



Memo

Department of Planning & Housing

Caring People

Quality Programs

TO: Planning & Zoning Commission

FROM: Justin Moore, Assistant Planner

DATE: September 7, 2016

SUBJECT: Landscape Ordinance Update

Attached please find a power point presentation for your review as well as a draft proposal of a landscape scoring system. This presentation and related material will be discussed at the September 7th Planning & Zoning Commission meeting.

Please contact me at extension 239-5269 if you have any questions regarding this agenda item.

Jm

Attachment

City of Ames: Landscape Ordinance – Ranking System (Draft Proposal)

1. Pre Design Site Assessment: (Pre-Requisite)

- Storm Water Analysis of pre-developed site.
 - o Discharge points
 - o Swale locations
 - o Existing wetlands
 - o Calculate pre-development runoff
- Document existing topsoil depths
- Documentation of existing ‘trees of significance’

2. Project Design:

- Developer agrees to submit written and photographic verification that they completed the tasks agrees upon prior to construction. (Pre-requisite)
- It is understood that designers will use best planting and design practices. Plant spacing to allow for growth, mulch additional areas as necessary to minimize maintenance, eliminate the use of nuisance and invasive species, etc.
- Developer agrees that all plant sizes must adhere to the following size restrictions. (Pre-requisite)
 - o Overstory Trees – Min. 2” Caliper, Max. 3.5” Caliper
 - o Understory Trees – Minimum 1.5” Caliper, Max. 2.5” Caliper
 - o Evergreen Trees – Min. 6’ Height
 - o Shrubs – Minimum three (3) Gallon
 - o Ornamental Grasses – Minimum one (1) Gallon
 - o Prairie Plantings – Must use at least three (3), but no more than five (5) varieties of native short grass prairie species. Must reach a minimum 3 feet in height. Can be combined with similar height native wildflowers, but is limited to 10 species per development. ‘Small sites’ only required to provide 2 types of prairie plantings
 - o Pollinator Species Planting – Must use the US Governments’ required species mix for the Conservation Reserve Program - (CP42)
 - o Commercial uses abutting a residential or industrial use must provide a combination of grasses, high shrubs and trees to screen. Evergreen trees required when abutting residential. Fencing can be no higher than 8 feet
 - o Industrial uses abutting a residential or commercial use must provide a combination of grasses, high shrubs and trees to screen. Evergreen trees required when abutting residential. Fencing can be no higher than 8 feet
 - o Apartment Building foundation plantings required utilizing a tree with shrub and/or grass mixture
 - o Identify which landscape ordinance criteria are being used on site plan and total generated points
 - o Parking Lots adjacent to residential zones require minimum 5 foot landscape screening area
 - o Minimum Landscaping/Open Space requirement by percentage of lot area in commercial and industrial zones. FS-RM, V-R, RM, RH require 5% of lot area as usable open in addition to required landscape and yard areas.
*(Note that Open Space and Landscaped area terminology may include storm water treatment facilities, Usable Open Space would likely not allow for storm water facilities to meet its definition)
 - o ‘Large Site’ is defined as being at or over 25,000 square feet. ‘Small site’ is defined as being under 25,000 square feet
 - o Rock mulch is prohibited in required landscape areas
 - o Reconstruction of existing sites must include a functional equivalent replacement of existing landscaping with regard to diversity, totals, etc.
- **Soil Management Plan** (minimum score - 8 points all size sites) (Self Certification of soil prep by contractor required)
 - o Stockpile topsoil on site 1
 - o Verify removal all construction debris 1
 - o Verify removal of excess gravel in planting areas 1
 - o Protect Drip Line of all existing trees of significance 1
 - o Rip sub-surface to 8” depth, prior to re-spread of topsoil 2
 - o Restore topsoil to recorded pre-development depth 4
 - o Replace the topsoil to a minimum 6” depth (submittal of soils test required) 2
 - o Till the soil to a minimum 8” Depth 3
 - o Soil must have minimum organic makeup in the top 8”
 - 3% organic makeup in the top 8” 1
 - 5% organic makeup in the top 8” 3
- **Environmental Design** (minimum score - 8 points)(Small sites- minimum score 6 points)
 - o Provide no more than 10% additional parking than necessary beyond base requirements (*Shopping Centers not to exceed 5 per 1000*)
 - o Develop a storm water management plan (Pre-Requisite)

