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1.0 INTRODUCTION AND REGULATORY FRAMEWORK

The Santa Barbara Museum of Natural History's proposed Master Plan project was the focus of a Phase 2 Historic Structures/Sites Report prepared by Post/Hazeltine Associates in April of 2014. The Phase 2 report was reviewed and accepted by the City of Santa Barbara Historic Landmarks Commission (HLC) in 2014. Conceptual plans for the Phase 1 component of the Museum's approved Master Plan were reviewed by Post/Hazeltine Associates in a letter report dated January 14, 2016 that was included in the package of material that accompanied the revised plan set reviewed by the HLC on January 27, 2016. This Letter Report Addendum evaluates revised final plans for exterior lighting for Phase 1 of the Santa Barbara Museum of Natural History Master Plan (see Appendix A for plans).

The California Environmental Quality Act (CEQA) requires analysis of impacts that may result from project development, including impacts to historic resources. The report follows the guidelines for Historic Cultural Resource Studies set forth in the General Plan of the City of Santa Barbara, as well as State and Federal guidelines pertaining to the assessment of impacts to historic resources. These include the State CEQA Guidelines, specifically Section 15064.5, Determining the Significance of Impacts to Archaeological and Historical Resources, as well as the CEQA guidelines outlined in the City of Santa Barbara Master Environmental Assessment. The Phase 2 Historic Structures/Sites Letter Report Addendum includes the following:

1) A revised lighting plan addressing HLC comments made on January, 27, 2016 has been prepared.

This assessment is an addendum to the 2014 Phase 2 HSSR, which determined that the proposed project would have a Less than Significant (Class III) impact to significant historic resources. This Letter Report Addendum has determined that the final plans evaluated in this document for selected elements of the project are consistent with the original finding of "no impact" (Less than Significant impact) in the Phase 2 HSSR and the subsequent Notice of Exemption for the SBMNH Master Plan. Pamela Post, Ph.D., principal investigator and senior historian, and Timothy Hazeltine prepared this report.

2.0 EXECUTIVE SUMMARY AND PROJECT DESCRIPTION

The final plans for Phase 1 of the Santa Barbara Museum of Natural History Master Plan are consistent with the guidance set forth in the 2014 Phase 2 Historic Structures/Sites Report reviewed and accepted by the HLC. These potential impacts are evaluated in Section 6 of

this report. Each impact under consideration is identified according to its level of significance as described below:

- Beneficial Effect (Class IV): An impact that would result in beneficial changes to the environment.
- Less than Significant Impact (Class III): An impact that may be adverse but does not exceed threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- Significant but Mitigable Impact (Class II): An impact that exceeds a threshold of significance but can be reduced to below the threshold level given reasonable available and feasible mitigation measures. Such an impact requires findings to be made under §15091 of the State CEQA Guidelines.
- Unavoidably Significant Impact (Class I): An impact that exceeds a threshold of significance and cannot be reduced to below the threshold level, given reasonably available and feasible mitigation measures. Such impact requires a Statement of Overriding Considerations to be issued if the project is approved (per §15093 of the State CEQA Guidelines).

This Letter Report finds that the proposed lighting plan for Phase 1 of the project enumerated below in Section 3.0 would not result in substantial impacts to significant historic resources including the significant cultural landscape.

3.0 PREVIOUS STUDIES

In 1981, the City of Santa Barbara designated a portion of the Main Museum Complex of the Santa Barbara Museum of Natural History, the Museum's Fleischmann Auditorium and the stone wall built for the former Hazard estate as a City of Santa Barbara Structure of Merit (see Appendix B). None of the other buildings or features on the Museum campus or non-institutional buildings or features owned by the Museum is a designated City of Santa Barbara Landmark or Structure of Merit, nor is any listed in the City of Santa Barbara Potential Historic Structures/Sites List. None of the buildings or features on the Museum's campus or non-institutional buildings owned by the Museum are listed in the California Register of Historical Resources or on the National Register of Historic Places. In 2009, the MacVeagh House and cottage were determined eligible for listing as a City of Santa Barbara Landmark, as well as for listing in the California Register of Historical Resources and the National Register of Historic Places (the cottage was found not eligible for designation on an individual level, but was eligible for listings as a contributor to the setting of MacVeagh House) (Post/Hazeltine Associates 2009). In 2011, the property at 653 Mission Canyon Road (owned by the Museum this is the former Herman H. Eddy House, which is now the Director's House) was evaluated by Post/Hazeltine Associates; this parcel is not within the current project area. The report determined that the house was eligible for designation as a City of Santa Barbara Landmark, as well as for listing in the California Register of Historical Resources and the National Register of Historic Places (Post/Hazeltine Associates 2011).

In 2011, a Phase 1 Historic Structures/Sites Report (HSSR) was prepared by Post/Hazeltine Associates for the following parcels owned by the Museum which are within the current project area: APN 23-250-039, APN 23-250-056, APN 250-066, APN 23-250-068, APN 23-271-003

and APN 23-271-004 (Post/Hazeltine Associates 2011). A number of other parcels located on the north side of Puesta Del Sol were evaluated in 2011 but are not located within the boundaries of the current project area. The methodology for determining whether potential historic resources met the eligibility requirements for listing as historic resources under City, State and Federal eligibility criteria was based on archival research to determine the historic context of the properties within the project area, as well as on-site evaluation of the physical and visual integrity of each building, structure, feature and landscape component. The Phase 1 HSSR was reviewed and accepted by the Historic Landmarks Commission (HLC) on August 11, 2011. A Phase 2 HSSR prepared by Post Hazeltine Associates was reviewed and accepted by the HLC in 2014. As noted above, elements of the final plan for Phase 1 of the Santa Barbara Museum of Natural History Master Plan were reviewed by the HLC on January 27, 2016. This letter provides an evaluation of revisions and refinements intended to address HLC comments made to the preliminary lighting plan during a January 27, 2016 review of final plans for the project.

4.0 SITE DESCRIPTION

The following provides a brief description of existing improvements in the vicinity of the proposed lighting improvements that are part of Phase 1 of the Santa Barbara Museum of Natural History's approved Conditional Use Permit (CUP).

4.1 Collections and Research Center

Located to the west of the Main Museum complex, the Collections and Research Center (CRC) is composed of two distinct elements, a one-story building designed in 1962 by the architectural firm of Arendt, Moser and Grant and a large, two-story addition designed by the firm of Edwards-Pitman in 1989. Originally, the one-story, reinforced concrete block building was built to accommodate the zoology department. In 1989, the building underwent a major expansion to create the Collections and Research Center to house the Museum's vertebrate zoology, invertebrate zoology and anthropology departments. The addition's architectural scheme drew its stylistic references from the Spanish Colonial Revival style of the Museum's prewar buildings, including the use of arcades, tiled roofs and multi-light windows. The Phase 1 HSSR determined that the Collections and Research Center is not a significant resource for the purposes of environmental review.

4.2 The Buildings at 2565 Puesta del Sol (MacVeagh House and Cottage)

MacVeagh House

The MacVeagh House, located to the west of the Museum's Collections and Research Center, is a wood-framed house clad in a combination of vertical board siding, shiplap siding and wood shingles. The house's complex footprint is composed of four distinct elements surrounding a courtyard. A Phase 1-2 HSSR prepared in 2011 determined MacVeagh House is a significant historic resource for the purpose of environmental review (Post/Hazeltine Associates 2011). MacVeagh House is a contributor to the surrounding significant cultural landscape.

The Cottage Associated with the MacVeagh House

The cottage associated with the MacVeagh House is a one-story, wood-framed house set on a raised foundation. Its exterior is clad in narrow, horizontal tongue-and-groove siding. Fenestration is composed of rectangular, wood-framed sash windows of varying dimension. The cottage is capped by a hipped roof covered in composition shingles. The wood-paneled front door is located on the east elevation. Small additions, capped by shed roofs, are located on the north and west elevations. A Phase 1-2 HSSR prepared in 2011 determined MacVeagh Cottage is a significant historic resource for the purpose of environmental review (Post/Hazeltine Associates 2011). MacVeagh Cottage is a contributor to the surrounding significant cultural landscape. The existing lighting fixture is less than 30 years of age and is not a historic feature of the building.

4.3 Main Museum Building and Fleischmann Auditorium

Built in phases between 1922 and the early 1960s, the Spanish Colonial Revival style building is composed of the original 1922 wing constructed around an arcaded courtyard, which is flanked on its east the former Botany Hall constructed in 1927, the Mammal Hall built in 1927 and the Dennis Power Bird Hall built in 1961. On its west side the 1922 wing is flanked by Gould Hall (1926) which is linked to Fleischmann Auditorium (1937) by a loggia. The elevation facing Puesta del Sol is characterized by one-story stucco clad volumes capped by flat, side and front gable roofs, most covered in c-shaped terra cotta tiles. Massing is picturesque with each hall forming a component of a series of projecting and recessed volumes linked by arcades and corridors which are united by common design vocabulary of stuccoed walls, wood frame windows, tiled roofs and a restrained use of wrought-iron gates, grilles and lighting. Historic lighting fixtures include the following 1) the metal and glass fixtures flanking the main entrance; 2) wrought iron fixtures in the corridor and courtyard of the Main Museum Building; 3) the owl lantern at the main entrance through the Hazard Estate wall; and 4) lantern at the north end of the Fleischmann Auditorium loggia.

4.4 Cultural Landscape

The Phase I HSSR identified a potential significant cultural landscape at the south end of Mission Canyon; its contributing resources are listed below. The significance of this landscape is derived from its concentration of natural features and vegetation and its inventory of significant historic resources dating from the late 18th century through the late 1930s, which range from Mission Santa Barbara and its waterworks to the Santa Barbara Museum of Natural History. Within the project area the streetscape along the 2500 block of Puesta del Sol is a significant contributor to the cultural landscape.

Contributors:

1) Natural Systems and Features:
a) Mission Creek;
b) Steep slope south of Mission Creek (most of which is not on SBMNH property);
c) Overall pattern of sandstone outcrops.

2) Spatial Organization and Existing Patterns of Land Use:
a) Overall pattern of native vegetation, especially oaks and sycamores, which represents, primarily, a regenerated woodland. This is mixed with non-native vegetation;
b) Semi-rural pattern of vegetation interspersed with residential and institutional buildings.

3) Circulation:
a) The existing circulation pattern of paved streets and the lack of paved sidewalks, especially around the residences on Mission Canyon Road and Puesta del Sol.

4) Structures and Features (not on Museum-owned parcels):
a) Garden Street Academy (former Saint Anthony's Seminary);
b) Mission Santa Barbara and its waterworks;
c) Order of the Holy Cross (former St. Mary's Retreat House);
d) Stone Bridge;
e) The house and wall at 609 Mission Canyon Road;
f) Wall on Mission Canyon Road: A cut sandstone wall extending from the north end of the stone bridge to the intersection of Mission Canyon Road and Puesta del Sol;
g) Rocky Nook Park;
h) Oliver Memorial Trough (northeast corner of the intersection of Mountain Drive and Mission Canyon Road);
i) The Santa Barbara Women's Club (670 Mission Canyon Road);
j) Santa Barbara Museum of Natural History property, overall landscape;
k) Santa Barbara Museum of Natural History (elements determined to be significant historic resources listed in Table 1);
l) Stone walls (former Hazard Estate) built sometime after 1898 that define the south side of the 2500 block of Puesta del Sol. A less substantial stone wall partially surrounds the Morehouse Residence at the west end of Puesta del Sol;
m) Streetscape on the 2500 block of Puesta del Sol and Mission Canyon Road.

5) Views and Vistas:

a) The views and vista from the SBMNH property towards the former St. Anthony's Seminary;
b) View towards "Dial House" and "Mission Hill" to and from the SBMNH property.

Non-Contributors:

a) Existing street and parking lot lighting; b) Asphalt paving;
c) Buildings, structures and features outlined in Table 1, Appendix C of the Phase 2 HSSR, as not eligible for listing as significant historic resources on the SBMNH property;
d) Whale skeleton on the SBMNH property;
e) Non-native landscaping (with the exception of several large specimen trees, most of the existing non-native landscaping has been installed since the 1940s)

5.0 DETERMINING THE SIGNIFICANCE OF IMPACTS TO SIGNIFICANT HISTORIC RESOURCES

5.1 Regulatory Setting

Analysis of project impacts to significant historic resources is guided by the following:

City of Santa Barbara Master Environmental Assessment

Guidelines for the evaluation of potential project effects are found in Section 1.4 "Project Impact Evaluation Procedures, #10" of the City of Santa Barbara Master Environmental Assessment as follows:

> *If the Historic Structures/Sites Report determines that historical structures/sites located at the proposed project site are significant historic resources, then the Historic Structures/Sites Report should include an analysis of the proposed project's potential effects on the resources. The Historic Structures/Sites Report should state the level of impact as significant and unavoidable (Class I), potentially significant unless mitigated (Class II) or less than significant (Class III). Potentially significant effects on significant historic resources are described in Section 2.3 Thresholds of Significance, Determining Significance of Impacts to Significant Historic Resources (MEA 2003: 63). In addition, potential direct, indirect and cumulative effects on overall site integrity and identified values should be considered. Effects on historic and architectural values are measured in terms of loss of exemplary or commemorative elements, structures and sites.*
>
> *This evaluation of potential project effects on significant historic structures and/or sites should be based on overall site integrity and identified values should be considered. Effects on historic and architectural values are measures in terms of loss of exemplary or commemorative elements, structures, and sites.*
>
> *This evaluation of potential project effects on significant historic structures and/or sites should be based on substantial information, and or should be presented in the Historic Structures/Sites Report in a well reasoned, defensible and logical manner. Conclusionary statements of potential project effects on significant historic resources are insufficient (City of Santa Barbara MEA 2002: 63).*

Mitigation measures are outlined in Section 2.5 of the MEA as follows;

In-situ preservation is the preferred manner of avoiding damage to significant historic resources.

1. Planning construction so that demolition or alteration of structures, sites, and natural objects are not required; and
2. Incorporating existing structures, sites, and natural objects into planned development whenever avoidance is not possible (City of Santa Barbara MEA 2002: 65).

As noted in the guidelines, the appropriateness of potential mitigation measures is dependent on the type of historic resource and its degree of importance. A resource's significance is tied to its level of eligibility for listing at the local, state and national level (City of Santa Barbara

MEA 2002: 66-67). The following range of potential mitigation measures are listed in the MEA:

1) Rehabilitation without relocation on site for use as habitable space, including compliance with all State Historic Building Code requirements. The Secretary of the Interior's Guidelines would apply to this treatment.
2) Preserving the historic structure on site as non-habitable space. The Secretary of the Interior's Guidelines would apply to this treatment.
3) Relocation and preservation of the historic structure on site for use as habitable space, including compliance with all State Historic Building Code requirements. The Secretary of the Interior's Guidelines would apply to this treatment.
4) Relocation and preservation of the historic structure on site for use as non-habitable space. The Secretary of the Interior's Guidelines would apply to this treatment.
5) Compatible incorporation of façade only of historic structure into the design of the new building on site (this treatment would not meet the Secretary of the Interior's Guidelines that would apply to this treatment).
6) Advertisements for acquisition and relocation of structures with its subsequent rehabilitation at its new site. The Secretary of the Interior's Guidelines would apply to this treatment.
7) Demolition of historic structures with recordation according to the Community Development Department's "Required Documentation Prior to Demolition" standards.
8) Commemoration of the demolished structure with a display of text and photograph within the new building.
9) Commemoration of the demolished structure with a display of text and photographs on the exterior of the new building.
10) Commemoration of the demolished structure with an enclosed display of texts and photographs on the perimeter of the property at the primary entrance.
11) Salvage of significant materials for conservation in an historical display (City of Santa Barbara MEA 2002: 66-67).

5.2 MEA Guidance

The MEA includes the following under State CEQA guidance:

CEQA Guidelines §15126.4(b) provides the following direction relative to the development of mitigation measures for historical resources.

(1) Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of a historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings (1995), Weeks and Grimmer. The project's impact on the historical resource will generally be considered mitigated below a level of significance and thus is not significant,

(2) In some circumstances, documentation of a historical resource, by the way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur (City of Santa Barbara MEA 2002: 65).

