

# Weehouse on Mount Airy Road West

Village of Croton On Hudson

Planning Board Meeting

Status Update – March 5th, 0224

Tom Hannigan Jr.

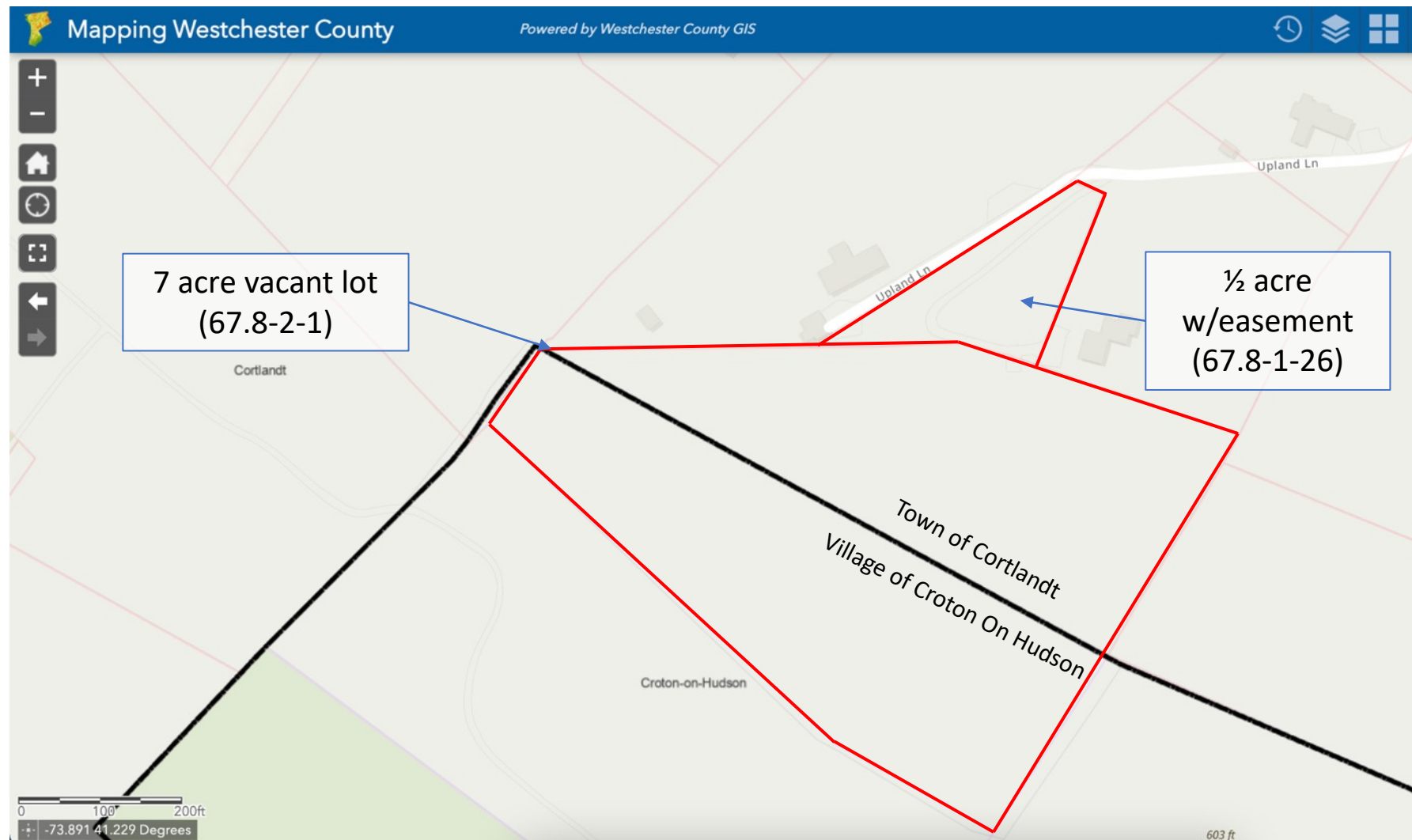
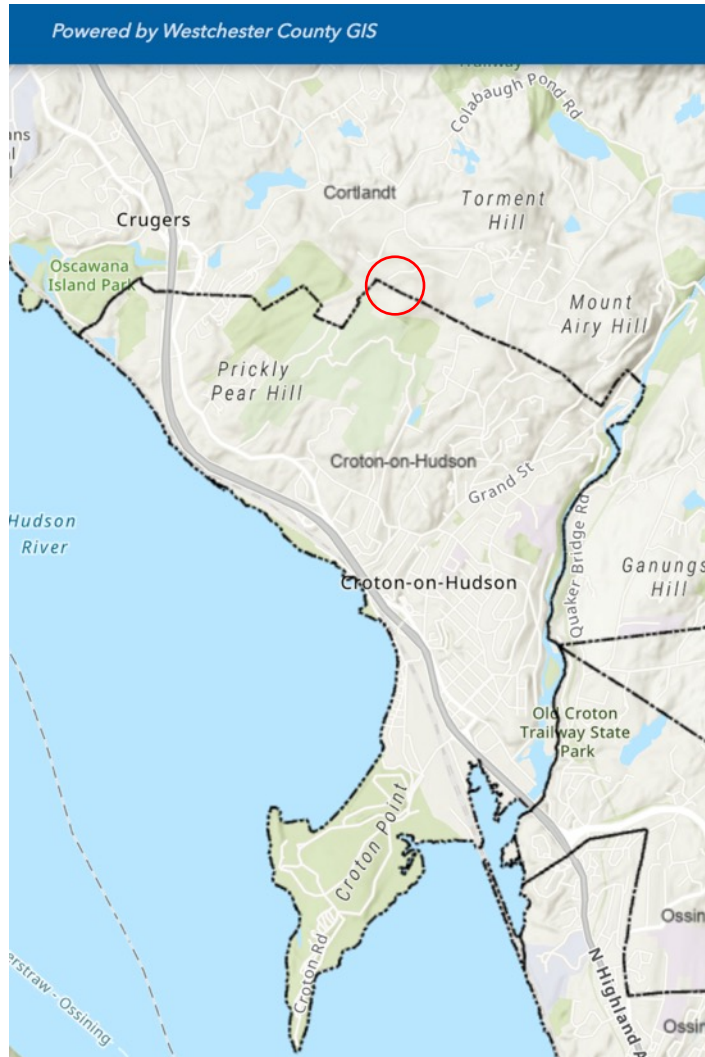
# Key Topics

