Glen Cove Waterfront Park Master Plan

August 2007

Prepared

Greater Vallejo
Recreation District

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with:

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Glen Cove Waterfront Park
Master Plan

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1.0 INTRODUCTION AND PLAN SUMMARY

Background and Setting

The Greater Vallejo Recreation District (GVRD) is a special service district that was formed on July 14, 1944 as the result of an election by the people within the Vallejo Township. In 1945, GVRD began operations to serve the community of Vallejo with recreation programs, parks, open space, and facilities. GVRD is governed by a five-member Board of Directors, who are appointed for four year terms. GVRD provides park and recreation services to over 121,000 people. Funding for operations and maintenance comes primarily from property tax revenues collected by Solano County.

Glen Cove Waterfront Park is a fifteen acre site located in southern Vallejo, on the north side of the Carquinez Strait (see Figure 1). It is on the southern edge of the large Glen Cove residential development. GVRD purchased the site in 1983 using park facilities fees from development, with the intent to improve it as a community park. It was deeded to the City of Vallejo and included in the master lease between the City and GVRD. The site has a unique natural character, with its protected waterfront cove, views to the wooded southern shore, stately eucalyptus trees, and intimate relationship to the residential neighborhoods on the surrounding hills. A current feature of the site is the Stremmel ”mansion”, or main house, a two-story 1920’s era structure located in the central portion of the site.

The park site is significant to the greater Vallejo region due to its history, unique setting and natural amenities. It is a crucial link in two regional trail systems that will connect public open space and park lands on both sides of the Carquinez Strait, and around all of San Francisco Bay. The site is important to the local Glen Cove community because it is directly adjacent to two residential developments, and serves as their primary viewshed. Several neighborhoods overlook the site, and many more are within walking distance. Vehicular access to Glen Cove Waterfront Park from Highway 780 includes Glen Cove Parkway, South Regatta Drive, and Whitesides Drive, the cul-de-sac that serves as entry road to the park.

Immediately to the north of the park site are two multi-family residential areas, east and west of Whitesides Drive. To the east, the park is adjacent to a narrow waterfront parcel owned by PG&E, above which are single-family homes on South Regatta Drive. Beyond the PG&E parcel is Benicia State Recreation Area, commonly referred to as Benicia State Park. The State Park includes land on the eastern shore of Glen Cove, and stretches around Dillon Point into Southampton Bay, where it connects to waterfront residential areas in the City of Benicia. To the south, the park includes approximately 1500 lineal feet of waterfront along scenic Glen Cove on the Carquinez Strait. On the opposite (southern) shore of the Strait to the southeast are park and open space lands of the East Bay Regional Park District in Carquinez Strait Regional Shoreline, and to the southwest, the city of Crockett and the historic and still-operating C&H Sugar plant. Further west, bridging the Strait is the Carquinez Bridge including the recently-dedicated Al Zampa Memorial Bridge – a graceful suspension structure. Adjacent to the site to the west is dedicated open space land of the City of Vallejo, overlooked by a gated ridgetop housing development.

Figure 1: Regional Location Map

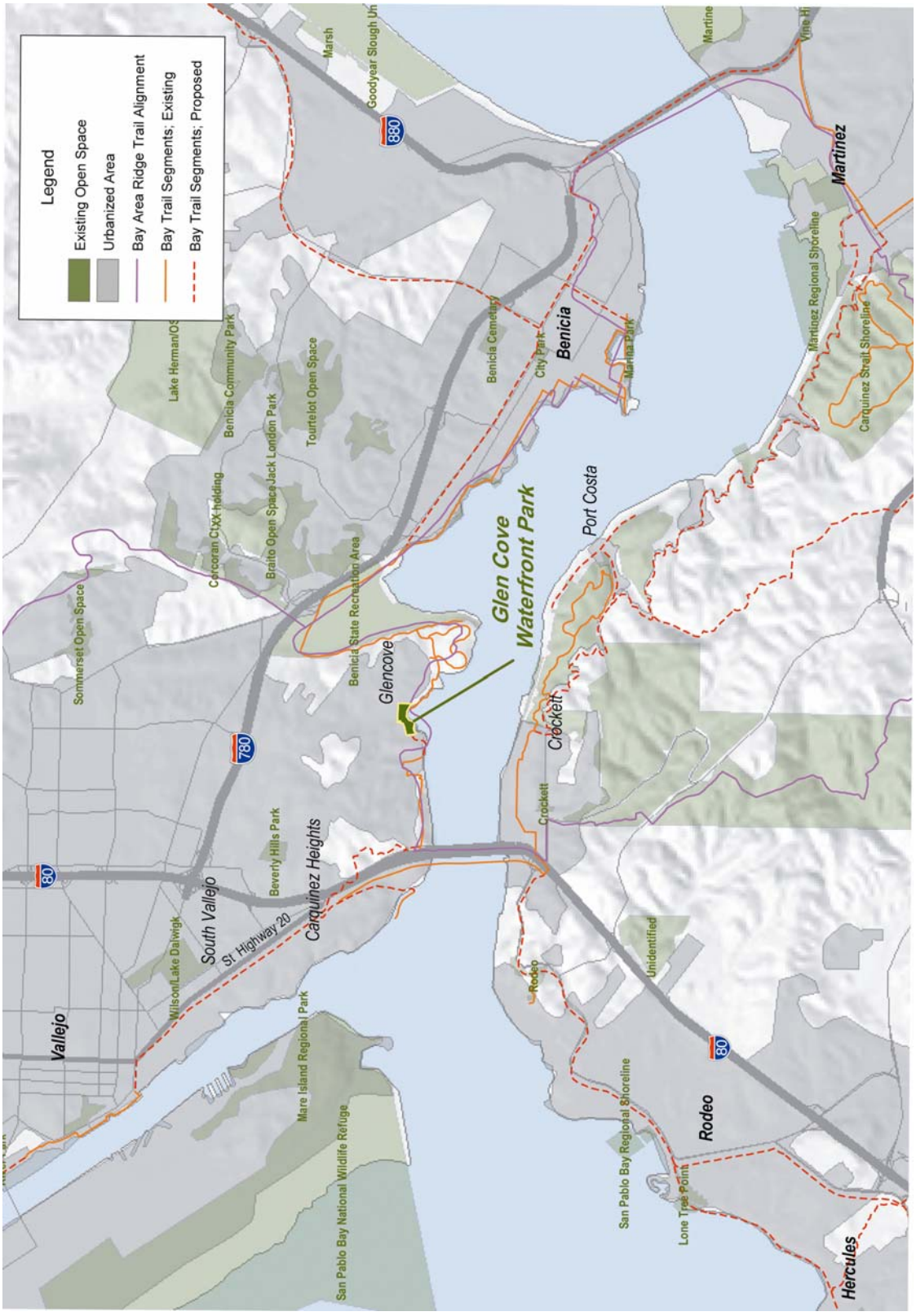


Figure 2: Site Vicinity Map

The former Stremmel residence is a key feature of the site and an issue for the master plan. The structure has been vacant for many years, while the adjacent small cottage is occupied by a caretaker who protects the main house from vandalism. GVRD does not have the financial resources to restore, operate or maintain the building. In the past, residents of Vallejo, and Glen Cove in particular, campaigned for preservation of the main house, but there was no significant interest in its preservation during the current master planning process.

The site features naturalized non-native grasslands, hillsides dominated by invasive, non-native fennel, riparian and waterfront areas with native plants, and mature eucalyptus and other introduced trees along the waterfront and around the main house. A portion of the waterfront in the center of the cove is documented as a "highly-sensitive, protected archeological zone" due to evidence of Native American use. The immediate grounds surrounding the house are documented as significant archeological resources due to the presence of "midden" or shell mound material indicating a long-term Native American occupation.

In 1988, shortly after GVRD acquired the site, a Master Plan Report was prepared for the park.[1] This report envisioned a significant level of use and improvement of the site, including renovation of the Stremmel main house for use as a center for small public and private events, approximately 145 parking spaces, two restroom buildings, a concessions building and formally improved plaza and landscape spaces. Since that time GVRD has determined that a much lower intensity of development and access is desired, focusing on preserving and enhancing the quiet natural beauty and waterfront open space character of the site.

The site is designated as Waterfront Commercial in the City of Vallejo General Plan, and is zoned as Public Facility. The 1999 General Plan noted

[1] Glen Cove Park, Vallejo, California, Master Plan Report, Amphion Environmental, Inc., November 1, 1988.

that Public Facility is “clearly compatible” zoning district in the Waterfront Commercial land use category. Conforming uses under this zoning would be public park improvements and related facilities. Because residential use has occurred continuously on the site, residential use of the main house and caretaker’s residence is “grandfathered” as a non-confirming use. A commercial use of the site would require rezoning.

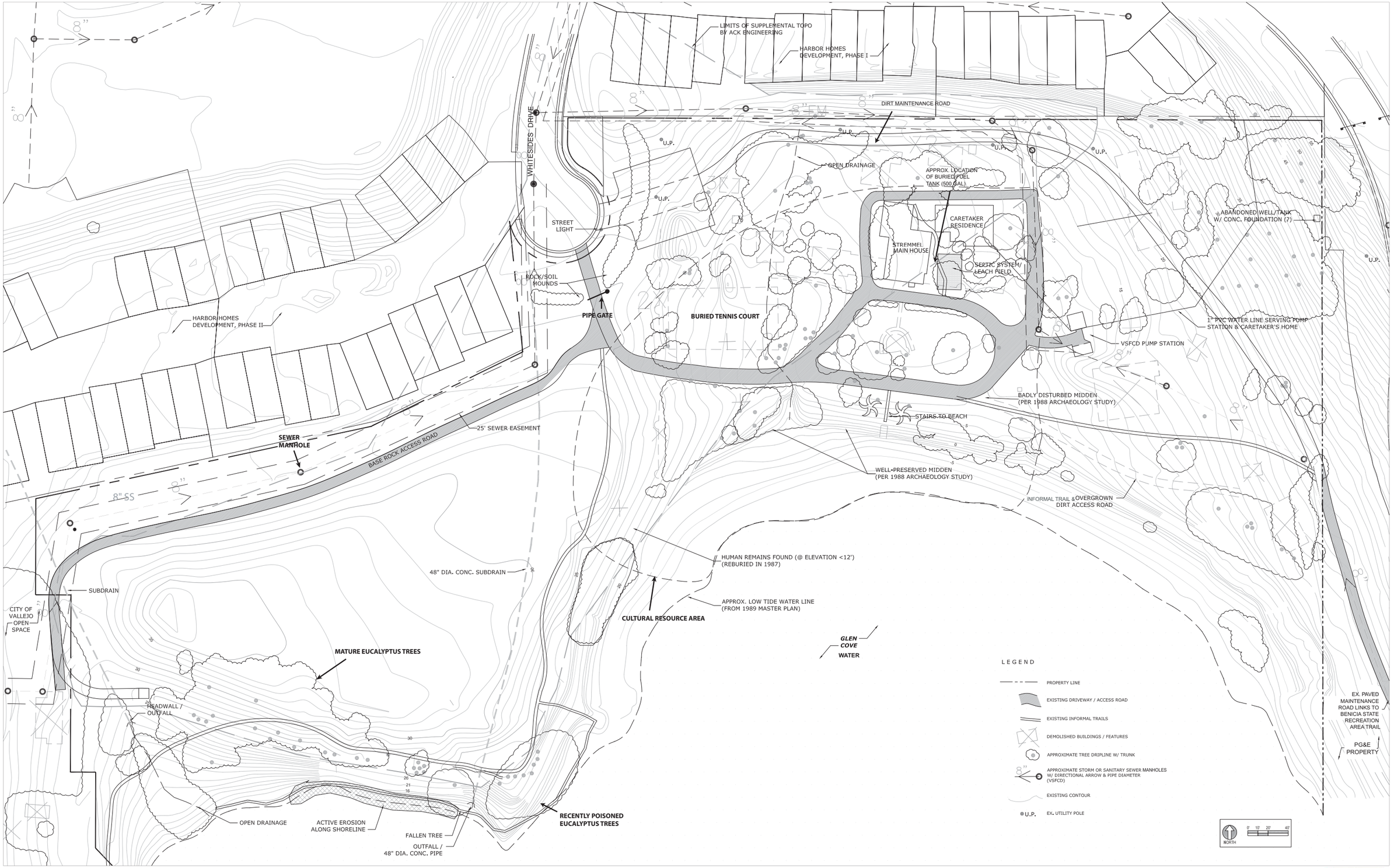
The San Francisco Bay Conservation and Development Commission (BCDC) is a state agency that promotes environmental protection and public access. BCDC has jurisdiction over the waters and shoreline of the Bay and a 100’ band beyond the shoreline. BCDC published a Bay Plan in 1968 to provide a general vision of the use and improvement of the Bay. The Plan has been regularly amended and updated. The map of the Vallejo area, last amended in 2002, shows the Glen Cove site as a “waterfront park and beach” and includes a policy statement for the Carquinez Strait Shoreline: “Continuous public access should be provided along the bluff top and shoreline of Carquinez Strait and views of the water from shoreline vista points should be preserved.” The park Master Plan is consistent with the Bay Plan goals and policies.

Regional Trail Systems

The San Francisco Bay Trail and the Bay Area Ridge Trail are two regional trail systems that have long planned a shared trail alignment through the site.

The San Francisco Bay Trail Project. In 1987, then-state Senator Bill Lockyer conceived of a plan for a so-called "Ring around the Bay," a hiking and bicycling trail that would encircle San Francisco and San Pablo bays, ideally as close to the water as possible. He authored Senate Bill 100 (SB 100) authorizing the Association of Bay Area Governments (ABAG) to "develop and adopt a plan … for a continuous recreational corridor which will extend around the perimeter of San Francisco and San Pablo bays." SB 100 required that the plan include a specific trail route; the relationship of the route to parks and other recreational facilities; links to existing and proposed public transportation facilities; an implementation and funding program for the trail; and provisions for implementing the trail without adversely affecting the natural environment of the bay. The Bay Trail Plan was adopted by ABAG in July 1989, and its policies and proposed alignment continue to guide the development of the Bay Trail. The San Francisco Bay Trail Project, a nonprofit organization administered by ABAG, was created in 1990 to plan, promote and advocate implementation of the Bay Trail. To date, slightly more than half the Bay Trail’s ultimate alignment—approximately 250 miles—has been developed.

The Bay Area Ridge Trail. Founded in 1987, the Bay Area Ridge Trail Council is a non-profit volunteer-driven organization working to create a 400 mile ridgeline trail system connecting the Bay Area's greenbelt of parks and open spaces with its communities. Upon completion, the Ridge Trail will connect 9 counties and serve 100 communities. The efforts of the organization to date have resulted in the dedication of over 215 miles of Ridge Trail. In the study area the Ridge Trail alignment is shared with the Bay Trail alignment until such time as the ridgeline connections can be completed.



LandPeople

GLEN COVE WATERFRONT PARK MASTER PLAN

LandPeople, landscape architects & planners

FIGURE 3: Existing Park Conditions

GVRD

Goals of the Current Master Plan

The Master Plan for the Glen Cove Waterfront Park site addresses two parallel goals so that a compatible balance is achieved:

1. Recognize and protect an important indigenous settlement and burial site. The site was an important settlement of indigenous people for thousands of years. It is unique in sharing presence of both Bay Area and Central Valley tribes. Officially designated as territory and remains of the Patwin tribe by the California Native American Heritage Commission, the site is considered a sacred burial site by people of many tribes, and is well documented as an important archaeological site.

2. Implement a public waterfront open space park. The site is dedicated public park land, shown on maps and available for public use for fishing, trails, water access and informal picnics and play for many years. It was purchased with park facilities fees by Greater Valley Recreation District (GVRD) with the intention that it be improved as a public park. Based on GVRD staff direction and changes in community opinion since the 1988 Park Master Plan was prepared, it is now intended that the park be improved only for low-intensity, natural type recreational uses (e.g. no formal sports facilities or major recreational improvements).

