Great Smoky Mountains National Park Statement of Work

Roadside Prism Clearing, Vista Clearing and Hazard Tree Removal

SCOPE: This project is for road prism clearing and brushing, vista clearing, and hazard tree removal. The work is located in Great Smoky Mountains National Park, Blount and Sevier Counties, Tennessee and Swain County, North Carolina.

OVERVIEW

A brief overview of each proposed task is given below with more detailed information provided in Section III of this document.

***Road Prism Clearing*:** This work includes clearing, trimming, brushing, and thinning per Figure 1 and 2 in this document. Identify, cut, and remove encroaching brush, trees, and limbs as designated to clear/reopen the road prism to clear vegetation from roadside waterways, open shoulders and clear zones, and provide appropriate clearance for travel lanes, pull-offs, and mow zones. This includes removing previously fallen trees and limbs. The amount of work needed in each area can fluctuate between intensive and minimal.

Roadside Hazard Tree Removal: This contract covers the removal of all hazard trees within 50 feet from the existing tree line along roadway unless otherwise specific in Proposed Schedule Sheet. On many roadways/waterways, the distance is listed at 100 feet and/or to remove all hazard trees that may hit the roadway/waterway. **The specified distance will be measured horizontally (not slope distance) from the tree line.** Clearing will not be required at existing overlooks or large maintained clearings where tree line is more than 50' from edge to pavement. Hazard trees will be identified by the contractor based on the definitions and guidelines given in this document and an ISA-certified master arborist is required to be at the work site at all times.

Vista Clearing: The contractor will identify, cut and remove trees, saplings, re-sprouts, and tall-growing shrubs within the specified depths of included vistas (*A vista is an opening along the tree line or in the forest through which distant scenic views are typically enjoyed*) to provide clear and unobstructed views for visitors. Trees along the listed vistas shall be trimmed in accordance with Park Standards. Some vistas have previously been cleared and will require selective cutting of resprouting stems while others may require more extensive felling and pruning of mature trees to achieve the desired visibility per the vista prescriptions provided and as determined by the contractor's certified master arborist and the Contracting Officers Representative (COR). Stumps of tall-growing shrub and tree species shall be treated with the park-specified herbicide and surfactant mixture as described in this document.

***Developed Areas* (Campgrounds, Picnic Areas, etc.):** The contractor will perform road prism clearing and hazard tree removal as described above within the defined areas specified in the Proposed Schedule Sheet. Prism clearing will be required along all roadways, pullouts,

campsites parking areas, and picnic parking areas within the developed zone. Hazard tree removal is required throughout the entire defined developed area, including near roads, parking areas, buildings, facilities, campsites, and picnic sites.

PERFORMANCE PERIOD: The work shall be accomplished from approximately September 2026 through September 2027. No work will be allowed on weekends, government recognized holidays, the month of October, or the weeks of Thanksgiving, Christmas, New Years, and the weeks before and after Easter Sunday. Weekends will be from noon on Fridays to 8AM on Mondays. If requested, consideration will be given to allowing contractor to work in closed park areas during the aforementioned prohibited timeframes. No lane closures will be allowed in park from June 15th through August 15th. Additional work restrictions are as specified in Proposal Schedule Sheet.

IMPORTANT
All trees scheduled for removal which are more than 6" in diameter (DBH) and are potential bat habitat shall be removed between November 15 and March 31.

Before any individual vista work is begun, please notify COR so Park staff can discuss any special instructions for specific vista.

PROJECT IDENTIFICATION: The work shall consist of the services described below for the referenced project. In this document, the project shall be referred to as Roadside and Vista Clearing.

CONTACTS:

- Contracting Specialist (CO)/Administrator: Marilia Mateo; Marilia_Mateo@ios.doi.gov
- Contracting Officer Representative (COR) for this contract is: TBD

1 GENERAL DESCRIPTION OF WORK

Great Smoky Mountains National Park encompasses 814 square miles, making it one of the largest protected areas in the eastern United States. The main park entrances are located at the towns of Gatlinburg, Tennessee, and Cherokee, North Carolina. The general scope of work includes identifying, and removing brush, trees, and limbs to clear the road prism to specified clearances/distances as specified and shown in included diagrams, remove hazard trees to eliminate hazards to the public and identifying, cutting, and removing trees, shrubs, brush, briars, and vines within specified depths of included vistas providing appropriate vertical and horizontal clearances to improve sight distances at vistas. Work shall be accomplished adjacent to the Park facilities including roads, trails, Deep Creek waterway, campsites, picnic sites, parking areas, overlooks, and pull offs in several areas of the Park.

2 FUNDING LIMITATIONS

The Government obligation for performance of this contract is contingent upon the availability of funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond the amount that has been authorized through the issuance of written contracts.

