Archaeological Resources and the CEQA-EIR Environmental Review Process

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Topics of Presentation

1. Definition of Archaeology
2. Historic vs. Prehistoric Archaeology
3. Brief European/American History of California
4. Examples of Historical and Prehistoric Archaeological Resources
5. Advantages of Historical Archaeology over Prehistoric
7. Bottle Identification and Dating *(likely will be omitted)*
8. Case Studies from Downtown Los Angeles
9. “Takeaways”
Definition of Archaeology

• **Archaeology** is the study of the material remains of past societies. Archaeologists attempt to reconstruct human behavior of past societies by examining the materials that they left behind. Archaeologists are interested in change over time. In the New World, historical archaeologists work on a broad range of sites preserved on land and underwater. These sites document early European settlement and its effects on Native American peoples, as well the subsequent spread of the frontier and later urbanization and industrialization. By examining the physical and documentary record of these sites, historical archaeologists attempt to discover the fabric of common everyday life in the past and seek to understand the broader historical development of their own and other societies. (from Society for Historical Archaeology)

• The time period and cultures to be studied depend on the geographic location.
Summary of European/American History of California

- Significant Time Periods/Events in California History
  - Spanish Exploration (Cabrillo in 1542, Vizcaino in 1602, and Portola in 1769)
  - Spanish Mission Period (1769 – 1833)
  - Mexican Period (1821 – 1848) – large Ranchos
  - American Period (1848 – Present Day)

- Russians in northern California (Fort Ross) from 1812 - 1842
- Missions were secularized in 1833, many Native Americans went to work on the Mexican Ranchos

- Historical Archaeology in California dates from 1769 A.D. to circa 1950 A.D.
- Prehistoric Archaeology in California dates from circa 14,000 YBP to 1769 A.D.

By Sea, 1542 A.D.  
By Sea, 1602  
By Land, 1769
Examples of Prehistoric Archaeological Resources

- Temporary camp sites, villages, ceremonial sites, artifact scatters (pottery, stone tools, faunal/floral remains), hearths or roasting pits, rock art, bedrock milling features, rock alignments/rings, burials, cultural landscapes, etc.
Examples of Prehistoric Archaeological Resources
Examples of Historical Archaeological Resources

- Refuse scatters, privies, structural ruins; water, mining, and transportation features; homesteads...
Examples of Historical Artifacts

Nails, bricks, glass bottle containers, ceramics, faunal remains, cartridge cases, personal items...
Prehistoric vs. Historical Archaeology

Historical archaeology has the benefit of utilizing historical documents such as maps, newspapers, manuscripts, census records, city directories, building plans, and photographs (aerial imagery as well) to assist in the interpretation of the material remains.
CEQA Threshold of Significance: A potentially significant impact on the environment would occur if a Project would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines.

An archaeological resource pursuant to Section 15064.5 is a resource that is listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR). Resource must meet one of the following criteria and retain integrity to be eligible for CRHR:

1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2) Is associated with the lives of persons important in our past;
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4) Has yielded, or may be likely to yield, information important in prehistory or history.
Archaeological Review Process:

1) **Identify** archaeological resources that would be impacted by project (aka, Phase I Assessment)
2) If resources exist, **evaluate** their eligibility for the California Register or local register (Phase II Assessment)
3) If eligible, determine whether project would **impact** those eligible resources (Phase II Assessment), and if so:
4) Develop and implement **mitigation** measures (Phase III Assessment) to reduce impacts to a less than significant level pursuant to CEQA
Identification Best Practices: The Known and the Unknown

The Known: Resources that can be seen on the surface

The Unknown: Resources that can’t be seen below the surface and; therefore, may or may not exist
Best Practices to Identify the Known and Unknown Resources
How to Identify Archaeo Resources in an Urban Setting: Case Study from Downtown Los Angeles – East Village Mixed Use Project
CRM Archaeology in Downtown Los Angeles

Los Angeles Paving Brick Company (1908 to 1917)
Photograph 13: Overview of Refuse Deposit stratigraphy shown in profile along western boundary of project site, view northwest.

Photograph 14: Close-up or artifacts from the Refuse Deposit.

Photograph 15: Overview of auger drilling activites along southern border of project site, view east.

Photograph 16: Overview of Brick Oven, view west.
How to Identify Archaeo Resources in an Urban Setting: Case Study from Downtown Los Angeles – One Santa Fe Project
How to Identify Archaeological Resources in an Urban Setting: Case Study from Downtown Los Angeles – One Santa Fe Project

1906 Sanborn Map

1951 Sanborn Map

La Grande Station (1893 - 1939)
Another Case Study in Downtown Los Angeles

Zanja Madre Uncovered in Chinatown (April 2014)

1884 Survey Map
Bottle Identification and Dating

• Bottles preserve well in archaeo contexts, have temporally diagnostic attributes that allow them to be dated to relatively narrow manufacture date.