Both goals for the site are valid and share many common concepts – particularly the restoration of the site to a more natural condition, and the active participation of local people in taking care of it. The primary objective of this Master Plan is to find the best balance between these two goals in the preservation and form of a more natural site.

The Planning Process

This Master Plan was prepared by LandPeople, landscape architects and planners, of Benicia, California. LandPeople led a multi-disciplined team of consultants to study and plan the site and prepare a document to address the California Environmental Quality Act (CEQA). The environmental planning firm Michael Kent & Associates was responsible for preparation of the CEQA document.

Preparation of this current plan involved extensive public outreach and participation efforts. An initial public workshop was held on November 13, 2004 at the site. This covered the background, scope and objectives of the Master Plan and collected ideas and opinions on park use and improvement. On January 27, 2005 a presentation was made to the GVRD Board of a draft Request for Proposals (RFP) intended to elicit potential uses of the Stremmel main house. This meeting included public comment on the use of the building and the surrounding site. The RFP was issued by GVRD on February 15, 2005. Its availability was widely noticed to the local and regional press, in real estate publications and internet sites, on GVRD's web site, and to the list of persons living near or interested in the park site.

Due to the high level of interest in the site from the Vallejo Intertribal Council and other Native American groups and individuals, a workshop specific to cultural resources was held on April 25, 2005. Based on information provided by the Vallejo Intertribal Council

and the Native American Heritage Commission, many Native American tribes and individuals were notified of this meeting, particularly those known to be concerned about the site.

Proposals in response to the Stremmel House RFP were due on May 18, 2005. At a meeting of the GVRD Board on June 6, 2005 the results were reviewed and a preliminary finding made by the Board that there were no responsive proposals for use of the structure, and that planning should proceed based on the premise that the structure would be demolished. Initial plan concepts and options were presented by LandPeople at a public workshop before the GVRD Board on August 25, 2005.

Technical studies were completed during this period to provide a sound basis for Master Plan decisions. A Summary of Cultural Resources Research (Appendix C) was prepared by Holman & Associates, Archaeologists. This was later supplemented by field sampling to more accurately determine the boundaries and condition of the cultural resource deposits. Finally, in response to comments on the Draft EIR, a third phase of archaeological testing was completed in May, 2007 involving deeper geoprobe borings of the western portion of the site and review by a geo-archaeologist to determine the presence of cultural resource deposits. These studies supported the previously-established boundary of the cultural resources area as depicted in the Master Plan.

A Biological Constraints Assessment (Appendix D) was prepared by The Environmental Collaborative to establish a baseline for protection and restoration of natural resources on the site. A Geotechnical and Geological Evaluation (Appendix E) was prepared by Kleinfelder, Inc. to evaluate geological conditions and make recommendations for appropriate shoreline erosion protection measures. Due to the decision to demolish the former Stremmel house, the infestation of the site by invasive exotic trees and plants, and the consensus to return the site to a more natural condition, the scope of the project was expanded to include a Vegetation Management and Habitat Restoration Plan (Section 3.0) prepared by The Environmental Collaborative.

The Draft Master Plan was presented at a public hearing before the GVRD Board on March 9, 2006. The Master Plan was revised based on comments and published for public review and formal environmental analysis in August, 2006. A draft Environmental Impact Report (EIR) on the Master Plan was published in December 2006, and a public meeting to receive comments was held by the GVRD Board on January 11, 2007. The required 45 day comment period on the Draft EIR ended January 17, 2007. A GVRD Board meeting and study session was held on July 18, 2007 to review results of the third phase of cultural resource studies, hear public comments on the Master Plan, and direct final adjustments to the Master Plan. At a hearing before the GVRD Board on September 27, 2007, the EIR was certified as final and the Master Plan was adopted.

Master Plan Summary

The primary objective of the Master Plan is to return the site to a more natural condition. The Master Plan calls for re-contouring the western portion of the site to more natural topography, and protection of the cultural resources from disturbance during demolition of the Stremmel main house and thereafter by placement of a layer of soil over the area. This earthwork supports a parallel effort to remove the invasive exotic species that have taken over the main house/cultural resources area, and impacted virtually all areas of the site. Placement of natural stone shoreline protection along two portions of the site is another work element that would be completed during initial operations. All work within the cultural resource area and a 50' buffer around it would be overseen by archaeological consultants and designated Native American representatives to ensure that the resources are protected.

The earthwork and removal of much of the existing vegetation may seem to some parties to be counter to the goals of maintaining the site in a natural condition, and even to protecting the cultural resources. However, the site has been severely adversely impacted by recent human actions. Its value has been compromised as natural habitat, and as a low-intensity nature park. The current vegetation is not representative of the environment when native people occupied the site or even when it was farmed. It took significant actions and a long period of time to cause the site to be in its current condition. It will take a significant and carefully-planned effort to give it a sound start toward restoration to a more natural and useful condition. Long-term, if not perpetual, follow-up by paid contractors and/or resource management organizations and volunteers will be required to implement the vision of a more natural and stable site. This unique site is worth the effort because it connects to other important wildlife habitat areas, has unique cultural history and resources that should be protected and respected, and has special environmental and scenic qualities that allow the visitor a sense of what the Greater Vallejo region was like in centuries past.

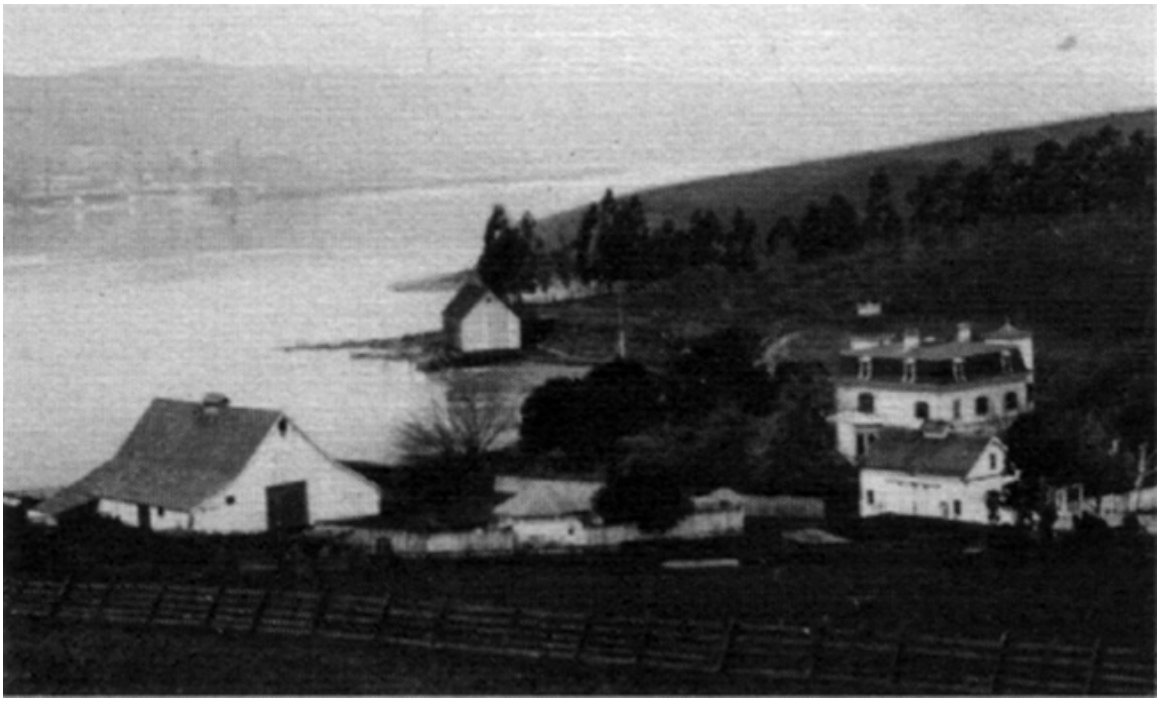
Proposed visitor-serving improvements for the park are suitably modest. Some existing service roads or driveways that access the main house, caretaker's house and sewer and electric facilities will be maintained or have minor improvements and will double as trails. Existing informal trail routes will be improved either as rock-surfaced trails 5' wide along the waterfront, or as a paved 12' wide connection in the regional S.F. Bay Trail and Bay Area Ridge Trail system. Other existing roads that served the main house would be broken in place, buried, and re-seeded to restore a natural condition.

A small 15 car parking area and a single restroom will be provided to support use by visitors who don't live near the site. A small number of individual picnic tables and benches will be provided, mostly along the shoreline. All native trees on the site, including willows along the creeks and some trees planted in the main house/cultural resource area, will be preserved. Ornamental trees that are healthy and not threatening to invade other areas will be preserved, at least until a native landscape is more fully established. A native landscape will be established by seeding native grass and wildflowers, and planting native tree and shrubs. At the park frontage on

Whitesides Drive, a more ornamental landscape emphasizing native plants will be planted to complement the adjacent residential landscapes. Along the now-barren northwest portion of the site, additional native tree and shrub plantings will be added. These plantings, and the frontage plantings will be sustained by drip irrigation, at least during establishment, while other areas will depend on natural precipitation.

A secondary objective of the Master Plan is to close out the more recent chapter of European settlement and use of the site. This settlement and agricultural use existed since at least 1857, originally a farm or ranch, then a “pleasure resort” with dance hall and beer garden in the late 1800s, and more recently, up until development of the surrounding area in the 1980’s, a dairy farm, with a large Victorian home formerly occupying the site of the present Stremmel main house, and many other structures that have since been demolished. The use of the site for agriculture has long ended, and all evidence is gone, as is the “pleasure resort.” Based on its poor condition, lack of interest in economic use, and conflict with the other site purposes, the decision was made to demolish the Stremmel main house. The caretaker’s residence is also recommended to be demolished based on its adverse presence in the cultural resource area, and the initial and on-going costs of repairing and maintaining the structure and support systems.

The Bailey sisters, early residents, in front of the house that pre-dated the current structure.



Glen Cove in the 1890s, looking southwest

Glen Cove vicinity, 1960s? looking west

Glen Cove vicinity, 1960s? looking north

Glen Cove vicinity, 1960s? looking south

Glen Cove in 1985, just prior to development

2.0 SITE USE AND IMPROVEMENT ELEMENTS

The following Master Plan elements are shown on the Master Plan, Figure 4, with letters and numbers keyed to the text. These improvement and restoration elements have been selected to help balance park and archaeological resource goals.

A. Cultural Resource Area

The area around the Stremmel main house, and the area adjacent to a small perennial stream, is well documented as an archaeological site that still contains human remains and is sacred to many people (see Area A on Figure 4). Descendants of indigenous people, especially representatives of those tribes who are known to have occupied the site, have been and should continue to be directly involved in planning and managing the archaeological resource area, and determining the protection and disposition of encountered remains and artifacts, consistent with state and federal law. Other areas of the site have not been shown to contain resources or remains, or have been so extensively re-graded at previous times as to preclude this.

Actions:

1. Protect the human remains and artifacts from disturbance.
    a. Define a protection area as shown on Figure 4, including a 50' buffer around the area as recommended by the Project Archaeologist. No construction or other activity involving significant disturbance of the soil shall occur in the protection area and buffer as part of the Park improvements, or as part of work by others (e.g. the Sanitary District), without consultation with a qualified archaeologist to ensure that the cultural resources are properly protected (see Section 4.0, Park Management Guidelines, for more information).
    b. Remove the existing invasive exotic plants (primarily elms and tree-of-heaven) by cutting off at ground level and painting stems with approved herbicide. No digging or ground disturbance will be allowed (see Section 3.0, Habitat Restoration, for more information).
    c. Place a protective layer of approximately 12" of soil over the resource area (see Section 2.0, H, regarding site grading for more information). This soil layer will protect the cultural resources from disturbance during the demolition of the Stremmel main house, and during subsequent use of the site by the public, and will allow planting of seedlings for restoration of native habitat without disturbing the native soil, and installation of sign bases. No sign or fence post holes shall be allowed to penetrate into the native ground under the soil cap.
    d. Mark the archaeological resource area boundary with signs at all points of entry (see Sign Program in Section 2.0, E), and at the perimeter with natural materials such as stones or native plants.
    e. Provide signs informing the public of the fact that the area was a significant site of Native American dwelling and trading, that remains of

those people are buried on the site, and that it is considered sacred by many people. Encourage recognition and respect for its status.

2. Restore native vegetation to the site. (see Section 3.0 for more detail).
    a. Seed and plant native species to restore the area to a more natural conditions with methods that don't disturb the original soil.
    b. Involve indigenous people and local residents in planning and implementing the restoration effort.
3. Encourage understanding and respect for the history of the site's use by indigenous people, their near-extermination, the presence of human remains, and the importance of the site to indigenous people today.
    a. Provide interpretive plaque(s) that describe the pre-historical and historical significance of the site to indigenous people and more recent residents:
        - Who lived and traded here;
        - How they lived;
        - Impact of the Spanish/Mexican and American conquest;
        - Specific records of events (e.g. journal of Father Ramon Abella, reproduced in Archaeological report for 1988 Master Plan);
        - History of European use – 1850 – 1980s)
    b. Accommodate low intensity use:
        - Preserve clearing for ceremonies, gatherings;
        - Provide benches, tables, per standards described in Section 2.0, D).
    c. Other compatible features or activities to be determined through future public interest/participation and grant availability (e.g. Interpretive installations, docent interpretation, religious ceremonies, a re-created village – see examples of other park sites with indigenous archaeological resources in Appendix A.

B. Stremmel Main House and Caretaker's Residence

The main house could be considered historic, but has not been formally determined at this time. The main house and associated structures were described, mapped and evaluated in detail in an appendix to the 1988 Master Plan.[2] The current Master Plan process included an extensive process to solicit use proposals (described in Appendix A), however no responsible use proposals were received. GVRD does not have resources to improve and maintain the main structure, and there has been general support for and no protest against, demolition of the main house during the public review process. The structure is built on top of and conflicts with the cultural resources protection area. Demolition of the structure requires use of large equipment that could disturb the archaeological resources, unless protection is provided through careful planning and a protective layer of soil. No information or opinion has come to light that identifies the main house as historically significant, though the site may be significant in historic times, as well as prior to the advent of the Spanish. Before the main house

2 Stremmel Mansion Assessment, Amphion Environmental, Inc. and G.F.D.S. (Structural Engineers?), April 1988 (Appendix to 1988 Master Plan).

is demolished, steps are recommended below to thoroughly document its features and setting.

The caretaker's residence is a single story concrete block structure with approximately 1600 to 1800 square feet; 2 bedrooms, 1 bath, a kitchen, living room, work room and fireplace. The residence is described in more detail in the appendix to the 1988 Master Plan. Some significant repairs would be needed if the caretaker's residence is to remain in service:.

- Connect the residence to nearby sewer line (this work would need to be performed under the supervision of a consulting archaeologist and Native American representative).
- Test walls from exterior to determine reinforcement; add reinforcement if necessary.
- Inject grout in cracked concrete block house and garden walls.
- Inspection and potential upgrade of wall to roof framing connection (requires removal and replacement of interior wall finish).
- Repaint inside and out.

The caretaker's residence is not a valuable structure in its own right, and has the above needs for repair and maintenance. The presence of a caretaker at the park potentially could have benefits for security, maintenance, and even restoration and interpretation efforts. However, the caretaker's residence is located in the cultural resources area and could have an adverse impact on the protection of and respect for these resources.

