EPHEMERAL ARCHITECTURE
TOWARDS A DEFINITION
EPHEMERAL ARCHITECTURE:
TOWARDS A DEFINITION

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PREFACE

Preface
This document originated during a multi-day backpacking trip along the northern coast of Kauai in December 2004. For those few days, I carried only what I needed along the trail; freeing myself from the constraints of modern life and reaffirming a sense of independence. Along the way, I thought a lot about the backpacking credo “leave no trace”, and the idea of living light on the land. The design of the backpack, the tent, the stove and the rest of the gear focuses on reducing weight while providing the basic comforts of life, including a dry place to sleep, clean water and some warm food. The tent provides a prime architectural example of doing more with less through thoughtful design and use of technology. The tent goes up for the evening, comes down in the morning and moves on to the next site. Its temporary nature allows the area to retain a greater sense of wilderness, allowing the next group to enjoy it just as I did. In addition, the tent requires direct participation from the occupant to setup and take down, and therefore emphasizes an individual’s role in the environment. By the end of the trip, I had decided to direct my research to architectural lessons found in the idea of backpacking and, perhaps more
specifically, the idea of tents. Over time, this examination of backpacking and tents evolved into an investigation of architecture that represented a physical expression of ‘freedom’ and ‘time’ in a natural or urban context. Toward this end, I began to research tents, pneumatic structures and portable environments.

In my mind, the key characteristic of these pieces of architecture is a brief existence and a limited attachment to a place, something I began referring to as ‘ephemerality’. I believe that this ‘ephemeral architecture’, central to backpacking, possesses an inherent vitality that could be a powerful force in an urban setting. Therefore, I eventually proposed a research effort that would measure the potential of ‘ephemeral architecture’ (EA) to rejuvenate city neighborhoods. Yet, while developing this project few people understood what might comprise EA, aside from the occasional camping tent. Most people I encountered harbored preexisting (mis)conceptions of architecture as exclusively permanent structures. I discovered that defining and defending the concept of time-based architecture presented a major obstacle. As a result, the section of the project addressing the definition of EA grew continuously as I added explanations and examples to persuade people of its existence and importance. What had initially been a small aspect of the project became the central focus. Therefore, I reorganized the project into an effort to define EA and argue for its recognition, and that is exactly what this document attempts to do.

Interestingly though, through the process of defining this term, I learned a lot about the wasteful nature of the architectural profession. As a part of the construction industry, we are complicit in squandering resources and endangering our environmental future. With this in mind, I often had a difficult time coming to terms with my research. A definition for EA in many ways seems to justify and endorse the ‘throwaway culture’ that jeopardizes the wilderness I experienced on Kauai. At its core, EA defines an observable architectural phenomenon. Nothing in that definition demands that EA must be sustainable or environmentally aware; it encompasses designs that do not attempt to minimize materials, time or money. The definition makes no value judgment; it only strives to identify a design genre based on time. In defining this genre of architecture though, there is hope to expand the scope of what people think of as architecture, and that greater understanding perhaps may lead to advancements in sustainable living.

In conclusion, over the past year of working on this document, I have realized that EA has a particular resonance in Hawaii, and not just on hiking trails. The climate and cultural influences create a nurturing environment for the development and use of temporary structures in nearly
every aspect of life. Temporary structures extend homes, house offices, shade fundraisers, enclose weddings and generally do all that permanent structures can but on a short term basis. The year-round picnic weather has allowed most locals to become veritable experts in the creation, erection and alteration of elaborate structures made from virtually nothing but blue vinyl tarps and some nylon string. The influence of far eastern cultures such as from Japan, has seasoned the culture with a bit of Buddhist perspective in regards to the impermanence of the world. These outside perspectives have complemented the intimate relationship Hawaiians developed long-ago with the natural environment. The research presented here stems from life long experiences in this culture, not just from backpacking on Kauai. I have assembled this document to lay the groundwork for further discussion, research, analysis and design of a distinct class of building, beginning with a definition of Ephemeral Architecture.
INTRODUCTION
The patterns, related to past theories (or past ways of seeing) have in many cases reached a mature state which, in their formal aspects, are considered static. It is this static nature which has become the problem.

Gary Brown, *Freedom and Transience of Space*

*Introduction*
Ephemeral Architecture has existed since the dawn of architecture. Yet it has not received the type of attention or interest provided architecture of greater permanence. Much of this relates to the origins of modern culture in an agrarian system that depended on continuity, stability and permanence. Before agriculture, humans lived as hunters and gatherers. They followed the wild herds and the good weather. Their architecture provided a modicum of comfort while allowing maximum mobility, freedom and flexibility. These simple structures were temporary, portable and ephemeral. The advent of agriculture brought a new set of architectural circumstances. Buildings could remain rooted to a site. They established claims to particularly fertile plots of land and provided a reliable place to spend the winter. Since then, permanence has remained fundamental to the way most people understand architecture. *Ephemeral Architecture: Towards a Definition* attempts to change the status quo with a definition and greater recognition for Ephemeral Architecture.
The effort to define Ephemeral Architecture (EA) begins by examining the role of ephemera in our natural and built environment through examples found in nature and the arts. People have a direct understanding of natural cycles and can readily relate to the integral relationship between time and nature. Tidal pools, seasonal plants or short-lived insects offer examples of natural, ephemeral phenomenon understood by everyone. However, nature does not monopolize the ephemeral. Manmade works of art may also strive to express ephemerality through short-term works and installations. The works of Christo, to name one artist, provide a wealth of ephemeral examples. Both nature and art provide easily identifiable ephemera. By establishing the primacy of the ephemeral in familiar settings, the idea of ephemerality in architecture becomes much more persuasive, and a definition understandable.

Based on this general understanding of ephemera in our natural and manmade environment, I propose the following definition that transfers the concept to architecture.

**EPHEMERAL ARCHITECTURE**

*A class of building designed to be distinguished by impermanence, and its physical departure from the site.*

To clarify the term and ensure a correct interpretation of the definition, the document surveys examples from historical and current works that demonstrate these characteristics. Examples include seasonal structures such as ice hotels and event architecture erected for World Expos. An extensive discussion of the definition and examples should provide a clear picture of what will constitute EA from this point forward. Prior to this, architects have described certain works as ephemeral but never in a consistent manner. ‘Ephemeral’, up until now, might apply to a building with the potential to move, or even just the impression of lightness, or fragility in its design. This definition attempts to bring some rigor and uniformity to future discussions about the ephemeral qualities of architecture.

The final step will be the exploration of technological and social trends that highlight the need for a definition of time-based architecture. The enormous growth in personal computing and communications contribute to a changing perception of space and its relationship to time. A part of that change includes the idea that the establishment of place via architecture becomes less important in a digital world. Furthermore, people become more detached from the world as the
windows of cars, planes and trains filter our experience of architecture. The rise of modern
nomadic culture as facilitated by technology popularizes and spreads these perceptions. In turn,
people’s minds open up to alternative understandings of our built environment, including one that
incorporates EA as a desirable architectural solution. Architects’ responses to these shifts thus far
typically have used established forms and structures. Introducing and defining the concept of EA
helps broaden the language available to designers.

The definition responds to the increased interest in EA that the coming technological and social
shifts will likely create. Traditionally though, interest in EA has been low, and people typically
have failed to recognize it for several reasons. First, cultural norms and traditions stretching back
to the start of agriculture have conditioned people to value permanence over transience, and view
only permanent buildings as architecture. Second, the notoriously poor design of most EA (e.g.
mobile homes) contributes to a perception of inferiority, and the lower class status of temporary
structures. Third, buildings that should be categorized as EA due to their markedly short
existence, have instead been divided into groups such as ‘vernacular’, ‘mobile’, ‘transportable’,
‘deployable’ and ‘demountable’. These categories combine truly ephemeral structures with
buildings whose defining attributes relate to a structural system, assembly strategy or formal
aesthetic rather than time. However, current technological and social trends make EA extremely
relevant today, and, furthermore, greater interest will naturally improve design and quality of EA.
Defining EA as a separate and distinct genre of architecture is the first step to understanding it
and using it to address issues in modern living.

To summarize, society has evolved through the age of agriculture, on through the industrial
revolution and perhaps is coming to the end of the information age. Still, most people,
particularly in the western world, have a preconceived idea of architecture as a permanent
structure. Therefore, it is understandable that EA garners limited attention given this long
tradition of permanence as an architectural ideal. Architecture for many people means solid
construction that will withstand the ravages of daily use, the weather and time. However,
changes wrought by technology, shifts in social perceptions of the world and a spreading
ambition for personal freedom, may bring an understanding of ephemeral architecture once again
into prominence. The architecture will reflect the global scope and individual scale of today’s
technology, while being flexible enough to accommodate the uncertainties of tomorrow. The role
of ‘ephemeral architecture’ in the built environment will grow in importance along with the
acceleration of these changes. Architecture of the future will no longer be strictly the province of

Introduction
the static, the monumental, the permanent, but will share the stage with the ephemeral…
...This shift demands a definition for Ephemeral Architecture.
EPHEMERAL
ephemeral

adj. Lasting for a markedly brief time: “There remain some truths too ephemeral to be captured in the cold pages of a court transcript” (Irving R. Kaufman).  n. a markedly short-lived thing
**A Definition**

To dismantle the preconceived notions about permanence and architecture, this section will first address the term and concept of ‘ephemeral’. ‘Ephemeral’ finds its origins in the Greek term *ephemeros* (epi- "upon" and hemera "day")\(^1\) and translates as "lasting a day, daily". The word first appears in English during the 14\(^{th}\) century as a description for a daylong fever\(^2\), but has since come to apply generally to anything with a short-lived presence, but particularly something with a beautiful yet tenuous existence. Based on this understanding, the ephemeral surrounds us everyday. Ephemera abound in nature and their transitory nature typically follows seasonal or other natural rhythms. From the changing of the seasons to the phases of the moon, ephemera act as clues speaking of the ongoing changes occurring in the world. The term proves appropriate for the transitory beauty of nature and the arts due in part to the word’s pronunciation, which carries a pleasant sensibility. Synonyms such as passing, short-lived, transient and fugacious may focus on time or movement, but fail to evoke a sense of temporality, lightness and beauty in the way that ‘ephemeral’ does.

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2 “Effimera, one dayes feuer [fever] is as it were the heete of one daye.” Original source was unavailable, but the sentence and discussion appear in Shawn Purcell’s on-line article “Ephemeral Assays-The Word” (www.ioba.org/newsletter/V8/ephemera html), September 6, 2005.
2. The Desert Paintbrush blooms brilliantly but briefly.

4. Christo and Jean-Claude temporarily wrap the Reichstag in fabric, altering forever the image of the iconic building in memory.

3. Ephemeroptera has the shortest adult life in the insect world.

5. The Gates as architectural gesture offers a visual and physical experience to the residents and visitors alike.
Looking to nature, the ephemeral is on conspicuous display. ‘Ephemeral’ often describes plants and insects, portraying them with a fragile, beautiful existence. Certain flowers found in the desert are commonly known as ‘ephemerals’ due to their short existence and the fact that they may not bloom every year. A few examples include the Desert Sand Verbena, Desert Paintbrush (image 2) and the Ocotillo, all of which bloom only when otherwise scarce water is available. When the rains arrive, the plant completes an entire lifecycle in a matter of days or weeks and then returns to dormancy, awaiting the next rainfall. Insects are another group with a famously short lifespan. Many insects spend the majority of their existence in the lower stages of development while the final adult stage, with which most people are familiar, may last a few days, hours or just minutes. In many ways, these insects define their lives in adulthood, since it must mate and lay eggs within that limited window of opportunity. Scientists speculate that by breeding in unison over a short period, the insects overwhelm predators with sheer numbers and reduce the time they are in their most vulnerable stage. The order ‘Ephemeroptera’(i3), a type of mayfly, derives the name from its ephemeral adulthood of less than 48 hours. The most ephemeral among these is the Dolania americana with females typically living for less than five minutes1. In a similar way, natural phenomenon, such as the fall colors or a sandbar owe their brevity to a combination of cyclical events tied to the weather, season or the moon. These plants, insects and natural phenomena speak to the constant change and inherent ephemerality of nature.

