

State Laws and Codes

State Preservation Laws

Administrative Code, Title 14, Section 4307

No person shall remove, injure, deface or destroy any object of paleontological, archaeological, or historical interest or value.

CCR Section 1427

Recognizes that California's archaeological resources are endangered by urban development and population growth and by natural forces. The Legislature further finds and declares that these resources need to be preserved in order to illuminate and increase public knowledge concerning the historic and prehistoric past of California. Every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archaeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor. It is a misdemeanor to alter any archaeological evidence found in any cave, or to remove any materials from a cave.

Senate Concurrent Resolution Number 43

Requires all state agencies to cooperate with programs of archaeological survey and excavation, and to preserve known archaeological resources whenever this is reasonable.

Senate Concurrent Resolution Number 87 – Resolution Chapter 104, filed with Secretary of State September 1, 1978

Provides for the identification and protection of traditional Native American resource gathering sites on State land.

Government Codes

§ 6254 (r): California Public Records Act Exemption from Disclosure

Exempts from disclosure public records of Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.

§ 65092: Public notice to California Native American Indian Tribes

Includes California Native American tribe that is on the contact list maintained by the Native American Heritage Commission in the definition of "person" to whom notice of public hearings shall be sent by local governments.

§ 65351: Native American Involvement in General Plan Proposals

Requires local planning agencies to provide opportunities for involvement of California Native American tribes on the contact list maintained by the Native American Heritage Commission, and others, in the preparation or amendment of the general plan

§ 65352: Referral of Action on General Plan Changes to Native Americans

Requires local planning agencies to refer proposed actions of general plan adoption or amendment to California Native American tribes on the contact list maintained by the Native American Heritage Commission, and others, with a 45 day opportunity for comments.

§ 65352.3- 65352.4: Consultation with Native Americans on General Plan Proposals

Requires local governments to conduct meaningful consultation with California Native American tribes on the contact list maintained by the Native American Heritage Commission prior to the adoption or amendment of a city or county general plan for the purpose of protecting cultural places on lands affected by the proposal.

§ 65560, 65562.5: Consultation with Native Americans on Open Space

Includes protection of Native American cultural places as an acceptable designation of open space. Requires local governments to conduct meaningful consultation with California Native American tribes on the contact list maintained by the Native American Heritage Commission for the purpose of protecting cultural places located within open space.

§ 12600-12612: Attorney General- Environmental Action

Permits the attorney general to intervene in any judicial or administrative proceeding concerning pollution or adverse effects on the environment. Authorizes the attorney general to maintain an action for equitable relief in the name of the people of the state against any person for the protection of the natural resources of the state from pollution, impairment or destruction. Includes historic sites in the definition of natural resources. Authorizes the court to hold the defendant accountable for the protection of natural resources of the state from pollution, impairment or destruction.

§ 25373, 37361: City/County Protection of Historic Resources

Allows city and county legislative bodies to acquire property for the preservation or development of an historic landmark. Allows local legislative bodies to enact ordinances to provide special conditions or regulations for the protection or enhancement of places or objects of special historical or aesthetic interest or value.

§ 50280-50290: Mills Act (Historical Property Contracts)

Allows the negotiation of contracts between a private owner of a "qualified historical property" and provides additional guidelines for such contracts.

Public Resources Code

§ 5020.5: State Historical Resources Commission

Directs the State Historical Resources Commission to develop criteria and methods for determining the significance of archeological sites, for selecting the most significant sites, and for determining whether the most significant sites should be preserved intact or excavated and interpreted. Directs the commission to develop guidelines for the reasonable and feasible collection, storage, and display of archeological specimens.

§ 5020.7: Public promotion of historical resource protection

Directs public agencies to encourage owners of both identified and unidentified historical resources to perceive historical resources as assets and to elicit the support of owners and of the general public for the preservation of historic resources.

§ 5024: State-owned historical resources

Directs all state agencies to preserve and maintain all state-owned historical resources with the assistance of the State Historic Preservation Officer.

§ 5024.1: California Register of Historical Resources

Establishes the California Register of Historical Resources, duties of the committee overseeing the administration of the register, and criteria for inclusion of resources on the Register.

§ 5079.10-5079.15: California Heritage Fund

Establishes the California Heritage Fund in the State Treasury for implementation of laws providing for historical resource preservation.

§ 5079.20-5079.28: State acquisition of property to preserve historical resources

Defines methods by which the State Public Works Board may acquire property, on behalf of the (Treasury), for the purpose of meeting the policies and objectives of the California Register to protect and/or provide public access to cultural or historical resources.

§ 5079.40-5079.44: Grants for historical resource preservation

Directs the (Treasury) to provide competitive grants to public agencies and non-profit organizations for historical resource preservation projects, not to exceed \$1,000,000 or 50% of project costs.

§ 5097.1-5097.6: Parks and Recreation Code and Sites

Requires state agencies proposing any major public works project on state lands to have plans reviewed by the Department of Parks and Recreation. Authorizes the Department of Parks and Recreation to conduct archeological site surveys for historical features on land affected by projects. Authorizes the state agencies to undertake surveys, excavation, or other operations on the state lands, or request such activities be done on their behalf by the Department of Parks and Recreation. Prohibits any archeological program from delaying state construction projects. Prohibits the removal, destruction, or defacement of any archeological or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

§ 5097.9: Non-interference with Native American religious expression

Establishes that public agencies, or private entities using, occupying or operating on public property under public permit, shall not interfere with free expression or exercise of Native American religion and shall not cause severe or irreparable damage to Native American sacred sites, except under special determined circumstances of public interest and necessity.

§ 5097.91-5097.94: Native American Heritage Commission (NAHC)

Creates the nine-member Native American Heritage Commission appointed by the governor and directs that at least five members shall be elders, traditional people, or spiritual leaders of California Native American tribes. Directs the commission to identify and catalog places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands, and to perform other duties regarding the preservation and accessibility of sacred sites and burials and the disposition of Native American human remains and burial items.

§ 5097.95: State and local agency cooperation with the NAHC

Directs all state and local agencies to cooperate with the Native American Heritage Commission in transmitting to the commission copies of appropriate sections of all CEQA environmental impact reports related to property identified by the commission as of special religious significance to Native Americans, or which is reasonably foreseeable as such property.

§ 5097.96: The NAHC inventory of Native American sacred places

Authorizes the Native American Heritage Commission to prepare an inventory of sacred places located on public lands and to review the administrative and statutory protections accorded to such places. Directs the commission to submit a report to the Legislature recommending actions, as the commission deems necessary, to preserve such sacred places and to protect the free exercise of Native American religions.

§ 5097.97: NAHC investigations

Enables the Native American Heritage Commission to investigate the effect of proposed actions by a public agency if such action may cause severe or irreparable damage to a Native American sacred site located on public property or may bar appropriate access thereto by Native Americans. Authorizes the commission to recommend mitigation measures for consideration by the agency if the commission finds, after a public hearing, that the proposed action would result in such damage or interference. Allows the commission to ask the attorney general to take appropriate action if the agency fails to accept the mitigation measures.

§ 5097.98: NAHC identifying most likely descendant

Requires the Native American Heritage Commission, upon notification by a county coroner, to notify the most likely descendants regarding the discovery of Native American human remains. Enables the descendants, within 48 hours of notification by the commission, to inspect the site of the discovery of Native American human remains and to recommend to the landowner or the person responsible for the excavation work means for treating or disposition, with appropriate dignity, the human remains and any associated grave goods. Requires the owner of the land upon which Native American human remains were discovered, in the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or the land owner rejects the recommendation of the descendant, to reinter the remains and burial items with appropriate dignity on the property in a location not subject to further disturbance.

§ 5097.99: Prohibition of possession of Native American artifacts and remains

Prohibits acquisition or possession of Native American artifacts or human remains taken from a Native American grave or cairn after January 1, 1984, except in accordance with an agreement reached with the Native American Heritage Commission.

§ 5097.991: Repatriation of Native American remains

States that the policy of the state is that Native American remains and associated grave artifacts shall be repatriated.

§ 5097.993-5097.994: Native American Historic Resource Protection Act

Establishes as a misdemeanor, punishable by up to a \$10,000 fine or both fine and imprisonment, the unlawful and malicious excavation, removal or destruction of Native American archeological or historic sites on public lands or on private lands. Exempts certain legal acts by landowners. Limits a civil penalty to \$50,000 per violation.

§ 21083.2: California Environmental Quality Act-Archeological Resources

Directs the lead agency on any project undertaken, assisted, or permitted by the state to include in its environmental impact report for the project a determination of the project's effect on unique archeological resources. Defines unique archeological resource. Enables a lead agency to require an applicant to make reasonable effort to preserve or mitigate impacts to any affected unique archeological resource. Sets requirements for the applicant to provide payment to cover costs of mitigation. Restricts excavation as a mitigation measure.

§ 21084.1: California Environmental Quality Act- Historic Resources

Establishes that adverse effects on an historical resource qualifies as a significant effect on the environment. Defines historical resource. 6254 (r): California Public Records Act Exemption from Disclosure

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Penal Code

§ 622 _: Destruction of Sites

Establishes as a misdemeanor the willful injury, disfiguration, defacement, or destruction of any object or thing of archeological or historical interest or value, whether situated on private or public lands.

§ 623: Destruction of Caves

(a)(2) Establishes as a misdemeanor the disturbing or alteration of any archeological evidence in any cave without the written permission of the owner of the cave, punishable by up to one year in the county jail or a fine not to exceed \$1,000, or both.

California Health and Safety Code

7050.5 Disturbance of human remains

Establishes intentional disturbance, mutilation or removal of interred human remains as a misdemeanor. Requires that further excavation or disturbance of land, upon discovery of human remains outside of a dedicated cemetery, cease until a county coroner makes a report. Requires a

county coroner to contact the Native American Heritage Commission within 24 hours if the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the remains to be those of a Native American.

7051 Removal of human remains

Establishes removal of human remains from internment, or from a place of storage while awaiting internment or cremation, with the intent to sell them or to dissect them with malice or wantonness as a public offense punishable by imprisonment in a state prison.

7052: Felony offenses related to human remains

States that willing mutilation of, disinternment of, removal from a place of disinternment of, and sexual penetration of or sexual contact with any remains known to be human are felony offenses.

7054 Depositing human remains outside of cemetery

Exempts reburial of Native American remains pursuant to Section 5097.94 from definition of a misdemeanor.

8010-8011: California Native American Graves Protection and Repatriation Act

Establishes a state repatriation policy intent that is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act. Strives to ensure that all California Indian human remains and cultural items are treated with dignity and respect. Encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. States an intent for the state to provide mechanisms for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims and getting responses to those claims.

BILL NUMBER: SB 18 CHAPTERED
BILL TEXT

CHAPTER 905

FILED WITH SECRETARY OF STATE SEPTEMBER 30, 2004
APPROVED BY GOVERNOR SEPTEMBER 29, 2004
PASSED THE SENATE AUGUST 19, 2004
PASSED THE ASSEMBLY AUGUST 9, 2004
AMENDED IN ASSEMBLY JULY 1, 2004
AMENDED IN ASSEMBLY JUNE 28, 2004
AMENDED IN ASSEMBLY JUNE 14, 2004
AMENDED IN ASSEMBLY JUNE 10, 2004
AMENDED IN ASSEMBLY SEPTEMBER 12, 2003
AMENDED IN ASSEMBLY SEPTEMBER 5, 2003
AMENDED IN ASSEMBLY AUGUST 25, 2003
AMENDED IN ASSEMBLY AUGUST 18, 2003
AMENDED IN ASSEMBLY JULY 9, 2003

INTRODUCED BY Senators Burton, Chesbro, and Ducheny

DECEMBER 2, 2002

An act to amend Section 815.3 of the Civil Code, to amend Sections 65040.2, 65092, 65351, 65352, and 65560 of, and to add Sections 65352.3, 65352.4, and 65562.5 to the Government Code, relating to traditional tribal cultural places.

LEGISLATIVE COUNSEL'S DIGEST

SB 18, Burton. Traditional tribal cultural places.

(1) Existing law establishes the Native American Heritage Commission and authorizes the commission to bring an action to prevent severe and irreparable damage to, or assure appropriate access for Native Americans to, a Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property.

Existing law authorizes only specified entities or organizations, including certain tax-exempt nonprofit organizations, and local government entities to acquire and hold conservation easements, if those entities and organizations meet certain conditions.

This bill would include a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the Native American Heritage Commission, among those entities and organizations that may acquire and hold conservation easements, as specified.

