



## ***INCORPORATED COUNTY OF LOS ALAMOS ADMINISTRATIVE PROCEDURE GUIDELINE***

Index No. 1330

Effective: April 1, 2022

### **Integrated Pest Management Plan**

#### **I. Purpose**

Integrated Pest Management (IPM) is a pest management strategy that focuses on the long-term prevention or suppression of pest problems with minimum impact on human health, the environment and non-target organisms. In most cases, IPM is directed at controlling pests that have an economic or performance impact on County facilities. In some instances, it may reflect a public health concern such as mosquitos or stinging insects where populations may create a potentially dangerous situation. The guiding principles, management techniques and desired outcomes are similar in all cases. This document should be updated as new information, best practices or conditions change.

Best practice strategies for pest management techniques include:

- Encourage naturally occurring biological control
- Adoption of cultural practices that include cultivating, pruning, fertilizing, maintenance, and irrigation practices that reduce pest problems
- Intentional design to mitigate potential issues
- Changing the habitat to make it incompatible with pest development
- Using alternated plant species or varieties that resist pests
- Limiting monoculture plantings, where possible
- Selecting plant protectants with a lower toxicity to humans or non-target organisms
- Minimization of health risk to employees and users
- Minimization of environmental impacts (e.g., water quality, non-target organisms)
- Risk reduction (losses to pests, or nuisance/threshold level)
- Ease with which the technique can be incorporated into existing management approaches
- Cost effectiveness of the management technique

#### **II. Policy**

Each department and/or division of the County has different needs and thresholds for pest management. Each division has provided the pest thresholds that begin action. Each of these thresholds are based on the use of the venue or facility and based on site monitoring. While the threshold level begins a more aggressive treatment, staff will monitor and use other tactics prior to relying on synthetic chemical application to mitigate the issues. The threshold indicates economic, performance or health impacts and will require more intensive measures to mitigate.

We recognize that a desire exists for “pesticide free zones” in public facing areas and these areas are noted at the beginning of each department and/or divisions section. Los Alamos County (LAC) reserves the right that, in the interest of immediate public safety or health impacts, measures may be taken that impact these “pesticide free zones”. Examples of such safety and health issues are stinging insects near playgrounds or high use areas, goat heads or mosquitos that carry a public health concern.

### **Parks, Recreation, Open Space (PROS) Division**

The following parks are designated pesticide free zones that are recognized by the PROS division: West Park, Urban Park, Pinon Park, and Rover Park.

A visual matrix is provided as Appendix A to demonstrate the threshold range of a pest activity that would require more intensive treatment options.

### **Golf Course Division**

#### Greens

On all regulation putting greens, practice putting greens, and nursery greens, a threshold range of 0-5% percent for **turf disease** pressure is set. When it is determined that this threshold percentage has been reached or exceeded, a curative fungicide treatment will be applied. There shall be one (1) annual preventative fungicide application in November for snow mold.

A threshold of 0% is set for **broadleaf or grassy weeds**. Weeds on putting surfaces are treated when necessary.

A threshold of 0-5% is established for **turf insect** pressure. When it is determined that this threshold is reached or exceeded, a curative insecticide treatment will be applied.

#### Tees

On all regulation tee and practice tee areas, a threshold of 25% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 15% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location basis, as needed.

A threshold of 15% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied. There shall be one (1) preventative application per year (approximately mid- May) on all tees bordering tree lines.

#### Fairways

On all regulation and practice fairways a threshold of 35% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 25% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location basis, as needed.

A threshold of 25% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied. There shall be one (1) preventative application per year (approximately mid- May) on all fairways bordering tree lines.

#### Roughs

On all rough areas a threshold of 100% for **turf disease pressure** is set. No fungicide applications will be made in rough areas.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available. There shall be one (1) annual preventative pre-emergent application in late March to early April, weather dependent.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made in rough areas.

#### Clubhouse and Surrounding Area

On all regulation and practice fairways a threshold of 35% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded, a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 50% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location basis, as needed. There shall be one (1) annual preventative pre-emergent application in late March to early April, weather dependent.