5.3 CEQA Guidance

CEQA defines direct impacts as physical impacts that are caused by the implementation of a project and occur at the same time or place. Indirect impacts are visual or contextual impacts caused by the implementation of a project that are reasonably foreseeable, but occur at a different time or place (CEQA Guidelines, Section 15064 and 15355).

5.4 The Secretary of the Interior's Standards for the Treatment of Historic Properties

Evolving from the Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards that were developed in 1976, the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings were published in 1995 and codified as 36 CFR 67. Neither technical nor prescriptive, these standards are "intended to promote responsible preservation practices that help protect our Nation's irreplaceable cultural resources." The Secretary of the Interior's Standards for Rehabilitation are ten basic principles created to help preserve the distinctive character of an historic building and its site while allowing for reasonable changes to meet new needs. The Standards apply to historic buildings of all periods, styles, types, materials, and sizes. They apply to both the exterior and the interior of historic buildings. The Standards also encompass related landscape features and the building's site and environment as well as attached, adjacent, or related new construction. These Standards have been adopted, or are used informally, by many agencies at all levels of government to review projects that affect historic resources.

CEQA regulations identify the Secretary of the Interior's Standards as a measure to be used in determinations of whether or not a project or new development or rehabilitation adversely impacts an "historical resource." The Secretary of the Interior's Standards for the Treatment of Historic Properties state (for rehabilitation):

1. A property shall be used as its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of distinctive materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture and other visual qualities and, where possible, materials. Replacement of missing features will be substantiated by documentary, physical or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be

undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

Infill and redevelopment projects that could affect historic resources may be subject to review based on Standards 9 and 10 of the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, which state:

9. New additions, exterior alterations or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale and architectural features to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Therefore, in determining the impact of a project on a "historical resource," CEQA regulations require the application of the Secretary of the Interior's Standards to the question of whether the project results in a substantial adverse change to the resource and in particular those physical characteristics or character-defining spaces and features that convey its historical significance.

CEQA Guidelines Section 15064.5(b)(3) states: Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Secretary's Standards, Weeks and Grimmer, 1995) shall be considered as mitigated to a level of less than a significant impact on the historic resource.

While compliance with the Secretary's Standards indicates that a project may have a less than significant impact on a significant historical resource, the converse of this does not hold. Failure to comply with the Secretary's Standards is not, by definition, a significant impact under CEQA. CEQA recognizes that alterations that are not consistent with the Secretary's Standards may still not result in significant impacts on the historical resource. Therefore, the significance of project impacts on an historical resource can be evaluated by determining:

- Whether a project is in conformance with the Secretary's Standards (less-than-significant impact);
- Whether a project is in substantial conformance with the Secretary's Standards and does not result in material impairment (less-than-significant impact); or
- Whether a project is not in conformance with the Secretary's Standards and results in material impairment (significant impact).

The above criteria are important not only in determining whether the project would have a significant cultural resource impact but also in considering effective mitigation and alternatives.

5.5 Work Plan

The work plan will focus on an evaluation of the final plans for the lighting scheme for Phase 1 of the Santa Barbara Museum of Natural History Master Plan on nearby significant historic resources and the significant cultural landscape identified in the Phase 1 HSSR and the Phase 2 HSSR. This will include a detailed description of the lighting program revisions for the Butterfly Garden Exhibit and site and an assessment of the potential impacts that the proposed lighting program could have on nearby significant historic resources. The level of analysis in this letter report is consistent with that needed to make historic resource finding and to evaluate whether the Historic Resource Protection Measures outlined in the Phase 2 HSSR have been implemented. The Secretary of the Interior's Standards for the Treatment of Historic Properties developed by the Department of the Interior will guide the evaluation:

Rehabilitation is defined as: *the act or process of making possible a compatible use for a property through, repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values*.

The lighting plan was prepared by LFA Lighting Design (see Appendix A).

5.6 Revised Design for the Butterfly Garden Exhibit

The following section of the report provides an analysis of the revised design for the Butterfly Garden Exhibit's lighting plan which is keyed to the lighting plans in Appendix A. The following Development Standard Measures outlined in the Phase 2 HSSR will be applied throughout the analysis:

1) *Final architectural plans for the proposed alterations to the historic resource shall be reviewed by a City-qualified historian to ensure that the alterations follow the Secretary of the Interior's Standards for the Treatment of Historic Properties. A Phase 2 HSSR Addendum shall be prepared by the historian evaluating the final plans. The Phase 2 HSSR Addendum shall be submitted for review and approval by the City of Santa Barbara Planning Division and HLC*.

<u>Revisions to the Lighting Plan for the Butterfly Garden Exhibit (Appendix A, LFA drawing sheets</u>

Exterior lighting fixtures on the pavilion would be composed of Spanish Colonial Revival style wrought-metal "carriage" style lanterns for the exterior of the vestibules (LT 3-2). The four-sided fixtures would be 18.5 inches tall with a width of 7.5 inches and a diameter of 10.5 inches. Set within metal frames the lanterns' glazing would be diffused fish scale type glass designed to emulate the glazing of the "owl" lantern at the entrance to the Museum on Puesta del Sol. The lanterns would have solid metal caps are designed to direct all light in a downward direction. The lanterns would be suspended from a metal hook that is designed to reference a tree branch and butterfly motif. The hook would be attached to a rectangular plate. Each vestibule would feature four of the hand-forged lanterns that would be fabricated by local craftsman, Haans Duus (Sheets LT2.20 and LT-3.2). Interior lighting for the vestibules would consist of four wall-mounted, metal LED cylinder downlights with a grey finish to match the netting and ribs of the Butterfly Exhibit structure and interior lights (two lights would be placed in each vestibule). The cylindrical fixtures would be 5-inches tall by 2 1/2 inches in diameter and would be attached to the stucco clad walls by a circular metal plate (manufacturer: B-K

Lighting, Model: B/E/F Cap type) (Sheet LT1.10). A variety of Task/exhibit lighting is proposed for the interior of the Butterfly Garden Exhibit. Lighting types would include: 1) surface-mounted dimmable LED adjustable downlights that be attached to the steel ribs supporting the enclosure's netting. The proposed fixture type would be an adjustable 4-inch long by 2 ¼-inch diameter cylinder attached to the steel ribs by a 1 5/8-inch metal arm. The fixtures would be the same color as the painted metal ribs (Sheets LT2.20, LT2.30 and LT2.40); 2) Eight, metal, stake-mounted LED adjustable accent lights that would be used to illuminate landscaping within the exhibit space. The fixtures would be m2 Mini-Micro ™ floodlights composed of a 1-inch diameter, 4 ½-inch long, metal cylinder attached to a stake set into the ground; and 3) The water feature set against the exhibits' north wall would be illuminated by three Lumascape underwater light fixtures (model LS375LED Star III). The metal fixtures would be composed of a 4.8-inch tall, 2.8-inch diameter cylinder attached to a 3-inch diameter plate.

Exterior lighting around the Butterfly Garden Exhibit would be confined to tree-mounted lighting, also designed to minimize its visibility for the exterior south side of the exhibit space (Type XR) and metal, 24-inch tall LED stem-mounted adjustable dimmable lights set on either side of the gateway in the stone-clad wall off the east side of the Butterfly Garden Exhibit. The tree-mounted lighting fixtures would be Nightstar™ 4-inch long, 2 ¼-inch metal cylinders. The fixtures and their supports would be attached to the trees with adjustable tree straps or, where possible tree rings as seen in fixture type XR (Sheet LT1.10)

Analysis:

The Phase 2 HSSR required the following measures be incorporated into the final design. The following analysis provides information to address these measures:

Details shall be provided for….<u>lighting</u> (if proposed):

The lighting plan for the Butterfly Garden Exhibit has been revised to address comments made by the HLC during their previous review of the lighting plan. The following provides an analysis of the proposed lighting plan:

<u>Vestibule Lanterns</u>

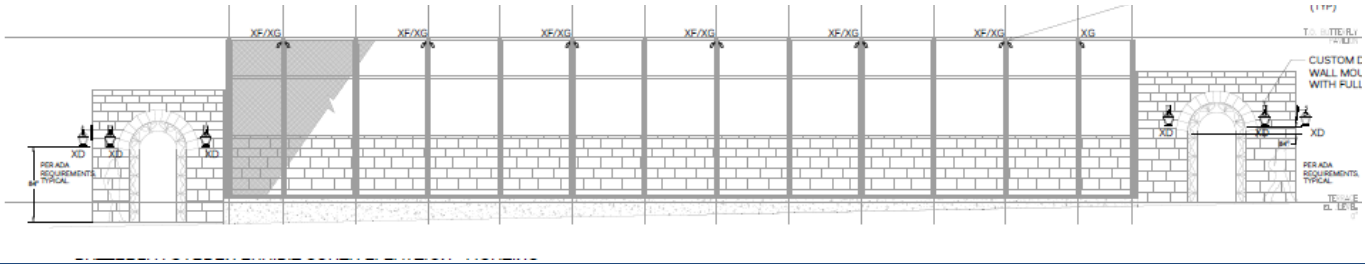
The proposed design of the lanterns meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The vestibules' exterior lanterns have been redesigned to create a design that has a more distinctive sense of place and is more referential to the Museum's historic hand-crafted Spanish Colonial Revival style light fixtures(see below); 2) The fixtures will be hand-crafted wrought metal to emulate the quality and appearance of the institution's remaining Spanish Colonial Revival style lighting; 3) the fixtures, composed of a lantern, hook designed to reference a tree branch capped by a buttefly and a 5-inch by 8-inch rectangular backplate, feature a traditional design that references, but does not copy, the lantern type fixtures flanking the main entrance to the Museum; 4) The lanterns' glazing is traditional in type, finish and appearance; 5) The incorporation of natural motifs, in this case, a butterfly on the hook and a branch and tree motif on the lantern top, is within the tradition of Spanish Colonial Revival light fixtures including the period lantern located in Fleischmann Auditorium's loggia which features foliate details; and 6) As demonstrated in Figure LT1.10N, the proposed fixtures would not produce excessive

glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape. Therefore, because the proposed lighting is referential to its historic setting, will not impair the historic setting or the surrounding cultural landscape and could be removed in the future with no impacts to significant historic resources, the design and placement of the lanterns meets Standards 9 & 10.

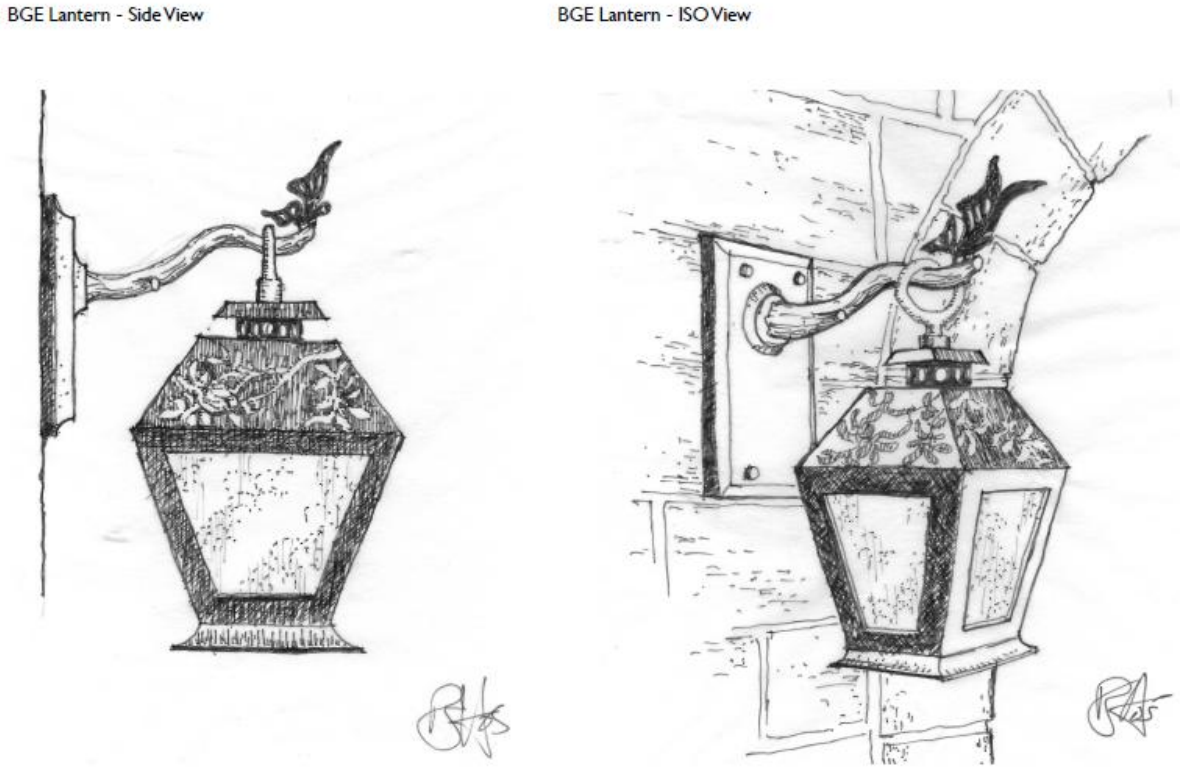
Historic Fixtures flanking Main Entrance

Existing Lantern at Fleischmann Auditorium

Existing Lantern at Fleischmann Auditorium



Location of Exterior Lanterns (Sheet LT2.30)

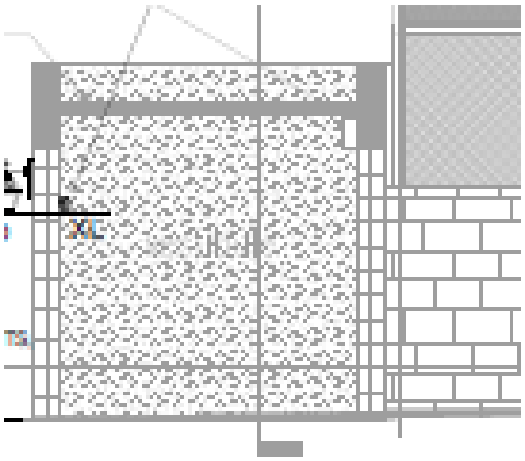


Proposed Lantern Design, Butterfly Garden Exhibit (Sheet LT3.2)

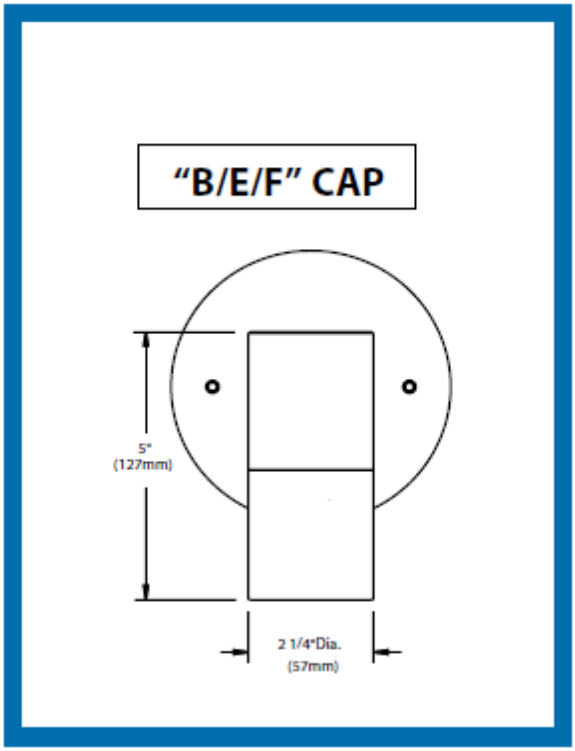
Vestibule Interior Lighting

The proposed lighting for the interior of the vestibules meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The fixtures are reductive in design since these areas serve as a transition to the exhibit space and are not visible from the exterior (see Sheet LT3.1); 2) The fixture type is modest in scale and will be painted to match the appearance of the painted ribs supporting the netting (fixture type XL); 3) Because the fixtures are not visible from the exterior their reductive design would not impair the historic setting or surrounding cultural landscape; 4) As demonstrated in Figure LT1.10N, the proposed fixtures

would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape and 5)Moreover, the fixtures could be removed in the future with no significant impacts to significant historic resources. Therefore, the proposed design of the vestibules' interior lighting meets Standards 9 & 10.



