typically not a defined circulation pattern for people to follow, making these forms sometimes difficult to navigate.

Though many designers prefer to choose one museum plan typology to solely design with, these plans can also be combined to create individual examples, something that is beneficial when working on a sensitive site. However, while working with the form, the designer must also concentrate on the arrangement of space within it, because patron circulation is also crucial to the success of an on-site interpretive center.

### 5.5.2 Circulation

When dealing with circulation on an archaeological site, the overall pedestrian and vehicular circulation needs to be addressed before the circulation of the interpretive center. The way that the public moves through the area, beginning with the initial introduction to the site, is something that determines where many of the key features go so as to facilitate the process and keep the area, artifacts, and architectural remains as secure as possible.

One archaeological site that deals with pedestrian and vehicular traffic well is Çatal Höyük, also in Turkey. A Neolithic site, Çatal Höyük has been extensively studied and provides visitors with a look into the very well preserved remains of domestic and commerce structures of ancient times. The site aims to be both a research location and a Turkish World Heritage Site, and therefore encompasses a number of facilities with various levels of admittance, all connected by a series of vehicular paths. The public has access to a majority of the archaeological site and also the interpretive center, while staff has additional access to housing and research facilities. However, the way that the site is arranged works very well for accommodating a large number of visitors, with the inclusion of a gatehouse at the main vehicular entrance to the site, and a circular pattern of circulation within it [Figure 5.5.6]. The general tourist facilities, such as the interpretive center and café, are located close to the gate allowing the architectural ruins to be accessed.
mainly on foot, at a small distance away, so as not to ruin the views. A small, reconstructed house [Figure 5.5.7] is located at the entrance near the interpretive center so that it is not confused with the actual architectural remains on the rest of the site. By examining the circulation pattern of Çatal Höyük, key pieces can be incorporated in the archaeological site of Troy to better handle the flow of vehicular and pedestrian traffic to and from the interpretive center.

One of the main aspects influencing the design of the new master planning of the Troy site is the degree of security that needs to surround the area, so as to protect the natural landscape and archaeological remains. Because different areas of the site are utilized, a central ticket or control booth at the vehicular entrance to the archaeological is a necessity. Requiring users to purchase tickets when first entering the site with their vehicle, or on foot, facilitates the admission process and the need for separate ticketing facilities both in the museum and on the archaeological site, allowing the visitor to choose which order he or she observes the components in.

Once visitors gain access to the site through the ticket booth, they then drive along a one-way paved road that circles the entire archaeological
Routing cars and buses this way not only cuts down on the width needed for the road, so as not to encroach on the site, but also provides visitors with one of the best, and most dramatic views of the archaeological remains along the south side [Figure 5.5.9] of Hisarlik before arriving at the museum/site parking lot. As Troy is situated atop Hisarlik, the short driving tour takes the visitor around the hill and along the plain surrounding the site, allowing for a 360-degree view of the remains, something that immediately helps to place the visitors within the context of the site, even before leaving their cars. The one-way circulation also diminishes the amount of space needed for parking radii, as the spaces can be angled and much easier to pull in and out of.

Included in this circulation/parking path is an area for loading and unloading buses, as well as a waiting area and stop for public transportation directly in front of the museum. From the parking lot, the patrons then continue either into the museum or out to the archaeological site, as they would have already purchased their tickets upon entering the park.

As discussed previously in this document, visitor comfort is a necessity for any new construction project, especially interpretive centers or museums. If an individual is not comfortable with his or her...
surroundings, it is much more difficult to absorb the information being presented and can cause the person to want to leave early, or skip certain galleries and displays. Manfred Lehbruck’s *Museum, Psychology and Architecture* focuses on the different types of circulation patterns for museums and how they impact visitor comfort. He identifies two standard patterns, the circular [Figure 5.5.10] and the linear [Figure 5.5.11], citing that if one of these is followed in museum planning, then half of the patrons at any time will essentially be uncomfortable.69 Because of this, the Museum at Troy incorporates both types of patterns into the design [Figure 5.5.12], ensuring visitor comfort as much as possible. By incorporating a semi-open plan, the users are able to either follow an intended path—such as with a linear design pattern—or choose which galleries they wish view, but still ending up at the established starting point—such as with a circular pattern. This open plan will also help visitors to place themselves mentally within the whole of the museum, while allowing a view of the majority of the galleries, another imperative to visitor comfort. This should accommodate any visitor that comes to the museum, allowing them to absorb as much of the information displayed as possible.