Actions:

1. Demolish the Stremmel main house
    a. Thoroughly document the features of the house and setting with photos, notes, and measurements for historical records. Collect available historic photos, maps, accounts and other records into a file to be provided to GVRD, the City of Vallejo, the Vallejo Historical Society and other interested parties, and for reference in preparing interpretive signs and materials.
    b. Assess the structure for the presence of any lead or asbestos materials and have them removed by a qualified contractor.
    c. Demolish the main house using conventional demolition techniques and equipment, but with careful specifications and controls to avoid disturbance of cultural resources, including placement of a protective layer of soil on the ground around the structures.
    d. Break, but do not remove, any paving at the bottom of the basement to allow drainage.
    e. Fill in the basement with soil in compacted layers to prevent a hazard to park users.
    f. Plant native plants over the area to restore to a more natural condition, as described in Section 3.0.
2. Demolish the Caretaker's Residence.

a. Assess the structure for the presence of any lead or asbestos materials and have them removed by a qualified contractor.
b. Demolish the structure using conventional demolition techniques and equipment, but with careful specifications and controls to avoid disturbance of cultural resources, including placement of a protective layer of soil on the ground around the structures.
c. Break and remove the slab foundation to allow drainage.
d. Plant native plants over the area to restore to a more natural condition, as described in Section 3.0.

C. Roads and Trails

Roads are required for service access and trails are needed for access to and through the park and the cultural resource protection area. An existing paved access road connects the cul-de-sac at Whitesides Drive to the Stremmel residence, caretaker's house, and a sewer pump station located on the east side of the site. A base rock-surfaced road to provide maintenance access exists along the sewer line on the west side of the site. A well-established dirt path follows the shoreline on the west side, and a less established path connects to an existing paved service road past the east boundary of the site on property owned by PG&E. The service road connects to a trail extending from the Benicia State Recreation Area (BSRA). Use of the service road for public access will require permission from PG&E, and resolution of maintenance responsibilities, presumably shared with PG&E and Vallejo Sanitary and Flood Control District (VSFCD), which uses the road for access to sewer manholes.

The San Francisco Bay Trail and the Bay Area Ridge Trail are two regional trail systems that have long planned a shared trail alignment through the site, ideally as close to the water as possible. The Bay Trail guidelines call for a paved path 12' wide, with 2' crushed rock shoulders, to be shared by pedestrians and bikes, but lesser levels of improvement may be acceptable. Ridge Trail standards are more flexible. While a multi-use trail is also sought, it is typically a more rustic, unpaved trail accommodating hikers, mountain bikes, and where feasible, equestrians. The nearest existing segments of the Bay and Ridge Trails are unpaved, base rock surfaced trails meeting ADA standards in BSRA to the east, a paved section of trail that extends around the Glen Cove Marina (the Marina is actually located in Elliott Cove, to the west of Glen Cove Waterfront Park), and unpaved trails along the bluff in open space areas to the west of the Marina. Long-term Bay Trail and Ridge Trail plans call for a waterfront trail extending west to connect with the existing trail at the Glen Cove Marina.

Actions:

1. East Side Access:
    a. Maintain the existing main access road on the east side of the site to provide internal park circulation, a Bay/Ridge Trail route, and access for the sewer pump station, and park service and emergency access.
    b. Construct Bay/Ridge Trail connections east toward BSRA:

- Secure permission from PG&E for public access on the existing paved service road on PG&E property east of the Park site. The service road pavement surface on the PG&E property is cracked and will need repair and re-surfacing, and encroaching vegetation will need to be trimmed.
- For the Bay Trail, construct a paved 12' wide path with 2' decomposed granite shoulders connecting from south of the sewer pump station east to the existing service road.
- For the Ridge Trail and as an internal park loop, construct an informal 5' wide decomposed granite trail across the north side of the site.

c. Provide beach/water access
- Repair stairs to beach at the main house by replacing rusted railing with railing on both sides of steps and mortaring new stone in place. No excavation will be allowed.
- Provide an informal trail to cove overlook on east side (5' wide base rock and/or decomposed granite surface).
- Provide an ADA-compliant informal trail to the beach at the east end of the site (5% maximum grade, or up to 8.33% with level resting intervals as required by State Accessibility Code).

2. West Side Access:
   a. Realign and reconstruct the existing base rock service road on the west side of the site (following site re-grading) to provide a 12' wide paved Bay/Ridge Trail segment and service road (to access manholes).
   b. Improve existing informal waterfront trail. Improve informal trail (5' wide base rock and/or decomposed granite surface) on existing route, except route the path above the outfall of the small creek to avoid impact on riparian vegetation.
   c. Provide beach/water access. Provide an ADA-compliant informal trail to the beach at the west end of the site (5% maximum grade, or up to 8.33% with level resting intervals as required by State Accessibility Code) and in keeping with BCDC recommendations.

D. Public Use Facilities and Fixtures

Although the park site is designated for low-intensity recreation, some basic facilities should be provided to support public use, including benches in the cultural resource protection area. To support use as a public park, and to maintain public health and site cleanliness, a small restroom structure is proposed in the north central portion of the site.

Public parks and trailheads typically provide parking to accommodate visitors. A study of seven comparable Bay Area waterfront open space parks (see Appendix F) indicated a wide range of on-site parking spaces per acre – from .02 to 5.87, with an average of 1.74 spaces per acre. Due to the low intensity of proposed use, and available curbside parking, only a small 15 space parking area is proposed immediately east of the Whitesides Drive cul-de-sac. With 1 space per acre, Glen Cove Waterfront Park would be well below the average parking space-to-acres ratio of

comparable parks. The proposed site currently exists as a sloping hillside with 8-10% slopes. While curbside parking for approximately 165 cars exists within 1000 feet of the entrance on Whitesides Drive, providing on-site parking will reduce the impacts on adjacent residents of public parking along the street, accommodate seniors, people with disabilities, and families with small children who may have difficulty traveling longer distances, and generally serve park visitors who don't live near the park. The parking lot also provides access for maintenance vehicles to service the VSFCD manholes and PG&E power lines.

Actions:

1. Picnic Facilities:
    a. Provide six individual picnic tables on concrete pads with integral color, each with trash receptacle:
        - Three tables near the point along the west central waterfront;
        - One table near the beach access trail at the west end of the site;
        - Two tables at overlook at eastern waterfront area
    b. No barbeques will be provided, to reduce maintenance and improve fire safety.
    c. Provide drinking fountain/running water near the restroom.
2. Benches: Provide durable concrete or steel benches for resting and viewing:
    - On west side overlooking cove.
    - On east side overlooking cove.
    - At intervals along trails.
    - In the cultural resource area
3. Provide a restroom structure at a central location near the proposed parking area.
    a. Restroom will be a single, unisex facility in a pre-fab concrete block structure with standing seam metal roofing on a concrete foundation.
    b. Exterior walls and metal roofing will be finished in neutral, earth-tone colors to blend into surroundings and minimize glare.
    c. Exterior security lighting will be shielded at the source (screened to prevent light in undesired directions) and mounted on the undersides of the eaves to minimize glare and off-site visibility.
    d. The restroom will be plumbed into the nearby existing utilities. The sewer line will be connected to a line owned by the Vallejo Sanitation and Flood Control District (VSFCD).
    e. New water service will be required, including a new water meter and connection to the existing water main located in Whitesides Drive.
4. Construct a small on-site parking area east of the Whitesides Drive cul-de-sac
    a. Provide asphaltic concrete (AC) paved parking area with 14 standard parking spaces and one handicap, van-accessible parking place with unloading zone.
    b. Excavate the northern end of the proposed parking area approximately 4-5' into the hillside to minimize cross slopes and to aid in screening from the condominiums to the north.

c. Provide mounding shrubs along the northern end and portions of the eastern edge to further screen it from adjacent residences while maintaining views to the cove and Carquinez Straights.
d. Provide entry gate to prevent parking during nighttime hours and maintenance access gate at east.
e. Apply to the City of Vallejo for permission to restrict parking duration at the end of Whitesides Drive cul-de-sac and limit the parking of RVs for aesthetics, parking capacity and security purposes.
f. Provide a vegetated swale south and downstream of the proposed parking area to collect Stormwater runoff.
g. No lighting is to be installed in conjunction with the parking area because it will be closed during the night, however a nearby street light on the cul-de-sac will provide some lighting

5. Water and Fishing Access is not anticipated to require any formal facilities. The sandstone outcroppings that project into the cove provide a natural "at your own risk" access for fishing. Kayakers currently occasionally launch from the cove near the existing steps. This level of access is suitable for the low anticipated level of use. A fishing or small boat/kayak pier would be expensive to construct, have high long-term maintenance costs, potential fire risks, and could be visually obtrusive.

E. Signage

Signage for the park will include a main entrance/identity sign, regulatory signs, directional signs and interpretive signs and installations.

Actions:

1. Install temporary notice and information signs explaining the work scope and objectives before and during construction.
2. Provide a main entrance sign constructed of routed stained/painted wood, consistent with the natural open space character and Glen Cove development and/or GVRD sign standards for parks.
3. Install Bay Trail and Ridge Trail route marker signs at intervals along the trail from Benicia State Recreation Area and along Whitesides Drive; the interim route continuing west. Trails on the western portion of the site may also be signed as spur trails.
4. Post rules and regulations, including park hours and emergency contact numbers, near the parking lot and main entrance.
5. Post regulation signs regarding protection of wildlife and control of dogs at the entrance and east and west waterfront areas.
6. Install a mapboard sign or kiosk that orients visitors to regional trails and destinations such as BSRA near the parking area and main park entrance.
7. Handicapped parking spaces will be striped and signed per state standards.
8. The cultural resources area boundaries will be signed at all trail entrances.
9. Signs may be required warning about or restricting fishing and water access for health or safety reasons.

10. Interpretive signs and exhibits should be installed at the cultural resources area to explain its history and significance, including themes such as noted in Section 2.0, A: Cultural Resource Area, part 3a. Any signs in this area must be designed with shallow spread footings (e.g. an X-shaped based in concrete) to avoid disturbing the soil below the cap.
11. Interpretive signs and exhibits should be located at intervals along the shoreline, comprising a nature trail that would circle the site, interpreting features such as the riparian zones, the shoreline plants and wildlife, aquatic life and hydrological processes, and the habitat restoration effort.

F. Fencing and Gates

Fencing exists for the townhome development on Shoal Drive West on the northwest side of the park. This fencing is constructed of tubular steel designed to allow views to the park, and is the responsibility of the homeowners to maintain. A fence of wire on wood framing exists along the northeast boundary of the park at South Regatta Drive. This fencing helps to deter after-hours entry into the park, and to prevent access down the adjacent steep slope, which could be unsafe, and potentially lead to erosion. This fencing is the responsibility of the Glen Cove Maintenance Assessment District to maintain. Currently, there is no fencing between the park site and the townhomes along Shoal Drive East, north of the main house/Cultural Resource Area. Additional fencing would be required for the park in this area.

Actions:

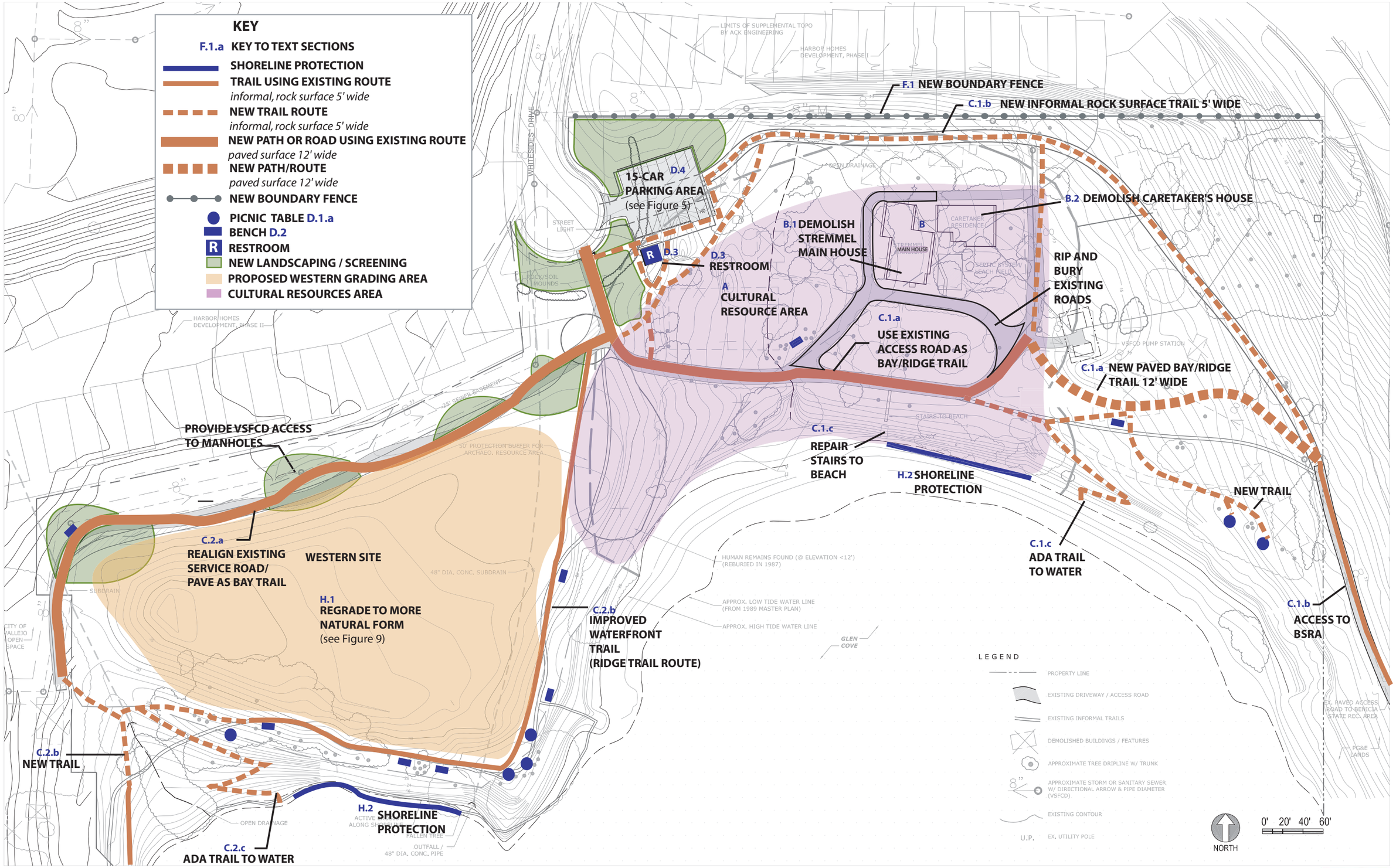
1. Install boundary fencing, consisting of welded wire mesh on a 6' high wood frame, along the property line with the Shoal Drive East townhomes.
2. Gates for the park will include the heavy duty, approximately 12-foot wide vehicle gate currently located at the main house and service access road at the end of Whitesides Drive. The existing white gate should be painted a less obtrusive color (e.g. green), with reflectors for night-time visibility.
3. A similar double-width vehicle gate will be required at the entrance to the new parking area, and a single width gate at the eastern end of the parking area to exclude public vehicles while allowing access for maintenance vehicles.

G. Service Facilities

Because the park is a low-intensity use are with a minimal level of improvement there is limited need for on-site maintenance or storage facilities.

Actions:

1. The restroom structure shall be specified with a built-in storage room for cleaning materials and supplies.
2. The sewer lift station is a facility that requires access for maintenance and has its own fenced yard and structure maintained by Vallejo Sanitary District. Ideally, this structure can be at least partially screened by native plantings.



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GLEN COVE WATERFRONT PARK MASTER PLAN

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FIGURE 4: Park Master Plan

GVRD

FIGURE 5: Parking Area & Frontage Plan

H. Site Grading and Shoreline Protection

The western side of the park site was originally a 40-foot-high hill that was completely removed during construction of the nearby residential development, including excavation below tide level for landslide repair, and then partial replacement (see Figure 7). The entire area has been extensively graded (cut and filled during ownership by a development company). During grading operations in 1986 a "historic burial site" was uncovered in the eastern portion of the western site (see Figure 6). It was covered with 2 feet of fill at the time, and later covered with up to 8' of additional fill (see Figure 7).

