

GREENSCREEN FENCE
(see detail)
SCREEN PLANTING

GRASS PAVER
EXISTING FENCE
SCREEN PLANTING (see detail)

ORLEANS
CANAL

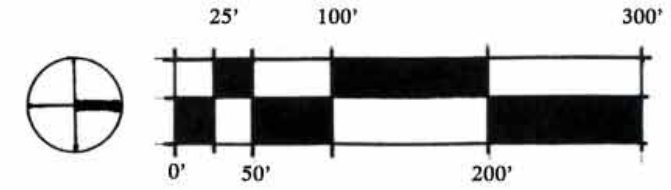
PUMP HOUSE
TOWER
SCREEN PLANTING

SCREEN PLANTINGS
PAVED ENTRANCE
BIKE PATH/ JOGGING TRAIL

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AESTHETIC TREATMENT CONCEPT
ORLEANS CANAL INTERIM CLOSURE



Orleans Avenue Canal

Concept Summary

Site Program

In contrast to the diversity and complexity of the 17th Street Canal ICS site, the Orleans Avenue Canal ICS site is located in the midst of a stable, well-maintained residential neighborhood where the site has always served as open space parkland which was available for passive recreation such as strolling along the top of the levee. The resident groups expressed a desire to restore, to the greatest extent possible, the character of that green space that has been lost since construction of the ICS. The site program will thus be limited to arranging the utilitarian site elements in a more compact layout in order to minimize the development footprint, installing screen planting to shield the views of the facility, and installing a walking / biking path around the ICS site to replace the levee top pathway lost to the ICS. The path is consistent with the City Park 2018 Masterplan, which includes this site. The path will improve security and public safety by giving people an optional pathway to the levee top, where people are currently walking under the pipe structure in order to pass by the ICS.

Aesthetic Approach

The residents on both side of the canal expressed a desire to return to the original aesthetic of the site, with a pastoral green and a natural woodland appearance. Due to site spatial constraints, the residents on each side of the canal were accepting of the fact that the aesthetic approach would have to be different in order to be effective.

The east side of the canal, along Marconi Drive, has ample amount of space, with the pump house set far back from the road. In this area, naturalistic plantings of a variety of evergreen trees of different scales, textures, and forms should be planted to visually screen out the view of the pump house. On west side of the canal, in the Lakeshore neighborhood, there is very little space available for aesthetic treatment and landscaping. In this area, the aesthetic approach will be more of a contemporary solution. Where screening the pump house structure is impossible due to physical proximity, the plan will instead be to modify the engineered look of the building itself through the addition of an attractive panel system applied around the structure. The result will be that the structure itself becomes a more attractive element in the neighborhood rather than being screened from view. Other site enhancements would be used to support and reinforce this aesthetic.

Conceptual Plan

The conceptual plan for the Orleans Avenue Canal ICS site includes the following primary components:

- The main operational center of the site is on the east side of the canal, and residents on both sides agreed that the east side, along Marconi Drive, has the site capacity to include all general site operational needs on that side. Thus the plan is to consolidate all employee parking to the east side of the site, and to pave the existing driveway with a area of asphalt near the public street in order to reduce dust and gravel from collecting on the neighborhood street.
- The rest of the site on the east side of the canal will feature evergreen screen plantings, new street tree plantings, and a walking path that will reroute pedestrians around the pump station.
- The west side of the canal will feature a Greenscreen panel system around the pump house, within feet of the structure. The screening system will be located just outside of the existing chain-link security fence which is located about two feet from the structure. The site immediately surrounding the pump house, which is currently a limestone parking area, will be redesigned to feature a more aesthetically appealing Grasscrete paving and landscaping look, while still providing for access by refueling trucks on an occasional basis.
- The open space areas to the north and south of the west side pump house should be planted with new street trees and more evergreen screen plantings where possible.

Design Features

The design features in the implementation of the mitigation plan will include:

- The entrance to the parking lot for operations staff on the east side of the canal will be paved with asphalt for a distance of 20 or 30 feet from Marconi Drive.
- Screen planting will be maintained at a 20 foot standoff distance from the parking lot and perimeter security fence.
- The walking path will be a curvilinear path of gravel, mulch, or some other informal material to encourage pedestrians to walk around them pump station without building a permanent pathway. The path will be on the east side of the canal only since there is not enough space to accommodate one on the west side.
- The planting on the east side of the canal will be selected for types and arranged in a way to create a naturalistic woodland edge impression. Along the street, Live Oak trees will be selectively planted in order to replace trees where there are gaps in the original planting.
- The west side of the canal will feature a Greenscreen fence system around the pump house to mitigate the visual impact of the pump house. The screening system will be a gridwire Greenscreen fence

that partially screens the view while providing a structure for climbing vines to grow. The combination screen wall may be 18 to 20 feet tall in order to shield the view of the building.

- The limestone paved area in front of the west-side pump house will be removed and replaced with a grasspave paving system that will support the loading capacity required for occasional refueling truck access while appearing to nearby residents as a grassed area. Also at this corner, the dying Live Oak tree should be removed, and new screen plantings should be installed in combination with the other remaining Live Oak trees. Only one vehicle entrance will be maintained on the west side of the property for fuel truck access. The northwest side will be screened with evergreen planting.