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**Figure 5.5.10** - Circular pattern of museum circulation

**Figure 5.5.11** - Linear pattern of museum circulation

**Figure 5.5.12** - Combined circular and linear patterns of museum circulation, creating a new type for the Museum at Troy
Circulation pattern is also key when looking at using the interpretive center as a restorative environment, because an over-complicated circulation and gallery pattern can be exhausting to the mind, according to the article The Museum as a Restorative Environment. Therefore, this simplification of gallery way-finding will help to ease the mind as opposed to over-stimulating it, like a more complicated pattern would.

Though the overall circulation—that is, the path taken between galleries—is primarily what is examined most at interpretive centers, the arrangement of the material within the individual galleries and the circulation through them is also worth consideration in the design. Diagramming each major gallery individually will assure that no artifacts seem less important than others and provide a better understanding of how these galleries should be arranged in succession. Also, defining certain circulation patterns for the individual galleries helps to control the view from them to the site, so as to present the material in a more contextual way, and with the optimum amount and appropriate type of lighting.

5.5.3 Lighting

Lighting in interpretive centers, and especially antiquities museums, is an important aspect in determining the arrangement of spaces with regards to the interior and exterior oriented rooms. Natural lighting from the north is typically viewed as optimal lighting both for working, reading and viewing objects. Because the construction site faces the archaeological site to the north, many of the galleries that require a view can be placed on the north side of the building without the sunlight being damaging to the artifacts or the vision of the patrons. This also allows for the larger staff spaces and the café to have optimal natural lighting, without having the harsh affects associated with the Turkish sun in the summer. The café has outdoor seating with an overhead shade for inclement weather, without having to worry about it being low enough to block the southern sun. On the southern side of the interpretive center, functions that do not require a direct view have natural lighting through skylights that control the southern sun for the purposes of solar gain.

For galleries that cannot include direct northern lighting for the safety of the artifacts, but would still be viewed best in natural light, use a number of methods to incorporate the sunlight, including clerestory windows and other methods of indirect natural lighting. Also, besides the ample natural lighting that the site provides, the museum also incorporates a large amount of artificial lighting
for areas where sensitive artifacts are stored or displayed. Though as much natural light as possible is used, it would be impossible to assume that all spaces can rely on it entirely, and so the artificial light is incorporated in such a way that it is tasteful and not glaring, especially when associated with galleries or work areas.

Specifically, the black box gallery used for displaying the supposed Treasure of Priam is a good example of where overhead and artificial lighting becomes extremely important. Gold artifacts are best viewed on an entirely black background, usually with soft overhead lighting to catch the glint on the individual pieces. The lighting in this gallery must be controlled at all times so that the artifacts will be presented optimally; this includes closing off the gallery from the rest so that no natural or artificial light from surrounding galleries interrupts the dark of the box.

5.5.4 Exhibit Displays and Interior Architecture

Because this new typology focuses on architecture as one of the methods used to display artifacts in a contextual way, the interior of the building becomes extremely important to the success of the interpretive center. In his article Heritage/Cultural Attraction Atmospherics: Creating the Right Environment for the Heritage/Cultural Visitor, Mark Bonn addresses the importance of the interior architecture with a study of visitor attitude toward the facility, concluding that:

> The study findings confirm the validity of investigating resources in the creation of high quality interior design and layout and appropriate signage.70

This study of visitors helps to establish some of the characteristics of the museum that patrons find important, and these can then be incorporated into the design of the museum at Troy to make it more easily navigated and a better experience for all visitors.

The majority of the displays are incorporated into the architecture of the building to accommodate the permanent collection, with some areas left neutral, allowing for the exhibits to be changed and include either temporary exhibitions or seasonal exhibitions. Also, the interior architecture and materiality are designed to not overpower the artifacts and architectural remains of the site. The architecture in the galleries, though a part of the displays, had to remain the background and not draw focus from the antiquities being displayed.

In the spaces designated for public and staff functions, the architecture takes more of a primary

role, because these areas do not house artifacts.

As previously mentioned, the interior provides two types of circulation paths, so the arrangement within the galleries is an open plan, becoming more segmented as the spaces become more defined as private, such as in the staff areas.

Bonn also mentions the current trends of museum interior architecture in *Heritage/Cultural Attraction Atmospheric* by stating:

> Techniques such as flexible lighting and darkness, color shifts, performance (music, actors), sound events, and short term barriers can quickly transform existing spaces into a different sensory environment of emotions, movement, action and tranquil rest spaces.71

These are simple techniques that can be employed in gallery or other public spaces that will enable some galleries to be used as temporary exhibit space and be changed easily with new finds and new artifacts being discovered constantly. Though many of the galleries at Troy house the permanent collections, some spaces needed to be more flexible so as to adapt to the constantly changing collection of the museum.