Location of Interior Vestibule Lighting (Sheet LT2.40)

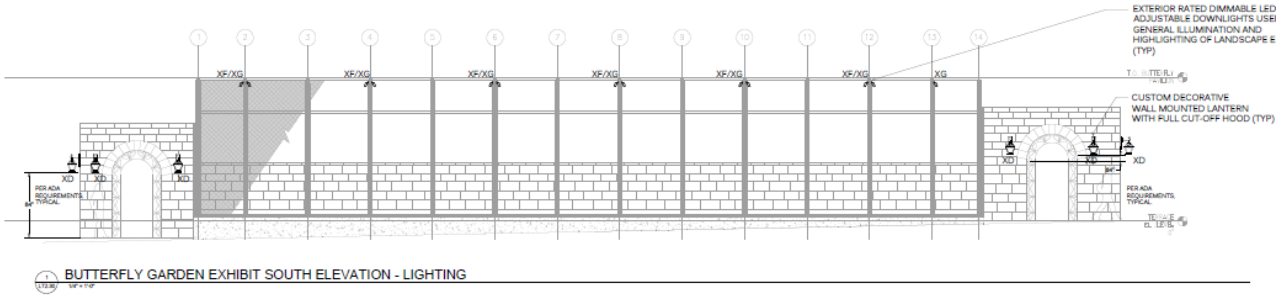


Fixture Type XL

Exhibit Space Lighting

The proposed design of the Butterfly Exhibit Garden's interior lighting meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The dimensions of the

lighting fixtures have been reduced to the minimum required to address the lighting needs of the exhibit space; 2) The design of the fixtures is reductive and does not include references to historic light fixture types because the exhibit space is not a traditional building type and the intent is to have the fixtures meld into the landscaping and the armature that supports the exhibit's netting rather than read as distinctive visual elements; 3) The fixtures will either be enmeshed in the landscaping, attached to the exhibit's metal supports (which they will match in color and material) or within the ornamental water feature, which will help ensure the fixtures recede into the background; and 4) As demonstrated in Figure LT1.10N, the proposed fixtures would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape Therefore, implementation of the proposed lighting for the interior of the Butterfly Garden Exhibit would not impair significant historic resources or the surrounding cultural landscape, this element of the lighting plan meets Standard 9. Standard 10 is met because the lighting could be removed in the future with no substantial impacts to significant historic resources.

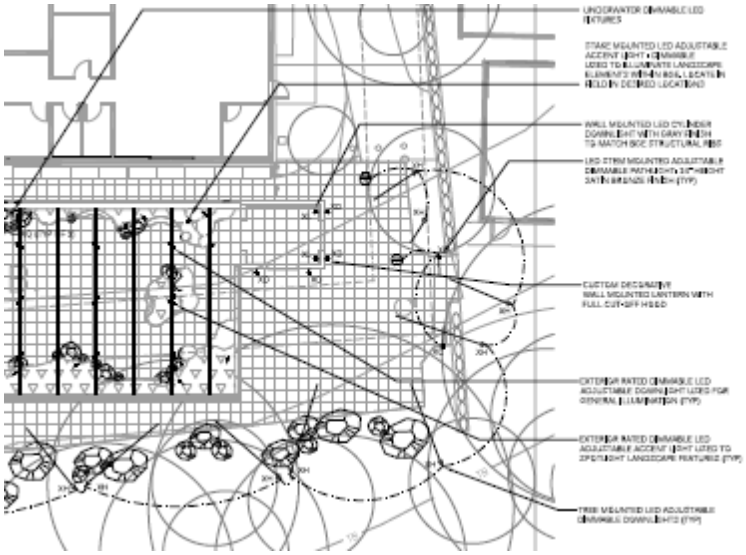


Elevation of Butterfly Garden Exhibit (Sheet LT2.30)

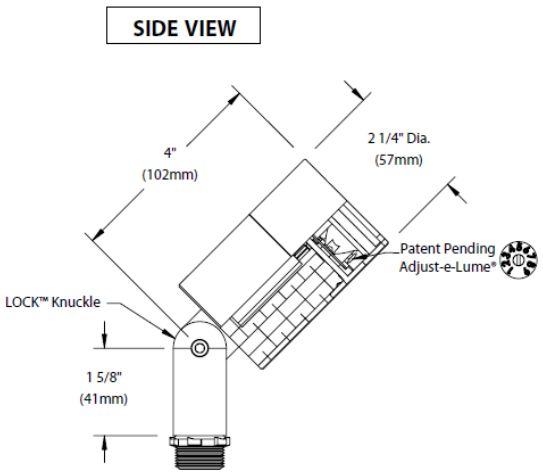
Interior Lighting (Sheet LT3.1)

Exterior Lighting around the Butterfly Garden Exhibit

Exterior lighting is confined to tree lights attached to the limbs of existing mature trees and a number of stem-mounted metal light fixtures as detailed above. The installation of the ground and tree-mounted fixtures meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The ground-mounted lights are modest in scale (2 feet tall) and have been designed to blend into the enhanced landscaping planned for the base of the sandstone-clad wall; 2) The light fixtures will recede into the landscape and will be limited to a small number; 3) The tree-mounted fixtures, which would be attached to the trees by adjustable tree straps or, where possible, tree rings, have been designed to blend into the foliage; 4) The tree-mounted lights will not be permanently attached to the trees and could be removed in the future; 5) As demonstrated in Figure LT1.10N, the proposed fixtures would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape. Therefore, the ground-mounted and tree mounted fixtures would not substantially affect the setting of nearby historic resources or the surrounding cultural landscape and the proposal for installing exterior lighting at the Butterfly Garden Exhibit, which would not substantially affect the setting of nearby historic resources or the surrounding cultural landscape and therefore, meets Standard 9. Standard 10 is met because the fixtures could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.



Location of exterior lighting (Sheet LT1.10)



Fixture Type XH

Fixture Type XC

Final plans shall be submitted to the City's Urban Historian to ensure that the alterations follow the Secretary of the Interior's Standards for the Treatment of Historic Properties:

The final plans which are part of this review have been submitted to the Urban Historian for review.

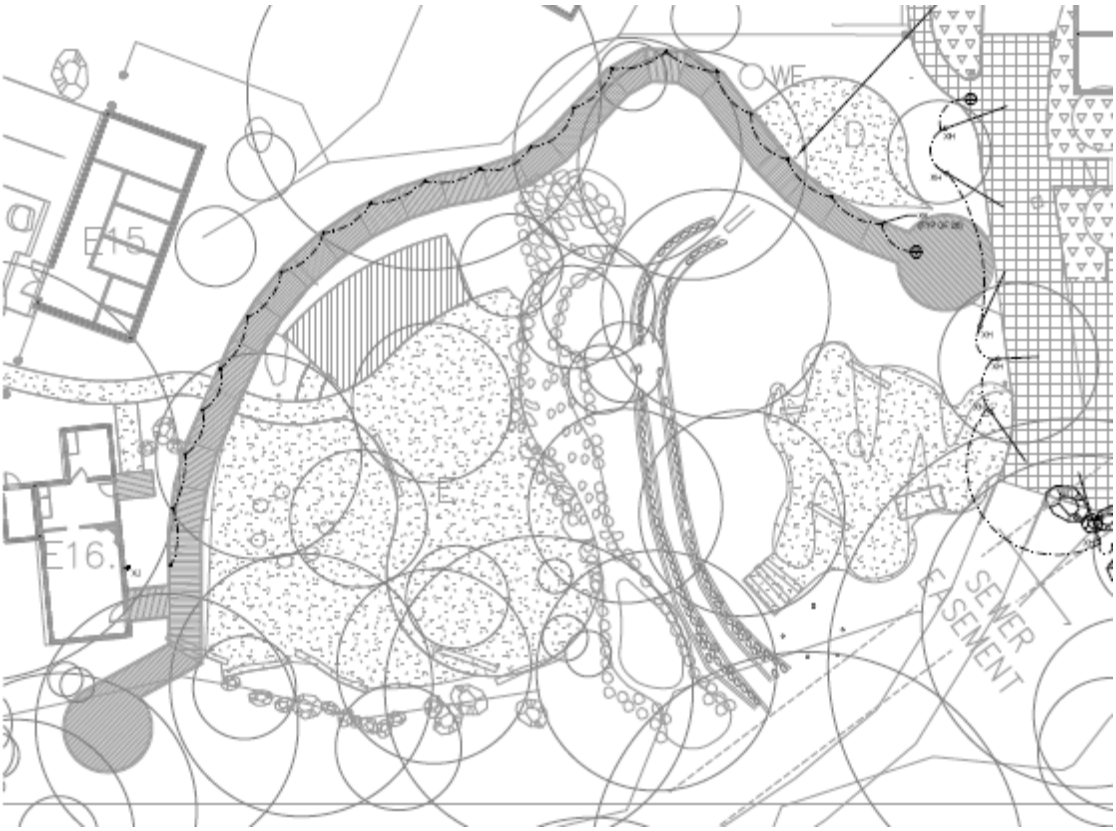
Because the guidance outlined in the Phase 2 report has been implemented, the installation of the proposed lighting plan for the Butterfly Garden Exhibit would result in a less than significant (Class III) impact to significant historic resources and is consistent with the Historic Preservation Protection Measures outlined in the Phase 2 HSSR.

5.7 Revised Design for the Backyard (Appendix A, Landscape Sheets)

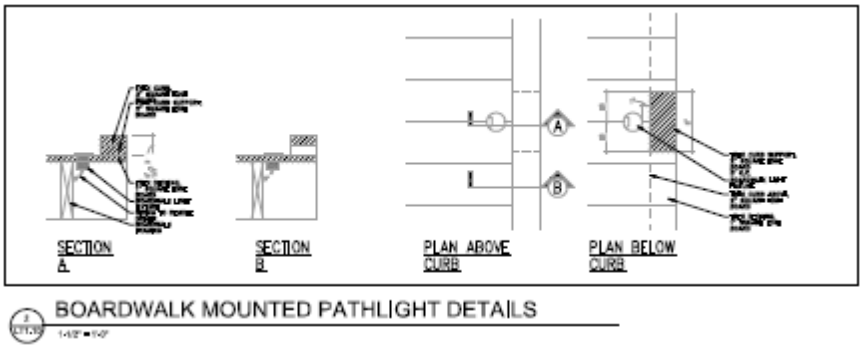
The final plans meet the following Historic Preservation Protection Measures outlined in the Phase 2 Report:

Provide details for ……lighting (if proposed);

The final plan includes pathway lighting integrated into the proposed boardwalk's Trex decking. The wattage and number of proposed lighting fixtures for the boardwalk have been reduced to the minimum necessary to safely guide people between MacVeagh Cottage and Butterfly Garden Exhibit. The lights are small in scale and would be set nearly flush into the boardwalk decking which would reduce their visibility. The locations of the light fixtures are detailed on Sheet LT1.10.



Site Plan with proposed lighting locations (Sheet LT1.10)



Path Lighting (Sheet LT1.10)

Analysis:

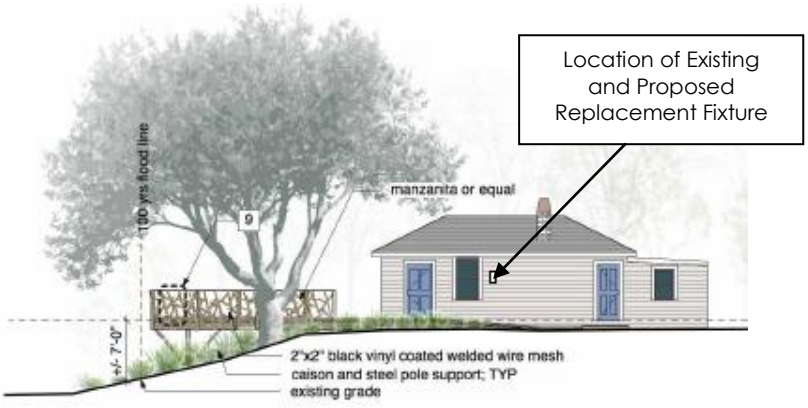
The installation of the deck-mounted fixtures meets the Secretary of the Interior's Standards for

Rehabilitation for the following reasons: 1) The deck-mounted lights are small in scale and set nearly flush to reduce their visibility; 2) The use of deck-mounted fixtures would eliminate the need for pole mounted fixtures, which will help maintain the semi-rural quality of the landscape; and 3) As demonstrated in Figure LT1.10N, the proposed fixtures would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape. Therefore, the proposal to mount pathway lighting into the boardwalk's decking would not substantially affect the setting of nearby historic resources or the surrounding cultural landscape and therefore, meets Standard 9. Standard 10 is met because the fixtures could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.

5.8 Final Plans for Rehabilitating MacVeagh Cottage

The design of the replacement light fixture flanking the north side of the window located on the north of the main entrance to the cottage has been revised. The new fixture would be a handcrafted pendant style wrought iron fixture fabricated by Steve Handleman, which draws its design inspiration from early 20th century lighting fixtures (Sheet LT3.3). The four-sided lantern style fixture would be 6.5 inches wide, 16.5 inches tall and a diameter of 8.5 inches. Glazing would be single sheets of diffused glass and the lantern's cap would be solid to direct light towards the ground. The lantern would be suspended from wrought metal hook attached to a rectangular metal plate that would be affixed to the cottage's wall.

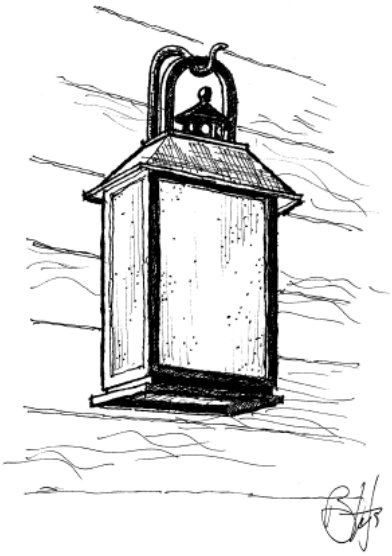
MacVeagh Cottage



Location of Existing and Proposed Replacement Fixture (Sheet LT3.3)

Existing Fixture on MacVeagh Cottage

(see next page)



Proposed Replacement Fixture (Sheet LT3.3)

Analysis:

The proposed design for the lighting fixture near the entrance to MacVeagh Cottage meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The lighting fixture is modest in scale and is not out of proportion with the cottage's east elevation; 2) The design of the fixture while recalling Arts and Crafts style light fixtures in its materials and handcrafting maintains a clear distinction between old and new; 3) As demonstrated in Figure LT1.10N, the proposed fixture would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape Therefore, implementation of the proposed lighting for MacVeagh Cottage meets Standard 9. Standard 10 is met because the lighting could be removed in the future with no substantial impacts to significant historic resources.

5.9 Lighting Scheme for the Entrance Plaza

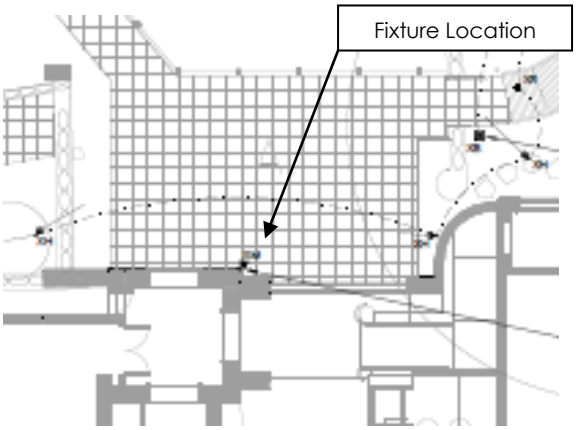
Lighting for the Entrance Plaza would be confined to the following: 1) refurbishment of an existing non-historic lantern style metal and glass lighting fixture attached to the north elevation of Fleischmann Auditorium's arched loggia is proposed for refurbishment (Sheet LT1.11). The refurbishment plan includes replacing the existing corner mount bracket with a hand forged wrought iron mount, replacement of the existing glass with clear rough cut glass and removing the glazing in the fixture's cap and replacing it with metal painted black to match the existing fixture; 2) Installation of a copy of the owl lantern located at the main entrance on Puesta del Sol. The new owl lantern would be placed on the inside of the approved opening through the Hazard Estate wall to guide visitors to the entrance; and 3) Tree-mounted lighting fixtures to guide visitors along the pathway from the parking area to the main entrance. The tree-mounted fixtures and their supports would be attached to the trees with an adjustable strap or, where possible, "tree rings" (see fixture type XR & Sheet LT1.11).

