



CITY OF NORTH WILDWOOD

901 Atlantic Avenue
North Wildwood, NJ 08260-5778
(609) 522-2030

Patrick T. Rosenello
Mayor

Ronald C. Simone III
City Administrator

Mr. George Chidley, Manager
NJDEP - Offices of Leases and Concessions
Division of Parks and Forestry
501 East State Street
Mail Code: 501-03A
P.O. Box 420
Trenton, NJ 08625-0420

RE: Hereford Lighthouse Garden Plan – 2019

Dear Mr. Chidley,

I write to you today in order to seek approval of proposed improvements to the Hereford Inlet Lighthouse garden, per the Lease Agreement with the State of New Jersey for the management of the State owned, Hereford Inlet Lighthouse. Attached is the Hereford Inlet Lighthouse and Gardens: Vegetation Management and Landscaping Plan, as a supplement to the “Public Lands Vegetation Management Plan,” dated March 2016 and prepared by The Lomax Environmental Consulting Group. The assessment includes graphics and details of the invasive vegetation and uncontrolled damaging vines throughout the property, in addition to plans and recommendations for specific tree removal and replacement. Descriptions of Sheets 1 – 4 and summary of the scope of work are as follows:

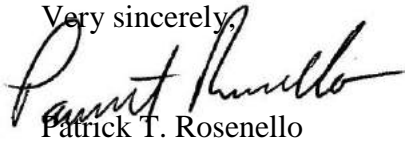
- 1. Sheet 1 highlights the existing conditions of the property with a complete tree inventory*
- 2. Sheet 2 contains proposals for the gardens*
- 3. Sheet 3 shows the proposals for the Natural Areas*
- 4. All details referring to Tree Planting and Maintenance Specifications can be found on Sheet 4*

*The six distinct biotic/geographic communities, including: Residential Buffer, Memorial Patio and Entry, Victorian Garden, Shade Garden, Memorial Walkway, and Maritime Forest, of the Lighthouse have all been examined. It is proposed that these areas have trees, such as the Japanese black pine (*Pinus thunbergii*), mimosa (*Albizia julibrissin*), and bamboo, be replaced with varieties that will not only enhance the beauty of the property, but also attract local wildlife such as butterflies and various migratory bird species native to the area. Furthermore, an annual pruning for all areas will take place to avoid conflicts with pedestrian walkways, sidewalks, paths, and adjacent private property. Safety concerns have also been taken into consideration, and special attention is placed on the existing vegetation that forms a protective barrier for the northeast and easterly portions of the property.*

Please accept the attached plan and narrative as our formal request to proceed with the proposed garden improvements to the Hereford Inlet Lighthouse grounds, which will not only create native horticulture that caters to indigenous species, but will also create a safer environment for visitors in accordance with the Lease Agreement and our NJDEP approved Community Forestry and Public Lands Vegetation Management Plans.

If you have any questions, please don't hesitate to reach out to our office at (609) 522-6464. Thank you for your consideration and I look forward to your reply.

Very sincerely,

A handwritten signature in black ink, appearing to read "Patrick T. Rosenello". The signature is fluid and cursive, with a long horizontal stroke at the end.

Patrick T. Rosenello

Mayor

MEMORANDUM

TO: Ronald C. Simone III, City Administrator
The City of North Wildwood

FROM: Peter L. Lomax

DATE: April 22, 2019

RE: **Hereford Inlet Lighthouse and Gardens – NJDEP Review
Vegetation Management and Landscaping Plan**
Block: 251, Lot: 5
City of North Wildwood, Cape May County, New Jersey
TLCG File #: 14-871

Background

The Lomax Consulting Group (TLCG) conducted a vegetation assessment of the Hereford Inlet Lighthouse parcel located in the City of North Wildwood, Cape May County, New Jersey, as part of the City's property management plan development for presentation to the NJDEP Office of Leases and Concessions. This assessment was completed as an extension of the previously issued "Public Lands Vegetation Management Plan", prepared by TLCG, dated March 2016, which promotes responsible stewardship practices to protect, enhance and manage the community's public lands. NJDEP requested a more comprehensive analysis of the Hereford Inlet Lighthouse property under the management plan, including a vegetation assessment and accompanying plans for management and supplemental plantings. Refer to the plant set entitled, "Hereford Inlet Lighthouse and Gardens - NJDEP Review Plan Set, Vegetation Management and Landscaping Plan," prepared by TLCG, dated November 20, 2018 (Sheets 3 and 4 last revised February 26, 2019).

The Hereford Inlet Lighthouse property is an important asset to the community of North Wildwood. The grounds serve as an educational and historic interpretive resource, a protective buffer from storms, habitat to wildlife, and an aesthetically appealing location for passive recreation. Unfortunately, portions of the property are dominated by invasive vegetation and damaging vines that jeopardize the aforementioned beneficial assets and reduce the ecological value of the site. The proliferation of invasive species, including Japanese black pine (*Pinus thunbergii*), mimosa (*Albizia julibrissin*), and bamboo species, does not reflect the City's interests or the goals and objectives for vegetation management on public lands. Concentrations of invasive vegetation and uncontrolled damaging vines, which outcompete and displace the diverse native species common to barrier islands and maritime forests, foster ecological risk throughout the community.

Findings

Upon close inspection of the property, six distinct biotic/geographic communities were identified, which consist of: Residential Buffer, Memorial Patio and Entry, Victorian Garden, Shade Garden, Memorial Walkway, and Maritime Forest. Each of these areas was specifically evaluated for existing vegetation conditions and management strategies.

At the behest of the City, TLCG identified, tagged (with numerical aluminum tree tags), and GPS-located the tree species on the property. Concurrently, the existing vegetation conditions were assessed, and the boundary of evident bamboo proliferation was delineated and recorded with GPS coordinates. Once all trees were tagged and the extents of bamboo growth defined, an existing tree inventory was created to quantify and qualify the on-site tree population. This tree inventory is depicted on **Sheet 1 – Existing Conditions** of the attached plan set. Upon review of the data, it was evident that many of the areas where vegetation management was most necessary were clustered, either the result of prior specified plantings or due to the spread of invasives from a central source. In several locations, the previously selected plantings were either unmanaged for extended periods which impacted the growth form or were inappropriate for the planting location. Utility line conflict, pedestrian safety risk, and overhead hazards were observed and noted during the property assessment.