(2) Existing law requires the Office of Planning and Research to implement various long range planning and research policies and goals that are intended to shape statewide development patterns and significantly influence the quality of the state's environment and, in connection with those responsibilities, to adopt guidelines for the preparation and content of the mandatory elements required in city and county general plans.

This bill would require that, by March 1, 2005, the guidelines contain advice, developed in consultation with the Native American Heritage Commission, for consulting with California Native American tribes for the preservation of, or the mitigation of impacts to,

specified Native American places, features, and objects. The bill would also require those guidelines to address procedures for identifying the appropriate California Native American tribes, for continuing to protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects, and for facilitating voluntary landowner participation to preserve and protect the specific identity, location, character, and use of those places, features, and objects. The bill would define a California Native American tribe that is on the contact list maintained by the Native American Heritage Commission as a "person" for purposes of provisions relating to public notice of hearings relating to local planning issues.

(3) Existing law requires a planning agency during the preparation or amendment of the general plan, to provide opportunities for the involvement of citizens, public agencies, public utility companies, and civic, education, and other community groups, through public hearings and any other means the city or county deems appropriate.

This bill would require the planning agency on and after March 1, 2005, to refer the proposed action to California Native American tribes, as specified, and also provide opportunities for involvement of California Native American tribes. The bill would require that, prior to the adoption or amendment of a city or county's general plan, the city or county conduct consultations with California Native American tribes for the purpose of preserving specified places, features, and objects that are located within the city or county's jurisdiction. The bill would define the term "consultation" for purposes of those provisions. By imposing new duties on local governments with respect to consultations regarding the protection and preservation of California Native American historical, cultural, and sacred sites, the bill would impose a state-mandated local program.

On and after March 1, 2005, this bill would include open space for the protection of California Native American historical, cultural, and sacred sites within the definition of "local open-space plan" for purposes of provisions governing the preparation of the open-space element of a city and county general plan.

(4) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement, including the creation of a State Mandates Claims Fund to pay the costs of mandates that do not exceed \$1,000,000 statewide and other procedures for claims whose statewide costs exceed \$1,000,000.

This bill would provide that with regard to certain mandates no reimbursement is required by this act for a specified reason.

With regard to any other mandates, this bill would provide that, if the Commission on State Mandates determines that the bill contains costs so mandated by the state, reimbursement for those costs shall be made pursuant to the statutory provisions noted above.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. (a) The Legislature finds and declares all of the following:

(1) Current state law provides a limited measure of protection for California Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places.

(2) Existing law provides limited protection for Native American

sanctified cemeteries, places of worship, religious, ceremonial sites, sacred shrines, historic or prehistoric ruins, burial grounds, archaeological or historic sites, inscriptions made by Native Americans at those sites, archaeological or historic Native American rock art, and archaeological or historic features of Native American historic, cultural, and sacred sites.

(3) Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance reflect the tribes' continuing cultural ties to the land and to their traditional heritages.

(4) Many of these historical, cultural, and religious sites are not located within the current boundaries of California Native American reservations and rancherias, and therefore are not covered by the protectionist policies of tribal governments.

(b) In recognition of California Native American tribal sovereignty and the unique relationship between California local governments and California tribal governments, it is the intent of the Legislature, in enacting this act, to accomplish all of the following:

(1) Recognize that California Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places are essential elements in tribal cultural traditions, heritages, and identities.

(2) Establish meaningful consultations between California Native American tribal governments and California local governments at the earliest possible point in the local government land use planning process so that these places can be identified and considered.

(3) Establish government-to-government consultations regarding potential means to preserve those places, determine the level of necessary confidentiality of their specific location, and develop proper treatment and management plans.

(4) Ensure that local and tribal governments have information available early in the land use planning process to avoid potential conflicts over the preservation of California Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places.

(5) Enable California Native American tribes to manage and act as caretakers of California Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places.

(6) Encourage local governments to consider preservation of California Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places in their land use planning processes by placing them in open space.

(7) Encourage local governments to consider the cultural aspects of California Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places early in land use planning processes.

SEC. 2. Section 815.3 of the Civil Code is amended to read:

815.3. Only the following entities or organizations may acquire and hold conservation easements:

(a) A tax-exempt nonprofit organization qualified under Section 501(c)(3) of the Internal Revenue Code and qualified to do business in this state which has as its primary purpose the preservation, protection, or enhancement of land in its natural, scenic, historical, agricultural, forested, or open-space condition or use.

(b) The state or any city, county, city and county, district, or other state or local governmental entity, if otherwise authorized to acquire and hold title to real property and if the conservation easement is voluntarily conveyed. No local governmental entity may condition the issuance of an entitlement for use on the applicant's

granting of a conservation easement pursuant to this chapter.

(c) A federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the Native American Heritage Commission to protect a California Native American prehistoric, archaeological, cultural, spiritual, or ceremonial place, if the conservation easement is voluntarily conveyed.

SEC. 3. Section 65040.2 of the Government Code is amended to read:

65040.2. (a) In connection with its responsibilities under subdivision (1) of Section 65040, the office shall develop and adopt guidelines for the preparation and content of the mandatory elements required in city and county general plans by Article 5 (commencing with Section 65300) of Chapter 3. For purposes of this section, the guidelines prepared pursuant to Section 50459 of the Health and Safety Code shall be the guidelines for the housing element required by Section 65302. In the event that additional elements are hereafter required in city and county general plans by Article 5 (commencing with Section 65300) of Chapter 3, the office shall adopt guidelines for those elements within six months of the effective date of the legislation requiring those additional elements.

(b) The office may request from each state department and agency, as it deems appropriate, and the department or agency shall provide, technical assistance in readopting, amending, or repealing the guidelines.

(c) The guidelines shall be advisory to each city and county in order to provide assistance in preparing and maintaining their respective general plans.

(d) The guidelines shall contain the guidelines for addressing environmental justice matters developed pursuant to Section 65040.12.

(e) The guidelines shall contain advice including recommendations for best practices to allow for collaborative land use planning of adjacent civilian and military lands and facilities. The guidelines shall encourage enhanced land use compatibility between civilian lands and any adjacent or nearby military facilities through the examination of potential impacts upon one another.

(f) The guidelines shall contain advice for addressing the effects of civilian development on military readiness activities carried out on all of the following:

- (1) Military installations.
- (2) Military operating areas.
- (3) Military training areas.
- (4) Military training routes.
- (5) Military airspace.
- (6) Other territory adjacent to those installations and areas.

(g) By March 1, 2005, the guidelines shall contain advice, developed in consultation with the Native American Heritage Commission, for consulting with California Native American tribes for all of the following:

(1) The preservation of, or the mitigation of impacts to, places, features, and objects described in Sections 5097.9 and 5097.995 of the Public Resources Code.

(2) Procedures for identifying through the Native American Heritage Commission the appropriate California Native American tribes.

(3) Procedures for continuing to protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects.

(4) Procedures to facilitate voluntary landowner participation to

preserve and protect the specific identity, location, character, and use of those places, features, and objects.

(h) The office shall provide for regular review and revision of the guidelines established pursuant to this section.

SEC. 4. Section 65092 of the Government Code is amended to read:

65092. (a) When a provision of this title requires notice of a public hearing to be given pursuant to Section 65090 or 65091, the notice shall also be mailed or delivered at least 10 days prior to the hearing to any person who has filed a written request for notice with either the clerk of the governing body or with any other person designated by the governing body to receive these requests. The local agency may charge a fee which is reasonably related to the costs of providing this service and the local agency may require each request to be annually renewed.

(b) As used in this chapter, "person" includes a California Native American tribe that is on the contact list maintained by the Native American Heritage Commission.

SEC. 5. Section 65351 of the Government Code is amended to read:

65351. During the preparation or amendment of the general plan, the planning agency shall provide opportunities for the involvement of citizens California Native American Indian tribes, public agencies, public utility companies, and civic, education, and other community groups, through public hearings and any other means the city or county deems appropriate.

SEC. 6. Section 65352 of the Government Code is amended to read:

65352. (a) Prior to action by a legislative body to adopt or substantially amend a general plan, the planning agency shall refer the proposed action to all of the following entities:

(1) A city or county, within or abutting the area covered by the proposal, and a special district that may be significantly affected by the proposed action, as determined by the planning agency.

(2) An elementary, high school, or unified school district within the area covered by the proposed action.

(3) The local agency formation commission.

(4) An areawide planning agency whose operations may be significantly affected by the proposed action, as determined by the planning agency.

(5) A federal agency if its operations or lands within its jurisdiction may be significantly affected by the proposed action, as determined by the planning agency.

(6) A public water system, as defined in Section 116275 of the Health and Safety Code, with 3,000 or more service connections, that serves water to customers within the area covered by the proposal. The public water system shall have at least 45 days to comment on the proposed plan, in accordance with subdivision (b), and to provide the planning agency with the information set forth in Section 65352.5.

(7) The Bay Area Air Quality Management District for a proposed action within the boundaries of the district.

(8) On and after March 1, 2005, a California Native American tribe, that is on the contact list maintained by the Native American Heritage Commission, with traditional lands located within the city or county's jurisdiction.

(b) Each entity receiving a proposed general plan or amendment of a general plan pursuant to this section shall have 45 days from the date the referring agency mails it or delivers it in which to comment unless a longer period is specified by the planning agency.

(c) (1) This section is directory, not mandatory, and the failure to refer a proposed action to the other entities specified in this section does not affect the validity of the action, if adopted.

(2) To the extent that the requirements of this section conflict with the requirements of Chapter 4.4 (commencing with Section 65919), the requirements of Chapter 4.4 shall prevail.

SEC. 7. Section 65352.3 is added to the Government Code, to read:

65352.3. (a) (1) Prior to the adoption or any amendment of a city or county's general plan, proposed on or after March 1, 2005, the city or county shall conduct consultations with California Native American tribes that are on the contact list maintained by the Native American Heritage Commission for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.995 of the Public Resources Code that are located within the city or county's jurisdiction.

(2) From the date on which a California Native American tribe is contacted by a city or county pursuant to this subdivision, the tribe has 90 days in which to request a consultation, unless a shorter timeframe has been agreed to by that tribe.

(b) Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Section 65040.2, the city or county shall protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects.

SEC. 8. Section 65352.4 is added to the Government Code, to read:

65352.4. For purposes of Section 65351, 65352.3, and 65562.5, "consultation" means the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

SEC. 9. Section 65560 of the Government Code is amended to read:

65560. (a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted pursuant to Section 65563.

(b) "Open-space land" is any parcel or area of land or water that is essentially unimproved and devoted to an open-space use as defined in this section, and that is designated on a local, regional or state open-space plan as any of the following:

(1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; areas adjacent to military installations, military training routes, and restricted airspace that can provide additional buffer zones to military activities and complement the resource values of the military lands; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

(2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open space for outdoor recreation, including, but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

(5) Open space for the protection of places, features, and objects described in Sections 5097.9 and 5097.995 of the Public Resources Code.

SEC. 10. Section 65562.5 is added to the Government Code, to read:

65562.5. On and after March 1, 2005, if land designated, or proposed to be designated as open space, contains a place, feature, or object described in Sections 5097.9 and 5097.995 of the Public Resources Code, the city or county in which the place, feature, or object is located shall conduct consultations with the California Native American tribe, if any, that has given notice pursuant to Section 65092 for the purpose of determining the level of confidentiality required to protect the specific identity, location, character, or use of the place, feature, or object and for the purpose of developing treatment with appropriate dignity of the place, feature, or object in any corresponding management plan.

SEC. 11. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution for certain costs that may be incurred by a local agency or school district because in that regard this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

However, notwithstanding Section 17610 of the Government Code, if the Commission on State Mandates determines that this act contains other costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code. If the statewide cost of the claim for reimbursement does not exceed one million dollars (\$1,000,000), reimbursement shall be made from the State Mandates Claims Fund.

Local Ordinances and Codes

A number of cities and counties have passed their own local ordinances regarding cultural resources. These ordinances generally have several goals:

- To clarify the procedures for dealing with cultural resources for both the developer and the landowner.
- To ensure that only qualified archaeologists are selected for performing the work.
- To standardize archaeological report content and format.

In addition, many of these ordinances have specific provisions to protect local cultural resources that are deemed important to the local community or county but which may not be sufficiently protected by state (<http://www.nahc.ca.gov/slc.html>) and/or federal (<http://www.nahc.ca.gov/fedlaw.html>) regulations. These local ordinances often help ensure that a developer or landowner does not end up with a substandard archaeological report that is not acceptable to the Regional Archaeological Information Centers (<http://ohp.cal-parks.ca.gov/chris/iclist.htm>).