Analysis:

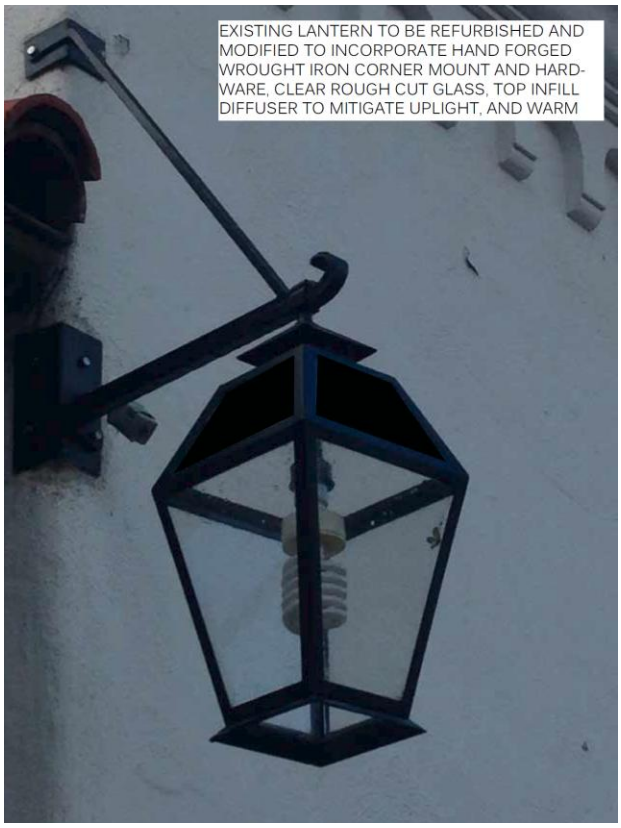
Refurbishment of the Existing Lantern

The refurbishment of the existing lantern meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The existing lantern is not a historic lighting fixture and its alteration will not impair a historic feature of the building; 2) Refurbishing the lantern to lend it a more handcrafted look would enhance its consistency with the building's Spanish Colonial Revival style architecture and the existing historic lighting; 3) As demonstrated in Figure LT1.11N, the proposed fixture would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape. Therefore, the proposal to refurbish the existing fixture would not substantially affect the architectural integrity of the Fleischmann Loggia or the surrounding cultural landscape and therefore, meets Standard 9. Standard 10 is met because the fixture could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.

Light Fixture Proposed for refurbishment



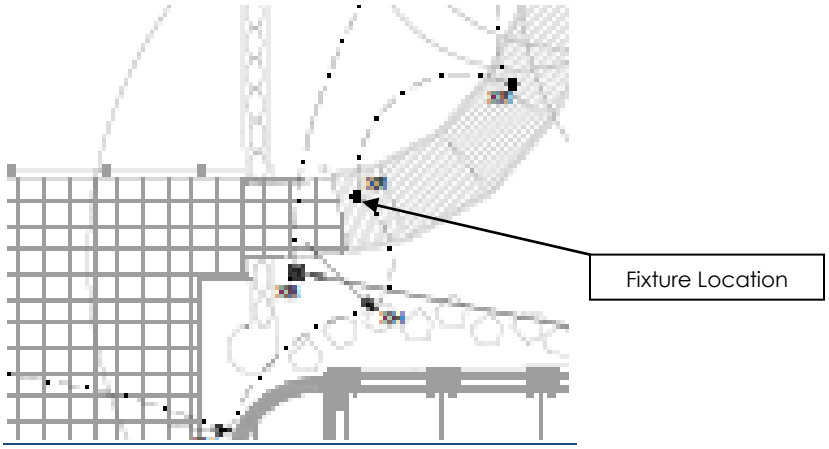
Location of refurbished Fixture (Sheet LT1.11)



Refurbished light fixture

Install a copy of the existing Owl Lantern

Installing a copy of the existing lantern meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1)the replication of a single historic light fixture would not impair the historic appearance of the Museum's street façade or the Hazard estate wall; 2) the lantern would be handcrafted to match the design, material and finish of the historic fixture, which maintain the character of the nearby historic lighting; 3) As demonstrated in Figure LT1.11N, the proposed fixture would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape. Therefore, the proposal to install a copy of the owl lantern at the approved new entrance through Hazard Estate wall not substantially affect the architectural integrity of the significant historic resources or the surrounding cultural landscape and therefore, meets Standard 9. Standard 10 is met because the fixture could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.



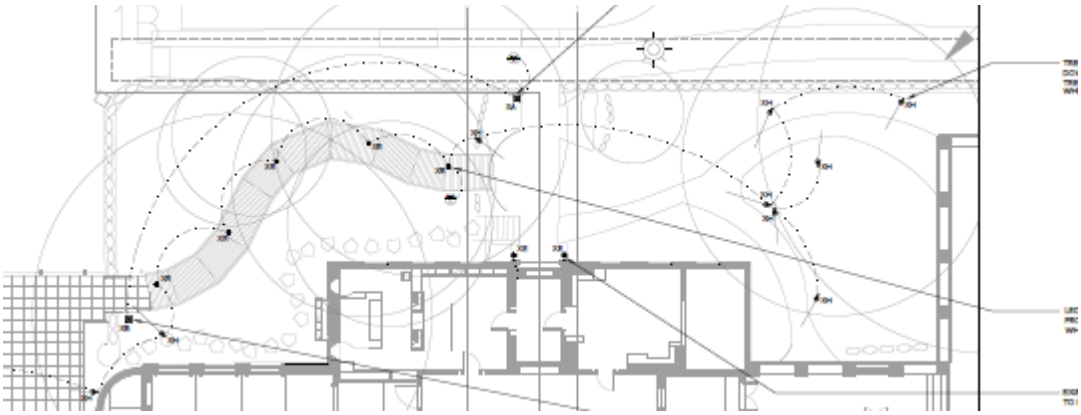
Location of replicated Fixture (Sheet LT1.11)

(see next page)

Existing Owl Fixture

Tree-Mounted Lighting

The tree-mounted lighting meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The tree-mounted fixtures and their supports would be attached to the trees with an adjustable strap or, where possible, "tree rings" (see fixture type XR, XH & Sheet LT1.11); 2) The tree-mounted lighting will not be permanently attached to the trees and could be removed in the future; 3) As demonstrated in Figure LT1.11N, the proposed fixtures would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting, including Puesta del Sol, the façade of the Museum or the surrounding cultural landscape or its semi-rural setting. Therefore, the proposal to install tree-mounted fixtures in the vicinity of the plaza meets Standard 9. Standard 10 is met because the fixtures could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.



Location of Tree Lighting (Sheet LT1.11)

Fixture Type XH: Strap Mount
Fixture Type: XR: Ring Mount

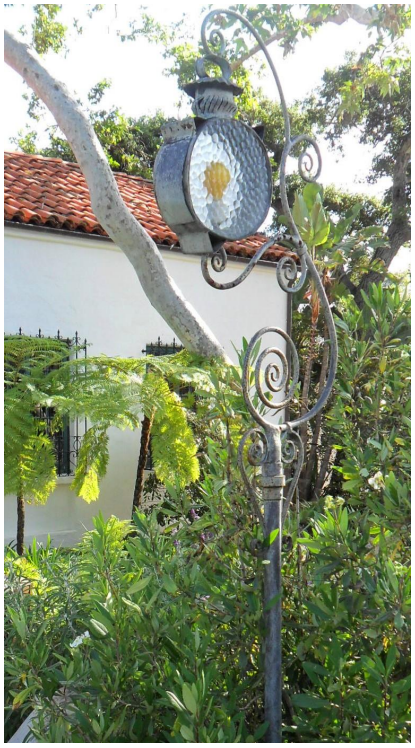
Tree Lighting typical (Sheet LT3.0)

5.10 Modifications to Lighting off the North Elevation of the Main Museum Building

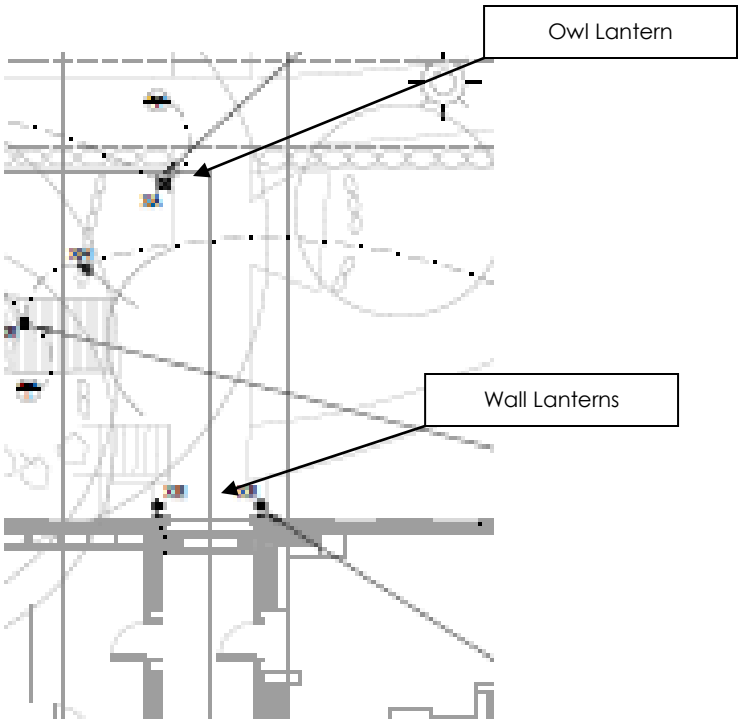
Lighting Program: The lighting plan for the Puesta Del Sol frontage includes the following components:

- Restore the historic Spanish Colonial Revival style light fixtures flanking the main entrance to the main museum building and the historic owl lantern; and
- Install tree mounted downlights to the specimen trees located on the north side of the main museum building to guide visitors along the pathway from the parking area to the main entrance.

Lighting Fixture proposed for Restoration



Lighting Fixture proposed for Restoration



Location of Refurbished Lanterns

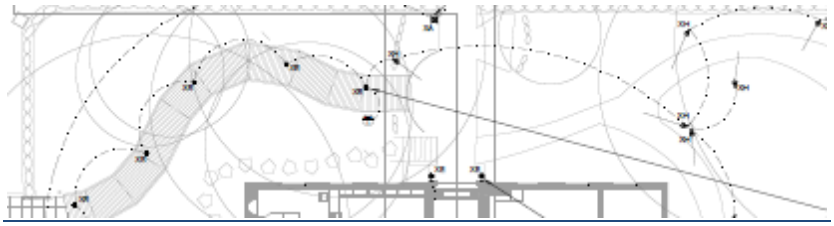
Analysis:

Historic Light Fixture Restoration

- Restore the Spanish Colonial Revival style light fixtures flanking the main entrance to main museum building and the freestanding owl lantern:

  Analysis: The restoration of the historic lighting fixtures meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The restoration would cleaning and repair the metalwork and glass, which would help preserve these features; 2) The light fixtures patina would be preserve to maximum extent feasible: 3) If florescent bulb types are installed they diffusing shades will be installed to meet the guidance outlined in the City of Santa Barbara Outdoor Streetlight and Design Guidelines in the summary of changes dated February 10, 2009. With the implementation of this guidance, the restoration of the lanterns would meet Standard 6.

Tree-Mounted Lighting

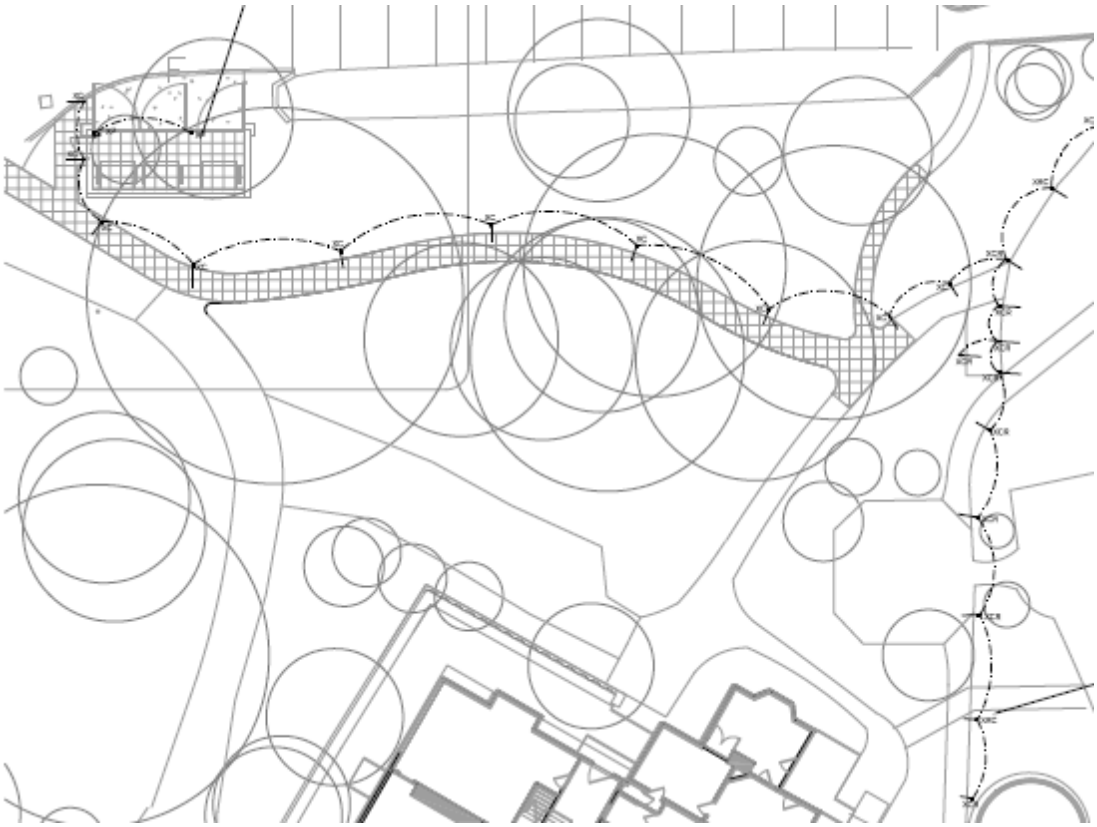


Location of Tree-mounted lighting (Sheet LT1.11)

The tree-mounted lighting meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The tree-mounted fixtures and their supports would be attached to the trees with an adjustable strap or, where possible, "tree rings" have been designed to blend into the foliage (see fixture type XR & XH, Sheet LT1.11); 2) The tree-mounted lighting will not be permanently attached to the trees and could be removed in the future; 3) As demonstrated in Figure LT1.11N, the proposed fixtures would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting, including Puesta del Sol, the façade of the Museum or the surrounding cultural landscape or its semi-rural setting. Therefore, the proposal to install tree-mounted fixtures along the north elevation of the Museum on Puesta del Sol meets Standard 9. Standard 10 is met because the fixtures could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.

5.11 Lighting for General Landscaping Improvements

The final landscape plan includes additional lighting along frontage between the parking area, observatory, and the pathway to the west end of the parking lot and the trash enclosure (Sheet LT1.12). The fixtures would be low intensity ground-mounted fixtures set into the landscaping. Two LED fixtures would be mounted to the interior walls of the trash enclosure. The trash enclosure fixtures would be a metal surface-mounted LED downlight, 3.94 inch by 3.91-inch in dimension (Type XP). It would be attached to the wall by a metal mounting plate. The fixture would be painted matte black to emulate the finish of the Museum's existing metal light fixtures and hardware used on the trash enclosure gates/door. The intent of lighting plan is to provide lighting for safety while minimizing the visibility of the light fixtures by placing them within the landscaping and within the interior of the trash enclosure.



