Vegetation Management Standards and Guidelines are developed to provide consistent direction and quality control in meeting the department’s vegetation management goals. The primary function of guidelines and standards is to provide consistent, uniform and directed management objectives to obtain the highest level of public safety, roadside vegetation management and scenic quality of Lane County road systems.

**Vegetation Management Standards and Guidelines will be based on five principles:**

- Safety, both for the public and Lane County staff.
- Being a “Good Steward” of the environment.
- Being a “Good Neighbor” to all of the property owners/residents whose property adjoins the rights-of-way and to those who use the rights-of-way.
- Maintenance and preservation of public facilities.
- Long-term, cost effective use of public resources.

The material in this document is an outline of Lane County’s goals and objectives for rights-of-way vegetation management. The concepts and techniques developed for this document come from the efforts, knowledge and experience of staff involved in vegetation management activities within Lane County. Vegetation management policies have changed over time to reflect both public and County staff recommendations, and this document is directed at providing consistent and uniform direction as to how Lane County Department of Public Works manages vegetation within County rights-of-way to accommodate new perspectives, technology and ideas.
Series 2: Rights-of-Way Top Trimming Standards.

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Section 1 – Safety Considerations

1.1 – Roadside Safety
Roadside safety refers to providing safe conditions for the traveling public, adjacent land owners and Lane County staff during top trimming operations. Safety is always Lane County’s first priority when conducting any operation, and all efforts should be made to conduct activities safely, for both the public and staff.

- Debris caused from top-trimming operations should be removed from roadway surface, road shoulder and drainage feature(s) in a safe and efficient manner.
- Large debris should be chipped or removed from the edge of the road to the right-of-way edge, to avoid conflicts with other management activities.
- No vegetation activities should direct debris towards roadway, and should be directed towards the right-of-way boundary.
- No top-trimming activity should project debris towards houses, utilities and other defined sensitive areas. If this does occur, promptly stop operations and remove debris of concern to prevent further damage when the operator perceives a potential risk.
- When the traveling public, either vehicular or pedestrian enter the work-zone, all top-trimming operations should be stopped or minimized when practicable to provide safe access through the work zone.
- When work occurs in limited visibility areas, efforts should be made to minimize conflicts with the traveling public, such as incorporating flaggers, work signs, or at a minimum utilizing a follow vehicle to warn the approaching public of the work zone.
- If hazardous situations are created or detected during top-trimming operations (for example broken limbs, damaged trees) these should be removed or reported prior to leaving the work site each day.
  (Immediate hazards should be reported to your supervisor when they are detected so we can have the appropriate agency(s) respond.)

1.2 – Employee Safety
Employee safety refers to promoting safe work environments and practices through education, training, and wearing of proper protective equipment to insure safety for all Lane County staff involved in vegetation management activities.

- Check all equipment prior to the start of each work day to insure equipment is in proper working order, and safe to operate.
- Make sure all personal protective gear is in good shape and equipped properly to meet the requirements for the type of job you are conducting.
- If you are not confident that a work zone is safe, or it has potential hazards, report to your supervisor prior to starting work.
- Be aware and alert during the workday to monitor traffic, work zone visibility, and the safety of yourself and others.
- Wear all appropriate personal protective gear while in the active work zone, and make sure all PPE gear is worn appropriately.
- Report any un-safe work practices that occur to your direct supervisor.
- Wear appropriate high visibility clothing per Lane County policy “General Safety Guidelines, PW 1-5(a)”.
1.3 – Utilities & Roadside Structures
Are obstructions that impede routine vegetation management activities within Lane County rights-of-way.

Utilities: Refer to structures that are created for electrical, phone or other infrastructure requirements. These include power-lines, phone boxes, guy-lines and underground utilities.

Fixtures: Refers to structures that are created for traffic control, property delineation and safety, these include traffic signs, delineator posts, mailboxes, fences, and guardrails.
• Conduct a pre-work survey to locate fixtures and utilities in work area.
• Monitor the work zone for utilities and fixtures to prevent damage or injury.
• Report any damage to roadway structures, fixtures or utilities during top trimming operations. Report any damage either to your supervisor, or on your daily timesheets, and complete a “Utility Damage Report” form.
• If any roadside structure cannot be adequately cleared of vegetation for proper sight distance and visibility with the top trim truck, report them so other crews can take care of the concern.
• Provide adequate visibility of fixtures for the traveling public. (Reference Table #1, page 4.)
• Maintain a 1’ foot buffer or greater from service lines and a 10’ buffer or greater from primary lines during top trimming operations to prevent injury or damage. (Check with your supervisor if unclear about the type of power line you are working around.)
• Maintain a 1’ foot buffer or greater from roadside fixtures, including fences, mailboxes, utilities and other roadside structures to minimize damage to these fixtures.
• Report vegetation conflicts with power lines to your direct supervisor, so we can inform the appropriate utility company to have the issue resolved safely.