- Project Re-cap
- Old Business
  - Current status
  - Upcoming milestones
- Holistic Forestry Approach
  - Detailed plan

# Project Re-cap

- Summarized for broader distribution

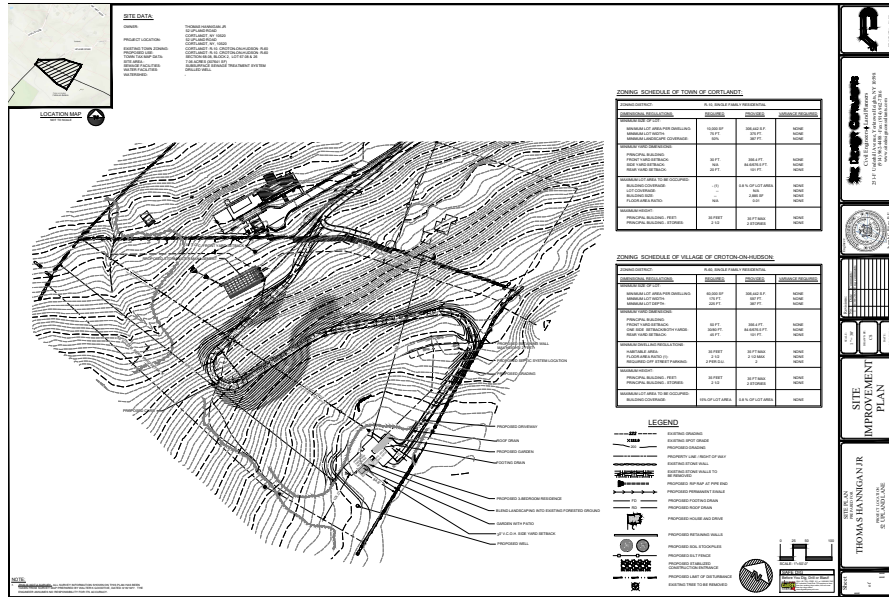
# Property Location





# Weehouse on Mount Airy Road West - Snapshot

# Site Plan



Permit ID: A-23-51  
Tax parcel: 67.8-2-1  
7.02 acres  
Driveway length: 1,050 linear feet  
LOD Area: 2.01 acres

Septic: WCDH File #C-2023-07

# House Design



Single family residence  
3 bedrooms  
2,225 Sq ft.  
Passive house design

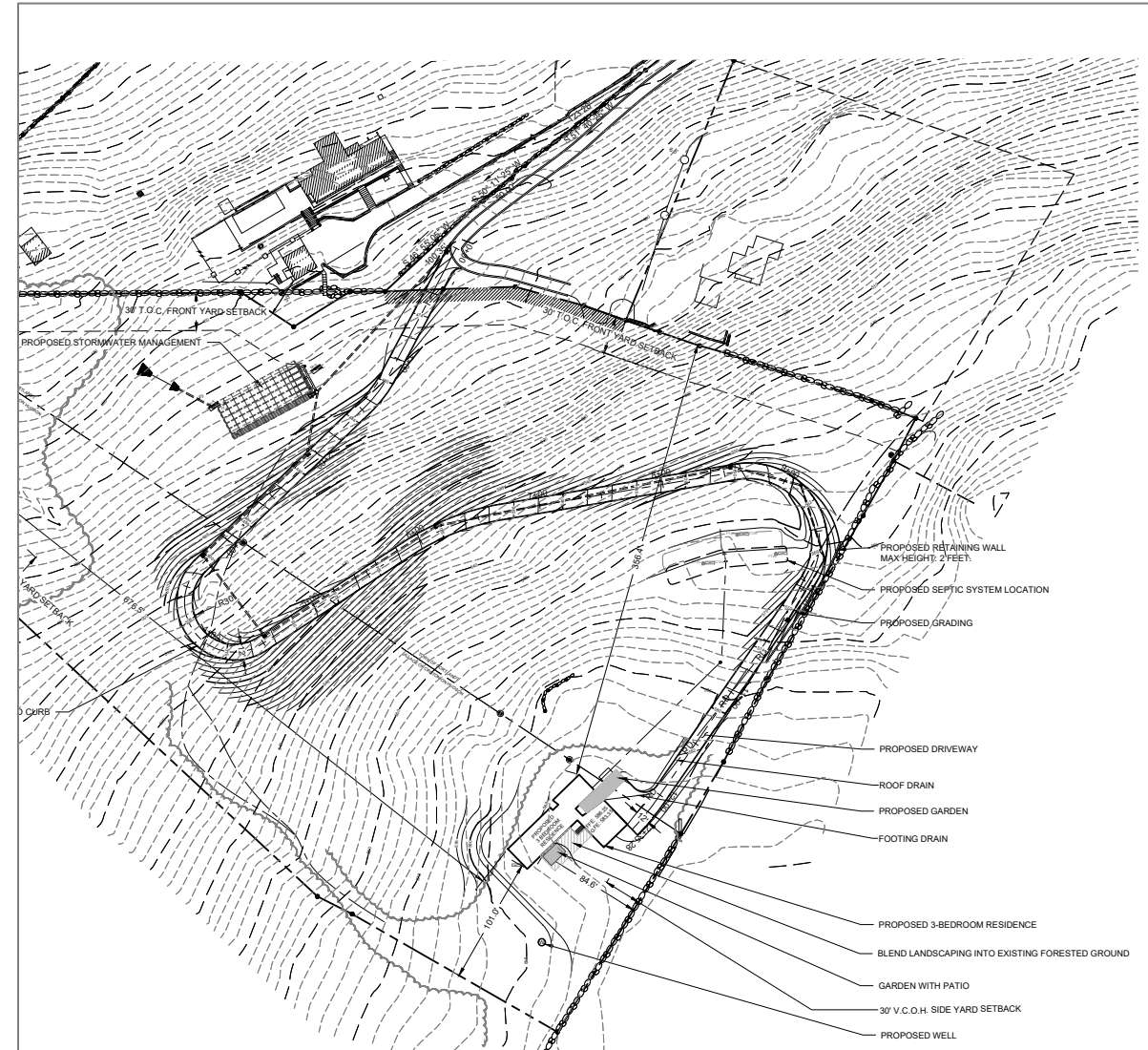
# Weehouse on Mount Airy Road West - Snapshot