Location of Lighting (Sheet LT1.12)

Analysis:

Ground Mounted Fixtures

The installation of the ground-mounted fixtures meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The ground-mounted lights are modest in scale (2 feet tall) and have been designed to blend into the enhanced landscaping planned for the base of the sandstone-clad wall; 2) The light fixtures will recede into the landscape and will be limited to a small number; and 3) As demonstrated in Figure LT1.12N, the proposed fixtures would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape. Therefore, the ground-mounted light fixtures would not substantially affect the setting of nearby historic resources or the surrounding cultural landscape and meets Standard 9. Standard 10 is met because the fixtures could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.

Lighting Type XC

Fixture Type XC: Path Light

Type XC Hi-lighted to show fixture in landscape

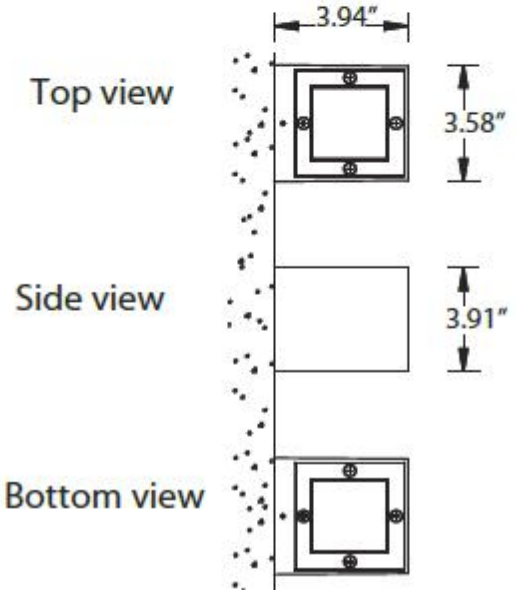
Type XC shown hidden in landsacpe

Over time, the vegetation will grow to surround and conceal Type XC Path Light

Sheet LT3.0

Fixtures Mounted to Trash Enclosure

The installation of two wall-mounted light fixtures within the interior of the Trash Enclosure meets the Secretary of the Interior's Standards for Rehabilitation for the following reasons: 1) The fixtures are modest in scale and will be painted to match the color and matte finish of the Museum's existing fixtures; 2) The light fixtures are not located on a historic building, structure, feature or landscape element; 3) the fixtures are mounted to the interior walls of the Trash Enclosure and would not be visible from the surrounding landscape; and 4) As demonstrated in Figure LT1.12N., the proposed fixtures would not produce excessive glare or lighting that would disrupt the nighttime appearance of the Museum's setting or the cultural landscape. Therefore, the trash enclosure's light fixtures would not substantially affect the setting of nearby historic resources or the surrounding cultural landscape and meets Standard 9. Standard 10 is met because the fixtures could be removed in the future with no impacts to significant historic resources or the surrounding cultural landscape.



Fixture Type XP
Interior lighting for Trash Enclosure

6.0 SUMMARY OF FINDINGS AND CONCLUSIONS

This Phase 2 Historic Structures/Sites Letter Report (Letter Report) was prepared by Post/Hazeltine Associates to evaluate final plans for the lighting component of Phase 1 of the Museum of Natural History Master Plan. An analysis of the revised project reveals that the project as currently proposed is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties. Cumulative impacts to significant historic resources, including the cultural landscape, would then be considered less than significant (Class III) and are

consistent with the Historic Preservation Protection Measures outlined in the Phase 2 HSSR.

7.0 LIST OF RESOURCES CONSULTED DURING THE PREPARATION OF THIS REPORT

Published Sources

Post/Hazeltine Associates

2009 Historic Structures/Sites Report for MacVeagh House, Cottage and Garage. Prepared for the Santa Barbara Museum of Natural History.

2011 Phase 1 Historic Structures/Sites Report for the Santa Barbara Museum of Natural History.

2012 Historic Structures/Sites Report for 653 Mission Canyon Road. Prepared for the Santa Barbara Museum of Natural History.

2014 Phase 2 Historic Structures/Sites Report for the Santa Barbara Museum of Natural History.

2016 Phase 2 Historic Resources Letter Report for the Santa Barbara Museum of Natural History

Suzanne Elledge Planning and Permitting Services, Inc.
2014 Santa Barbara Museum of Natural History 2014 Master Plan Applicant Report. March 17, 2014.

APPLICABLE EXTERIOR LIGHTING CODE REQUIREMENTS

CITY OF SANTA BARBARA ARCHITECTURAL BOARD OF REVIEW GENERAL DESIGN GUIDELINES

EXTERIOR LIGHTING:
BOTH OF THE FOLLOWING STANDARDS MUST BE MET FOR ADMINISTRATIVE APPROVAL:
1. REPLACEMENT OR INSTALLATION OF ADDITIONAL FIXTURE IS COMPATIBLE IN STYLE, COLOR AND SCALE WITH THE EXISTING STRUCTURE.
2. LIGHTING FIXTURE AND PLACEMENT MEET THE OUTDOOR LIGHTING ORDINANCE AND DESIGN GUIDELINES.

OUTDOOR LIGHTING MUNICIPAL CODE 22..75

B. CONTROL OF NUISANCE LIGHTING IN AND ADJACENT TO RESIDENTIAL ZONES 22.75.060
1. GENERALLY OUTDOOR LIGHTING IN RESIDENTIAL ZONES AND OUTDOOR LIGHTING ON REAL PROPERTIES ADJACENT TO RESIDENTIAL ZONES SHALL BE DESIGNED, INSTALLED, AND OPERATED SO THAT IT IS COMPATIBLE WITH THE AMBIENT LIGHTING OF THE NEIGHBORHOOD IN WHICH IS IS LOCATED. SUCH LIGHTING SHALL BE DESIGNED, INSTALLED AND OPERATED TO CONTROL GLARE, PREVENT LIGHT TRESPASS ONTO ADJACENT AREAS, MINIMIZE DIRECT UPWARD LIGHT EMISSION, PROMOTE EFFECTIVE SECURITY, AVOID INTERFERENCE WITH SAFE OPERATION OF MOTOR VEHICLES. THE MINIMUM INTENSITY NEEDED FOR THE INTENDED PURPOSE SHALL BE USED.

OUTDOOR LIGHTING AND STREETLIGHT DESIGN GUIDELINES

SECTION 1 - BUILDING AND SITE LIGHTING
PART 1 - GENERAL GUIDELINES
1. LIGHTING FIXTURES SHOULD BE APPROPRIATE TO THE STYLE OF THE ARCHITECTURE OR AESTHETICALLY CONCEALED FROM VIEW.
2. ILLUMINATION LEVELS SHOULD BE APPROPRIATE TO THE TYPE OF USE PROPOSED, THE ARCHITECTURAL STYLE OF THE STRUCTURE, AND THE OVERALL NEIGHBORHOOD.
3. LIGHTING SHALL BE DESIGNED TO CONTROL GLARE, MINIMIZE LIGHT TRESPASS ONTO ADJACENT PROPERTIES, MINIMIZE DIRECT UPWARD LIGHT EMISSION, PROMOTE EFFECTIVE SECURITY, AND AVOID INTERFERENCE WITH THE SAFE OPERATION OF MOTOR VEHICLES.
4. LIGHTING OF FACADES SHOULD BE CONSIDERED FOR APPROPRIATENESS TO THE APPLICATION.
5. LIGHTING FOR COMMERCIAL INSTALLATIONS PROXIMATE TO RESIDENTIAL USES SHOULD BE DESIGNED TO BE COMPATIBLE WITH RESIDENTIAL ILLUMINATION LEVELS.

PART 2- SPECIFIC GUIDELINES
A. LANDSCAPE, HARDSCAPE, AND BUILDING LIGHTING

1. LIGHTING TECHNOLOGIES CURRENTLY RECOGNIZES AS MEETING THESE GUIDELINES ARE HIGH PRESSURE SODIUM (HPS), METAL HALIDE (MH), FLUORESCENT, INDUCTION AND LIGHT EMITTING DIODE (LED). INCANDESCENT LIGHTING MAY BE USED TO ACCENT LIGHTING AS ALLOWED BY TITLE 24 STANDARDS.
2. LANDSCAPE LIGHTING SHOULD BE SUBTLE, AND SHOULD BE CAREFULLY SHIELDED TO AVOID VIEW OF THE SOURCE. UPLIGHTING OF LANDSCAPING SHOULD BE LIMITED TO A SELECT FEW ELEMENTS, AND SHOULD BE DESIGNED TO AVOID SKYGLOW.
3. HARDSCAPE LIGHTING INCLUDES PATH LIGHTS, BOLLARDS, AND POST-TOP LIGHTS AND SHOULD USE THE MINIMUM INTENSITY REQUIRED FOR THE INTENDED PURPOSE. FIXTURES AND PLACEMENT SHOULD BE DESIGNED TO AVOID GLARE, LIGHT TRESPASS ONTO ADJACENT PROPERTIES, AND SKYGLOW.
4. BUILDING LIGHTING INCLUDES FIXTURES MOUNTED TO BUILDING SURFACES, RECESSED DOWNLIGHTING, AND FIXTURES AIMED AT THE BUILDING. BUILDING LIGHTING SHOULD USE THE MINIMUM INTENSITY REQUIRED FOR THE INTENDED PURPOSE. FIXTURES IN WHICH THE LAMP IS NOT SHIELDED, SUCH AS LANTERNS, SHOULD BE LOW INTENSITY TO AVOID GLARE AND SHOULD BE GENERALLY USED FOR DECORATIVE AND LOCAL LIGHTING AND NOT FOR AREA LIGHTING.
5. FOR HARDSCAPE AND BUILDING LIGHTING, LAMPS IN FIXTURES WHERE THE LAMP IS NOT SHIELDED SHOULD NOT EXCEED A MAXIMUM OF 2700 LUMENS PER FIXTURE IN COMMERCIAL ZONES, AND 1200 LUMENS IN RESIDENTIAL ZONES. LIGHTING OF BUIDLING FACEDES SHOULD BE CONSIDERED FOR APPROPRIATENESS TO THE AMBIANCE OF SANTA BARBARA AND SHOULD BE SUBTLE.
6. ADDITIONAL MEANS MAY BE REQUIRED TO MINIMIZE GLARE, SUCH AS THE USE OF REFRACTORS, LOUVERS, OR PATTERNED OR TRANSLUCENT GLASS TO OBSCURE VIEW OF THE LAMP AND DIFFUSE THE LIGHT OUTPUT.
7. LIGHTING INSTALLATIONS SHALL BE EQUIPPED WITH CONTROLS AS REQUIRE BY TITLE 24 LIGHTING STANDARDS. PLANS SHALL SPECIFY THE THE PROPOSED OFF-TIME. THIS REQUIREMENT SHALL INCLUDE A PROVISION FOR REDUCED LIGHT LEVELS OR REDUCED NUMBER OF FIXTURES FOR AFTER HOURS.
8. LIGHTING FIXTURES SHALL ALSO BE SHOWN ON LANDSCAPE PLANS TO DEMONSTRATE COORDINATION OF FIXTURES WITH TREES AND PLANTS.
9. AREA LIGHTING FIXTURES AND POLES SHOULD BE APPROPRIATE TO THE STYLE AND SCALE OF THE ARCHITECTURE.

PLAN REVIEW CHECKLIST SPECIFIC TO LANDSCAPE LIGHTING:
1. LANDSCAPE LIGHTING TO BE SHIELDED BY ARCHITECTURAL OR LANDSCAPE ELEMENTS TO AVOID VIEW OF SOURCE.
2. UPLIGHTING SHOULD NOT BE OVERDONE, AND IS MOST EFFECTIVE WHEN LIMITED TO A FEW LANDSCAPE ELEMENTS.
3. LANDSCAPE PLAN TO SHOW FIXTURE LOCATIONS TO DETERMINE COORDINATION OF LIGHTING BETWEEN PLANTS.
4. MANUFACTURER'S PRODUCT SHEETS SHOWING REPRESENTATION OF FIXTURE DESIGN, LAMP TYPE, WATTAGE AND OTHER PERTINENT INFORMATION INCLUDING COLOR.

PLAN REVIEW CHECKLIST SPECIFIC TO HARDSCAPE LIGHTING:
1. CHECK TO SEE THAT LIGHTING INTENSITY OF PATHLIGHTS, BOLLARDS, AND POST-TOP LIGHTINGS IS THE MINIMUM NECESSARY FOR THE INTENDED PURPOSE.
2. FOR BOLLARDS AND POST-TOP LIGHTS, HPS OR FLUORESCENT ARE PREFERRED FOR WALKWAYS AND OPEN AREAS. COLOR TEMPERATURE SHOULD BE SPECIFIED. PREFERRED COLOR TEMPERATURE IS 2700K-3000K.
3. FIXTURES AND PLACEMENT SHOULD BE DESIGNED TO AVOID GLARE, LIGHT TRESPASS, AND SKY GLOW.
4. FIXTURE AND POLE STYLE FOR AREA LIGHTING APPROPRIATE TO ARCHITECTURE, NEIGHBORHOOD, AND/OR SPECIAL DISTRICT.
5. LAMPS IN FIXTURES WHERE LAMP IS NOT SHIELDED SHOULD NOT EXCEED 2700 LUMENS IN COMMERCIAL ZONES AND 1200 LUMENS IN RESIDENTIAL ZONES.
4. MANUFACTURER'S PRODUCT SHEETS SHOWING REPRESENTATION OF FIXTURE DESIGN, LAMP TYPE, WATTAGE AND OTHER PERTINENT INFORMATION INCLUDING COLOR.

PLAN REVIEW CHECKLIST SPECIFIC TO SECURITY LIGHTING:
1. FLOODLIGHTS AIMED TOWARD ADJACENT PROPERTIES OR STREETS ARE NOT ALLOWED.
2. FLOODLIGHTS INCLUDE WALLPACKS, BARN BARNLIGHTS, AND AIMABLE FIXTURES.
3. SECURITY LIGHTING SHOULD CONFINE ILLUMINATION TO THE SUBJECT PROPERTY.

HISTORICAL LANDMARKS COMMISSION GENERAL DESIGN GUIDELINES

SECTION 3 ADMINISTRATIVE APPROVAL STANDARDS 1.3.2

K. EXTERIOR LIGHTING - ALL OF THE FOLLOWING STANDARDS MUST BE MET:
1. REPLACEMENT OR INSTALLATION OF ADDITIONAL FIXTURES IS COMPATIBLE IN STYLE, COLOR AND SCALE WITH THE APPLICANT'S EXISTING STRUCTURE.
2. LIGHTING FIXTURES AND PLACEMENT MEET THE OUTDOOR LIGHTING ORDINANCE AND DESIGN GUIDELINES.
3. FOR PROJECTS IN EPV I OR II THE FOLLOWING STANDARDS ALSO APPLY:
A. UNSHIELDED LIGHT BULBS ARE LOW INTENSITY TO AVOID GLARE AND SHOULD ONLY BE USED FOR DECORATIVE OR LOCAL LIGHTING AND MAY NOT BE USED FOR AREA LIGHTING.
B. LANTERN FIXTURE DESIGNS WHICH INCLUDE BARE BULBS RESEMBLE THE APPEARANCE, COLOR AND LOW INTENSITY OF A TRADITIONAL INCANDESCENT BULB.
C. LIGHTING INSTALLATIONS MAY NOT BE APPROVED WITH EXPOSED RACEWAYS OR CONDUITS.
D. RECESSED SOFFIT LIGHTING AND LANDSCAPE LIGHTING ARE CAREFULLY CONCEALED OR DESIGNED IN A MANNER APPROPRIATE TO HISPANIC ARCHITECTURE.