The Government may award a contract for the Proposal Schedule, for the Proposal Schedule and any Options, or for the Proposal Schedule and any combination of Options up to and including all Options. All work shall be performed under a single contract.

3 SCOPE OF SERVICES

3.1 Road Prism/Corridor Clearing and Brushing

3.1.1 Description of Work

Identify, cut, and remove encroaching brush, trees, and limbs to restore sight distances and provide appropriate vertical and horizontal clearances to improve sight distances and eliminate hazards to the motoring public. Vertical and horizontal clearances are as shown in diagrams found in Appendix A and on Proposal Schedule Sheet. Cut and remove all hazard trees within the clearing limits and extending into perimeter that may pose a hazard to the road corridor.

Edge of corridor should be cleared to a natural look that allows for a scalloped edge rather than a clean straight edge along the woods line. Trees 10" DBH and smaller beyond the identified limits of clearing shall be removed to achieve the natural look. Specimen trees and shrubs should be left in place to help in achieving this natural scalloped edge.

Road, Pull-off, and Parking Lot: Trees along parking area and roadways shall be trimmed in accordance with Figure 1 and 2 found in Appendix A. Small trees (less than 10 inch DBH) within 8 to 10 feet of the pavement edge shall be removed or chipped and spread across the area evenly. Large managed turf areas (Figure 1.) may only require selective cutting and trimming, while areas that are adjacent to the edge of pavement (Figure 2.) may need extensive clearing to achieve the desired visibility and vertical clearance.

3.1.2 Handling of Woody Material

Vegetation material shall be hauled out of the Park or be disposed of in adjacent wooded areas (chipped only) as long as, in the opinion of the government, the aesthetic quality of the Park was not compromised.

- Vegetation disposed of in adjacent wooded areas must be chipped and dispersed.
- Stumps shall be cut to no greater than 2 inches or removed and the area repaired to original contour.

- No piles of grindings shall be greater than 3 inches high as measured to the surrounding area, and chips shall be evenly spread across the area of disposal.
- No wood debris shall be left in open grass areas.
- Do not allow leaves, wood chips, or wood debris to be deposited in or near any drainage structure that could inhibit water flow.
- The use of 60 cubic yard, or more, capacity grapple trucks to remove tree debris have proven to successfully complete the contract in the past.

3.1.3 Special Considerations

- Cutting and trimming around buildings, masonry walls, guardrails, fencing, signs, headwalls, specimen trees, boulders, and curbing shall be accomplished in a way that avoids damage to and protects the Park's infrastructure. Specific requirements for protection of natural resources and infrastructure, including damage to asphalt pavement, can be found in section 4.2
- Requirements for road access and traffic management is given in section 4.1 Worksite and Road Control Requirements.

3.2 Roadside Hazard Tree Removal

3.2.1 Description of work

Identify, cut and remove hazard trees *and limbs* to eliminate hazards to the motoring public. Identify, cut and remove all hazard trees within the clearing limits (50 feet in from tree line or as specified in Proposed Schedule Sheet) and extending into perimeter that may pose a hazard to the road corridor. For the purposes of this contract, hazard trees will be defined as follows:

Hazard trees are defined as any tree over 6 inches diameter with a major defect that upon failing is likely to have all or parts of the tree impacting the identified target (For example, roadway, campsite, picnic site, building, parking areas, etc). Major defects include:

- Dead-standing snags
- Significant dead stems, leaders, or scaffolds (that are too large to mitigate by pruning-out)
- Heavy, unnatural lean towards or parallel to target
- Open Hollows, cankers, or other areas of dead cambium or rot on trunk flare or bole of tree that encompasses over 30% of diameter at the site of defect.
- Obvious internal hollows at trunk flare that account for over 66% basal area of tree.
- Horizontal or vertical cracking on trunk flare, bole, or major scaffold.
- Root lifting near base of tree.
- Damage to, or exposure of, over 30% of major anchoring roots
- Significant recent canopy dieback on over 50% of crown.

Hazard Branch Removal: Any branch or portion of a tree over 4 inch diameter that is dead or has a significant defect (cracking, large open hollow or canker) and is positioned directly over the roadway is considered a hazard and shall be pruned appropriately following guidelines in this

document. As listed above, in the Major Defects section, if a limb cannot be pruned out without further compromising the health of the tree, then the tree itself is a hazard and shall be removed. Pruning of branches shall follow accepted industry standards as outlined in section 4.2.1.