## Site design

- Sustainable approach to land use/forestry
- Follows natural contours of land
- Meets code for steep slopes
- Land clearing/grading only where required to meet local codes

Joe Riina - Site Design Consultants  
Licensed Professional Engineer  
New York State License # 06877  
Connecticut License # 15954

Certified Professional in Erosion and Sediment Control CPESC # 2670  
Certified Professional in Storm Water Quality CPSWQ # 0073



# Weehouse on Mount Airy Road West - Snapshot



## Alchemy Architects:

- Weehouse creators
- Passive house experts
- ~20 projects NY/NE



Geoffrey Warner, FAIA  
Architect



Marcy Conrad Nutt, AIA,  
CPHD, LEED AP  
Architect

## Design Points

- Passive house principles
- Siting sympathetic to the property
- Locally sourced



# Project Re-cap

- Current Status
- Upcoming milestones

# Current Status

| Date    | Activity                                                                     | Status                                      | Next Actions                                             |
|---------|------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------------------|
| 1/25/23 | Permit application submitted to TOC                                          | Complete                                    |                                                          |
| 3/29/23 | DOTS Engineering review                                                      | On hold – refer to opengov portal messages  | Prepare septic, stormwater & tree plan                   |
| 6/7/23  | Septic, storm water, steep slopes, initial tree plan update submitted to TOC | Submitted - pending clarifications from TOC | TBD                                                      |
| 1/9/24  | Village Planning Board – steep slope plan review                             | Complete                                    | Schedule site visit                                      |
| 1/27/24 | Planning Board Site Visit                                                    | Complete                                    | Steep slope application letter                           |
| 2/6/24  | Village Planning Board – steep slope plan revision                           | Complete                                    | Initial tree re-planting plan                            |
| 2/20/24 | Village Planning Board – initial tree plan review                            | Complete                                    | Detailed re-planting plan, connect with TOC for guidance |
| 3/5/24  | Village Planning Board – re-planting plan review                             | In process, connect w/TOC declined          |                                                          |
|         |                                                                              |                                             |                                                          |
|         |                                                                              |                                             |                                                          |
| 4/1/24  | Commitments to contractors for '24 build season                              |                                             |                                                          |

# Holistic Forestry Approach

- Updated re-planting plan
- Tree count/replacement count



# Holistic Forestry Management Plan

Tim Miller Associates, Inc.

10 NORTH ST, GOLD SPRING, NY 045.235.4100 FAX: 045.235.4116



Steven Marino, PWS  
Principal, Sr. Environmental Planner, Wetland  
Ecologist, Professional Wetland Scientist





# 1926 Aerial View

- Large sections of the property were clear land
- Evidence of development on the site in the past





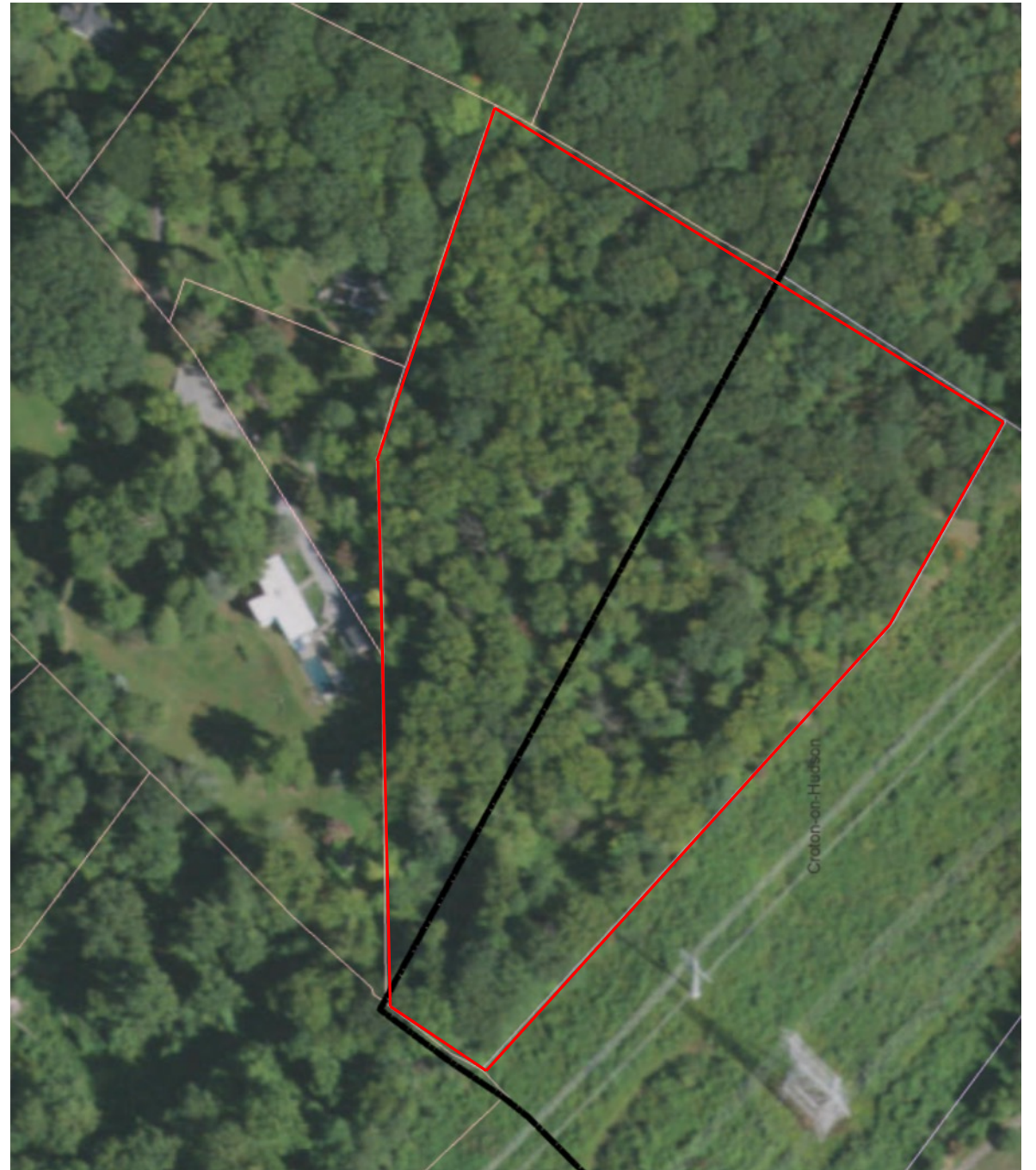
# 1926 Aerial View

- Most of the proposed disturbance will occur in areas that were historically cleared