EL PUEBLO VIEJO LANDMARK DISTRICT GUIDELINES

CHAPTER 3: CHARACTER DEFINING FEATURES OF THE DISTRICT

C. LIGHTING
1. THE USE OF WROUGHT IRON LANTERNS IS ENCOURAGED. LIGHTING SHOULD BE DESIGNED AS AN INTEGRAL PART OF THE OVERALL BUILDING DESIGN AND IN CHARACTER WITH THE PERIOD THE BUILDING REPRESENTS.
2. THE LIGHTING FROM EXTERIOR LANTERNS AND LAMPS SHOULD USE THE MINIMUM INTENSITY REQUIRE FOR THE INTENDED PURPOSE. FIXTURES IN WHICH THE LAMP IS NOT SHIELDED, SUCH AS LANTERNS, SHOULD BE LOW INTENSITY AND AVOID GLARE, SHOULD BE GENERALLY USED FOR DECORATIVE AND LOCAL LIGHTING AND NOT FOR AREA LIGHTING.
3. WHEN USING LANTERN-TYPE LIGHTING, THE APPEARANCE OF A BARE BULB, UNLESS RESEMBLING THE APPEARANCE, COLOR AND LOW INTENSITY OF A TRADITIONAL INCANDESCENT LAMP, MAY DETRACT FROM THE LIGHITNG DESIGN AND DEFEAT THE PURPOSE OF A LANTERN.
4. RECESSED SOFFIT LIGHTING AND LANDSCAPE LIGHTING SHOULD BE CAREFULLY CONCEALED OR DESIGNED IN A MANNER APPROPRIATE FOR HISPANIC ARCHITECTURE.
5. ALL EXTERIOR BUILDING LIGHTING, SITE LIGHTING, AND STREETLIGHTS ARE REQUIRED TO CONFORM TO THE CITY OF SANTA BARBARA'S OUTDOOR LIGHTING ORDINANCE AND THE OUTDOOR LIGHTING AND STREETLIGHT DESIGN GUIDELINES,

EXTERIOR LIGHTING FIXTURE SCHEDULE

KEY	SYMBOL	WATT	LAMP TYPE	DESCRIPTION	MANUFACTURER	MODEL#	LOCATION	NOTES
XA		N/A	WARM WHITE LED	EXISTING DECORATIVE POLE OWL LANTERN TO BE REFURBISHED	HANS DUUS BLACKSMITH, INC 75 INDUSTRIAL WAY BUELLTON, CA 93427 P: 805-688-9731	N/A	ORIGINAL MUSEUM ENTRY.	EXISTING DECORATIVE POLE OWL LANTERN TO BE REFURBISHED AND CLEANED WITH SOFT BRUSH TO REMOVE CORROSION. GLASS CLEANED AND LAMP REPLACED WITH WARM WHITE LED LAMP.
XB		TBD	WARM WHITE LED	CUSTOM DECORATIVE POLE OWL LANTERN FABRICATED TO MATCH EXISTING TYPE 'XA' FIXTURE	HANS DUUS BLACKSMITH, INC 75 INDUSTRIAL WAY BUELLTON, CA 93427 P: 805-688-9731	TBD	MUSEUM SITE	BUDGET ALLOWANCE $3500 PER FIXTURE.
XC		7W	LED 2700K	LED STEM MOUNTED ADJUSTABLE DIMMABLE PATHLIGHT- 24" HEIGHT SATIN BRONZE FINISH	BK LIGHTING	SF-24"-B-LED-E64-WFL-BZP-12-11-B-PP-18B-SF	MUSEUM SITE - PATHWAYS	FIXTURES CONCEALED WITHIN LANDSCAPE. REMOTE TRANSFORMER LOCATED IN ACCESSIBLE, NEMA OUTDOOR RATED ENCLOSURE.
XCR		7W	LED 2700K	LED STEM MOUNTED ADJUSTABLE DIMMABLE PATHLIGHT- 24" HEIGHT SATIN BRONZE FINISH, RED DICHROIC COLOR FILTER	BK LIGHTING	SF-24"-B-LED-E64-WFL-BZP-12-11-B-PP-18B-SF-120-36500-2049	MUSEUM SITE - PATHWAY TO OBSERVATORY	FIXTURES CONCEALED WITHIN LANDSCAPE. REMOTE TRANSFORMER LOCATED IN ACCESSIBLE, NEMA OUTDOOR RATED ENCLOSURE.
XD		TBD	WARM WHITE LED	CUSTOM DECORATIVE WALL MOUNTED LANTERN WITH FULL CUT-OFF HOOD	HANS DUUS BLACKSMITH, INC 75 INDUSTRIAL WAY BUELLTON, CA 93427 P: 805-688-9731	TBD	BGE VESTIBULE - EXTERIOR WALLS	BUDGET ALLOWANCE $2000 PER FIXTURE.
XE		N/A	WARM WHITE LED	EXISTING WALL MOUNTED CARRIAGE STYLE LANTERN TO BE REFURBISHED	HANS DUUS BLACKSMITH, INC 75 INDUSTRIAL WAY BUELLTON, CA 93427 P: 805-688-9731	N/A	ORIGINAL MUSEUM ENTRY	FIXTURE TO BE REMOVED, CLEANED AND RELAMPED WITH WARM WHITE LED LAMPS .
XF		8W	LED 2700K	SURFACE MOUNTED DIMMABLE LED ADJUSTABLE DOWNLIGHT - NARROW SPOT OPTIC - (GENERAL ILLUMINATION)	BK LIGHTING	NS-LED-E36-NSP-A9-FINISH-11-360SL-SMC-FINISH-TRXX-VOLT	BGE	REMOTE TRANSFORMER TO BE LOCATED IN ACCESSIBLE NEMA OUTDOOR RATED ENCLOSURE.
XG		8W	LED 2700K	SURFACE MOUNTED DIMMABLE LED ADJUSTABLE DOWNLIGHT - SPOT OPTIC - (ACCENT LIGHTING)	BK LIGHTING	NS-LED-E36-SP-A9-FINISH-11-360SL SMC-FINISH-TRXX-VOLT	BGE	REMOTE TRANSFORMER TO BE LOCATED IN ACCESSIBLE NEMA OUTDOOR RATED ENCLOSURE.
XH		8W	LED 2700K	TREE MOUNTED LED ADJUSTABLE DIMMABLE ACCENT LIGHT	BK LIGHTING	NS-LED-E36-A9-FINISH-11-TS-TMC-FINISH-TRXX-VOLT	MUSEUM SITE	REMOTE TRANSFORMER TO BE LOCATED IN ACCESSIBLE NEMA OUTDOOR RATED ENCLOSURE.
XJ		INC 60W	WARM WHITE LED	RUSTIC FOLK STYLE WALL MOUNTED LANTERN TO REPLACE EXISTING FIXTURE	STEVEN HANDLEMAN 716 N. MILPAS ST. SANTA BARBARA, CA 93103 P: 805-962-5119	GRIFFITHS WALL BRACKET - WITH MODIFIED WIDTH, HANGER, AND DESIGN DETAILS	MACVEAGH COTTAGE	BUDGET ALLOWANCE $700 WITH MODIFICATIONS.
XK		2.5W	LED 2700K	BOARDWALK MOUNTED LED PATHLIGHT - FINISH TO MATCH BOARDWALK	MP LIGHTING	L08-2.5-W27H-S-VOLT-S-0-FINISH	BOARDWALK	MOUNTED IN BOARDWALK. PROVIDE REMOTE DRIVER /TRANSFORMER IN ACCESSIBLE LOCATIONS UNDER BOARDWALK AS REQUIRED.
XL		8W	LED 2700K	WALL MOUNTED LED CYLINDER DOWNLIGHT WITH GRAY FINISH TO MATCH BGE STRUCTURAL RIBS	BK LIGHTING	EC-LED-E36-MFL-A9-BLP-11-B	BGE VESTIBULES - INTERIOR WALLS	---
XM		N/A	WARM WHITE LED	EXISTING CORNER MOUNTED LANTERN TO BE MODIFIED AND REFURBISHED	HANS DUUS BLACKSMITH, INC 75 INDUSTRIAL WAY BUELLTON, CA 93427 P: 805-688-9731	N/A	NEW MUSEUM ENTRY	EXISTING LANTERN TO BE REFURBISHED AND MODIFIED TO INCORPORATE HAND FORGED WROUGHT IRON CORNER MOUNT AND HARDWARE. CLEAR ROUGH CUT GLASS, TOP INFILL DIFFUSER TO MITIGATE UPLIGHT, AND WARM LED LAMP. BUDGET ALLOWANCE $600.
XN		3W	LED 2700K	STAKE MOUNTED LED ADJUSTABLE ACCENT LIGHT - DIMMABLE	BK LIGHTING	MM-LED-E70-MFL-BZP-11-B-360SL-POWER PIPE	MUSEUM SITE - PATHWAYS AND BGE	FIXTURES CONCEALED WITHIN LANDSCAPE. LOCATE IN FIELD IN DESIRED LOCATIONS.
XP		4W	LED 2700K	SURFACE MOUNTED LED DOWNLIGHT	LIGMAN	UGI-31591-4W-W27-VOLT-06-C-3" MOUNTING PLATE	TRASH ENCLOSURE	---
XQ		6W	LED 3000K	UNDERWATER DIMMABLE LED FIXTURE	LUMASCAPE	LS375LED-6H6-NM-13-DIM	BGE - LILY POND	---
XR		7W	LED 2700K	LED DOWNLIGHT SUSPENDED FROM TREES	BK LIGHTING	RM-25-AR-LED-E64-MFL-A9-BZP-11-E	MUSEUM SITE	REMOTE DRIVER TO BE LOCATED IN ACCESSIBLE NEMA OUTDOOR RATED ENCLOSURE.

1 / LT0.0 LIGHTING FIXTURE SCHEDULE AND APPLICABLE CODE REQUIREMENTS
NTS

TITLE 24 2013 - NON RESIDENTIAL OUTDOOR LIGHTING REQUIREMENTS

GENERAL:
1. OUTDOOR LIGHTING MUST BE CIRCUITED AND INDEPENDENTLY CONTROLLED FROM OTHER ELECTRIC LOADS.

REQUIRED AUTOMATIC DAYLIGHTING CONTROLS:
1. PHOTOCONTROLS OR ASTRONOMICAL TIME-SWITCH CONTROLS THAT AUTOMATICALLY TURN LIGHTS OFF DURING DAYLIGHT HOURS.

LUMINAIRES MOUNTED ≤ 24' ABOVE THE GROUND REQUIRED:
1. PHOTOCONTROLS OR ASTRONOMICAL TIME-SWITCH CONTROLS.
2. MOTION SENSORS.
3. BE CAPABLE OF AUTOMATICALLY REDUCING LIGHTING POWER OF EACH LUMINAIRE BY AT LEAST 40% BUT NO MORE THAN 80% OR PROVIDE CONTINUOUS DIMMING THROUGH RANGE OF 40%-80% DURING VACANT PERIODS.
4. SWITCH ON AUTOMATICALLY WHEN AREA IS OCCUPIED.

EXCEPTIONS:
1. POLE MOUNTED LUMINAIRES WITH A MAXIMUM OF 75W.
2. NON-POLE MOUNTED LUMINAIRES WITH A MAXIMUM OF 30W.
3. LINEAR LIGHTING WITH A MAXIMUM OF 4W PER LINEAR FOOT.

BUILDING FACADES, ORNAMENTAL HARDSCAPE, OUTDOOR DINING AREAS:

ONE OR BOTH OF THE FOLLOWING REQUIRED:
1. MOTION SENSORS REDUCING LIGHTING BY 40% BUT NO MORE THAN 80% DURING VACANT PERIODS.
2. CENTRALIZED TIME-BASED ZONE LIGHTING CONTROL CAPABLE OF REDUCING LIGHTING POWER BY AT LEAST 50%.
3. WALL PACKS - BOTTOM OF LUMINAIRE MOUNTED ≤ 24' ABOVE THE GROUND.

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LIGHTING FIXTURE SCHEDULE

LT0.0

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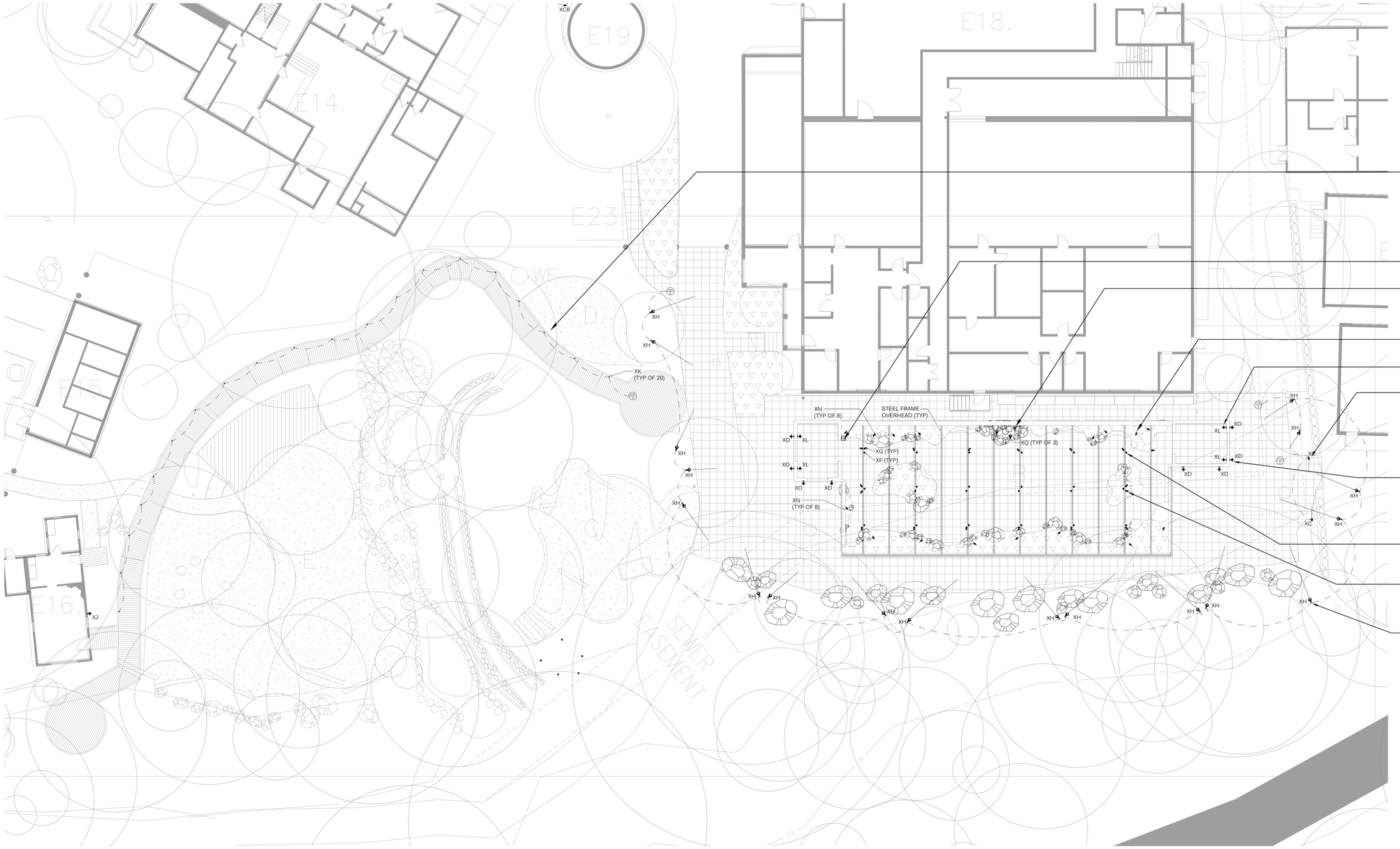
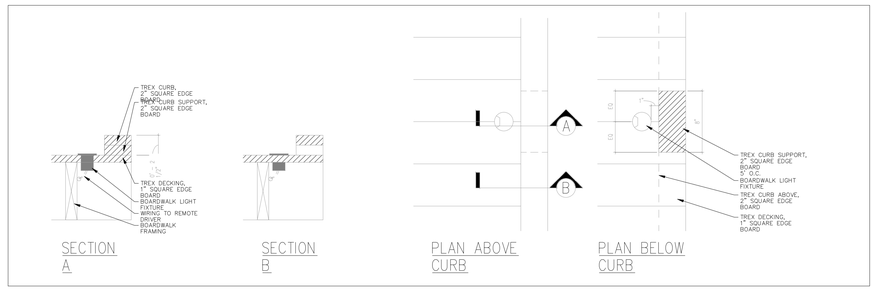