In the formulation of vegetation management objectives, priority action was biased to those areas where safety concerns were identified. Additionally, priority action was assigned to locations where ecological degradation was documented. Careful consideration was focused on areas of existing vegetation that form a protective buffer along the northeast and easterly portions of the property. Implementation of vegetation management in these areas is detailed as being phased in a manner so that the protective nature of these features be retained. In areas where existing vegetation removal is deemed appropriate, naturalized/native species replacement plantings, adapted to this coastal setting, are prioritized wherever possible. Species were selected based upon a comprehensive science-based approach to enhance the ecological integrity and value of the site in balance with both facility operations and safety considerations. The proposed replacement plantings are illustrated on **Sheet 2 – Gardens and Sheet 3 – Natural Areas**. Replacement plantings reflect the long-term site goals, which were formulated in consultation with the City of North Wildwood, including safety concerns, maintenance considerations, enhanced aesthetics, habitat/species richness and diversity, and appropriate living fence screening. Tree planting and maintenance specifications were prepared to ensure that best management practices are implemented as detailed on **Sheet 4 – Planting Specifications**. The vegetation management and landscaping plan implementation was designed for a phased removal/replacement, where indicated, to allow for retained buffers of the gardens during establishment of the replacement plantings.

Planting Areas

Residential Buffer (Sheet 2)

Goal: Remove/replace Japanese black pine (*Pinus thunbergii*) and bamboo species with Chinese juniper (*Juniperus chinensis*) and Eastern red cedar (*Juniperus virginiana*) to maintain and improve the living fence screening to buffer the facility from the adjoining properties.

- Annual pruning is required (March or July) to control horizontal spread of new plantings to avoid conflicts with sidewalks, paths and adjacent private property.

Memorial Patio and Entry (Sheet 2)

Goal: Remove/replace Japanese black pine (*Pinus thunbergii*) with naturalized blue spruce (*Picea pungens*) to augment beautification of the Memorial Patio and Entry and to serve as a buffer to the adjoining property.

- Reduction pruning is required (March or July) to avoid conflicts with adjacent property.

Victorian Garden (Sheet 2)

Goal: Remove/replace of Japanese black pine (*Pinus thunbergii*) and bamboo species with salt tolerant/wildlife food source plants, including inkberry holly (*Ilex glabra*), shadblow serviceberry (*Amelanchier canadensis*), sweetgum 'Rotundiloba' (*Liquidambar styraciflua*), common persimmon (*Diospyros virginiana*), hackberry (*Celtis occidentalis*), bayberry (*Morella pennsylvanica*) and Eastern red cedar (*Juniperus virginiana*), to enhance species richness and beautification of the Victorian Garden.

- Plants selected will provide fruits or flowering to attract local wildlife such as butterflies and various bird species.
- Reduction pruning is required (March or July) to avoid conflicts with pedestrian walkways.

Shade Garden (Sheet 2)

Goal: Phased remove/replace of Japanese black pine (*Pinus thunbergii*) with Eastern red cedar (*Juniperus virginiana*), white flowering dogwood (*Cornus florida*), bayberry (*Morella pennsylvanica*) and white oak (*Quercus alba*) to provide a protective barrier/living fence buffer. In addition, selective removal/replacement of ornamental Chinese juniper (*Juniperus chinensis*).

- Plants selected will provide fruits or flowering to attract local wildlife such as butterflies and various bird species.
- Annual pruning will be required (March or July) to avoid conflicts with adjacent property and pedestrian walkways.

Memorial Walkway (Sheet 3)

Goal: Relocation of Memorial Walkway to seawall promenade with native herbaceous vegetation restoration to be completed in original location consisting of American beachgrass (*Ammophila breviligulata*), coastal panic grass (*Panicum amarum*) and seaside goldenrod (*Solidago sempervirens*) in order to enhance dune diversity and stabilization. Phased replacement of two stressed cherry trees with beach plums (*Prunus maritima*).

Maritime Forest (Sheet 3)

Goal: Remove/replace invasive vegetation, damaging vines and dead/damaged trees with native/naturalized vegetation to restore/recover the maritime forest. Maritime forests are unique, providing increasingly rare coastal woodland habitat on barrier islands. An historic lack of woodland management and the introduction of invasive species has led to the degradation of the subject site's ecological value. This has resulted in the propagation of invasive seed stock and uncontrolled spread of damaging vines throughout this woodland. Upon removal of these problematic species, the City of North Wildwood will supplement this area with naturalized/native species, including the following; Eastern red cedar (*Juniperus virginiana*), black cherry (*Prunus serotina*), groundsel (*Baccharis halimifolia*), bayberry (*Morella pennsylvanica*), beach plum (*Prunus maritima*), winged sumac (*Rhus copallinum*), American beachgrass (*Ammophila breviligulata*), eastern prickly pear (*Opuntia humifusa*), Carolina rose (*Rosa Carolina*), coastal panic grass (*Panicum amarum*), little bluestem (*Schizachyrium scoparium*), and seaside goldenrod (*Solidago sempervirens*), to restore and enhance the site's ecological integrity.

- Annual pruning will be required (March or July) to avoid conflicts with adjacent property and pedestrian walkways.

- Semi-annual inspection and maintenance to address damaging vine growth is required to prevent degradation of the maritime forest.
- Plants selected will provide fruits or flowering to attract local wildlife such as butterflies and various bird species.

