

# Landscape Management Plan

This Grounds Services Management Plan documents the site and landscape improvements that exist on campus and provides detailed information on maintenance activities performed by Grounds Services. The plan is intended to be used to communicate in a variety of ways:

- ✿ Ensuring appropriate species selection that promotes tree diversity and acknowledges proper tree care needs;
- ✿ Promoting tree health and safety by utilizing the best management and care practices when maintaining campus trees;
- ✿ Ensuring that trees are reasonably replaced when there is mortality due to weather, pest infestations, injury, or construction displacement;
- ✿ Protecting high-value trees during construction or renovation projects;
- ✿ Establishing future goals and targets for the campus urban forest program;
- ✿ Encouraging campus community members to respect and value the campus urban forest.



## 1. Introduction

- This Grounds Services Management Plan documents the site and landscape improvements that exist on campus and provides detailed information on maintenance activities performed by Grounds Services. The plan is intended to be used to communicate in a variety of ways:
- The management plan can be used as an important communication tool with Grounds Services customers. This includes departments, facility managers, students, and administration. The plan provides a basis for understanding the kinds of landscapes found on campus and the level to which any given area will be maintained.
- The management plan is designed to be used as a field reference tool for Grounds Services supervisors and staff. The campus is divided into three service levels. Grounds staff can utilize this as a tool to plan and monitor work activities.
- Campus consists of roughly 806 total acres. Roughly 108.5 acres are centered around academic function.



## 2. Campus Landscape

### **Campus Landscape Background:**

The University campus sits within the east central portion of the pre-settlement historic tallgrass prairie complex which extended from northern Minnesota south to eastern Kansas. The prairie heritage provided for deep, rich soils, which were coveted and settled by farmers. The agricultural context is still visible immediately west of campus. To the east and north of campus, remnants of 200-300-year-old oak savanna are visible, and as in other Midwest locations, they provided canopy and building materials for residential settlement over 100 years ago. The city of Cedar Falls to the northeast of campus was settled within this mix of prairie and savanna located along the Cedar River.

### **Campus Landscape Management:**

The care and management of campus landscape affects not only aesthetics but also operating budgets. The need for strategic use of resources has informed these landscape guidelines. It is, however, tempered by the responsibility to the educational mission of the university, regulatory to the educational mission of the university, the regulatory considerations for Low Impact Design, and an understand that a well-heeled campus landscape affects the business model related to recruitment. Careful attention to design guidelines, details, plant selection and hydrology will allow for better and more prioritized landscape maintenance routines, which are tied to space typologies within maintenance zones by the caretakes of the campus.

### **Campus Landscape Priorities:**

The buildings of the UNI campus form edges to the open space of campus and establish the scale, shape, micro-climate and character. These rooms, along with circulation pathways, supporting amenities and plated landscape, become the setting in which the university community is set and the business of education students takes place. The interplay between the buildings and the landscape is crucial to the perceived beauty of the campus and are integral in developing social and intellectual development.

### 3. Landscape Philosophies

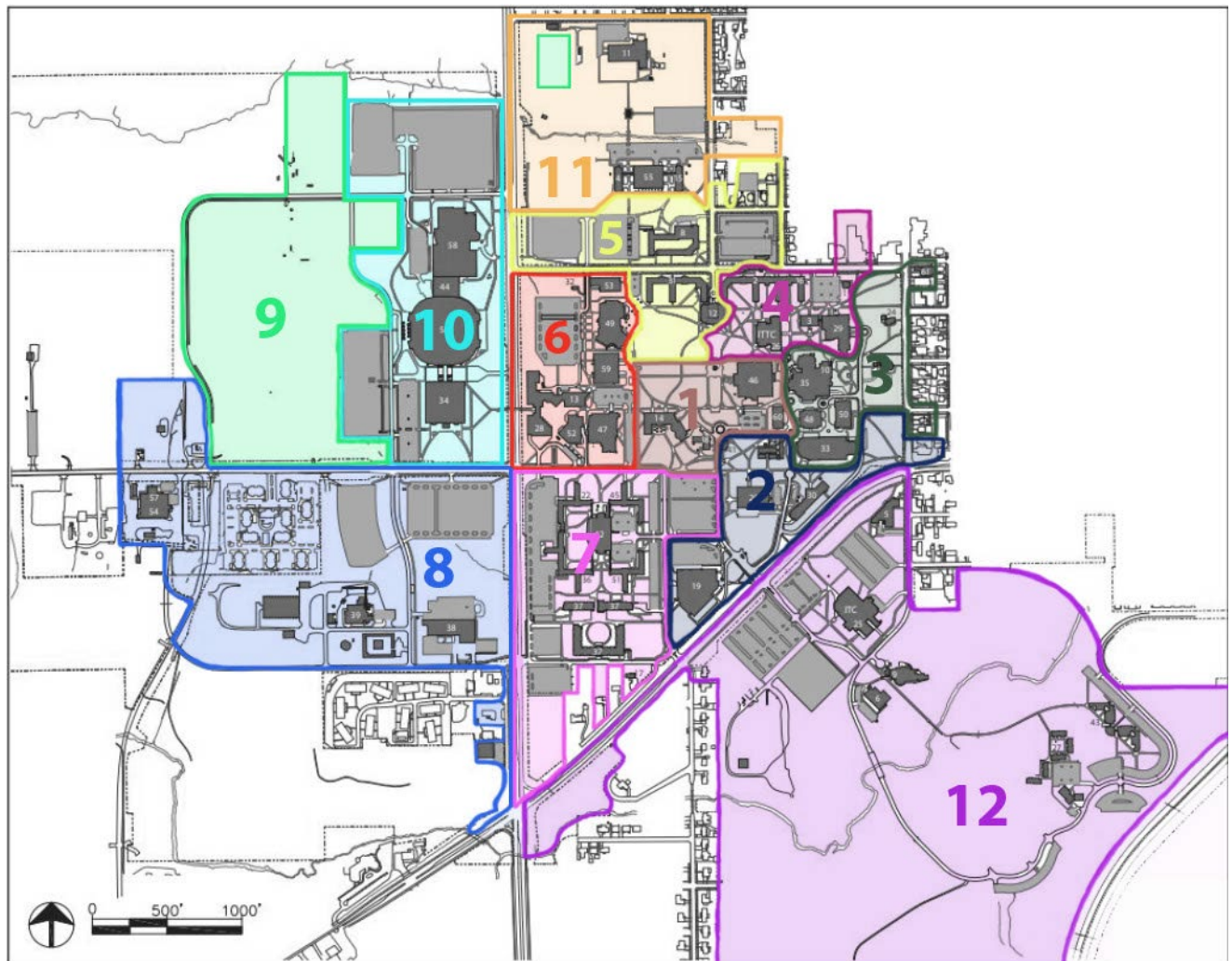
- Optimum Landscape Appearance 365 days per year
- Maintain standards of quality on the campus
- Understand, preserve and enhance design intent
- Encourage professionalism in everything we do
- Staff training and continuing education
- Train professional horticulturists
- Demonstrate responsibility towards economic impact to the University
- Use sound horticultural practices
- Create the traditions of excellence
- Incorporate color into the landscape
- Use plants to announce the seasons
- Practice creative horticulture and try new ideas
- Implement sustainability into our operations
- Experiment with new plants