1 LT1.10 SITE PLAN - A

3/32" = 1'-0"



2 LT1.10 BOARDWALK MOUNTED PATHLIGHT DETAILS

1-1/2" = 1'-0"

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SITE PLAN - A

LT1.10

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1 LT1.10 SITE PLAN - A

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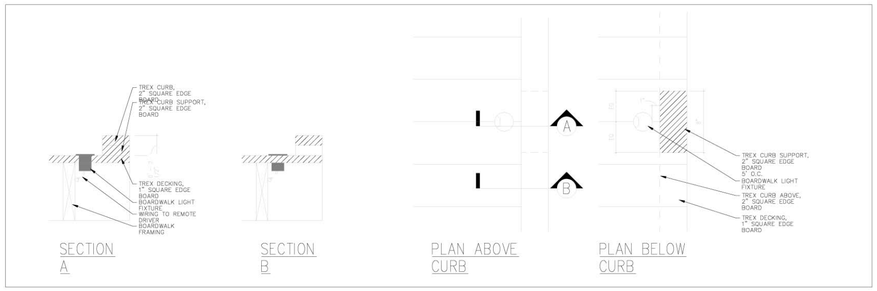

2 LT1.10 BOARDWALK MOUNTED PATHLIGHT DETAILS

1-1/2" = 1'-0"

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SITE PLAN - A
NIGHT TIME RENDERING

LT1.10N

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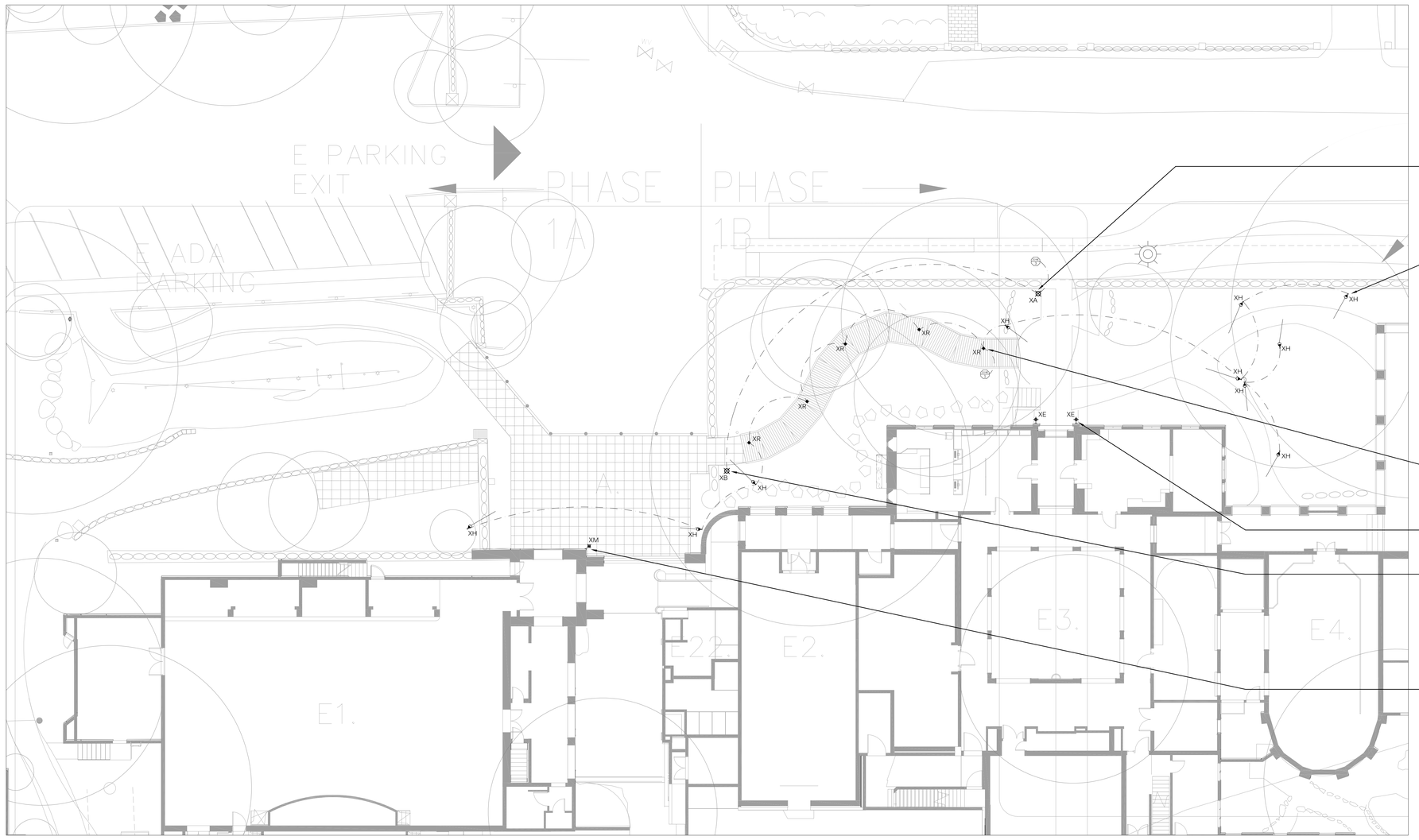

1 LT1.11 SITE PLAN - B
3/32" = 1'-0"

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SITE PLAN - B

LT1.11

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1 LT1.11 SITE PLAN - B

3/32" = 1'-0"

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SITE PLAN - B

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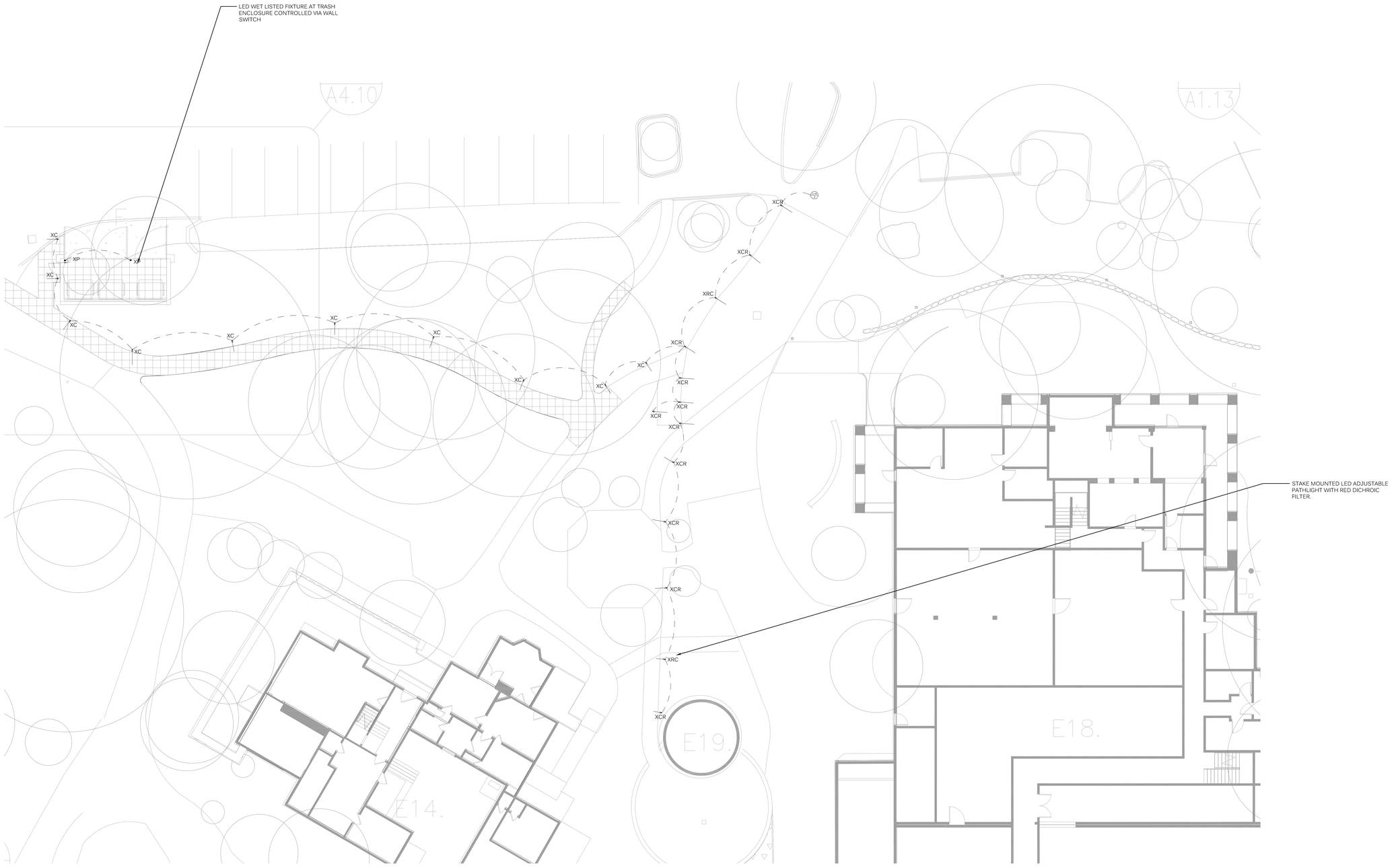

1 LT1.12 SITE PLAN - C

3/32" = 1'-0"

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SITE PLAN - C

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1 LT1.12 SITE PLAN - C
3/32" = 1'-0"

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SITE PLAN - C

LT1.12N

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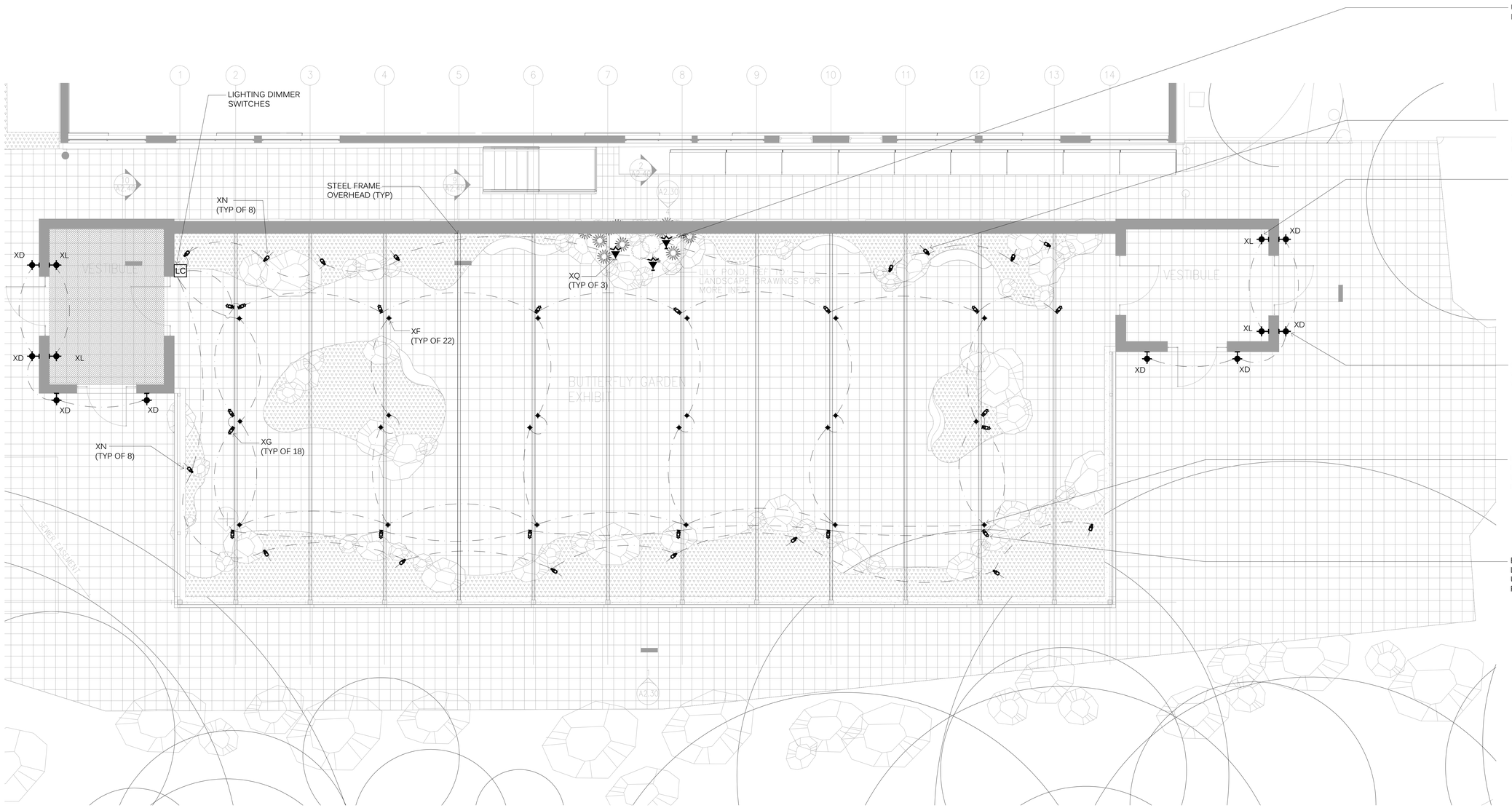

1 LT2.20 BUTTERFLY GARDEN EXHIBIT - FLOOR PLAN & RCP - LIGHTING WITH CONTROL INTENT

1/4" = 1'-0"

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BGE FLOOR/RCP - LIGHTING

LT2.20

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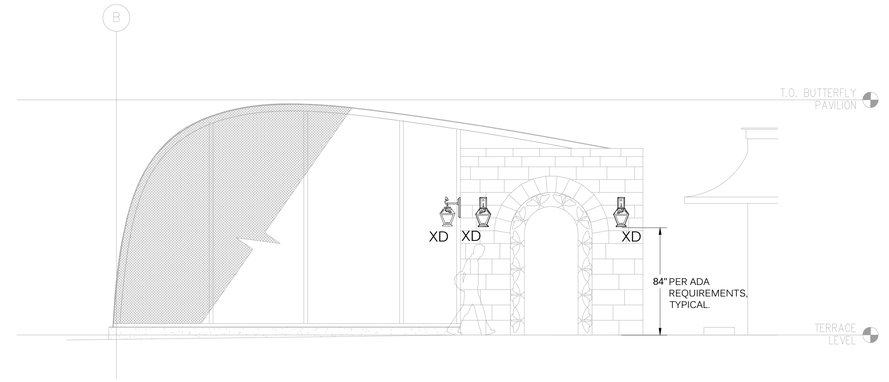
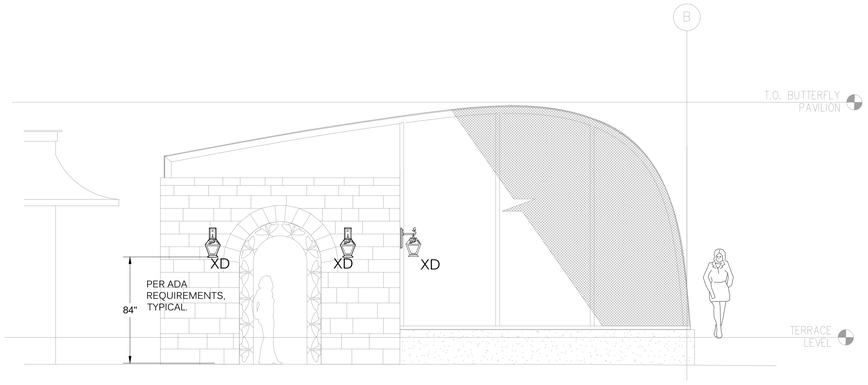