Actions

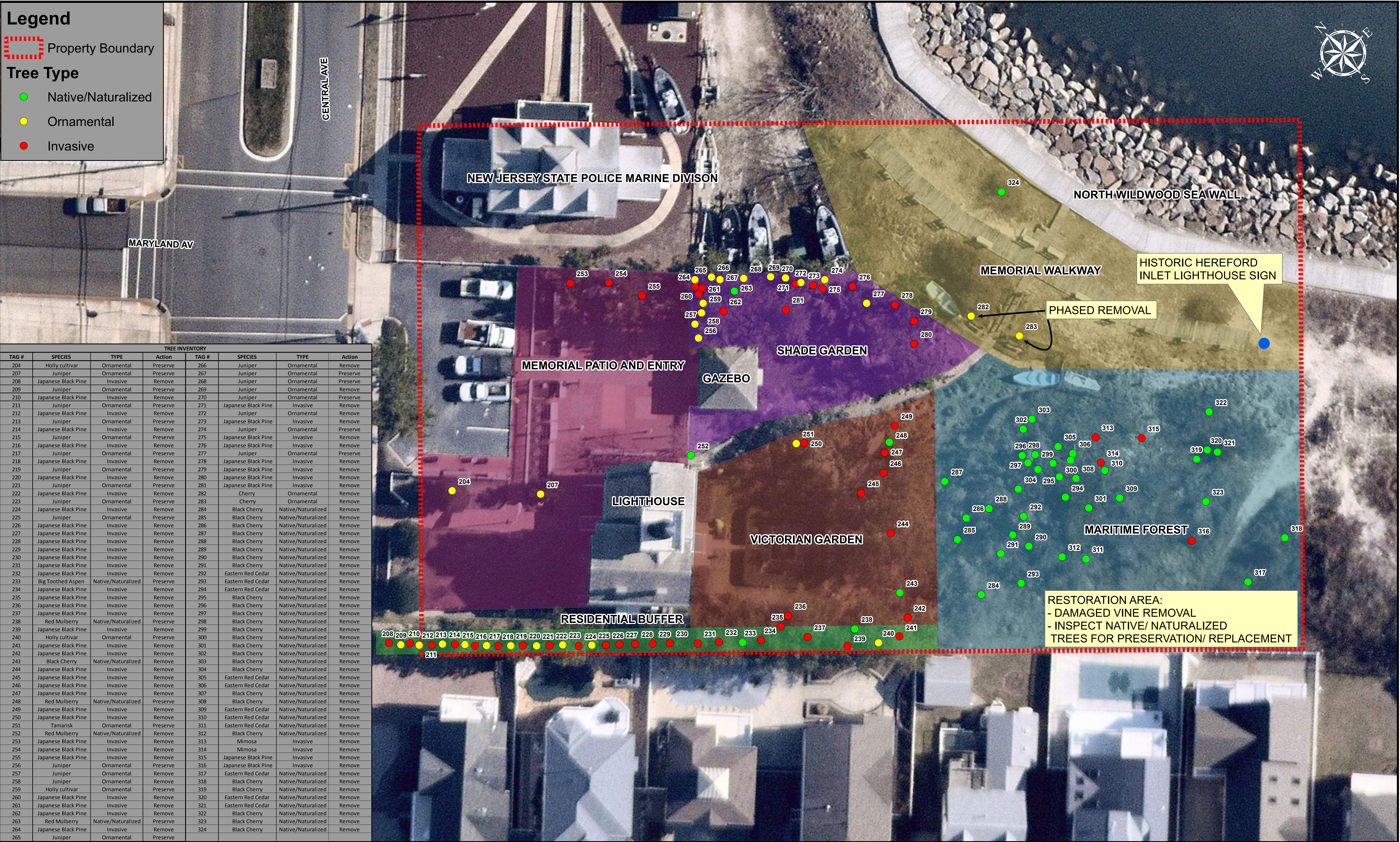
1. Submit draft landscaping plans and vegetation management memorandum to the City of North Wildwood for review and comment.
2. Prepare final landscaping plans based on input from the City of North Wildwood.
3. Update vegetation management memorandum pursuant to the final vegetation management and landscaping plans for submission to NJDEP.
4. Submit final landscaping plans and vegetation management memorandum to NJDEP's Office of Leases and Concessions.
5. Tracking NJDEP Office of Leases and Concessions' (or their designee's) review and approval of the landscaping plans and vegetation management program.
6. Request a Coastal Jurisdictional Determination from the NJDEP Division of Land Use Regulation (DLUR) for the proposed vegetation management activities.
7. Assist the City of North Wildwood with selection of a qualified landscape contractor.
8. Meet with the selected contractor for each phase of work and mark out removals, plantings, and management locations.
9. Monitor and oversee program implementation to ensure consistency with vegetation management program and approval(s).

Legend

Property Boundary

Tree Type

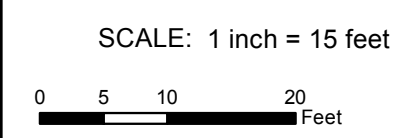
- Native/Naturalized
- Ornamental
- Invasive