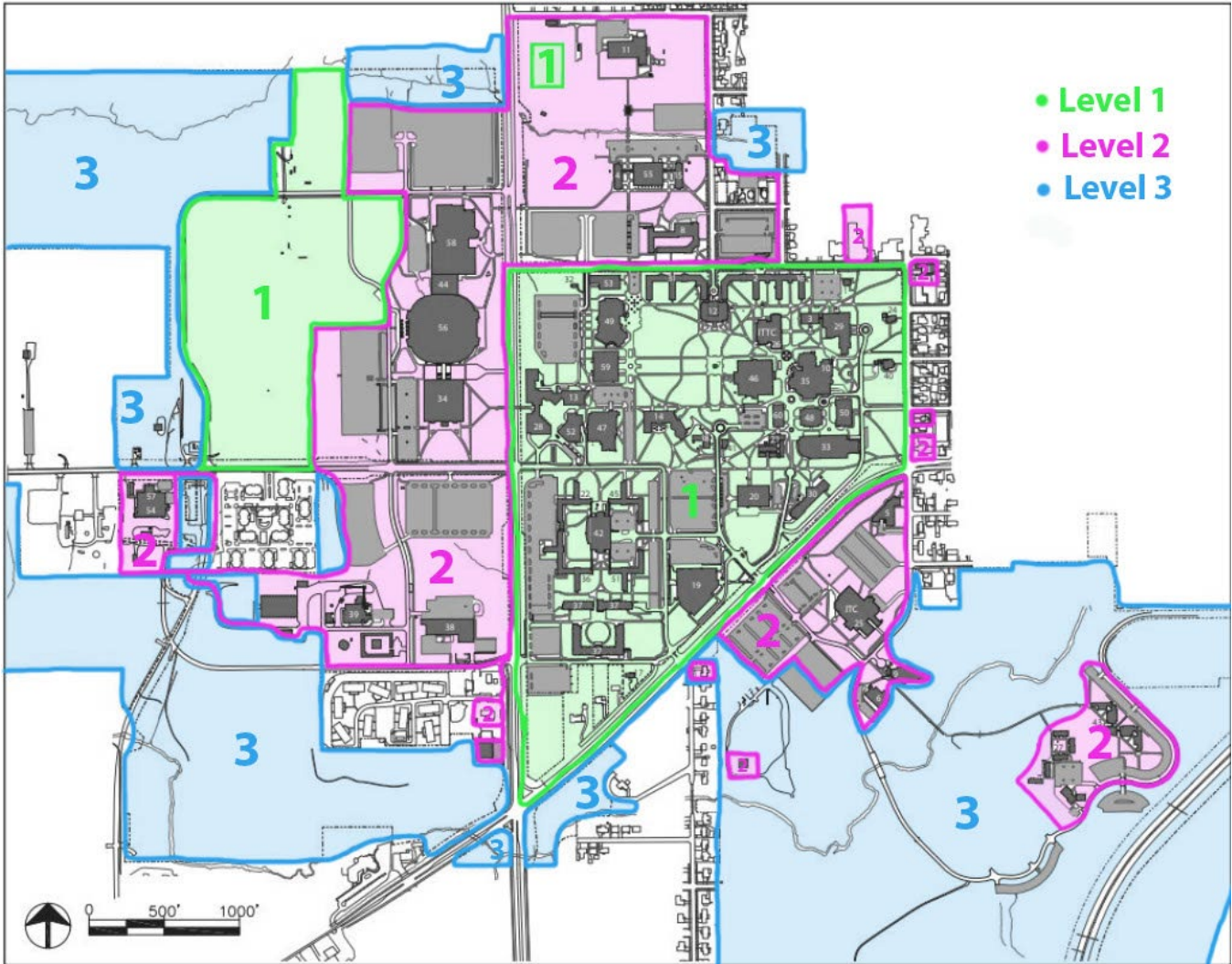
## 4. Campus Maintenance Maps

### Maintenance Zones

Campus is divided into twelve (12) maintenance zones. These are contiguous areas which are intended to be maintained by an area groundskeeper with assistance from other crews. The sizes of the areas vary depending on the amount and intensity of the individual maintenance activities contained within.



**Campus Service Level Area**



## 5. Service Level Designation Criteria

### Service Level 1

- Intense use by students and faculty at gathering places or destination points.
- Historically or architecturally significant buildings or sites.
- Significant area of interface between the University and the public (theatres, visitor areas, major administration areas, gathering places or destination points).
- Locations containing major works of art, fountains, or other unique features or landmarks.
- Identified in the Campus Master Plan as a prominent area on campus

### Service Level 2

- Passive use by students and faculty such as open space and pedestrian circulation links between area. • Academic or administrative buildings without historical or architectural significance but in prominent or visible locations.
- Interface between the University and the public is moderate such as borders.

### Service Level 3

- Natural areas.
- Open space with little to no actual use by students or faculty.
- Area of little or no interface with the public or the interface is automobile oriented. Service Level designations should be evaluated regularly to reflect changes in the campus and reductions or increases in the landscape maintenance budgets

**Landscaping**

**MAINTENANCE EXPECTATIONS**

- Walks, plazas, and steps are kept free of dirt and debris
- Minimal snow storage on lawn areas
- Lawns, shrub beds, and building areas are kept free of litter
- Walks and bed lines have clean edges
- Leaves are removed promptly or mulched
- Shrub, perennial, and annual beds are kept weed free
- Perennials, annuals, trees, and shrubs are fertilized at ideal rates
- All trees and shrubs are treated for disease and insect problems in accordance with IPM of University of Iowa
- Hardwood bark mulch is top dressed annually
- Trees have little to no dead wood
- Trees are pruned following ANSI standards
- Lawns are fertilized at ideal rates each year
- Lawns are kept free of weeds
- Lawns are maintained at approximately 3.5" high
- Lawns are aerified at ideal rates
- Lawns are restored/renovated promptly