Although people do tend to fixate on the longevity of manufactured items (“How long will it last? When does the warranty expire?”), we find ephemera in the manmade as well as nature. Art and fashion commonly explore issues of the ephemeral and time. Projects by husband and wife artist team Christo and Jean-Claude intend to create an environment, an image and a memory (i4). In doing so, the permanence of their work becomes superfluous or even detrimental to the essence of their pieces. “The Gates” (i5) of NYC’s central park, for example, represent their latest ephemeral public artwork. For “The Gates”, they erected 7500 saffron gates meandering over 23 miles in NYC Central Park for 16 days2, attracting people from around the world. The brief window of time the work was on display heightened interest in the project. Christo and Jean-Claude are not alone however, as many other artists work with ephemera as well. Andy

2 http://www.nyc.gov/html/thegates/home.html
6. Denevan cooks and serves seasonal meals to accompany the viewing of his ephemeral beach art in an attempt to recruit the senses to create lasting memories and connections.

7. Buddhist Mandala sand art provides a visual representation of the religious beliefs regarding the ephemeral nature of the world. The concept and the process are the point.

Goldsworthy works with leaves, stones, sticks and flowers to create temporary works of art. In a recurring project he creates small sculptures of stacked rocks that the tide will eventually cover or break apart. In similar fashion, artist Jim Denevan rakes large geometric designs in the sand at remote beaches that the tides also wash away (i6). Yet these ideas are not new. For instance, Buddhists has long created two-dimensional symbolic representations of the universe, called mandalas, with colored sand (i7). Once the monks complete the design, they brush the sand away to start anew. Much of the allure of ephemeral art, like natural phenomena, lies in the process, experience and memories created, not any lasting object.

Some ephemeral art may suggest an architectural origin or reference, and in doing so begin to straddle the line between art and architecture. The work of sculptor Patrick Dougherty, for example, uses sapling wood grown in the area of a given project to weave architectural sculptures with organic forms (i8). The projects relate directly and tangibly to the site, often wrapping over adjacent buildings and trees. Dougherty’s designs often include architectural elements such as doors, windows and interior spaces. Many of his sculptures could possibly be mistaken for a vernacular structure. Similarly, Indian structures for annual rituals emulate and reference religiously important architecture. One example is the Ta’zia, a symbolic tomb commemorating the death of Husain, grandson of Prophet Mohammad. Elaborate in design and decoration, the structure is built like a lattice tower and can climb to a height of 30 feet. Although the ta’zia plays a large symbolic role in annual religious ceremonies, participants destroy the structure at the end of the ceremony. Shakeel Hossain, an expert in these structures, stated that for the participants the ceremonial destruction of the Ta’zia is an affirming act of community building3. Other similar structures include the ‘rath’, a mobile temple of the Hindu gods and goddesses, and the ‘pandal’, a temporary pavilion for the goddess Durga. These structures are not unique as many cultures construct ritual towers and buildings for festivals. In such cases, art and architecture may at times overlap, operating in both realms simultaneously.

Yet, even with these examples from nature and the arts, the essence of the ephemeral remains elusive, subjective to human perception. No one can say with authority what constitutes ‘short-lived’. Rhetorically speaking, does ephemeral mean less than a year, six months, a week or a day? Where do we draw the line between permanent and ephemeral? What becomes the standard—the adult life of a mayfly? Admittedly, the point of departure from ‘ephemeral’ to

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‘permanent’ remains unclear. Therefore, when discussing the ephemeral, determinations of time become issues of expectations and intentions. These issues increase in complexity as we begin to apply them to architecture since it has long strived to be everlasting, and associate itself with the perception of ‘permanence’. However, discernment of ephemeral in regards to architecture remains similar to the arts: *ephemeral means a short existence in terms of our expectations and the intention of the designers*. This understanding forms the basis for a definition of Ephemeral Architecture.
EPHEMERAL ARCHITECTURE

10. This ephemeral tipi of Native American Indians of North Dakota appears to be the second idea in architectural design.
A Definition

Buildings that distinguish themselves in terms of time rather than through space, form or function do exist. Much in the same way as plants, insects and art, these buildings define their existence through their brief connection with their environment. In fact, a rudimentary temporary tent likely represents man’s first ‘architectural’ work. The structure, primitive Laugierian (19) architecture to be sure, may have involved draping a skin or leaves over a branch. Simple and easy to erect, this ‘tent’ kept out some rain, provided a little shade, and perhaps, just as importantly for a hunter/gatherer, offered mobility. The structural components may have comprised locally found materials or a set kit of parts. Over time, the structure grew in complexity1, but did not always retain its mobility.

With the advent of agriculture, buildings generally became more permanent. Still, the tradition of primitive tents lived on through vernacular design like the tipis of the American Indian (10),

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1 “The great masonry domes of both the East and the West can ultimately be traced back to the simple arched brick hut or tent.” Torvald Faegre, Tents: Architecture of the Nomads (London) 1979. p 1
11. Typical Bedouin ‘black tents’ perfectly suited ephemeral design for nomadic life in the desert.

12. Typical Mongolian yurt designed for easy transport and erection, are well suited for Asian steppes.

13. “Suburban nomads” on a weekend trek stake out a front yard with an assortment of modern nylon backpacking tents.

14. Modern pneumatic ‘bouncer’ flanked by other architectural essentials for a day at the beach.
black-tents of the Bedouin (i11) and yurts (i12) of the Mongols among many others. Common contemporary interpretations include the tents of modern day backpackers (i13) and those used in community events such as a local fair. Hi-tech examples are the pneumatic structures pioneered in the 60’s to house short-term events (i14). Each shares the same key sense of impermanence. Yet, unlike plants and insects, no term identifies these structures as a cohesive group, distinct and unique. Therefore, the term ‘Ephemeral Architecture’ (EA) should be adopted.

The following statement establishes a broad definition for EA and a starting point for discussions regarding time-based architecture. The subsequent sections offer examples and further investigations that are critical to a full understanding and correct interpretation of the definition.

**EPHEMERAL ARCHITECTURE**

* A class of building designed to be distinguished by impermanence, and its physical departure from the site.

The definition incorporates two central ideas. First, the design must highlight or somehow distinguish the design of the building as ephemeral. The architect must demonstrate a design intent that does not strive for permanence at the site, and expresses the eventual removal of the building from the site. Rather than establishing a set time that divides ephemeral from permanent, the design intent proves to be a differentiating characteristic. The designer can express this intent in any number of ways including use of materials (e.g. ice-block buildings will melt away), structure (e.g. the framing of yurts and tents express a sense of mobility) or literal announcement (e.g. a timer on the façade counting down to “departure”). Other methods not yet conceived of could accomplish the same thing. The idea is that the design demonstrates a sense of or intention toward impermanence at the site.

Secondly, the building must do more than express this intention; it must follow through and physically leave the site. In other words, a piece of architecture designed for easy relocation is not EA if it remains permanently rooted in place. The building must be removed (e.g. dismantled like weekend tents or World Expo buildings), shift to another location (e.g. traveling stage sets or mobile homes), disappear (e.g. melt away or be demolished) or in some other way vacate the site. Thus, unlike other classifications of architecture, the architect alone cannot distinguish a building as EA through design. The owner or occupant must carry through with the design intent of the architect.
For example, due to financial pressures during the real estate bubble of the 1980s, a high-rise building in Tokyo might come down in a year. Such a building might be brief and transitory when compared against its intended life, yet not ‘ephemeral architecture’ by definition since its design would have expressed no sense of its unintended temporary nature. On the other hand, a building made of ice, the material clearly expressive of transience, would also fall short of the definition if it failed to melt away, since it never physically realized the intention of its design. As EA, a building must meet both definitional aspects of impermanence regarding intention of design and duration of existence at a given site.

Even between the definition and examples there remains ample room for misinterpretation and confusion. The following discussion addresses a few foreseeable areas of potential confusion. One of the first questions regarding this definition to arise is, “How short-lived does a building need to be, to be considered ephemeral?” In this way, EA proves difficult to define in the same way as “high-rise”. The height or number of floors required to qualify as a “high-rise” varies and may shift over time. A ten-story “high-rise” of yesteryear would likely be called a mid-, or even low-rise today. Similarly, the distinction of ‘ephemeral’ for a building will likely change over time, and resist the assignment of a time cutoff. The shortest-lived EA, those that last a day or less, would likely meet the idea of impermanence for most people. Most would also likely agree on architecture lasting a few weeks or even the length of a season. However, when does it creep into questionable territory? It is impossible to say and that line may differ across buildings. Arguments for and against EA could begin by comparing a building’s lifespan against similar buildings, or analyzing how its design expresses impermanence. The definition cannot resolve all ambiguous situations without overly restricting its scope. Since the time-span considered ‘brief’ today might change tomorrow and differ between building types, the line separating permanence from impermanence should remain open to interpretation. Differences of opinions will naturally occur, helping to keep the definition alive and relevant; allowing the genre to evolve as the interpretation changes and adjust to social perceptions of time. The definition plays a crucial role by providing the basis for discussion and on which to disagree.

2 An ice-hotel has been built in an air-conditioned hangar. See discussion in the following section: “A Survey”.

3 Completing a Google web-search for the term brings a number of different criteria. 1) “taller than six stories.” (www.realestateglossary.com/real-estate-glossary/h.html). 2) “multiple dwelling units and at least eight floors.” (www.ncbuy.com/credit/glossary.html). 3) “usually taller than six stories, serviced by elevators. The designation as to high-rise is determined by local codes.” (www.virtuallytoronto.on.ca/h1.html). 4) “In the central business district, this could mean a building higher than 25 stories above ground level, but in suburban markets, it generally refers to buildings higher than seven or eight stories.” (talkinghouserealtors.com/glossary.html).
The graph visually displays architecture relative to its intended and actual time at a site. Architecture along the 45° line remains on a site as long as intended. Above and to the left of the 45° line lies architecture that prematurely departs a site. Below and to the right lies architecture that remains on a site past its intended departure. As the graph shows, EA typically lies near the 45° line. Most EA can be found here because actual time is relatively easy to reconcile with intended in a shorter time frame, and the examples shown often relate to an event with a predetermined end point. For example, Snow Show 2005 was scheduled to last a specific number of days, but due to an early spring the buildings melted away early. Therefore, it falls to the left of the 45° line, but still close as indicated by the golden color. The golden area around the 45° expands as it moves into the future since deviations from the line become more difficult to control over time. The darker golden area represents where most architecture will be found since a building's intended and actual time at a site is not always easy to reconcile. Therefore, buildings in this area generally move toward the 45° line. Examples like Ise Shrine and Denver Airport are still aging and moving toward the 45° line, while others like Paper Church and Quonset Hut have moved well past it. (Note: The graph shows certain typical groups (e.g., backpacking tents, cruise ships, yurts) and may not properly reflect specific examples within these groups. For example, not all recreational vehicles will be on the 45° line; there may be specific ones that become permanently rooted to a site and exceed their intended time.) See Appendix C for tabular form.
The graphic above suggests a way of categorizing the parts of the world, to show how they overlap and change over time, and how people will have differing opinions over where things fit (e.g. Should space stations be considered a type of building?). Within each category, subsets exist that also grow, shrink or merge according to changing perceptions, trends and technologies.

Figure 2: The graphic above shows a way of categorizing the parts of the world, to show how they overlap and change over time, and how people will have differing opinions over where things fit (e.g. Should space stations be considered a type of building?). Within each category, subsets exist that also grow, shrink or merge according to changing perceptions, trends and technologies.
Additional confusion may come over what different people consider ‘architecture’. This document will not attempt to settle this age-old debate, but for the purposes of discussing EA, any structure built for habitation will be included. This of course leaves room for much interpretation. Architecture in this context comprises a loose grouping with various subcategories that overlaps with other categories (figure 1). Certain buildings and concepts may be indisputably ‘architecture’, but others might also fall under the label of vehicle, art, nature or even infrastructure. Each category has a central core of ideal types that may operate as an icon. For example, when thinking about art one might reference a painting like the Mona Lisa. The quintessential vehicle might be a four-door sedan. In terms of architecture, the suburban home or a skyscraper might come to mind. For example, no one would likely disagree that the NYC Chrysler Building is architecture, but other examples may prove more difficult to categorize. There would likely be disagreement over to which group the mobile home rightfully belongs—vehicle or architecture or both? As another example, the Eiffel Tower might deserve a place in both categories of architecture and art. The point is that categories overlap and create grey areas where their edges blur together. Once again, difference of opinion will emerge, making architecture another point of discussion, but EA argues for an open interpretation of architecture including everything from tent to skyscraper.

