

# ***Partial Tree Inventory – Risk Trees Request for Proposals Specifications***



**Notice:** The following specification is provided by the N.C. Forest Service for informational purposes. The prospective user should have their legal counsel review and approve the use of any of this content for their management purposes.

## **Scope of services**

Services to complete a partial tree inventory of the (community name) properties as specified in this document.

## **Partial tree inventory**

The objective is to complete an inventory of trees that pose a risk to people and property located on the (community name) properties as defined in the following.

- A. Scope of inventory – Drive or walk each street, and walk each property (community name). Identify trees as specified. Catalog tree management and location information for these trees, and make management recommendations as specified.
  - 1. Trees that will be inventoried.
    - a. Trees with readily obvious defects that may represent an unacceptable risk to people and property.
    - b. Street trees
      - i. Trees located within the street right of way (ROW), or on private property and threaten the public ROW.
      - ii. The (community name) will provide the ROW widths for each street, definition of the ROW and /or manpower to identify the ROW.
    - c. Park/properties
      - i. Trees located within high target areas and intensively managed landscaped properties. These will include:
        - 1. Properties that have a high frequency of pedestrians, traffic, parking, buildings and the landscapes that are mowed.
      - ii. The margins of the above referenced properties that are either naturalized or bordering adjacent property owners.
      - iii. The (community name) will define the scope of the area to be surveyed including survey maps, property limits and or the manpower to define the properties to be surveyed.
- B. Level of inspection and defining management recommendations
  - 1. Level of inspection – level of inspections as defined by the International Society of Arboriculture's (ISA) Tree Risk Assessment BMP plus work prioritization.

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- a. A Level 1 visual inspection of trees on the (community name) property to identify trees with visually obvious tree defects. Trees with defects that warrant management action will receive Level 2 assessment. This assessment will include the digital collection of the inventory data and the use of hand tools such as a sounding mallet, probing tool and binoculars to further evaluate the defects present in root crown, trunk and crown of the tree. A complete ISA tree risk assessment and rating will not be completed.
  2. Management recommendations – management recommendations for each tree inventoried are defined as follows.
    - a. Tree removals
      - i. Trees with readily obvious, major defects that present an unacceptable risk of failure under normal weather conditions will be considered for removal. The tree's health and the severity of the defects present will be considered when making a removal recommendation. If one-third or more of a tree's live crown must be removed to remove defective limbs, the tree will be recommended for removal.
    - b. Pruning needs
      - i. Prune safety
        1. Defective branches 4 inches or larger in diameter.
        2. Branches over street being struck by vehicles.
        3. Branches hanging into sight line of pedestrians over sidewalks.
        4. Branches resting on streetlights, other structures or utilities.
        5. These needs will be prioritized.
      - ii. Prune reduce– tree with trunk or large scaffold defects that require reduction pruning to reduce the risk of failure.
    - c. Management priority -- each tree that has had removal or safety pruning recommendations will be assigned a management priority based on the targets present, occupancy rates and consequences of failure.
      - i. Highest
      - ii. Medium
      - iii. Lowest
  - C. Tree management data variables -- the following data will be collected for each tree:
    1. Tree data
      - a. Street or park/property name
      - b. Address
      - c. On street – Street trees only. Street on which the tree is located.
      - d. Tree number. Park/public property trees may be the tree tag number attached to each tree.
      - e. Side of lot -- front, side rear, or median, north, east, south, north
      - f. Tree genus, species and common name -- each tree will be identified to genus and species, and a common name will be provided.

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- g. DBH (diameter breast height) -- diameter in inches at 4½ feet above grade measured with a diameter tape or Biltmore stick.
  - h. Management need -- as described in (II) above.
  - i. Priority
  - j. Health – tree biological health or the condition of foliage and twigs expressed as:
    - i. Excellent -- exceptional shoot growth, foliar color and density, and absence of dieback or damaging pests.
    - ii. Good -- typical condition for the species including shoot growth, foliar color and density, and absence of dieback or damaging pests.
    - iii. Fair -- deficiency in one category such as below normal shoot growth, foliar color and density, or presence of dieback or damaging pests.
    - iv. Poor -- below typical or deficiency in two or more categories such as shoot growth, foliar color and density, or presence of dieback or damaging pests.
    - v. Very Poor -- major deficiency in two or more categories such as shoot growth, foliar color and density, or presence of major dieback or damaging pests.
    - vi. Dead -- no living tissues.
  - k. Structure – tree structure or the condition of structural portions of the tree expressed as:
    - i. Excellent -- exceptional structure with an absence of any structural defects such as decay or weak branch attachments.
    - ii. Good -- absence of any significant structural defects although minor defects such as low amounts of decay that are unlikely to fail under normal weather conditions may be present.
    - iii. Fair -- one significant structural defect is present that may fail under storm conditions, or several minor structural defects can be found.
    - iv. Poor -- one or more significant structural defect(s) is present that may fail under normal weather conditions.
    - v. Very Poor -- several significant structural defects are present that may fail under normal weather conditions.
  - l. Overhead utilities -- presence of primary or secondary electrical distribution wires or telephone or street lighting
  - m. Placement – good tree site, fair, poor tree site (don't replace tree after removal).
  - n. Site type – type of location the tree is growing in such as lawn area, natural area, border tree, tree lawn or tree pit.
  - o. Planting area – most limiting dimension of planting area in feet.
  - p. Other – for trees requiring further inspection.
    - i. Check ROW -- determine if the tree is in the right of way.
  - q. GPS coordinates – GPS coordinates will be collected for all trees using sub-three meter accuracy units.

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- D. Quality control -- the following quality control checks will be implemented during the inventory.
  - 1. All data will be reviewed digitally for errors, and errors will be corrected.
  - 2. One percent of the inventory will be randomly reinspected in the field for error. Most reevaluations will focus on the trees recommended for removal.
- E. Data format
  - 1. Excel spreadsheet with all data
  - 2. Shapefile
- F. Inventory report -- an inventory report summarizing the data collected and methods used will be provided.

## Fee schedule

<i>Item</i>	<i>Fee</i>		
	Street Trees	Park Trees	Public Properties
Partial Tree Inventory & Report			

## Qualifications

### Company/firm

The company must demonstrate in a brief narrative and at least five (5) years of experience in completing municipal address-based and GPS tree inventories. Please supply three references.

### Inventory staff

Staff performing the field inventory work must have the following minimum qualifications. Provide a list of their names and qualifications.

1. An associate degree in arboriculture or urban forestry or an International Society of Arboriculture certified arborist and three (3) years of experience completing municipal tree inventories.
2. International Society of Arboriculture tree risk assessment qualified