Table #1: Recommended Sight Distance for roadside fixtures: AASHTO – Geometric design standards. Lane County Department of Public Works will attempt to follow AASHTO recommendations in rural areas (refer to Visual Clear Zones recommendations for urban areas) when practicable and/or feasible.

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(Reference – A Policy on Geometric Design of Highways and Streets, AASHTO. This book will be used as a reference to assist in site specific management decisions when deemed necessary).
1.4 – Equipment and Vehicle Maintenance

Equipment and tools used for top trimming operations need to be maintained in good condition to insure employee safety and proper functional operation.

A. Work Vehicles

County policy and Federal Law, 49 CFR 396.11 & 396.13 require that work vehicles be inspected by completing a Vehicle Inspection Report on a daily basis.

Vehicles used for top-trimming operations that require “Vehicle Inspection Reports” to be completed on a daily Basis

1. **Top-trim truck**

   - Complete “Vehicle Inspection Reports” on a daily basis on all work vehicles that are required under County Policy and Federal Law.
   - Report all defects prior to departure, on a daily basis. If defects are found the vehicle shall not be operated until repairs have been completed.
   - If defects are found, turn in Yellow copy of “Vehicle Inspection Report” to Fleet for diagnosis and repair of problem.
   - Turn in white copy of “Vehicle Inspection Report” to your supervisor on a daily basis.

B. Hydraulic Saws

   - All saw blades should be sharpened on a routine basis to maintain the life of the equipment, and promote good arboricultural practices.
   - All hoses and attachments should be visually inspected for wear, and replaced if needed.
   - Inspect saws to make sure all bolts and accessories are fastened, and are in good working order.
   - Inspect all hydraulic equipment on a daily basis to maintain equipment in safe and efficient working order, refer to equipment manuals for specific maintenance requirements.
   - Inspect hydraulic seals and hoses for leaks, limit inspection to visual observation only, because hydraulic fluid is not safe to handle or contact. If a leak is detected, report it to Fleet so we can have trained staff fix the problem.

C. Chainsaws

   - All saw chains should be inspected before operations, to make sure they are sharp and in good working order.
   - All saw chains should be inspected for appropriate tension and wear.
   - Check fuel and oil levels prior to starting work for the day. Replace any fuel and oil that was used, so the next crew will have a saw ready for use the next day.
   - If a saw is damaged, have it set aside for repair, and labeled with the problem so it can be fixed.
   - Inspect chainsaws daily for operational wear and general maintenance needs.
   - Inspect all chainsaw equipment on a daily basis to maintain equipment in safe and efficient working order, refer to equipment manuals for specific maintenance requirements.
D. Chippers
- Check all safety equipment for proper installation and operation.
- Maintain chipper blades and feed wheel in good working condition.
- Check towing attachment before moving the chipper at the start and end of each work day.
- Make sure all operational lights are working properly at the start of each day.
- Check fuel and oil levels on a daily basis.
- Inspect all chipper equipment on a daily basis to maintain equipment in safe and efficient working order, refer to equipment manuals for specific maintenance requirements.

Section 2 – Top Trimming Operations

2.1 – Truck Operations:
Refers to pruning operations that occur from top trim truck. Including pruning from the top deck, aerial bucket or utilizing hydraulic saws for ground pruning needs.

- Prune limbs that are in conflict with County clearance or visibility standards or that are a safety concern first.
- Secondarily, prune limbs that provide for aesthetics or proper arboricultural standards.
- Use the top deck when limbs can be reached safely. If limbs out of reach need to be pruned, utilize the aerial bucket or have ground crews do the pruning.
- If the ground crew is required for pruning, have either the truck driver or other qualified ground crew do the pruning with the hydraulic saw or other pruning tools. If hydraulic saws cannot be utilized, use power-pruners or chainsaws to manage the vegetation need. (Power-driven tools operated during fire season, will follow all fire regulations, and provide a fire watch when required.)

2.2 – Aerial Bucket Operations
Refers to pruning operations that occur from the aerial bucket, when other pruning methods can not satisfy pruning requirements to meet County standards, or good arboricultural practices.

- Shall be used routinely as a tool to reduce future management activities.
- Shall be used when pruning needs cannot be satisfied by other means.
- Shall be used when promoting tree health, aesthetics and good arboricultural practices.
- Only trained crew shall be allowed to operate the aerial bucket for any pruning.
- The truck shall be parked, and the driver shall be outside the truck assisting the bucket operator when the aerial bucket is utilized.
- Maintain a buffer of at least 1' or greater from service lines, and a 10' buffer or greater from primary lines.
- Make sure that all pruned materials and debris fall safely to the ground, avoiding utilities, roadway, public and ground crew.
- Follow all safety standards and manufacturer’s recommendations when operating the aerial bucket.
• Provide a safe buffer around potential hazards detected while operating the aerial bucket.
• Inspect aerial bucket prior to operation for maintenance and safety.
• Aerial bucket operations need to follow all OSHA and County safety standards, including all operational and PPE requirements.