The current form of the western portion of the site is an unnatural-looking bench that blocks views of the water and doesn't drain properly. Figure 8 shows several cross-sections generally running north-south through the western portion of the site. The existing topography blocks views of the water and of the blufftop along the eucalyptus trees, which is an aesthetic issue and a security issue because this area cannot be seen from Whitesides Court or from nearby homes. The steep embankment north (landward) of the eucalyptus trees also prevents mowing of the fennel, artichoke thistle and yellow star thistle that has invaded this area, which further impacts visibility for aesthetics and security.

The shoreline along the western side of the site and at the Cultural Resource Area is eroding into the cove due to wave action, both natural and from the wake caused by large ships passing in the strait. On the western bluff one large eucalyptus tree has already fallen down the bluff, and over the long term all the trees and the current trail alignment may be lost. At the Cultural Resource Area artifacts, and potentially remains, may eventually be washed into the water is no prevention is implemented.

The Master Plan includes measures to restore the site to a more natural landform and drainage pattern, protect the cultural resources with a layer of soil, aid in the removal of invasive non-native plants and restoration of native plants, and prevent shoreline erosion.

Actions:

1. Grade the western portion of the site to a more natural condition.
    a. Remove the artificial fill that currently creates an embankment near the waterfront to a more natural condition and drainage pattern as shown in Figure 9.
    b. No grading over 12" in depth shall occur in the area of the identified burial ground.
    c. Place excess soil on the eastern portion of the Park site to cap the cultural resources area, fill the basement of the Stremmel main house, create a pad for the proposed parking area, and fill low points as indicated in Figure 9.
    d. The soil layer will taper off to 0" as it approaches the creek bank, the root zone of trees and shrubs to be retained, and roads and structures to be retained.

2. Install shoreline erosion protection.
    a. Place large rock “rip-rap” against the western and central shoreline to prevent further erosion as shown on Figure 9 and as specified in the Geotechnical and Geological Evaluation (Appendix C):
    b. During final design of the shoreline protection, research, and if possible specify, stone materials that visually match the native stone on site.
    c. Install the riprap carefully using a skilled operator and a backhoe equipped with a “thumb” To place the rock, minimizing disturbance of the existing embankment in the Cultural Resources Area.
    d. Ensure that cultural resources and delineated wetlands along the central shoreline are protected during installation of the shoreline protection.

Figure 6: Original Western Site Grading Record Drawing

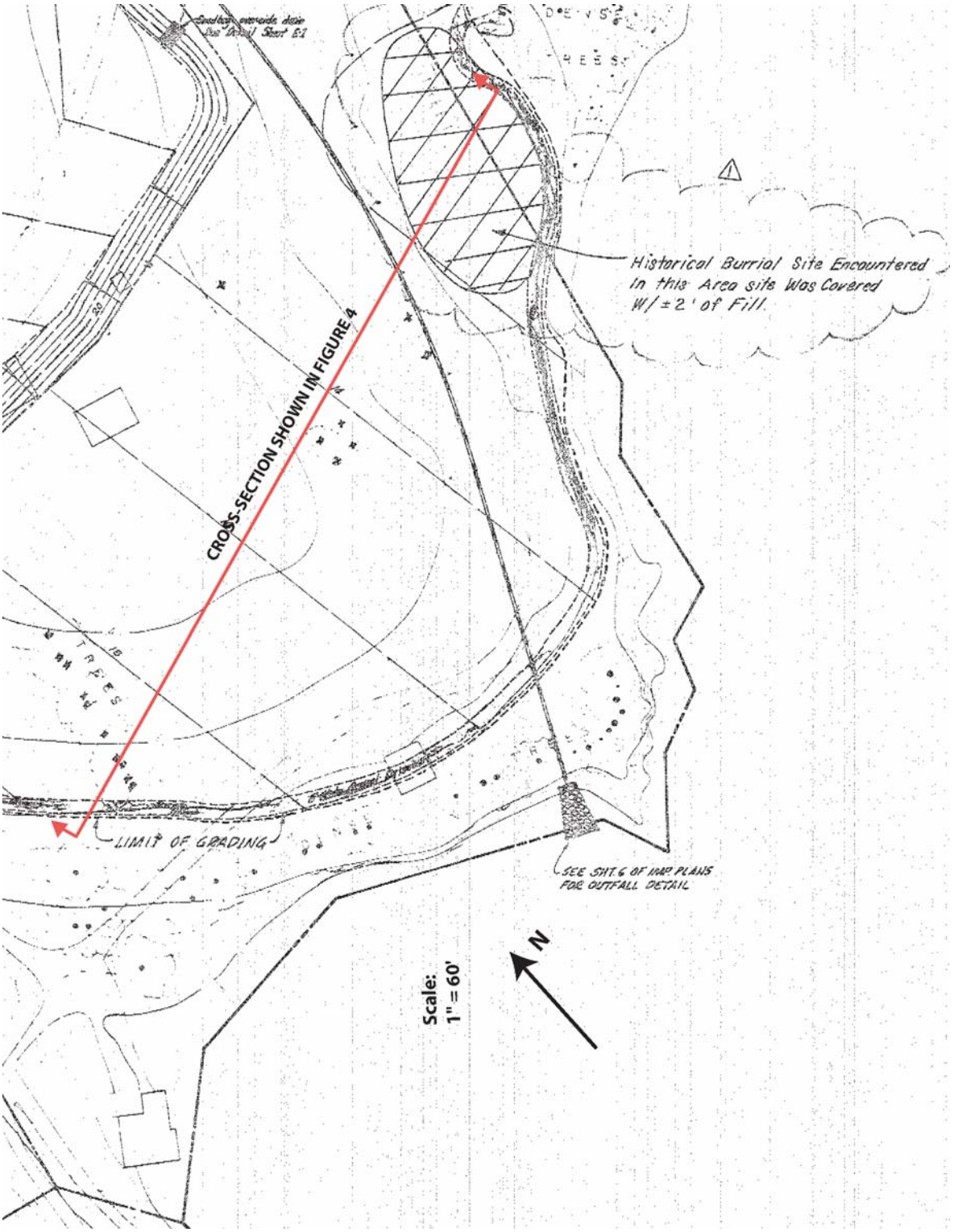
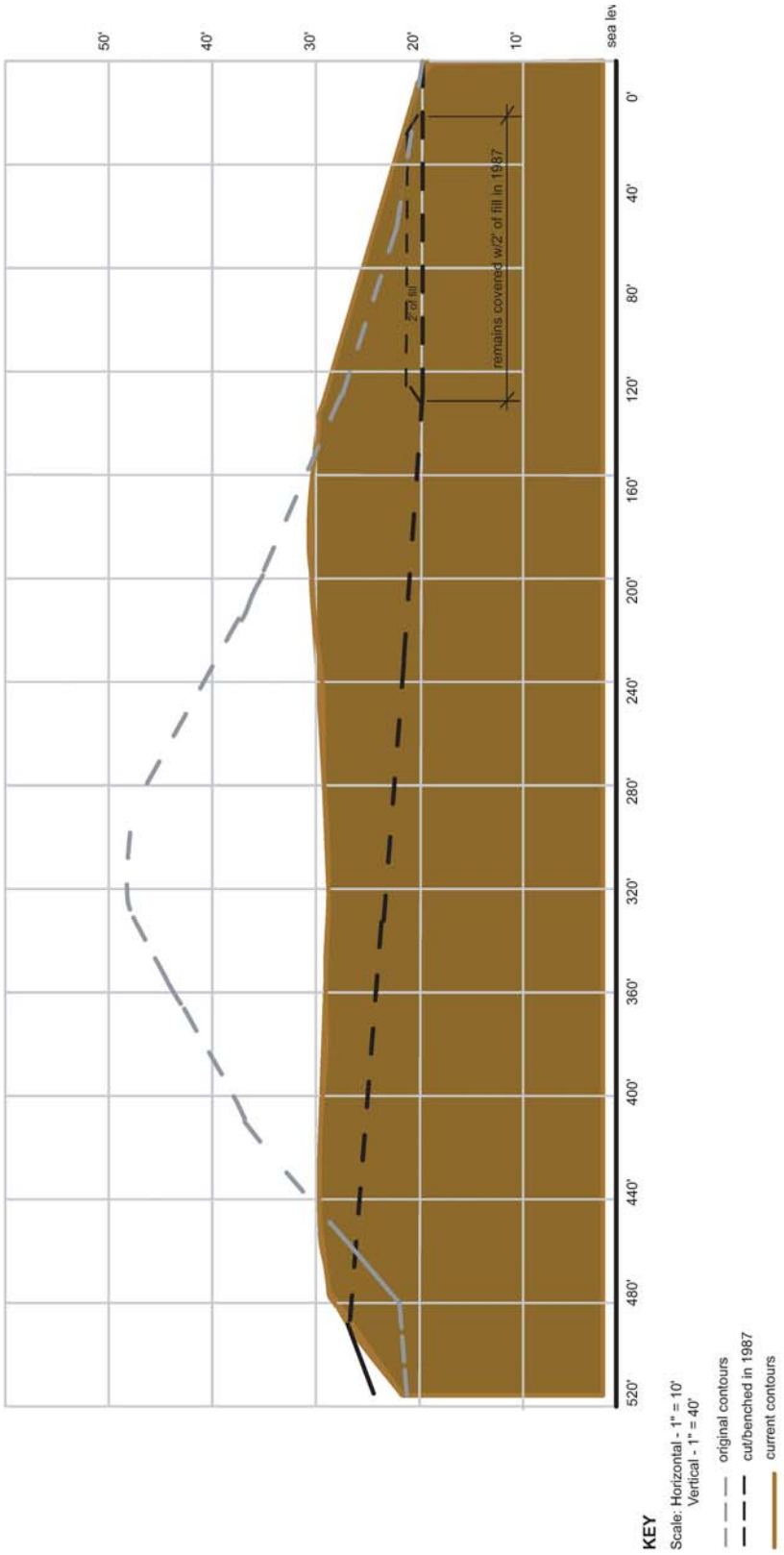


Figure 7: Western Site Current Grades Cross-Section



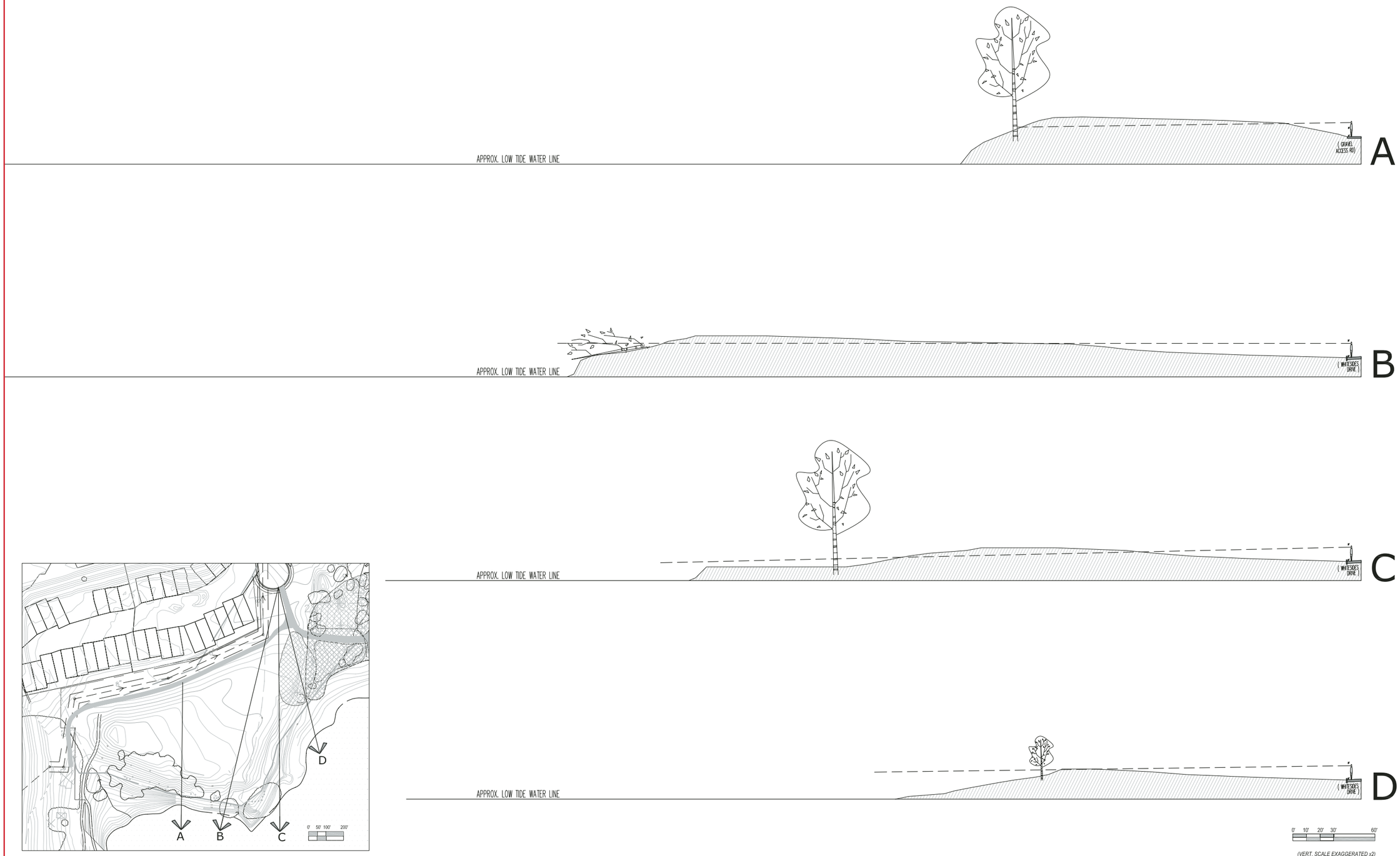


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FIGURE 8: Western Site Visibility Cross-Sections

GVRD

Grading Calculation Estimates in Cubic Yards

Western Site	Cut	volume after expansion* (30%)	Fill
Big Cut	8,379	10,893	
North Cut	78	101	
Fill			2,647
Eastern Site			5,810
Total	8,457	10,994	8,457

*expansion volume given for hauling estimation purposes

SOUTH REGATTA DR.

Fill for Proposed Parking Lot
744 Cubic Feet
27Cubic Yards

Basement of Stremmel Mansion
6,080 Cubic Feet
225 Cubic Yards
4' deep

CULTURAL RESOURCE AREA

Existing Catchbasin

Creek Corridor

18,549 Cubic Feet
687 Cubic Yards
1.22 feet deep

20071 Cubic Feet
743 Cubic Yards

41,227 Cubic Feet
1527 Cubic Yards

2099 Cubic Feet
78 Cubic Yards

6,192 Cubic Feet
229 Cubic Yards

5012 CF
186 CY

6989 Cubic Feet
259 Cubic Yards

51,945 Cubic Feet
1924 Cubic Yards
1.22 feet deep

SHORELINE PROTECTION

71608 Cubic Feet
2647 Cubic Yards

226,224 Cubic Feet
8379 Cubic Yards

HUMAN REMAINS FOUND (@ ELEV.<12')
(REBURIED IN 1987)

SHORELINE PROTECTION

Legend

- Proposed Fill; 1 foot deep *except as noted*
- Cut per Proposed contours
- 2-ft. contours, existing
- 10-ft. contours, existing
- Contour of Proposed Grading
- Park Boundary
- Cultural Resource Areas
- Parcels
- Wetlands per wetland delineation by Zentner & Zentner, see Appendix D

LandPeople

GLEN COVE WATERFRONT PARK GRADING PLAN

0 50 100 150 200
Feet
1 inch equals 100 feet

FIGURE 9: Schematic Grading Plan

GVRD

3.0 VEGETATION MANAGEMENT AND HABITAT RESTORATION

This Vegetation Management and Habitat Restoration Plan (VMHRP) has been prepared as part of the Glen Cover Waterfront Park Master Plan to define appropriate vegetation management practices and to identify habitat restoration efforts at the park site. The primary goals of this VMRP are to:

1. Provide for the control and eradication of highly invasive exotic plant species which currently dominate much of the property;
2. Protect selected specimen trees and manageable stands of non-native trees because of their aesthetic value and historical reference to the previous uses on the property;
3. Reestablish native grasslands which historically dominated the vegetative cover in the vicinity of the property; and
4. Enhance native plant and wildlife habitat through establishment of native riparian habitat and a mosaic of tree and shrub plantings in uplands away from the riparian corridor.