# 2024

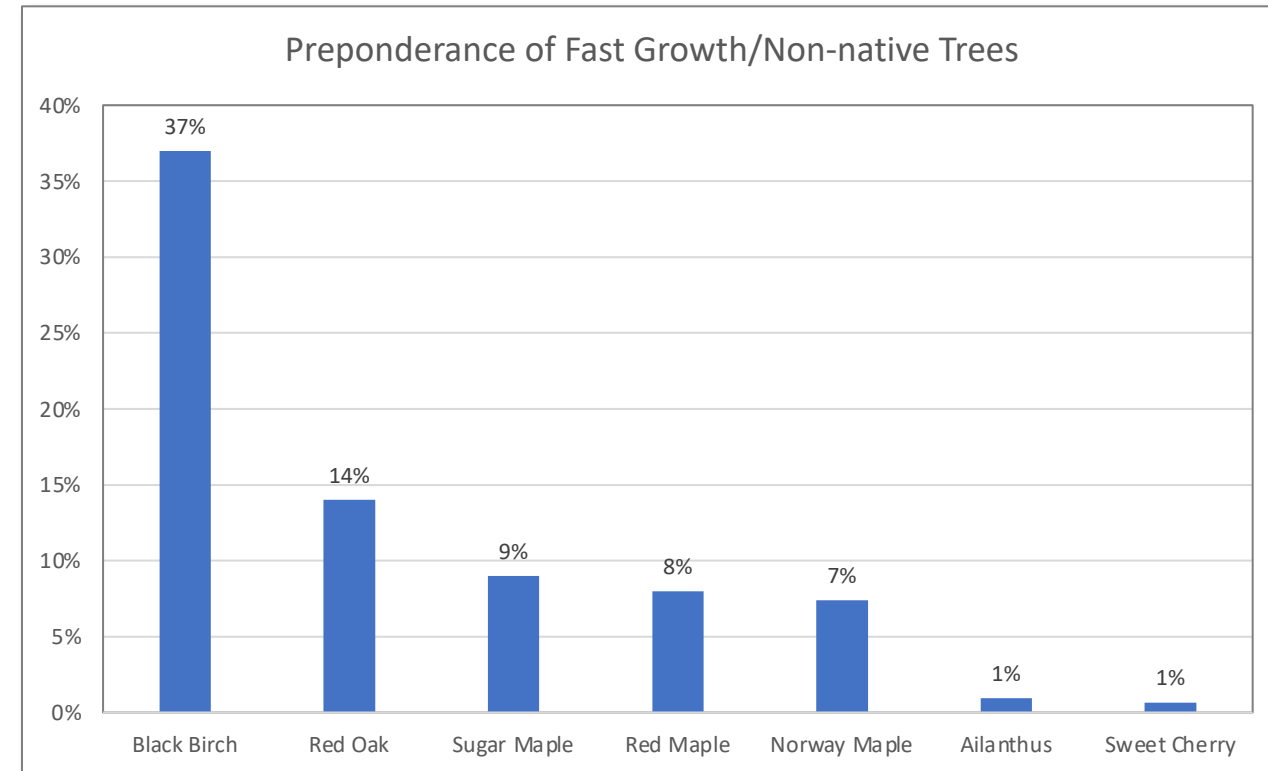
- Heavily wooded second growth forest with poor understory
- ~800 trees – dense canopy
- “Atypical” composition – predominantly fast growth/non-native species (86% are “fair” condition)
- Limited number of larger trees (1% are 24+”, 36% are <8”)
- Actively maintained – majority of invasive growth and deadfall has been removed





# Sav A Tree Impact Report – “Atypical species composition”

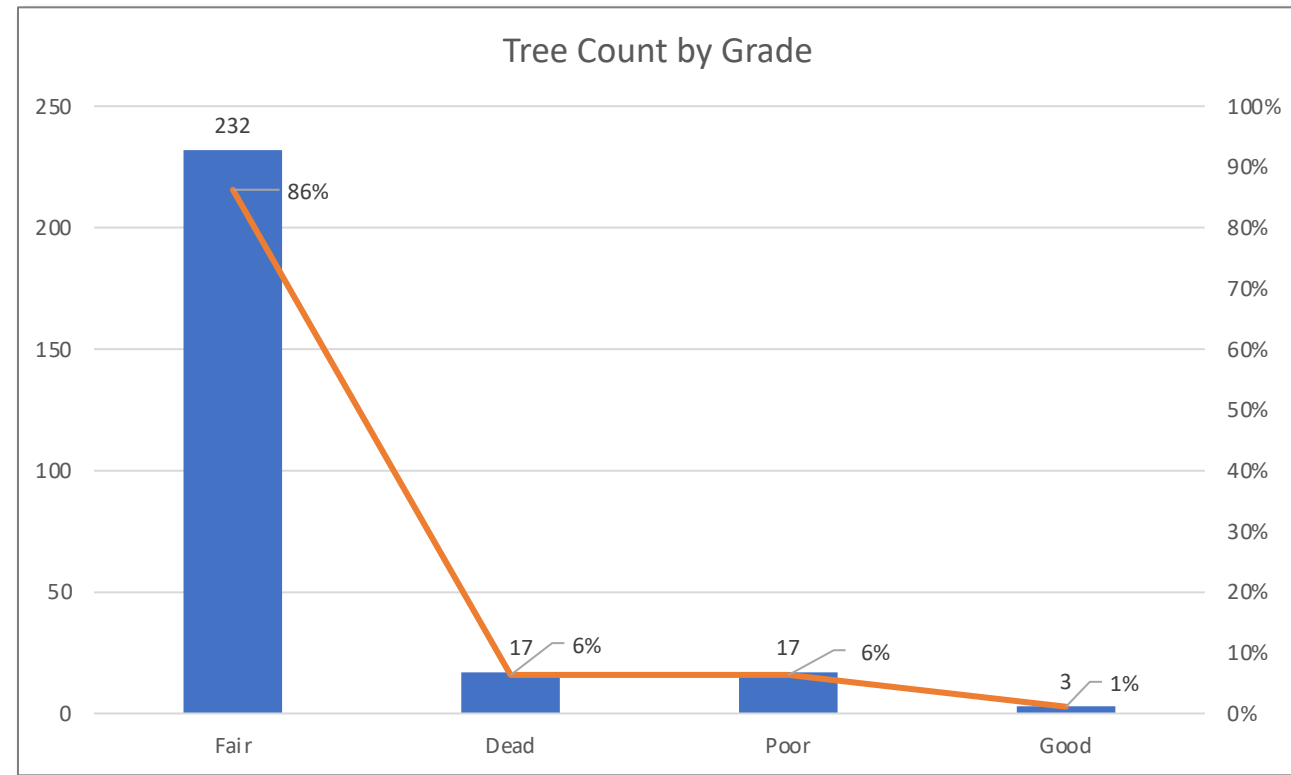
- “Atypical” species composition, 37% black birch (not “long lived” trees)
- No protected species
- Indicative of second growth, fast growing forest
- Large number of non-native species
- Few large trees, only 15 trees are 24” or larger
- 269 trees in standard line of disturbance, recommending 312 trees for removal
- Of the 312, 251 are “healthy,” 61 dead or poor condition