2.3 – Ground Operations
Refers to site operations that can be conducted by the ground crew, such as pruning with power and hydraulic saws, identifying pruning needs, chipping and removing debris, along with other associated activities related to safety and pruning needs.

• Appropriate number of crew will be positioned as flaggers at the work site, to control traffic through the work zone.
• Appropriate number of crew will be responsible for chipping and ground pruning operations at the site.
• Ground crews will assist the top trim truck in debris removal, and pruning needs for limbs and shrubs that cannot be effectively pruned from the top trim truck deck or aerial bucket.
• Ground crew members shall communicate safety concerns and pruning needs to the top trim truck operators.
• Ground crews shall be responsible for communicating when all debris and chipping operations are completed, and then directing the truck to move to the next area for further pruning.
• The ground crew will be responsible for work site clean-up, including chipping, ground pruning and debris removal. Clean-up activities will be assisted by truck operators when practicable.

Section 3 – Work Zone Operations

3.1 – Work Zone Creation
Prior to top trimming operations, a safe work zone needs to be established, along with all crew responsibilities being clearly defined prior to top trimming activities.

• All the crew’s roles and responsibilities should be clearly defined prior to leaving the office in the morning, this includes who will be positioned as flaggers, chippers, driver and deck/bucket pruner. This should be a crew decision, yet if consensus cannot be reached the RM3’s will make the final decision.
• The RM3(s) will assist with the setup of all road signs prior to the start of top trimming activities, to verify the work zone is signed appropriately and safely.
• All road signs and flaggers shall be in place prior to the top trim truck entering the work zone for operations.
• Once the RM3(s) has verified the work site is appropriately signed and safe, the top trimming operations can begin at the site.
• At every break, crew positions should be rotated, with the exception of mutual agreement amongst crew members.
• A pre-work flagging plan shall be established at the end of the previous work day, or prior to the start of the next work day.
Traffic sign setup questions?


Step #2: Ask your supervisor if you are un-clear about how to properly flag a work zone.

3.2 – Flagging Operations
Flagging operations are crucial to the safety of both the traveling public and County staff at the work site, requiring that flaggers be visible and properly positioned to control traffic in and around the work zone.

- All traffic control signs will be placed, in accordance with State and County regulations for the specific work site requirements.
- All traffic control signs will be in place prior to starting work site, and flagging operations.
- Flaggers shall be equipped with a minimum type II safety vest, closed in front, or a type III or greater safety jacket or coat.
- Flaggers shall be equipped with a County provided hat, either a soft or hard hat.
- Flaggers shall be equipped with proper traffic control signs.
- Flaggers shall be equipped with two-way radios, properly charged and functioning, for communication with adjacent flagger(s) at the work site.

(Changes may occur to apparel requirements based upon County Safety Committee requests or changes in OSHA requirements. All crews will be informed of any policy changes when they occur.)

Flagging questions?


Step #2: Ask your supervisor if you are un-clear about how to properly flag a work zone.

3.3 – Work Zone Communication
Communication is essential to efficiently and safely manage a work zone, and coordination amongst the crew, involving site preparation, job details and safety inspection are essential for all top trimming operations.

- All daily work plans will be established by the Zone Forman or Vegetation Supervisor prior to the start of each work day.
- Field operations will be coordinated by the RM3(s) of each crew, and their direction will be followed by other crew members unless the work site is deemed un-safe by the crew.
- No top-trimming operation shall begin until the on-site RM3, or other designated crew member has determined the work area safe and ready for operations.
- All daily work responsibilities shall be communicated clearly too all crew members prior to starting top trimming operations. This is the responsibility of the on-site RM3(s), or other designated crew member.
• If any situation is deemed un-safe, and a situation cannot be resolved in the field, the on-site RM3(s) shall contact their Zone Forman or Vegetation Supervisor to help resolve the situation prior to contacting outside resources (Excluding emergency situations).

• All crew members shall be encouraged to communicate any concerns regarding safety, procedure or other informational concerns to the on-site RM3(s), or other County staff as needed

• Exception: If no RM3 is on site, the designated RM2 will fill that role, and shall take responsibility.

3.4 – Rights-of-Way Boundaries

Right-of-way boundaries are the edge of County Maintenance, where public land adjoins private land. The right-of-way boundaries in Lane County vary in size on almost every road system we manage, and can generally be defined through location of power poles, phone boxes, utility features or fence-lines, and previously delineated management activities.

• Prior to top trimming activities, locate ROW boundary to avoid pruning on private land.