Implementation and Maintenance Considerations

There are no significant factors outside of the control of the Corps of Engineers scope of control that would limit the implementation of this concept design plan. Most of the areas of concern would fall within the category of maintenance, including the following:

- All of the plant material indicated on the concept plan will be located outside of the perimeter security fences for the pump houses. The resident stakeholders expressed a strong desire to hide the security fencing as well as the pump stations, and this would not be accomplished with the fencing in front of the planting. The planting also extends along the parkway to the north and south of the pump stations for two reasons. The new landscaping around the pump stations will appear more appropriate to the site if there is more supporting planting, and some of the planting will be considered as replacement tree planting for trees that were destroyed during construction of the ICS sites.
- Decision will have to be made regarding the care of the landscape planting. The Corps may choose to contract with a landscape maintenance vendor to support the planting installation. The planting materials chosen will be low maintenance tree species, which will be self-sustaining after an initial establishment period. It is recommended that the Corps select a contractor that will install the plant materials and provide one year of maintenance, including watering the plants on a regular basis. The contractor may use TreeGator bags or some similar product to water the trees weekly, especially during the growing season.

Security Factors

Two inter-related security factors affect the site design process – perimeter fencing, and standoff distances. Inventory and site analysis of the three ICS stations indicates that there has been inconsistent application of these security factors at the facilities. In general, this landscape mitigation plan includes aesthetic mitigation measures that can be accomplished



without disturbing existing security fences. These concerns are further explored in USACE Operational Review section later in this document.

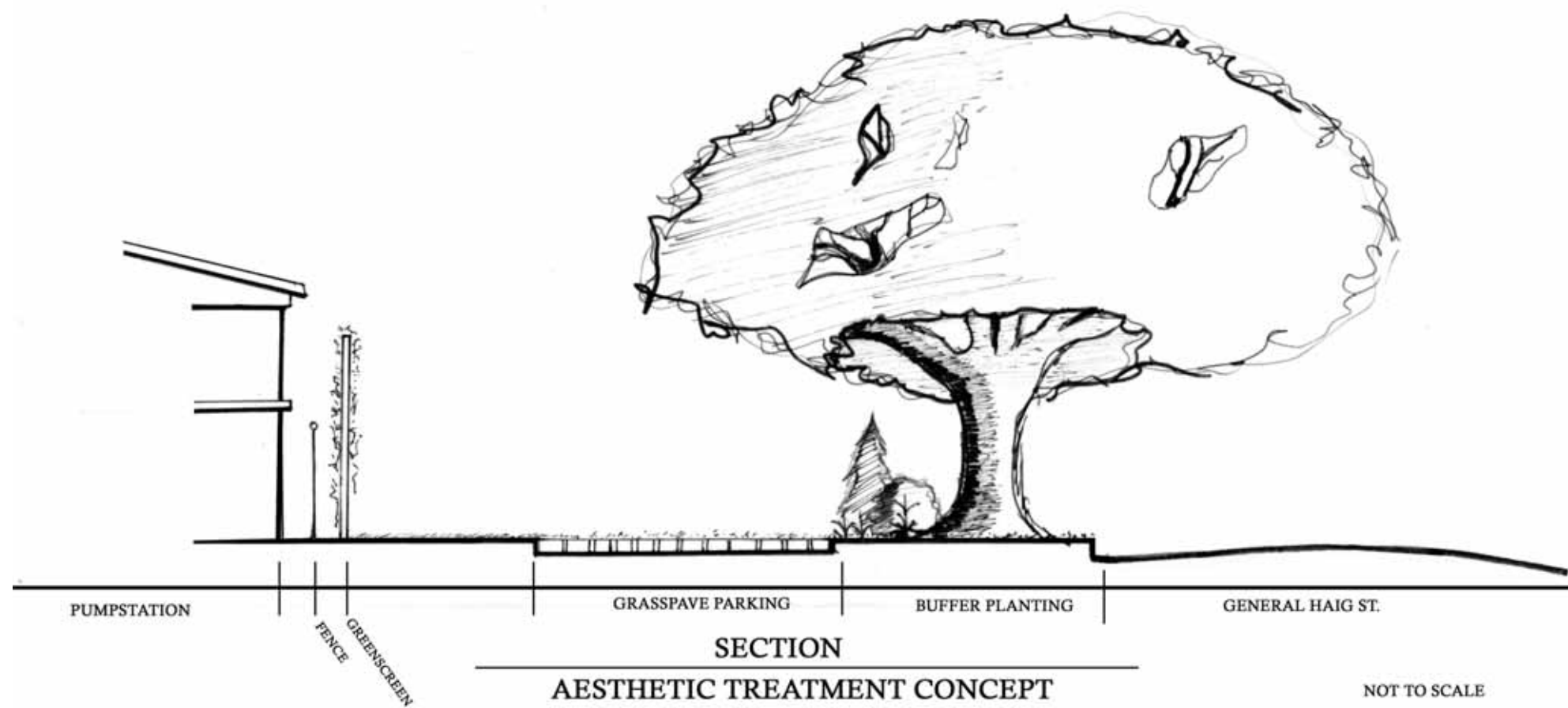
Another security factor that needs to be addressed at the Orleans ICS location is the nighttime lighting. The current all-night illumination levels greatly exceed the security requirements for normal conditions and are designed for the relatively rare occasions when nighttime operations are required. Per section 5-6 of Army Field Manual 3-19.30, “security lighting usually requires less intensity than working lights.” The lighting design of the Orleans ICS station should be revised to provide for a lower level of illumination during non-operational nights. Continuous lighting should be reduced and those fixed lights that must remain on should be revised to avoid bleeding off-site. Extensive use of standby lighting that is not continuously lit should be employed. Such lights could be automatically or manually turned on when suspicious activity is suspected or when nighttime operations are required.