Examples of government entities which have passed such ordinances include the counties of San Diego, Santa Barbara, Orange, San Bernardino, Riverside, Monterey, Mendocino, San Benito, Calaveras, Tuolumne, Lake, and Sonoma, and the cities of Santa Barbara, San Juan Capistrano, Santa Rosa, and Fontana.

Contact your County (<http://www.ceres.ca.gov/planning/bol/1997/county.html>) or City Planning Agencies (<http://www.ceres.ca.gov/planning/bol/1997/>) to inquire if local ordinances have been passed regarding cultural resources.

Links to County and City Governments (http://ceres.ca.gov/planning/countylists/county_gov.html)

Historic Artifact Handbook

by

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March 2005

The intent of this handbook is to provide site recorders with little or no background in historic artifact identification sufficient information so that they can provide consistent descriptive information about the artifacts and site features they are observing. Good description of observed features and artifacts is essential for functional and chronological determinations to be made, thereby insuring that sites or site components are evaluated for significance using the proper thematic context. Regardless of whether or not an individual has the expertise to interpret the evidence present at a particular site, anyone carrying out site recordation has the obligation and should have the ability to provide good descriptive information.

A large portion of this handbook is composed of illustrations. For the most part, these are self-explanatory and little text will be written to accompany them. Many artifacts will not be described whatsoever. A list of references is also provided. The focus of the handbook will be on commonly found artifacts that are particularly useful in providing dating information. Historic artifacts from the late nineteenth and twentieth centuries are particularly time sensitive, because of the rapid growth and change of technology. Using an assemblage of historic artifacts, it is not uncommon to be able to date a site to a 5 or 10-year time period. Functional interpretations can also be quite accurate using the artifacts alone. When coupled with well-directed historical research, the information that can be learned from a historic site can be very illuminating, not only from a historical perspective, but from anthropological, behavioral, technological, and socioeconomic viewpoints as well.

When classifying historic artifacts, the preferred method is by function. Classifying artifacts by material type makes functional interpretations very difficult and is inherently troublesome because many historic artifacts are composed of a variety of materials. A classificatory system for artifacts in museum collections was devised Robert G. Chenall (1978) and updated by Blackaby and Greeno (1988). This system is used by the National Park Service for their museum collections and works very well, especially when reference is made to Sprague (1981). Reuse of artifacts for purposes other than their original intention is very important data and should be recorded, but is problematic.

Vessel Glass

Vessel glass includes all glass containers such as food and household chemical bottles and jars, beverage bottles, and canning jars. It also includes glass service wares such as drinking glasses and dishes. Glass color is a very good indicator of a vessel's age.

White Milkglass	ca. 1890s-present
Aqua	ca. 1800-1920s
Green	ca. 1860s-present
Amber or Brown	ca. 1860s-present
Cobalt Blue	ca. 1890s-present
Purple	ca. 1885-1920
Yellowish	ca. 1918-1920s

Purple glass is one of the best time markers to be found on archaeological sites. Use of manganese as a clearing agent in glass became very commonplace by 1885, perhaps beginning as early as 1880. Although the vessels started out clear in color, exposure to the sun resulted in a purple tint, varying in intensity depending on the amount of manganese used. The main source of manganese, Germany, was cut off as a result of World War I. Supplies on hand may have lasted into the very early 1920s, though in very limited quantities. Selenium replaced manganese as a clearing agent. It also changed color with exposure to the sun, this time to a yellowish hue, never getting dark enough to be confused with amber or brown glass.

Care must be taken when assigning a disposal date for a particular piece of glassware. Common food or household vessels were most usually disposed of immediately or soon after their contents had been used up. Canning jars and table service, especially fancy glassware, were used over and over again and were not discarded until unusable. Other glassware fragments, such as lamp chimneys or lantern globes, may be mistaken for short-lived vessels but in reality were used until broken.

Makers marks are very commonly found on the bases of food or household bottles and jars and the name or trademark of the product manufacturer is also frequently embossed on containers or lids. These marks and names should always be recorded as accurately as possible, even if fragmentary, because they can be looked up with relative ease, providing dates and other information. Here are four of the most common makers marks:

◇ - Mark of the Illinois Glass Company of Alton, Illinois in use between 1916 and 1929 (Toulouse 1971:264-268).

◻ - Mark of the Owens Bottle Company in use between 1911 and 1929 (Toulouse 1971:393).

◻ - Mark of the Owens Illinois Glass Co. of Toledo, Ohio used upon the merger of the Owens Bottle Company and the Illinois Glass Company in 1929 and used until 1954 (Toulouse 1971:403-406). Associated with this mark will be numbers to the left, right, and bottom. The number to the left indicates the manufacturing plant. The number to the bottom is the mold number. The number to the right is the date number and can usually be added to 1930 to get the year of manufacture. Bottles from the early 1940s were marked with a single date digit to the right of the mark that may cause confusion with bottles manufactured in the early 1930s. Although some bottles from 1940 were simply marked with a 0, others were marked with a dot following the 0. This use of a dot to designate a 1940s age continued until a two digit date mark was instituted. Still, the single digit and dot designation may be found on bottles through 1946, though the two digit markings began in 1943. Further confirmation of a 1940s age is that stippling is commonly found on the base of these bottles, which is an indication that the glass is Duraglas, which began to be used in 1940 (Lockhart 2004, 2006). An exception to the dating formula was on very small medicine bottles where accompanying numbers were left off entirely or only a single date digit was used into the 1950s (Lockhart 2004, 2006).

⌒ - Mark of the Hazel-Atlas Glass Co. of Wheeling, West Virginia. This mark was in use from 1920 to 1964 (Toulouse 1971:239). According to the U.S. Patent Office, the trademark was registered in 1924.

Other marks also seem to have date numbers in association, particularly beer bottles beginning in the 1940s. These are not well documented, so assumptions of dates by numbers on bottle bases should be considered relative to other artifacts on a site. Plastic bottles may also have date numbers.

Vessel manufacturing attributes should be recorded as well. The attached dating key and illustrations provide the technical information necessary for providing this information.

Depression glass comes in a variety of colors and shapes. It was usually inexpensive dime-store dishware and was often given away in advertising promotions. Patterns can often be identified and

frequently have restricted periods of production. On occasion, decorative glass table service or housewares came in purple. Consideration should be of the type of vessel and its use when purple glass is concerned as curated items or items considered for long use were sometimes manufactured of purple glass that, without close observation, can be confused with fragments of jar or bottles of an earlier age.

Ceramics

Ceramics found on archaeological sites in the West can generally be categorized into one of three basic types: stoneware, earthenware, and porcelain.

Stoneware is a clay ceramic frequently used for utilitarian vessels, such as crockery or sewer pipe. It is fired at a high enough temperature that the clay becomes vitrified somewhat, resulting in impermeability to liquids. It is frequently glazed. The fired clay has a rather porous appearance and is frequently tan to brown.

Earthenware is probably the most common type of ceramic found on historical archaeological sites. It is easily manufactured into a variety of shapes with fairly thin walls and is impermeable to liquids. The fired clay appears very fine in texture, ranges in color from white to yellowish, and sticks to the tongue to varying degrees depending on how vitrified the ceramic is from firing. Earthenwares are commonly glazed with a white or clear slip and are often well decorated. Decoration can range from blue-on-white oriental patterns to polychrome hand-painted, transfer-printed, or decal decoration, to relief-molded patterning with gilding, or any combination of the above. In general, the more refined the decoration, the more expensive the ware. This makes some economic scaling possible. Another generalization that should be considered is that decorated wares frequently indicate a family unit or at least the presence of a woman. Plain white earthenwares, often known as hotel ware, are frequently found at labor camps.

Porcelain is the most refined of the ceramics. It is generally very thin walled and highly vitreous. In cross section, porcelain looks very much like rough glass and will not stick to the tongue. It is almost always very fancy tableware and well decorated in the manner described above for earthenware. The expensiveness of porcelain is indicative of a certain level of affluence and, again, the likelihood of a woman's presence.

As with vessel glass, makers marks are very commonly found on the bases of earthenware and porcelain vessels and on the sides of stoneware vessels. These are either printed on or impressed into the vessel. Makers marks are very time diagnostic and occasionally can be dated to the month and year of manufacture. Because ceramic vessels were intended for long use, the date obtained from ceramics may indicate a slightly earlier date than is the actual case for a site. Ceramic dates should be considered as only one piece of information in the total artifact assemblage from a site when ascribing a date.

Cans

Cans come in a wide variety of shapes, sizes, and styles. Changes in can manufacturing technology in the late nineteenth century and early twentieth century make cans fairly good time indicators. The most commonly encountered cans are those which contained fresh foods. These can be broken down into three basic types: Hole-in-cap, hole-in-top, and sanitary (modern-style) cans.

Hole-in-cap cans are lead-sealed cans having a separate filler cap, soldered in place, with a pin hole vent covered with a spot of lead solder. These cans were manufactured at first entirely by hand and later by machine. The ends of the cans have flat lips that fit around the outside of the can sides. The connection is not interlocked in any way. One end of the can has a filler hole large enough for the contents of the can to enter. The filler hole was covered by a sheet metal disc soldered in place forming

a characteristic ring of lead. The filler cap has a pin hole which allowed steam to escape during processing. Once processing was completed, the pin hole was sealed with a spot of lead solder. The side seam of the cans was also covered with a line of solder. In general, cans from the early 1880s and before tend to have heavier amounts of solder on their side seams, less neatly applied, than later cans. Side seams began to be soldered by machine in the 1880s, resulting in more uniform and regular solder seams. Aberrations may be observed on hole-in-cap cans that may be noteworthy. On occasion, cans may be found that have the sides fitted around the ends. More frequently, cans with two vent holes and two lead spots on the filler caps may be observed.

Hole-in-cap cans were in production by the 1820s. A stamping machine for the manufacture of can ends was patented in 1847. Can ends began being soldered by machine in the mid-1870s and a machine for soldering side seams was introduced in 1883. Rectangular hole-in-cap cans for canned corned beef were introduced in 1875 (Rock 1984:102-103). Inventions for crimping the seams of cans, eliminating the need for solder, leading to the development of "sanitary" cans, began in 1888, but sanitary cans as we know them did not come onto the market until 1904. By 1911, sanitary cans had dominated the can market (Rock 1984:105-106). In general, hole-in-cap cans on a site indicate a date of occupation prior to 1914 and an absence of sanitary cans suggests a pre-1904 date. One exception should be noted. Large hole-in-cap bulk food cans provided by the U.S. government to Civilian Conservation Corps camps, and possibly for military use, have been noted dating to the 1930s.

Hole-in-top cans closely resemble hole-in-cap cans but do not have filler holes. The tops of these cans may be stamped with ridges that mimic filler holes, but lack the solder ring. They do have a pin hole vent sealed with a spot of lead. Hole-in-top cans were introduced in 1900 by Carnation for evaporated milk (Rock 1984:104). These cans were still in use until the early 1990s. Prior to the introduction of hole-in-top cans (by 1885), evaporated milk was canned in hole-in-cap cans.

Sanitary cans are the cans in use today. These were the result of innovations in seam crimping machinery. In 1897, machinery was developed that could crimp the can ends to the sides with a double seam sealed with a rubber compound. By 1904, sanitary cans were in full production, completely dominating the market by 1911.

Other Can Innovations of Note

During the late 1890s and early 1900s, many new innovations were attempted to modernize food cans. These innovations appear as cans with unusual attributes. For instance, some lead-sealed cans have been observed with crimped ends similar to sanitary cans with lead spots over vent holes similar to hole-in-top cans. Some hole-in-cap cans have been observed with lead spots over two vent holes through the filler caps.

Prince Albert tobacco tins appear to have been first manufactured in 1907 or 1908 (Rock 1989:166; Periodical Publishers Association 1934:74). They had a simple friction-type lid with a loose pin hinge. In 1948, the lid was changed to be more airtight. The edge of the can was doubled over and the lid was made with a U-shaped lip into which the can edge fit and ran the full length of the lid. This is the closure still used (Kirkpatrick and Duran 1981:53).

Round quart-sized motor oil cans were introduced in 1933 (Rock 1989:147).

Sardine cans: three-piece body – 1810-1880; one-piece body – 1880-1918; depressed lid – 1884-present; double seamed – 1918-present (Gillio et al. 1980:9)

Distribution of canned beer did not begin until 1935. Cone-top cans with crown cap finishes were used on a limited basis from 1935 to 1959 (Rock 1981:25). See Beer Can Table for additional information.