Thirdly, ‘Ephemeral Architecture’ does not herald the dawn of a new type or style of architecture. Instead, it might be a considered a regrouping of architecture. This project unites time-based architectural works currently scattered across existing groupings through criteria set down by the definition, and renames them ‘Ephemeral Architecture’. For instance, ‘Pneumatic’, ‘Demountable’ and ‘Vernacular’ refer to specific types of architecture that includes examples of EA as well as non-EA buildings. The definition links together those EA examples across these groups (figure 2). In essence, EA exists but we fail to recognize buildings in terms of how long they last because architecture is most often categorized by structure, form and function. When considering time as a key architectural feature, reexamining existing architectural categories through the lens of this definition is necessary.

EA reexamines architecture through the lens of time in terms of design and physical connection to a site. Therefore, the definition can only apply to a specific building at a specific moment. This point does not mean much for buildings that melt, crumble, self-destruct, or otherwise cease to exist upon their departure from a site. However, for those buildings that are relocated, rebuilt, reassembled or otherwise continue to exist on another site, this statement means that over the
course of its life, a building may be described as both EA and permanent at different points. For example, an empirically EA building may at some time put down roots for years with no anticipation of departing, making it no longer, by definition, EA. If it does return to moving between sites, it may once again be termed EA (Figure 3).

Finally, this definition does not suggest that the term ‘ephemeral’ has never before been used in the context of architecture. Interestingly, the word ‘ephemeral’ does already turn up in the description of a wide-range of architecture, but not consistently and not as applied here. The term substitutes interchangeably with ‘temporary’ and ‘portable architecture’ in at least a couple places (Kronenburg, 1998: 7 and 2002: 10-11). One researcher argues ‘architecture as ephemera’ is, “…media whose reflexive and dynamic task is to inform,” (Tardif, 2000). Others apply the term to Japanese architecture for “…the techniques of construction and the concept of materiality that is embedded in it.” (Krstic, 1998: 11) and buildings of “little material substance” (Bognar: 5).

[See Appendix A for other related terms.] Others have used it even less precisely in reference to buildings that might express a sense of movement, fragility, lightness, transparency, etc. Taken together, ‘ephemeral’ has no clear identity in relationship to architecture, or time; it has had no definitive meaning, until now.

In sum, EA stretches back into antiquity and continues to play a part in shaping our environment. EA exists much in the same way the phenomena of the natural world existed well before man put a name to them. In the case of both nature and EA though, a name and identification allows for further study and greater understanding. The definition allows for future discussion about this architectural genre and more focused development of EA. In an effort to further clarify and develop the idea of EA the following section provides some real world examples of EA, putting a “face” to the definition.
Just by walking or driving through a city, one will come across numerous examples of temporary or ephemeral architecture. Whether the public market every Tuesday/Thursday or the construction trailer set up for a new high-rise, everyone encounters buildings and pieces of architecture on a daily basis that inhabit and alter the built environment for a relatively short time. They may also exist for a day, a weekend or a season, or they may be cyclical like the market showing up just those two days but every week like clockwork. They may be for one-time use, or durable and portable, moving from place to place.

Regardless of whether they are produced at a factory or erected by crane, they provide a great deal of interest and vitality in the built environment, offering convenience and functionality or perhaps just fun and whimsy. Once made aware of these structures, a person will be surprised at how common they are, and how little attention and credit they receive. Perhaps more intriguing is the fact that EA has possibly existed since the very beginnings of architecture and remains as relevant now as ever.

EA has always included nomadic architecture, but it has expanded to cover many other functions besides mobility. EA exist as experimental exercises, performance spaces, and commercial platforms. The functional possibilities of EA continue to grow just as the forms of EA structures continue to morph. The tent provides just a single interpretation. The use of advanced tensile engineering, modern developments in pneumatic structures, ‘hi-tech’ materials and ingenuity continue to generate new formal ideas. The examples that follow will demonstrate exactly this.

The various examples differ significantly in form or function since EA appears in any number of styles, and accommodate virtually any type of function. The groupings (Seasonal, Nomadic, Daily, etc.) create subsets of EA that express a certain perspective on transience. In addition, they provide a way to organize the examples into manageable sizes and establish a framework for further discussion.

**Seasonal** - *These works last for a season.* Before refrigeration allowed foods to travel across the globe, people relied largely on seasonal foods. The nutrients provided by seasonal foods frequently reflect the needs of the body during that time of year. For example, the hot months of summer find vegetables and fruits with high water content in season (e.g. melons, tomatoes,
peaches and mangoes). One might argue that seasonal architecture similarly establishes a healthy direct connection to natural cycles. The use of seasonal materials, for one, speaks of the place in a visual and tactile way.

One example is Snow Show (i16), an annual collaboration between architects and artists in Finland demonstrating the architectural and artistic potential of building with ice and snow. Each winter a village of monuments, some occupiable, others not, appear for as long as the weather allows. During the past 2005 incarnation, most pieces melted away a couple weeks before the official end of the festival due to unexpected warm weather. Of course, the idea of ice as a construction material is not new, nor is it only found in the realm of festivals. The ice-block houses of the Canadian Artic Eskimos are vernacular examples (i17). The Eskimos have long used the temporary structures for winter housing and/or overnight shelters for hunters¹.

Ice buildings around the world represent modern and elaborate interpretations of the indigenous structures. Made famous in the James Bond movie “Die Another Day”, the first modern ice hotel originated in Sweden circa 1989. Known simply as “The Ice Hotel” (i18), architects redesign the entire complex each year in Jukkasjärvi, Sweden, pulling the majority of the construction material from the neighboring Torneälven River². Another Ice Hotel sits just outside Quebec City in Canada. Just like the original, the structure is redesigned and rebuilt every winter and typically takes guests January to April. Other “ice hotels” have started as well, including one in the U.S., but interestingly that hotel aims for permanence through use of a refrigerated enclosure. Based on this key characteristic, the American hotel is not EA. Although it may be made of ice like those in Sweden and Canada, the American version has made every effort to subvert its ephemerality. Through the material alone, ice architecture suggests a temporary existence, but it is not enough to be considered ephemeral. At the outset, the purpose of building in this manner appears to be novelty, especially with a one-night average length of stay. (Most people spend the remainder of their vacations in more conventional buildings nearby.) Yet, in addition to the initial sense of amazement, no one can deny the tangible and psychological connection formed between the environment and the occupant.

Mexican vernacular structures used for fishing also display a seasonal sensitivity to the

¹ A common misperception is that all Eskimos lived in ‘igloos’. “In reality, however, the domical snow house associated with that term (igloo, or, more properly in the Inuit Eskimo language, iglu, is a generic term for “house” in most Eskimo languages) was built by only a small minority of Eskimos.” (Lee, 1)
² http://www.icehotel.com/english/index2.htm
16. Exterior shot of work by Arata Isozaki and Yoko Ono at Snow Show 2005. Note the conventional doorway leads to “habitable” interior space.

17. Traditional Snow village. ‘Igloos’ may interconnect to create extensive series of rooms. Windows shown are orientated for best sun angle. (Lee, p 49 from Hall 1864:269)

18. Swedish Ice Hotel reception area. Vaulted ceilings are typical for ice & snow construction.
environment. These summer huts house the anglers and little else other than some furniture, a fish cooler and radio. When the winter tides and waves arrive, the fishermen move out and let the water take the structure away (Busch, 88)\(^3\). The next year, these men rebuild the structures from locally found materials. Similarly, families on Molokai in Hawaii will build bamboo ‘summer homes’ on beaches accessible only by boat on the north side of the island. The materials for their homes come from the quick growing bamboo found there, and the structures return to the earth at the end of summer with the arrival of the big winter surf. This system creates architecture in harmony with the land. A permanent structure may be argued as more efficient in that no new structure needs to be erected each year, but then there is maintenance to pay for and the building would need to be secured in the off-season. Still regardless of the economics, these structures help establish a strong relationship between its function, the season and its occupants.

**Event - These works last for a predetermined length of time.** People may be most familiar with these types of ephemeral architecture that may last just a few hours or the weekend. These structures comprise the various tents, tarps, pneumatic structures, etc. used to shade and house picnics, parties, gatherings and markets. The additions of simple tents or elaborate demountable structures instantaneously transform entire parks, city blocks and plazas. They may last a day, but develop a sense of permanence through regular recurrence.

“...this sort of temporary structure can populate public spaces with a ‘building’ type structure which does not, however, represent any particular governing authority or commercial power base and is therefore both revolutionary and free. An event generated in a public space in which the city’s inhabitants can become directly involved defuses, if only temporarily, the authority of the established system.”

~Robert Kronenburg, Portable Architecture (p 239), in reference to Maurice Agis’ Dreamscape project

EA for daily events represents a very democratic form of architecture, as it requires very little investment and virtually no technical skill. The construction process does not typically require government approval, and no building code check. In some ways, it operates outside the bounds of authority and in this way considered free. Furthermore, the daily architecture allows for changes, adjustment and experimentation. The constant construction of these spaces and the typical flexibility inherent in the tent form proves conducive to innovation in the same way the nomadic lifestyle developed their specific architectural forms and systems. Considering that “Today there are 3,000 farmers markets in the United States, an almost tenfold rise from the early

\(^3\) The article refers to these huts as *chozas*. However, *chozas* generally identifies a “hut” that may or may not be temporary, similar to barracas of Spain.
one could argue that EA as the typical structure for these markets has also seen a similar increase. The symbolic meaning of the tent and its power as a democratizing tool make it an important component of establishing a more vibrant and free community. The rise in the popularity of such markets signal an interest in locally grown produce, and a wider recognition of the potential for such markets to develop social networks, enliven the community and make use of underutilized areas.

There are significant historical examples of Event EA, including a trend in Europe around the seventeenth and eighteenth century. During this period, commissioned architectural works provided the primary spaces for celebrations such as births, marriages, funerals, and then disappeared after the festivities. The EA of that era “has often been understood as an outlet for designer’s creative, even outlandish expression or as a laboratory for experimental formal innovation…ephemeral architecture had its own constraints of propriety, its own rules and traditions. It fashioned its own way of engaging the visual, and was judged according to exacting standards by a well-informed public that knew how to link the structure to larger contexts…ephemeral design constitutes an independent genre of artistic production, not a poor stepchild of more ambitious projects…” (Moore) The patrons of this historical EA held a particular appreciation for the EA work as a unique piece of architecture and an integral part of the event itself. The projects continue to exist as prints, created at the time to commemorate the work. These ephemeral architectural works seem to foreshadow floats and ceremonial stages that mark a major event or festival today.

The teahouses of Japan provide another traditional example. The wooden structures specially designed for the ritualistic tea ceremony are demountable and portable, although may not ever relocate. Architects attempt to reinterpret this form and concept from a modern perspective, often focusing on the ephemeral aspects. Examples include the Mobile ICHIJYO/1 by Toshihiko Suzuki and the So-an/Mobile Chanoyu Room5 (i20, following page)

In other cases, EA may respond to tragic events, fill a functional role or make an architectural

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20. Mobile ICHIUJO/1 by Toshihiko Suzuki (top) and So-an/Mobile Chanoyu Room allow for portable personal private space with the simplicity of a miniature Japanese Teahouse.

21. Shigeru Ban has completed a number of refugee housing designs made from paper. This is a typical example with walls made from paper tubes.

22. Tadao Ando Japan pavilion for the 1992 Sevilla Expo (top), and an interior view of Peter Zumthor’s Swiss Pavillion Expo 2000 (bottom).