TREE INVENTORY							
TAG #	SPECIES	TYPE	Action	TAG #	SPECIES	TYPE	Action
204	Holly cultivar	Ornamental	Preserve	266	Juniper	Ornamental	Remove
207	Juniper	Ornamental	Preserve	267	Juniper	Ornamental	Preserve
208	Japanese Black Pine	Invasive	Remove	268	Juniper	Ornamental	Preserve
209	Juniper	Ornamental	Preserve	269	Juniper	Ornamental	Remove
210	Japanese Black Pine	Invasive	Remove	270	Juniper	Ornamental	Preserve
211	Juniper	Ornamental	Preserve	271	Japanese Black Pine	Invasive	Remove
212	Japanese Black Pine	Invasive	Remove	272	Juniper	Ornamental	Remove
213	Juniper	Ornamental	Preserve	273	Japanese Black Pine	Invasive	Remove
214	Japanese Black Pine	Invasive	Remove	274	Juniper	Ornamental	Preserve
215	Juniper	Ornamental	Preserve	275	Japanese Black Pine	Invasive	Remove
216	Japanese Black Pine	Invasive	Remove	276	Japanese Black Pine	Invasive	Remove
217	Juniper	Ornamental	Preserve	277	Juniper	Ornamental	Preserve
218	Japanese Black Pine	Invasive	Remove	278	Japanese Black Pine	Invasive	Remove
219	Juniper	Ornamental	Preserve	279	Japanese Black Pine	Invasive	Remove
220	Japanese Black Pine	Invasive	Remove	280	Japanese Black Pine	Invasive	Remove
221	Juniper	Ornamental	Preserve	281	Japanese Black Pine	Invasive	Remove
222	Japanese Black Pine	Invasive	Remove	282	Cherry	Ornamental	Remove
223	Juniper	Ornamental	Preserve	283	Cherry	Ornamental	Remove
224	Japanese Black Pine	Invasive	Remove	284	Black Cherry	Native/Naturalized	Remove
225	Juniper	Ornamental	Preserve	285	Black Cherry	Native/Naturalized	Remove
226	Japanese Black Pine	Invasive	Remove	286	Black Cherry	Native/Naturalized	Remove
227	Japanese Black Pine	Invasive	Remove	287	Black Cherry	Native/Naturalized	Remove
228	Japanese Black Pine	Invasive	Remove	288	Black Cherry	Native/Naturalized	Remove
229	Japanese Black Pine	Invasive	Remove	289	Black Cherry	Native/Naturalized	Remove
230	Japanese Black Pine	Invasive	Remove	290	Black Cherry	Native/Naturalized	Remove
231	Japanese Black Pine	Invasive	Remove	291	Black Cherry	Native/Naturalized	Remove
232	Japanese Black Pine	Invasive	Remove	292	Eastern Red Cedar	Native/Naturalized	Remove
233	Big Toothed Aspen	Native/Naturalized	Preserve	293	Eastern Red Cedar	Native/Naturalized	Remove
234	Japanese Black Pine	Invasive	Remove	294	Eastern Red Cedar	Native/Naturalized	Remove
235	Japanese Black Pine	Invasive	Remove	295	Black Cherry	Native/Naturalized	Remove
236	Japanese Black Pine	Invasive	Remove	296	Black Cherry	Native/Naturalized	Remove
237	Japanese Black Pine	Invasive	Remove	297	Black Cherry	Native/Naturalized	Remove
238	Red Mulberry	Native/Naturalized	Preserve	298	Black Cherry	Native/Naturalized	Remove
239	Japanese Black Pine	Invasive	Remove	299	Black Cherry	Native/Naturalized	Remove
240	Holly cultivar	Ornamental	Preserve	300	Black Cherry	Native/Naturalized	Remove
241	Japanese Black Pine	Invasive	Remove	301	Black Cherry	Native/Naturalized	Remove
242	Japanese Black Pine	Invasive	Remove	302	Black Cherry	Native/Naturalized	Remove
243	Black Cherry	Native/Naturalized	Remove	303	Black Cherry	Native/Naturalized	Remove
244	Japanese Black Pine	Invasive	Remove	304	Black Cherry	Native/Naturalized	Remove
245	Japanese Black Pine	Invasive	Remove	305	Eastern Red Cedar	Native/Naturalized	Remove
246	Japanese Black Pine	Invasive	Remove	306	Eastern Red Cedar	Native/Naturalized	Remove
247	Japanese Black Pine	Invasive	Remove	307	Black Cherry	Native/Naturalized	Remove
248	Red Mulberry	Native/Naturalized	Preserve	308	Black Cherry	Native/Naturalized	Remove
249	Japanese Black Pine	Invasive	Remove	309	Eastern Red Cedar	Native/Naturalized	Remove
250	Japanese Black Pine	Invasive	Remove	310	Eastern Red Cedar	Native/Naturalized	Remove
251	Tamarisk	Ornamental	Preserve	311	Eastern Red Cedar	Native/Naturalized	Remove
252	Red Mulberry	Native/Naturalized	Remove	312	Black Cherry	Native/Naturalized	Remove
253	Japanese Black Pine	Invasive	Remove	313	Mimosa	Invasive	Remove
254	Japanese Black Pine	Invasive	Remove	314	Mimosa	Invasive	Remove
255	Japanese Black Pine	Invasive	Remove	315	Japanese Black Pine	Invasive	Remove
256	Juniper	Ornamental	Preserve	316	Japanese Black Pine	Invasive	Remove
257	Juniper	Ornamental	Remove	317	Eastern Red Cedar	Native/Naturalized	Remove
258	Juniper	Ornamental	Remove	318	Black Cherry	Native/Naturalized	Remove
259	Holly cultivar	Ornamental	Preserve	319	Black Cherry	Native/Naturalized	Remove
260	Japanese Black Pine	Invasive	Remove	320	Eastern Red Cedar	Native/Naturalized	Remove
261	Japanese Black Pine	Invasive	Remove	321	Eastern Red Cedar	Native/Naturalized	Remove
262	Japanese Black Pine	Invasive	Remove	322	Black Cherry	Native/Naturalized	Remove
263	Red Mulberry	Native/Naturalized	Preserve	323	Black Cherry	Native/Naturalized	Remove
264	Japanese Black Pine	Invasive	Remove	324	Black Cherry	Native/Naturalized	Remove
265	Juniper	Ornamental	Preserve				

RESTORATION AREA:
 - DAMAGED VINE REMOVAL
 - INSPECT NATIVE/ NATURALIZED TREES FOR PRESERVATION/ REPLACEMENT

Sheet 1 - Existing Conditions



SOURCE: 2018 AERIAL PHOTOGRAPH BY NEARMAP AND GIS DATA PROVIDED BY NJOT AT <http://njot.nj.gov/>

HEREFORD INLET LIGHTHOUSE AND GARDENS - NJDEP REVIEW PLAN SET VEGETATION MANAGEMENT AND LANDSCAPING PLAN BLOCK 251, LOT 5 CITY OF NORTH WILDWOOD, CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: CPW	DATE: 11-20-18
CHECKED BY: PLL	REVISED:
PROJECT #: 14-871	



PRJ\Act14-871\Site Mapping\Plans and Large Format Mapping\NJDEP Plan Set \NJDEP Vegetation Management Plan Lighthouse Sheet 1