Soft drinks were not successfully canned until 1953 (Rock 1981:27).

Can Openings

The way in which food cans have been opened is an indication of what may have been inside. There appears to be a correlation of the size of the filler hole on hole-in-cap cans to the type of opening technique used. This is not surprising because both are related to the size of the items inside. The opening technique may indicate whether the food inside was liquid, solid, or composed of small or large pieces. Condensed milk cans tend to have two small punched holes or slits for pouring out the contents. Key-wind openings were first introduced in 1866, though they were not widely used. In 1895, the technology was refined for use on meat tins that incorporated a scored strip (Rock 1984:105; Gillio et al. 1980:9). This is the opening technique used until very recently on sardine and coffee cans. Geared rotary can openers were introduced in 1925 for use on sanitary cans. Church-key openers were introduced in 1935 (Gillio et al. 1980:9).

Marks on Cans

For the most part, food cans were identified with paper labels and others with painted labels that rarely survive in archaeological contexts. Certain can types, such as baking powder cans, coffee cans, and others, have embossing identifying their contents and/or manufacturer. It is frequently possible to look these up and refine the date of the artifact. An unusual example is KC Baking Powder cans that give a number of years that the product cost the same. The year of manufacture can be determined by adding the years to 1890. Later cans, such as hole-in-top and sanitary cans, occasionally have markings or codes which may prove to be informative and should be recorded. For instance, the "SANITARY" mark found on some early sanitary cans is probably the mark of the Sanitary Can Company, which began business in 1904 and was purchased by the American Can Company in 1908 (Rock 1989:65).

Plastic

Molded plastic screw caps began to be manufactured in quantity in 1927. Initially, they were used on high-priced toiletries and cosmetics and were black, dark red, or brown in color. New plastics enabled a wide variety of colors to be manufactured in a few years, as well as a wider variety of applications. With improvements in molding equipment, plastic screw caps could be produced at prices competitive with metal caps (Lief 1965:30).

Nails

Nails are the most frequently encountered hardware fasteners at historical archaeological sites. The basic identification of wire (round) and cut (square) nails and their relative frequencies to each other is an important dating tool.

Cut nails have a long history of manufacture. Both hand-made and machine-made cut nails were manufactured in the nineteenth century. Transition from cut nails to wire nails took place between the 1880s to the early 1900s. Wire nails began to be imported in small numbers to America in the 1850s, and the manufacture of wire nails in America began in 1873; large-scale production did not begin until the 1880s. Wire nails were initially most competitive with cut nails in the smaller, finer sizes. It has been estimated that by 1890, approximately 50% of the nails produced were wire nails. In 1894, 70% of the nails produced were wire nails; in 1900, 82% were wire nails; and in 1913, 95% were wire nails (Clark 1929:Vol. 2:351-355, Vol. 3:126; Buckles 1978). In general, if cut nails are found on a site, a date of 1900 or before can be presumed. The rate at which wire nails replaced cut nails may vary throughout the country depending upon the source of supply. In Colorado, it is common for sites as early as 1890 to have a nail assemblage dominated by wire nails. This seems to be because the Colorado Fuel & Iron

Company of Pueblo had the capability of producing wire nails by that time and had the ability to ship them by railroad by way of the Denver & Rio Grande Railway. The sphere of their marketing area is currently unknown, but probably covers all of Colorado and may have extended into northern New Mexico, western Kansas, and southern Wyoming.

Window Glass

Window glass is flat glass, usually light green in color, frequently with lines, air bubbles or other flaws in older examples. The presence of window glass usually indicates that a fairly substantial structure was present at that location. Often, no other physical evidence remains of a structure besides window glass and nails.

Cartridges

Cartridges can be categorized into three types: Pinfire, rimfire, and centerfire.

Pinfire cartridges are the oldest of the patent ignition type cartridges. The hammer of the gun struck a pin projecting from near the base of the cartridge engaging a primer that set off the enclosed load. These saw fairly wide use and were still advertised after 1900.

Rimfire cartridges were ignited by a blow to the base by the gun's firing pin or hammer. These cartridges were introduced in the 1850s and are still popular today.

Centerfire cartridges have a primer incorporated into their base which ignites the load when struck by the gun's firing pin. These cartridges were developed in the 1860s, but did not become generally available until 1873 with the introduction of the .45-70 Government cartridge. Centerfire cartridges are still in use today.

It is very important to record any markings on the base of cartridges. On occasion, cartridges may be found that have no markings. These should be collected so that they can be measured and identified. In general, cartridges with no markings are older varieties, possibly dating prior to the early 1880s. Centerfire cartridges are reusable. Original primers are brass, replacement primers are usually chrome. Reloaded cartridges may not be very good indicators of site age. Introduction of recent cartridges by hunters to an otherwise older site is not uncommon and should be expected and accounted for when considering the occupational history indicated by surface artifacts.

Some basic chronological information about marks on cartridges:

U.M.C. - Union Metallic Cartridge Co. before it merged with Remington in 1912.

Rem-UMC - Remington-Union Metallic Cartridge Co. after merger in 1912.

R-P - Remington-Peters after Peters Cartridge Co. was absorbed by du Pont and Remington in 1934.

W.R.A. Co. - Winchester Repeating Arms Company prior to 1934 when the mark was changed to simply W.R.A.

Military ammunition is marked with the month and year of manufacture as well as the manufacturer.

Other gun related items to look for are percussion caps and gun flints. Gun flints may be mistaken for prehistoric lithic material but has a characteristic square shape. Bullets and gun parts are also found on occasion.

Other Artifacts

Buttons and Fasteners - Buttons and other clothing fasteners are commonly found on historical archaeological sites. Describe buttons by how they are attached to clothing and the material they are made of. Common shirt buttons should be described as two or four-hole sew-through buttons. What are usually thought to be white milkglass buttons are in reality Prosser ceramic. On occasion, the backs of buttons will have the name of the manufacturer or other information. Metal buttons similar to those on Levi's frequently have product names stamped or embossed on them. These are generally from overalls or other work clothes. Overall and suspender buckles are generally made of wire, sometimes partly covered with sheet metal. Old catalogs of clothing are very helpful in their identification.

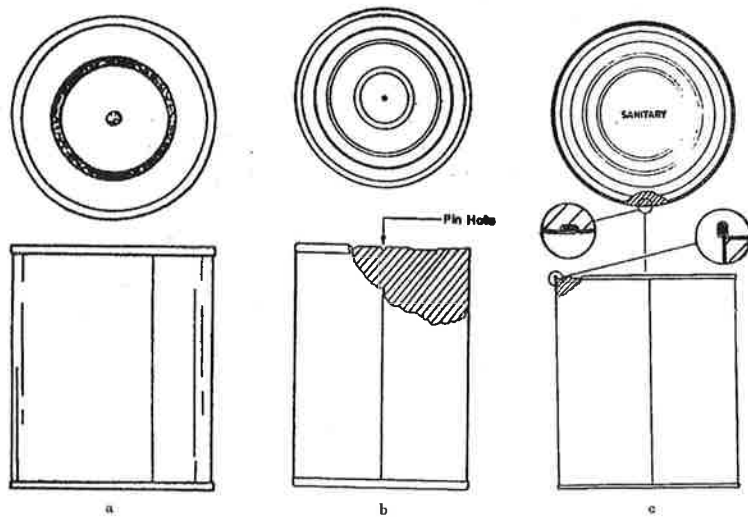
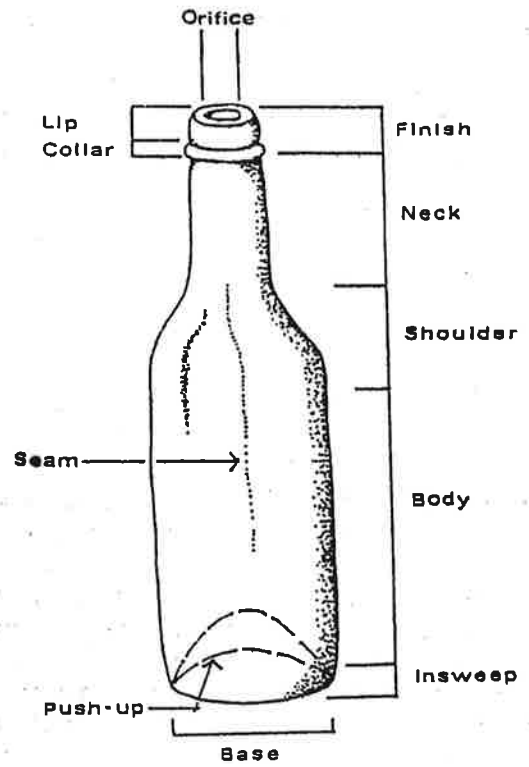
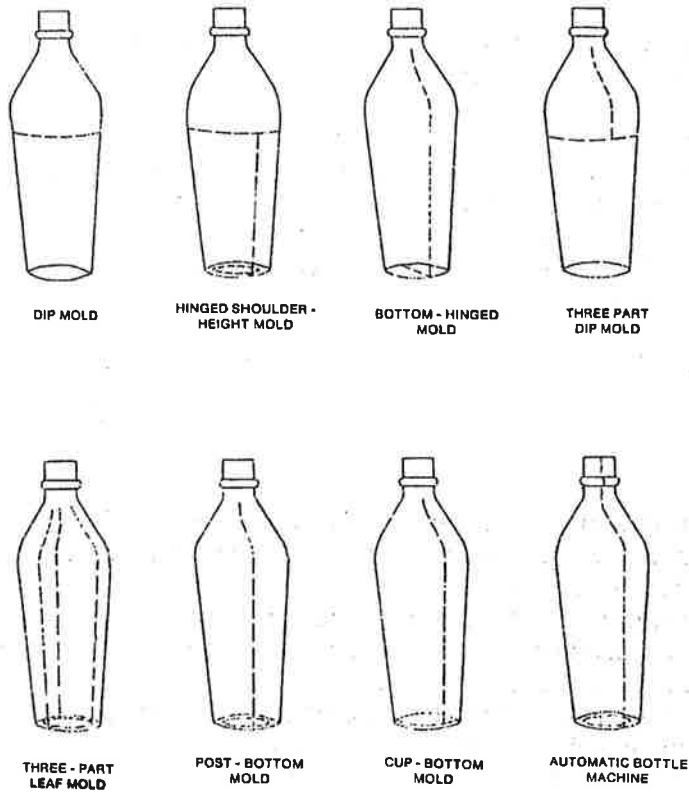
Beads - Beads are found at both historic and post-contact aboriginal sites. Beads should be described by how they were made - drawn or spun (wound), by color, and any other manufacturing attributes they might possess such as grinding, etching, engraving, enameling, or painting. Bead styles can be somewhat time sensitive.

Wire Products - Wire products such as barbed wire, baling wire, and wire rope became widespread after the development of the Bessemer steel manufacturing process in 1876. Prior to the Bessemer process, wire could not be made into long strands of consistent strength and quality. The ability to make long lengths of good quality wire enabled a large number of products to be produced. One of the most frequently encountered products is barbed wire. The number of types of barbed wire manufactured is astounding. The varieties are very well documented, however, and patent dates ascertained if good descriptions are made in the field. Baling wire also became quite prevalent. Early baling machines required hand tying off of the ends of wire around a bale of hay. To facilitate this, a variety of bale ties with distinctive pre-made loop ends were marketed. How long these were available is not known, but they were certainly in use through the 1890s. Wire rope (commonly referred to as "cable") consists of numerous strands of wire braided or twisted into a single unit, sometimes around a core of hemp rope. Wire rope replaced natural fiber rope for use with machinery, especially with the expansion of use of steam power in the late 1880s and 1890s. Consequently, when wire rope is found on a site, it can be presumed that some sort of motive power was in use there.

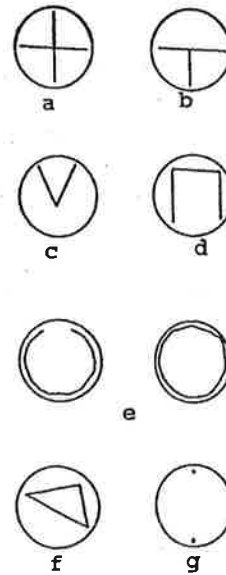
Animal Shoes - Horse, mule, and oxen shoes are easy to identify. When examining them, however, be sure to note any modifications, especially of horseshoes. Such modifications may indicate use for work or pleasure, orthopedic problems the animal may have had, and use in icy, snowy, or muddy conditions - indicating seasonality.