Another feature of interior architectural and exhibit  

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design that needs to be addressed is the inclusion of what I will refer to as *child-friendly* exhibits. Because Troy is a site fascinating to visitors of all ages, it can be assumed that many children with varying degrees of education and interest will be visiting the site each day. It is important that these children, usually younger ones, feel engaged in the museum and can learn just as much from the exhibits as adult visitors. This requires the display of some artifacts in a way that is conducive to teaching small children. After studying several interpretive center projects that employ child-friendly exhibits, such as the museum at Lexington and Concord in Massachusetts, the most important feature that seems to engage children is the use of a way-finding character that they can look for throughout the museum to know that particular exhibits were designed especially for them. This keeps the children interested in the museum as a whole, while creating a means of circulation through the galleries, as well. Lexington and Concord places the indentifying character- in this case, a cartoon mouse in Revolutionary costume- low enough on the wall so that it is directly in the eyesight of an elementary school-aged child. Accompanying the mouse is typically a hands-on activity designed to help children learn through experience instead of having to read information from a plaque. Employing such techniques in the
Troy museum assists in the contextual education for people of all ages, as even adults tend to find hands-on activities interesting and fun.

Another important feature of the interior architecture for the new museum at Troy is an area or gallery devoted to the explanation of the methods of archaeology and how archaeologists and researchers come to conclusions about ancient cultures based on the archaeological evidence remaining. Though many site and archaeological museums have explanations about where and possibly how an artifact is found, very few, if any, devote much space to the concept of archaeology as a discipline and how artifacts are interpreted by the researchers, based on the context in which they are found. Since the new interpretive center typology focuses on contextual education of visitors, it is more than fitting to have an area in which visitors can see or experience how conclusions are drawn from the wide array of artifacts found at Troy and other archaeological sites.

Coinciding with the need for tactile experiences in the museum, as mentioned regarding child-friendly exhibits, this gallery could have many types of hands-on experiences for patrons to take part in. Providing an area devoted to methods of excavation where visitors could practice uncovering objects or fabricated architectural remains with archaeologist tools would assist in the education of these methods far more than just providing a display with an explanation of the tools. From this, visitors also experience interpreting their findings for themselves, something that would take them through the major processes of archaeology, and leave them with a better understanding of both the archaeological site and its workers alike.

As well as hands-on exhibits designed to engage the visitor in archaeological activities, this gallery also provides a means of visually accessing real archaeologists and preservationists at work. This is accomplished through the inclusion of a window overlooking the preservation staff area. By providing such a connection, visitors will be able to better understand exactly what is necessary in uncovering, cleaning, preserving, reconstructing and interpreting actual artifacts found on the site. This facilitates the contextual education of the artifacts within the main galleries of the museum, as people then draw connections between those antiquities currently on display and ones that are uncovered daily and being prepared for display. As mentioned previously, it is important for artifacts to be shown in context, and this context is present through the entire evolution of the site, which
includes modern times. This brings the artifacts temporally from the time of the ancients into the modern era, enormously benefitting the education of the patrons on the complete timeline of the site.

5.5.5 Security
The next biggest concern regarding the design of the new interpretive center is the security of the objects housed within its walls. Looting has been a constant concern at ancient sites, even back in the times of antiquity, when many historic sites are believed to have originally been robbed. Because the museum also acts as a storage facility for excavated artifacts, those artifacts need to be kept not only safe from looters, but also safe from the harsh environmental elements of the Turkish landscape. At the forefront of the concern regarding Troy is the aforementioned Treasure of Priam, the large collection of gold objects originally excavated at the site. If the Treasure is ever to be returned to Troy, the new interpretive center must demonstrate that the objects are as safe within its walls as with any other facility.

To achieve the high level of security surrounding the antiquities, the new interpretive center employs a number of measures designed to keep anyone not authorized to do so from handling or stealing any of the objects. These methods include designing the landscape surrounding the building with a barrier not allowing for vehicles to gain access to the main building unless authorized (such as with loading or unloading). This security measure is accomplished by the materiality of certain exterior walls, making them thick, sturdy and therefore impenetrable by vehicles or by providing a void or dry moat between the building and parking areas, allowing visitors to only access the building through footbridges. Another measure designed for the safety of the artifacts is placing the most valuable galleries in the center of the building so that they cannot be accessed at all from the exterior, such as with bank vaults. These walls are thicker than average, with the galleries under surveillance at all times. The galleries are also able to be closed off from the main circulation pattern in case of a security breach. Though the safety of the artifacts is always a very high concern with interpretive centers, many security measures can be employed in aesthetically pleasing ways so as not to detract from the architectural design of the building.