3.2.2 Handling of woody material

- Woody material (tree tops, branches, logs, etc) shall be hauled out of the Park or be disposed of in adjacent wooded areas (chipped only) as long as, in the opinion of the government, the aesthetic quality of the park is not compromised. The contractor is expected to haul 70%-90% of felled trees/logs from the Park, as directed by the CO.
- All logs that are pulled out and hauled off shall be legally disposed of off Park property. Logs left on site in Government-approved areas shall be laid flat to be in full contact with the ground.
- Any woody material left on site shall be cut flush to the ground and laid flat.
- Stumps shall be cut to no greater than 2 inches, or removed and the area repaired to original contour.
- Piles of chipped or ground materials shall not be greater than 3 inches high as measured to the surrounding area, and chips shall be evenly spread across the area of disposal.
- No woody material shall be left in open grass areas.
- Do not allow leaves, wood chips, or wood debris to be deposited in or near any drainage structure that could inhibit water flow. Logs dropped in streams shall be cut to no longer than 8 ft. lengths.
- Cutting and trimming around buildings, masonry walls, guardrails, fencing, signs, headwalls, specimen trees, boulders, and curbing shall be accomplished in a way that avoids damage to and protects the Park's infrastructure.
- The use of 60 cubic yard, or more, capacity grapple trucks to remove tree debris have proven to successfully complete the contract in the past.

3.2.3 Special considerations

Fire-affected areas: A portion of this contract will take place within the boundary of the 2016 Chimney Tops 2 wildfire and identifying major defects as defined above in this zone can be more challenging. There is no change in what is considered a hazard or a major defect within the fire zone, but contractors should take note that damage to the root zone and basal portions of trees by fire is most often found on the uphill side of trees and not readily visible from the road. The most common defects found within the fire zone are 1.) Areas of dead cambium that encompass more that 30% of the tree, most often on the upslope side which either presents as barkless areas or as dense bracket fungi cover on attached bark 2.) Damage to over 30% of the anchoring roots of the tree which present as soft roots with advanced decay or roots with extensive bracket fungi coverage, 3.) Overall tree health decline leading to over 50% recent dieback of the crown.

Threatened & Endangered Species: All or portions of this contract will be in areas under management for Indiana Bats and Northern Flying Squirrels, both federally listed species. This will impact the contract by requiring specific mitigations in managed areas. Most notably**, all cutting of trees over 6 inches DBH should be performed between November 15th and March 31st** due to Indiana Bat nesting habitat. Outside of this time period, the contractor will be responsible for confirming that no bats are using trees to roost before cutting. See section 4.3 Threatened & Endangered Species below for specific details.

Protection of Park Resources: Cutting and trimming around buildings, masonry walls, guardrails, fencing, signs, headwalls, specimen trees, boulders, and curbing shall be accomplished in a way that avoids damage to and protects the Park's infrastructure. Specific requirements for protection of natural resources and infrastructure, including damage to asphalt pavement, can be found in section 4.2

Road and Traffic Control: Requirements for road access and traffic management is given in section 4.1 Worksite and Road Control Requirements.

3.3 Vista Clearing

3.3.1 Description of Work

The contractor shall identify, cut and remove trees, saplings, re-sprouts, and tall-growing shrubs within the specified depths of included vistas (*A vista is an opening along the tree line or in the forest through which distant scenic views are typically enjoyed*) to provide clear and unobstructed views for visitors. Cut stumps shall be 6 inches or less in height. Trees along the listed vistas shall be trimmed in accordance with Park Standards. Some vistas have previously been cleared and will now only require selective cutting of resprouting stems while others may require more extensive felling and pruning of mature trees to achieve the desired visibility per the vista prescriptions provided and as determined by the contractor's certified arborist and COR.

Herbicide Use: Stumps of non-native shrubs, tall-growing shrubs, and hardwood trees that are cut within the vista shall be immediately treated with 25% Garlon 4 Ultra herbicide mixed with 75% JLB Oil Plus carrier oil with a tracer dye. Conifer species (pines, hemlocks, spruce, firs, cedars) do not need to be treated with herbicide. All non-native shrub and tree species encountered shall be cut and treated with herbicide. Common non-native shrubs and trees include privet (*Ligustrum spp.*), bush honeysuckle (*Lonicera maackii*), bicolor Lespedeza (*Lespedeza bicolor*), multiflora rose (*Rosa multiflora*), mimosa (*Albizia julibrissin*), tree-of-heaven (*Ailanthus altissima*), and princess-tree (*Paulownia tomentosa*). Specifics on herbicide requirements can be found in section 4.5 Application of Herbicide.

Vista Clearing Shape: Work on vistas varies from light re-clearing of vistas that were cleared in last 2 to 5 years to intensive for those that have not been cleared in recent years. Generally vistas are to be tapered from each end to the full depth of the vista to prolong the view and provide a natural appearance. Long vistas may have an established mature tree line that runs the full cut

depth approximately parallel to the roadway between the ends of the tapers. Smaller vistas may have a "v", semi-elliptical, or irregular shape. The limits of clearing lines should not be perfectly straight but slightly staggered to produce a varied and natural appearance.