**DESIGN ISSUES THAT AFFECT MAINTENANCE**

- Some hand mowing and string trimming is acceptable
- High number of ornamental trees and shrubs
- High number of annual and perennial beds
- Automatic irrigation in select areas, quick couplers or hose bibs for beds
- High amount of brick paving



**LITTER AND DEBRIS CONTROL**

- Litter pick up around Area 1 x per day
- Cigarette butt pick-up as needed
- Building entrances 5 x per week
- Litter receptacles, clean and power wash 1 x per year
- Sand and debris removal from walks 1 x per year

**TURF MAINTENANCE**

- Edging walks 2 x per year
- Sidewalk margin repair as needed
- ENTER PESTICIDE PLAN
- Aeration 2 x per year
- Mowing 1 x per week

**TREE MAINTENANCE**

- Pruning inspection as needed/ Oaks only in winter
- Insect and Disease inspection as needed
- Mulching 1 x per year

**SHRUB AND GROUND COVER BED MAINTENANCE**

- Trim formal hedges 1-2 x per year
- Prune and shape shrubs 1 x per year
- Edge and mulch beds 1-2 x per year
- Weeding of beds 1 x per week
- Prune dead branches and remove dead plants 2 x per month
- Spot treatment as needed

**ANNUAL AND PERENNIAL FLOWER BED MAINTENANCE**

- Weeding 1 x per week
- Edging 1-2 x per year
- Watering, check and water as needed 3 x per week
- Spot treatment as needed

**SITE FURNITURE AND AMENITIES**

- Tables, benches, litter receptacles inspected 1 x per week
- Post and chain inspected 1 x per month

**IRRIGATION**

- See Appendix

**Service Level 2- Moderate Service Level 2-  
Moderate Intensity Landscaping and Maintenance**

**MAINTENANCE EXPECTATIONS**

- Walks, plazas, and steps are kept clean
- Lawns, shrub beds, and building areas are kept moderately free of litter
- Walks and bed lines are edged yearly
- Leaves are removed regularly or mulched as needed
- Shrub and perennial beds are kept moderately free of weeds
- Perennials, trees, and shrubs are fertilized at ideal rates
- Trees and shrubs receive insect and disease control as needed.
- Hardwood mulch is top dressed every other year
- Trees have little or some deadwood
- Trees are pruned following ANSI standards
- Lawns are fertilized at ideal rates
- Lawns are on a broadleaf weed control program, excluding S. of University & North of Dry Run Creek.
- Lawns are maintained within a 3.5” to 5” range
- Lawns are aerified every year

**DESIGN ISSUES THAT AFFECT MAINTENANCE**

- Hand mowing and string trimming exist
- Moderate number of ornamental trees and shrubs
- Moderate number of perennial beds
- Moderate amount of foundation plantings
- Minimal amount of brick paving

## Service Level 2- Area Frequencies

### **LITTER AND DEBRIS CONTROL**

- Litter pick up around Area 1 x per week
- Cigarette butt pick-up as needed
- Building entrances 5 x per week
- Litter receptacles, clean and power wash 1 x per year
- Sand and debris removal from walks 1 x per year

### **TURF MAINTENANCE**

- Edging walks 1 x per year
- Sidewalk margin repair 2 x per year
- Aeration 1 x per year
- Mowing 1 x per week

### **TREE MAINTENANCE**

- Pruning inspection as needed / Oaks only in winter
- Insect and Disease inspection 1 x per year
- Mulching 1 x per year

### **SHRUB AND GROUND COVER BED MAINTENANCE**

- Prune and shape shrubs 1 x per year
- Edge and mulch beds 1 x per year
- Weeding of beds 1 x per week
- Prune dead branches and remove dead plants as needed
- Spot treatment bi-weekly or as needed

### **ANNUAL AND PERENNIAL FLOWER BED MAINTENANCE**

- Weeding 2 x per month
- Edging 1 x per year
- Watering, check and water as needed 3 x per week
- Spot treatment bi-weekly or as needed

### **SITE FURNITURE AND AMENITIES**

- Tables, benches, litter receptacles inspected 1 x per week
- Post and chain inspected 1 x per month

### **IRRIGATION**

- See Appendix

## **Service Level 3- Low Intensity Landscaping and Maintenance**

### **MAINTENANCE EXPECTATIONS**

- Walks, plazas, and steps are swept seasonally
- Lawns, shrub beds, and building areas receive litter pick up every other week
- Walks and bed lines are not edged
- Leaves are removed only as needed or not removed
- Shrub and perennial beds are weeded monthly
- Trees and shrubs receive minimal or no fertilization
- Trees and shrubs receive minimal or no insect and disease control
- Hardwood bark mulch is replaced every three years
- Trees are pruned following ANSI standards
- Lawns receive no fertilizer
- Lawns receive minimal or no weed control
- Lawns are kept mowed to a 3.5" to 5.5" range or seasonally
- Lawns are not aerified

### **DESIGN ISSUES THAT AFFECT MAINTENANCE**

- Minimal hand mowing and string trimming exist
- Minimal number of ornamental trees and shrubs
- No perennial or annual beds
- Little to no irrigation, hose bibs on buildings/ well spigots
- No brick paving

**Service Level 3- Area Frequencies**

**LITTER AND DEBRIS CONTROL**

- Litter pick up around Area 2 x per month
- Cigarette butt pick-up 1 x per month
- Building entrances 1 x per week
- Trash receptacles weekly
- Sand and debris removal from walks As needed

**TURF MAINTENANCE**

- Edging walks 1x years
- Sidewalk margin repair As needed
- ENTER PESTICIDE PLAN As directed
- Aeration 1 x per year As directed
- Mowing 1 x per week
- Trail Mowing 1x per month

**TREE MAINTENANCE**

- Pruning inspection 1 x per year
- Insect and Disease inspection 1 x 2 years
- Mulching As directed
- Pre-Emergent As directed

**SHRUB AND GROUND COVER BED MAINTENANCE**

- Prune and shape shrubs once per year
- Edge and mulch beds as needed
- Weeding of beds 1 x per month
- Prune dead branches and remove dead plants as needed if visible or hazard to hikers

**PERENNIAL FLOWER BED MAINTENANCE**

- Weeding 1 x per month
- Edging 1x per year
- Watering, check and water as needed As needed

**SITE FURNITURE AND AMENITIES**

- Tables, benches, litter receptacles inspected 2 x per year
- Post and chain inspected 1 x per year
- Building signs inspected 1x per year

## 7. Task Management

### Litter & Debris Control

#### SERVICE LEVEL 1

- Litter and debris will be picked up a minimum of once per day.
- Cigarette butts will be picked up from pavement and mulch beds twice per week.
- Building entrances, stairways and major gathering spaces will be checked daily and kept free of litter and debris as needed.
- All sidewalks and steps will be cleaned, blown and / or swept after each mowing.
- Litter receptacles and pavement under receptacles will be cleaned and power washed once per year.
- Any debris resulting from storms will be cleaned up immediately following the storm and completed by the day following the occurrence.

