



**ILLINOIS STATE  
UNIVERSITY**  
*Illinois' first public university.*



# Effective & Innovative Grounds Practices

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Grounds Department

**2020 ILAPPA CONFERENCE**

March 11 & 12, 2020  
Illinois State University





## Facts

### Employees

- (1) Assistant Superintendent of Grounds
- (1) Foreman
- (20) Full-Time Employees
- (6) 900hr Snowbirds
- (5) Student Workers

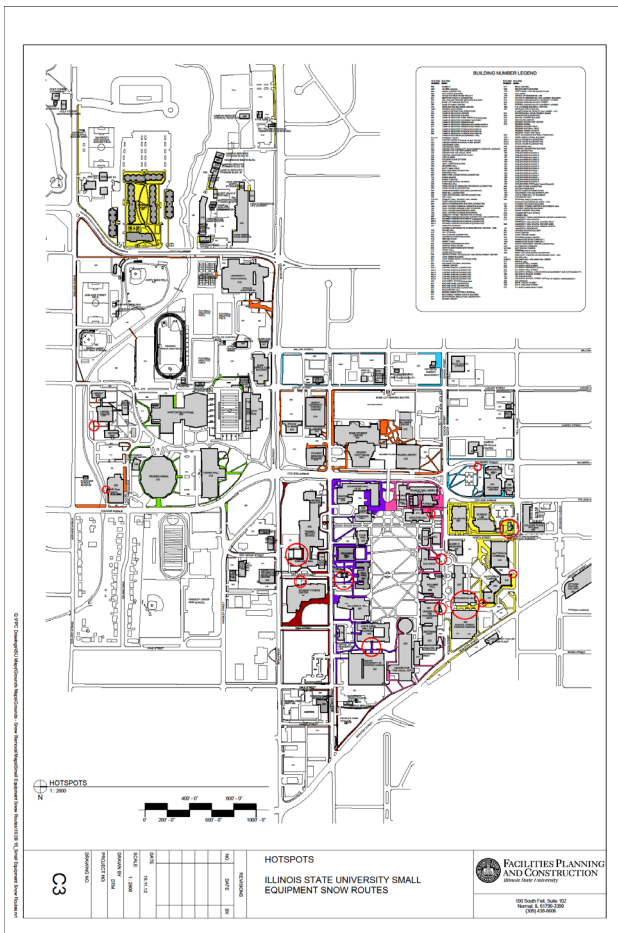
### Grounds Maintenance

- 35 Miles of Sidewalks
- 97 Acres of Parking Lots, including (3) Parking Structures
- 2000 Stairs

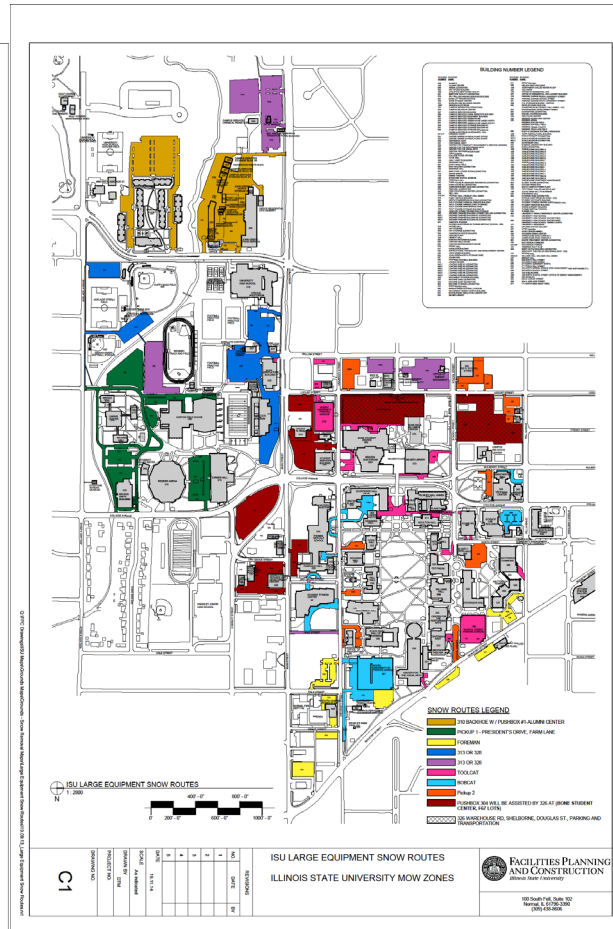
## Grounds Equipment

- (2) Pushboxes
- (1) Bobcat, (1) Toolcat equipped with liquid unit
- (6) Pickup, Plow trucks
- (3) Salt trucks with plows
- (1) Spray truck
- (4) Gators equipped with both salt and liquid units
- (10) Garden tractors