Specimen trees: Some vistas will have specimen trees within the cleared limits that are to be preserved, usually to provide shade to the vista area and frame the view. In most cases, these will be mature trees and shall be pruned as needed to enhance the view (pruning to raise/thin within the limits recommended in ANSI A300 Part1). More recently cut vistas will have small trees identified to be preserved so that they can become specimen trees as they mature. The COR will notify contractors of these trees prior to vista work.

3.3.2 Handling of Woody Material

- All stumps within the vista shall be cut to 6 inches or less in height.
- All small woody material (<2 inch diameter) shall be laid flat to the ground and can be left in place.
- All large woody material (>2 inch diameter) in the upper 50 ft of the vista shall be hauled out by the contractor.
- Large woody material further than 50 ft. from the top of vista can be brushed to lay flat to the ground and left in place, however the contractor may be required to pull up to 25% of woody material out of the vista for aesthetic purposes, as directed by the CO.
- All woody material that is removed from the vista shall either be chipped or hauled and legally disposed of off park property.
- Piles of chipped or ground materials shall not be greater than 3 inches high as measured to the surrounding area, and chips shall be evenly spread across the area of disposal.
- No woody material shall be left in open grass areas.
- The use of 60 cubic yard, or more, capacity grapple trucks to remove tree debris have proven to successfully complete the contract in the past.

3.3.3 Special considerations

- All tall-growing shrub and tree species shall be cut within the entire vista footprint, unless designated by the COR as a specimen tree to be retained.
- Short-statured trees/shrubs shall be cut and treated in approximately the upper 20 ft. of the vista where they block the view. Beyond the upper 20 ft. of the vista, short statured shrubs/trees shall not be cut. A "Do Not Cut" list for vistas is provide in Table 1 of Appendix B.

3.4 Developed Areas (Campgrounds, Picnic Areas, etc)

3.4.1 Description of Work

Work in developed areas of this contract will include road prism clearing and/or hazard tree removal. The scope of work will generally follow those outlined in the above sections, with this section provided to highlight different expectations and considerations for developed areas.

Hazard tree removal: For developed areas, hazard trees shall be defined the same as above in the roadside hazard tree section. Any road, parking area, building, park infrastructure, campsite, picnic site, walking path or the deep creek waterway in the developed area shall be considered as potential targets for hazard tree identification. Clearing limits for hazard trees in developed areas covers any trees with the potential to impact a target. For the unique circumstance on the Deep Creek waterway the following circumstances apply as well. This includes any hazard tree that is up to 100' from the edge of the waterway and will hit the waterway. This is also to include trees that have fallen or have partially fallen creating hazards for removal in all areas including Deep Creek waterway. The trees that require removal from the Deep Creek waterway are in the 1.5-mile section of waterway that is adjacent to an administrative use (not publicly driven) gravel road/trail from the gate at the trailhead for the Deep Creek Trail to the junction with the Indian Creek administrative road/trail. Most of the creek is generally directly accessible on one side of the creek via the gravel administrative road yet in some sections there may be up to 300 feet separating the administrative road form the creek and equipment WILL NOT be able to reach the trees as equipment is only allowed along roadway surface. Also, removal of strainer trees or trees that fall into the creek during removal may involve cutting in, or near various depths of swift water.

Hazardous branches shall be defined in developed areas the same as in roadside areas (4 inch or more in diameter, directly over the target) and shall be removed by the contractor over roadways, campsites, picnic areas, or established walkways. Pruning of branches shall follow accepted industry standards as outlined in section 4.2.1.

Developed area prism clearing: Prism clearing in developed areas will be defined as it is above in the roadside prism clearing section, and will apply to all roadways, parking areas, and campsite/picnic areas pull-in spots.

3.4.2 Handling of Woody Material

- All stumps within developed areas shall be ground by the contractor and contoured to the surrounding area.
- No piles of chips/grindings shall be deeper than 3 inches when measured to the surrounding area.
- In *Campgrounds only*, woody material 12 inches diameter or less shall be bucked into 2 ft. sections and stacked at the woodline for firewood use (tree tops and other small material shall be hauled off site, and does not have to be bucked).
- All other woody material shall be legally disposed of off Park property. *Contractors will be expected to haul 100% of woody material out of developed areas, unless noted above for camprgrounds or if otherwise approved by the CO/COR.*
- The use of 60 cubic yard, or more, capacity grapple trucks to remove tree debris have proven to successfully complete the contract in the past.