Existing Conditions

Vegetation on the Glen Cove Waterfront Park property is dominated by ruderal (weedy) non-native grasslands, with planted ornamental trees and shrubs around the Stremmel main house and caretaker's house, and stands of non-native trees in scattered locations (see Figure 10). Most of the trees and shrubs on the property are highly invasive non-native species, and are categorized by the California Invasive Plant Council as having a High or Moderate impact on ecosystems, plant and animal communities, and vegetation structure in their "Invasive Plant Inventory" (IPI). Table 3-1 lists the dominant invasive plant species on the park property, their IPI rating, and treatment strategies. Native vegetation is currently limited to a thicket of willow (*Salix* sp.) that grows along a drainage in the southwestern portion of the property, a few clumps of native willow that grow along a central drainage just west of the Stremmel main house, scattered sapling coast live oak (*Quercus agrifolia*), and stands of brackish water marsh along the shoreline of Carquinez Strait.

Areas of grassland cover are dominated by non-native species common in the Vallejo area. These include non-native grasses and broad-leaf ruderal species typical of non-native grasslands throughout northern California, such as slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), lotus (*Lotus scoparius*), common vetch (*Vicia sativa*), and English plantain (*Plantago lanceolata*). Most of these grassland species are now considered naturalized in California and support wildlife species common in grassland habitat. However, several highly invasive species dominate the ruderal grasslands in some locations, forming such dense thickets that other ground cover species are now completely absent. Invasive species of particular concern in open areas on the property consist of yellow-star thistle (*Centaurea solstitialis*), sweet fennel (*Foeniculum vulgare*), and artichoke thistle (*Cynara cardunculus*), all of which

are categorized as having a High or Moderate rating in the IPI by the California Invasive Species Council, as indicated in Table 3-1.

Non-native trees, shrubs, and groundcovers have been planted as landscaping around the Stremmel main house and caretaker's residence, the entrance onto the property, and as stands and windrows. Dominant species include the highly aggressive tree-of-heaven (*Ailanthus altissima*), blackwood acacia (*Acacia melanoxylon*), green wattle (*Acacia decurrens*), elm (*Ulmus* sp.), periwinkle (*Vinca major*), cape ivy (*Delairea odorata*), English ivy (*Hedera helix*), and Himalayan blackberry (*Rubus discolor*). As indicated in Table 3-1, all of these species are categorized as having a High or Moderate rating in the IPI with the exception of elm. Although it is generally restricted to disturbed areas, elm can be problematic as is the case on the park site, particularly in the riparian zone along the central drainage.

Stands of blue gum (*Eucalyptus globulus*) occur at the eastern edge of the property and as a mature window above the southwestern shoreline, with an understory of non-native grassland and ruderal species. The row of mature eucalyptus along the western promontory was unfortunately deliberately poisoned in 2005. Foliage on most of these trees has completely died, and although eucalyptus can sometimes resprout, at this time, the trees appear to be dead and may have to be removed at significant expense and loss to the park environment. While blue gum eucalyptus can become a management problem in some locations, and is categorized as having a Moderate rating in the IPI, it does provide important foraging, roosting, and possible nesting habitat for a wide variety of bird species. Smaller stands can be monitored with relative ease, leaving the mature trees to provide an aesthetic and habitat resource.

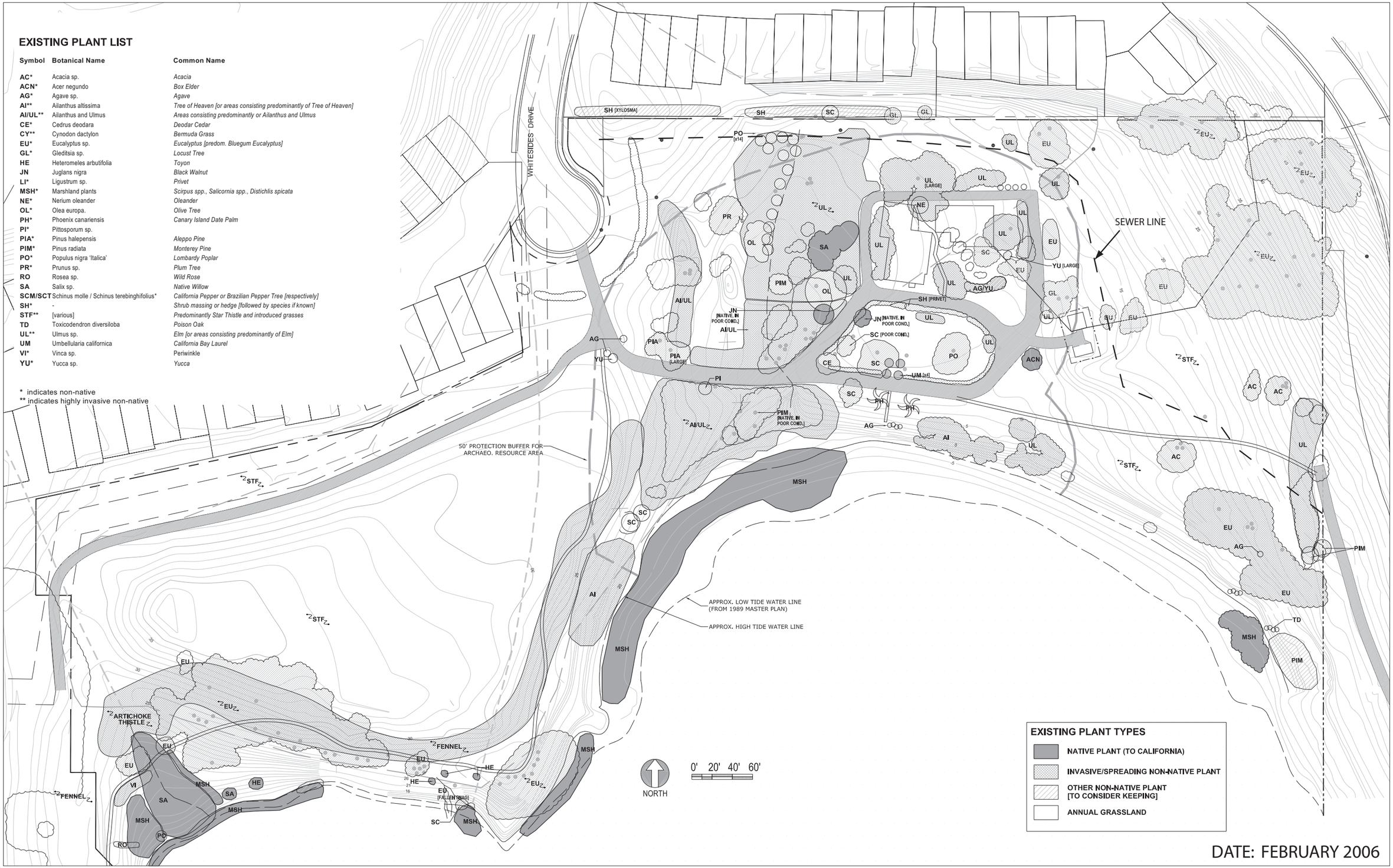
Brackish water marsh occurs in several stands along the shoreline. These areas are dominated by native bulrush (*Scirpus* spp.), pickleweed (*Salicornia* spp.), and salt grass (*Distichlis spicata*). Most of the shoreline is devoid of vegetation, forming a long beach below the Stremmel main house, exposed bedrock along the bluffs, and mudflats at low tide over most of the cove. The stands of native marshland vegetation provide important foraging opportunities to wildlife and should be preserved as part of the VMHRP.

The two drainages on the property support native willow, forming a dense thicket along the western drainage and a few clumps along the central drainage. The drainages receive surface runoff from the upstream storm drain system, including irrigation runoff. These narrow channels were most likely ephemeral before residential development occurred in the watershed, but now most likely have flows through the summer months as a result of irrigation runoff. Invasive trees, shrubs, and groundcovers have greatly reduced the habitat value of the central drainage, but the presence of surface water provides an opportunity to eventually expand the native riparian vegetation and increase existing plant and wildlife habitat values as part of the VMHRP.

EXISTING PLANT LIST

Symbol	Botanical Name	Common Name
AC*	Acacia sp.	*Acacia*
ACN*	Acer negundo	*Box Elder*
AG*	Agave sp.	*Agave*
AI**	Ailanthus altissima	*Tree of Heaven [or areas consisting predominantly of Tree of Heaven]*
AI/UL**	Ailanthus and Ulmus	*Areas consisting predominantly or Ailanthus and Ulmus*
CE*	Cedrus deodara	*Deodar Cedar*
CY**	Cynodon dactylon	*Bermuda Grass*
EU*	Eucalyptus sp.	*Eucalyptus [predom. Bluegum Eucalyptus]*
GL*	Gleditsia sp.	*Locust Tree*
HE	Heteromeles arbutifolia	*Toyon*
JN	Juglans nigra	*Black Walnut*
LI*	Ligustrum sp.	*Privet*
MSH*	Marshland plants	*Scirpus spp., Salicornia spp., Distichlis spicata*
NE*	Nerium oleander	*Oleander*
OL*	Olea europa.	*Olive Tree*
PH*	Phoenix canariensis	*Canary Island Date Palm*
PI*	Pittosporum sp.	
PIA*	Pinus halepensis	*Aleppo Pine*
PIM*	Pinus radiata	*Monterey Pine*
PO*	Populus nigra 'Italica'	*Lombardy Poplar*
PR*	Prunus sp.	*Plum Tree*
RO	Rosea sp.	*Wild Rose*
SA	Salix sp.	*Native Willow*
SCM/SCT	Schinus molle / Schinus terebinghifolius*	*California Pepper or Brazilian Pepper Tree [respectively]*
SH*	-	*Shrub massing or hedge [followed by species if known]*
STF**	[various]	*Predominantly Star Thistle and introduced grasses*
TD	Toxicodendron diversiloba	*Poison Oak*
UL**	Ulmus sp.	*Elm [or areas consisting predominantly of Elm]*
UM	Umbellularia californica	*California Bay Laurel*
VI*	Vinca sp.	Periwinkle
YU*	Yucca sp.	*Yucca*

* indicates non-native
** indicates highly invasive non-native



DATE: FEBRUARY 2006

Habitat Improvement and Management Objectives

Implementation of a comprehensive VMHRP provides an opportunity to protect the important archaeological resources on the site, improve the aesthetic experience of recreational users, and enhance the existing habitat values for native plant and animal species. Re-contouring disturbed areas will provide fill to adequately cap the sensitive archaeological resources, bury unnecessary roads and other areas of impervious surface and rubble surrounding the Stremmel Main house and caretaker's residence, and allow for the creation of more natural topography on the site. Seed of the highly invasive species has accumulated on the soil surface, and re-contouring will allow much of this seed bank to be buried and destroyed under the fill cap across the central portion of the site.

Effective control of the highly invasive species will require an effective Integrated Pest Management (IPM) program as a component of the VMHRP. The IPM will involve short-term intense mechanical and chemical eradication efforts, followed by on-going monitoring and maintenance practices that select for native species and less invasive, naturalized species. Table 3-1 provides major steps in the initial treatment of the highly invasive species, disposal of seed, stem, stolon, and root materials, and necessary follow-up activities to ensure successful eradication from the site. The IPM must be flexible in its implementation to address possible re-sprouting or re-establishment of the highly invasive species through successive annual treatment by mechanical removal and possibly herbicide application for a period of two to four years. Habitat enhancement will be achieved through the control and eradication of the highly invasive plant cover and through establishment of native grassland, riparian, and woodland species.

The initial efforts to control the invasive exotics and restore native cover will require a combination of mechanical removal of the invasive plants, immediate herbicide treatment of cut trunks/shoots and remaining groundcover root systems, and earthwork to re-establish more natural topography. The earthwork associated with re-contouring the western portion of the site to create more natural contours will also provide a source of fill material to cap the cultural resources area and either bury most of the stands of highly invasive species or allow for their removal during initial grading. The basic approach and benefits of the initial phases of the VMHRP include the following:

1. Grading will allow for direct removal of most of the stands of highly invasive fennel, artichoke thistle and yellow-star thistle infestations in the western portion of the site, and collection of the seed bank for these species in the surface soils, which can then be buried under the soil cap across the central portion of the site.
2. The soil cap over the cultural resources area will bury both the seed bank of the western infestations and any remaining root systems of the tree and groundcover infestations through the central portion of the site. The tree and groundcover species through the central portion of the site will require mechanical removal through pulling and cutting, and immediate treatment with

herbicide to inhibit resprouting. Invasive species on this portion of the site include: tree-of-heaven, acacia, elm, periwinkle, ivy, and Himalayan blackberry. This mechanical and chemical treatment should be performed at least one year in advance of the earthwork to allow for re-treatment of any re-sprouting tree and groundcover species.

3. The graded areas and soil cap will provide a medium for seeding and planting that is relatively free of the invasive seed bank that exists on the current surface and will allow for establishment of a dominant cover of native and naturalized grass species. Earthwork will be performed during the dry season, with seeding of native grasses done in the fall to ensure successful germination. Native tree and shrub species will be planted along the central drainage and in select uplands on the site, to further enhance the diversity of vegetation types and wildlife habitat values.
4. The soil cap can be used for new plantings without disturbing the underlying archaeological resources below the original ground surface. Selected treatments include heavy seeding by native grasses and wildflowers, and planting with native riparian and upland tree and shrub species.

Because the invasive plant removal and new seeding and planting can be combined with a major earthwork project, the initial work can be accomplished much more quickly and efficiently than with small labor-intensive projects. The downside is that there will be an initial major change in the appearance of site. It will be much less "natural" appearing after the initial clearing and grading, especially during the initial phase of invasive tree, brush, and groundcover removal. However, the appearance will recover very quickly to a far more natural condition with higher wildlife habitat values, and better conditions for security and aesthetics, including native grasslands, wildflowers, and trees and shrubs. Keeping the invasive species from becoming re-established on the site will be an ongoing management component of the VMHRP that requires coordinated efforts by volunteers, routine mowing and spot treatment by District staff, and possibly occasional use of contractors or specialized non-profit organizations such as the California Conservation Corps.

Figure 11 shows major concepts for phasing the removal of invasive non-native species and for enhancement planting of native vegetation. These include mechanical and chemical treatment areas addressing invasive species, and establishment of native vegetative cover over areas disturbed by earthwork and invasive species removal. As indicated in Figure 11, treatment units consist of:

- removal of an estimated 1.4 acres of invasive trees, shrubs, and groundcovers around the central drainage and vicinity of the Stremmel main house and caretaker's residence;
- removal of an estimated 0.5 acre of fennel and artichoke thistle dominated ruderal cover in the western portion of the site;
- establishment of approximately 7.3 acres of native grasslands on re-contoured slopes and areas treated to remove invasive species;

- enhancement and creation of approximately 0.6 acre of native riparian habitat along the central drainage; and
- establishment of approximately 0.33 acre of native tree and shrub enhancement plantings near the entrance and northwestern edge of the site.