23. Edgar Blazona MD 144 with sleeping loft.
Refugee housing in the wake of a major disaster has garnered a lot of attention for ephemeral architecture. A wide number of architects have addressed the need for low cost, quick to erect architecture, including Shigeru Ban. The quick erection, and eventual removal, of what may be thousands of housing units demonstrates a unique circumstance for which EA is aptly suited. Other events may include the construction of a building requiring the requisite marketing trailers and administrative buildings that occupy the site during the work. These are built for short lives at the site, ready to be redeployed to another site, and they make no pretense about their short existence—people know that they will be gone once the new building is erected. The buildings at World Fairs and Expos often do more than temporarily house exhibits. Structural or formally innovative, these structures represent ideas, products or entire countries. Examples include Tadao Ando’s Japan Pavilion at the 1992 Expo in Sevilla, Spain and Peter Zumthor’s Swiss Pavilion at Expo 2000 in Hannover, Germany. At the end of the Expos, they may be dismantled and reused elsewhere. Event EA may also represent an artistic vision like Burning Man. The structures found there not only house people attending the event, but also influences the ideas and alters the perception of those that experience it. The potential of architecture expands based on these experimentations. An example of the work explored at Burning Man includes Edgar Blazona’s Modular Dwellings (Topham, p 116-117). Event Architecture establishes a strong connection between the activities and the physical space.

**Nomadic** - These works have a flexible existence, but typically are “always” on the move. Among the oldest type of architecture known, nomadic dwellings continue to persist today. The best known of these include the Tipis of the Native American Indian, the Yurts of the Mongolians, and the Black Tents of the Bedouin. Easy to erect and take down, these dwellings allowed the nomads to follow their herds and the good weather. This is not to say however that as nomads they wandered aimlessly. They have certain predetermined routes and campsites they frequent on an annual basis. Their structures provided a sort of continuity for them between various campsites while allowing freedom of movement. Furthermore, within each of these nomadic groups smaller ‘tribes’ or communities exist, each with its own unique interpretation of the tipi, yurt and tent.

Ancient nomadic architecture offers a valuable resource of information and ideas. Having been developed for local conditions across generations and built from a limited palette of materials, the structures naturally have a certain efficiency and intimate connections with the local environment, providing time-tested precedents for modern architects. The long run success of these building
25. Jean-Paul Jungmann’s Dyodon is an example of Utopie’s work. The group pushed the boundaries of what people conceived to be possible with pneumatic structures. Utopie consider this a whole ‘pneu’ world of architectural design.

26. Archigram approached architecture from the personal and urban directions. The Walking City (top) envisioned the day when cities would travel the globe thereby removing architecture from the immediate context of its place. Cushicle (bottom) allowed a person’s clothing to transform into his/her dwelling ‘pod’.

27. Nagakin Capsule not operates primarily as a commercial high-rise with the capsules in the same place as the day the tower was built.

28. This is one example of Rakowitz’s paraSITE work, which he sees as a way to present a “symbolic strategy of survival” for homeless in the city. Rakowitz contemplates the city covered “like ivy” on day by this temporary parasitic architecture.
types attests to their intelligent design. These design strategies also connect the occupant with the environment, by using locally found materials. Use of local and natural building material speaks of the region, develops direct connections with the natural environment and can encourage conservation (e.g. if a people personally see their forests decimated for lumber, they will be more likely to consider the impact of their actions). Imported and manmade building materials may separate us physically and psychologically from the materials, disconnecting us from the true impact our buildings have on the world.

Modern nomads have developed their own contemporary versions reflecting the modern condition. Granted, many adopt an infrastructure-based solution involving strategically placed hotels positioned around the globe. Yet in other cases, people have successfully translated the spirit of ephemeral architecture found in tipis and yurts into a modern form. The covered wagons and gypsy caravans call out just a couple of the mobile home incarnations popular in the past. Contemporary traveling houses, in the form of Recreational Vehicles, Mobile Homes and elaborately customized wheeled housing, bring the necessities and comforts of a site-fixed house with the nomad anywhere on the globe.

Since the 1960’s, experimental ephemeral architecture related to the nomadic lifestyle has flourished. Some became prototypes, but many others remain paper architecture exploring issues of time and space. Archigram, Utopie (i25) and the Metabolist were among the experimental architectural groups that worked to push the boundaries of what people could consider as architecture throughout the 1960s. The walking city and “cushicle” (i26) represent a couple of the most famous works from British design group Archigram. Utopie, a group originating in France, focused exclusively on the use of pneumatics as a political and architectural symbol (Dessauce). Their projects spanned from furniture to huge theatres intended to display the potential of pneumatics. On notable project that was actually built is the Metabolist designed Nagakin Capsule Tower (i27). The tower operated as a vertical docking station for numerous identical nomadic capsules. In theory, these capsules would wander the globe with their owners docking at similar towers in other countries. Yet, once in place these capsules never actually left the Nagakin site. In light of this heritage, similar experimentation continues on, although perhaps not quite as a movement, but by individuals and specialty offices. Michael Rakowitz, for example, developed inflatable homeless shelter dubbed para-SITES6 (i26) as political statement.

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6 http://www.possibleutopia.com/mike/
Meanwhile, Lucy Orta explores the possibilities of the ephemeral in intersections between clothing, tents and sleeping bags. (Topham p 52-55) Orta attempts to literally connect people (i28) in the hopes of creating social bonds through architecture. Jennifer Siegal also promotes many of the concepts of EA through her Office for Mobile Design and a book about mobile architecture7.

Even with the definition and examples, ephemeral architecture remains a subjective term, something not easy to encapsulate. The idea of establishing this definition is to begin discussing and assessing buildings based on their ephemerality in addition to a typology or formal style. Identifying buildings based on their temporal nature requires that other judgments regarding operative functions or stylistic elements occur independently. In other words, two buildings may be described as mobile homes, but only one might be actually ephemeral. The definition is not intended to be a specific legal definition, but rather a useful descriptive tool to bring together otherwise disparate building types.

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**Trends**

The definition of EA establishes a basis for discussing time-based design, and draws attention to the fact that architecture has become increasingly characterized by time. The definition works to undermine the fixation of most architecture with longevity. The idea of architecture as static and permanent pervades and controls the type of architectural projects designed and developed, and restricts our understanding of architecture.

The only barrier to stop architects adopting free experiential space is the human conceptual notion of the past as a source for producing the future… Physical permanence of form, in perpetuity, is not necessary for psychological permanence within our contemporary culture. The ideal architecture of the past… is actually a stagnation of form—it is a product of our fear of the future… the universe as we now comprehend it is not constructed of matter that is solid or defined: it is a collection of subjective ephemerality in which the only immutability is transience. (Brown, p10)

The definition of EA reflects a renewed interest of contemporary culture to move beyond past ways of building and understanding the world. EA allows society to manage minutely and responsively an ever-changing environment comprising a “collection of subjective ephemerality”. Recent technological and social trends create a confluence of materials and attitudes that offer a fertile environment for EA.¹ Technology has trended towards advancements for personal communication and navigation devices. This technology fuels the continuing social evolution and expansion of a modern, or techno-, nomad. The nomadic lifestyle reflects and shapes a new perception of the world, including the understanding of place and time. Underlying these changes is the foundation of individual freedom and participation. EA, as discussed, operates as a physical manifestation of these trends that provide an environment to nourish and cultivate time-based architecture.

**GPS** - Global Positioning System, or GPS, relies on a network of 27 satellites (24 in use with 3 back-ups) in geosynchronous orbit that beam signals to receivers on earth (i30, 31). Using these signals, the receivers can determine their exact coordinate location on the earth in terms of longitude and latitude. Originally used solely by the military, search-and-rescue, and adventurers, GPS devices have quickly made their way onto car dashboards, cell phones and watches in recent years.

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¹ There may be some zeitgeist around ephemera with an apparent increase in the number of publications and experimentation, and the current call for submission from the MIT journal of architecture, *Thresholds*, for work regarding ‘ephemera’.
However, prior to May 2000, the military practiced a policy of “Selective Availability” which meant that the satellites transmitted disrupted signals that would allow civilian GPS devices an accuracy of 100 meters at best. Only US military receivers would be capable of receiving accurate information. With the end of “Selective Availability”, today’s civilian GPS receivers vary in accuracy depending on the abilities of the device, but do have the potential to be accurate to within a meter. This change expands the potential of civilian technology in navigation and safety.

Although the impacts may be delayed in the architectural realm, the ubiquity of GPS devices and the end of “Selective Availability” open greater possibilities for EA. First, as a tool, GPS provides an alternative to standard methods of navigation such as the use of landmarks and street addresses. It also reflects the next step in the evolution of navigation, moving from the use of stars to maps and now to GPS. Unlike established forms of navigation, GPS can plot and locate coordinates in a wide-open field or the Pacific Ocean with nearly pinpoint accuracy. Every GPS ‘address’, or global coordinate, is unique and already determined by longitude and latitude and does not change if a landmark comes down or a street gets rerouted. In a world organized by a GPS coordinate, buildings could set up for a brief amount of time at any site in the world and still be located by anyone. Organized around a coordinate and facilitated by ephemeral architecture, entire events can be staged without the necessity of ‘place’ or even much time.

**Mass Mobile Communication**

“… transient, tectonic solutions are increasing in both incidence and scale as a means of resolving the ever-changing demands of a media and technology driven society… The emphasis towards transience is not only driven by the pace of facility to obsolescence it is also due to a change in the emphasis of the technology market. There has been a shift away from social technology to individual technology.” (Brown, p 7)

The internet and mobile phones, alone and in conjunction with GPS, further expands the potential of EA. Both have played a role in creating ‘flash mobs’—an instantaneous crowd, group or community that perform some choreographed action, stunt, dance, etc. Frequently seen as a sort of performance art, ‘flash mobs’ have been used to comedic effect with anonymous people quickly coming together to do bird calls or undressing in public. In recent years, the idea has been applied to political causes including the 1999 World Trade Organization protests in Seattle.

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Another case occurred in the Philippines where ‘flash mobs’ appeared at President Estrada’s house to demand his resignation. Mobile mass communications enables this modern phenomenon, and in a similar way paves the way for more complex efforts involving architecture. These efforts at mass, spontaneous coordination makes the possibility of producing architecture for a brief moment more tenable. In a way, raves or Guerrilla/Pop-up retail have already taken these initial steps by creating ‘flash events’. In both instances, crowds of people converge on a prearranged site and time via mobile messaging and the internet to establish ‘places’ transformed for a brief moment into a club or retail establishment. Warehouses or old abandoned buildings, often in neglected parts of a city, suddenly become a ‘destination’ for parties, entertainment, shopping or some other experience.

This phenomenon may simply be a fad, but it also foretells massive potential. As people become more accustomed to impromptu activities occupying spaces with no formal connection to the function itself, ephemeral architecture grows in relevance. Participation in ‘flash events’ familiarize people to this way of inhabiting a space, making them more open to the use of temporary buildings for an hour, a day or a weekend to house a variety of functions. This happens all the time, but traditionally it requires significant advance notice, a built-in constituency and an address. Examples such as a local fair or an outdoor festival demonstrate the feasibility of combining temporary functions and ephemeral architecture. With the technology on hand, times and location can change at the last moment or even during the event. Technology allows the building to detach itself from ‘place’ and in doing so, from time as well. If a building no longer needs to establish permanency in a given location then it no longer needs to exist for an extended period to be successful. Taken a bit further, ephemeral communities will become reality. There is no doubt that technology forms the foundation of many changes in architecture.

**Modern Nomad** - Much has been made of the way technology in the form of GPS, cell phones, laptops and jet travel has enabled the proliferation of the modern nomad or techno-nomad. Social observers use the global drifter as an archetype for future living or a significant social problem. Either way it is difficult to deny or escape the presence and influence of this sub-culture. The American image of a rebel or drifter has a strong resonance with the general population around the world, and the techno-nomad represents the latest incarnation. The lifestyle of this group

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3 “On January 20th, 2001, President Joseph Estrada of the Philippines became the first head of state in history to lose power to a smart mob. More than one million Manila residents, mobilized and coordinated by waves of text messages, assembled at the site of the 1986 "People Power" peaceful demonstrations that had toppled the Marcos regime.” (http://www.smartmobs.com/book/toc_7.html)
demonstrates a certain detachment from the world, represented by time spent flying and refusal to call any single place home. Even in the era of worldwide terrorism alerts, plane travel continues to grow. Just a year after 9.11, numbers from 2002 show a 2% increase in the annual number of passengers to 1.6 billion⁴. By 2004, the overall passenger traffic was 8.4% greater than 2000. In 2005, the global air traffic year-to-date statistics are 8.8% over 2004. EA in many ways reflects an architectural interpretation of a techno-nomad. Born of and brought up in a world made possible by technology, EA is a rebellious design idea in that it is beholden to no site or program. In this way, as the modern nomads grows its ranks, so too will the understanding and attraction towards EA. With the growth of nomadic living as an ideal, the perceptions generated by this style of living will gain greater currency in professions such as architecture.