5.6 The Final Design
Through my research, I have established a number of necessities that a design for the new interpretive center at Troy must encompass. As well as being a successful project for the Turkish country and local community, I hope that the Interpretive Center at
Troy will act as a successful precedent for future on-site interpretive center projects.

5.6.1 Site Plan

The site plan [Figure 5.6.1] is one of the most important features of this Case Study project because it was necessary to incorporate all of the design elements regarding regional context and education into the placement of the building. Based on my research, the ideal site for the museum was located within viewing distance of the architectural remains so that visitors could identify the antiquities housed in the interpretive center with the area in which they were excavated. Also, by elevating the museum several meters above the ground plane, visitors are able to get a more aerial view of the site as a whole from the building, something that is nearly impossible from standing within the archaeological site. Viewing the layers of the site altogether helps with the interpretation of the site because its complexity and layering is more apparent from the location of the building.

Because the building is placed in such close proximity to the archaeological site, there was a chance that the views from the site out to the landscape would be compromised by locating a large museum within eyesight. To accommodate this, I placed the building so that it is buried...
slightly into the hill, thus bringing down the scale of the elevation on the side that faces the archaeological ruins. Visitors standing atop Hisarlik will have no problem seeing beyond the museum this way, especially with the inclusion of the low, stepping down roof lines of the gallery spaces.

Security was another cause for concern with the site plan since the museum will house a number of priceless objects, and especially a need for a type of barrier preventing a vehicle from driving up directly to the museum and through a wall. I decided that the best method of ensuring the safety of the antiquities was to provide a wide, planted, dry moat surrounding portions of the elevations that were glass façade. I located pedestrian bridges over the moats, and a loading dock around the side of the building, so that visitors and staff can access the museum during working hours, however each of these entrances can be closed off with an attractive gate if necessary. All other areas of the elevations are designed as thick cavity walls with a concrete structure and stone veneer. This architectural combination of solid and void barriers ensures that the artifacts cannot be reached from the exterior, while still allowing the building to seem accessible and not forbidding or prison-like.

Also important to the site plan are the other exterior user areas that were specified in the programming of the building. These include the car and bus parking, an outdoor sitting or gathering area for those wishing to walk to the archaeological site and the mass-transit stop outside the main entrance. These areas are located around a water feature outside the front entrance and are surrounding by the relocated olive trees that once occupied the land that the building sits atop. To provide as little site damage as possible, permeable pavers are used whenever possible, with paving at a minimum.

5.6.2 Symbolism
As previously mentioned, Troy is an optimal site for a new site museum because the general public’s knowledge of the site mainly comes from the myths surrounding it, and not the facts providing by the archaeology. The interpretive center provides an ideal way of addressing this issue by educating the public in the actual everyday workings of the ancient Trojans, and much of this teaching can be done through the form of the architecture.

First, I knew that I wanted to provide phenomenal views of the archaeological site and National Park, so I diagrammed the main spaces as cones of vision, or view corridors, focused on the areas of the site with the best views [Figure 5.6.2]. I
used these sight lines to establish three of the main spaces of the interpretive center and enclosed them in stone veneer walls, so as to set them apart from the rest of the architecture. As well as representing the views out to the site, their shape also provides a slight commentary on the more modern history of the area because of their resemblance to the trenches that Schliemann dug through the archaeological site. They are an integral part of the building (as Schliemann’s are an integral piece of the overall history of the site), though I also brought in another ordering system that focuses on the ancient history of the site.

Because weaving was such an integral aspect of everyday life in the time of ancient Troy (as evidenced by the large number of loom weights and spindle whorls that have been found there), and the complex layering of individual settlement periods on the site, I incorporated this concept into the overall planning and ordering system of the building. The roof plan [Figure 5.6.3] is most demonstrative of this point, where the roof-lines over the galleries are weaving in and out of the stone cavity walls surrounding the three major space delineations. The galleries are also layered on top of each other [Figure 5.6.4], and arranged chronologically by settlement (Troys I-IX), creating a progressive circulation pattern leading up to what some consider the high point of the Troy
civilizations, Troy VI. However, while there is a circular order that patrons can follow so that the galleries build chronologically, I also provided means for accessing all galleries from a centralized light court sculpture garden to accommodate those patrons who wish to explore the museum on their own. From this main space, the café and all the galleries are visible and accessible, creating my combination linear and circular pattern of circulation that was developed earlier in the document [Figure 5.6.5]. This will provide added visitor comfort, a key function previously established in this document.