# Sav A Tree Impact Report – Majority of trees “Fair”

“The large number of Fair condition trees is mainly due to the fact that there are all forested trees that have never been managed. Most of them could be improved to good condition is (sic) they were pruned, fertilized, and/or treated for insect/disease issues, etc. Obviously, without management, the condition of all trees declines over time until they die.”

Matt Weibel  
ISA Certified Arborist #NJ-1065A  
Registered Consulting Arborist #534  
SavATree Consulting Group



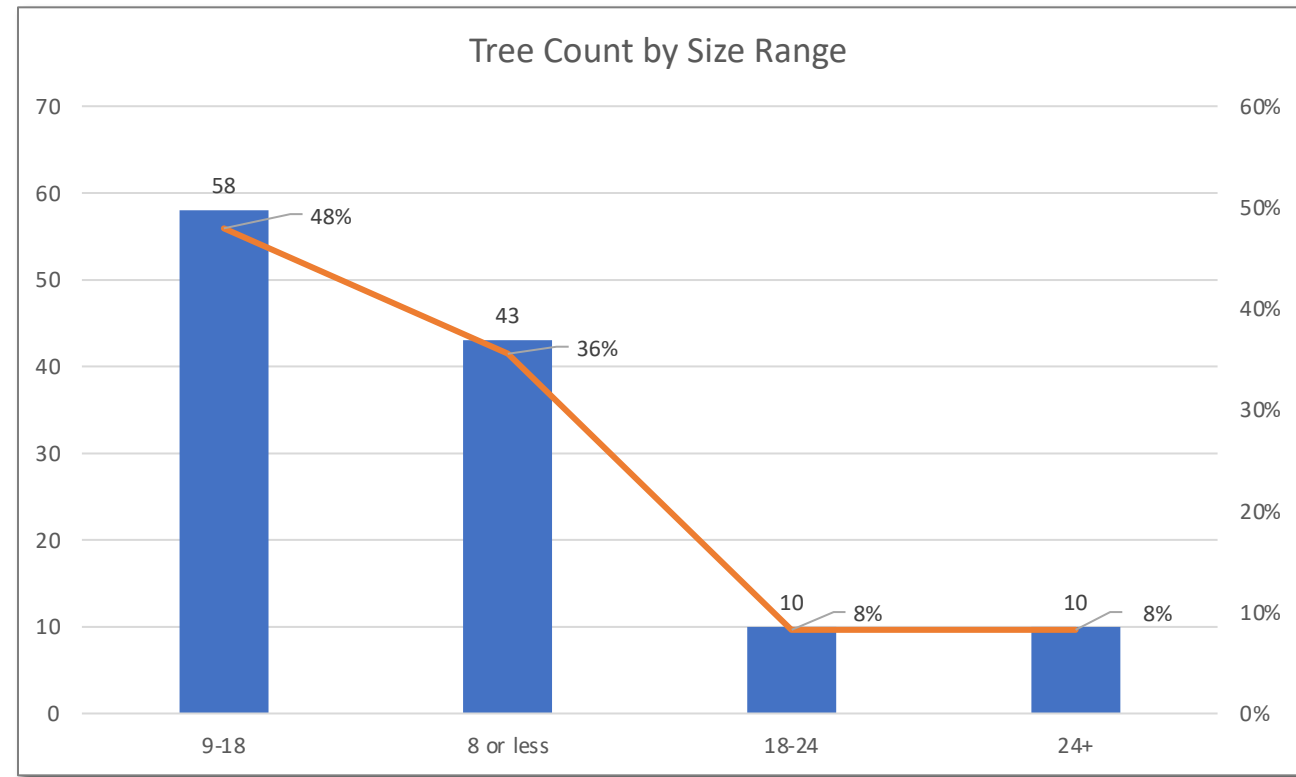
# Sav A Tree Impact Report – Tree Grading Criteria

- Good - tree shows good symmetry, no/very little dieback and/or deadwood, and its structure is free from obvious defect (single lead trunk, no lean, etc)
- Fair- tree may have canopy symmetry issues, be overgrown, have up to 25% dieback and/or deadwood. May have minor decay in trunk/large limb, but these issues are not great enough that removal is warranted.
- Poor - tree health is noticeably deficient and/or structural issues in need of action. Some poor trees may not be salvageable
- Dead - tree has no live foliage/canopy.



# Sav A Tree Impact Report – Majority of trees “understory 2<sup>nd</sup> growth”

- 87% of trees are less than 18” in diameter
- 36% are less than 8”



# Sav A Tree Impact Report – Conclusions

1. No protected trees, only ten 24+” large trees impacted.
2. The “atypical” species composition is an understory of mostly weak forest trees (black birch) or non-native invasive trees (Norway maple, Ailanthus).
3. Majority (86%) are <18” trees in fair condition.
4. Left unmanaged health of the majority of “fair” trees in the LOD will continue to decline, negatively impacting the sustainability of the forest.