• Historic Glass Bottle Identification and Information Website (by SHA/BLM): http://bottleinfo.historicbottles.com/

Toulouse (1971)
Bottle Identification and Dating

Bottle morphology, embossings, paper labels, and other “dateable” attributes

Embossings or “Maker’s Marks”

Finish or “Lip”

Diagram of bottle parts:
- Neck
- Shoulder
- Body
- Finishes or “Lip”
- Embossings or “Maker’s Marks”
# Bottle Identification and Dating

<table>
<thead>
<tr>
<th>Logo</th>
<th>Firm</th>
<th>Date Range</th>
<th>Section*</th>
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</thead>
<tbody>
<tr>
<td>Silicone Glass Company</td>
<td>Silicon Glass Co.</td>
<td>1906-1908</td>
<td>S: Other S</td>
</tr>
<tr>
<td>Simplex Mason</td>
<td>Perfection Glass Co.</td>
<td>1903-1906</td>
<td>P: Perfection Glass Co.</td>
</tr>
<tr>
<td>SK&amp;Co</td>
<td>Shields, King &amp; Co.</td>
<td>ca. 1875-1878</td>
<td>E: Everett Glass Co.</td>
</tr>
<tr>
<td>S.M.C.O.</td>
<td>Star Milk Cooler Co.</td>
<td>early 20th century?</td>
<td>S: Other S</td>
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<tr>
<td>Smith &amp; Co.</td>
<td>J.P. Smith &amp; Co.**</td>
<td>1868-1871</td>
<td>S: Other S</td>
</tr>
<tr>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
<td>S: Other S</td>
</tr>
<tr>
<td>SOU.G.W.</td>
<td>Southern Glass Works</td>
<td>ca. 1877-1886</td>
<td>S: Southern Glass Works</td>
</tr>
<tr>
<td>SOU.G.W.S.</td>
<td>Southern Glass Works</td>
<td>ca. 1877-1886</td>
<td>S: Southern Glass Works</td>
</tr>
<tr>
<td>S&amp;S</td>
<td>Stebbins &amp; Stebbins (Coventry Glass Works)</td>
<td>ca. 1825</td>
<td>S: Other S</td>
</tr>
</tbody>
</table>

The bottle website
Maker’s Mark Encyclopedia: Marks from A - Z
Bottle Identification and Dating – Mold Types and their Signatures

3-piece mold seams

No continuation of side mold seam below the shoulder of the bottle.

Three-piece mold
Bottle Identification and Dating – Brief History of Bottle Making

- Mouth-blown (or free-blown) VS. Machine Made Bottles

Mouth-blown Bottle Bases

Mouth-blown Technique

Owen’s Bottle Machine (c. 1910)

Mouth-blown

OPEN PONTIL SCAR

Machine-made
Limitations of Dating Bottles in Archaeological Contexts

• A bottle manufacture date is not a discard date
• Bottles, along with cans, ceramics, and other items were stored, reused/recycled, and/or scavenged (to be reused) in the past (see Schiffer 1987)
• Multiple lines of evidence to support discard date are needed as a result
“CRM” Archaeology
-Cultural Resources Management
Catalog No. 239 are fragments of at least two soda or beer bottles made from the same company since their embossings on their respective bases are similar. The amber-colored fragments include two entire bases and parts of the body and heel. Each bottle base is embossed with “A B Co” with a number below, either “6” or “16”, respectively. The bottle with a “6” on the base is embossed with “6 – S” on its heel while the other bottle is embossed with “…-S” on its heel. The “A B Co” embossing is consistent with the American Bottle Company which operated several plants in the Midwest and the east coast and appear to be the first glass manufacturer to provide date codes on their bottles. Since the bottles were returnable, the company initiated the placement of date codes on the heels of bottles which allowed them to track the number of round trips made by soda or beer bottles from the plant and the consumer (Lockhart et al. 2013:315). The “6 - S” embossing on the heel of one of the bottles indicates the bottle was manufactured at the company’s Streator, Illinois plant in 1906 (Lockhart et al. 2013: 329). The “…-S” embossing on the other bottle indicates that bottle was also manufactured in Streator but since the date code is not present (i.e., broken off), this bottle dates between 1906 and 1912 (Ibid.).
“Takeaways”

• Collaboration Between Architectural Historians and Archaeologists is recommended to assist in the identification and interpretation of archaeological resource during the planning/environmental review and construction stages

• Can’t Write-off Archaeological Resources Even When Project Site Is Developed

• Archaeological Resources Need to be Preserved for Future Generations
Thank you! Questions or Comments?