However, the main reason though for the growth of EA will not be to house global drifters per se, but rather due to the spread of their unique understanding of the world, space and time. The “zoomscape”, a conceptual term coined by Mitchell Schwarzer, offers a view of the world from the various modes of transportation that keep us connected. Schwarzer argues that by perceiving the world from a moving vehicle, architecture becomes removed from the physical context and is reattached to “a web of routes, narratives, and milieus—a road journey, a plot-driven movie, a book of photographs. Zoomscapes not only “liberate” a building from its status as object, they also free it from its site and from our bodies. The experience of the built environment emerges on the go or in distant places, and, in either case, more and more through visual observation. The influence of place on our understanding of architecture is less pronounced than ever.”⁵

These ideas help form the basis for an argument that society has begun to shift its understanding of architecture due to fundamental changes in the visual and experiential relationship. A small percentage of people will experience a building on foot; most will ‘zoom’ by in a plane, train or automobile. Architecture no longer needs to be firmly rooted to a time or place. Buildings instead have a flexible and malleable existence in our psyche, and can be shuffled from the context of a television commercial to a magazine and then to “reality”. The vast majority of buildings a person will ever encounter will be through a visual media or through the window of a vehicle with little understanding of the physical surroundings, therefore, people become more open to the idea of architecture that does not exist indefinitely at a certain physical address.

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⁵ Schwarzer, Mitchell. Zoomscape: Architecture in Motion and Media.
Chronic Change - During years past, work and the family unit formed the solid foundations of most people’s lives. Certainty in life, embodied by culture and traditions, would continue unabated between generations. Unwavering confidence in continuity provided people the environment to create styles, tools and buildings of permanence, passed from generation to generation in the form of heirlooms, traditions and culture. Over time though, many of these societal cornerstones have become transient and uncertain across time; family traditions and social cultures now fragment and readjust to world trends. Some time ago Marx and Engels in their “Communist Manifesto” pointed out that capitalism means “…constant revolutionizing of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation…All fixed, fast frozen relations, with their train of ancient venerable prejudices and opinions are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air.” Yet, in the US, instead of rejecting the onslaught of change, people appear to embrace it as an extension of their freedoms.

Americans possess a notorious appetite for the “latest and greatest”, and seem to crave change. In just an hour, American will change the television channel between 36 and 107 times and in a lifetime, most will change jobs (approximately 10 times between 18 and 38 alone), residences (the average American will move nearly 12 in a lifetime) and even spouses (approximately 40% of marriages end in divorce). As traditionally ‘permanent’ institutions become increasingly ephemeral, it is no wonder that other elements have increasingly brief existences. In the realm of products and material possessions, change comes even quicker. A person’s desire to be at the forefront of fashion and technology helps sustain a relentless interest in what’s ‘new’, and contributes to a shrinking overall lifespan of nearly all products.

The defining dynamic of the global economy is speed. Never before have communications networks, transportation, infrastructure and language been so streamlined and connected…As a result, products are going from research and development to investment to production to obsolescence more rapidly than ever in history. And it is a trend that will continue to accelerate. (Young 40)

In addition, people do not expect products today to last very long. Many things once built to last, now come as disposable products, for one-time use. Others are intended for just a short life span,

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6 Gitlin, 72
a design strategy also known as planned or product obsolescence. French historian Alexis de Tocqueville visited Boston in 1835 and in a discussion with a sailor asked why Americans built their ships for only temporary use. Tocqueville noted, “The sailor answered without hesitation that the art of navigation is making such rapid progress that the finest ship would become obsolete if it lasted beyond a few years…”

The idea of planned obsolescence obviously is not a new idea, but has become essential in the design and production of nearly everything.

It's likely that all standard televisions in North America will become obsolete within a decade. If this happens, every household that owns a television, even if it's a perfectly functioning unit, will likely become a new customer for the new-and-improved product: HD TV...While the introduction of HD TV may be the ultimate example of prematurely inducing hyper-obsolescence, similar scenarios are playing themselves out with thousands of consumer products. The fashion industry, for example, mastered this form of marketing strategy years ago. We've been taught that it's perfectly acceptable to buy new wardrobes every fall and spring, rather than be caught wearing last season's coat. The introduction of high-tech gear in cars induces consumers to increase the rate at which they purchase new automobiles. Digital cameras offer another example. And, of course, personal computers and home electronics are also prime examples. The speed at which consumer products move through the supply/disposal chain has accelerated at a rate like nothing before in the history of human consumption. It's not difficult to envision a day when middle-class consumers upgrade products like computers, cameras, cars and appliances on an annual basis. Products that were once considered "durables," because they had an expected life span of years rather than months, will enter a future where few products are considered durable. (Grogan, p71)

Furthermore, many products that a consumer might have once considered worth fixing are replaced instead. A “new and improved” TV, toaster or refrigerator will be purchased since most often repair is more costly in time and expense. Yet, perhaps nothing reflect this system more than technologically related products such as cell phones, laptops and software. The rate at which products arrive on the market continues to increase. In fact, according to David Hoyte, IBM Corp. Personal Systems Group VP of cost management, “…the average computer industry product life cycle -- from development concept to end of production -- is shrinking from three years to 18 months and, in some cases, about a year.” The length of time length of time before a consumer upgrades a product has fallen as well. For example, the average American keeps a cell phone for only 18 months, not because the phone breaks but to upgrade to a newer model or style. As the pace of change in technology quickens, it is interesting to note that the products

10 Story and Tocqueville quote: Bennis, 64.
12Worldwatch Institute.
13Since consumers do upgrade so quickly, manufacturers have a reduced incentive to design products that endure, and may lead to decrease product quality and built-in shorter product life-spans.
themselves largely distinguish themselves by their speed—for example, the processing speed of a computer (megahertz) or internet connection speed (bit rate). As buildings become more time oriented and intertwined with technology, it makes sense to identify architecture in terms of time. In his book The Temporary Society, Todd Gitlin states, “Change continues to be the one given of our time—dizzying, unpredictable, relentless change that all but cries out for temporary systems that can be dismantled as soon as they become outmoded.” Concepts such as EA respect the pace of change and offer an approach to managing it. General uncertainty in the future, in terms of fashion, technology, culture and climate suggests that architects should design buildings with a heretofore-unimagined flexibility or planned obsolescence. People will begin to demand that their buildings change just as regularly as fashions and technology. People will demand EA.

Some cities have already witnessed dramatic changes, and movement toward EA. For example, as many cities across the world have evolved from centers of industrial production, they have adjusted their building stock to reflect new residential and office demands. Japan, in particular Tokyo, represents a case study of sorts for chronic change. Throughout its history, Japan has rebuilt itself in the aftermath of natural and manmade disasters. In fact, it is arguable that “…Tokyo “stands” as a city of repeated destructions as much as of rebuildings and revivals; perhaps no other city has been devastated and almost completely destroyed as often, given its relatively brief, four-hundred-year history.”(Bognar, 3)

Given this legacy and a religious embrace of the world’s ephemeral nature, Japan enjoys an atmosphere of acceptance for buildings with temporary lives. For example, Shinto shrines have been historically rebuilt at set intervals. The most noted example is the Shrine at Ise(i32). Located in the Mie prefecture, the shrine is famously taken down and reconstructed on a neighboring site every 20 years. This idea lives on in Japan’s modern cities.

32. Ise shrine alternates between the sites shown above every 20 years.

[In Japan] buildings are designed in the expectation not that they will stand the test of time but that they will be torn down sooner rather than later and replaced by something more appropriate to the economic and technological demand of the future. (Thackara 12)

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14 Moore’s Law is “…the empirical observation [made by Gordon E. Moore, a co-founder of Intel] that at our rate of technological development, the complexity of an integrated circuit, with respect to minimum component cost will double in about 24 months.” Moore’s observation has proven accurate and this “law” establishes an ever-quickening pace of change in technology. (en.wikipedia.org/wiki/Moore%27s_law)

15 The image shows an aerial view of the Ise site from 1973. The newly constructed shrine occupies the lower enclosure. The old shrine in the upper enclosure was torn down the following day. (Image and data: http://www.columbia.edu/~hds2/ise/02.htm)
The real estate boom through the 1980s and into the early 1990s established a modern precedent for quick building turnover. As Jane Jacobs states in *Death and Life of Great American Cities*, “There is no art as impermanent as architecture. All that solid brick and stone mean nothing. Concrete is as evanescent as air. The monuments of our civilization stand, usually, on negotiable real estate; their value goes down as land value goes up.” High Japanese land values and tax rates made vacant land too expensive, encouraging construction. In addition, the exorbitant land value reduced the cost of construction in Japan to a relatively small percentage, 10% for a typical building at the time (Bognar 2), of overall project costs in Japan. High holding costs and relatively low construction costs resulted in quick building turnover. Krstic (1985) showed “the time between alterations of facades ranges from four months to two years, while extensive renovations or complete replacements occur every five to ten years” (Bognar 2). This means the “...annual degree of change in the urban [context] is about 30%, including all modes of mutations ranging from façade reconstruction to newly built structures...” (Krstic 44). This trend towards transience has not abated even when the real estate bubble burst in the early 1990s.

An unidentified architectural ‘movement’ evolved from these conditions. Bognar identifies that the, “…‘new wave’ of Japanese architecture, instead of striving for monumental, permanence, began to foster new “urban sensibilities,” to engage and thrive on the city’s dynamics and to probe the notion of impermanence in architecture. Contemporary design in Japan is characterized by lightness, surface, fragmentation, and dissolution, often with a “ruinous” quality, a sense of temporality, imageability, sensuousness, and, finally, a spectacular phenomenalism—all attributes of the ephemeral...” (Bognar 5) Many of the projects express a sense of the ‘ephemeral’ (e.g. Kazunari Sakamoto’s Hoshida Common City Housing (i33), Itsuko Hasegawa’s Shondai Cultural Center (i34) and Riken Yamamoto’s Hamlet housing (i35). Others take up where the experimental groups left off in the 1960s (e.g. Japanese Metabolists) by using pneumatics (i36) and innovative construction to create works that are functionally and formally ephemeral. Many of these examples do not constitute EA by definition since they still strive for permanence, but they do signal increasing architectural interest and exploration in this area.

The Japanese came to EA through their history, geography, religion and culture. Given that over time, Americans have come to embrace many aspects of Japanese popular culture, from Pokemon

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33. Common City housing evokes a sense by surface and lightness through use of thin metal, use of bright colors and curving forms.

34. Dynamic angles and geometry work with perforated metal screens in the design of Shondai Cultural Center to give the architecture a sense of movement and fragmentation.

35. Use of metal screen and columns give Hamlet Housing a light open feel.

36. The inflated Pika Pika Pretzel by Klein Dytham Architecture provided a temporary construction screen for a site in Harajuku, Tokyo.
to sushi, architecture as a temporal phenomenon could gain greater acceptance here as well. This Japanese concept and understanding of architecture could resonate with American culture due to the freedom inherent in the ephemeral. Sir Norman Foster once commented that, “The idea of a city that becomes like a museum, where you cannot pull down buildings simply because they are old, is questionable….In that sense Tokyo is more liberated.” EA offers liberation through an understanding of architecture based on time.

**Freedom** - The relationship between land, architecture and freedom is integral to many of the changes discussed above. Richard Pipes examines these relationships in his book *Freedom and Property*. He uses these four terms to lay the definitional foundation for his work.