A threshold of 50% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied.

## **Parks Division**

### Gardens

On all formal plantings or gardens, a threshold of 100% for **turf disease pressure** is set. No fungicide applications will be made in rough areas.

A threshold of 100% for **broad leaf and grassy weeds** is set. Mechanical and cultural methods will be the primary management tool for removing unsightly weeds. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made in formal planting or garden areas.

### Parks

On all parks except those designated as pesticide free, a threshold of 100% for turf disease pressure is set. No fungicide applications will be made.

A threshold of 100% for broad leaf and grassy weeds is set. Mechanical and cultural methods will be the primary management tool for removing unsightly weeds. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available. Goat heads will be treated on an as needed basis for the safety and comfort of community members.

A threshold of 100% for turf insect pressure is set. No treatment will be made in the turf areas.

### Athletic Fields

On all formal athletic fields, a threshold of 35% for **turf disease pressure** is set. When it is determined that that this percentage has been reached or exceeded, a curative fungicide treatment will be applied on a spot spray by location basis, as required.

A threshold of 50% for **broad leaf and grassy weeds** is set. When it is determined that that this percentage has been reached or exceeded, a treatment will be applied on a spot spray by location, as needed.

A threshold of 35% for **turf insect** pressure is set. When it is determined that that this threshold percentage has been reached or exceeded, a curative treatment will be applied.

#### Dog Parks

Dog parks have a threshold of 100% for **turf disease pressure**. No fungicide applications will be made.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made unless the pest creates a health and safety concern for people or their pets.

#### Landscaped Medians

On medians, a threshold of 100% for **turf disease pressure** is set. No fungicide applications will be made.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made.

### **Open Space Division**

Open Space provides our community with undeveloped areas for mental and physical health. The desire is to minimize pesticide applications. Primary efforts are to eradicate invasive species and maintain the natural order in the system.

### **Stables**

The common areas of the stables are under the purview of this document. Each lot has a licensee that is responsible for individual choices for pest management on the assigned lot. Since the land is County property, the licensee is required follow the County ban on glyphosate and notification requirements for pesticide application.

Stables have a threshold of 100% for **turf disease pressure**. No fungicide applications will be made in the common area.

A threshold of 100% for **broad leaf and grassy weeds** is set. No treatment will be performed, unless the weed is listed under the New Mexico Noxious Weeds Management Act. Noxious weeds will be treated by the least invasive method available.

A threshold of 100% for **turf insect** pressure is set. No treatment will be made unless the pest creates a health and safety concern for people or their livestock. Primary pests to be considered are flies and mosquitos for population management.

### **Traffic & Streets Right-of Way Maintenance**

Traffic & Streets is responsible for the maintenance of County right-of-way (ROW) which is typically behind the sidewalk to the property line along streets in Los Alamos County. Vegetation removal is critical for safety of all users of the roadway. See Appendix B.

Please note, LAC does not maintain all ROW- particularly it does not maintain ROW in front of private residences.

Vegetation shall be cut when it reaches a height of 20 inches.

### **Sight Triangle**

It is important to keep a clear sight triangle at intersections so users can see oncoming hazards before they enter the roadway. Obstructions, including vegetation, should be kept free between 3-10 ft. as measured from the roadway surface. See Appendix B.

### III. Responsibility

LAC will notify the public within 72 hours prior of an application of a pesticide, unless the application is an emergency application. In the event of an emergency application, the notification will be within 24 hours of the treatment. The notice of application will be posted on the County website and if applicable, by a sign on the entrance doors.

Upon completion of the application, the New Mexico Department of Agriculture Application Record will be posted within 24 hours on the County website.

### III. Procedure

#### **Step 1: Take Prevention Measures**

This step anticipates pest issues and minimizes land disturbances while searching for early pest conditions that may result in a future pest outbreak. Prevention steps utilize

such things as pure seed mixes, good soil preparation, diversity of landscapes, design principles, etc.

To build a good foundation for preventing future pest outbreaks, a few ecological and agronomical practices must be followed.