#### SERVICE LEVEL 2

- Litter and debris will be picked up a minimum of once per day.
- Cigarette butts will be picked up from pavement and mulch beds a minimum of twice per month.
- Building entrances, stairways and major gathering spaces will be checked two times per week and kept free of litter and debris as needed.
- All sidewalks and steps will be cleaned, blown or swept after each mowing.
- Litter receptacles and pavement under receptacles will be cleaned and power washed once every two years.
- Any debris resulting from storms will be cleaned up as soon as possible following a storm event.

#### SERVICE LEVEL 3

- Litter and debris shall be picked up a minimum of once every two weeks and weekly and major gathering areas.
- Cigarette butts shall be picked up from pavement and mulch beds a minimum of once a month.
- Major gathering spaces will be checked every two weeks and kept free of litter and debris as needed.
- Any debris resulting from storms will be cleaned up as soon as possible.

## Turf

### SERVICE LEVEL 1

- Litter in turf areas will be picked up prior to mowing.
- Mowing shall be set at cutting height of 3 1/2".
- Irrigation shall be used as needed to maintain a weekly application rate
- Edging walks shall be done a minimum of two times per season.
- Aeration shall be done 2x per year in high use area to maintain quality turf.
- Leaf litter may be mulched in place with mowers through the fall as necessary. Leaves will be removed promptly. Leaves will be hauled to the compost pile near South Grounds Shop.
- Grass clippings and mowing debris will be removed from all paved surfaces immediately after each mowing.
- Renovations shall be addressed on an as needed basis to keep turf and walk edges free of bare spots and worn pathways. All sidewalks edges will be top dressed and seeded in the late spring/ early summer.
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### SERVICE LEVEL 2

- Litter in turf areas will be picked up prior to mowing.
- Mowing shall be set at cutting height of 3 1/2".
- Edging walks shall be done a minimum of one time per season.
- Aeration shall be done 1x per year and more frequently in high use area to maintain quality turf.
- Leaf litter may be mulched in place with mowers through throughout the fall as necessary. Leaves will be

removed when their volume / depth is such that it may kill the grass or cause other problems. Leaves will be hauled to the compost pile near South Grounds Shop.

- Renovations shall be addressed on an as needed basis to keep turf and walk edges free of bare spots and worn pathways. All sidewalks edges will be top dressed and seeded in the spring.
- Grass clippings and mowing debris will be removed from all paved surfaces immediately after each mowing.

### SERVICE LEVEL 3

- Litter in turf areas will be picked up prior to mowing.
- Mowing shall be scheduled every week with a target of 3.5-4".
- Edging walks shall be done as needed yearly.
- All fertilizing and herbicide applications will be done only when directed by supervisor.
- Weed control will be utilized only to manage noxious weeds and heavy infestations of invasive weeds.
- Aeration will not be performed in this level unless scheduled to address a significant turf issue.
- Renovations will be addressed on an as needed basis when time allows.
- Leaf litter may be mulched in place with mowers throughout the fall if necessary. Leaves shall be removed in problem areas.
- Walks kept free of grass clipping and debris.

## Tree

### GENERAL TREE MANAGEMENT STANDARDS ARE:

- Tree selection will be based on the 10-20-30 Rule. When possible, there is no more than 10% of one species, 20% of one genus, or 30% of one family comprising the campus forest.
- Tree selection will be referred to the Grounds Services Supervisor, Assistant Director Campus Services, Arborist, and University Architect.
- Tree pruning will vary depending on the Service Level, but in general trees should be pruned to follow ANSI A300 Standards, provide pedestrian and vehicle clearance, and follow the appropriate time of year for Oaks and Elms.
- Pesticide application will follow the Grounds Services Integrated Pest Management guidelines.
- Dead trees will be removed as soon as possible.
- Trees will be installed in Service Level A areas first, followed by Service Level B areas, and then Service Level C areas.
- Watering of newly-installed trees will occur as needed for the first 1-2 years after planting.

### SERVICE LEVEL 1

- Trees will be inspected monthly for pruning needs.
- Trees will be inspected monthly for insect and disease concerns or during the appropriate life cycle of the pest.
- Trees will be mulched every 2 years or as needed.
- Minimum caliper for new tree installations will be 2 inches.

### SERVICE LEVEL 2

- Trees will be inspected twice per year for pruning needs.
- Trees will be inspected once per year for insect and disease concerns.
- Trees will be mulched every 2 years or as needed.

### SERVICE LEVEL 3

- Trees will be inspected once a year for pruning needs.
- Trees will be inspected once per year for insect and disease concerns.
- Trees will be re-mulched as needed.



**Shrub and Ground Cover**

**GENERAL SHRUB AND GROUND COVER STANDARDS ARE:**

Plant selection should minimize the need to shear or prune shrubs and encourage species diversity. At minimum there shall be 30% evergreen to deciduous in the landscape.

Shrub pruning will vary depending on the Service Level but in general shrubs should be pruned:

- Maintain size and shape
- Provided pedestrian clearance
- Provide safe visual exposure of pedestrians at building entrances and other high traffic areas
- Encourage flowering
- Promote safe, healthy plants
- Provide a specific design statement

Hedge plantings shall be trimmed yearly or as needed in accordance with the plant type and growth rate.

Height and form shall be determined by Supervisor of Grounds Services

Ornamental grasses shall be cut off three to six inches above the crown in early spring or late fall.

Groundcover should be managed to promote vigorous growth, minimize weeds and control pests

**SERVICE LEVEL 1**

Formal hedge plantings will be sheared 1x times per season

Shrubs shall be pruned and shaped 1x times per season

Shrub beds will be edged and mulched in the spring, before spring graduation.

All shrub and groundcover beds will be kept free of weeds.

Any plant material that is dead or dying will be removed and area made presentable until new scrubs can be planted.

**SERVICE LEVEL 2**

Shrubs shall be pruned and shaped once per season

Shrub beds shall be edged and mulched once per season

All shrub and groundcover beds will be weeded weekly

Any plant material that is dead or dying shall be removed and replaced as soon as possible.