1. political freedom, i.e., the right of the individual to participate in the choice of officials of the government under which he lives
2. legal freedom, i.e., the right in relations with other individuals and the state to be judged by third parties in accord with the law
3. economic freedom, i.e., the right freely to use and dispose of one’s assets
4. personal rights, i.e., the claim of the individual to his life and liberty and the license to do whatever he wishes as long as he does not infringe on the liberties and rights of others: in other words, absence of coercion.” 17

Richard Pipes, *Freedom and Property*

Participation and control are central ideas behind each of these expressions of freedom. The ability to participate and control our environment and ourselves (whether in terms of the physical, political, legal or economic realms) characterizes a great deal of our perceived freedoms. Yet, every ‘free’ choice made restricts the choices available in the future. In essence, “You can’t have your cake and eat it too.”18 Therefore, there is inherent freedom with non-commitment, a critical flexibility in the ability to change. The greater availability of choices begets a greater perceived sense of freedom. In this regard, the idea of EA has a significant connection to the perception of freedom.

Almost all the dreams inherent in the mobile architecture of architects and artists can be traced back to the idea that a life without possessions is liberating. We are then free to do as we please.

-Ibeling, Hans. *Mobile Architecture in the 20th Century*

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17 Through the book Richard Pipes argues for an “intimate connection between public guarantees of ownership and individual liberty: that while property in some form is possible without liberty, the contrary is inconceivable.” He supports this argument through a historical review and a contemporary comparison across cultures the relationship between property ownership and freedom.

18 John Heywood, c. 16th century, Barlett’s Popular Quotations.
Those that come before us have had a significant hand in shaping the built environment we inhabit today. Existing building stocks are society’s possessions, restricting free design. In this way, the structures of our predecessors imprison us. One British study indicated that 90% of the buildings that will exist 20 years from now already exist today\textsuperscript{19}, suggesting that a significant portion of our ability to shape and determine our environment and thus our lives has been done for us already. Just as much as the built environment represents a gift to us from previous generations, it has also become an imposition. EA offers a freer future.

The desire to recreate the environment as an expression of self or simply to suite ones taste and desires is evident in many aspects of modern culture. The customization of everything from cell phone ring tones to cars and homes show the desire and ability to provide people with what they want and how they want it. This desire has been given a venue in popular remodeling television shows where much of the work involves extensive renovations of houses, loft spaces and warehouse style buildings. According to Papadakis\textsuperscript{20} architecture since the 1990’s should free people to construe the function and form of buildings as they please. Buildings are then reinterpreted by Papadakis as open lofts or ambiguous follies (e.g. the follies of Tschumi’s Parc de la Villette (i37)) reflecting the uncertainties of the times. Papadakis states, “The new spirit in architecture celebrated here is about freedom above everything else—social responsibility, respect for history and hierarchy, consistency, even logic itself, are secondary considerations. It may be a passing interlude in the evolution of the new architecture of humanism, but it has a vigour, a variety and a sheer honesty which command respect.” EA takes this idea the next step with buildings that actually allow for new reconsideration of a site on a regular basis. The fact that a building is ephemeral provides the opportunity to change it entirely for a new fashion or function, a freedom in the built environment unknown since the age of the plains Indians. This freedom proves necessary in this age of accelerating change and technological innovation.

37. Typical folly in Parc de la Villette.

\begin{quote}
...inflexible buildings hinder the evolution of society, inhibiting new ideas...new materials exist that are capable of changing from high-insulation, from opaque to transparent that can react organically to the environment.
\end{quote}

- Richard Rogers, Projects and Buildings 1996

\textsuperscript{19} Frampton, Kenneth. “Brief Reflections on the Predicament of Urbanism”.
People desire the ability to participate in the creation, control and manipulation of the built environment. EA increases this ability and therefore freedom. Within this freedom, society has a greater ability to understand and respond to changes whether technological, economic or other. Traditional buildings designed for permanence continue to play a role, but so do buildings with more ephemeral characteristics. Defining EA represents the first step in applying this genre of architecture.
Related Works

The following topics represent related, although independent, ideas regarding ephemerality. Future research may thoroughly explore implications of each alone and in relationship to one another.

Ephemeral Sites – As a complement to EA, Gary Brown addresses the idea of a site’s functional transience through ‘para-Sites’. Brown describes para-Sites and the buildings on them, as transient, lasting only as long as a functional requirement demands, or typically 10-20 years according. Brown’s discussion includes buildings that express the transience of the site while creating a sense of history. Brown points out formal and structural strategies that connect the various facilities on a given site over time. Para-Sites create continuity and history from an inherently unstable existence. EA attempts to define and identify time-based designs that could possible work in the context of a para-Site. Together, para-Site and EA present a more cohesive picture of the way such ideas might work in the urban environment. [See Appendix B for further discussion]

Disassembly Design - Much of today’s new buildings become tomorrow’s building stock and construction material. Therefore, it makes sense to design new structures with an eye on transforming a building for a new function or salvaging its pieces. A wider use of ephemeral architecture could naturally encourage exploration of disassembly design since not all building material is as assessable or available as ice. Most buildings come down before the end of their functional life with no disassembly plan, but some firms have developed disassembly systems. The architecture team of Croxton Collaborative and Gould Evans designed Rinker Hall at the University of Florida for eventual disassembly. To facilitate the process, the team created a disassembly matrix identifying materials for reuse and the way to retrieve them from the building. EHDD of San Francisco approached a school project in a similar way. For example, window design incorporated mechanical fasteners ensuring easy disassembly.

Ephemeral Communities - Defining EA broaches discussion of ‘ephemeral communities’ (EC). EC currently exist on the fringes of society, but wider acceptance is possible. Boat harbors offer

1 Not to be confused with Micheal Rakowitz’s ‘paraSITE’ discussed in a previous section.
39. Although distorted by perspective in this elevated view of two cruise ships in Honolulu Harbor, the size of these ships clearly compete with buildings in downtown Honolulu for command of the cityscape.

40. Aerial view of Burning Man weeklong community shows the enormity of the festival.
one example as the constant traffic of boats change the image and constitution of the community. The dock infrastructure provides some sense of permanence, but the status of individual slips change from hour to hour, day to day. Cruise ships (i39) present another nautical example. Such vessels operate as their own community traveling from port to port. Upon arrival, the ship substantially shifts the population center of the host port and, due to its enormous size (3000+ people), alters the image of the city. Festivals and fairs represent another sort of EC. Burning Man (i40), for example, brings thousands of people from around the world to the Nevada desert for a week, creating a spontaneous and temporary community.
**Additional Applications**

EA applies to a wide-range of scenarios as the *Survey* section demonstrates. People may discover additional applications once they accept EA as a viable design strategy. Other aspects of architectural permanence have shifted over the years with related changes in public perception. For example, banks no longer operate out of classical marble structures that portray them as ‘established’ and ‘permanent’. Use of formal elements such as columns and material like marble attempted to assure people of the bank’s solvency, strength and permanence. Over time, people have grown familiar with the way banks work and are more accustomed to operating in a virtual world. As a result, banking occurs through a wall-mounted, or stand-alone, ATM accessible from the sidewalk. Similarly, large churches no longer require the grandeur of a gothic cathedral and may prefer the functional versatility of a high school auditorium or a stadium. A portable vinyl sign may state the same message previously announced by elaborate stain glass, or towering spires. Additionally, people may favor the amenities of coffee bars, day care and air conditioning over the ‘prestige’ of a huge cathedral. Simply put, expectations of buildings change over time.

EA addresses trends regarding time related architecture and architectural responses to a dynamic culture. As societies change, so do their institutions, and in turn their architecture. While it is impossible to describe all the current variations of EA, let alone predict the various scenarios that might develop, the following point to a couple of areas that might make greater use of EA in the future.

*Community Facilities* – Public buildings such as community recreation centers are often characterized by graffiti, vandalism and deferred maintenance. These buildings may incorporate a variety of preventative measures that include concrete block/brick construction and small barred windows. Such buildings evoke the essence of a prison rather than a place for the community to socialize and recreate. The simple utilitarian structures comprising many community centers brace for a lifetime of abuse, and in doing so, only seemed to invite it. EA offers another perspective. These buildings should instead strive to foster a sense of community through architecture, rather than focus on withstanding the anticipated vandalism. An ephemeral building could forgo much of the maintenance required to eliminate graffiti and grime; instead, the community could build it anew as needed. The building, as an old shoe resoled, could be improved and renewed with each rebuilding. The people that use it, similar in a way to the
41. This overhead view of a proposed ephemeral community center (design: Brian Chappel, UH SoA Studio Project, Fall 2002) shows the vaulted roof form of the pool and changing facilities with the gym in the background. The structures comprise numerous flexible poles that act like ribs over which fabric membrane coverings are wrapped to create naturally illuminated multi-functional spaces.

42. View of the restroom facilities. Poles contain spring loaded canvas walls that provide privacy. The tallest poles are vents for below grade composting.

43. Prototype pole system using paper tubes allows for easy erection and replacement.
community ritual of ‘barn-raising’, could assist the reconstruction of a recreation center (i41-43). The process of reconstruction reinforces the objectives of the center by bringing the community together, and gives the community members a vested interest in the building. The greater sense of pride could decrease vandalism, increase use of the center and build a stronger community.

**Political Buildings** – EA contains inherent political symbolism and power. Certain sovereignty movements such as those found in Australia and Hawaii make extensive use of tents. However, one might argue that the government buildings of democratic states should also be more ephemeral, reflecting the ability of the people to change and shape their own government. Interestingly, California Governor Arnold Schwarzenegger’s built a smoking tent soon after beginning his term of office. The New York Times reports that a 5 x 15 "Bedouin-style smoking tent ... [was] set up in the courtyard of the State Capitol ...." from which Scharzenegger conducts most of his negotiations. Although built to suite Schwarzenegger’s fondness for cigars, the tent can be reinterpreted as an object of freedom and participation. Instead of operating as a cigar haven, the next government tent could be built to empower people and express that authority vested in politicians is temporary. The ephemeral nature of the tent signals an alternative to the current design and construction of political buildings. While some capitols (e.g. German Reichstag and Hawaii State Capital) use glass to symbolize that the government is transparent to the people, EA could go further in placing the physical form of the building into the hands of the voters. EA would reduce the constant physical presence of the government, make it less obstrusive in daily life and allow it to be rebuilt with each turnover in government leaders.

**Retail Buildings** – ‘Fashion’ is the retail equivalent of planned obsolescence. Fashion turns over quickly and requires constant vigilance. In an effort to remain current and ‘fresh’, RoxAnna Sway in an article for Design and Display Ideas asks whether design should have an expiration date. She argues that fresh design brings in customers and conscientious retailers would be well advised to update their stores approximately every three years. She states that a design expiration date would: “1) help retailers know when it's time to remodel or develop a new concept, and 2) make designers better consider the attributes of the longevity — or lack of longevity — of their work.” This idea attempts to codify a system recognizing the importance of novelty and fashion.

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1 The movement in Australia created the Aboriginal Tent Embassy, a community of tents used to establish a physical presence near government buildings and symbolic sites (Cowan). The Hawaiian movement uses tents in a similar fashion.

in retail. According to Brown (p 7), “Shops, cafes and bars refit their premises on a five or 10-year cycle and office environments change scenery on a weekly basis as staff and technology rotate through their shells. Within this context it is then hardly surprising that most architects and developers have started to talk of a 10-years cycle in terms of a building that remains clearly linked to the particular function for which it was intended.” Most change currently happens in the form of renovations to the interior décor, layout or the exterior façade, but an EA approach may provide the next level for fashionable establishments. A retailer could rebuild to account for changes in fashion or relocate to trendy neighborhoods.

EA may grow even faster as more retail centers begin to operate primarily as advertisements rather than actual stores that hope to turn a profit. Electronics manufacturers such as Sony and Apple use certain retail establishments as places for consumers to try out new products and develop a cool-ness cachet. Customers then purchase merchandise through the company’s on-line site. The Galeria Illy store, opened on September 15, 2005 in Manhattan by Italian coffee company Illy, offers another example of pop-up retail used to promote a brand. The store, to be open for just three months, includes “an art gallery, library, classroom and espresso bar. [Although] Nothing beyond desserts and coffee drinks…can be bought…” Customers interested in other Illy products, including coffee beans, can purchase them on-line through computers located in the store. In reference to Galleria Illy and pop-up stores in general, Peter Golder, an associate professor of marketing at New York University’s Stern School of Business, states, “You go into this expecting to lose money, but its more like an ad that people can live and breathe and experience...A pop-up store is novel because it’s a new store in the neighborhood and anything with a limited commodity increases desirability.” Retailers could invest in EA to increase their desirability and eventually sales.
CONCLUSION
Nothing ever is, everything is becoming.