Stove Parts - Very little information is currently available about stove manufacturers. However, stove parts are usually well marked with casting marks, the name of the stove and its manufacturer, and decorations. Frequently these marks can be identified or interpreted. For instance, some marks may indicate the size of the burner plates and oven. Certain parts may indicate whether a stove was intended to burn coal or wood. It may also be possible to tell if a stove was a cook stove or heating stove. Even when pieces of an actual stove are not present, pieces of stove pipe may reveal that one was there and where it was located. Ash and coal cinders are other indicators.

Hardware - Hardware is a very diverse artifact category that must be handled on an item by item basis. Artifacts in this category include all sorts of tools, equipment, and fasteners. Frequently pieces of a larger item are found which cannot be identified from what is left. Sometimes a single item will be very informative. The best that can be done is to describe hardware artifacts as well as possible. If the function of an item is unknown to you, photograph or draw it. It is usually possible to tell if something is hand or machine made. On machine made items, look for casting marks. These will usually be numbers but occasionally are manufacturer's marks, patent dates, or names.



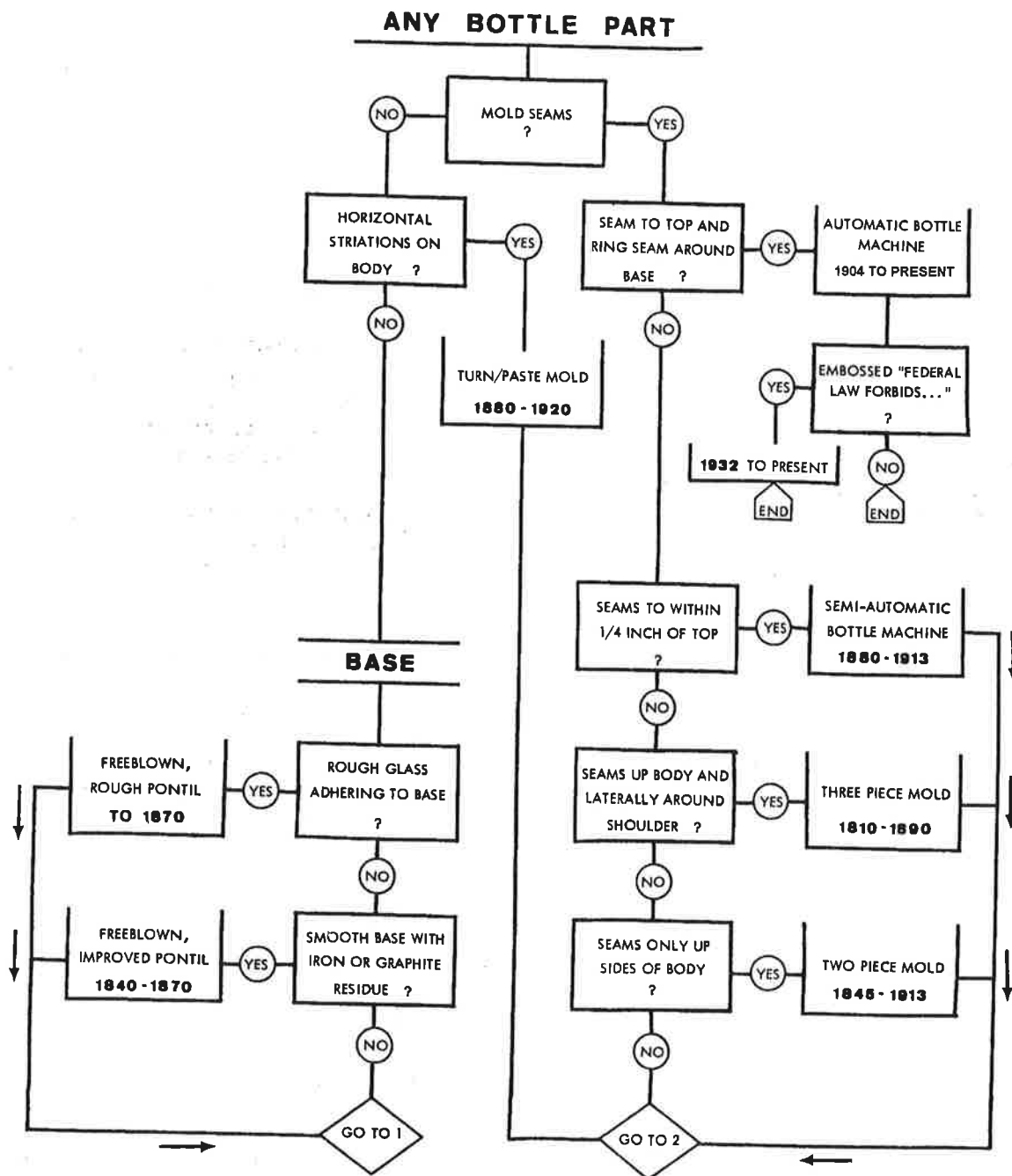
Can Types. a, hole-in-cap; b, hole-in-top; and c, sanitary (modern style).



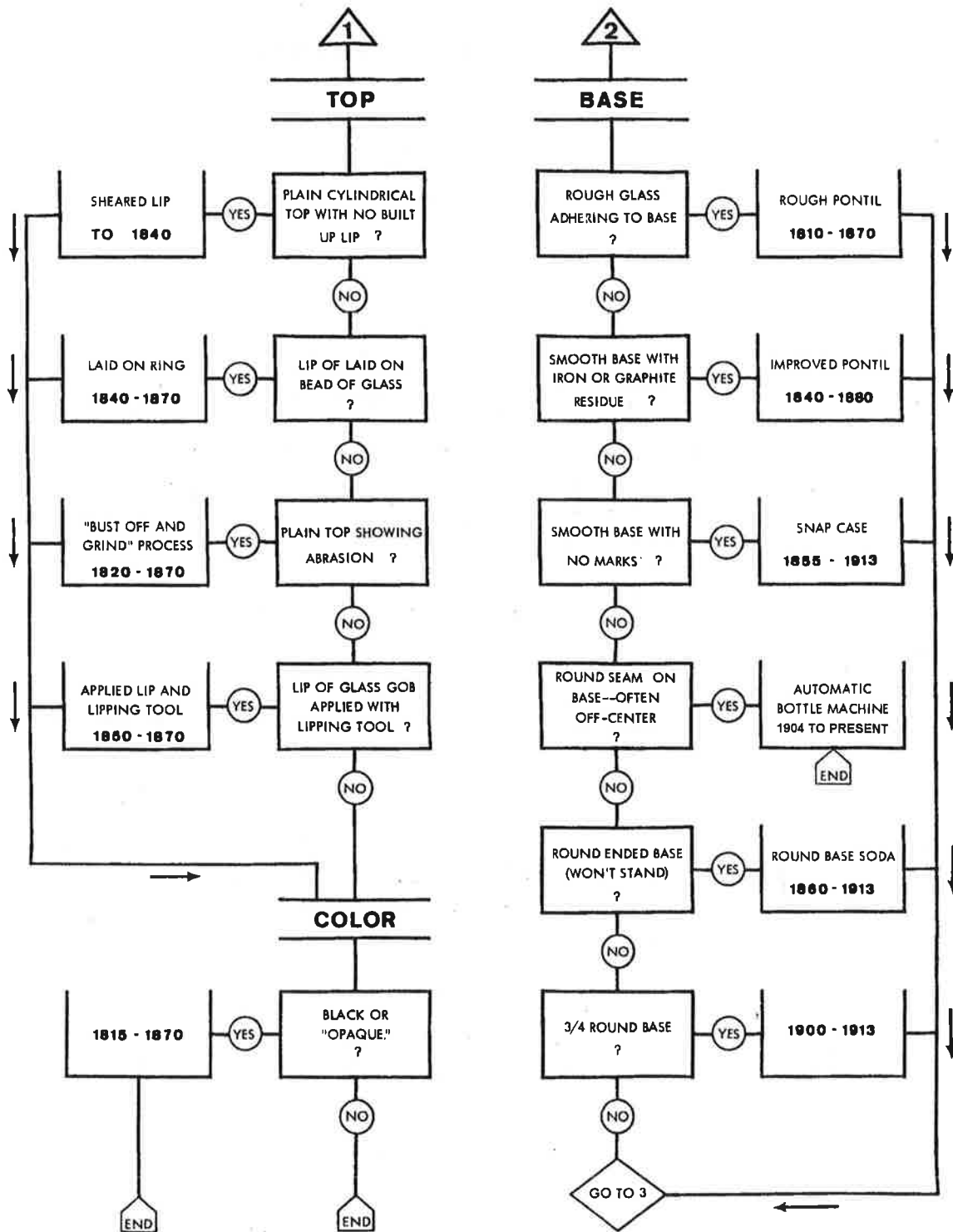
Can Opening Styles. a, X-cut; b, T-cut; c, V-cut; d, square cut; e, cut all around; f, irregular opening; and g, two punched holes.

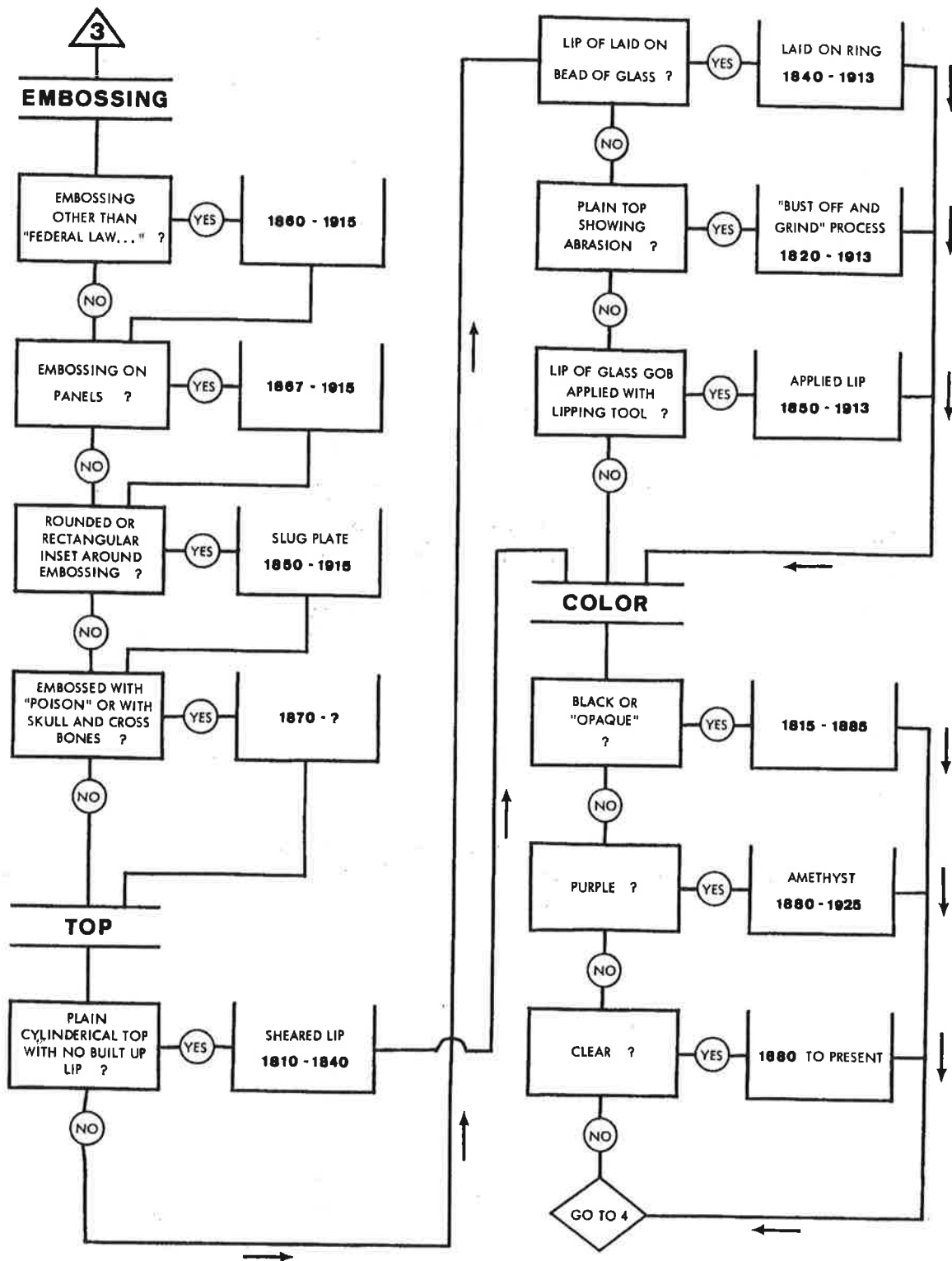
Bottle seams indicative of mold type, bottle nomenclature, can types, and can opening styles.