Figure 12 shows a selected cross-section across the central drainage as located in Figure 11. The cross-section shows the changes to existing conditions that will be achieved as part of the VMHRP involving the mechanical removal of invasive species, capping of the Cultural Resource Area, rubble, and unused driveways, and habitat restoration with native grassland cover and riparian trees and shrubs.

Treatment Methods, Phasing and Planting Details

Phasing associated with Implementation of the VMHRP is important to successful eradication of invasive species and re-establishment of native cover on the site. The first phase will involve a concerted effort to remove invasive species, focusing on the tree and groundcover species around the central drainage and vicinity of the Stremmel main house and caretaker' s residence, and stands of fennel and artichoke thistle in the western portion of the site. Removal of non-native invasive plants within the Cultural Resource Area (see Figure 4) must use methods that do not disturb the underlying archaeological resources, involving cutting, mowing, and herbicide treatment but prohibiting digging, stump grinding or disking. This will be followed by scraping of the soil surface to collect the invasive seed bank from the western portion of the site, deposition of the seed bank scrapings in the central portion of the site, and re-contouring and capping of the cultural resources area and seed bank scrapings. The next phase will involve heavy seeding of graded slopes with a native seed mix in advance of the fall rains. Enhancement riparian and upland plantings with native trees and shrubs can either be accomplished at the same time native grassland seeding is installed, or in subsequent years. On-going management will involve routine mowing of the grasslands to prevent re-establishment of fennel, artichoke thistle, and yellow-star thistle, pulling of invasive tree, shrubs, and groundcover plants and vines, and possibly successive treatments using a broadleaf-specific herbicide that won't affect the seeded native grasslands. Any herbicide application must be carefully controlled to protect desired native willow to be preserved, avoid native grassland and enhancement plantings, and protect the aquatic habitat of the drainages and Carquinez Strait.

EXISTING PLANT LIST

Symbol	Botanical Name	Common Name
AC*	Acacia sp.	*Acacia*
ACN*	Acer negundo	*Box Elder*
AG*	Agave sp.	*Agave*
AI**	Ailanthus altissima	*Tree of Heaven [or areas consisting predominantly of Tree of Heaven]*
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GL*	Gleditsia sp.	*Locust Tree*
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PIA*	Pinus halepensis	*Aleppo Pine*
PIM*	Pinus radiata	*Monterey Pine*
PO*	Populus nigra 'Italica'	*Lombardy Poplar*
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RO	Rosea sp.	*Wild Rose*
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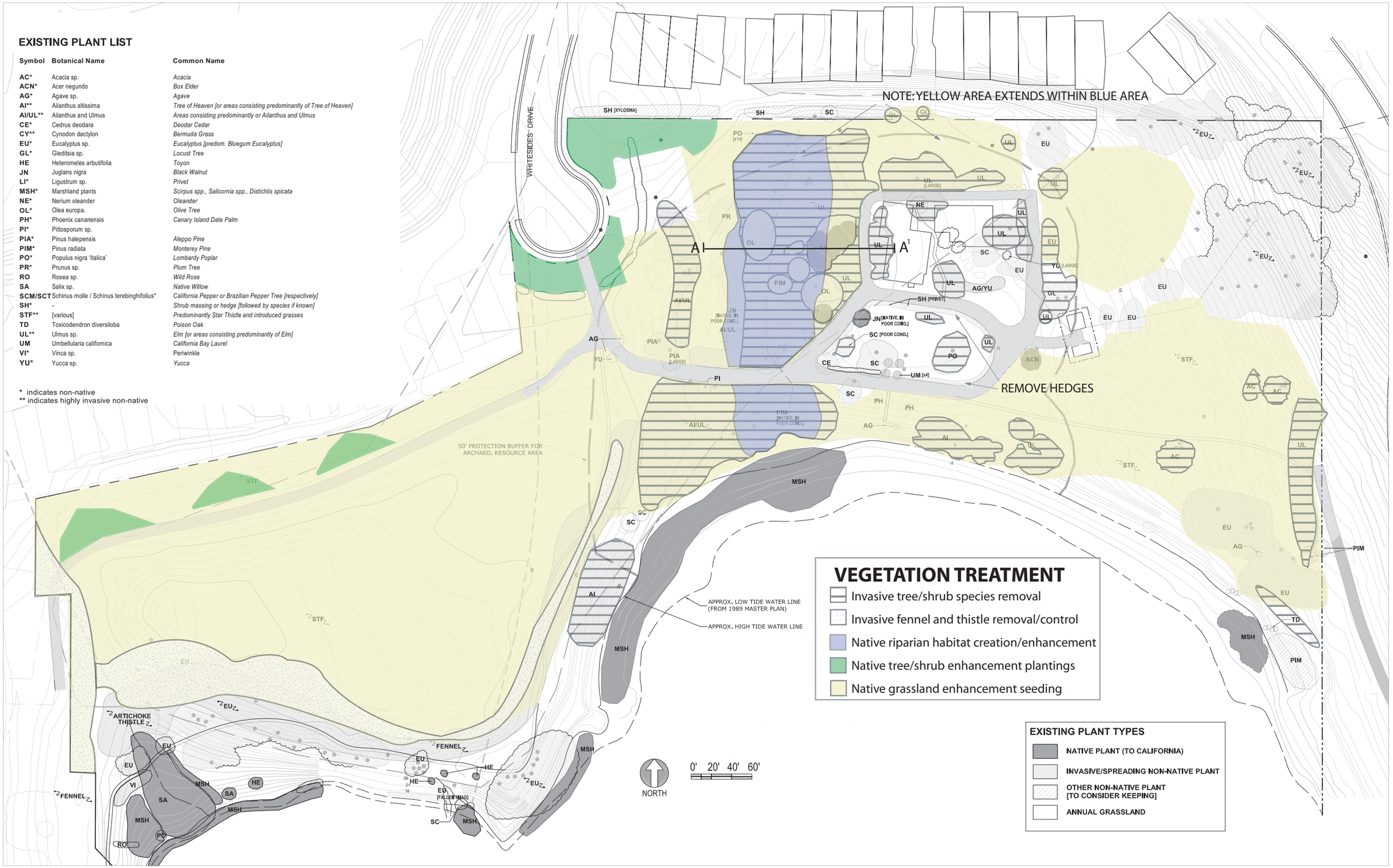
UL**	Ulmus sp.	*Elm [for areas consisting predominantly of Elm]*
UM	Umbellularia californica	*California Bay Laurel*
VI*	Vinca sp.	Periwinkle
YU*	Yucca sp.	*Yucca*

* indicates non-native
** indicates highly invasive non-native



LandPeople

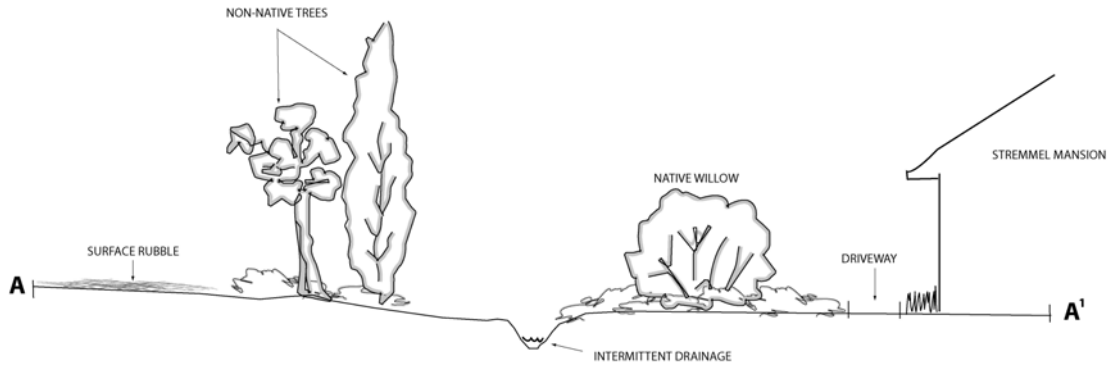
GLEN COVE WATERFRONT PARK MASTER PLAN

LandPeople, landscape architects & planners

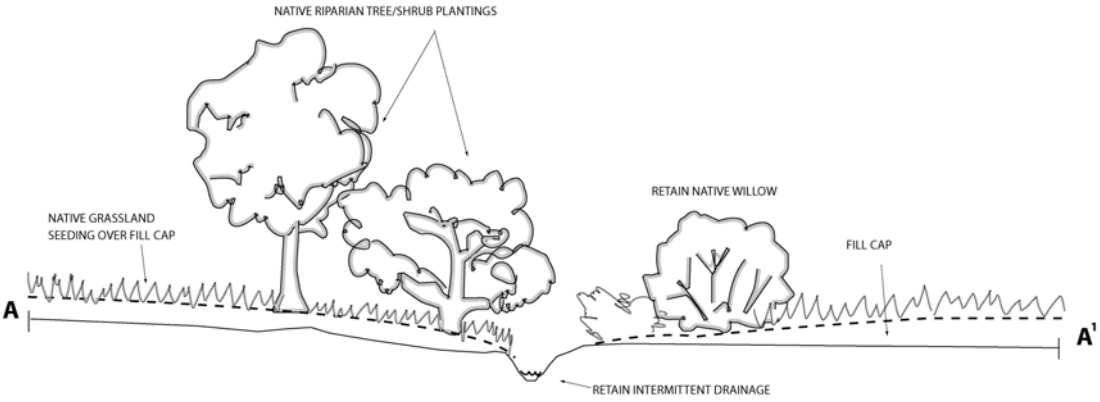
Figure 11: Vegetation Management and Habitat Restoration Plan

GVRD

Figure 12: Cross-Section of Habitat Restoration at Central Creek



Existing Condtions near Drainage



Proposed Improvements/Management near Drainage

See Figure 11 for section location
Not to scale

The following outlines the process of implementing the VMHRP. These include information on basic procedures, invasive species eradication and control, site grading and re-contouring, and new plantings and landscape features. As discussed previously, Table 3-1 provides details on appropriate mechanical and chemical treatment of invasive species. Table 3-2 provides details on native seeding and planting efforts, including grassland seeding, wetland seeding, riparian habitat plantings, and upland tree and shrub plantings.

Actions:

A. Basic Procedures to implement the VMHRP:

1. Hire professional consultants and contractors to coordinate or perform the initial major invasive species removal, re-contouring, and native seeding and planting efforts. Chemical treatment of the invasive species must be carefully controlled according to the California Department of Pesticide Regulations and the Solano County Agricultural Commissioner using Best Management Practices to prevent exposure to park users, avoid sensitive aquatic habitat, and utilize the most effective and appropriate products available at the time field work is performed.
2. Hire public groups such as California Conservation Corps (CCC) or Native American groups to assist with removal and planting under direction of selected contractor.
3. Use volunteers, directed and coordinated by experienced restoration specialists, to participate in the initial invasive species removal and provide the bulk of ongoing removal, planting, and management efforts.
4. Coordinate with City of Vallejo's Glen Cove Maintenance Assessment District to include restoration and management of the open space area on the hillside to the west of the park site as part of the habitat restoration project. This hillside is problematic as is supports a dense stand of sweet fennel. Unless this area is simultaneously cleared and controlled, it will provide a permanent source of invasive fennel that will continue to re-colonize the park site. Routine mowing of accessible slopes will eventually control fennel re-establishment, but this species could continue to spread along the steeper shoreline of the park site requiring intensive hand removal.

B. Invasive Species Eradication and Control:

1. Follow species management details outlined in Table 3-2-1 regarding initial treatment, disposal, and follow-up requirements of dominant invasive plant species to be addressed as part of VMHRP. These include a major mechanical removal and chemical treatment of target invasive species at least one year before subsequent grading. All seed, pulled seedlings, stolons, and root material of target invasive species should be bagged and disposed up in a landfill. Performing an initial removal a year in advance of grading will allow for invasive treatment through cutting, pulling, and herbicide application at least twice before fill is placed over the vicinity of the central drainage and Cultural Resource Area where the major infestations of invasive trees and groundcover vines occur. The initial removal and herbicide treatment should be accomplished in spring (before May) when the cambium is active and to prevent

additional seed production of target species. Tree trunks should be treated immediately with herbicide, within one minute of cutting. Foliar spray should be applied in the spring following removal and disposal of groundcover species. Any foliar spray application within 5 feet of surface waters should be restricted to an aquatic-approved herbicide. Subsequent treatment includes cutting and herbicide retreatment of tree trunks/shoots, pulling seedlings, saplings, stolons, and accessible root material, and spot treatment with foliar spray to eradicate ground cover.

2. Employ trained professionals to perform all herbicide applications and require that they have appropriate certification and licensing as a Pest Control Operator for use of non-restricted materials registered for use in Solano County. Best Management Practices should be used during all herbicide applications, considering latest standards for products used for target species. Factors to be considered during herbicide application include wind and weather conditions, timing of initial and subsequent treatments, specific product and concentrations, and protection of aquatic habitat and native cover to be preserved or established on the site.
3. Notify the public of treatment areas prior to herbicide application through use of temporary signage posted no less than 24 hours in advance of application, identifying product to be used, explaining health risks, and including a contact person and phone number to answer any questions. Signs should be posted at the entrance to the park and the perimeter of any treatment area at 50 foot intervals or as necessary to visibly delineate the boundaries of the treatment area.
4. Provide on-going maintenance and monitoring to prevent re-establishment and spread of dominant invasive species. This will involve routine mowing of the western field area to prevent re-establishment of fennel/ yellow-star thistle, and artichoke thistle, pulling of seedlings of all target species before stands get re-established, and possible spot treatment with selected foliar spray herbicide followed by supplemental seeding to establish the desired grassland seed mix.

C. Site Grading and Re-Contouring:

1. Initiate grading in the dry summer period after successful eradication of target invasive species through the central portion of the site where fill material is to be deposited. It is critical that infestations of tree-of-heaven, elm, periwinkle, ivy, and Himalayan blackberry have been successfully treated to limit the likelihood that these species will resprout and spread at the margins and shallower areas of the fill where there is less fill thickness to inhibit regrowth. A final treatment of herbicide by foliar spray may be warranted to help prevent rerooting of invasive groundcover species.
2. Scrape and collect invasive seed source from the western portion of the site and deposit it in the center of the area to be capped with fill in the central portion of the site. The scraping should target the top one or two inches of the soil surface where fennel, artichoke thistle, and yellow-star thistle are particularly abundant.

3. Flag and avoid trees to be retained by surrounding them with orange construction fencing, and by instructing construction equipment operators to prevent damage to tree root systems and trunks.
4. Complete re-contouring and placement of fill cap as indicated in final grading plans. A minimum of 12 inches of fill should be placed over the collected invasive seed source or locations with mapped infestations of tree, shrub, or groundcover species.
5. Avoid disturbance to central drainage during re-contouring and placement of the fill cap. This feature is regulated by the U.S. Army Corps of Engineers and California Department of Fish and Game, and modifications to the bed or bank would require appropriate authorizations from these agencies. Because of the absence of fill on the bed or bank of the central drainage, mechanical and chemical control of invasive species will be particularly important along this drainage as the likelihood of re-emergence is greater than in capped areas. Any foliar spray application within 5 feet of surface waters should be restricted to an aquatic-approved herbicide.