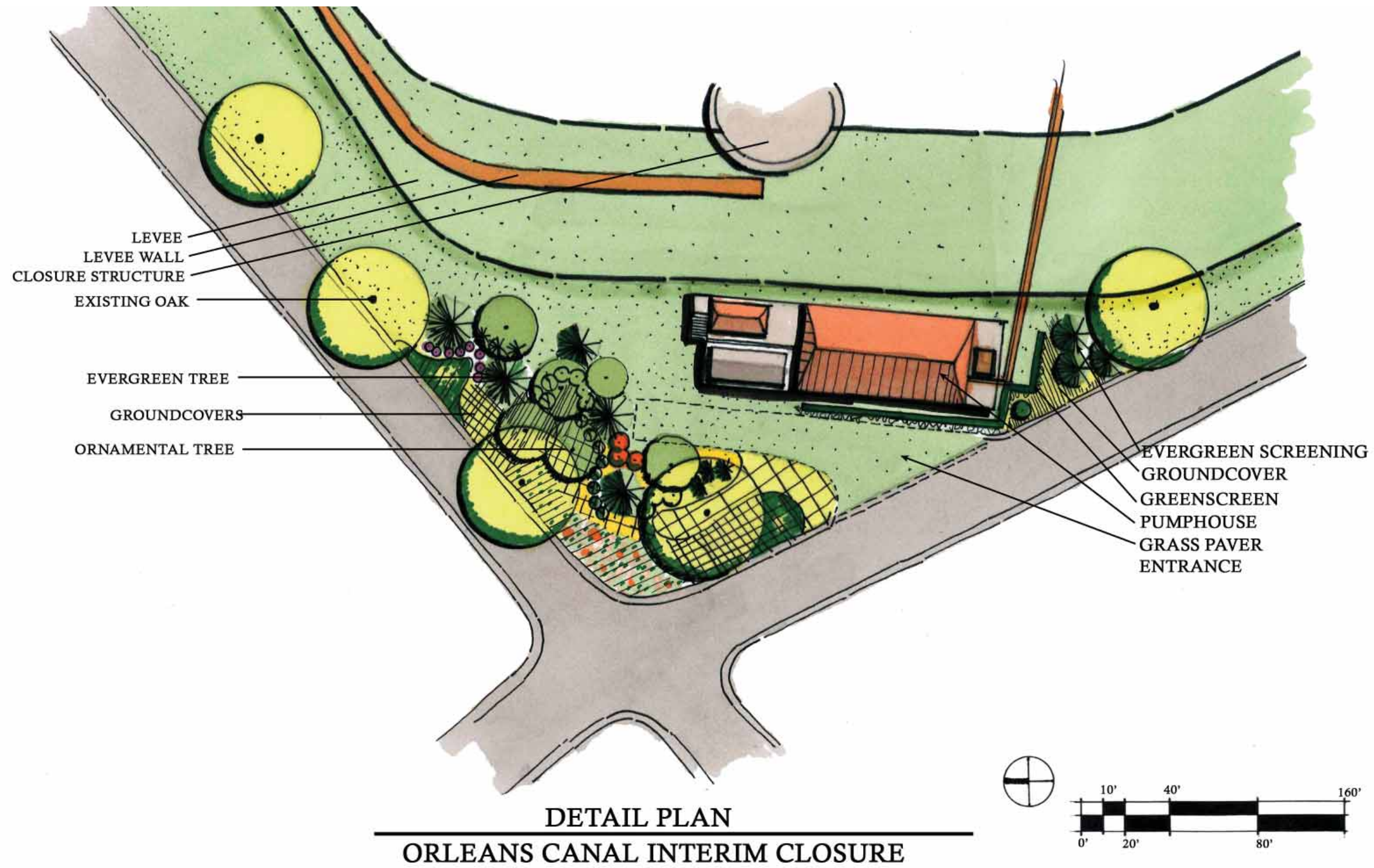
Orleans Avenue Canal - West Side - Current Condition



Orleans Avenue Canal - West Side - Possible Vertical Garden Screen Wall Applications. Greenscreen (upper) and Architectural Panels w/ Green Walls (lower)



Section: Showing the pumpstation, Greenscreen, decorative fence, planting and Grasspaver parking lot.



Detail Plan Showing the pumpstation, Greenscreen, decorative fence, planting and Grasspaver parking lot.