Components of Prevention Measures:

- a) Soil testing and augmentation
- b) Site Analysis and conditions
- c) Plant species assessment and plant diversity
- d) Seed mix and test plot data
- e) Professional design and installation
- f) Stewardship sustainability and management plans

### **Step 2: Avoidance and Thresholds**

This step assesses and monitors pest populations and sometimes drives the decision to take a wait-and-see approach; or take no action at all because the pest populations are tolerable and not spreading or causing significant loss.

Components of Assessment:

- a) Evaluate the priority and importance of the area for the public.
- b) Determine if the damage by the pest is exceeding the economic threshold, performance, or health impacts.
- c) Weigh the risk of implementing other pest controls against the wait-and-see or do-nothing approach.
- d) Forecast any changes in weather or conditions that may favorably augment the pest population without applying additional controls.
- e) Observe other valuable natural resources in the area that may be impacted by the implementation of pest controls and weigh those against the need for application of pest controls.

### **Step 3: Mechanical Means and Hand Labor**

While this step is very labor intensive, it is considered a low risk to the environment. In some locations it may put staff at risk due to work locations, such as medians or rights of way. This method includes hand pulling, trimming, or removal of pests manually.

Considerations for mechanical means:

- a) Hand-pulling of weeds and physical removal of pests in site specific areas
- b) Mowing and trimming of weeds in more general areas of concern, where practical
- c) Naturalized areas by propagating native plant species to control weeds
- d) Clipping weed seed heads before they bloom or spread

#### **Step 4: Cultural Controls**

This step is highly diversified, however, can be very effective in mitigating pest concerns because it puts in place practices that help reduce pest establishment, reproduction, dispersal, and survival. The range of activities can vary from intentional design and construction practices, irrigation management, nutrition programs, preferred plant communities, diversity of plant selections and other cultural practices. Monitoring conditions in the field is critical for controlling undesirable pests while knowing what conditions the pests prefer and doing what you can to alter those favorable conditions to avoid pest out break.

Considerations for cultural controls:

- a) Mulching
- b) Aeration
- c) Irrigation Management
- d) Mechanical stress
- e) Nutrition programs
- f) Weed barriers
- g) Design controls
- h) Top dressing
- i) Flaming
- j) Prescribed burns

#### **Step 5: Biological Controls**

Bio-controls are established for a supplement to pest control. This may include the release of beneficial or parasitic insects, beneficial microbes or even plant specific disease to noxious weeds. These can be released into the environment or inoculated into the soil to help combat undesirable pests.

Considerations for biological controls:

- a) Parasitic wasps
- b) Lady bugs
- c) Leafy spurge beetles
- d) Praying mantis
- e) *Bacillus thuringiensis*

#### **Step 6: Organic controls**

This step considers what organic pesticides exist to combat pests taking into account the life cycles of the pests and their interaction with the environment. One should NOT assume that organic pesticides are less toxic just because they are labeled “organic” or “natural”. The public should be aware that organic-approved pesticides often carry the similar label warnings and are not necessarily safer for people, pollinators, or the environment than comparable synthetic pesticides.



Considerations for organic controls:

- a) Soap-based insecticides
- b) Garlic-based repellants
- c) Citronella
- d) Horticultural vinegar

### **Step 7: Synthetic Controls**

Synthetic pesticides are a last resort, however, can be effective tools in the IPM toolbox when steps 1-6 have not proven to be effective, practical or the pest outbreak is severe. The risk of using pesticides can be significantly minimized by their proper and safe use.

#### Invasive Species Siberian Elm and Russian Olive Management:

**Cut-stump treatment** with herbicide allows specific trees to be immediately removed. Use a chain saw to cut the trunk as close to the ground as possible. Within 5 to 15 minutes of cutting, apply Triclopyr to the cut surface using a paint brush, wick applicator, or low-volume hand-held sprayer. Follow the labels instructions for mixing.

**Girdling with herbicide**, as described in part in the “Physical Methods” section, is an effective control treatment for larger trees. Spray or paint the cut-surface of girdled areas with a 50–100% concentration of triclopyr. The most effective time to girdle and apply chemical treatment is during summer when Siberian elm is fully leafed out and actively growing.