Heraclitus
CONCLUSION

Ephemeral Architecture is an ancient part of our architectural heritage, stretching back to the vernacular works of nomadic cultures. However, the idea of architecture as something permanent grew into prominence when humans shifted to an agricultural based society and it has remained the dominant mode of thought ever since. Bastions of EA remain, but ephemerality remains largely unrecognized and underutilized as an architectural approach. Interestingly, a quick look to nature and the arts demonstrates that impermanence has an integral role in those areas. Nature utilizes variations in permanence/impermanence as a survival strategy. Whether brilliant desert blossoms or delicate mayflies, ephemera developed as natural reactions to environmental conditions. Through this functional adaptation, these ephemera also provide great interest and beauty for us. Similarly, a temporary work of art may relate to natural rhythms, religious ritual or an exploration of time, but its temporary brilliance has significant impacts. Artists have long incorporated this perspective into their work, and in the years ahead it is likely more architects will start to do the same. In anticipation, this project establishes the term Ephemeral Architecture as a category to unite architectural works of a temporary nature.
While most buildings may suggest a sense of permanence, it is in fact a common misperception that buildings last ‘forever’ or are intended to. A look at the built environment demonstrates that not all buildings strive for permanence, and even those that do will likely come down sooner rather than later.

“In the whole history of human construction the vast majority of buildings in use today have been built just yesterday, and what is more, they will be demolished tomorrow.”

-Robert Kronenburg, Houses in Motion p141

The lifespan of a building at a given site may vary enormously. Buildings may last for a day, a season or just the duration of an event. Examples of such temporary structures exist in vernacular architecture, their modern incarnations and innovative new structures. The profile of these buildings is rising since current social and technological trends have begun to alter perceptions regarding the value of temporal architecture. Shifts in societal values (e.g. throwaway culture), technological advances (e.g. internet) and talk of the contemporary nomad suggest that there exists a greater appreciation for the ephemeral in our built environment than ever before. In the wake of these changes, people may not always require or request a permanent building for reasons related to function, economics or fashion. The ability and the willingness to explore ideas of ephemeral architecture in architecture grow each year. The establishment of the term “Ephemeral Architecture” and its definition facilitates understanding, discussion and future application of this genre.

Change continues to be the one given of our time—dizzying, unpredictable, relentless change that all but cries out for temporary systems that can be dismantled as soon as they become outmoded.

-Todd Gitlin, The Temporary Society

EA describes a system compatible with the modern pace of change, and works in conjunction with traditional permanent architecture. EA does not portend the imminent end of permanence in architecture. Permanence remains intrinsic to architecture even in light of the endless talk about a virtual world. At the very least, we still need a place for all those servers. There is a time and place for these different architectural viewpoints, and this document attempts to highlight the growing role of EA and its implications. In order to fully and properly discuss, design, direct and utilize ephemeral architecture, we first need to define it. Towards that end, this document argues for adoption of the following term and definition.
EPHEMERAL ARCHITECTURE

*A class of building designed to be distinguished by impermanence, and its physical departure from the site.*

As a complex concept involving issues of time and space, as well as addressing fundamental ideas of what constitutes architecture, the definition resists understanding out of context. The definition provides the foundation for an understanding of EA. Building on the definition, the discussion and examples found here construct a clearer picture of EA, and allow for proper interpretation of the term. The definition creates broad boundaries that encompass the concept of an Ephemeral Architecture; it does not strive for the specificity of either a scientific or a legal definition. The definition identifies those core characteristics of EA, and consciously avoids describing form, use, structure or other physical/functional traits. The concept of EA cuts across existing groupings of architecture. Labels like mobile home, Quonset hut or igloo have their basis in certain formal traits or structural systems. However, in terms of EA, a person’s home that actually moves locations regularly would have more in common with a house made of ice for the winter than a house on wheels that never moves. Based on this new definition, technologies, forms and structural systems can be developed specifically to explore EA.

Exploration and research can then overcome the stigmas and myths long associated with EA and similar structures. Temporary structures often suffer the reputation of low quality construction and poor design, since most people become familiar with EA through mobile homes. Greater interest and recognition of the genre can rectify this situation. Furthermore, there are number of overlooked advantages with EA. In Bognar’s discussion of Tokyo, he noted that its culture of chronic change has its unique advantages. Expressed as EA, that culture has “energy, flexibility, innovation, spirit of community, etc...[H]eterogeneous, volatile, and chaotic urban conditions can be understood as a different kind of order rather than as anarchy, and can be the source not only of destructive forces but also of creative energies and even of poetic inspirations.” (Bognar, p7) The dynamic nature of EA increases awareness and potentially a sense of participation in the built environment. These characteristics may have the potential to aid in the rejuvenation of urban neighborhoods. As more attention and design work raises the profile of EA then the idea of a high quality, well-designed architectural work may not seem so dubious, and the advantages will become more apparent.
In conclusion, EA has a role in the built environment and that role may be growing. Granted, it will not likely usurp the general idea of architecture as an object of permanence since the static, the stable and the permanent are all critical. As Brown states, “Any concept denying the importance of the stability of Semper’s mound to motion is a fallacy; there is a distinct relationship between infrastructure and mobility.” (Brown, p5) Stability and permanence are essential to mobility, portability, transformability, the inflatable and the ephemeral. Yet, we are living simultaneously in an age of increasing change and uncertainty. Clinging to static perceptions of the world do not allow for a quick response to an every evolving set of circumstances. Navigating this world requires flexibility and freedom. Identifying the critical technological and social trends and our responses to them represent an important step in the formulation of appropriate systems. Such systems may include greater use of ephemeral approaches to architecture. Architects should attempt to envision buildings through the lens of ephemerality, and how the inherent potential of EA might improve the future built environment. As with ephemera in nature and arts, the temporal variety introduced by EA can enliven, invigorate and enhance our built environment. Toward these ends, the definition shall empower architects by providing a basis from which to research, design, discuss, analyze and visualize the future of Ephemeral Architecture.
APPENDICES
APPENDIX A

Other Definitions
Much of EA has long been identified as ‘mobile’, ‘portable’ and ‘transformable’ or simply not acknowledged at all. These terms are related to EA and in certain cases overlap. However, not all portable/transportable/mobile architecture is EA, and vice versa. These existing categories attempt to group buildings by assembly system and design potential. EA attempts to regroup architecture based on its actual relationship with time. Below is a discussion of various categories that often include some EA, and how they differ.

Mobile Architecture - In Mobile: The Art of Portable Architecture, author Jennifer Siegal defines ‘Mobile Architecture’ with a quote from Douglas Heingartner as “a way of intelligently inhabiting a specific environment at a specific time and place in a way that better reacts to increasingly frequent social shifts.”¹ This definition opens the discussion to a wide range of buildings and vehicles that may or may not be designed for transience. Although, mobility is explicitly incorporated into the discussion immediately through the title, the definition does not develop this idea further. The examples presented in her text do demonstrate the way mobility might provide an alternative interface between people and a specific environment, but does not make time a defining aspect. Furthermore, unlike EA it restricts the type of architecture to those that move, or have the potential to move.

Portable Architecture - Robert Kronenburg defines ‘portable architecture’, in a book by the same name, as “structures that are intended for easy erection on a site remote from their manufacture.”² Nicholas Goldsmith defines it as buildings, “…that are transported whole and intact.” Per these definitions, once erected on a site, the structure can remain indefinitely as the case with oilrigs and the London Millennium Dome. Both of these examples reflect a structural system that allowed for on-site assembly and could potentially facilitate movement, however neither will likely move. In addition, the manufacture of portable architecture must occur away from the site of erection. As examples from the following section will demonstrate, the materials may be found on the construction site itself.

Transportable environment - ‘Transportable environments’ relates closely to portable architecture, and Kronenburg defines it as “…a building, a landscape or an interior design, which is brought into existence in

¹ Jennifer Siegal quotes Douglas Heingartner from his article “Mobile Homer” from Artbyte: Magazine of Digital Arts and Culture.
a specific place for a limited time, though its impact may continue for much longer. Unlike conventional buildings, transportable ones are designed to take move-ability into account…deployment, rather than destruction, is their key feature.” Portable Architecture and Transportable Environments demonstrates little interest in the ephemeral potential inherent in a building, and only extols the virtues of mobility and maintaining the physicality of a building through portability.

Other - The architecture of native peoples often fall under Vernacular or Nonpedigree Architecture. In many instances, the work also is EA. Notable examples are tipis and Bedouin tents. Other definitions include Demountable Architecture, involving a manufactured system of parts to be assembled on site, and Deployable Architecture which is, “…transported in parts, but…assembled at the site almost instantly into usable built form.”

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The following quote (Brown, 2003, 2-13) provides further discussion of the term “para-site”.

“This approach retains the idea of building location as context, consequently it is termed a para-site...[and] refers to a conceptual difference in the approach to the site usage. It promotes the retention of site for its future potential through transient usage. The site becomes the location for facility, functions and experiential events within the cycle of the city and exhibits the transient acquisition of the site as a design feature. Originating from the Greek para- (against, besides, near) indicates a sense of time or extent of space, or indicates the object or recipient of a perception, desire or activity. Para- in this context is used to mean a temporary or transient structure—a kind of bridging facility, a ride, an experience of some duration within an extent of space (similar to that of a descent by parachute). So a para-site is essentially a site that is intended for transient use (or re-use) by the use of formal gestures with in-built obsolescence. The building, and consequently the site, responds to an ever-changing cycle of facility and fashion. This notion accepts that the function for which a particular building is built may be changes with a short period of time (typically one or two decades). Within the cycle of the city, the central challenge of these para-sites is how to design facility spaces for a kind of transience that maintain real, contemporary, symbolic, permanence within our temporary continuum.”

Gary Brown goes on to describe five possible design solutions and examples.

1. Design buildings with a self-destruct timer to create an event and “form another layer to the city life cycle...The constructions become constant reminders of the event and through this attain a kind of permanence”. (e.g. Jean Tinguely’s performance art where he designs piece for self-destruction)
2. Allow architecture to grow/shrink and change overtime “…in that it yields an awareness of time.” (i.e. Organic Building, Gaetano Pesce, Japan and Hairy Buildings, Terunobu Fujimori)
4. Loft design. Ephemeral functions occupy a permanent system. (i.e. Domino House, Le Corbusier, 1914 and Kunsthal, Rem Koolhaas)
5. Architecture can physically transform allowing for different functions or experience during the day or across seasons (GucklHuph, Hans Peter Worndl, Austria and Venezuela Pavilion, Fruto Vivas, Hannover Expo, 2000.)
These examples provide a site perspective on EA. All five, in essence, incorporate a type of ephemeral experience, exhibiting ‘time’ as a design feature, on a particular site. Brown and this document look to the transience nature of a design as a defining attribute, but one difference between the two ideas rests in Brown’s desire to, “…maintain…permanence within our temporary continuum…” within the design of these spaces. EA spaces, on the other hand, do not need to display a concern for continuity, but operate outside the city’s sense of permanence (although in doing so may highlight these aspects of the city). Another difference is Brown’s focus on the ‘site’ whereas EA focuses on the architecture. Granted architecture may need a site, but a para-site remains a temporary condition preceding the site’s ultimate use. As for EA, the transient use may be an end in itself and any site may be used. Para-site and EA, as ideas or definitions, are closely related, and together present an alternative perspective on the idea of permanence in architecture.
## APPENDIX C