• If limbs outside of the right-of-way need to be removed for management needs or the need to follow good arboricultural practices, limit those activities to necessary portions of the tree to mediate the concern.

• If un-clear about a right-of-way boundary during top trimming operations, limit vegetation management to where activities are within suspected County rights-of-way.

• Limbs that have been pruned within County rights-of-way, may have stubs removed for good arboricultural practices if the tree falls outside of the Right-of-way.

Section 4 – Standards and Guidelines

4.1 – Clearance Standards

Clearance standards are developed to provide safe travel on County roadways by providing proper sight distance, road clearance and visibility for the public. These standards are developed to not only provide a high level of safety, but also to limit repeated maintenance of roadside vegetation activities.

A. Clearance and Procedural Standards for County Roadways

• Prune to heights of 18-20’ above road surface when possible.

• A pruning height of 15’ is the minimum height above road surface, and shall trigger the need for further vegetation management to satisfy roadway clearance standards, when necessary for safety and appropriate sight distance.

• Tree limbs should be pruned from the outside of the limb towards the trunk of the tree, to reduce damage to the tree. (See sec. 5.2- Special Considerations: Waterways).
• Best arboricultural practices should be followed when top trimming.
• Pruned materials and debris, including previous debris at the site, shall be chipped or removed by chip crew to ROW edge, to limit obstructions for other management activities (See sec. 5.2 Special Considerations: Waterways).
• Final pruning cuts should be made to meet good arboricultural practices, and leave a clean appearance when feasible.
• Use your best judgment and arboricultural knowledge when top trimming to promote tree health, proper future growth, reduce future safety concerns, and limit future management activities.
• Avoid damage to the trunk and other parts of the tree that are not going to be pruned, as to leave the tree in good health and visually appealing.
• Avoid leaving debris in drainage feature(s) to facilitate proper roadside drainage.
• All debris and limbs shall be removed from the roadway prior to leaving for the day. These materials can either be chipped or hauled from site.

B. Clearance and Procedural Standards for Sidewalks

• Prune to heights of 7-9’ ft. above sidewalks when pruning promotes tree health, aesthetics, necessary clearance and visibility requirements.
• A vegetative clearance height of 7’ is the minimum allowable height above a sidewalk, and shall trigger the need for further vegetation management when feasible, to satisfy clearance and safety standards.
• Remove any vegetation that obstructs pedestrian traffic, or obscures pedestrian vision.
• Tree limbs should be pruned from the outside of the limb towards the trunk of the tree, to reduce damage to the tree.
• Best arboricultural practices should be followed when top trimming.
• All debris and limbs shall be removed from the sidewalk prior to leaving for the day. These materials can either be chipped or hauled from site.
• Final pruning cuts should be made to meet good arboricultural practices, and leave a clean appearance when feasible.
• Use your best judgment and arboricultural knowledge when top trimming to promote tree health, proper future growth, reduce future safety concerns, and limit future management activities.
• Avoid damage to the trunk and other parts of the tree that are not going to be pruned, as to leave the tree in good health and visually appealing.

C. Clearance and Procedural Standards for Areas of High Concern
Some areas within Lane County require that we promote a high level of sight distance, clearance and visibility to promote a high level of public safety for the traveling public. These areas include, but are not limited too intersections, driveway approaches, inside corners and other areas deemed appropriate by County staff.

• Areas of high concern for public safety, sight distance and visibility shall be pruned to all maximum standards when deemed appropriate by County staff.
• County standards may be exceeded to satisfy clearance, visibility and sight distance needs at any given site deemed necessary for public safety.
• Ground vegetation, including shrubs shall be pruned to a height not to exceed 30” measured from the road surface.
• Any vegetation that obstructs or restricts sight distance or visibility at intersections or driveways, shall be pruned or removed to meet County standards and/or safety needs.
• Naturally occurring or landscaped vegetation will be pruned or removed to meet County standards in defined visual clear zones or other areas of concern.
• No ground or overhead vegetation shall be allowed that obstructs visibility at driveway approaches and intersections, measured 8’ back from road edge that obstructs safe sight distance or visibility for the traveling public. Intersections and driveways shall be cleared of vegetation that is considered to be limiting proper sight distance for the traveling public through either pruning or removal.

4.2 – Visibility and Sight Distance
Lane County strives to maintain roadways that are safe for the traveling public, and that requires that roadways and associated traffic devices are visible and free of obstructions. When feasible, Lane County staff will maintain vegetation to standards that promote proper sight distance and visibility for the traveling public.

A. Visual Clear Zones – For Public and Private Property
Visual Clear Zones exist at intersections and driveway approaches, to help people approaching these areas time to clearly see each other and respond appropriately.