**SERVICE LEVEL 3**

Shrubs shall be pruned and shaped once every year.

Shrub beds shall be edged and mulched once every two years

All shrub and groundcover beds shall be kept weed free.

Any plant material that is dead or dying shall be removed within several weeks and replaced within the proper planting window if necessary.

## **Annual and Perennial Flower Bed**

Annual flower pots are only placed in Service Levels A & B

Annual flower pots shall be thoroughly prepared to a minimum depth of 8" prior to planting by incorporating decomposed organic matter

Pre-emergent, shall be applied to planting beds in April, July and September

Watering of flowers shall be done regularly and adequately to fit the weather, soil and plant conditions

Insect and disease control shall occur as needed to maintain health plants in all situations

Pruning of herbaceous perennials shall consist of removing previous years top growth in spring or fall prior to any new growth. Beds shall be cleaned and mulched with one inch of chocolate brown processed mulch.

Prune foliage from spring flowering bulbs after wilting

Groundcover should be managed to promote vigorous growth, minimize weeds and control pests

### **SERVICE LEVEL 1**

Annuals will be planted prior to spring graduation

Remove foliage after dieback

Dead heading will be performed on varieties which require it to maximize pots blooming.

Hand weeding of annuals will be done once a week

Edging of annual beds will be done monthly

### **SERVICE LEVEL 2**

Hand weeding of beds in Service Level B areas shall be done every week or as needed

### **SERVICE LEVEL 3**

Minimal low maintenance perennial flower beds may be used in Service Level C areas.

**Site Furniture and Amenities**

It is the responsibility of each area groundskeeper to monitor and inspect the quality and condition of all site furniture and amenities in their assigned area. This includes benches, chairs, tables, litter receptacles, building signs, fences and post & chain barriers, swag fences.

## 8. Maintenance Terms

The following terms are used throughout the management plan and have been defined as follows:

### **HAND WEEDING -**

Mechanical methods will include the complete removal of noxious weeds and other foreign material. Removal will include as much of the root system as possible.

### **CHEMICAL WEEDING -**

Weeding of planting beds, annual beds and perennial beds using chemical methods will include the application of herbicides, both pre and post emergent, to all noxious weeds and other foreign plant material. The Grounds Supervisor will determine the type of chemical control and application rates.

### **WATERING -**

Watering of planting beds, annual beds, and perennial beds will include the regular application of water necessary at a rate determined by the Grounds Supervisor in conjunction with grounds staff.

### **FERTILIZING -**

Fertilizing of planting beds, annual beds, and perennial beds will include the application of fertilizers at a rate determined by the Grounds Supervisor.

### **MULCHING -**

Mulching of planting or perennial beds will include the application of

hardwood mulch at a depth not to exceed 4". Mulch should always be applied at minimum depths and **should not** be allowed to come in contact with the root collar of trees or shrubs. After application mulch is to be smoothed within the beds and edges raked to create a crisp transition between the mulch area and surrounding land uses.

### **TRIMMING HEDGES -**

Trimming hedges includes the shearing of plant material into formal geometric forms.

### **PRUNING -**

Pruning of planting beds will include the removal of broken, diseased or insect damaged branches. It will also include the removal of crossing branches or other branches necessary to promote vigorous and functional growth and form. Removal of double leaders on young trees and pruning at head height and lower of branches on young trees.

### **MONITORING -**

Monitoring planting beds, annual beds and perennial

beds will include inspection of the plants for disease, insect, or other problems, deadheading of spent flowers and stems, removal of dead leaves, and pruning of broken branches.

**CLEANUP OF ANNUAL BEDS -**

Cleanup of annual beds will include the removal of annual plants from previous growing season to make way for annual plants from the current growing season. The removal of bulbs for summer annuals, the removal of summer annuals for fall annuals and the removal of fall annuals for spring bulbs are a few examples.

**PREPARATION OF ANNUAL BEDS -**

Preparation of annual pots will include the amending of soil, tilling, fertilizing or other work necessary to prepare the pot

**PLANTING OF ANNUAL BEDS -**

Planting of annual beds will include the installation of annual plants such as bulbs, summer annuals or fall annuals.

**BLOW / SWEEP PAVEMENT -**

Blowing or sweeping pavement will include the complete removal of dirt, sand or other debris from pedestrian paving surfaces by using power blowers, brooms or both. Debris should be removed from flat surfaces of paving, corners between paving and walls, the tops of walls if visible, from under site furniture, from stair treads and risers and handicap ramps.

## 9. LANDSCAPE SERVICES CALENDAR

### JANUARY

#### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly

#### GROUNDSKEEPER I/II:

- Snow removal, as weather dictates. Check for slippery areas each morning on non-snow days.
- Litter and debris removal.
- Inspect equipment, make sure it is prepared for next snow event.
- Winter Projects List- tree work
- Sign maintenance, site furniture, post and chain inspection

#### ARBORIST:

- Snow removal, as weather dictates. Assist Groundskeeper I/II's on monitoring of slippery areas, as needed.
- Register for Shade Tree Short course held in Ames in February.
- Tree Inventory
- Inspect equipment, make sure it is prepared for next snow event.

#### ATHLETIC FACILITIES ATTENDANT:

- Snow removal as weather dictates
- Assist Groundskeepers I/II's with monitoring slippery areas, as needed
- Assist with athletic indoor turf conversions
- Attend Iowa Turfgrass conference
- Winter Projects List- tree work

#### GREENHOUSE CARETAKER:

- Snow removal, as weather dictates
- Assist Groundskeeper I/II's with monitoring slippery areas, as needed.
- Plan and discuss designs for upcoming planting season with Supervisor and Manager
- Order flowers
- Litter and debris removal.
- Inspect equipment, make sure it is prepared for next snow event.
- Winter Projects List- tree work

#### SUPERVISOR:

- Snow Reports
- Monitor snow melt systems
- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Register for Shade Tree Short Course held in Ames in February
- Monitor progress of Winter Projects List
- Register Groundskeeper I/II's, Arborist, Greenhouse Caretaker for continuing instruction course at Johnson County Extension
- Perform area inspections
- Submit time card

## FEBRUARY

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly

### GROUNDSKEEPER I/II:

- Snow removal, as weather dictates. Check for slippery areas each morning on non-snow days.
- Litter and debris removal.
- Inspect equipment, make sure it is prepared for next snow event.
- Winter Projects List- tree work
- Sign maintenance, site furniture, post and chain inspection

### ARBORIST:

- Snow removal, as weather dictates. Assist Groundskeeper I/II's on monitoring of slippery areas, as needed.
- Attend Shade Tree Short course held in Ames.
- Tree Inventory
- Prepare and prioritize projects for upcoming season
- Inspect equipment, make sure it is prepared for next snow event.