**Physical Control** To control Siberian elm, it is necessary to destroy the root system. Physical control can be done on a range of scales—from individual plant removal (ranging from hand tools to excavators) to broad-scale clearing (varying from tillers to bulldozers). Mechanical clearing often requires repeat applications.

**Manual Methods Hand removal** – Newly emerged seedlings and saplings with a stem diameter less than 3/8 inch are easily removed by hand pulling or hoeing. Small trees with a stem diameter between 3/8 and 2.5 inches may be hand grubbed with a shovel, hoe, or weed tool.

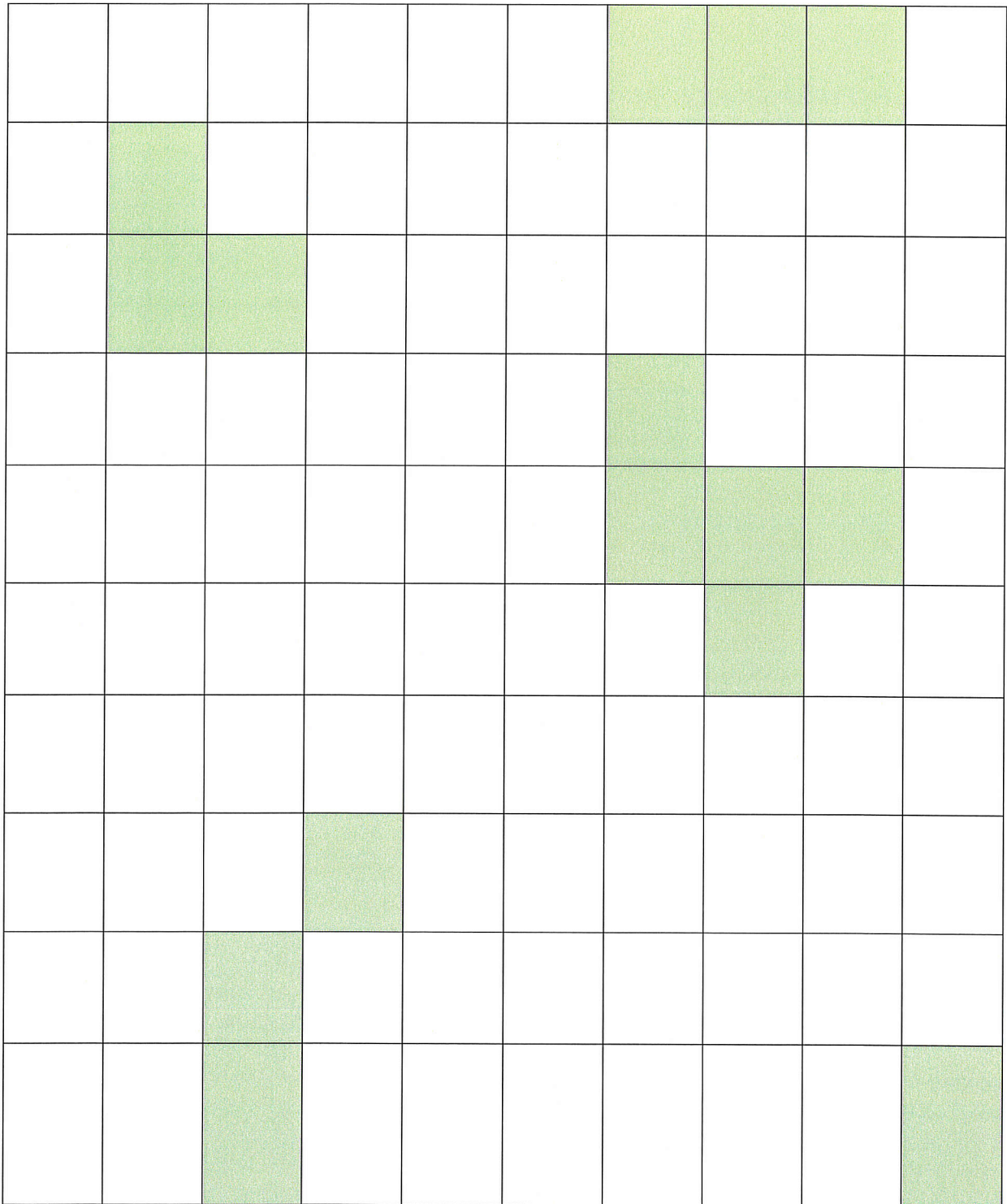
**Suppression by cutting** – In areas with just a few large trees, trunks may be cut close to the ground to remove top growth. Anticipate that root and trunk resprouts will return later in the growing season and will require repeated follow-up cutting. Cutting is more effective when followed up with a chemical treatment (see cut-stump treatment in the “Chemical Control” section below).