Note: No significant differences observed in split between Croton/Cortlandt

# Holistic Approach to Forestry Management

## Best Practices:

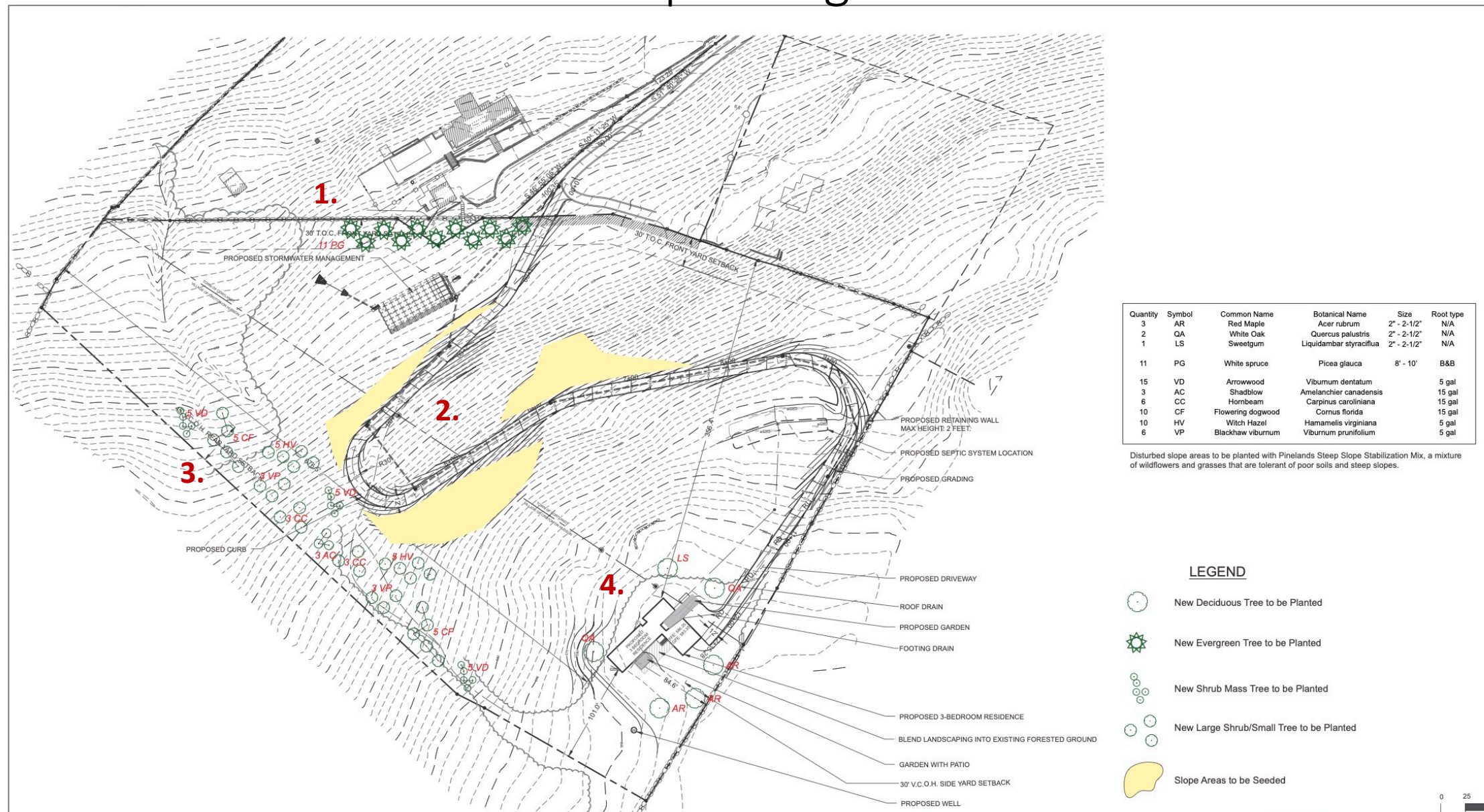
1. Thinning of dead or poor condition and non-native trees.
2. Increased light penetration with creation of gaps in forest.
3. Planting with understory trees and shrubs along site perimeter to enhance habitat.
4. Removal of trees too close to grading, septic, stormwater and new structures.  
Proximity to these areas reduces root health so forest-grown trees are likely to fail in the near future.
5. Protection of tree roots and trunks during site activities.
6. Erosion control measures to protect roots from siltation and/or excessive water.

# Best Practices Applied to our Project

1. Thinning of non-native second growth trees - improves the health and welfare and rural character of the property.
2. Avoid re-planting in heavily wooded sections
  - Dense canopy in existing locations outside of the LOD makes re-planting in these most of these areas non-viable.
  - Limited available viable re-planting locations.
3. Recommend re-planting trees along the property borders where the canopy will support new tree growth.
4. Include vulnerable species in re-planting plan where applicable (Cornus Florida, Flowering Dogwood).