Diagram referenced from; Lane County Public Works Road & Right-of-way Visual Clear Zone Brochure

• Naturally occurring, or landscaped vegetation will be pruned or removed to meet County standards in defined visual clear zones.
• No planting(s) are permitted within Lane County rights-of-way, and on private property that obstructs proper sight distance within visual clear zones.
• Visual Clear Zones have been created to assist vegetation control efforts in high concern areas, primarily intersections and driveway approaches where sight distance is of the highest concern.
B. Sight Distance Table
This table is included as a guideline for County staff and the public for proper sight distance of both roadside fixtures and traffic control devices.

**Table #1: Recommended Sight Distance for roadside fixtures:** AASHTO – Geometric design standards. Lane County Department of Public Works will attempt to follow AASHTO recommendations in rural areas (refer to Visual Clear Zones recommendations for urban areas) when practicable and/or feasible.

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4.3 – Road zone and Classification
For vegetation management purposes, Lane County roads are grouped into three categories:

1. **Level One Roads** – Includes urban arterials and rural major collectors.
2. **Level Two Roads** – Includes urban collectors and rural minor collectors.
3. **Level Three Roads** – Includes urban and local roads and all gravel roads, regardless of functional classification.

**Standards:** (Referenced from the Lane County Integrated Vegetation Management (IVM) Program Standards and Guidelines Document, August 2001).

**Level 1 Roads**: Should be maintained such that vegetation generally does not exceed 24 inches in height for a distance of approximately 6 feet from the edge of the travel lane. This distance will be defined as the safety strip for vegetation management purposes. Level 1 Roads should be maintained such that vegetation generally does not exceed 36 inches for a maximum of 18 feet from the edge of the travel lane. All vegetation beyond 18 feet from the edge of the travel lane shall be left in its natural state unless it produces a safety concern.

**Level 2 Roads**: Should be maintained such that vegetation generally does not exceed 24 inches in height for a distance of approximately 6 feet from the edge of the travel lane. This distance will be defined as the safety strip for vegetation management purposes. Level 2 Roads should be maintained such that vegetation generally does not exceed 36 inches for a maximum of 15-18 feet from the edge of the travel lane. All vegetation beyond 18 feet from the edge of the travel lane shall be left in its natural state unless it produces a safety concern.
**Level 3 Roads**: Should be maintained such that vegetation generally does not exceed 24 inches in height for a distance of approximately 6 feet from the edge of the travel lane. Vegetation beyond the safety strip will be maintained when time allows. In general Level 3 Roads should receive a full width mowing or brushing at least once every five years. *All vegetation beyond 18 feet from the edge of the travel lane shall be left in its natural state unless it produces a safety concern.*

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**Section 5 – Site Preservation and Clean-up**

**5.1 – Tree Pruning**

Tree pruning refers to the removal of limbs and branches from trees to promote tree health, road clearance standards, reduce safety concerns, and promote appropriate sight distance and visibility within Lane County rights-of-way.

- Best arboricultural practices should be used when feasible.
- Limbs should not be removed in a manner that causes damage to the tree trunk or other portions of the tree that remain after pruning.
- If a tree needs to be topped, it needs to be removed, excluding historical trees, heritage trees, or other trees of landscape or preservation value.
- Final pruning cuts should be clean and at the appropriate location when feasible.
- Remove all damaged and deadwood from trees that could pose a safety risk, when feasible.
- Tree species, growth form and location should be considered prior to pruning any trees within Lane County right-of-way.
- Only prune trees when they exceed, or are anticipated to exceed standards prior to the next pruning cycle, pose a safety concern, or obstruct sight distance on County roadways.


**5.2 – Special Considerations (houses, landscaped areas, waterways)**

Areas that are located in front of houses, and/or are landscaped require special attention to promote good public relations. Lane County will attempt to contact property owners when our pruning activities are deemed by County staff to negatively impact landscaping or vegetation in front of houses. We will provide door hangers as a courtesy, to provide home owners information regarding our planned activities, and we will allow a ten day period for response and discussion prior to any management activities, excluding emergency situations, or areas where door hangers are not feasible or safe to place.
Special Considerations for Houses:
- If debris is thrown into a yard, or towards a house, clean up the area of all debris created by the operation.
- Prune to best arboricultural practices when working in front of houses, to avoid leaving unsightly stubs or prune cuts.
- Prune cuts may cross County rights-of-way in front of houses, to promote tree health and best pruning practices.
- Quality of the pruning versus quantity should be the priority in front of houses.
- Do not fuel or repair equipment on or adjacent to landscaped areas, move to an area that will not negatively impact landscaping or other sensitive areas.