### ATHLETIC FACILITIES ATTENDANT:

- Snow removal as weather dictates
- Assist Groundskeepers I/II's with monitoring slippery areas, as needed
- Assist with athletic indoor turf conversions
- Winter Projects List- tree work
- Prepare and prioritize application

### GREENHOUSE CARETAKER:

- Snow removal, as weather dictates
- Assist Groundskeeper I/II's with monitoring slippery areas, as needed.
- Plan and discuss designs for upcoming planting season with Supervisor and Manager
- Order Pansy flowers
- Litter and debris removal.
- Inspect equipment, make sure it is prepared for next snow event.
- Winter Projects List- tree work

### SUPERVISOR:

- Snow Reports
- Monitor snow melt systems
- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Attend Shade Tree Short Course held in Ames in February
- Monitor progress of Winter Projects List
- Register Groundskeeper I/II's, Arborist, Greenhouse Caretaker for continuing instruction course credits at Iowa State Extension for Category 30T
- Perform area inspections
- Submit time card

## MARCH

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly
- Take Mowers to shop for inspection

### GROUNDSKEEPER I/II:

- Snow removal, as weather dictates. Check for slippery areas each morning on non-snow days.
- Litter and debris removal.
- Winter Projects List- tree work
- Clean up salt from winter snow removal operation
- Repair turf damage from snow removal operation along sidewalk margins
- Cut back ornamental grass foliage
- Attend Continuing Instruction virtually Iowa State extension
- Sign maintenance, site furniture, post and chain inspection

### ARBORIST:

- Snow removal, as weather dictates. Assist Groundskeeper I/II's on monitoring of slippery areas, as needed.
- Prepare and prioritize projects for upcoming season
- Inspect equipment, make sure it is prepared for next snow event.
- Winter project lists- tree work
- Repair turf damage from snow removal operation along sidewalk margins
- Litter and debris removal
- Prepare for Pre-emergent herbicide application next month

### ATHLETIC FACILITIES ATTENDANT:

- Snow removal as weather dictates
- Assist Groundskeepers I/II's with monitoring slippery areas, as needed
- Assist with athletic indoor turf conversions
- Assist with Asphalt patching
- Assist Groundskeeper I/II's with restoring turf damage from winter removal operation
- Aerate turf
- Winter Projects List- tree work
- Prepare and prioritize application

### GREENHOUSE CARETAKER:

- Snow removal, as weather dictates
- Assist Groundskeeper I/II's with monitoring slippery areas, as needed.
- Plan and discuss designs for upcoming planting season with Supervisor and Manager
- Clean up salt from winter snow removal operation
- Repair turf damage from snow removal
- Litter and debris removal.
- Inspect equipment, make sure it is prepared for next snow event.
- Winter Projects List- tree work
- Prepare planting beds

### SUPERVISOR:

- Snow Reports
- Monitor snow melt systems
- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage



## APRIL

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Repair turf damage from snow removal operation along sidewalk margins
- Potential first mow is around April 20<sup>th</sup>
- Overseeding windows is April 15<sup>th</sup> – May 31<sup>st</sup> for majority of projects
- Apply Pre-emergent herbicide
- Sod along selected side walk margins
- Bed Maintenance
- Mulch tree rings
- Sign maintenance, site furniture, post and chain inspection

### ARBORIST:

- Prepare and prioritize projects for upcoming season, begin projects if conditions allow
- Repair turf damage from snow removal operation along sidewalk margins
- Potential first mow is around April 20<sup>th</sup>
- Apply Pre-emergent herbicide
- Mulch tree rings
- Bed maintenance
- Install a tree on Arbor Day
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Charge irrigation systems, coordinate with Supervisor
- Fix any issues with irrigation systems
- Set up programming for irrigation software
- Assist with athletic indoor turf conversions
- Average first mow is April 20<sup>th</sup>
- Apply Pre-emergent herbicide
- Overseeding window is April 15<sup>th</sup>- May 31<sup>st</sup> for majority of projects
- Connect with athletic staff on schedules

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Average first mow is April 20<sup>th</sup>
- Apply Pre-emergent herbicide
- Prepare planting beds, get planters prepared
- Mulch tree rings
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Area inspections

## MAY

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Mow turf
- Overseeding window is April 15<sup>th</sup> – May 31<sup>st</sup> for majority of projects
- Sod along selected side walk margins
- Spray broadleaf herbicide third week in May
- Bed Maintenance
- Mulch tree rings
- Trim back deciduous shrubs as necessary after the blooming period,
- Sign maintenance, site furniture, post and chain inspection

### ARBORIST:

- Perform tree pruning, trimming
- Litter and debris removal
- Repair turf damage from snow removal operation along sidewalk margins
- Mow turf
- Mulch tree rings
- Bed maintenance
- Install a tree on Arbor Day
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Litter and debris removal

- Conduct irrigation maintenance schedule
- Mow
- Set up programming for irrigation software
- Assist with athletic indoor turf conversions
- Overseeding window is April 15<sup>th</sup>- May 31<sup>st</sup> for majority of projects
- Connect with athletic staff on schedules

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Mow turf
- Plant annuals in flower pots
- Place flower pots on campus
- Sod along selected sidewalk margins
- Mulch tree rings
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Prep for spraying third week of May
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Check with Steve Choplin if assistance is needed for Move In/ Out
- Area inspections

## JUNE

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly
- Asphalt Patching

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Mow turf
- Bed Maintenance
- Mulch tree rings
- Sign maintenance, site furniture, post and chain inspection

### ARBORIST:

- Perform tree pruning, trimming
- Litter and debris removal
- Mow turf
- Mulch tree rings
- Bed maintenance
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Litter and debris removal
- Conduct irrigation maintenance schedule

- Mow
- Assist with athletic indoor turf conversions
- Connect with athletic staff on schedules

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Mow turf
- Monitor seasonal color beds/ annual flowers
- Mulch tree rings
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Area inspections

## JULY

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Mow turf
- Bed Maintenance
- Mulch tree rings
- Sign maintenance, site furniture, post and chain inspection
- Edge sidewalks

### ARBORIST:

- Perform tree pruning, trimming
- Litter and debris removal
- Mow turf
- Edge sidewalks
- Mulch tree rings
- Bed maintenance
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Litter and debris removal
- Conduct irrigation maintenance schedule