Legend

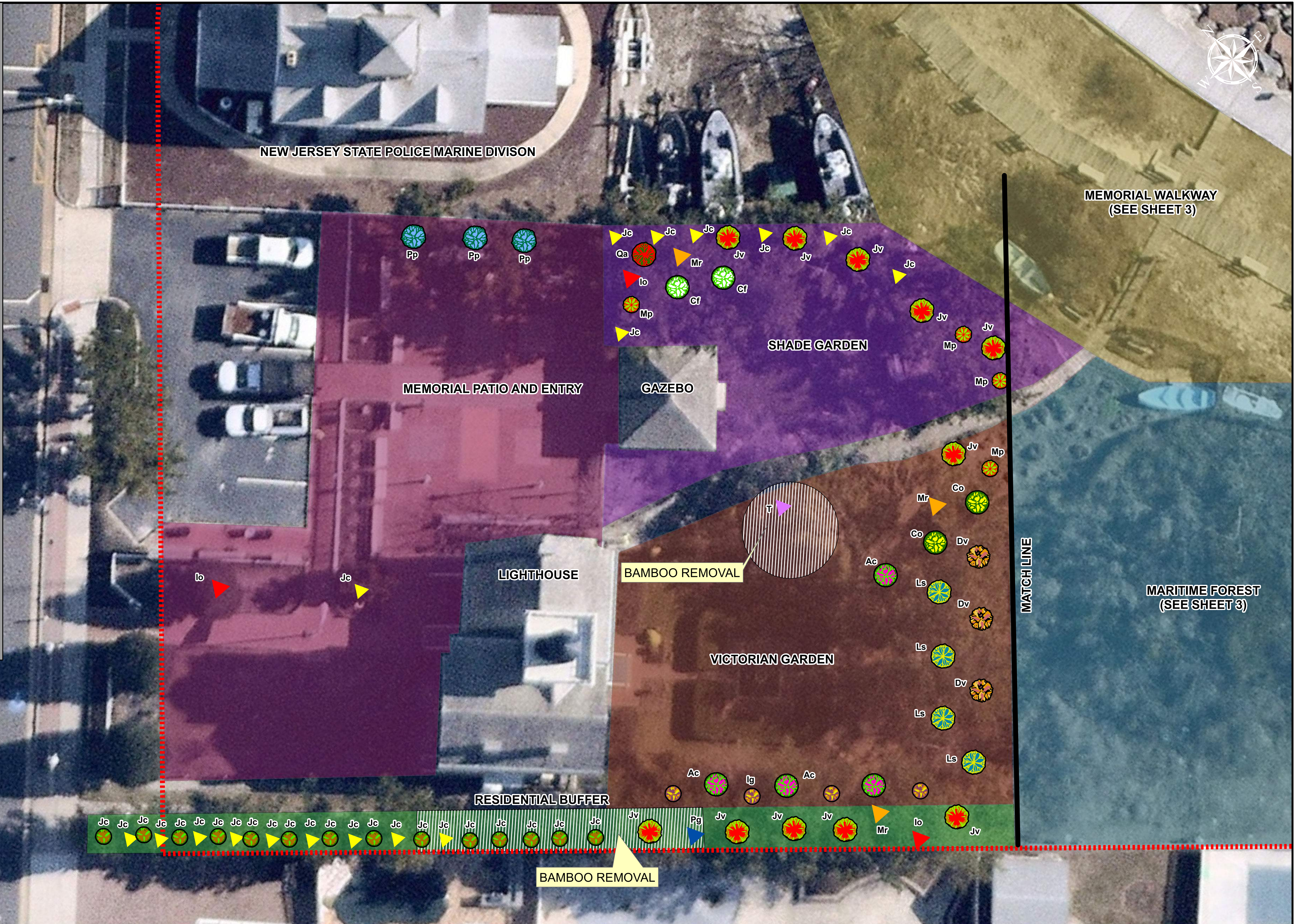
- Property Boundary
- Bamboo Removal

Proposed Replacements

- Shadblow Serviceberry (Ac)
- Hackberry (Co)
- Dogwood (Cf)
- Persimmon (Dv)
- Chinese Juniper (Jc)
- Eastern Red Cedar (Jv)
- Sweetgum (Ls)
- Blue Spruce (Pp)
- White Oak (Qa)
- Inkberry Holly (Ig)
- Bayberry (Mp)

Preserved Trees

- American Holly (Io)
- Red Mulberry (Mr)
- Bigtooth Aspen (Pg)
- Tamarisk (T)
- Chinese Juniper (Jc)



Sheet 2 - Gardens

SCALE: 1 inch = 10 feet
 0 5 10 20 Feet
 SOURCE: 2018 AERIAL PHOTOGRAPH BY NEARMAP AND GIS DATA PROVIDED BY NJGIT AT <http://njgit.nj.gov/>

HEREFORD INLET LIGHTHOUSE AND GARDENS - NJDEP REVIEW PLAN SET
VEGETATION MANAGEMENT AND LANDSCAPING PLAN
 BLOCK 251, LOT 5
 CITY OF NORTH WILDWOOD, CAPE MAY COUNTY,
 NEW JERSEY

DRAWN BY: CPW	DATE: 11-20-18
CHECKED BY: PLL	REVISED:
PROJECT #: 14-871	



PRJAct14-871Site MappingPlans and Large Format MappingNJDEP Plan Set NJDEP Vegetation Management Plan Lighthouse Sheet 2



Legend

- Property Boundary
- Proposed Composite Boardwalk
- Proposed Bench Patio
- Existing Bench

Proposed Replacements

- Eastern Red Cedar (Jv)
- Groundsel (Bh)
- Bayberry (Mp)
- Beach Plum (Pm)
- Winged Sumac (Rc)
- Beachgrass (Ab)
- Eastern Prickly Pear (Oh)
- Carolina Rose (Rc)
- Panicgrass (Pa)
- Little Bluestem (Sc)
- Seaside Goldenrod (Ss)

Natural Area and Seawall Tree Inventory Tagged Trees

- Eastern Red Cedar (Jv)
- Black Cherry (Ps)



EXISTING BENCH TO BE RELOCATED TO PATIO ALONGSIDE NORTH WILDWOOD SEAWALL AND EXISTING MEMORIAL WALKWAY TO BE RELOCATED TO SEAWALL PROMENADE

HISTORIC HEREFORD INLET LIGHTHOUSE SIGN

INSPECT NATIVE/ NATURALIZED TREES FOR PRESERVATION/ REPLACEMENT

Sheet 3 - Natural Areas

PRJAct14-871Site MappingPlans and Large Format MappingNJDEP Plan Set NJDEP Vegetation Management Plan Lighthouse Sheet 3

SCALE: 1 inch = 10 feet
 0 5 10 20 Feet
 SOURCE: 2018 AERIAL PHOTOGRAPH BY NEARMAP AND GIS DATA PROVIDED BY NJOT AT <http://njgis.nj.gov/>

HEREFORD INLET LIGHTHOUSE AND GARDENS - NJDEP REVIEW PLAN SET
 VEGETATION MANAGEMENT AND LANDSCAPING PLAN
 BLOCK 251, LOT 5
 CITY OF NORTH WILDWOOD, CAPE MAY COUNTY,
 NEW JERSEY

DRAWN BY: CPW	DATE: 11-20-18
CHECKED BY: PLL	REVISED: 2-26-19
PROJECT #: 14-871	





Know what's below. Call before you dig.

CONTACT ALL OF THE FOLLOWING FOR UTILITY MARK OUTS:

NEW JERSEY ONE CALL

SEA ISLE CITY

TREE PLANTING SPECIFICATIONS

- 1) GENERAL
a) The contractor shall be liable for any damages to property caused by their operations...
b) Trees shall be free of damage as the result of handling or transportation.
c) No substitution of plant material is allowed unless written permission is obtained...
d) All work shall conform to accepted horticultural/arboricultural practices...
2) SCOPE OF WORK
a) The contractor's work shall consist of:
i) preparation of areas for planting, including soil sample(s) which shall be analyzed to determine organic matter content, soil nutrients and determine any necessary soil amendments...
ii) furnishing labor, materials, equipment, tools, and planting/care of specified trees...
iii) maintenance-care of plantings until acceptance by the project supervisor...
iv) clean-up and restoration of any disturbed areas to the condition prior to the contractor's operations...
v) reinstallation of electrical service, conduit and receptacles at each tree planting pit as specified.
3) SCHEDULING OF WORK
a) The contractor shall submit a proposed work schedule to the project supervisor for approval at least fourteen (14) days prior to beginning operations...
b) The contractor shall arrange to confine their operations to normal working hours for the industry and no work will be permitted on Sundays or holidays without written authorization from the project supervisor.
4) PERSONNEL
a) All personnel will be properly supervised by the contractor in a manner that assures that the property is protected from damage, that the safety of all personnel and the public is protected and that all contract work is completed in a professional manner and according to accepted horticultural/arboricultural safety standards.
5) PROTECTION OF UTILITIES, EXISTING SITE FEATURES AND TRAFFIC SAFETY
a) Prior to any excavation or the driving of stakes into the ground, the contractor shall ascertain and have marked-out the location of all underground utilities...
b) In the event that any sub-surface utilities are uncovered or damaged, the contractor shall immediately notify the project supervisor so that the contract work may be relocated or stopped until the damage can be repaired...
c) Prior to planting, all trees, natural features, other vegetation and existing improvements shall be protected from equipment by a four (4) foot high self-supporting, protective barrier...
d) Equipment operators and contractors/nursery personnel shall not damage existing tree trunks and root systems during the handling of plant material and/or by driving vehicles over the root zone of any trees, existing or newly planted...
e) Contractor shall secure any necessary permits and/or approvals from the necessary authority(ies) prior to planting activities along roadways, and shall be responsible for any signage, cone placement and traffic controls deemed necessary by the prevailing authority(ies).
6) MULCH
a) Shredded hardwood mulch shall be the preferred type of mulch, but other organic mulches may be used if approved by the project manager...
b) The mulch supplied by the contractor shall be free of debris and shall be maintained by the contractor around all plantings to a depth of three (3") inches as shown in the planting diagram...
7) LAYOUT
a) All trees shall be located as shown on the plans supplied by the project supervisor...
b) The project supervisor or their designee shall mark the exact planting location of each tree in accordance with the plans...
c) All designated planting locations shall have the existing root-ball removed, and the planting pit properly prepared for a new tree to be planted...
d) No planting pits shall be excavated in advance of planting operations...
8) WATER
a) Plants shall be thoroughly watered-in after planting...
9) NURSERY STOCK
a) Plant species shall conform to those indicated on the drawings, plant list, and the publication Hortus Third...
b) All landscape nursery stock at the time of planting, including size of plants, spread of roots and size of root balls, shall conform to the planting plan schedules and standard specifications...
c) No substitutions shall be permitted in either kind or grade without written authorization from the project supervisor...
10) QUALITY
a) Plants shall have the habit of growth that is normal for the species or cultivar and shall be sound, healthy, vigorous, free from insects, plant diseases and injuries or damage of any nature...
b) All plants shall have been root pruned at the nursery at least one year prior to transplanting...
11) SHIPMENT, DELIVERY, INSPECTION AND ACCEPTANCE
a) The project reserves the right to inspect and select all plant material at its point of origin...
b) The plant material is to be delivered to the site in quantities and on the dates agreed upon by the project supervisor...
c) All plants shall be tarped, protected from weather and be adequately packed to avoid breakage, sun scald, windburn, desiccation and other damage during loading and shipment...
d) No plants shall be planted until they have been inspected and approved on the site by the project supervisor...
12) TIME OF PLANTING
a) Prior to commencement of planting, the contractor shall contact the project supervisor to establish a schedule of planting dates...
13) PLANTING
a) Unless otherwise specified herein, all work shall conform to accepted horticultural/arboricultural practices as ultimately determined by the project supervisor...
b) Plants shall be protected upon arrival to the site by being thoroughly watered and properly maintained until properly planted and watered...
c) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
d) All trees shall be planted in pits which are a minimum of two (2) feet larger in diameter than their ball of earth and their spread of roots unless otherwise agreed upon by the project supervisor in writing...
e) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
f) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
g) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
h) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
i) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
j) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
k) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
l) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
m) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
n) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
o) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
p) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
q) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
r) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
s) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
t) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
u) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
v) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
w) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
x) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
y) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...
z) The contractor shall protect all existing features on the site including underground utilities, structures and existing trees...

- 14) GUYING, STAKING AND WRAPPING
a) Trees shall be supported immediately after plantings...
b) The contractor shall be responsible for the proper installation and maintenance of pedestrian-friendly tree stakes and supporting materials...
c) For details on proper staking, see the planting diagram...
d) Tree trunks shall not be wrapped...
15) PLANTING PREPARATIONS
a) Prior to backfilling, balled and burlapped trees shall have burlap and twine removed from around the trunks, stems and tops of the balls...
b) The entire wire basket shall be removed from the root balls after the trees are set in the planting pit...
c) Backfilling shall be lightly but thoroughly tamped...
16) MULCHING
a) Shredded hardwood mulch supplied by the contractor shall be free of debris and shall be placed by the contractor around all plantings at a depth of three (3") inches away from the bases of all plantings...
17) PRUNING
a) The contractor shall not prune any plant during planting unless otherwise agreed upon by the project supervisor in writing...
18) CLEAN-UP
a) During the course of operations, the contractor shall remove from the property at their expense all excess and waste materials...
b) Any damaged lawn areas, pavement, surfaces or vegetation will be restored or replaced to their original condition...
19) ELECTRICAL SERVICE
a) Existing electrical service/conduit within the planting pits shall be powered off before and during the planting process...
b) Upon completion of plantings, electrical service shall be inspected, repaired and confirmed operational...
c) Electrical service shall be installed via flexible non-metallic conduit with elevated, weatherproof, electrical receptacles...
20) INSPECTION FOR ACCEPTANCE
a) Inspection: The contractor shall notify the project supervisor when planting is completed and shall request an inspection in order to determine whether or not the project meets the specifications contained herein...
b) Acceptance: After inspection, the contractor will be notified in writing by the project supervisor of the acceptance of all work.