Special Considerations for Landscaped Areas:
- Landscaped areas that are located in high priority areas, including intersections, inside corners and/or obscuring traffic fixtures shall be pruned or removed to satisfy Lane County standards, and/or may exceed County standards to satisfy sight distance or visibility requirements for safety.
- Landscaped areas that are located in lower priority areas, including straight-a-ways, outside corners and not obscuring traffic fixtures shall be reported to a supervisor for further evaluation prior to starting any maintenance activities.
- When top trimming any landscaped areas, minimize damage to the remaining vegetation, and leave the vegetation as aesthetically pleasing as possible.
- If a landscaped area is small enough to be hand-pruned efficiently by the follow truck, make the effort when feasible to do it by hand.
- No landscaping outside of the right-of-way shall be pruned or removed, unless approved by your supervisor or Vegetation Management Coordinator, or provided with permission from the landowner.
- If approached by a homeowner to stop activities involving landscaping, stop pruning and provide them with a contact number for your supervisor, and move on to another area.
- If a crew feels un-safe or harassed when interacting with the public, leave the area and report the situation so we can have it resolved or mediated.

Special Considerations for Waterways:
- Do not remove any trees within riparian areas and/or waterways without first consulting with your supervisor or Vegetation Management Coordinator.
- Large limbs and debris can be left within waterways and/or riparian zones. Remaining stubs should be mechanically removed or hand-pruned when they can be reached.
- Cut brush, and limbs in riparian areas, will be left in place, where doing so does not impede drainage, reduce visibility, or produce a safety concern. (Refer to BMP’s section 8).
- Tree limbs that provide shade to waterways shall be left in place, where doing so does not reduce proper sight distance, reduce visibility or pose a safety risk.
- Only limbs facing the road surface shall be pruned, unless they are deemed a hazard.
- Maintain adequate buffer strips according to Best Management Practices. (BMP’s, Section 8 “Riparian Management Widths”).
5.3 – Debris
Refers to any vegetative matter altered, or modified by vegetation management activities that interferes with or impedes any roadside function for safety, drainage and/or aesthetics.

**Urban Areas**: These areas as a general contain more house frontage and landscaped areas. With this in mind, all clean-up activities and debris removal should be more detailed and comprehensive to leave the areas looking as nice as possible, to promote good public relations. This also refers to house frontage and landscaping located in rural areas.

- Leave the work area better, or equal in appearance to what it looked like before you arrived.
- Remove any debris on the road surface that may pose a safety risk for the traveling public, this includes raking or leaf blowing the material off the road surface.
- Remove debris, by chipping or hauling the materials, extending from road surface edge to the edge of the right-of-way.
- Remove all vegetation that may impede proper drainage within the designated drainage feature.
- Remove any overhead debris that may pose a safety risk, including dead, damaged, or hanging limbs and debris, that can be easily reached from the top deck.
- Aesthetics are important. Leave the trees and shrubs looking as good as possible.
- Remove all debris created from top trimming activities, including previous debris when practicable.

**Rural Areas**: In rural settings, where houses and landscaping are not located, debris clean-up is still a top priority for all top trimming and other vegetation management activities. The primary difference is that materials in rural areas may be hauled, chipped or left in place if they do not produce a safety concern, are clear of the roadway, and/or do not decline the appearance of the area.

- Remove any debris on the road surface that may pose a safety risk for the traveling public, this includes raking or leaf blowing the material off the road surface.
- Remove debris, by chipping or hauling the materials, extending from road surface edge to the edge of the right-of-way.
- Remove all vegetation that may impede proper drainage within the designated drainage feature.
- Remove any overhead debris that may pose a safety risk, including dead, damaged, or hanging limbs and debris, that can be easily reached from the top deck.
- Aesthetics are important. Leave the trees and shrubs looking as good as possible.
- Remove all practicable debris created from top trimming activities, including previous debris.
Section 6 – Program Management and Scheduling

6.1 – Program Development
Coordination and communication are essential to developing an efficient roadside vegetation management program that works in conjunction with other divisions involved in road maintenance.

- The Vegetation Management Coordinator, in conjunction with appropriate Zone Forman will be responsible for creating vegetation management schedules.
- Vegetation Management plans will be developed based on public safety, vegetation requirements, other department requests and public comment.
- Field crews should communicate concerns or issues regarding vegetation management activities with their supervisors. Suggestions and comments should be encouraged and welcomed between supervisors and field staff.
- Vegetation Management activities should be developed to work in conjunction with other vegetation and road crews to accommodate the needs of all parties involved when feasible.
- Coordination and scheduling will be based on the best equipment to fulfill the desired objectives of the vegetation management activity.
- Equipment utilized in vegetation management activities will be coordinated in an efficient and cost-effective matter, in an effort to reduce costs and repeated management activities for any given work area.

6.2 – Scheduling
The order in which equipment is utilized will vary based upon seasonal activity needs, maintenance requirements, special project scheduling and other factors that develop through Lane County infrastructure and safety needs.

Table #2: Seasonal Activities Planning Table – Vegetation Management.