**Girdling** – In late spring to midsummer on larger trees, use an ax, saw, or chain saw to make two horizontal, circumferential cuts around the entire trunk. Place one cut 3 to 4



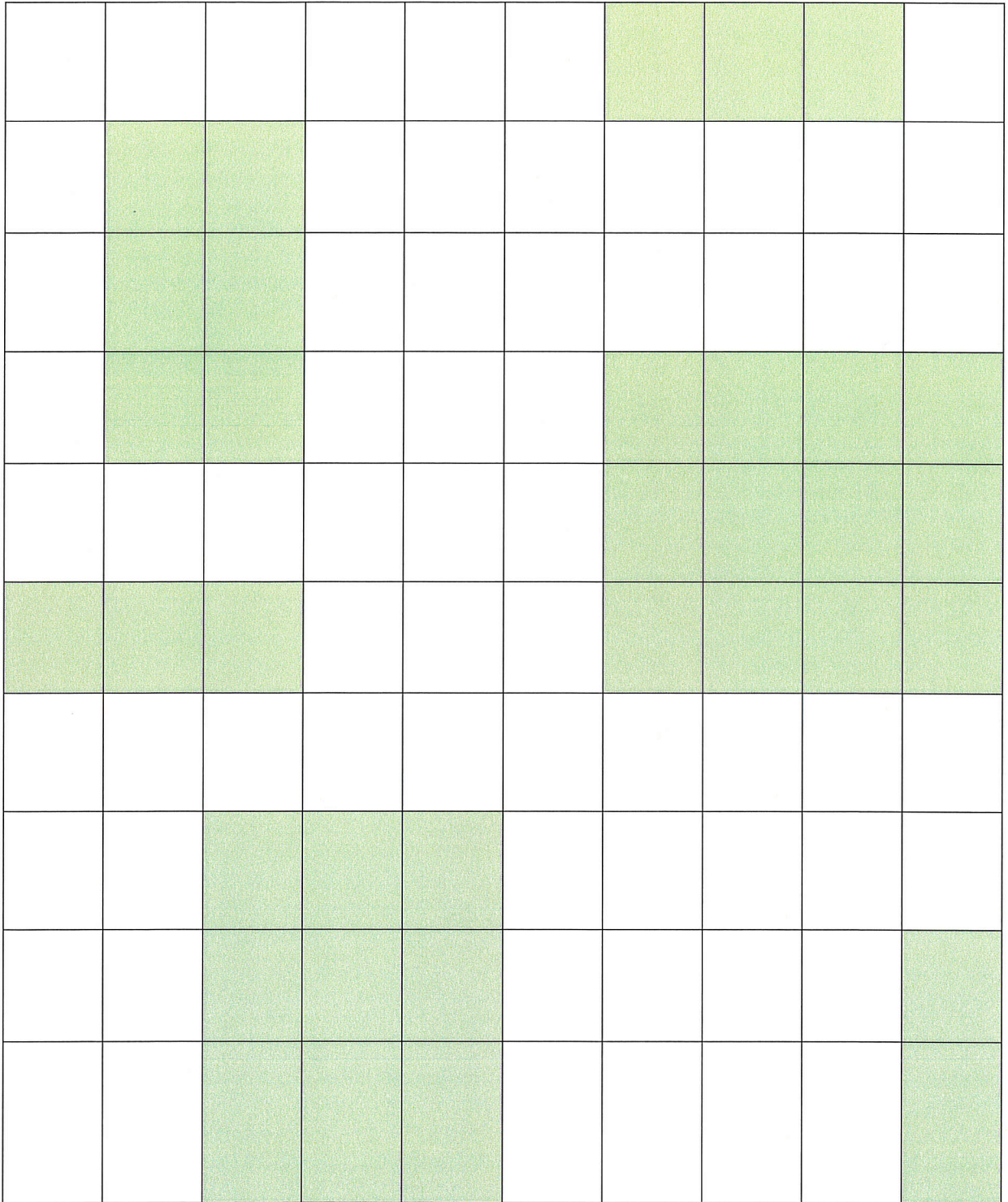