# Recommended Sustainable Re-planting Locations



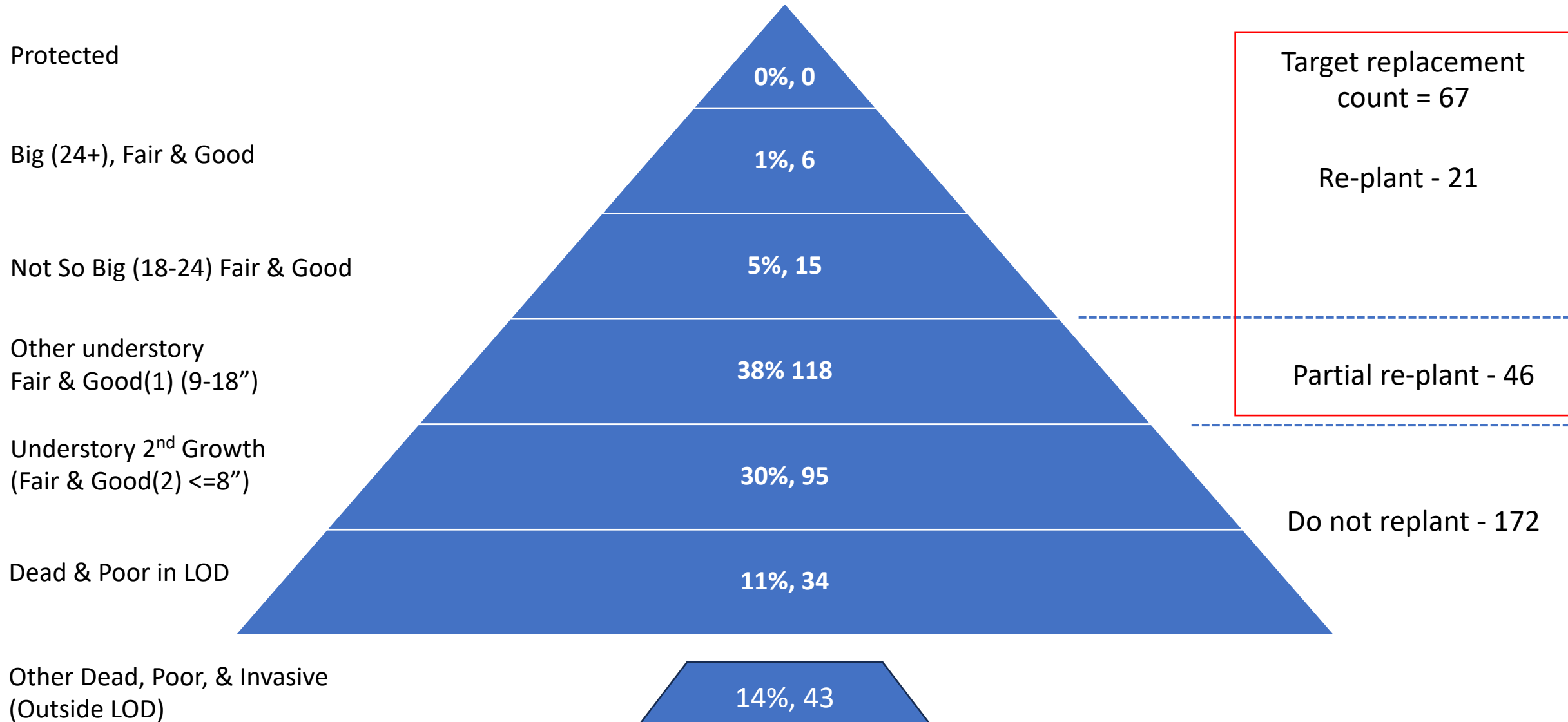
# Recommended Re-planting Inventory

| Location                | Re-planting type              | Count | Recommended Species Type                                                                 |
|-------------------------|-------------------------------|-------|------------------------------------------------------------------------------------------|
| 1. NE Property line     | Evergreens                    | 11    | White Spruce                                                                             |
| 2. Middle of driveway   | Native plants & mixed grasses | N/A   |                                                                                          |
| 3. Western prop. line   | Understory trees & shrubs     | 50    | Arrowwood, Shadblow, Hornbeam, <b>Flowering Dogwood</b> , Witch Hazel, Blackhaw Viburnum |
| 4. SW corner house site | Landscape trees               | 6     | Red Maple, White Oak, Sweetgum                                                           |
| Total                   |                               | 67    |                                                                                          |

# Best Practices - Clearing

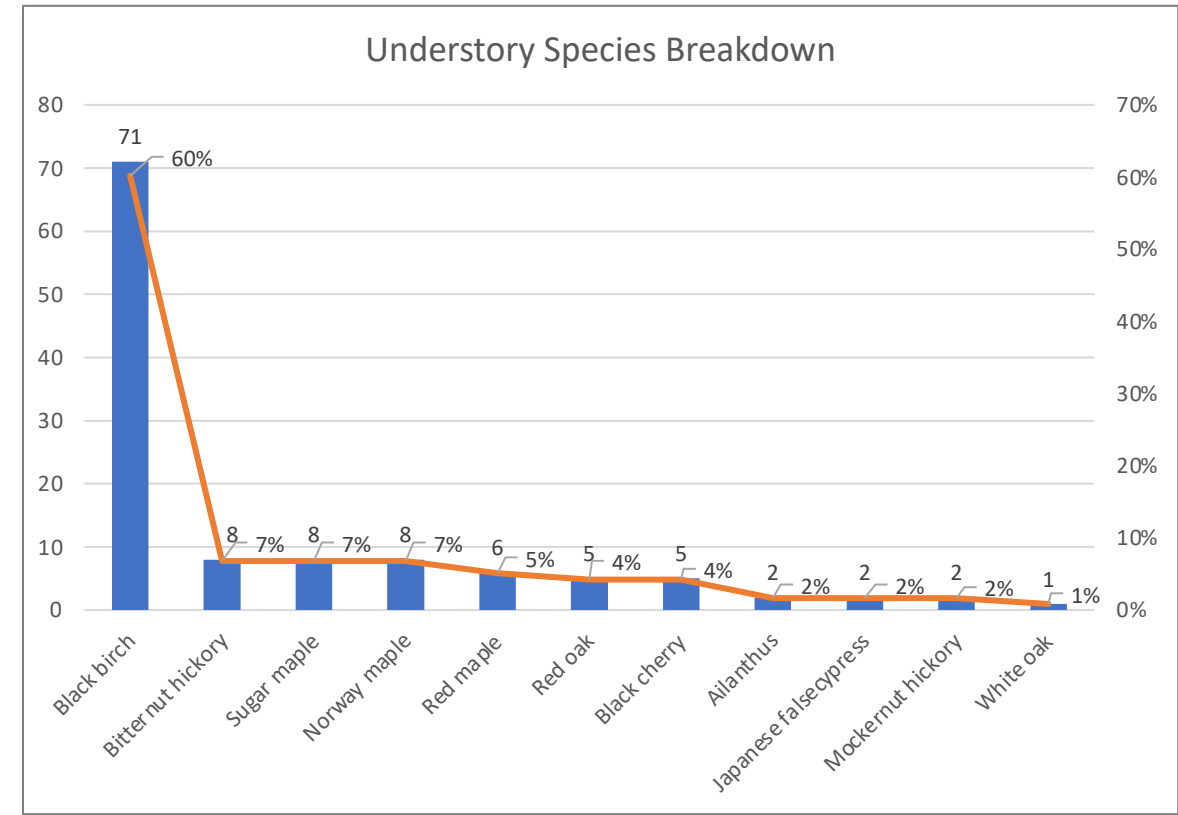
1. The limits of tree cutting will be identified in the field prior to cutting, and orange snow fence or equivalent will be used to demarcate such areas.
2. Tree cutting will begin at the intersection with the existing driveway, first clearing the septic area then moving up the driveway to the house location.
3. A twelve-inch capacity chipper will be used and any trees or limbs that will fit in the chipper will be chipped and chips used on site. Logs that will not fit in the chipper will be hauled away from the site to be processed for firewood or other uses depending on type of tree. All stumps will be removed and legally disposed of by the site contractor as they are removed from work areas.
4. After tree cutting is completed, disturbed ground from removed trees will be rough graded to restore any ground disturbance caused by tree felling in preparation for driveway construction. Stumps will remain to support the existing slopes until they are removed for the necessary construction activities to take place allowing the disturbed areas to be put to final grades and permanent erosion controls are able to be installed.