D. New Plantings and Landscape Features:

1. Apply hydroseeded mixture of native grasses and wildflowers on all graded and cleared areas throughout the park site as specified in Table 3-2.
    a. The hydroseed application will serve to establish a base native plant palette, improve the native species diversity in the grasslands, and reduce the potential for re-infestation by invasive species.
    b. Seeding should occur in late fall or early winter, preferably before October 15, to coincide with the natural rainfall period and to allow for germination and grass establishment before heavy winter rains.
    c. Hydroseeding should be applied by a professional hydroseeder.
    d. Prior to hydroseeding, the seed mixture should be pre-mixed by a mechanical mixer.
    e. Prior to application of the hydroseed/mulch mixture, the applicator should clean and rinse all equipment to preclude the introduction of weeds or other species not intended for the site.
    f. The hydroseeding application should follow a two or three-step process depending on slope and proximity to the central drainage. For relatively level ground a two step process is adequate, as follows: 1) hydro-spray a mixture of the seed mix and 500 lbs. per acre of hydraulic fiber mulch; and 2) apply 1,500 lbs. acre of hydraulic fiber mulch, fertilizer, any additives such as lime, and the tackifier. For graded slopes in excess of 10 percent or within 25 feet of the central drainage an added step is necessary to provide additional slope protection. Following completing of the hydroseeding, rice straw should be applied at a rate of 3,000 lbs. per acre. A hydromulch mixture, consisting of 100 lbs. per acre with tackifier, should then be applied over the straw.
2. Install native shrubs and trees by hand in a phased program to re-establish a more natural gradation of habitats as specified in Table 3-2. Additional native

riparian species may be suitable, but must consider short-term absence of shade along the riparian corridor until canopy cover is re-established and ultimate height of trees and desire to not conflict with existing views from neighboring upslope residences.

a. Plant species native to the site and indigenous to the riparian and upland habitats in the region.
b. Follow spacing and treatment details identified in Table 3-2, including installation during the winter months when successful establishment is more likely, adequate browse protection, and short-term irrigation during the summer months through installation of a temporary drip-irrigation system.
c. Supplemental irrigation of container plantings will be required for the first two-three years following installation, no less than three times a month. Approximately five gallons of water should be applied to each container stock planting during each watering event, and each watering should be of such a quantity as to provide optimum growth conditions. If drought stress is noted during monitoring, the quantity and interval of watering should be increased until plants are successfully established. By year three, the frequency and duration of watering should be successively curtailed to force the young plant to adapt to summer conditions. Infrequent waterings may still be necessary during the summer months on a bi-monthly basis in the fourth and fifth year.
d. Retain the large agave and other non-invasive plants such as the palms, and California bay laurel, immediately south of the caretaker's residence for aesthetic resources and a remnant of the historic setting.

3. Protect the Cultural Resource Area. The following restrictions are necessary to protect the archaeological resources in the vicinity:
    a. No digging for container plantings shall be allowed other than planting of small shoots and seedlings in the 12" soils cap, and installation of spreading rush in the bottom of the central drainage.
    b. The major treatment on this portion of the site will consist of seeding with native grasses and establishment of native riparian tree and shrub species along the central drainage.
    c. The existing deteriorated driveways to the immediate north, south, and west of the Stremmel main house will be broken up with a backhoe-mounted breaker to allow drainage, but soil below the pavement surface will not be disturbed. These driveway areas shall be covered with at least 12 inches of soil and heavily seeded with the native grass seed mix as part of the site capping process.
    d. Existing native and non-native ornamental trees that are not invasive shall be retained if they are in good health and not interfering with habitat restoration (e.g. palms, pines, bays, pittosporum, and selected stands of blue gum).
4. Install Park Entry/Parking Area/Upland Plantings:
    a. Provide decorative native or Mediterranean shrub, ground cover, and low-growing tree plantings using drought-tolerant species in area

between cul-de-sac and existing rock mounds to complement adjacent townhouse development landscape.

b. Provide small groupings of native shrubs and trees as specified in Table 3-2 along the Bay/Ridge Trail in the northwestern portion of the site to provide visual interest, shade and a more natural appearance. Carefully design and locate these plantings in coordination with adjacent homeowners to minimize blocking views. Dominate native tree species shall be California buckeye.
c. Provide drip irrigation to frontage and northwestern area plantings at least during establishment period for the first two-three years.
d. Augment existing rock mounds to create vehicle barrier and naturalistic boundary for the park, including relocation of rocks for construction of parking area and restroom. Protect ground squirrels that currently live among rocks.
e. Remove non-native agave and other plants in this area.

Table 3-1: Dominant Invasive Plant Species Management Details

Invasive Species	IPI Rating	Control and Management
Tree-of-heaven (*Ailanthus altissima*)	Moderate	**Treatment** - Cut and immediately treat all trunks/shoots with herbicide glyphosate, with repeat treatment of any resprouts; Cut in spring (before May) when cambium is active and to prevent seed production, at least one year in advance of grading and placement of fill cap to ensure resprouting has stopped; Pull all remaining seedlings when soil is moist before taproot established. **Disposal** – All seeds, pulled seedlings, and root material should be collected, bagged and disposed of properly. **Follow-Up –** Cut and retreat any resprouts with glyphosate every spring (before May) until stand is eliminated, and continue retreatment at least one year following placement of fill cap. Pull all seedlings and root suckers annually when soil is moist until seed source exhausted.
Blue gum (*Eucalyptus globulus*)	Moderate	**Treatment** – Cut and immediately treat selected trunks/shoots with herbicide glyphosate, with repeat treatment of any resprouts in advance of grading and placement of fill; Pull seedlings and saplings when soil is moist to control spread beyond stands to be preserved. **Disposal** – No significant problems with trunk, root, or seed material. **Follow-Up** – Cut and retreat any resprouts for selected trunks/shoots with glyphosate.
Acacia species (*Acacia melanoxylon*) (*Acacia decurrens*)	Limited	**Treatment** – Cut and immediately treat trunks/shoots with herbicide glyphosate, with repeat treatment of any resprouts; Cut in spring (before May) when cambium is active and to prevent seed production, at least one year in advance of grading and placement of fill cap to ensure resprouting has stopped; Pull seedlings and root suckers annually until seed source exhausted. **Disposal** – All seeds, pulled seedlings, and root material should be collected, bagged and disposed of properly. **Follow-Up** – Cut and retreat any resprouts with glyphosate every spring until trees are eliminated. Pull all seedlings and root suckers annually when soil is moist until seed source exhausted.
Elm (*Ulmus sp*.)	Evaluated but not listed	**Treatment** – Cut and immediately treat trunks/shoots with herbicide glyphosate, with repeat treatment of any resprouts; Cut in spring (before May) when cambium is active and to prevent seed production, at least one year in advance of grading and placement of fill cap to ensure resprouting has stopped; Pull seedlings and root suckers annually when soil is moist until seed source exhausted. **Disposal** – All seeds, pulled seedlings, and root material should be collected, bagged and disposed of properly. **Follow-Up** – Cut and retreat any resprouts with glyphosate very spring until trees are eliminated. Pull all seedlings and root suckers annually when soil is moist until seed source exhausted.
Yellow-star thistle (*Centaurea solstitialis*)	High	**Treatment** – Remove all woody material and flowering heads prior to site grading. Scrape top two inches of soil surface from infestation area and bury scraped surface material at least 12 inches below fill cap. Pull/Dig out any plants outside limits of scraping and apply foliar spray herbicide in spring with broadleaf-specific herbicide such as Transline that will not affect grasses. Wear heavy leather gloves during all hand contact due to likely absorption through

		skin. **Disposal** – All seeds, pulled seedlings, and root materials should be collected, bagged and disposed of properly. **Follow-Up** – Mow 4 times a year about every 3 months beginning in March-April until seed source is exhausted. Limit early spring mowing until first buds of yellow star thistle have appeared unless infestation with sweet fennel and artichoke thistle require earlier mowing. Hand bag and dispose of any plants that have set seed prior to mowing to prevent dispersal of seed. Use foliar spray as necessary in spring with broadleaf specific herbicide to supplement mowing regime. Remove any plants prior to flowering to prevent additional seed source.
Sweet fennel (*Foeniculum vulgare*)	High	**Treatment** – Remove all woody material and flowering heads prior to site grading. Scrape top two inches of soil surface from infestation area and bury scraped surface material at least 12 inches below fill cap. Pull/Dig out any plants outside limits of scraping and apply foliar spray herbicide such as Garlon in spring with broadleaf-specific herbicide that will not affect grasses. **Disposal** – All seeds, pulled seedlings, and root materials should be collected, bagged and disposed of properly. **Follow-Up** – Mow 4 times a year about every 3 months beginning in March-April until seed source is exhausted. Hand bag and dispose of any plants that have set seed prior to mowing to prevent dispersal of seed. Use foliar spray as necessary in spring with broadleaf specific herbicide that will not affect grasses to supplement mowing regime. Remove any plants prior to flowering to prevent additional seed source.
Artichoke thistle (*Cynara cardunculus*)	Moderate	**Treatment** – Remove all woody material and flowering heads prior to site grading. Scrape top two inches of soil surface from infestation area and bury scraped surface material at least 12 inches below fill cap. Pull/Dig out any plants outside limits of scraping and apply foliar spray herbicide in spring with broadleaf-specific herbicide such as Transline that will not affect grasses. **Disposal** – All seeds, pulled seedlings, and root material should be collected, bagged and disposed of properly. **Follow-Up** – Mow 4 times a year about every 3 months beginning in March-April until seed source is exhausted. Hand bag and dispose of any plants that have set seed prior to mowing to prevent dispersal of seed. Use foliar spray as necessary in spring with broadleaf specific herbicide that will not affect grasses to supplement mowing regime. Remove any plants prior to flowering to prevent additional seed source.
Periwinkle (*Vinca major*)	Moderate	**Treatment** – Pull and remove all stem material, accessible stolons and deeper roots from ground surfaces. Apply broadleaf-specific herbicide by foliar spray prior to placement of fill cap over infestation area to supplement hand removal. Restrict foliar spray within 5 feet of surface water drainage to appropriate aquatic approved herbicide. **Disposal** – All seeds, pulled seedlings, stolons, and root material should be collected, bagged and disposed of properly. **Follow-Up** – Hand pull all seedlings, stem material, accessible stolons and deeper roots. Spot treat with broadleaf specific herbicide by foliar spray as necessary in spring and late summer to supplement hand removal, but carefully control use and application to prevent loss of native grassland, riparian, and upland enhancement plantings.
Ivy species	High	**Treatment** – Pull and remove all stem material, accessible stolons and deeper

(Delairea odorata) (*Hedera helix*)		roots from trees, shrubs, and ground surfaces. Apply broadleaf-specific herbicide by foliar spray prior to placement of fill cap over infestation area to supplement hand removal. Restrict foliar spray within 5 feet of surface water drainage to appropriate aquatic approved herbicide. **Disposal** – All seeds, pulled seedlings, stolons, and root material should be collected, bagged and disposed of properly. **Follow-Up** – Hand pull all seedlings, stem material, accessible stolons and deeper roots. Spot treat with broadleaf specific herbicide by foliar spray as necessary in spring and late summer to supplement hand removal, but carefully control use and application to prevent loss of native grassland, riparian, and upland enhancement plantings.
Himalayan blackberry (*Rubus discolor*)	High	**Treatment** – Pull and remove all stem material and accessible root balls from ground surfaces. Apply broadleaf-specific herbicide by foliar spray prior to placement of fill cap over infestation area to supplement hand removal. Restrict foliar spray within 5 feet of surface water drainage to appropriate aquatic approved herbicide. **Disposal** – All seeds, pulled seedlings, and root material should be collected, bagged and disposed of properly. **Follow-Up** – Hand pull all seedlings, stem material, accessible root balls. Spot treat with broadleaf specific herbicide by foliar spray as necessary in spring and late summer to supplement hand removal, but carefully control use and application to prevent loss of native grassland, riparian, and upland enhancement plantings.

IPI Ratings Definitions (California Invasive Species Council, 2005, *Invasive Plant Inventory, "The Weed List"*):

High: These species have severe ecological impacts on ecosystems, plant and animal communities, and vegetational structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. These species are usually widely distributed ecologically, both among and within ecosystems.

Moderate: These species have substantial and apparent - but generally not severe - ecological impacts on ecosystems, plant and animal communities, and vegetational structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited: These species are invasive but either their ecological impacts are minor on a statewide level or information on them is insufficient to justify a higher rating, although they may cause significant problems in specific regions or habitats. Their reproductive biology and other attributes result in low to moderate rates of invasion. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Evaluated But Not Listed: In general, this designation is for species for which information is currently inadequate to respond with certainty to the minimum number of criteria question, or for which the sum effects of ecological impacts, invasiveness, and ecological amplitude and distribution fall below the threshold for ranking. Many such species are widespread but are not known to have substantial ecological impacts (though such evidence may appear in the future).

Table 3-2: Suitable Native Plant Species

Species	Rate/Size	Treatment Details
Grassland Mix:		
Creeping wildrye (*Leymus triticoides*)	15 lbs per acre	Seed shall be applied over all graded surfaces (except along the central drainage as covered by the "wetland seed mix") by hydroseeding before onset of fall rains, prior to October 15. Seed source shall be as local as possible, supplied on a basis of Pure Live Seed (PLS), and not contain an excess of one percent (1%) of weed seed. Hydroseed may include seed, dye, fertilizer, lime, mulch, and synthetic binder.
California brome (*Bromus carinatus*)	15 lbs per acre	
Purple needle-grass (*Nassella pulchra*)	15 lbs per acre	
California poppy (*Eschscholzia californica*)	2 lbs per acre	
Lupine (*Lupinus nanus*)	2 lbs per acre	
Central Drainage Wetland Seed Mix:		
Creeping wildrye (*Leymus triticoides*)	15 lbs per acre	Seed shall be applied within 25 feet of the central drainage by hydroseeding before onset of fall rains, prior to October 15. Seed source shall be as local as possible, supplied on a basis of Pure Live Seed (PLS), and not contain an excess of one percent (1%) of weed seed. Hydroseed may include seed, dye, fertilizer, lime, mulch, and synthetic binder.
California oatgrass (*Danthonia californica*)	10 lbs per acre	
California brome (*Bromus carinatus*)	10 lbs per acre	
Meadow barley (*Hordeum brachyantherum*)	10 lbs per acre	
Spreading rush (*Juncus patens*)	2 lbs per acre	
Riparian Habitat Plantings:		
California buckeye (*Aesculus californica*)	Grouped mosaics of a total of 20 tree pot or one gallon plants, spaced randomly within 20 feet of drainage on 10 foot centers.	Install during wet period between November 15 and January 15. Provide appropriate browse protection with staked 4'-high poultry mesh fencing. Provide summer irrigation for a minimum of two years until established.
Box elder (*Acer negundo* var. *californicum*)	Grouped mosaics of a total of 20 tree pot or one gallon plants, spaced randomly within 20 feet of drainage on 10 foot centers.	
California rose (*Rosa californica*)	Grouped mosaics of a total of 20 tree pots in three clusters within 10 feet of drainage on 5 foot centers.	

Snowberry (*Symphoricarpos albus*)	Grouped mosaics of a total of 20 tree pots in three clusters within 10 feet of drainage on 5 foot centers.	
Mugwort (*Artemiisia californica*)	Grouped mosaics of a total of 20 one gallon plants in three clusters within 5 feet of drainage on 5 foot centers.	
Spreading rush (*Juncus patens*)	Install 20 tree pot plants, spaced randomly along outer edge of bottom of drainage.	Install during wet period between November 15 and January 15. Browse protection and summer irrigation not required.
Valley oak (*Quercus lobata*)	Two grouping of a total of 6 tree pot or one gallon plants, installed between 20 and 40 feet from drainage at lower end within 100 feet of shoreline.	Install during wet period between November 15 and January 15. Provide appropriate browse protection with staked 36”-high Tubex tube. Provide summer irrigation for a minimum of two years until established.
Upland Tree and Shrub Plantings:		
California buckeye (*Aesculus californica*)	Grouped mosaics of a total of 25 tree pot or one gallon plants, spaced randomly in identified planting areas.	Install during wet period between November 15 and January 15. Provide appropriate browse protection with staked 4’-high poultry mesh fencing. Provide summer irrigation for a minimum of two years until established.
California coffeeberry (*Rhamnus californica*)	Grouped mosaics of a total of 25 tree pot or one gallon plants, spaced randomly in identified planting areas.	
Prostrate coyote brush (*Baccharis pilularis*)	Grouped mosaics of a total of 25 tree pot or one gallon plants, spaced randomly in identified planting areas.	Install during wet period between November 15 and January 15. Provide summer irrigation for a minimum of two years until established. Browse protection not required.