- Mow
- Assist with athletic indoor turf conversions
- Connect with athletic staff on schedules

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Mow turf
- Edge sidewalks
- Monitor seasonal color beds/ annual flowers
- Order fall flowers July 1st
- Mulch tree rings
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Area inspections

## AUGUST

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Mow turf
- Bed Maintenance
- Mulch tree rings
- Sign maintenance, site furniture, post and chain inspection
- Prune hedges
- Overseeding window is August 15<sup>th</sup>-September 30<sup>th</sup> for majority of projects

### ARBORIST:

- Perform tree pruning, trimming
- Litter and debris removal
- Mow turf
- Edge sidewalks
- Mulch tree rings
- Bed maintenance
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Litter and debris removal
- Conduct irrigation maintenance schedule
- Mow

- Assist with athletic indoor turf conversions
- Overseeding window is August 15<sup>th</sup>-September 30<sup>th</sup> for majority of projects
- Connect with athletic staff on schedules

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Mow turf
- Monitor seasonal color beds/ annual flowers
- Mulch tree rings
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Contact Steve Choplin for Move in/out assistance
- Call T&W Grinding to schedule fall grind
- Area inspections

## SEPTEMBER

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly
- Leaf Removal
- Urea Application
- Aerate turf in Level A areas

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Mow turf
- Bed Maintenance
- Mulch tree rings
- Sign maintenance, site furniture, post and chain inspection
- Overseeding window is August 15<sup>th</sup>-September 30<sup>th</sup> for majority of projects

### ARBORIST:

- Perform tree pruning, trimming
- Litter and debris removal
- Mow turf
- Mulch tree rings
- Bed maintenance
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Litter and debris removal

- Conduct irrigation maintenance schedule
- Mow
- Assist with athletic indoor turf conversions
- Overseeding window is August 15<sup>th</sup>-September 30<sup>th</sup> for majority of projects
- Connect with athletic staff on schedules

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Mow turf
- Monitor seasonal color beds/ annual flowers
- Mulch tree rings
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Area inspections

## OCTOBER

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly
- Take all snow removal in for inspection
- Leaf Removal

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Mow turf and fallen leaves
- Bed Maintenance
- Sign maintenance, site furniture, post and chain inspection
- Apply second application of gypsum to sidewalk margins to counteract salt from Winter operations

### ARBORIST:

- Perform tree pruning, trimming
- Litter and debris removal
- Mow turf and fallen leaves
- Bed maintenance
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Litter and debris removal
- Conduct irrigation maintenance schedule
- Irrigation shut off October 15<sup>th</sup>, lines blown out
- Mow
- Assist with athletic indoor turf conversions

- Overseeding window is August 15<sup>th</sup>-September 30<sup>th</sup> for majority of projects
- Connect with athletic staff on schedules

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Mow turf and fallen leaves
- Monitor seasonal color beds/ annual flowers
- Install Mums in selected areas
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Work with Plumbing Shop on plans for winterizing irrigation lines
- Haul Adirondack chairs to storage 3<sup>rd</sup> week.
- Discuss snow operations for the upcoming season
- Performance appraisals
- Area inspections

## NOVEMBER

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly
- Leaf Removal

### GROUNDSKEEPER I/II:

- Litter and debris removal.
- Mow turf and fallen leaves
- Bed Maintenance
- Sign maintenance, site furniture, post and chain inspection

### ARBORIST:

- Perform tree pruning, trimming
- Litter and debris removal
- Mow turf
- Bed maintenance
- Litter and debris removal

### ATHLETIC FACILITIES ATTENDANT:

- Litter and debris removal
- Conduct irrigation maintenance schedule

- Irrigation shut off October 15<sup>th</sup>, lines blown out
- Mow
- Assist with athletic indoor turf conversions

### GREENHOUSE CARETAKER:

- Litter and debris removal.
- Mow turf
- Remove annual planters
- Monitor Mums
- Bed maintenance

### SUPERVISOR:

- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Area inspection



## DECEMBER

### ALL STAFF:

- Monitor Compliance Training requirements
- Clean Vehicles Weekly

### GROUNDSKEEPER I/II:

- Snow removal, as weather dictates. Check for slippery areas each morning on non-snow days.
- Litter and debris removal.
- Inspect equipment, make sure it is prepared for next snow event.
- Winter Projects List- tree work
- Sign maintenance, site furniture, post and chain inspection

### ARBORIST:

- Snow removal, as weather dictates. Assist Groundskeeper I/II's on monitoring of slippery areas, as needed.
- Register for Shade Tree Short course held in Ames in February.
- Tree Inventory
- Inspect equipment, make sure it is prepared for next snow event.

### ATHLETIC FACILITIES ATTENDANT:

- Snow removal as weather dictates
- Assist Groundskeepers I/II's with monitoring slippery areas, as needed
- Assist with athletic indoor turf conversions
- Attend Iowa Turfgrass conference
- Winter Projects List- tree work

### GREENHOUSE CARETAKER:

- Snow removal, as weather dictates
- Assist Groundskeeper I/II's with monitoring slippery areas, as needed.

- Plan and discuss designs for upcoming planting season with Supervisor and Manager
- Order flowers
- Litter and debris removal.
- Inspect equipment, make sure it is prepared for next snow event.
- Winter Projects List- tree work

### SUPERVISOR:

- Snow Reports
- Monitor snow melt systems
- Planning and scheduling
- Monitor compliance training requirements for self and staff
- FAMIS360- Approve time entries, assign new work requests, close completed work requests
- Track warehouse stock data entry, equipment usage
- Performance appraisals
- Register for Shade Tree Short Course held in Ames in February
- Monitor progress of Winter Projects List
- Register Groundskeeper I/II's, Arborist, Greenhouse Caretaker for continuing instruction course at Johnson County Extension
- Perform area inspections  
Submit time card

10.

## **10. Snow and Ice Removal**

The winter maintenance of all building entrances, steps, sidewalks, loading docks, parking lots, service drives and institutional roads under the control of the University of Northern Iowa-Facilities Management is the responsibility of Grounds Services. Our goal is to removal snow and ice from traveled surfaces to provide safe pedestrian and vehicular traffic. Accumulations of snow and ice will be removed as expeditiously as practical during and after storms within the parameters dictated by weather conditions, available staffing resources, equipment resources and budget constraints.

During normal working hours (7:00 am to 4:30 pm Monday – Friday), snow and ice treatment will be initiated by the Grounds Services Supervisor or Assistant Director Campus Services. It is our policy to respond to all snow and ice occurrences.