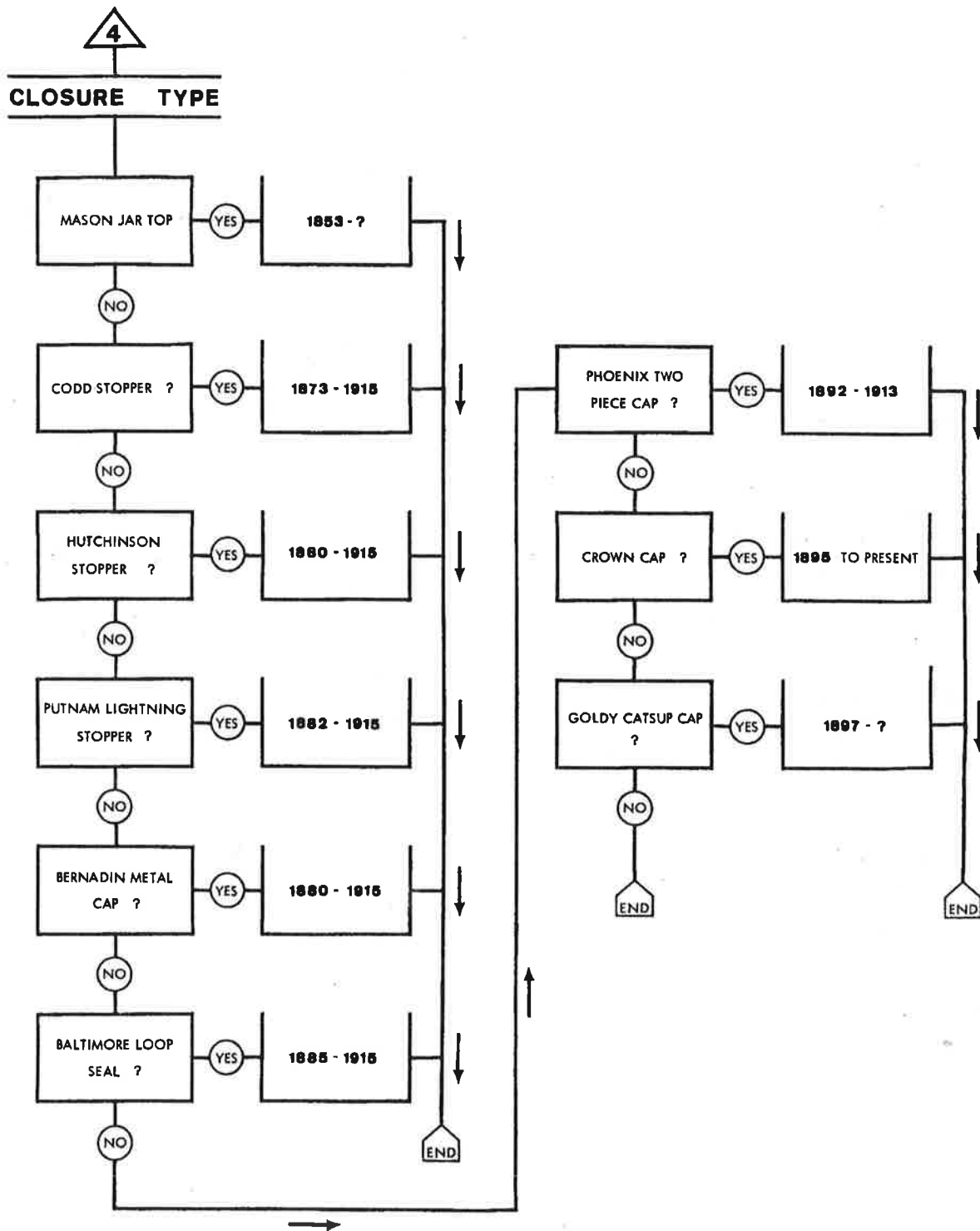
DATING KEY FOR POST 18th CENTURY BOTTLES

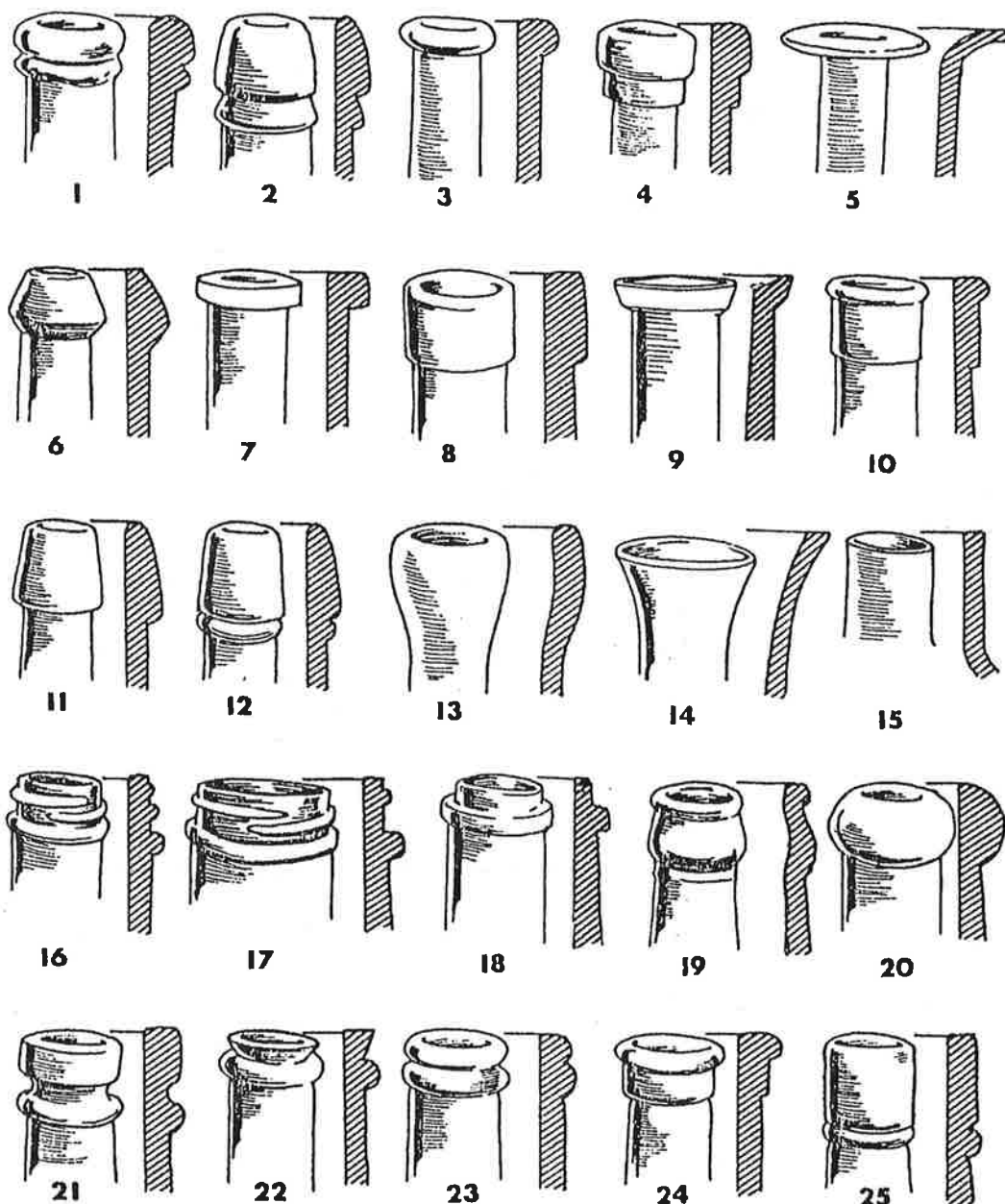


Dating key for bottles from D. Stell Newman, 1970, A Dating Key for Post-Eighteenth Century Bottles. *Historical Archaeology* 4:72-75.







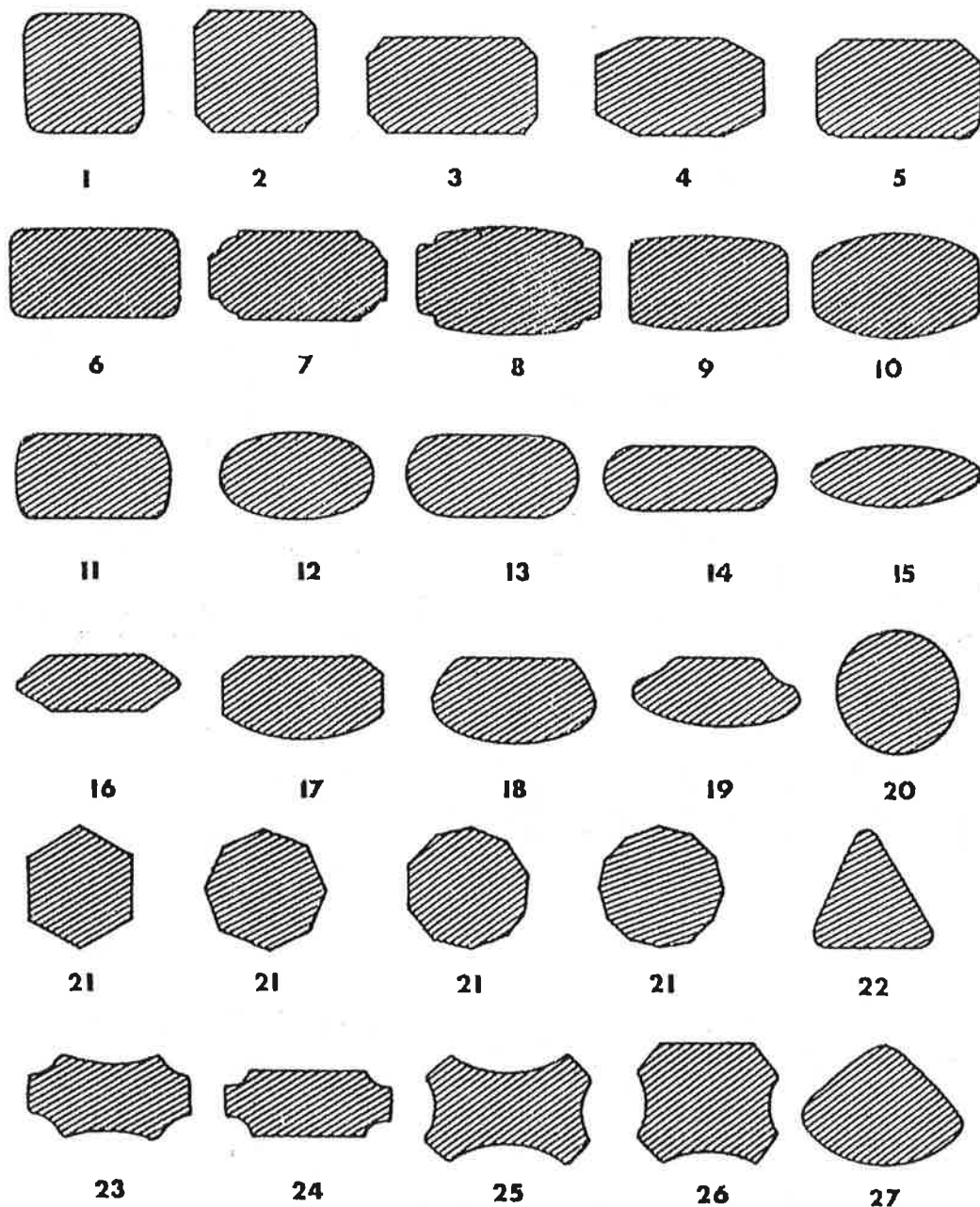


NECK FINISHES: 1 DOUBLE RING; 2 DOUBLE OIL OR MINERAL; 3 BEAD; 4 STOVE PIPE; 5 WIDE PRESCRIPTION; 6 SHEARED RING (OCCASIONALLY GROUND); 7 FLAT OR PATENT; 8 ENGLISH RING, DEEP LIP OR PACKER; 9 PRESCRIPTION; 10 REINFORCED EXTRACT; 11 RING OR OIL; 12 WINE OR BRANDY; 13 GLOBULAR FLARE; 14 FLARE OR TRUMPET; 15 SHEARED OR BLOW OVER (USUALLY GROUND); 16 SMALL MOUTH EXTERNAL THREAD; 17 WIDE MOUTH EXTERNAL THREAD; 18 CHAMPAGNE; 19 CROWN; 20 BLOB; 21 GROOVED RING; 22 FLARED RING; 23 STACKED RING; 24 COLLARED RING; 25 STRAIGHT BRANDY OR WINE (1911, Cumberland Glass Co. Catalog; Dominion Glass Co. Catalog, n.d.; James, 1967 (1902, Whitall Tatum Glass Co. Catalog Reprint); Lohman, 1972 (1904, Whitney Glass Co. Catalog Reprint); Putnam, 1965 (1911, Illinois Glass Co. Catalog Reprint); 1880 Whitall Tatum Glass Co. Catalog).