<ul style="list-style-type: none"> ▪ Minimize hard surface parking lot area (In addition to the required Storm Water Management Plan) <ul style="list-style-type: none"> • Maximize green space (over 25% of the site) Outside of Floodway 2 • Parking Islands at the end of all parking rows 1 • No more than 10 continuous parking stalls in any row (7 X16 islands.) 1 ▪ Install Bio-retention to manage water quality and quantity 3 (In areas where Bio-retention are proposed, landscape requirements will be waved.) ▪ Reduce and/or eliminate the use of storm water intakes and piping. 2 (Encourage designers to use overland flow) (Narrative required) <ul style="list-style-type: none"> • Elimination of piping 2 ▪ Design and construct a Green Roof 1 	
<ul style="list-style-type: none"> ○ Heat Island Effect <ul style="list-style-type: none"> ▪ Islands not designated as bio-swales: plant a minimum of 1 Overstory tree in each. 3 ▪ Parking Lot Shading <ul style="list-style-type: none"> 35% within 15 years 2 50% within 15 years 4 	
<p>Front Yard Landscaping & Parking Lot Screening (minimum score - 10 points) (Small sites- 8 points) <i>*See amenity option requirements for possible reduction in requirements.</i></p> <ul style="list-style-type: none"> ○ Diversity of genus (No more than 25% of any genus of plant) 2 ○ Leave a 3'-0" zone of planter area with no plantings directly in front of all parking stalls 1 ○ Provide 1 Overstory tree for every 50LF of street frontage in front setback (See note A) 1 ○ Provide 2 Understory trees for every 50LF of street frontage in front setback (See note A) 1 ○ 9 shrubs per 50 LF of drive isle outside of parking lot areas. 1 ○ Provide 9 shrubs, for every 100 LF of front setback street frontage 2 (See note A) ○ Provide 20 ornamental grasses for every 50LF of frontage in front setback (See note A) 1 ○ Use of clustered thoughtful plantings (layering of colors and textures with variety of plants) 4 ○ Provide grasses or shrubs with Bio-Swale in required landscape areas between parking and ROW 3 ○ Provide minimum 10 foot screening area adjacent to residential uses utilizing the criteria listed above. 2 ○ Parking separation from lot line with minimum 10 ft. wide planting area (excluding alleys) 2 ○ Provide landscape berming between the parking area and the street 2 (Must be a minimum of 30" high and cover 75% of parking lot frontage.) OR ○ Provide landscape berming between the parking area and the street 3 (Must be a minimum of 30" high and cover 95% of parking lot frontage.) 	
<p>Planting Design (minimum score - 8 points)(Small sites- 4 points)</p> <ul style="list-style-type: none"> ○ Diversity of genus (No more than 25% of any genus of plant in all categories of plantings) 2 ○ Provide .2 Overstory tree for every 1000SF of Open Space 1 ○ Provide .4 Understory trees for every 1000SF of Open Space 1 ○ Provide 6 shrubs for every 1000SF of Open Space 1 ○ Provide 10 ornamental grasses for every 1000SF of Open Space 1 ○ Provide 10 shrubs or 3 grasses per 50 LF of building foundation 1 ○ Undulating large open space 1 ○ Provide added visual interest to the open spaces with the creation of berms and hills. (large sites) 2 (Must be a significant impact on the site to be considered.) Additional submittals will be required. ○ Incorporate existing significant vegetation (Trees must be at least 12 inches in diameter) <ul style="list-style-type: none"> ▪ 50% of existing vegetation 2 ▪ Planning may authorize for high value wetland, riparian and native areas 2 ○ Use of clustered thoughtful plantings that include ornamental grasses, shrubs and over story trees 2 ○ Designer Choice: Thoughtful planting plan that generally meets the intent of the items listed 8 above, but goes beyond the basic requirements. It would include signature green spaces, outdoor gardens, rain gardens, seating areas, etc. Note- All items listed above need to be incorporated in some capacity to achieve this (See Note D) (Developments with more than Four (4) Acres of open space will want to use this method as it will likely decrease the number of required plantings) <ul style="list-style-type: none"> • 15% of open area must contain either an outdoor garden or rain garden • At least 2 seating areas required in front or side yards • Must provide a summary of vegetation and its significance to the planting plan • Must contain at least 2 signature green spaces 	