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<tbody>
<tr>
<td>Safety Strip Mowing</td>
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<td>X</td>
<td>X</td>
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<td>Urban Tree Work</td>
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<td>X</td>
</tr>
</tbody>
</table>

X= Optimum Times of Year O= Secondary times activity may occur
**General Scheduling Standards:** (All scheduling will be based upon available crew size, equipment location, management needs and site characteristics).

A. **Safety Strip Mowing:**
   - Shall generally be conducted from May thru July.

B. **Full Width Mowing:**
   - Shall generally be conducted from August thru November.

C. **Brush Mowing:**
   - Can be conducted from January thru December.

D. **Top-Trimming:**
   - Can be conducted from January thru December.
   - Optimum time for urban tree work from Mid-January through Mid-March.

E. **Hydro-Seeding:**
   - Spring seeding shall generally be conducted from February thru April.
   - Fall seeding shall generally occur from September thru November.

F. **Herbicide Treatments:**
   - Shall generally be conducted from April thru June.
   - Fall treatments shall generally be conducted from September thru November.
   - Cut stump and other woody shrub treatments may occur March thru November dependent on weather conditions.
   - All herbicide treatments will be weather dependent.

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**Section 7 – Distinct Road Conditions**

7.1 – Diagram #1: Inside Corners

- Provide overhead clearance of 18-20 feet over road surface at inside corners
- Mow all ground vegetation to a height of 12-24 inches when feasible within 100 feet on each side of the inside corner.
- Maximum height for vegetation within 100 ft. of inside corners shall not exceed 30 inches when feasible.
- Clear any vegetation that obstructs, or limits proper sight distance and safe visibility for the traveling public.
• Do not allow trees and large shrubs to establish within 100 ft. of inside corners when feasible, existing trees shall be pruned or removed when necessary.
• Mow to maximum width of 18 ft. from road surface edge when feasible.

7.2 – Diagram #2: Intersections Urban Areas

![Visual Clear Zone At Intersections]

- No tree Limbs allowed below 15 Ft. in height over roadways. Pruning height should attempt to remove limbs to a height of 18-20 feet.
- No tree limbs allowed below 7 Ft. in height over sidewalks. Pruning heights should attempt to prune limbs to a height of 9 feet when pruning activity does not impair future tree health.
- No vegetation allowed that is a hazard to pedestrian or vehicular use of any sidewalk or street by obstructing passage or vision.

7.3 Intersections Rural Areas

Diagram #3: Visual Representation of Sight Triangles. Variable (b) representing appropriate setback, measured as 8 ft. from road edge. Variable (a) representing appropriate sight distance based upon road design.
• No tree limbs allowed below 15 ft. in height over driveway approaches. Tree limbs and overhead vegetation shall be pruned to a height of 18-20 ft. when feasible.
• No ground vegetation allowed that obstructs visibility at driveway approaches, measured 8 feet back from road edge that obstructs a safe sight distance or visibility for the traveling public.
• Intersections and driveways should be cleared of vegetation that is considered to be limiting proper sight distance for the traveling public, through either pruning or removal. (Reference Tables 3, Page 19).

Table 3: Recommended Sight Distance Guidelines for new construction of intersections with No Traffic Control for High Volume Roads.
(AASHTO – Length of Sight Triangle Leg – Case A – No Traffic Control)

<table>
<thead>
<tr>
<th>Design Speed (mph)</th>
<th>Length of Leg (ft.)</th>
</tr>
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<tbody>
<tr>
<td>15</td>
<td>70</td>
</tr>
<tr>
<td>20</td>
<td>90</td>
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<tr>
<td>25</td>
<td>115</td>
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<td>30</td>
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<td>45</td>
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<td>50</td>
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<td>55</td>
<td>285</td>
</tr>
<tr>
<td>60</td>
<td>325</td>
</tr>
</tbody>
</table>

(Reference – A Policy on Geometric Design of Highways and Streets, AASHTO. This book will be used as a reference to assist in site specific management decisions when deemed necessary).

Section 8 – Public Relations and Reporting

8.1 – Resolution of Conflicts
Conflicts will arise between County Staff and the public, and may also occur between supervisors and field staff. Resolution of these conflicts will be deemed a high priority to satisfy public concerns and promote good communication amongst Lane County Staff and supervisors.

Resolution of Public Conflicts:
• Listen to the concerns and comments from the public, and be courteous and professional in your responses.
• If a situation can not be resolved in a professional manner, provide the public with your supervisor’s contact information so they can resolve the conflict.
• If you ever feel in danger, leave the area first then report the situation to your supervisor, law enforcement and/or Station #2 if necessary.
• Explain to the public Lane County standards and guideline information as to why we do what we do, to provide information of why we manage vegetation within Lane County rights-of-way.
• Provide the public with the flyer “Citizen Guide to Issue Resolution”, if they request contact information.