TREE MAINTENANCE SPECIFICATIONS

- 1) GENERAL
Maintenance procedures will be carried out by the contractor to promote the establishment of the trees and ensure that they are in a healthy and viable condition two years after planting...
2) SCOPE OF WORK
The contractor's work shall consist of:
• Inspections
• Watering
• Mulching
• Weeding
• Securing stakes and guys
• Resetting trees to plumb
• Insect and disease control
• Fertilization
• Pruning
• Canopy Protection
• Electrical service/conduit/receptacle installation
• Storm cleanup
3) INSPECTIONS
Inspections shall consist of regular visits to the planting site/s by a qualified professional on behalf of the contractor to determine the health and needs of the trees...
4) WATERING
Watering is the most crucial maintenance procedure to ensure plant establishment and survivability...
5) MULCHING
Shredded hardwood mulch shall be the preferred type of mulch, but other organic mulches may be used if approved by the project supervisor...
6) WEEDING
The mulch rings of caliper size trees shall be kept free of weeds by using either chemical controls and/or hand weeding...
7) SECURING STAKES AND GUYS
Pedestrian-friendly tree stakes and supporting materials shall be maintained according to the planting specifications...
8) RESETTING TREES TO PLUMB
Any tree that deviates from a vertical position shall be adjusted so that the main trunk is plumb in two directions...
9) INSECT & DISEASE CONTROL
Trees shall be kept free of insect or disease infestations that can affect their health or establishment...
10) FERTILIZATION
A balanced, slow release fertilizer shall be applied at the recommended rate at the end of the first growing season in late fall...
11) PRUNING
Pruning shall be done only to dead, broken, diseased or infested branches during the maintenance period...
12) CANOPY PROTECTION
Plantings, especially those that are ornamental and more sensitive to winds and salt spray, shall have an effective means of canopy protection installed during the dormant season...
13) ELECTRICAL SERVICE/CONDUIT/RECEPTACLE INSTALLATION
The contractor shall be responsible to install, secure and maintain electrical service via flexible non-metallic conduit and receptacles in the tree plantings...
14) STORM CLEANUP
In the event of severe weather, the contractor shall inspect the trees for damage/maintenance and complete the associated actions within 72 hours of the storm event...

- 3) MAINTENANCE SCHEDULE
The contractor shall arrange to confine their operations to normal working hours for the industry and no work will be permitted on Sundays or holidays without written authorization from the project supervisor.
4) PERSONNEL
All personnel will be properly supervised by the contractor in a manner that assures that the property is protected from damage, that the safety of all personnel and the public is protected and that all contract work is done in a professional manner and according to accepted horticultural standards.
5) CLEAN-UP
During the course of operations, the contractor shall remove from the property at their expense all excess and waste materials...
6) OTHER
Unless otherwise specified within these specifications, all work shall conform to accepted horticultural practices as ultimately determined by the project supervisor.

GARDENS: STREET TREES, MEMORIAL PATIO AND ENTRY, RESIDENTIAL BUFFER, SHADE GARDEN AND VICTORIA GARDEN

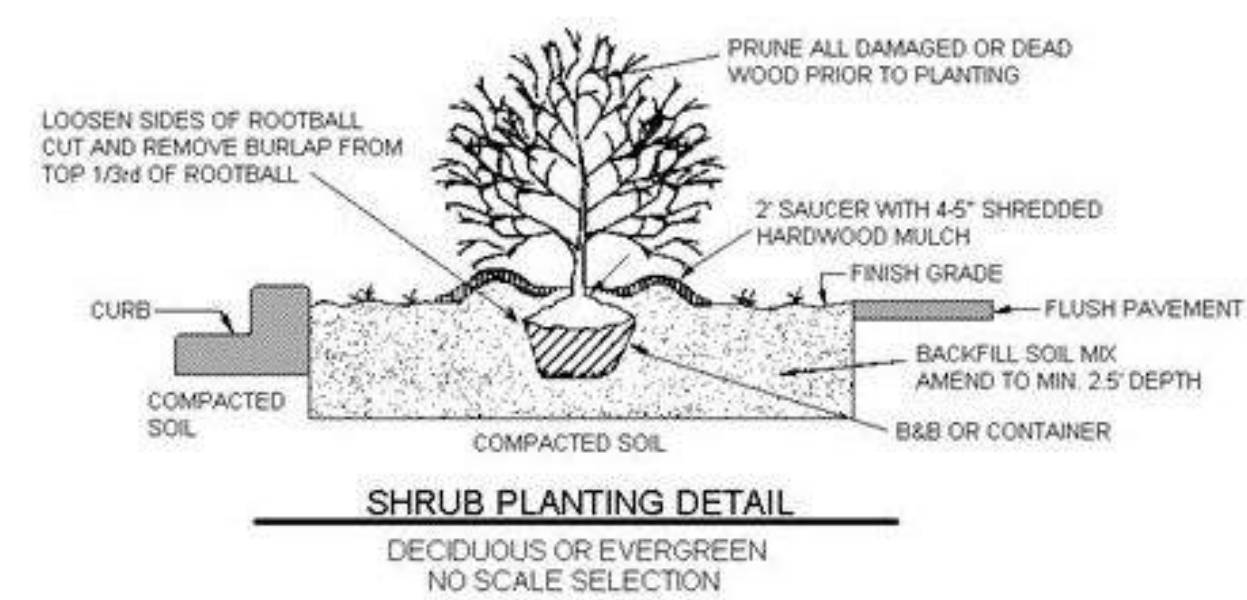
Table with 4 columns: TREES Qty, Symbol, Botanical name, Common Name. Lists plants like Juniperus chinensis, Ilex opaca, Morus rubra, Populus grandidentata, Tamarix.

Table with 10 columns: TREES Qty, Symbol, Botanical name, Common Name, Height, Caliper, Option A Height, Option B Height, Caliper, Type, Comments. Lists plants like Amelanchier canadensis, Celtis occidentalis, Cornus florida, Diospyros virginiana, Juniperus chinensis, Juniperus virginiana, Liquidambar styraciflua, Magnolia grandiflora, Picea pungens, Quercus alba, Ilex glabra, Morella pennsylvanica.