### SURVEY TABLE

<table>
<thead>
<tr>
<th>Item</th>
<th>Built</th>
<th>Site Departure</th>
<th>Time at Site</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buddhist Sand Mandalas</td>
<td>NA</td>
<td>NA</td>
<td>Varies</td>
<td>The artists destroy their creations upon completion. Monks typically create the mandalas from colored sand that will be later poured into a nearby river</td>
</tr>
<tr>
<td>Andy Goldsworthy</td>
<td>NA</td>
<td>NA</td>
<td>Varies</td>
<td>Designs and art created with natural materials reinterpreted. Leaves may be sewn into a nautilus horn or stones stacked into sculptures</td>
</tr>
<tr>
<td>Backbacking Tents</td>
<td>NA</td>
<td>NA</td>
<td>Varies</td>
<td>Light and mobile tents typically occupy a site for just a day. They have been used for political statements or for semi-permanent dwellings</td>
</tr>
<tr>
<td>Mobile ICHIJO/1</td>
<td>NA</td>
<td>NA</td>
<td>Varies</td>
<td>Demountable personal loft space</td>
</tr>
<tr>
<td>Cushicle</td>
<td>NA</td>
<td>NA</td>
<td>Varies</td>
<td>An experiment in personal mobility, the design blurs the line between clothing and dwelling</td>
</tr>
<tr>
<td>So-an/Mobile Chanoyu Room</td>
<td>NA</td>
<td>NA</td>
<td>Varies</td>
<td>Patterns raked into sand disappear with the incoming tide. Denevan will often serve a gourmet meal made from seasonal ingredients to (paying) observers of his art</td>
</tr>
<tr>
<td>Farmer's Markets</td>
<td>NA</td>
<td>NA</td>
<td>1/2 day</td>
<td>Typically lasting a day and comprised of tents, tarps and other temporary structures</td>
</tr>
<tr>
<td>Covered Wagons</td>
<td>NA</td>
<td>NA</td>
<td>1 day</td>
<td>Famously used to cross the American plains, they blur the line between vehicle and building. They operate as a forerunner for today's mobile houses</td>
</tr>
<tr>
<td>para-SITES</td>
<td>NA</td>
<td>NA</td>
<td>1 day</td>
<td>A mobile dwelling for homeless that utilizes vented air from other buildings to inflate the structure and create a livable space</td>
</tr>
<tr>
<td>Party Bouncers</td>
<td>NA</td>
<td>NA</td>
<td>1 day</td>
<td>Inflatable, portable playroom for children typically lasting a day to coincided with a party Adopted by at least one architect into a dwelling</td>
</tr>
<tr>
<td>Ephemeroptera</td>
<td>NA</td>
<td>NA</td>
<td>&lt; 48 hours</td>
<td>Mayflies with an adult stage of less than 48 hours. They attempt to overcome predators with sheer numbers. Less time in the vulnerable adult stage increase chances of survival</td>
</tr>
<tr>
<td>Desert Paintbrush, Ocotillo, etc</td>
<td>NA</td>
<td>NA</td>
<td>Hrs - Mo</td>
<td>Desert plants attempt to quickly propagate when adequate water is available. In the typically dry conditions, the plants remain dormant conserving energy, awaiting spring thaw or rainfall</td>
</tr>
<tr>
<td>European Festival Architecture</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Architecture during the 1600-1700 commissioned for a particular event. The buildings last only as long as the event, but were recorded in etchings</td>
</tr>
<tr>
<td>Recreational Vehicles</td>
<td>NA</td>
<td>Hrs - Perm</td>
<td>Hrs - Perm</td>
<td>Blurs the line between vehicles and houses. May stop briefly for supplies, or for the night. Other vehicles may become permanently rooted residences</td>
</tr>
<tr>
<td>Mobile Home</td>
<td>NA</td>
<td>Hrs - Perm</td>
<td>Notorious for poor quality. Designed for mobility but frequently remains permanently at a given site</td>
<td></td>
</tr>
<tr>
<td>Cruise Ships</td>
<td>NA</td>
<td>Hrs - Wks</td>
<td>Blurs the line between ship and floating hotel. May stop for hours or weeks at a port</td>
<td></td>
</tr>
<tr>
<td>Refugee Housing</td>
<td>NA</td>
<td>NA</td>
<td>Dys - Perm</td>
<td>Varying widely in form, they may well outlast their intended lifespan housing refugees</td>
</tr>
<tr>
<td>Blazona's MD 42 &amp; MD 144</td>
<td>Aug 25, 2003</td>
<td>Sept 1, 2003</td>
<td>8 days</td>
<td>Designed for occupation during the weeklong Burning Man event in 2003</td>
</tr>
<tr>
<td>Burning Man</td>
<td>Aug 29, 2005</td>
<td>Sept 5, 2005</td>
<td>8 days</td>
<td>An annual event during the week prior to and including Labor Day weekend. Hotbed for architectural experiments. Recent controversy has grown over efforts to establish a permanent location and buildings for the event</td>
</tr>
<tr>
<td>Ta'zia, Rath, Pandal</td>
<td>NA</td>
<td>NA</td>
<td>11 days</td>
<td>Integral to Hindu religious festivals, the ceremonial destruction of the structures rebuilds community bonds</td>
</tr>
<tr>
<td>Christo's Reichstag Project</td>
<td>June 24, 1995</td>
<td>July 7, 1995</td>
<td>14 days</td>
<td>Coordinated to cover the building during renovations and addition of the new cupola</td>
</tr>
<tr>
<td>The Gates</td>
<td>Feb 12, 2005</td>
<td>Feb 27, 2005</td>
<td>16 days</td>
<td>A temporary art outdoor art exhibit emphasizing the procession of paths in central park. The artist claim to create their art for no &quot;reason&quot; just for the sake of art</td>
</tr>
<tr>
<td>Tipi, Yurt, Black-Tent</td>
<td>NA</td>
<td>NA</td>
<td>Season</td>
<td>Demountable and easily portable, these vernacular dwellings facilitate a nomadic lifestyle</td>
</tr>
<tr>
<td>Mexican and Hawaiian Huts</td>
<td>NA</td>
<td>NA</td>
<td>Season</td>
<td>Built around seasonal ocean conditions, these structures are rebuilt each year</td>
</tr>
<tr>
<td>Igloos</td>
<td>NA</td>
<td>NA</td>
<td>Season</td>
<td>Quickly built and durable, they may serve as a dwelling for a night or months</td>
</tr>
<tr>
<td>Item</td>
<td>Built</td>
<td>Site Departure</td>
<td>Time at Site</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>--------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Swedish Ice Hotel</td>
<td>Jan</td>
<td>April</td>
<td>4 mos</td>
<td>A seasonal hotel compound rebuilt each year from locally collected river ice</td>
</tr>
<tr>
<td>Jukkasjärvi, Sweden</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swiss Pavilion</td>
<td>June 1, 2000</td>
<td>Oct 31, 2005</td>
<td>5 mos</td>
<td>Built to evoke the idea of Switzerland from demountable wooden slats, and removed after the event</td>
</tr>
<tr>
<td>Hanover, Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japanese Pavilion</td>
<td>April 20, 1992</td>
<td>Oct 12, 1992</td>
<td>6 mos</td>
<td>Built for the Seville Expo, and removed after the event</td>
</tr>
<tr>
<td>Seville, Spain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Na Hale ’O Waiwai</td>
<td>July 2003</td>
<td>March 2005</td>
<td>21 mos</td>
<td>Dougherty designs various pseudo-architectural sculptures with locally grown saplings</td>
</tr>
<tr>
<td>Honolulu, Hawaií, USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rinker Hall</td>
<td>2003 Remains on Site</td>
<td></td>
<td>2 yrs *</td>
<td>Although designed to be eventually disassembled, it is a permanent structure that does not have a set departure date</td>
</tr>
<tr>
<td>University of Florida in Gainesville, Florida, USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schwarzenegger Cigar Tent</td>
<td>Nov 2003</td>
<td>Remains on Site</td>
<td>2 yrs *</td>
<td>Built to service Schwarzenegger's cigar fetish, and political deal making The tent will last as long as his term in office Next election scheduled for Dec 2006</td>
</tr>
<tr>
<td>Sacramento, California, USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millenium Dome</td>
<td>2000 Remains on Site</td>
<td></td>
<td>5 yrs *</td>
<td>A tensile dome structure built for second millennial celebrations The deployable permanent structure remains underutilized</td>
</tr>
<tr>
<td>London, England</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shigeru Ban's Paper Church</td>
<td>1995 Remains on Site</td>
<td></td>
<td>10 yrs *</td>
<td>A paper church built in the aftermath of the Kobe earthquake as a temporary church; it has outlasted its intended duration</td>
</tr>
<tr>
<td>(Takatomi Kyokai Church) Kobe, Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denver Airport</td>
<td>1995 Remains on Site</td>
<td></td>
<td>10 yrs *</td>
<td>Famous for its tensile roofs said to mimic the Rocky Mountains Intended to be permanent</td>
</tr>
<tr>
<td>Denver, Colorado, USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ise Shrine</td>
<td>1993 Remains on Site</td>
<td></td>
<td>12 yrs *</td>
<td>Originally built in 4th or 5th century AD, the structure was intended to be rebuilt at 20 year intervals on an adjacent site To be rebuilt next in 2013</td>
</tr>
<tr>
<td>Ise City, Kansai, Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoshida Common City Housing</td>
<td>1993 Remains on Site</td>
<td></td>
<td>12 yrs *</td>
<td>Example of Japanese architecture expressive of surface and lightness, qualities referred to as &quot;ephemeral&quot; Permanent structures, not EA by definition</td>
</tr>
<tr>
<td>Osaka, Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shonandai Cultural Center</td>
<td>1991 Remains on Site</td>
<td></td>
<td>14 yrs *</td>
<td>Example of Japanese architecture expressive of movement and fragmentation, qualities referred to as &quot;ephemeral&quot; Permanent structures, not EA by definition</td>
</tr>
<tr>
<td>Tokyo, Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pruitt-Igoe</td>
<td>1956</td>
<td>1972</td>
<td>16 yrs *</td>
<td>Built as a new paradigm in apartment architecture, its destruction is considered the start of the post-modern architectural era Intended to be a permanent icon</td>
</tr>
<tr>
<td>St. Louis, Missouri, USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamlet Housing</td>
<td>1988 Remains on Site</td>
<td></td>
<td>17 yrs *</td>
<td>Example of Japanese architecture expressive of lightness and fragmentation, qualities referred to as &quot;ephemeral&quot; Permanent structures, not EA by definition</td>
</tr>
<tr>
<td>Tokyo, Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parc de la Villette</td>
<td>1987 Remains on Site</td>
<td></td>
<td>18 yrs *</td>
<td>Designed around a series of small red follies located throughout the park Intended for an indefinite life-span</td>
</tr>
<tr>
<td>Paris, France</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nagakin Capsule Tower</td>
<td>1972 Remains on Site</td>
<td></td>
<td>33 yrs *</td>
<td>The tower operates as a vertical street/infrastructure that capsules plug into The capsules were intended to travel the world plugging into similar towers in other countries</td>
</tr>
<tr>
<td>Tokyo, Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hawaii State Capital</td>
<td>1969 Remains on Site</td>
<td></td>
<td>36 yrs *</td>
<td>The capital incorporates glass windows overlooking the viewing areas to emphasize transparency of government Intended to be permanent</td>
</tr>
<tr>
<td>Honolulu, Hawaií, USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quonset Hut</td>
<td>1945 Remains on Site</td>
<td></td>
<td>60 yrs *</td>
<td>Designed and built during WWII as portable and temporary structures, they were later sold to the public who reconceived of them as inexpensive permanent buildings</td>
</tr>
<tr>
<td>Berlin, Germany</td>
<td>1894 Remains on Site</td>
<td></td>
<td>111 yrs *</td>
<td>German symbol of democracy and intended to be permanent A new cupola (1995) allows views of the government chambers to emphasize the openness of government</td>
</tr>
<tr>
<td>New Orleans, 9th District</td>
<td>1718 2005</td>
<td></td>
<td>287 yrs *</td>
<td>Established to last for all posterity Built date is the year New Orleans was founded Destroyed by hurricane Katrina, the district is already being rebuilt</td>
</tr>
<tr>
<td>Louisiana, USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egyptian Pyramids</td>
<td>2495 Remains on Site</td>
<td></td>
<td>4500 yrs *</td>
<td>Mausoleums for Egyptian royalty intended to last for eternity</td>
</tr>
</tbody>
</table>

*Indicates current age as of November 2005
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