Outside of normal working hours, including weekends and holidays, snow calls will be initiated by UNI Department of Public Safety as conditions require. Grounds Services personnel may also be monitoring the weather situation and begin the call- in process.

Regardless of who makes the request for snow/ ice removal, Public Safety or Grounds Services, snow plow drivers for campus are to be contacted first. The Grounds Services Supervisor will assess the conditions and call-in personnel as needed.

Call-ins for snow and ice removal can occur any time conditions warrant but if the snow or ice has already fallen, or if the storm is in progress, reporting times for staff can vary. In general, staff should be out on their routes by 4:00 am at the latest. We acknowledge that we will have to return to areas later in the day to do a more thorough job, or to clean up snow/ ice accumulations that could constitute a safety hazard for evening pedestrian / vehicular traffic. Custodial Services will salt campus as needed during the evening hours.

The Grounds Supervisor or Assistant Director Campus Services will distribute an updated call-in sheet to public safety prior to the snow season each year.

Streets and service drives will be plowed and treated with salt.

Sidewalks will be plowed and/ or broomed and treated with salt.

Building entrances and steps will be shoveled and treated with ice-melt. The university contracts out the removal of snow if accumulation is over 1” or falls on the weekend. The Grounds Services Supervisor or Assistant Director Campus Services will call-in Step Contractors.

Supervisors will provide information and instructions to personnel for areas that require specific practices or procedures that differ from normal service provided. Special requests and emergency service calls will be communicated to employees in the field by use of cell phones.

## **11. Integrated Pest Management Statement**

Pest control will involve utilizing Integrated pest Management (IPM) principles to control insect, disease, and weed pests. Pesticides will only be used when a determination has been made that all other options to control the target pest have been ineffective or cannot be used. A definition of IPM is as follows:

“Integrated Pest Management is both a concept and a philosophy. It is broad, multi-disciplinary, systemic approach to controlling pests. All types of control methods (biological, cultural, regulatory, physical, and chemical) are utilized. Use of IPM strategies should result in effective and economical suppression of pests with a minimum of effect on non-target organisms and the environment. IPM is based on understanding the plants to be protected and the pests to be controlled.

The IPM program will follow six basic principles:

- 1) Identify the pest to be managed – not all pests need to be controlled.
- 2) Define the management area- pest management will vary with campus area and pests.
- 3) Establish monitoring techniques- a wide variety of methods, from trapping to degree-days, may be employed.
- 4) Establish thresholds of tolerance- typically damage thresholds will predominate. However, economic and esthetic thresholds may be considered.
- 5) Develop a prediction model for each target pest.
- 6) Develop a pest management plans and schedule for each target pests.

Label directions, safety, guidelines, and proper record keeping will be followed during pesticide application.

## **12. Tree Management**

The selection of tree species and planting will be done collaboratively among the Assistant Director, Campus Services, Supervisor, Grounds Services, and campus arborists.

### **INSTALLATION**

The selection of tree species and planting will be done collaboratively among the Assistant Director, Campus Services, Supervisor, Grounds Services, and campus arborists. Trees will be installed in the following order: Service level 1, 2, 3.

### **PRUNING, MONITORING, AND REMOVAL CONSIDERATIONS**

- Pruning practices shall follow the American National Standards (ANSI) A300 standards. General pruning of Oaks and Elms shall be done between the months of November through March to minimize the spread of Oak Wilt and Dutch Elm diseases.
- Pruning priorities for clearance, removal of dead wood, structural, and esthetic reasons will follow. Clearance over sidewalks shall be 8 feet, and clearance over streets shall be 14 feet for medium to mature-sized trees.

### **WATERING**

Watering of newly- installed trees shall occur as needed for two years after planting. This applies to Level 1, 2, 3.

### **STAKING**

Staking is generally not recommended. If staking is required to stabilize newly-installed tree, three posts shall be placed uniformly around the tree with the connecting wire attached to a strap that won't harm the cambium. The stakes shall remain for one year or until the tree is stable enough to remain upright on its own.

### **MULCHING**

All trees growing in the maintained portion of campus shall have a mulch ring with a minimum radius of three feet. The purposes are to protect the tree trunks from mower and string-trimming damage. In addition to protecting the trunk, mulch protects the tree roots by retaining moisture and lowering soil temperatures.

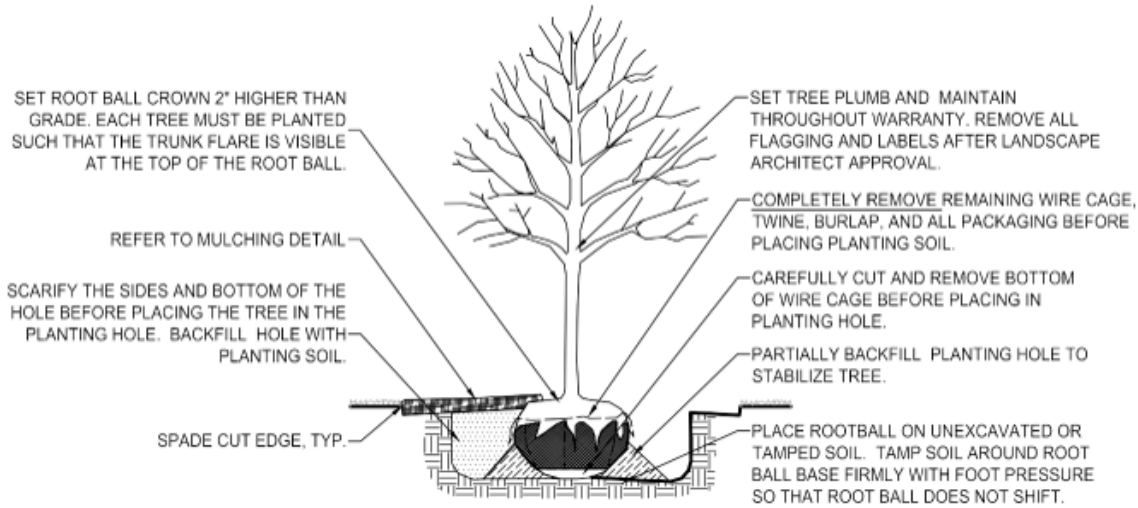
### **PROTECTION AND PRESERVATION**

Trees identified during design phase will be projected with appropriate fencing.

**PROHIBITED PRACTICES**

Prohibited practices include topping and flush cut pruning. Pruning Oaks and Elms during the months of April through October is prohibited.

**TREE PLANTING DIAGRAM**



**MULCHING DIAGRAM**