4 Special Project Requirements

4.1 Worksite and Road Control Requirements

- The contractor must keep the roads open for public use at all times during construction except when closures have been permitted.
- One-lane closures will be permitted for this work.
- Contractor shall notify COR one month in advance of areas requiring closures such campground loops, picnic area loops, one-way roads, pullouts, parking areas, or trailheads.
- The contractor will be required to post appropriate advance warning signs indicating periods of construction. Traffic control shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and traffic control measures must be in place and functional at all times during construction activities.
- Special care must be taken to prevent impacting the surrounding area or facilities.
- Contractor shall clear roadways of all tree and brush clearing debris before reopening roadway lanes to traffic.

4.2 Protection of Park Infrastructure and Resources

4.2.1 Protection of trees and vegetation

In order to protect park natural resources the contractor shall adhere to the following guidelines:

- All pruning and felling shall be performed to industry standards based on ANSI Z133 and ANSI A300:Part 1. Pruning shall be performed from a bucket truck, aerial lift, or with a trained tree climber with appropriate rope techniques. Pruning non-removal trees via spiking/gaffing is not allowed in this contract.
- Care should be taken to limit damage to non-target trees during felling operations.
- If non-hazard trees are struck and damaged through felling operations, the contractor is responsible for mitigating any new hazards (e.g., pruning out large broken branches if they present a hazard, felling trees that have been compromised).
- No vehicular equipment access will be allowed beyond the edge of the forest (including skid steers, tracked chippers, etc).
- Woody material shall not be piled next to non-hazard trees, even temporarily, due to risk of damage to tree base and roots.
- The contractor must stop work immediately and immediately notify the COR if any cultural resources are encountered.

4.2.2 Protection of Park Infrastructure

In order to protect park infrastructure, the contractor shall adhere to the following guidelines and mitigations:

- **Protect asphalt pavement in a manner that felling operations, dragging, outriggers, equipment, tracks, etc. will not damage asphalt. Small patches will not be allowed on any sections of roadway that have been paved or overlaid within 3 years. Mill and**

overlay full lane width per FHWA special contract requirements will be required on newly paved sections of road damaged by the Contractor during contract operations.

- Any asphalt, grounds, guardrail, signs, or other park amenities damaged due to construction activities will be repaired at the expense of the contractor.

4.3 Threatened and Endangered Species

4.3.1 Indiana Bats

The normal period for cutting trees that are potential roost trees for Indiana Bats is November 15th through March 31st.

There are no restrictions on cutting trees that are potential roost trees for Indiana Bats during the time period of November 15th through March 31st. If work is to be performed outside this window, the contractor shall, at no additional cost to the government, determine if the tree exhibits these important characteristics of summer roost trees for Indiana bats: Structural (e.g., exfoliating bark, tree cavities, crevices, etc.) and are typically found on dead, hollow, dying, damaged, or very large trees. For the purpose of this contract, only trees with these characteristics that are greater than **6 inches DBH** will be considered potential Indiana bat roosting habitat. Trees that would **not** be considered potential summer habitat for Indiana bats, and therefore shall be removed in accordance with this contract, include: 1) root sprung trees that pose a hazard along roads; 2) live trees with tight bark and no crevices or hollows that could be used as roosts, and 3) Spruce/Fir forests.

Outside of that time period, contractor will be required to identify potential bat habitat trees and to observe those trees, at dusk (for 1 hour before and after sunset), for bats before starting work. If no bats are observed, remove tree(s) the next day. If bats are observed wait a week to observe tree(s) again. Repeat procedure as needed.

4.3.2 Northern Flying Squirrels

Northern Flying Squirrel habitat is found only at elevations greater than 4,500 feet above sea level. For the purposes of this contract, any roads and/or developed areas at this elevation or above that are listed to be treated will be included and will require this additional requirement. The Carolina northern flying squirrel prefers yellow birch cavities for nesting and, therefore, tree and/or limb removal in areas that contain northern hardwoods, particularly yellow birch, should be conservative. Cutting live trees or the limbs of live trees at the trunk in northern hardwoods would not impact northern flying squirrels provided the live trees or limbs do not have holes, crevices or cavities. **Trees or limbs that contain holes, crevices or cavities shall not be cut. It shall be the contractor's responsibility, while in the identified habitat areas,** to survey the limbs and trees for holes, crevices or cavities, and make the determination to remove the limbs or trees or to not remove them. If tree or limbs are not removed they shall be noted and shown to the COR for concurrence that they are not to be removed.

4.4 Certified Master Arborist

The contractor shall provide an ISA Board Certified Master Arborist who shall be required to be on-site at all times that any tree clearing, brushing, tree trimming/pruning, and any other tree

work is taking place. Provide alternate certified arborist whenever primary arborist must be off site.