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Bottle neck finishes from: Fike, Richard E.

1987 *The Bottle Book: A Comprehensive Guide to Historic, Embossed Medicine Bottles.*
Peregrine Smith Books, Salt Lake City.



BASE PROFILES: 1 HOPKINS SQUARE; 2 FRENCH SQUARE; 3 BLAKE (VARIANT 1); 4 BLAKE (VARIANT 2); 5 BEVELED IDEAL; 6 EXCELSIOR, WINDSOR OVAL OR ROUND CORNERED BLAKE; 7 OBLONG PRESCRIPTION; 8 UNION OVAL; 9 CROWN OVAL; 10 SALAMANDER OVAL; 11 MONARCH OR ERIE OVAL; 12 PLAIN OVAL; 13 ELIXIR OR HANDY; 14 SLENDER HANDY; 15 OVAL; 16 IRREGULAR POLYGON; 17 HUB OR GOLDEN GATE OVAL; 18 BUFFALO OR PHILADELPHIA OVAL; 19 CLAMSHELL; 20 ROUND; 21 POLYGON; 22 TRIANGLE; 23 FLUTED OBLONG (VARIANT 1); 24 FLUTED OBLONG (VARIANT 2); 25 CONCAVE; 26 FLUTED SQUARE; 27 SPHERICAL TRIANGLE (Berge, 1980; *Dominion Glass Co. Catalog, n.d.*; James, 1967 (1902, *Whitall Tatum Glass Co. Catalog Reprint*); Putnam, 1965 (1911, *Illinois Glass Co. Catalog Reprint*); 1907, *Peter Van Schaack & Sons Drug Catalog*).

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Bottle base shapes from: Fike, Richard E.

1987 *The Bottle Book: A Comprehensive Guide to Historic, Embossed Medicine Bottles.*
Peregrine Smith Books, Salt Lake City.

CHRONOLOGY OF STYLISTIC DEVELOPMENT OF THE BEER CAN

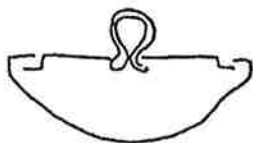
<u>Date</u>	<u>Feature Introduced</u>
1980s	-UPC computer codes standard feature on all cans. -Multiple neck-in chimes present on cans produced in the early years of the decade. -Single, longer neck-in chimes prevalent during latter years of the decade.
1989	-Government alcohol warning labels introduced.
1984	-Straight-sided steel cans cease production.
1983	-Production of ring-pull cans ceases.
1970s	-Production of 11-oz., 15-oz., and gallon cans ceases. -UPC computer codes introduced.
1977	-Coors phases out push-button cans.
1975	-American Can Company begins producing push-button cans.
1974-1979	-Cans issued commemorating the U.S. bicentennial.
1972	-Oregon bans the use of ring-pull cans. Push-button can openings introduced by Coors. -Cans with specialized shapes first marketed.
1967	-Tin-free steel (TFS) cans introduced.
1966	-Welded-seam cans introduced.
1965	-"Neck-in chime" cans (lid smaller than can body) introduced.
1964	-First "ring-pull" can marketed. -Continental Can's "U-tab" design introduced. -Tab-tops with "smile" beads introduced. -Gallon cans introduced.
1963	-In January, Schlitz becomes first national brewer to use tab-top cans. By August, 65 brands are available in this design. -First 12-oz. all-aluminum can issued. -Plastic six-pack holder (yoke) introduced.
1962	-First self-opening can ("snap-top" or "tab-top") introduced by Pittsburgh Brewing Company.
1960	-Cones completely phased out by this time.
1950s	-Crowntainers phased out by mid-decade. -Cones largely phased out by mid-decade. -Odd-size cans marketed include 7-, 8-, 10-, 11-, 14-, and 15-oz. sizes. -Aluminum lids used on steel-bodied cans. These are often described on can labels as "soft-tops." -Pastels and metallic colors become common features of can labels.
1959	-Coors markets 7-oz. all-aluminum can.
1958	-Primo markets 11-oz. paper-labeled, all-aluminum can.
1954	-Schlitz markets the first 16-oz. punch-top can.
1950	-"Internal Revenue Tax Paid" marking removed from can (and bottle) labels, March 30.
1942-1947	-Domestic canned beer production ceased due to World War II. Over 18 million cans of beer produced for military use. -Military beer cans are silver or olive drab in color. -Military cans are not marked "Internal Revenue Tax Paid" but, rather, "Withdrawn Free of Tax for Exportation."
1940	-J-spout cans phased out of production.
1930s	-Introduction of crowntainer, which replaces the J spout. -Most cans feature heavy paint and lacquer, resulting in good label preservation. -The word "beer" is usually as prominent as the brand name, owing to the novelty of having beer in cans. -Opening instructions, usually with illustrations, are included as part of the label (usually near the seam).
1937	-Contents are often described as "contains 12 fluid ounces-same as a bottle." -Cones produced after this date have concave bottoms and long cones ("high-profile"). -J-spout cans introduced.
1935	-Quart-size cones introduced in July. -First can marketed on January 24 in Richmond, Virginia. Eighteen breweries are canning beer by end of year. -Beginning June 28, all cans produced are marked "Internal Revenue Tax Paid." -Cone-top cans first marketed in September. These have flat bottoms and short cones ("low-profile").

Note. It is often difficult (if not impossible) to document the dates when various features are eliminated or removed from use, due primarily to the fact that old stock is frequently utilized after changes have been made. The presence of multiple suppliers (and in some cases, brewery locations) will also result in the simultaneous usage of different styles of cans (i.e., a single brewing company may produce aluminum and crimped-steel cans in different plants).

From: Maxwell, D. B. S.

1993 Beer Cans: A Guide for the Archaeologist. *Historical Archaeology* 27(1):95-113.

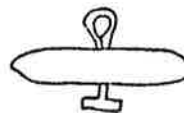
BUTTON TYPES



Sanders Shank



Key Shank (glass)
(ca. 1800)



Pinhead Shank
(ca. 1800)



Loop Shank



Loop Shank



Loop Shank



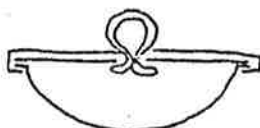
Omega Shank



Alpha Shank



Rosette Shank



Staff Shank
(1832-1902)



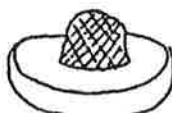
Cone Shank
(1700s-1800s)



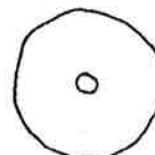
Box Shank (4 holes)
(1800s-1900s)



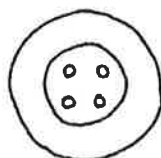
Cut-out Shank (1900s)



Flexible Shank



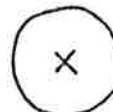
Whistle (ceramic)
(ca. 1875)



Sew-Through (2-5 holes)



Self Shank (1 piece)
(ca. 1850)