# Hierarchy of Trees for Removal (N=312)



# Other Understory Fair & Good(1) (9-18")

- 46 Total trees to be re-planted
- Of that, 16 trees to be re-planted - native & slow growth
  - Bitternut hickory
  - Red oak
  - Mockernut hickory
  - White oak
- Remainder are fast growth weak forest or invasive species will not be replanted





# TOC Definition of Protected Trees

PROTECTED TREE — Trees as set forth in Appendix A.<sup>3</sup>

## Tree Code Section 283-3

In determining the number of replacement trees to be planted, the Planning Board and Town Arborist shall consider the size, genus and cultivar of the trees which are proposed to be removed. **Each protected tree that is to be removed** shall be replaced by at least 1 1/2 times the number (rounded up) of the same trees as removed. On slopes of 25% or greater, two trees shall be planted for each tree which is to be removed.

### TREES

283 Attachment 1

Town of Cortlandt

#### Appendix A List of Protected Trees

All of the following are deemed to be protected trees under Chapter 283, Trees, of the Town of Cortlandt.

##### Endangered:

| Botanical Name                          | Common Name          |
|-----------------------------------------|----------------------|
| <i>Betula glandulosa</i>                | Tundra dwarf birch   |
| <i>Betula minor</i>                     | Dwarf white birch    |
| <i>Cornus drummondii</i>                | Rough-leaf dogwood   |
| <i>Crataegus berberifolia</i>           | Hawthorn             |
| <i>Crataegus compacta</i>               | Compact hawthorn     |
| <i>Crataegus mollis</i>                 | Downy hawthorn       |
| <i>Crataegus uniflora</i>               | Dwarf hawthorn       |
| <i>Gymnocladus dioica</i>               | Kentucky coffee tree |
| <i>Malus glaucescens</i>                | American crab        |
| <i>Prunus pumila</i> var. <i>pumila</i> | Low sand-cherry      |
| <i>Salix cordata</i>                    | Sand dune willow     |
| <i>Salix herbacea</i>                   | Dwarf willow         |

##### Threatened:

| Botanical Name              | Common Name           |
|-----------------------------|-----------------------|
| <i>Betula pumila</i>        | Swamp birch           |
| <i>Carya laciniosa</i>      | Big shellbark hickory |
| <i>Populus heterophylla</i> | Swamp cottonwood      |

##### Rare:

| Botanical Name                | Common Name          |
|-------------------------------|----------------------|
| <i>Chamaecyparis thyoides</i> | Atlantic white-cedar |
| <i>Pinus banksiana</i>        | Jack pine            |

##### Exploitably vulnerable:

| Botanical Name         | Common Name       |
|------------------------|-------------------|
| <i>Corpus florida</i>  | Flowering dogwood |
| <i>Juglans cinerea</i> | Butternut         |

# Summary of Proposal

- Approximately 800 trees exist on the parcel.
- No protected trees impacted.
- A maximum of 312 trees will be unavoidably removed to allow for the construction of a new driveway, residence, septic system and stormwater management area.
- 121 trees to be cut are in Croton.
- 191 trees are in Cortlandt.
- Approximately 500 trees will remain on the 7+ acre site after construction.
- 67 native trees will be re-planted in sustainable locations:
  - New landscaping trees will be planted at north end of site as screening and around new residence.
  - New small trees and woodland shrubs will be planted along southern property line to enhance habitat value.

# Alignment to Village Tree Code Intent & Requirements

## Code Section 208-14 Tree preservation

“The Board of Trustees finds that it has been established that trees stabilize the soil and control water pollution by preventing soil erosion and flooding, reduce air pollution, provide oxygen, yield advantageous microclimatic effects, temper noise and, further, that unusual, large and old trees have unique aesthetic and historic values. Indiscriminate removal of trees causes deprivation of these benefits and disrupts the Village's ecological systems. It is, therefore, **the purpose of this article to prevent the indiscriminate or unnecessary destruction of trees within the Village of Croton-on- Hudson.**”

“It is the intent of the Village to recognize these responsibilities in part by providing these procedures as well as to **preserve the health and welfare and rural character of the community** which is reflected in the woodlands of the Village of Croton-on-Hudson.”

## 208-16 Standards for granting permits

“The removal of the tree is **not inconsistent with good silvicultural, horticultural or vegetation management and will not have an adverse visual or ecological impact.**”



The only changes to the topography in the site plan are those required to permit the proper and appropriate use of land for a single family residence.



The site plan preserves and improves the health, welfare, and rural character of the property by addressing the current unsustainable understory growth according to recognized industry best practices.



Re-planting has been recommended to in select sustainable open canopy locations offsetting the negative effects of tree removal while improving the sustainability of the natural forest.

# Alignment to Cortlandt Tree Code Intent & Requirements

## Code Section 283 Trees

“The Town Board further finds that the natural topography of the Town of Cortlandt is a public asset which should be preserved and safeguarded... **Therefore, no changes should be permitted in such topography except those which are absolutely necessary in order to permit the proper and appropriate use of the land.**”

“It is the intent of the Town to recognize these responsibilities in part by providing these procedures, as well as to **preserve the health and welfare and rural character of the community** which is reflected in the trees and woodlands of the Town of Cortlandt.”

## Standards for Approval 283-7

“If the property owner will replant replacement trees of a similar species or add other vegetation to **offset the negative effects of the tree removal** to the satisfaction of the approving authority.”



The only changes to the topography in the site plan are those required to permit the proper and appropriate use of land for a single family residence.



The site plan preserves and improves the health, welfare, and rural character of the property by addressing the current unsustainable understory growth according to recognized industry best practices.



Pruning of non-native trees and re-planting have been recommended to in select sustainable open canopy locations offsetting the negative effects of tree removal while improving the sustainability of the natural forest.

# Benefits of a Holistic Forestry Approach

- Addresses the current “atypical” composition of the forest – thinning out unhealthy understory.
- Pruning fast growing weak second growth trees and non-native trees.
- Opening the dense tree canopy to allow for sustainable understory growth.
- Selective replacement with appropriate native species ensures the long-term viability of replanted trees - improving the health and welfare of the forest.
- Selection of appropriate locations for re-planting to ensure the long-term viability of replanted trees.
- Aligned to the code intent & requirements for both the Town of Cortlandt and the Village of Croton on Hudson.

# Backup

- Cortlandt only tree count/replacement coverage



# Hierarchy of Trees for Removal - Cortlandt (N=191)