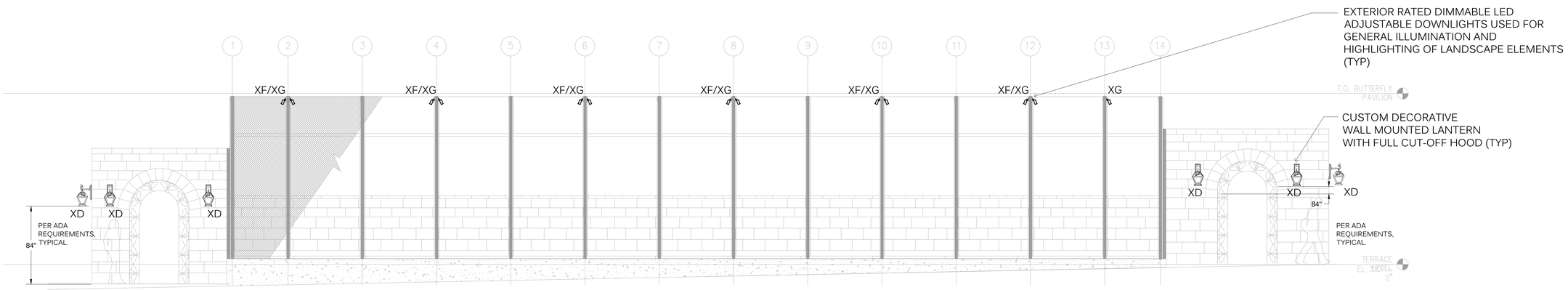
3 LT2.30 BUTTERFLY GARDEN EXHIBIT - EAST ELEVATION - LIGHTING

1/4" = 1'-0"



2 LT2.30 BUTTERFLY GARDEN EXHIBIT - WEST ELEVATION - LIGHTING

1/4" = 1'-0"



1 LT2.30 BUTTERFLY GARDEN EXHIBIT SOUTH ELEVATION - LIGHTING

1/4" = 1'-0"

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BGE ELEVATIONS - LIGHTING

LT2.30

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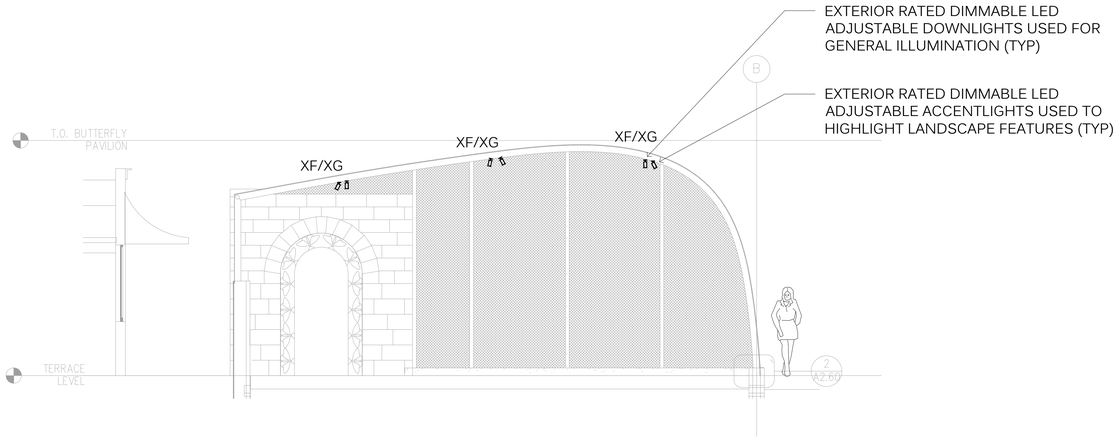
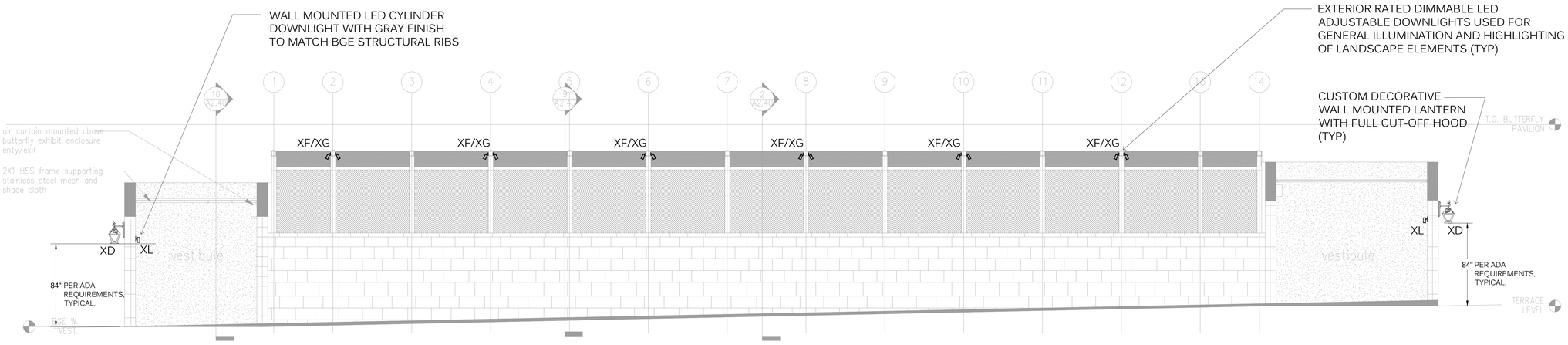


2 LT2.40 BUTTERFLY GARDEN EXHIBIT - NORTH/SOUTH SECTION - LIGHTING

1/4" = 1'-0"



1 LT2.40 BUTTERFLY GARDEN EXHIBIT EAST/WEST SECTION - LIGHTING

1/4" = 1'-0"

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BGE SECTIONS - LIGHTING

LT2.40

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Soft Lighting within Landscape

• Exterior light fixtures are mounted within landscape, tree canopies and foliage to hide light source.

• Warm white color temperature of light for harmony with semi-rural environment

• LED light source for sustainability and low maintenance

• Dark Bronze finish to blend into natural setting

• All light directed at pathways or walls, zero uplight and spill light

Moonlight Concept Sketch

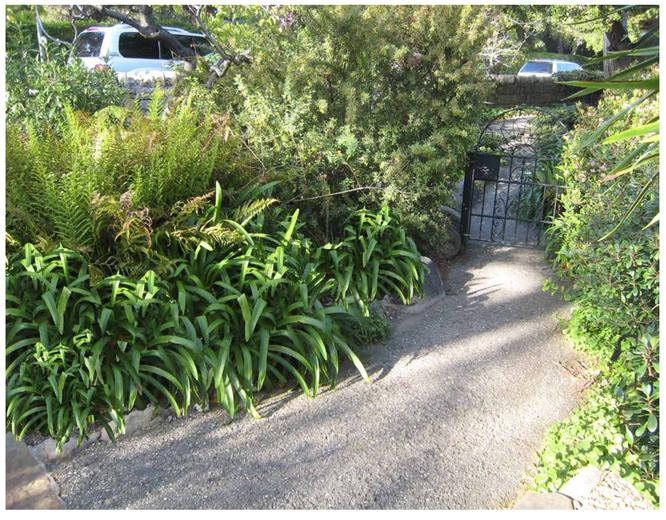
Fixture Type XH: Strap Mount

Fixture Type: XR: Ring Mount

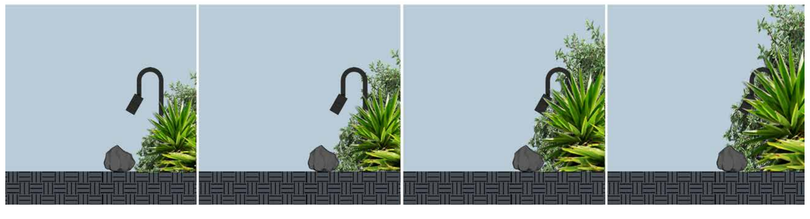
Path Light Concept Sketch

Fixture Type XC: Path Light

Type XC Hi-lighted to show fixture in landscape



Type XC shown hidden in landsacpe



Over time, the vegetation will grow to surround and conceal Type XC Path Light

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Exterior Lighting Techniques

LT-3.0

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Butterfly Garden Exhibit - Interior

Soft Lighting mounted to sctructural ribs and located within Landscape

Light fixture types XF and XG:

- •Mounted to the vertical faces of the ribs to provide gentle illumination of the the space and accentuate natural elements
- • Warm white color temperature of light for harmony with semi-rural environment
- • LED light source for sustainability and low maintenance
- • Low heat output to prevent harm to butterflys
- • Finish to match rib structure

Light fixture type XN

- •Hidden within foliage to wash tree canopies
- • Dark bronze finish to blend in shadows
- • Ultra low wattage led for sustainability, low maintenance and glare reduction

Light fixture type XQ

- •Hidden within lily pond
- • Ultra low wattage led for sustainability, low maintenance and glare reduction

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2559 Puesta Del
SolSanta Barbara, CA

Principal VT
Project Manager HS
Drawn By HS
Reviewed By
Job No.
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BGE Interior

LT-3.1

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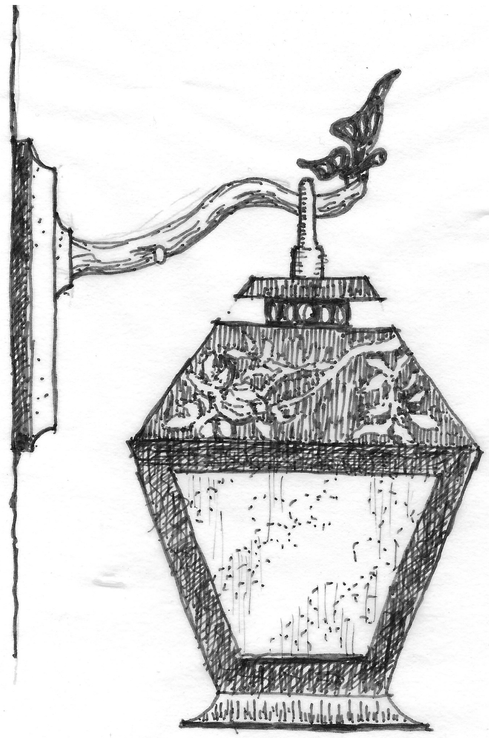
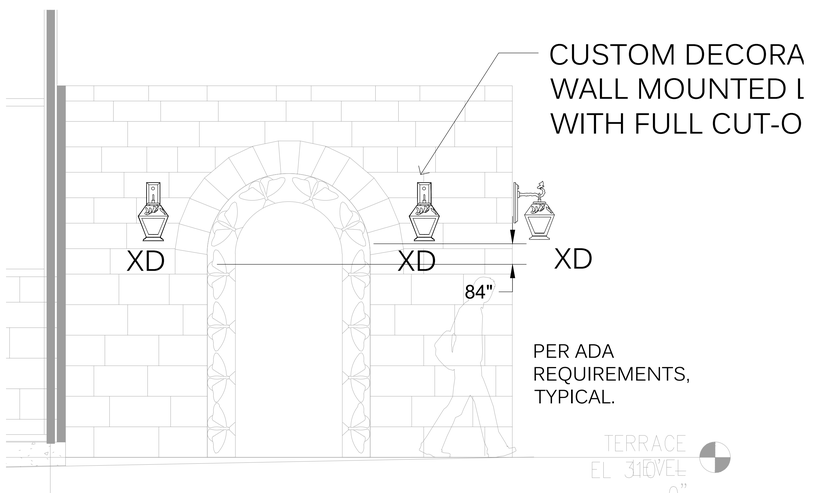
BGE Lantern - Side View



BGE Lantern - ISO View

Butterfly Garden Exhibit Lantern

- Handforged wrought iron construction by local craftsmen **Haans Duus**
- Warm white color temperature of light for harmony with semi-rural environment
- LED light source for sustainability and low maintenance
- Natural finish to patina over time
- All light directed downward
- Wrought Iron embossed motif on lantern cap with natural elements featuring leaves & branches
- Diffused fish scale glass to echo glass used in Owl Lantern
- 7.5"w x 18.5"h x 10.5"d
- Backplate is approximately 8" x 5"



SCALE: 1/2"=1'

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BGE Lanterns

LT-3.2

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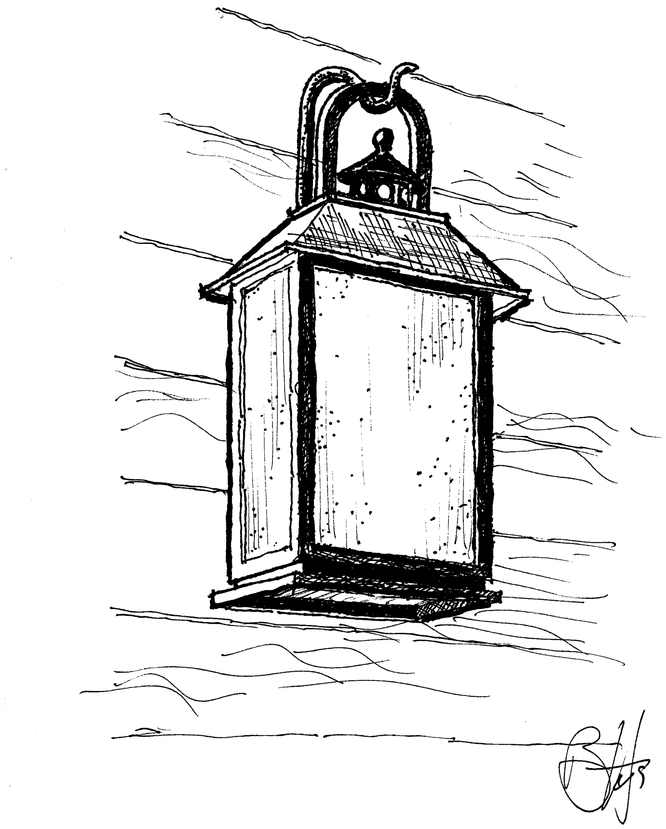
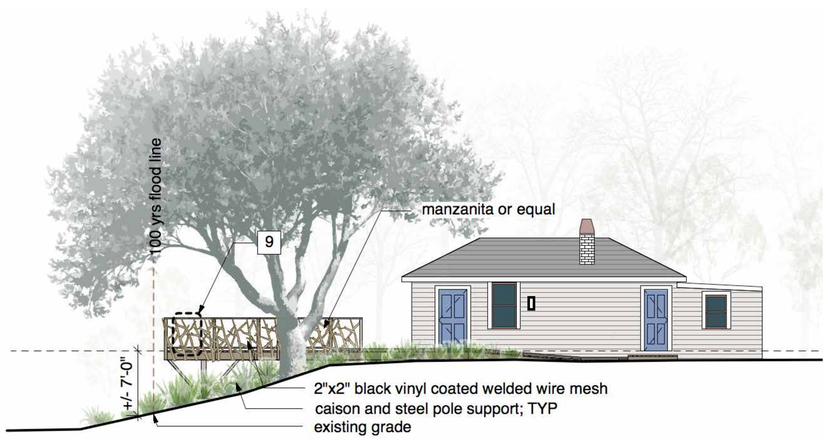
MacVeagh Cottage Lantern



MacVeagh Cottage Lantern

- Handforged wrought iron construction by local craftsmen ***Steve Handleman***
- Warm white color temperature of light for harmony with semi-rural environment
- LED light source for sustainability and low maintenance
- Natural finish to patina over time
- Diffused glass
- 6.5”w x 16.5”h x 8.5”d



Design Inspiration taken from architectural style of MacVeagh Cottage at Backyard

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MacVeagh Lantern

LT-3.3

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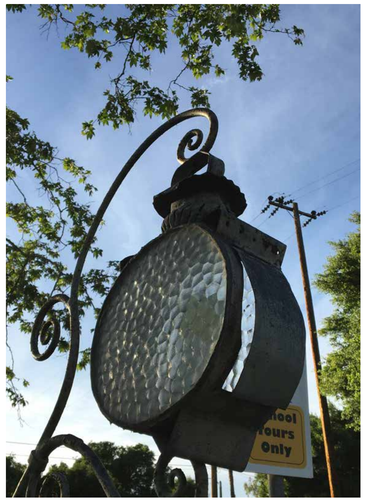
Entry Rendering showing refurbished corner mount fixture, Type XM



EXISTING LANTERNS CURRENTLY LOCATED THROUGHOUT THE MUSEUM EXTERIOR

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Entry Rendering & Existing Fixtures

LT-3.4

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