5.6.3 Galleries and Public Spaces

I discussed other main functions of the interpretive center as well in a previous chapter, the first of which is to study. To accomplish this, I provided several spaces in my design, such as a library, conference rooms, and auditorium for the local community and also international scholars to come and research at Troy. Because many existing interpretive centers in Turkey do not include these spaces, this makes Troy one of the hubs of archaeological study in the Anatolian Peninsula. Including these bridges the gap between small on-site interpretive centers and large, centralized museums, which are typically the buildings that have the spaces for such functions. Troy also houses a number of important artifacts that still
need to be interpreted by researchers to help educate the public, and these study spaces in the interpretive center provide the necessary space that the specialists need to work.

The galleries can be considered one of the most important areas in the interpretive center because they incorporate a number of the functions identified earlier in the document, the first of which is communication. In order to provide contextual education of the artifacts for the public, the galleries needed to be specially designed to display the artifacts in an as easily understandable way as possible. The galleries [Figures 5.6.6] are arranged chronologically and therefore create a timeline of Ancient Troy through each of its levels of civilization, something that provides temporal contextual education. This way, pieces of pottery and other artifacts can be compared between galleries, while still being part of the collection as a whole. Because of the way they are arranged, many of these galleries also have a view out to the archaeological site in order to help place the antiquities within a regional context.

The main central gallery [Figure 5.6.7] and sculpture garden is one of the most important rooms in the building, because it draws all of these galleries together, allowing them to communicate with each other across the open plan of the space.
It also helps to provide another one of the core functions of new interpretive centers by creating a *restorative environment*. The sculpture garden is naturally lit through three high space frame skylights, creating a bright, open, airy environment for rest or reflection. Because the intensity of the summer sun can be an issue with that amount of glazing, I designed movable sails [Figure 5.6.8] that redirect the southern sun and allow for the less-direct northern light to come in instead. The sails are reminiscent temporary structures located on archaeological sites, thus allowing the building to be better incorporated into the general landscape of the area, while alleviating the strain of direct sunlight from the main gallery space. This area also provides a direct view through the building from the main entrance, so that the first thing that patron sees when walking into the museum is a grand view directly out to the archaeological site.

5.6.4 *Staff Spaces*

The last function of the new typology that I addressed is *preservation*, a very important role in the archaeological world. The researchers, archaeologists and preservations that will be working in the museum both seasonally and daily are the key people that this function is for, and ample space needed to be provided for them to

![Figure 5.6.8 - Grand gallery sails diffusing the southern exposure](image-url)
work. Therefore, my design includes a great deal of space not only for artifact storage, but also for employees to carry out the intricate methods of preserving antiquities.

The most expressive of these spaces is the area of the staff wing identified as the Preservation Room [Figure 5.6.9]. Though many museums and interpretive centers have similar accommodations, this room is unique in the fact that it is visible—though not accessible—to patrons of the Troy interpretive center. Because the education of the public in the methods of archaeology is so important and a fairly new concept, I wanted to provide a way of showing the public how artifacts were excavated, cleaned, stabilized and eventually displayed, without hindering the preservationists in any way or dramatizing the events through a video or staged presentation. Therefore, I located a gallery explaining the methods and practices of archaeology adjacent and slightly above the Preservation Room, with a large picture window so that visitors can watch actual preservationists at work, without the researchers being disturbed. This will help to educate the public not only on the particular artifacts at Troy, but also on what preservation is and why it is necessary to the continuation of archaeological sites and artifacts.

Another large programmatic element in the new museum is the amount of storage space that I provided for the functioning of the building. Currently at the site, artifacts are stored in a number of different areas, with no close workstations. Moving all of these storage areas underneath one roof, and providing direct access
to preservation areas and galleries, facilitates the process of cataloguing and storing artifacts, and is far more convenient for moving artifacts and changing displays.

Mechanical space is also a large programmatic element that I included in the design. Because of the sensitivity of the artifacts, climate control within the building is very important and requires a great deal environmental technology. There is ample equipment and ductwork necessary for such a large museum, so I have elected to use my large cavity walls [Figure 5.6.10] and crawl spaces beneath the lowest galleries to circulate air throughout the building. Galleries, as well as storage spaces need to be kept dry and climate controlled, so as to protect the antiquities from further deterioration due to the natural elements.