- Must be designed and certified by a professional landscape architect

- **Groundcover** (minimum score - 10 points)(Small sites- 7 points)
 - o No turf/lawn in areas less than 5-0' in width. 1
 - o Eco-lawn mixture 1
 - o Use of hardwood Mulch beneath all trees, shrubs and decorative grasses 2
 - o Clustering of shrubs and grasses so that maintenance can operate around them easily 2
 - o 6' diameter mulch bed around all Overstory Trees, 4' on Understory 1
 - o Turf Grass / Lawn to cover less than 50% of the Open Space provided 2
 - OR
 - o Turf Grass / Lawn to cover less than 25% of the Open Space provided 3
 - o Combination of Shortgrass Prairie grasses and ornamental grasses to cover 60% or more of the open space provided 4
 - OR
 - o Use of Shortgrass Prairie grasses to cover 25% of the open space provided 1
 - o Addition of plantings to attract pollinator species in select areas 3
- **Site Amenities "Bonus Category"** (*no required minimum score*) If 8 points are accomplished:
 - o Provide a public hardscape plaza (minimum of 200SF) 2
 - o Provide public seating opportunities (Bench or Cut Stone) (1 point for every 3 benches) (2 pt Max) 2
 - o Irrigation installed in required landscape areas 1
 - o Use of an alternate paving material for 80% of the designated plaza space (DG pavers, stamped concrete, etc.) 2
 - o Incorporation of publically visible Art Piece (must be approved by City Staff) 2
 - o Addition of Publicly accessible bike parking 2
 - o Use of Decorative pedestrian scale lighting (Must be in addition to standard parking lot lighting) 2
 - o Recreational or private amenity 2
 - o Perennial flower beds 1
 - o Edible Landscaping 1

- *“A” The intent of the 100/50LF designation is that it creates a unit of measure that can be repeated and averaged. The City of Ames encourages the use of a combination of plantings to meet the requirements.*
 - *Example: A site with 1000LF of frontage could meet the requirements by:*
 - *Diversity, 3’ Zone, Clustered Plantings, 10 Overstory trees, 60 Shrubs, and 200 Ornamental Grasses*
 - *Diversity, 3’ Zone, Clustered Plantings, 20 Understory trees, 60 Shrubs, and 200 Ornamental Grasses*
 - *Diversity, 3’ Zone, Clustered Plantings, 10 Overstory trees, 20 Understory Trees, and 60 Shrubs*
- *“B” The intent of this portion of the plantings is to provide the developer and their consultants the necessary flexibility, to be creative with the design of these spaces. The City does not want trees placed on 50’ centers, shrubs in a line, or random single ornamental grasses. These points will be rewarded to those that do not create repetitive planting zones, create planting clusters of appropriate species, and generally make an effort to design the space provided.*
- *“C” The intent of the 1000SF designation is that it creates a unit of measure that can be repeated and averaged. The City of Ames encourages the use of a combination of plantings to meet the requirements by:*
 - *Example: A site with 80,000SF of open space:*
 - *Diversity, Clustered Plantings, 16 Overstory trees, 480 Shrubs, and 800 Ornamental Grasses*
 - *Diversity, Clustered Plantings, 32 Understory trees, 480 Shrubs, and 800 Ornamental Grasses*
 - *Diversity, Clustered Plantings, 16 Overstory trees, 32 Understory Trees, and 480 Shrubs*
 - *Diversity, and Designer Choice*
 - *Example: B site with 8,000SF of open space:*
 - *Diversity, Clustered Plantings, 2 Overstory trees, 48 Shrubs, and 80 Ornamental Grasses*
 - *Diversity, Clustered Plantings, 4 Understory trees, 48 Shrubs, and 80 Ornamental Grasses*
 - *Diversity, Clustered Plantings, 2 Overstory trees, 4 Understory Trees, and 48 Shrubs*
 - *Diversity, and Designer Choice*
 - *Example: C site with 200,000SF of open space:*
 - *Diversity, Clustered Plantings, 40 Overstory trees, 1200 Shrubs, and 2000 Ornamental Grasses*
 - *Diversity, Clustered Plantings, 80 Understory trees, 1200 Shrubs, and 2000 Ornamental Grasses*
 - *Diversity, Clustered Plantings, 40 Overstory trees, 80 Understory Trees, and 1200 Shrubs*
 - *Diversity, and Designer Choice*
- *“D” This item will require additional submittal and documentation than the previous items, but will allow for design flexibility. Plantings plans, perspectives, and details will be required during submittal to get these points approved.*