4.5 Application of Herbicide

The Contractor shall furnish all personnel, equipment and materials required to apply the approved herbicide to the designated vistas. Herbicide shall be applied by a licensed applicator in accordance with all applicable federal, state and local regulations. All stumps of identified species will be treated with a 25% Garlon 4 Ultra mixed with 75% JLB Oil Plus carrier oil with a tracer dye. Herbicides must be preapproved by COR or designated representative. All short-statured native shrubs and conifer stumps are not to be treated unless otherwise directed by COR.

Garlon 4 Ultra herbicide is the only approved herbicide for use in this contract.

Using the herbicide manufacturer's instructions and guidelines, apply the herbicide mixture immediately (seconds matter) to the freshly cut stumps in the designated vista area. Use a wick applicator or backpack sprayer with a narrow angle nozzle to reduce and control over-spraying and completely coat the cut surface of the stump. Do not spray if weather conditions are windy. Do not apply herbicide in close proximity to other personnel or designated protected plants.

4.6 Health & Safety

4.6.1 Protection to the Public

The treatment sites are located in public areas that often receive many park visitors. The contractor shall provide suitable signs and barriers, barrier tape or barricades necessary to warn people of and protect people from the contract operations.

4.6.2 Worker Safety

- The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all Contractor or Sub-contractor employees on the job. Safety requirements are governed by OSHA regulations. Contractor shall provide employees with the proper personal protection equipment such as hard hats, goggles, chaps, leather gloves, hearing protection and high top leather work boots with lugged soles. Each worksite should have readily available a first aid kit, a bee sting kit, two-way radios or cellular phones for communications in the remote areas of the parkway and a vehicle available for emergency transportation to a medical facility.
- Sawyers shall be trained and currently certified in first aid and CPR as per OSHA requirements
- **Contractor shall provide a copy of Company Safety Plan that addresses all safety topics including work hazards associated with this project and accident and spill response.**

4.6.3 Fire Prevention

Contractor shall take all necessary precautions to prevent fire during this contract work. Internal combustion equipment shall be located by the contractor so that exhausts discharge well away from combustible materials. The contractor shall provide a minimum of one fire extinguisher per vehicle/equipment at each separate job site that is appropriate for each type of fire that could

occur on the job. Contractor shall notify COR as soon as possible of any fire starts regardless of size and whether or not fire is/was contained.

4.6.4 Contractor Conduct

While at the work site or traveling to and from it in the boundaries of the Great Smoky Mountains National Park, the Contractor shall comply with any rules and regulations of the National Park Service governing the park in general and the work site in specific.

4.6.5 Accident Reporting

Report all accidents on the jobsite to the area Ranger and COR or area Project Inspector.

4.7 Reporting

4.7.1 Daily Reports

Contractor shall maintain daily logs of construction. Reports shall log date, weather, employees on site, equipment on site, and work accomplished. Contractor shall use their own form.

4.7.2 Tree Removal Reports

Contractor shall maintain daily logs that report the number of hazard trees removed each day. **Contractor shall also count number of stems cut at vistas**. The "Trees and Vistas" contractor form shall be completed for each work location daily and sent to the COR weekly. See form attached in Appendix C.

4.8 Submittals

Contractor will be required to submit the following before beginning work:

- Certificate of Insurance
- Safety Plan
- Traffic Control Plan
- SF 1413s for All Subcontractors
- Project Schedule
- First Aid and CPR Certification of all Sawyers
- Certification/Licensure of Certified Arborists
- TN Certification/Licensure of Herbicide/Pesticide Applicators
- Data and MSDS for Herbicide

4.9 Quantity

The mileage and acreage of roadside prism clearing, hazard tree removal, vista clearing, and tree trimming shall be as estimated on the Proposal Schedule Sheet at each designated location. The tree line distance varies from being very close to the edge of pavement to being 25+ feet away from the edge of pavement. Because of this variance in distance, the amount of work needed in each area can fluctuate between intensive and minimal.

5 Quality standards

Quality Standards for all work under the base contract and options shall be in accordance with the base contract, commercial practices and as described in this statement of work.