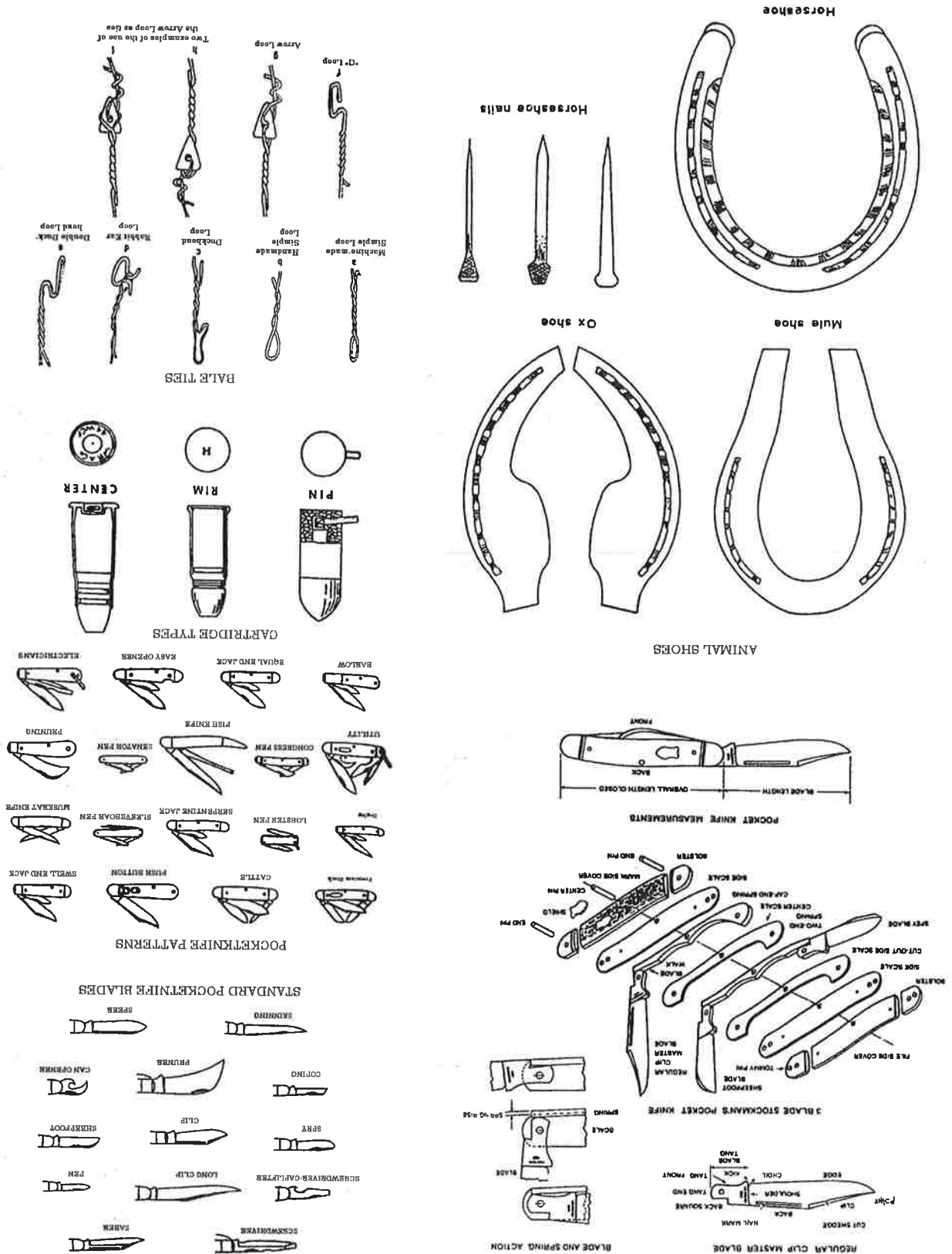


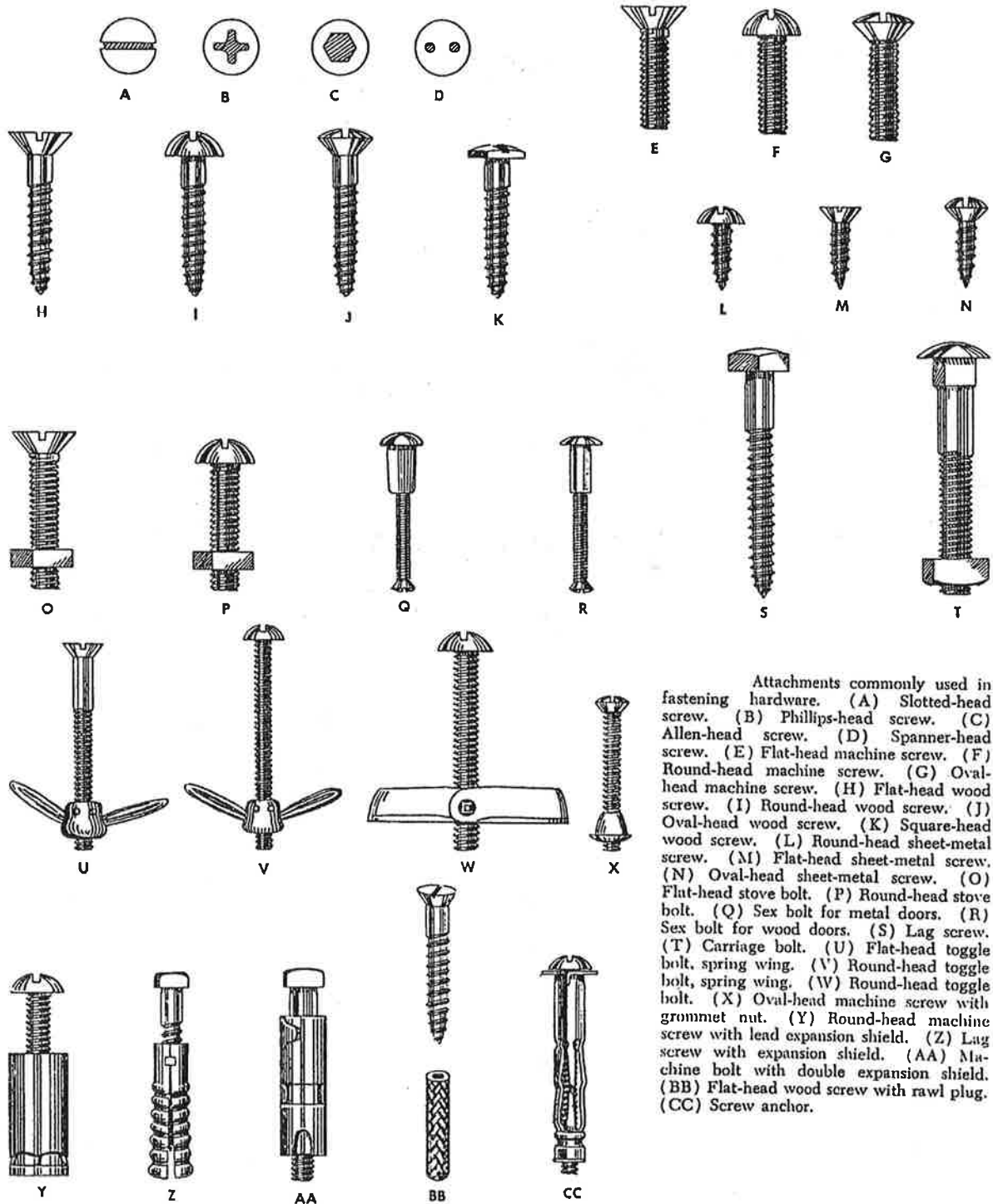
Thread Back
(1820-1900)



Wedge Shank (ca. 1700s)

Pocketknives, animal shoes, cartridge types, and bale ties.

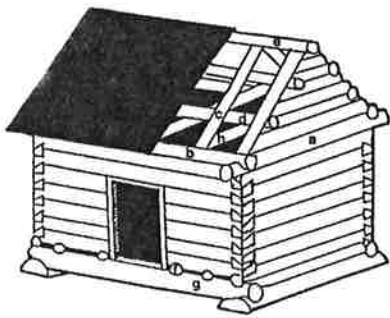




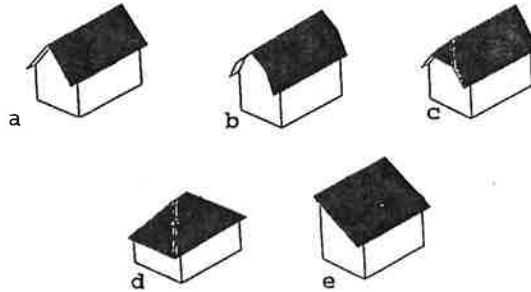
Attachments commonly used in fastening hardware. (A) Slotted-head screw. (B) Phillips-head screw. (C) Allen-head screw. (D) Spanner-head screw. (E) Flat-head machine screw. (F) Round-head machine screw. (G) Oval-head machine screw. (H) Flat-head wood screw. (I) Round-head wood screw. (J) Oval-head wood screw. (K) Square-head wood screw. (L) Round-head sheet-metal screw. (M) Flat-head sheet-metal screw. (N) Oval-head sheet-metal screw. (O) Flat-head stove bolt. (P) Round-head stove bolt. (Q) Sex bolt for metal doors. (R) Sex bolt for wood doors. (S) Lag screw. (T) Carriage bolt. (U) Flat-head toggle bolt, spring wing. (V) Round-head toggle bolt, spring wing. (W) Round-head toggle bolt. (X) Oval-head machine screw with grommet nut. (Y) Round-head machine screw with lead expansion shield. (Z) Lag screw with expansion shield. (AA) Machine bolt with double expansion shield. (BB) Flat-head wood screw with rawl plug. (CC) Screw anchor.

Screw nomenclature from: Brownell, Adon H.

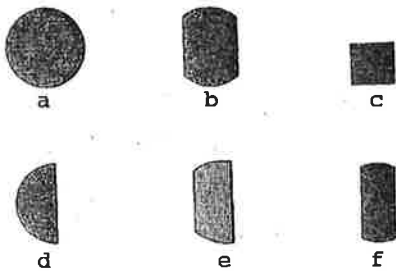
n.d. *Hardware Age Builders' Hardware Handbook*. Chilton Company - Book Division, Publishers, Philadelphia.



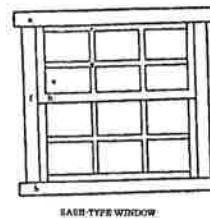
Structural Terminology. a, eave beam; b, plate log; c, rafter; d, purlin; e, ridgepole; f, joist; g, sill log; and h, tie beam.



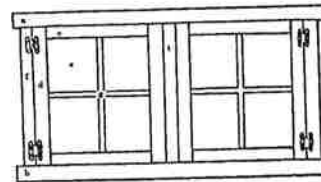
Roof Styles. a, gable roof; b, gambrel roof; c, hip on gable roof; d, hip roof; and e, shed roof.



Log Shapes. a, round; b, round hewn; c, square hewn; d, half log; e, hewn half log; and f, planked.

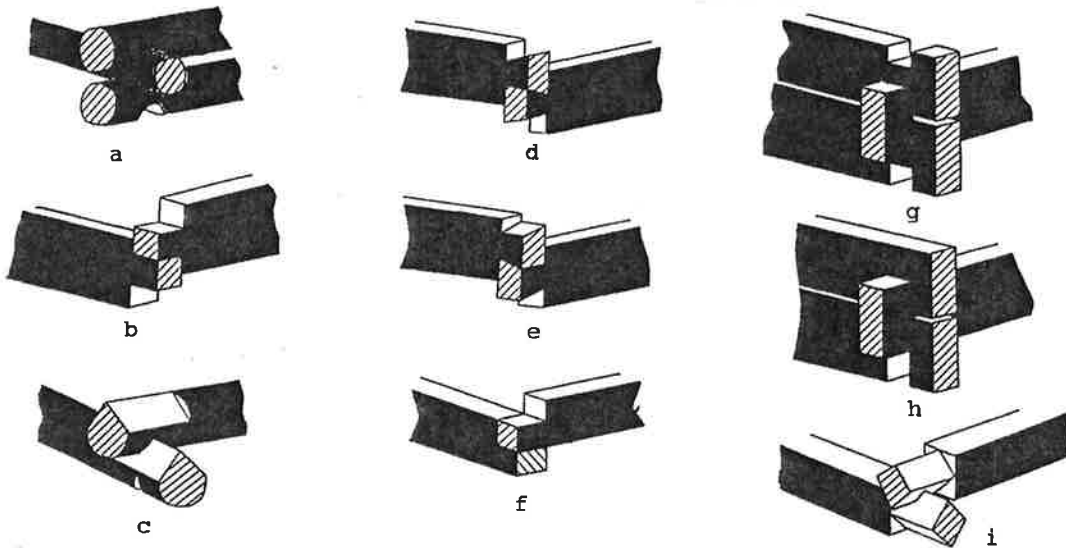


SASH-TYPE WINDOW



CASEMENT-TYPE WINDOW

Window Terminology. a, head; b, sill; c, rails; d, stiles; e, lights or panes; f, jambs; g, mullins; h, meeting rails; and i, mullion.

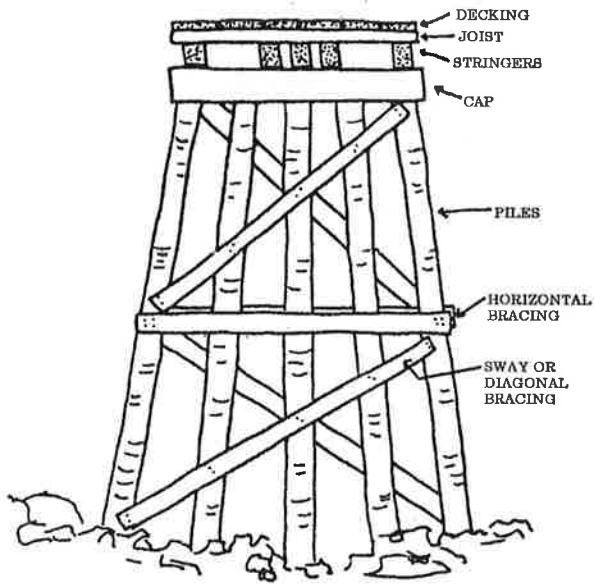


Log Notching Styles. a, saddle; b, square; c, V-notch; d, full dovetail; e, half dovetail; f, half notch; g, double lock; h, single lock; and i, diamond notch.

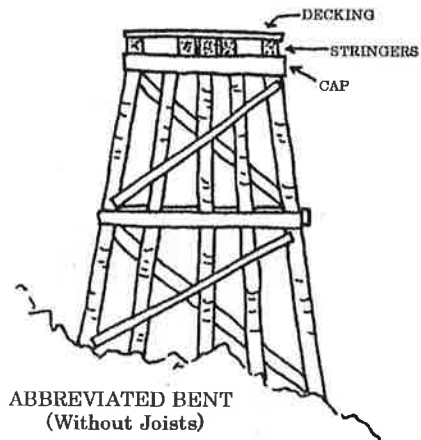
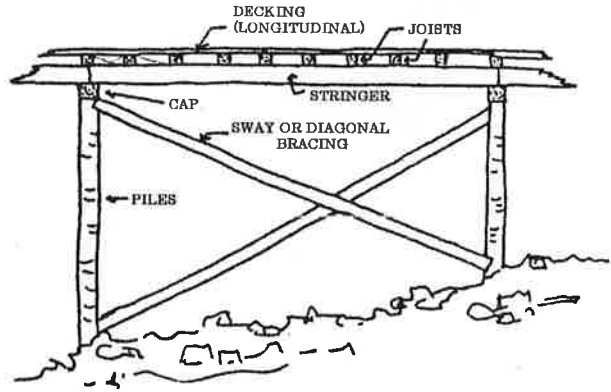
Cabin and architectural information adapted from: Wilson, Mary
1984 *Log Cabin Studies, the Rocky Mountain Cabin, Log Cabin Technology and Typology and Log Cabin Bibliography.* U.S. Forest Service, Intermountain Region, Cultural Resource Report No. 9.

TRESTLES

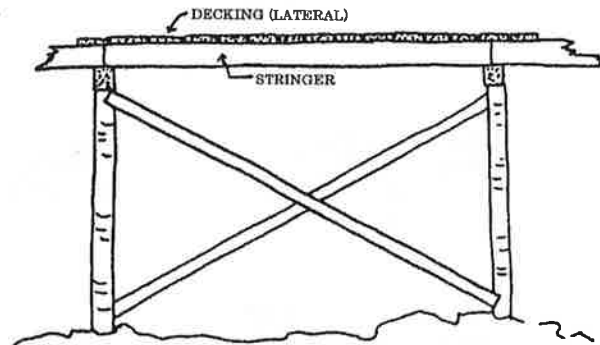
STANDARD PILE BENT



SPAN OF TWO STANDARD BENTS
(SIDE VIEW)



ABBREVIATED BENT
(Without Joists)



SPAN OF TWO ABBREVIATED BENTS
(Side View)

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