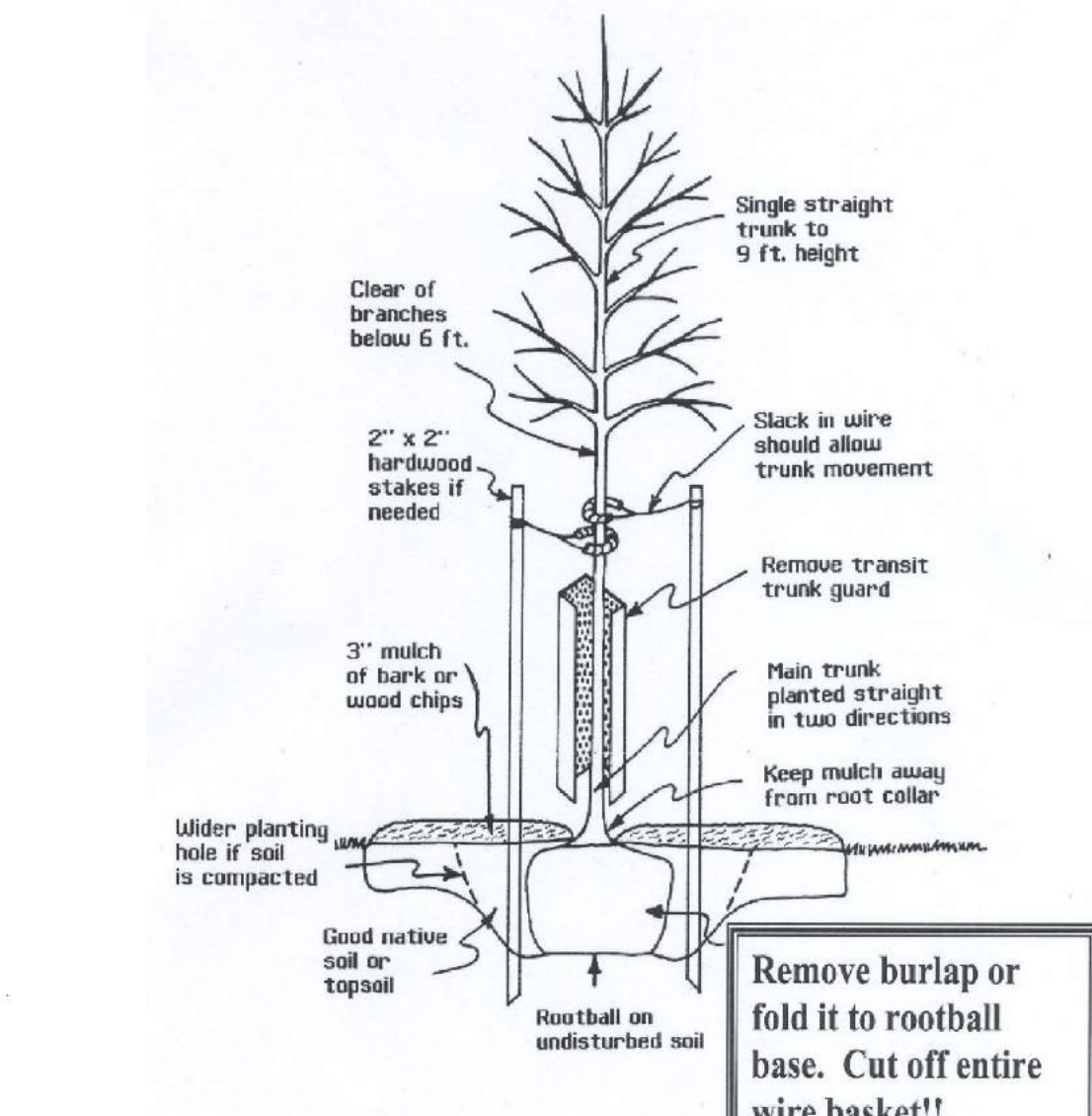
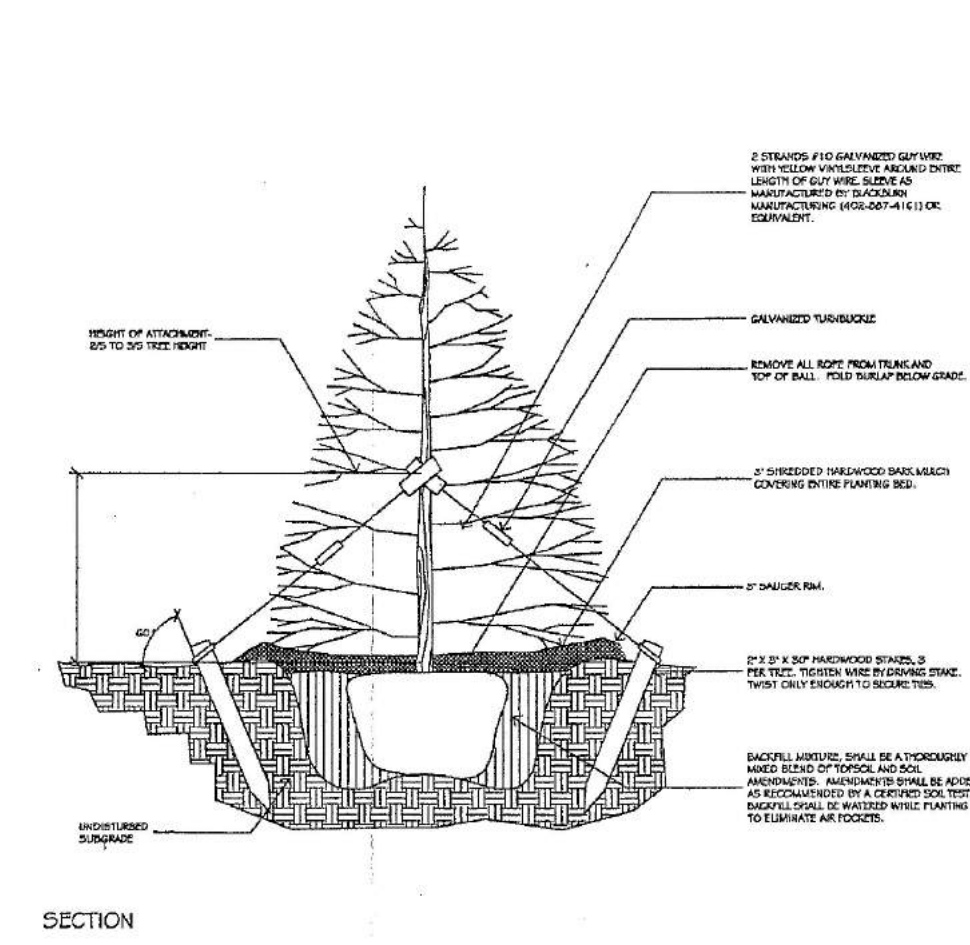
NATURAL AREAS: MARITIME FOREST AND MEMORIAL WALKWAY

Table with 4 columns: TREES Qty, Symbol, Botanical name, Common Name. Lists plants like Juniperus virginiana, Prunus serotina, Prunus spp. (var).

Table with 10 columns: TREES Qty, Symbol, Botanical name, Common Name, Height, Caliper, Option A Height, Option B Height, Caliper, Type, Comments. Lists plants like Baccharis halimifolia, Morella pennsylvanica, Prunus maritima, Rhus copallina, Ammophila brevifloluta, Opuntia humifusa, Rosa carolina, Panicum amarum, Schizachyrium scoparium, Solidago sempervirens.



TREE/SHRUB PLANTING DETAIL



Sheet 4 - Planting Specifications

HEREFORD INLET LIGHTHOUSE AND GARDENS - NJDEP REVIEW PLAN SET VEGETATION MANAGEMENT AND LANDSCAPING PLAN BLOCK 251, LOT 5 CITY OF NORTH WILDWOOD, CAPE MAY COUNTY, NEW JERSEY

DRAWN BY: CPW DATE: 11-20-18 CHECKED BY: PLL REVISED: 2-28-19 PROJECT #: 14-871