5.6.5 Materiality

The materiality of the new interpretive center at Troy is very important because the existing architectural remains in the archaeological site and the antiquities being displayed in the galleries should be the focus of the visitors’ attention. Therefore the architecture of the new construction should not draw focus from the real intentions behind the addition of the building. One way that I dealt with the close proximity of ancient architecture is through the use of a stone rain
screen [Figure 5.6.11] on the large cavity walls outlining the view corridors. I did not want the modern architecture to mimic the ancient walls; instead I chose to use the ancient architecture as a reference in designing an updated system. The wall section consists of a reinforced concrete structure with stone veneer panels extended out from the main wall. The panels are left with a slight gap in better them (traditionally where grout would be applied) so that there is a reveal that the concrete structure can show through. This way, the visitors are aware that the stone is not actually a structural element in the wall, but still makes a strong reference to ancient building techniques of stacking stones.

In the remainder of the building, I chose to use very neutral materials so that the antiquities take precedent over the architecture. The flooring is a combination of polished and rough concrete, with the polished portion designating circulation path through the building and rough portion identifying places that are for display purposes and not meant for visitor traffic. The concrete will be able to sustain heavy foot traffic and be easy to clean when tourists come in from the site with muddy feet. The walls of the rest of the spaces are a neutral drywall, because this can be changed and repainted when necessary if exhibits more or change. This also allows for the stone walls on the
view corridors to stand out as special areas to draw the attention of the patrons.
5.6.6 Final Design Images

Figure 5.6.12 - Site model showing roof and site plans

Figure 5.6.13 - Front entrance detail

Figure 5.6.14 - View of staff bridge and dry moat

Figure 5.6.15 - View down into Grand Gallery from exterior

Figure 5.6.16 - View of Cafe and loading dock

Figure 5.6.17 - View of Troy VI gallery looking out to site
Figure 5.6.18 - View of Troy VI gallery looking out to site

Figure 5.6.19 - Wall section detail showing rainscreen
5.7 Design Conclusions
The new interpretive center at Troy in Turkey is an excellent example of how the current paradigm of the museum can be molded to better accommodate the changing demographic in visitors to archaeological sites. The architecture of the museum plays an important role in the education of these visitors, and through the Case Study, I identified several ways that architecture can solve the problems associated with this education. Through techniques such as placing the building in viewing proximity to the ruins, using natural lighting and climate as much as possible, and molding the programmatic elements and footprint of the building to the specific site, the archaeological interpretive center creates a new typology that can be used for construction on active excavation, or any other sensitive site.
6.0 General Conclusions: The Archaeological Site Museum

The idea of the archaeological site museum is a fairly new topic in the architectural world, though one that needed to be addressed. My exploration has shown that because of the change in demographic of patrons to archaeological sites over the last several years, many of these sites need to employ a building in which to contextually educate visitors in the every day happenings of the site. After researching the writing of experts such as Manfred Lehmburck, Victoria Newhouse and Stephen Wells, I established the need for on-site interpretive centers and their needed functions.

Because many archaeological museums are miles away from actually excavation sites, and are usually large, centralized museums, the true meaning, context, and provenance of the artifacts and lost, thus giving visitors to these museums either false or inadequate education of the culture that once produced them. Changing in technology and mobility have allowed more people to be able to travel to the actual archaeological sites, instead of just the large, centralized museums, and having a facility on-site to educate these people would allow the artifacts to be shown in context, helping with the overall education of the visitors. Using the on-site museums as storage facilities would also vastly diminish the need for shipping artifacts elsewhere, ensuring that they are catalogued and housed with provenance, so that the context from which they were discovered is not lost.

Housing the artifacts at the site would also enable researchers interpreting them to visit the site and use the museum or interpretive center as a place of study. Adding certain programmatic elements, such as a preservation room, allows for work to be done in the actual building, guaranteeing the safety of the artifacts for future generations. The new interpretive center at Ancient Troy in Turkey employs techniques in the design of the building and is a successful example of how architecture can solve many of the problems with the old museum paradigm.

Though the large, centralized museum typology will never completely vanish, it can be molded to better fit a changing, modern society. However, these museums, as well as new, on-site interpretive centers both remain focused on the same purpose: the preservation and interpretation of the artifacts housed within their walls, and education of the public on ancient cultures.
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Technical and Construction Specifications


Specific Turkey Information


Specific Troy Information