1. Contractor must have good past performance on previous federal government work.
2. Quality Assurance and Quality Control are the responsibility of the contractor. The COR and park inspectors will evaluate contractor's performance based on the SOW and Tree Risk Evaluation form in this document. Contractor Arborist(s) must have a tree identification accuracy of 80% or better otherwise contractor will need to find another arborist before work can proceed. Sites will be periodically inspected for quality throughout the contract period and contractor will be informed if he has missed anything or there are any discrepancies.
3. The equipment the contractor uses most be reliable and in good working order with all modern safety equipment features intact and properly installed. This will include all equipment like grapple trucks, bucket trucks, skid steer loaders etc.
3. At the conclusion of the work of this project, it is expected that selected trees and brush shall be removed or chipped and spread in the area of disturbance, and that safe access to roads, trails, pull-offs, overlooks, and parking lots is reestablished.
4. The contractor must understand that its employees will be working alongside, near, and in some cases on the road. Proper safety protocol will be the responsibility of the contractor. **This includes, but is not limited to, proper signage for oncoming traffic and safety attire for employees (e.g. orange or yellow vests, traffic cones, and flags) as stated in the MUTCD.** The contractor will need to coordinate with the Facility Management Office at Great Smoky Mountains National Park regarding the safety protocol along roadside and traffic control. Traffic Control must be reviewed and approved by COR. Arrow board shall be used in certain areas if dictated by MUTCD. And arrow board is required for any work on the Gatlinburg Spur. Traffic control in areas/road closed to the public will still be required for park staff and other contractor traffic. Equipment used along the roadside will need to be approved prior to contract work. Flaggers will be needed while working along the roadside and flaggers must have way to communicate with one another besides visually.
5. Remove any incidental trash and all equipment from the work site each day. Repair any direct or indirect damage to Government property caused by the Contractor's personnel or equipment and restore such property to its condition prior to sustaining such damage.

6 Schedule

Work may start on site after the contract is awarded, all submittals have been approved, a pre-construction conference is held, a Notice to Proceed issued, and once a work schedule is coordinated with the CO.

7 Fee and Payment

After completion of the work and as a prerequisite to the final payment on this contract, the contractor shall furnish to the Contracting Officer a **Release of Claims arising out of this**

Contract. Such claims as are asserted by the contractor and alleged as excepted from operation of the Release shall be listed in spaces provided after the word “except” and shall be referenced to correspondence or other identifying data, together with monetary amount for each major claim item.

NOTE: The Government may award a contract for the Proposal Schedule, for the Proposal Schedule and any Option or for the Proposal Schedule and any combination of Options up to and including all options. All work shall be performed under a single contract.

8 Appendices

8.1 Appendix A: Roadside Prism Diagrams

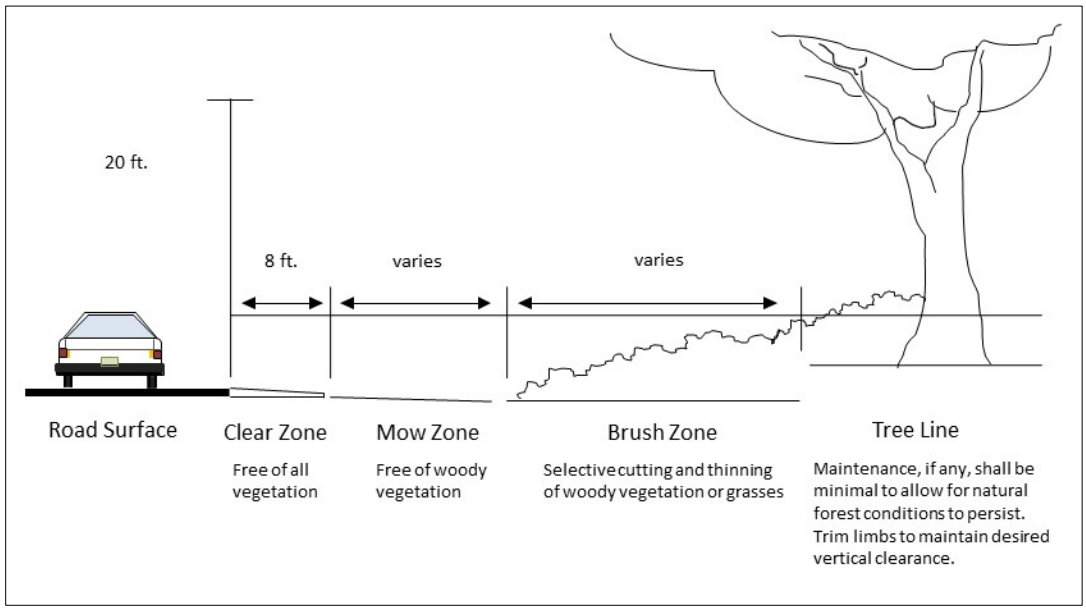

Figure 1: Road Prism for an open area.