Ames Landscape Ordinance Overview

Planning & Zoning Commission 9/7/16

Landscape Ordinance Overview

- Review landscape ordinance update scope
- Provide overview of the intent for new landscaping standards
- Discuss current scoring system draft

Landscape Ordinance Update

- **September/November 2011 Council Referral**
 - Review landscaping objectives and performance
 - Incorporate storm water measures
 - Consider changes to planting requirements and locations
 - Review plant list for suitability to Ames
 - Establish a work group to review landscaping issues
- **Council Goal 2014/15 and Planning Work Plan**
 - Explore options for parking standards that improve storm water management

Landscape Ordinance Update

- Current Ames Landscape Standards:

- Very prescriptive
 - Based on linear footage and screening of parking
 - Little or no flexibility to deal with unique conditions
- Varied planting requirements for specific areas.
 - Urban application – campustown & downtown
 - Lacks sustainability language
 - Rain Gardens, Natives, Green Initiatives
- No planter area soil quality or compaction requirements

- However, after comparing to other cities, Ames requirements are not onerous in their area or planting requirements

Landscape Ordinance Update

- City Hired Landscape Architecture and Planning Consultant (Confluence) January 2016
- Introductory workshop and outreach January 28th
 - Attended by developers, property management, landscape designers, civil engineers
 - Reviewed scope of update and discussion of key interests and improvements to landscape standards (why landscaping, plant survival, rigid requirements, uninteresting, maintenance, side property line plant areas)
- Consensus that current requirements were not meeting most peoples' interests!
 - Rigid requirements, no interest or variety, landscaping doesn't succeed,
 - Something can be done to improve the process and standards
- 2nd Workshop on March 30th
 - Review flexibility vs. predictability
 - Initial thoughts from staff on options for new standards, framework for standards

Landscape Ordinance Update

- **City Council April update**
 - Staff presented three options for a new landscape ordinance framework
 - Identified the site inspection process may be revised as well
 - City Council directed staff to move forward with developing a scoring system based on a variety of “points” to create flexibility for sites
- **3rd Workshop on May 25th**
 - Staff presented a draft scoring system to the workgroup
 - Workgroup members provided feedback and suggestions for the scoring system.
 - Staff heard concerns about predictability, potential for additional cost, could there be an alternative option for developers, questions on minimum categorical points and total project points.
- **City Council workshop on August 16th for draft scoring system**
 - Staff presented a detail overview of the draft system and findings from case studies
 - City Council directed staff to meet with the workgroup to address implementation concerns.

Landscape Ordinance Update

- **Current Basic Landscape Standards include:**
 - Current standards based upon perimeter parking lot screening (L1,L2, L3 Options)
 - Requires planter islands for double loaded parking aisles (every 20 spaces)
 - Large parking lots require a 15-foot median (1 for every 3 double loaded aisles)
 - Require Apartment foundation plantings along streets

Landscape Ordinance Update

- A new ordinance will address improvements in
 - Screening vs Design
 - Diversity in the Landscape
 - Sustainability
 - Installation / Soils / Maintenance
- Draft scoring system includes categories
 - Soils
 - Environmental Design
 - Front yard and parking landscaping
 - Planting Design
 - Groundcover
 - Bonus/amenities