4.0 PARK MANAGEMENT GUIDELINES

Other than the significant requirements of the Vegetation Management and Habitat Restoration Plan, Glen Cove Waterfront Park is designed to be a very low maintenance facility consisting primarily of natural open space lands. Potential management and maintenance tasks are outlined below as a guide for estimating the necessary staff and resources.

Park Management

GVRD Planning or Maintenance staff, or potentially the caretaker, could be required to conduct the following general management activities:

1. Inspection of conditions and addressing general use issues. The City of Vallejo Police and Fire Departments will be directly responsible for addressing crime and fire safety issues.
2. Coordination with Native American groups, as detailed below under "Cultural Resource Area Coordination"; with Park neighbors, through the Glen Cove Homeowner's Association, and individual residents and citizens and user groups. A formal or informal "Friends of Glen Cove Waterfront Park" group could be formed.
3. Coordination of follow-up efforts to remove exotic invasive plants and establish native species (actual planning and coordination of the work is proposed to be managed by GVRD under contract by a specialized non-profit or government organization such as the Solano County Resource Conservation District).
4. Coordination with agencies and organizations with adjacent or overlaying property, facilities, or interests in the park:
    - Vallejo Sanitary District
    - Glen Cove Maintenance District
    - PG&E
    - California Department of Recreation/Benicia State Recreation Area
    - S.F. Bay Conservation and Development Commission
5. Coordination with schools and environmental organizations that may conduct environmental education activities at the site, or low-intensity recreation activities such as picnics and day camps.
6. Fees: The park facilities are too basic and the parking area too small to justify staffing to charge fees for entry. However a voluntary "iron ranger" pay station could be a way to collect some funds to support maintenance of the park.

Cultural Resource Area Coordination

Staff could be required to coordinate the following activities of others:

1. Oversight of construction, and any subsequent ground-disturbing activities, by a qualified consulting archaeologist in accordance with the recommendations contained in Appendix C, Summary of Cultural Resources Evaluation.
2. Oversight of construction and other activities related to cultural resources or human remains by Native American representatives, in accordance with Attachment A in Appendix C: "Cultural Resources Coordination Information".

3. Design and installation of interpretive signs and exhibits.
4. Environmental and cultural resource interpretation and study.
5. Efforts to re-inter remains that were originally removed from the site and stored at U.C. Berkeley (this would have to be undertaken by or coordinated with the Most Likely Descendant as recognized by the Native American Heritage Commission).
6. Scientific studies of cultural resources.
7. Activities and events concerned with acknowledging or interpreting the Native American remains and history at the site.
8. Selection of a name for the site or the cultural resources area appropriate to its significance to Native Americans – potentially with a name in the Wintun/Patwin language of the people who originally occupied the site.

Maintenance

Basic park maintenance requirements would include the following tasks In addition to the specific vegetation management prescriptions detailed in Section 3.0):

1. Annual mowing of native grass and wildflower areas to manage fuel load for fire protection purposes and to simulate natural grazing (see Section 3.0 for more detail).
2. Possibly augment the stand of grass and wildflowers by sowing additional seed as necessary.
3. Conventional landscape maintenance of the park frontage at Whitesides Drive, and plantings along the Bay Trail/service road in the northwest portion of the site.
4. Maintenance of the restroom.
5. Maintenance of the picnic and overlook areas including litter pick-up and emptying trash receptacles.
6. Periodic sweeping of the paved trails and parking lot.
7. Periodic tree pruning and clean-up of branches and leaf litter – particularly from eucalyptus.

Repair and Replacement

GVRD staff or contractors will eventually be required to undertake the following repairs:

1. Repair and re-surfacing of the paved trails/service roads (potentially shared with the utilities that also use the roads) and of the parking area.
2. Replacement of signs due to age and vandalism.
3. Repair and replacement of restroom facilities.
4. Repairs to the caretaker's residence.
5. Repairs to sewer and water lines.
6. Repair and replacement of irrigation systems.
7. Replanting of ornamental plants at park frontage.

5.0 IMPLEMENTATION PROGRAM AND COST ESTIMATE

There are a number of steps to be taken before the adopted Glen Cove Waterfront Park Master Plan can be constructed.

Funding for Design, Permitting, and Construction
Grant funding will need to be obtained for preparation of construction and permit documents, and for construction. In 2002 GVRD received a $500,000 grant from the Association of Bay Area Government's Bay Trail Project for park planning and construction, however it was subsequently determined that the environmental documentation was incomplete and the 1988 Master Plan improvements were no longer consistent with Board goals and public interests. GVRD anticipates reapplying for these funds with the new Park Master Plan and environmental document.

Other potential grant sources include the California Resources Agency's River Parkways Program, and the Bay Area Ridge Trail Council's planning and construction grant programs. Further funding opportunities may hinge on the passage of a future state resources bond, similar to Proposition 40 that passed in 2002.

Permitting and Agreements
GVRD will need to obtain several permits and agreements:

- Planned Development Permit from the City of Vallejo, including demolition and tree removal permits;
- Permits from the San Francisco Bay Conservation and Development Commission, which has jurisdiction over tidelands and a 100‘ band beyond the mean high tide line;
- U.S. Army Corps of Engineers permit, for placement of shoreline protection, which constitutes bay/wetland fill, including consultation with the U.S. Fish and Wildlife Service;
- Potentially a Streambed Alteration Permit from the California Department of Fish and Game for work removing invasive species and planting native species in or near the creeks;
- Grading and building permits from the City of Vallejo;
- Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Certification by the Regional Water Quality Control Board to comply with Section 401 of the Clean Water Act.
- Agreement must be obtained from PG&E and VSFCD for connection to, and public use of, the paved service road to the east of the park site that is proposed for use as part of the Bay/Ridge Trail Route;
- If the City of Vallejo Glen Cove Maintenance District lands to the west of the site are to be included in the Habitat Restoration Plan, an agreement or arrangement must be resolved with the responsible City staff.

Construction Documents

The schematic-level Master Plan drawings and descriptions will need to be translated into detailed construction plans, specifications and estimate that can be used to obtain permits and for bidding by contractors. This will require detailed topographic survey of the site, technical studies such as sampling of lead and asbestos in the Stremmel main house and caretaker's house, and potentially soil borings for design of structures such as the restroom and shoreline protection.

Bidding

Contract bid documents for the project must be prepared, the project must be advertised for public bid, based on authorization of the GVRD Board. The bids must be analyzed, and the GVRD Board must award a construction contract to the lowest responsible bidder.

Construction

The earthwork, shoreline protection, vegetation removal and planting, and facilities improvements would need to be carefully planned and phased as a vegetation management project the first season, with major earthwork and construction the second construction season, and on-going vegetation management and habitat restoration work, as specified in Section 3.0.

Design and Construction Cost Estimate

Table 5-1 presents a preliminary estimate of probable cost for the design and construction of Glen Cove Waterfront Park, including vegetation management and habitat restoration elements. This estimate is based on preliminary site information and conceptual design details that will be superceded by more detailed design and cost estimates during the construction document and permitting stage.

Table 5-1: Cost Estimate

Note: Overhead and contingency costs are applied at the beginning and end of the estimate. These factors, totaling 33%, should be added to any individual items to calculate their actual cost.

	Item	Unit	Qty	Unit Price	Total
	Project Start-Up				
1	Mobilization, bonding, and project staking	8%	allow	-	$ 10,000.00
2	Misc. clearing and grubbing, unanticipated costs	LS	allow	-	$ 20,000.00
	Project Start-Up TOTAL				**$ 30,000.00**
	Vegetation Management / Habitat Restoration				
3	Trim damaged eucalyptus trees on point	LS	allow	-	$ 8,500.00
4	Cut invasive/exotic trees to crown, chip, & paint stumps 3x (eastern site)	SF	30,000	$ 1.50	$ 45,000.00
5	Scrape invasive plants and seed stock, stockpile and remove (western site)	SF	160,000	$ 0.10	$ 16,000.00
6	Follow-up herbicide treatment, all areas	LS	allow	-	$ 5,000.00
7	Hydroseed native plant/wildflower mix, all disturbed areas (after grading)	SF	318,674	$ 0.10	$ 31,867.40
8	Plant native plants from cuttings or liners (after grading) 1 gallon or liners, assume 1 per 25 s.f. over 25,662 s.f.	EA	1,027	$ 10.00	$ 10,270.00
9	Plant maintenance and irrigation period (hand water 3x per mo. in dry season)	YRS	3	$ 9,000.00	$ 27,000.00
	Vegetation Management / Habitat Restoration TOTAL				**$ 143,637.40**
	Site Grading and Shoreline Protection				
10	Regrade western site (cut)	CY	8,457	$ 8.00	$ 67,656.00
11	Regrade western site (fill)	CY	2,647	$ 12.00	$ 31,764.00
12	Place 12" protective fill layer of soil (from cut on western site)	CY	5,330	$ 12.00	$ 63,960.00
13	Fill main house basement with soil, compact	CY	225	$ 16.00	$ 3,600.00
14	Rough grading for new 12' paths w/ 2' shoulders, assume 1' deep: .6 CY/LF	CY	643	$ 12.00	$ 7,716.00
15	Fine grading for new 12' paths w/ 2' shoulders,	SF	17,136	$ 0.30	$ 5,140.80
16	Rough grading for new 5' paths, assume 1' deep: .25 CY/LF	CY	858	$ 12.00	$ 10,296.00
17	Fine grading for new 5' paths	SF	24,024	$ 0.30	$ 7,207.20
18	Install western shoreline erosion protection (3-layer riprap)	LF	160	$ 100.00	$ 16,000.00
19	Install eastern shoreline erosion protection (2-layer riprap)	LF	140	$ 75.00	$ 10,500.00
	Grading & Shoreline Protection TOTAL				**$ 223,840.00**
	Demolish Stremmel Main House and Caretaker's Residence				
20	Break up existing driveways around house sites	SF	4,675	$ 0.50	$ 2,337.50
21	Asbestos assessment/abatement	LS	allow	$ 17,000.00	$ 17,000.00
22	Demolish main house	LS	allow	$ 10,000.00	$ 10,000.00
23	Break up basement floor paving	SF	2,150	$ 5.00	$ 10,750.00
24	Demolish caretaker's residence and garden walls, break and remove slab	LS	allow	$ 5,000.00	$ 5,000.00
	Stremmel Main House and Caretaker's Residence TOTAL				**$ 45,087.50**
	Roads and Trails				
25	12'W path, AC-paved (2.5" AC over 6" AB)	SF	12,852	$ 4.50	$ 57,834.00
26	Shoulder, decomposed granite, 2' wide, both sides	SF	4,284	$ 3.50	$ 14,994.00
27	Repair stairs to beach & install new railings	LS	allow	$ 5,000.00	$ 5,000.00
28	5' W path, crushed rock surface (4" DG), incl water access trails	SF	17,160	$ 3.50	$ 60,060.00
29	Install conc. retaining wall for E water access trail (36" avg ht or 2-18" walls)	SF	175	$ 175.00	$ 30,625.00
30	Repair/resurface ex. driveway and PG&E service road (cut weeds; chip & slurry seal - 12' wide)	SF	19,640	$ 0.50	$ 9,820.00
	Roads and Trails TOTAL				**$ 178,333.00**
	Public Use Facilities and Fixtures				
31	Picnic tables on intergral color concrete pads	EA	6	$ 3,000.00	$ 18,000.00
32	Trash receptacles	EA	8	$ 700.00	$ 5,600.00
33	Drinking fountain/running water	EA	3	$ 4,000.00	$ 12,000.00
34	Benches (concrete or steel)	EA	12	$ 1,000.00	$ 12,000.00
35	Restroom (prefab, single stall, concrete foundation), incl materials & installation	ALLOW	1	$ 60,000.00	$ 60,000.00
36	New water service for restroom, incl. new meter	ALLOW	1	$ 12,000.00	$ 12,000.00
	Parking area (14 standard spaces plus 1 handicap)				
37	Clearing	SF	4,900	$ 0.15	$ 735.00
38	Rough and fine grading (6" avg depth)	CY	40	$ 20.00	$ 800.00

Table 5-1: Cost Estimate (cont'd)

	Item	Unit	Qty	Unit Price	Total
	Public Use Facilities and Fixtures (cont'd)				
39	AC paving (3" AC over 9" AB)	SF	4,900	$ 4.50	$ 22,050.00
40	6" conc curb	LF	235	$ 20.00	$ 4,700.00
41	Stripe parking stalls (HC parking counts for 2 extra stalls)	EA	17	$ 10.00	$ 170.00
42	Recycled plastic wheel stops	EA	15	$ 50.00	$ 750.00
43	Parking signs, incl HC	EA	3	$ 300.00	$ 900.00
44	Double pipe gate	EA	1	$ 6,500.00	$ 6,500.00
45	Single pipe gate	EA	1	$ 3,000.00	$ 3,000.00
	Public Use Facilities and Fixtures TOTAL				**$ 156,205.00**
	Signage and Fencing				
46	Temporary project notice signs	EA	3	$ 200.00	$ 600.00
47	Main entry sign per GVRD specs	ALLOW	1	$ 5,000.00	$ 5,000.00
48	Bay Trail & BARTC trail signs (6 ea for 12 total)	EA	12	$ 500.00	$ 6,000.00
49	Rules & regulations signs @ entrance, west and east waterfronts	EA	3	$ 300.00	$ 900.00
50	Mapboard @ entrance	EA	1	$ 2,500.00	$ 2,500.00
51	Cultural resource boundary signs	EA	4	$ 500.00	$ 2,000.00
52	Cultural resource interpretive signs	EA	5	$ 2,000.00	$ 10,000.00
53	Interpretive signs for natural features	EA	6	$ 2,000.00	$ 12,000.00
54	North boundary fence welded wire mesh on 6' wood frame	LF	800	$ 20.00	$ 16,000.00
	Signage and Fencing TOTAL				**$ 55,000.00**
	Landscaping and Erosion Control				
55	Stormwater pollution prevention measures	LS	allow	$ 15,000.00	15,000.00
	Plant shrubs and trees, entry and upland areas				
56	Install 1-gallon shrubs	EA	134	$ 10.00	1,340.00
57	Install 5-gallon shrubs	EA	40	$ 25.00	1,000.00
58	Install 15-gallon shrubs/trees	EA	50	$ 125.00	6,250.00
59	Install drip irrigation	SF	25,311	$ 0.45	11,389.95
60	Soil amendment	SF	25,311	$ 0.30	7,593.30
61	Plant establishment period - weed, repair irrig., replace dead/damaged plants	YR	3	$ 3,000.00	9,000.00
	Landscaping and Erosion Control TOTAL				**$ 51,573.25**
	CONSTRUCTION UNIT COSTS SUBTOTAL				**$ 883,676.15**
	Construction Cost Contingencies	**% of Unit Costs Subtotal**			
1	Construction changes	allow	4%	-	$ 35,347.05
2	Inflation (3% over the next 2 years)	allow	6%	-	$ 53,020.57
3	Level of estimate accuracy	allow	15%	-	$ 132,551.42
	Contingency TOTAL				**$ 220,919.04**
	TOTAL CONSTRUCTION COSTS				**$ 1,104,595.19**
	Professional Services				
1	Landscape architecture and engineering (including planning, permit process and construction documents)	allow	16%	-	$ 176,735.23
2	Land survey for design	allow	3%	-	$ 33,137.86
3	Biological and archaeological services during design and construction	allow	5%	-	$ 55,229.76
4	Construction management	allow	5%	-	$ 55,229.76
	Professional Services TOTAL				**$ 320,332.60**
	TOTAL ESTIMATED PROJECT COSTS				**$ 1,424,927.79**