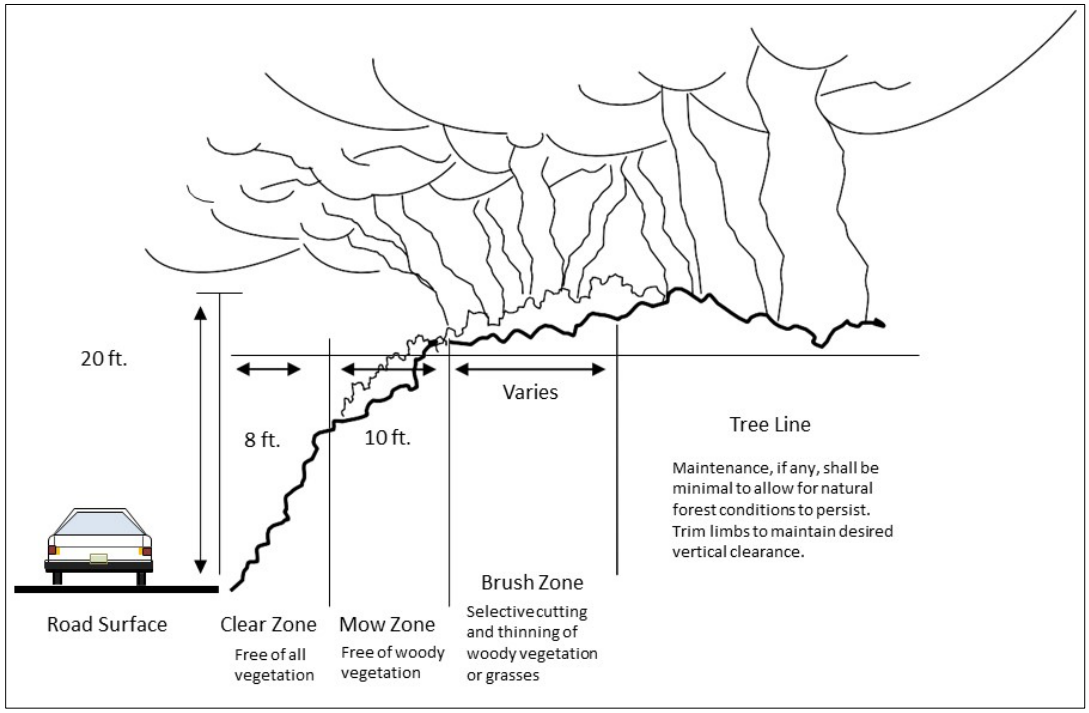

Figure 2: Road prism for a rock cut area.

8.2 Appendix B: "Do Not Cut" list for Vista Management

Table 1: "Do Not Cut" list for Vista Management. The below species are short-statured shrubs and trees and shall not be cut in vistas, except in the upper 20 ft of the vista footprint where they can obstruct the view. This is not an exhaustive list of all short-statured species It is the contractor's responsibility to identify these trees and ensure that they are not damaged during the course of the work of this contract.

Common Name	**Scientific Name**
Flowering Dogwood	*Cornus florida*
Redbud	*Cercis canadensis*
Mountain Laurel	*Kalmia latifolia*
Rhododendrons (Great, Catawba, Carolina, Minniebush)	Rhododendron spp.
Azaleas (Deciduous Rhododendrons)	Rhododendron spp.
Blueberries	*Vaccinium spp.*
Huckleberries	*Gaylussacia spp.*
Fraser Fir **	Abies fraseri
American Chestnut	Castanea dentata
Butternut**	Juglans cinerea
Big Tooth Aspen	Populus grandidentata
Eastern Hemlock	Tsuga canadensis
Sharp's Mock Orange	Philadelphus sharpianus
Common Ninebark	Physocarpus opulifolius
Native vines (grape, dutchman's pipe, VA creeper, crossvine, trumpet creeper, etc.)	*Vitis, Isotrema, Parthenocissus, Bignonia, Campsis*)

8.3 Appendix C: Trees and Vistas Daily Form

Great Smoky Mountains Contractor Form
Hazard Trees and Vistas

Location:_____ Date:_____

For Roads, give range of mile markers or sections.

HAZARD TREES/PRISM

Hazard Trees Removed

Deciduous (non-Locust): _____ Deciduous (Locust): _____

Evergreen: _____

Non-Hazard Trees Cut (for Prism Clearing): _____

VISTAS

Number of Stems Removed_____ (if Large trees cut, give total in NOTES below).

HERBICIDE USE

Cut Stumps Treated: _____

Herbicide (Brand Name) _____ (Percent)_____%

Surfactant (Brand Name)_____(Percent)_____%

Quantity used (in Liters)_____

NOTES

(This should include anything you want the park to know about. For example, many of the trees had borer damage, hazard trees noted that were outside of contract range, heavy erosion noticed when a tree root-balled, etc)

_____

_____

_____

Submitted By: (Signature and Date)_____ Company Name:

Entered By: (Signature and Date)_____

Reviewed By: (Signature and Date)_____