L1 Landscape Standards

- The City's existing landscape standards are arranged in 3 separate primary categories ranging in design status from L1 through L3.
- L1 is based upon use of space for separation
 - Minimum 10 foot planter areas
 - Require trees every 50 feet
 - Shrubs based upon formula for area or street frontage
 - Allows for some grouping of plantings



L2 Landscape Standards

- L2 relies upon dense planting of low growth screening and trees
 - Minimum of 5 foot wide planters
 - Shrubs every 4 feet on center
 - Trees planted every 50 feet



L3 Landscape Standards

- L3 is a high screen requirement of 6-foot shrubs and trees
- Required as transition area between residential and parking lots
- 6-foot high screen with 6 feet on center and trees every 50 lineal feet (may substitute a 6-foot fence)
- Minimum width is 5 feet for planter



Screening vs Design



Screening vs Design



Screening vs Design



LEFT- Diversity of plantings, minimizing turf

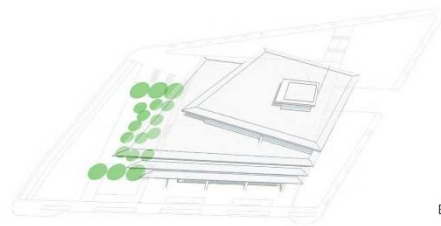


RIGHT- Foundation planting, flowers, grasses, trees, shrubs

Parking Lot Planting – (Interior)



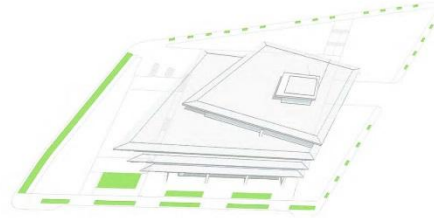
Diversity in the Landscape



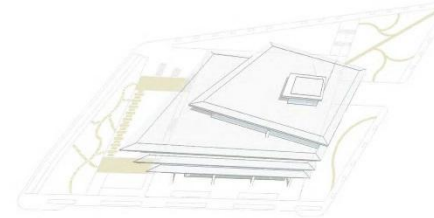
White Birch Grove



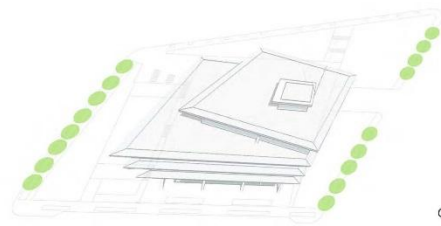
Betula papyrifera



Perennial Mix



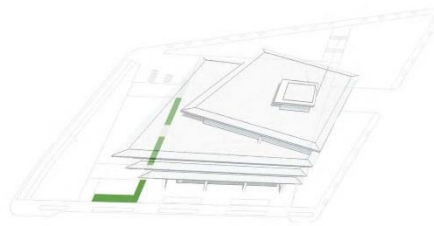
Decomposed Aggregate



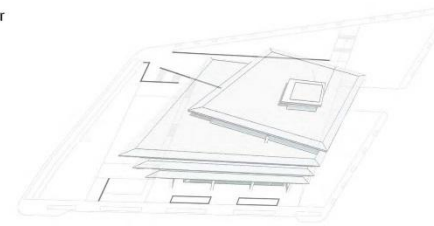
Ginkgo Streetscape



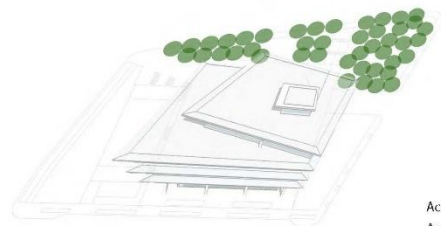
Ginkgo biloba 'Princeton Sentry'