8.2 – Reporting Landscaping in ROW
Landscaping occurs in varying degrees within Lane County rights-of-way, and in turn we have to make management decisions to how we will manage these problems. General guidelines are listed below, yet exceptions may be made by supervisors based upon the site characteristics, management needs and safety concerns at the site.

• Landscaping that exists in high priority areas, including inside corners, intersections, driveway approaches, or obstructs roadside fixtures shall be pruned to County standards or removed when practicable.
• Landscaping that exists in lower priority areas, including straight-a-ways, outside corners, house frontage or other managed areas, and does not pose a safety concern shall not be pruned or removed without supervisor approval, unless it poses a safety concern.
• Efforts shall be made to contact homeowners prior to pruning or removal of landscaping when feasible, excluding high priority areas.
• Any landscaping that is skipped, requiring pruning or removal during top trimming activities should be reported to your supervisor for future management.

8.3 – Reporting Hazard Trees
Hazard trees can pose a large risk to public safety and infrastructure when they exist within or near to the Lane County rights-of-way, and in turn need management activities to reduce these concerns.

• Report all hazard trees that are located during work activities when feasible.
• Provide directions and location information of the reported hazard tree, such as nearest address, mile marker, or other easily identifiable location reference.
• Provide a general description of the hazard tree, including species, tree height, and why it is a hazard tree.
• Provide a description of the potential hazards, including location of structures, proximity to road systems and other potential risks.
• Provide road width information and distance from road edge when practicable.

8.4 – Reporting Noxious Weeds
Noxious weeds are a growing concern for vegetation management activities within Lane County rights-of-way. When a noxious weed is located, report these sites so future management activities can manage the site(s).

• Report noxious weeds that are located within Lane County rights-of-way to your supervisor or Vegetation Management Coordinator.
• If you are not certain a plant is a noxious weed, report it so that others can make a determination, when feasible.
- Provide a location, plant name and other information that will assist others in locating the area for further management if necessary.
- The Crummy shall contain a weed book, with data forms to report noxious weed locations.
- Fill out noxious weed reporting forms, and provide completed forms to the Vegetation Management Coordinator.

Section 9 – Best Management Practices

9.1 – Vegetation Management Description & Goals

Description, Top Trimming (MMS 452): These actions are designed for trimming trees to County standards to ensure clearance, preserve sight distance, and promote safety.

Goals: To maintain a safe and efficient transportation system that includes controlling noxious, invasive, and inappropriate vegetation, while promoting beneficial and native vegetation for the benefit of adjacent landowners, the public user and the natural environment.

9.2 – Minimization, Avoidance, and BMP’s
(Referenced from Lane County Public Works Routine Road Maintenance, Water Quality and Habitat Guide. Best Management Practices.)

1. See above referenced manual for complete description of Lane County BMP’s.
2. Cut brush, in riparian areas, will be left in place where doing so does not interfere with sight distance, create safety issues, cause fire hazards, involve noxious weeds or the proper functioning of roadway features (e.g. drainage).
3. LCPW maintenance will maintain shade trees along streams and rivers, unless those trees are danger trees (as determined by the Vegetation Management Coordinator and/or appropriate resource agency), could potentially impact bridge structures, or could impact line of sight. If trees provide shade or bank stabilization within 50 feet of streams and are determined to be danger trees that must be removed, tree removal will be coordinated with ODFW or other regulatory agency.
4. Only brush within 20 feet (on either side) of and under all bridge structures will be removed. All other brush not within LCPW’s clear zones will be left in its current condition, unless the brush interferes with sight distance, shades the structure, or the brush is a noxious weed (e.g. Scotch Broom). Mapping of sensitive resource areas may lead to additional areas not being brushed.
5. On culverts six feet or greater, LCPW Maintenance will remove ten feet of brush on both sides of the culvert, on the upstream end of the culvert and ten feet on both ends of the downstream side, unless the brush around the culvert is a noxious weed. If other brushing needs are identified, LCPW will coordinate with ODFW.
Minimization and Avoidance: (RMA: Riparian Management Areas)
1. Where possible, LCPW Maintenance will attempt to maintain buffer strips corresponding to the RMA’s shown in the following table

<table>
<thead>
<tr>
<th>Size</th>
<th>Riparian Management Widths</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>100 feet</td>
<td>McKenzie River, Siuslaw River, Willamette River</td>
</tr>
<tr>
<td>Medium</td>
<td>70 feet</td>
<td>Mohawk River, Deadwood Creek, Brice Creek</td>
</tr>
<tr>
<td>Small</td>
<td>50 feet</td>
<td>Most streams (first-second order tributaries)</td>
</tr>
</tbody>
</table>

Lane County Riparian Management Widths – Waterway List.