Appendix A

15% Impact

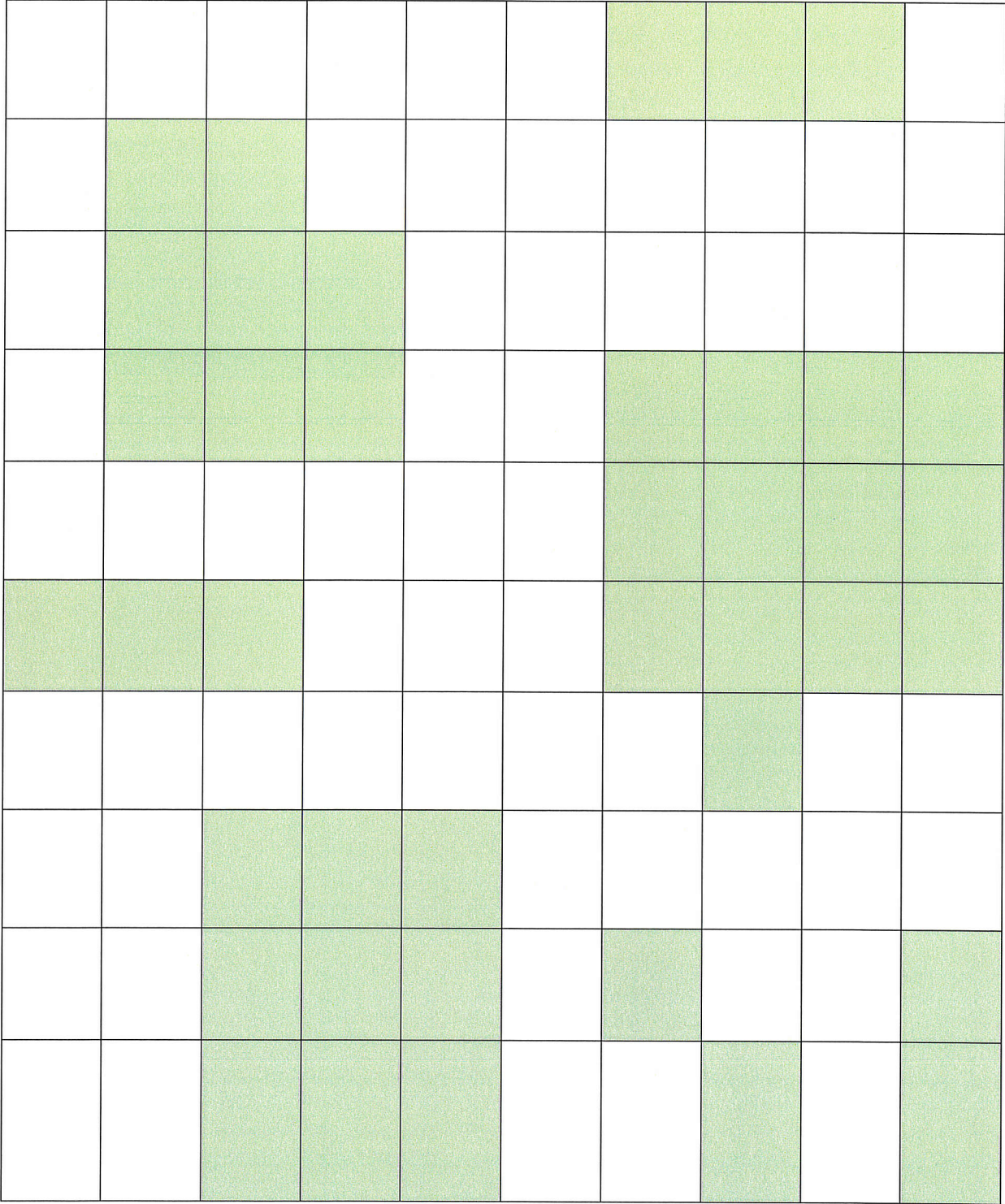




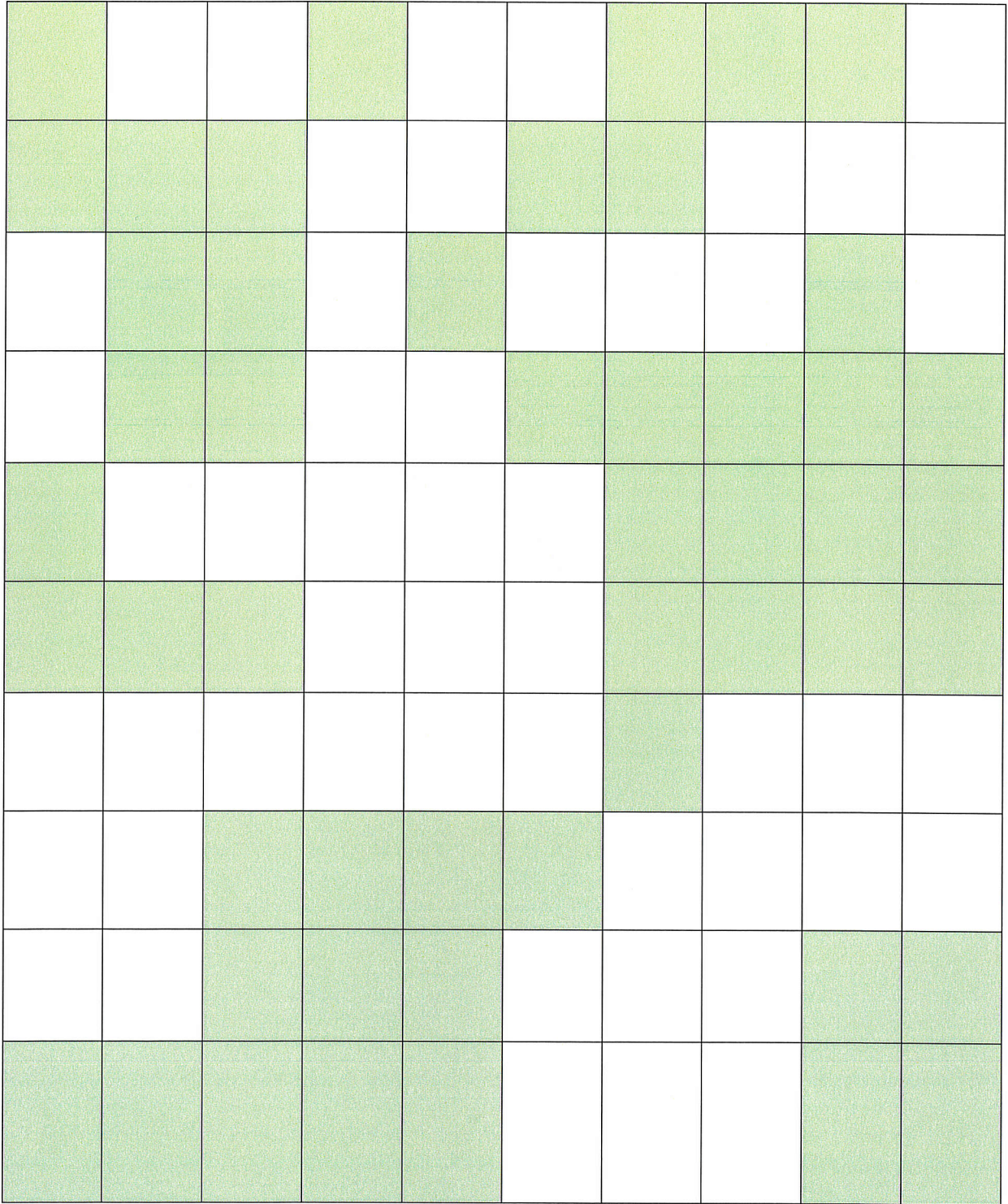
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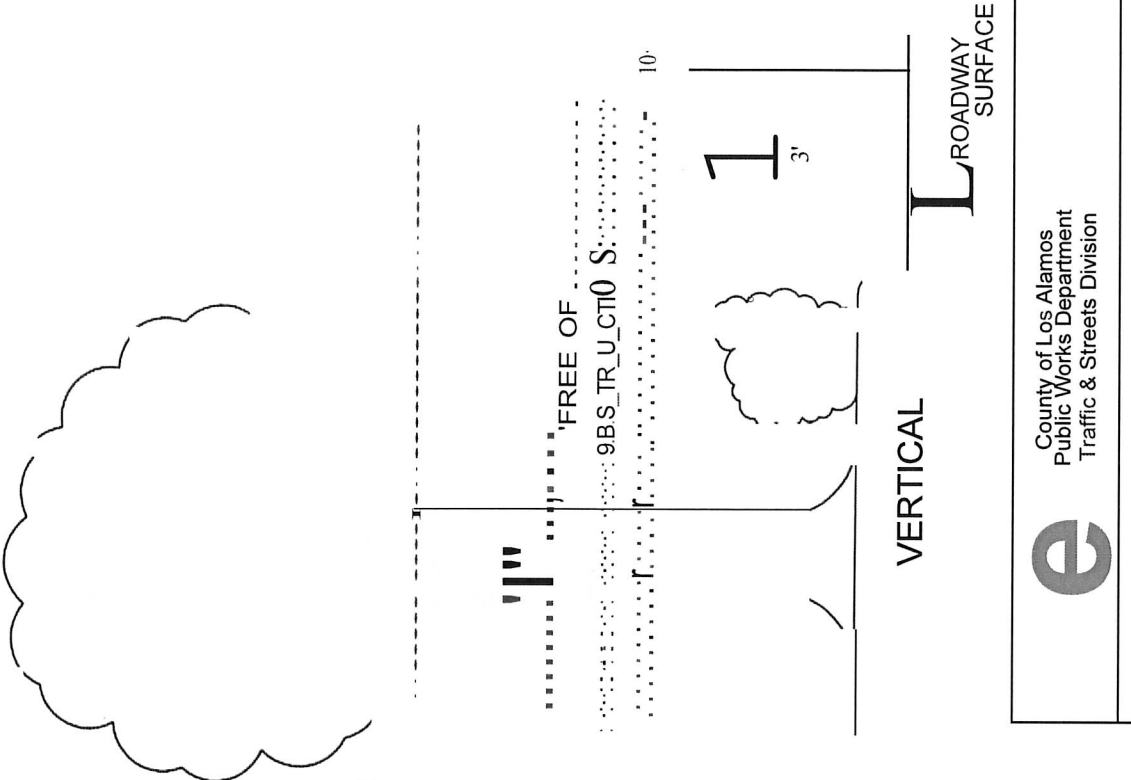


40% Impact



50% Impact





County of Los Alamos  
Public Works Department  
Traffic & Streets Division

**CLEAR SIGHT TRIANGLE DIAGRAM**

ADDRESS: \_\_\_\_\_

DATE: \_\_\_\_\_ NOT DRAWN TO SCALE

COMMENTS: \_\_\_\_\_

**HORIZONTAL**

CLEAR SIGHT TRIANGLE: 30 FT BACK FROM THE INTERSECTION OF THE PROPERTY LINES OR 40 FT BACK FROM THE INTERSECTION OF THE CURB LINES

USE WHICHEVER VALUE IS GREATER