Pachysandra Groundcover



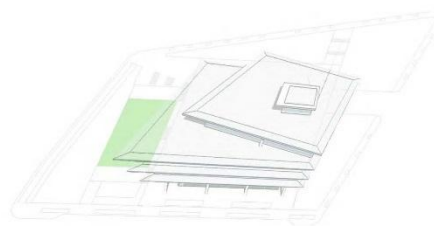
Architectural Finish
Concrete Wall



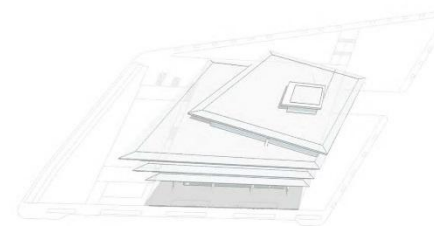
Maple Woodland



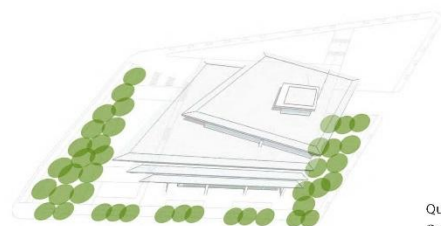
Acer rubrum
Acer saccharum
Acer nigrum



Lawn



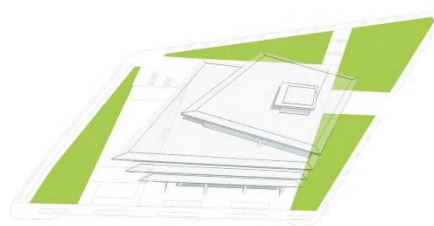
Belpasso® Pavers by Unilock



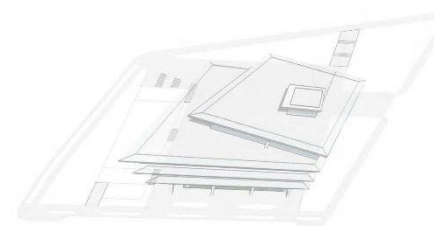
Oak Forest



Quercus alba
Quercus macrocarpa
Quercus rubra



Urban Savanna



Concrete



Sustainability



Sustainability



Natives



Installation, Soils, and Maintenance

Compaction



Quality



Installation, Soils, and Maintenance

2010



2015



CHILDREN'S ART MUSEUM, ABERDEEN, SD

Maintenance, Pruning, Time



Scoring System

- Basic requirements are part of pre-requisites
- Scoring system includes six(6) separate categories
 - 5 Mandatory categories
 - Soils
 - Environmental Design
 - Front Yard and Parking Landscaping
 - Planting Design
 - Groundcover
 - 1 Optional/Bonus category
- Developers would need to achieve a minimum score per mandatory category and an overall point total.
 - Total points would exceed the combined minimum points of the five (5) categories.
 - Differentiates point totals between large and small sites (< 0.5 acres)
- Large site approval requires a total of 50 points
- Small site approval requires a total of 33 points

Scoring System findings

- **Staff reviewed already built L1 and L2 sites across Ames**

- Current standards focused on parking lot screening and islands
- Reviewed small commercial, office/industrial, apartments, large retail sites
- No changes to required landscape or open space requirements of base zoning
- No changes to parking requirements
- Use approved plans or reviewed from aerial photos

- **Existing sites ranged from 16 to 36 points (assuming soil management points)**

- Focused on meeting parking lot screening requirements
- Very few sites had diversity of plantings
- Most sites do not have landscape based storm water treatment
- Lack of design in layout and integration of planting variety
- Principally rely upon grass turf for open space areas

Scoring System findings

• **With developer assistance, staff reviewed three recently approved projects to see the differences and what changes would enhance scoring:**

- Bell Warehouse General Industrial (could achieve 42 points)
- Walnut Ridge Mixed Use 3505 Lincoln Way (could achieve 52 points)
- Mortenson Heights Apartments/Crane Farm (could achieve 52 points)
- Findings: adding diversity not difficult; some site constraints will limit use of certain points; easier with initial integration; industrial loading areas difficult to address, substantial increase in planting requirements in large open spaces of apartments & industrial, soil management verification is needed.

• **Staff generated mocked up a large industrial site and small commercial site for comparison of L1 and L2 versus points based approach:**

- System creates flexibility, but requires integration at the beginning of a project
- Less parking lot plantings will be required vs. L2, but more variety required
- L1 similar for parking lot requirements, but does not require overall site design

Scoring System findings



Industrial 8-acre Office Example
L1 Site Plan to the right

Industrial 8-acre Office Example
Scoring System to the left