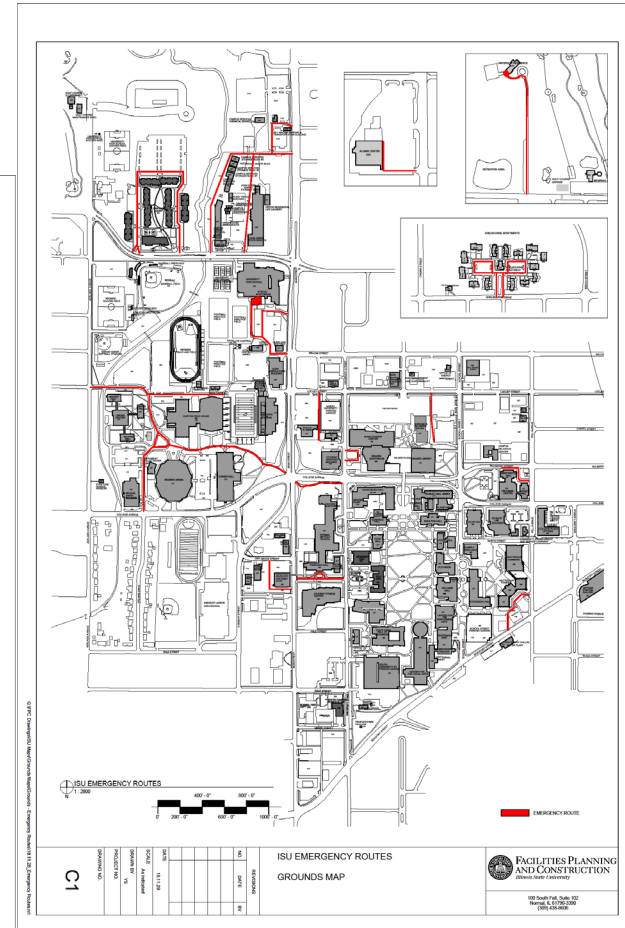




## Large Equipment



## Emergency Route





## Pedestrian Driven Student Base



## Snow Procedure Manual

ILLINOIS STATE UNIVERSITY  
GROUNDS DEPARTMENT  
SNOW PROCEDURE MANUAL  
REVISED FY 2019





## How Could We Do Things Better? the beginning...

- Began in 2016
- **Settled on SOS product**
  - Accelerates melting capacity
  - Reduces bounce and scatter
  - Reduced leaching in stockpiles



Product applied with garden hose



Mixed by hand and machine

## Bulk Salt Plant



Found Equipment in  
January 2017

### Initial Investment

- \$32,500 through partnership with Office of Parking and Transportation



## Setting Up the Bulk Salt Plant



**2017**

- **Partnered** with the Town of Normal
- **Joint effort** with the various Trades to coordinate the success of this venture



## Salt Brine Plant

- **Current Investment**
  - \$20,000
- **Current Storage Capacity**
  - 20,000 gallons
- **Brine Ratio**
  - 2.2 pounds of salt/gallon of water
- **Production**
  - Varitech Salt Brine Production System
  - Formula: 85% Brine, 15% AMPS melting capacity drops from 18 degrees to 10 degrees

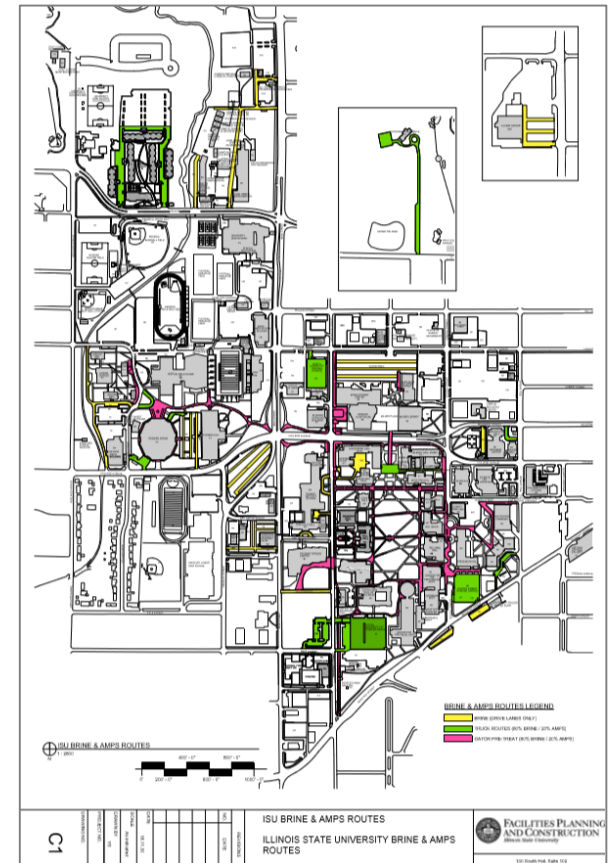




# Pretreating



**Best results with a combination of liquid and salt**  
**Currently pretreat 20% of campus**



## Trial and Error

Have gone from an **80/20 % liquid mix**



**85/15 % liquid mix**





## Analysis



### Brine and AMPS Solution

- 85% Brine, 15% AMPS
- Current cost: \$0.60/gallon
- Current open market value \$1.20/gallon

### Bulk Treated Salt

- SOS 6 gallons/ton bulk salt
- SOS treatment \$1.85/gallon, \$121.00/ton treated salt

## APPA's Effective & Innovative Practices Award 2019

**APPA's Effective & Innovative Practices Award** recognizes programs and processes that enhance service delivery, lower costs, increase productivity, improve customer service, generate revenue, or otherwise benefit the educational institute.

### Criteria:

- Institutional Benefit
- Innovativeness, Creativity, Originality
- Portability and Sustainability
- Management Commitment and Employee Involvement
- Documentation, Analysis, Customer Input, Benchmarking



# 2020 ILAPPA Conference



## Beautification





## Beautification

- **15,000 total square feet of in-ground annual install space**
  - 9,000 square feet is irrigated
  - 2,000 square feet receives a 3-season turnover
- **101 containers**
  - Size range 30-41" interior diameter
  - 77 containers receives a 3-season turnover
  - Campus standard container



## Why Do We Beautify?

- **Healthy, vibrant aesthetics breed healthy, positive vibes**
  - Students
- **Changes the way campus feels, warms it up, and makes it feel like home**
  - Money walk
- **Financial and social return on investment far outweighs cost**
  - Donor gardens, trees
  - Birds Give Back 2020



## Seasons

- **Spring (Late March – Early April)**
  - 4,700 plants installed (wholesale vendor)
  - Bulbs, pansies, wallflower
- **Focus**
  - Awaken campus from winter slumber
  - Commencement





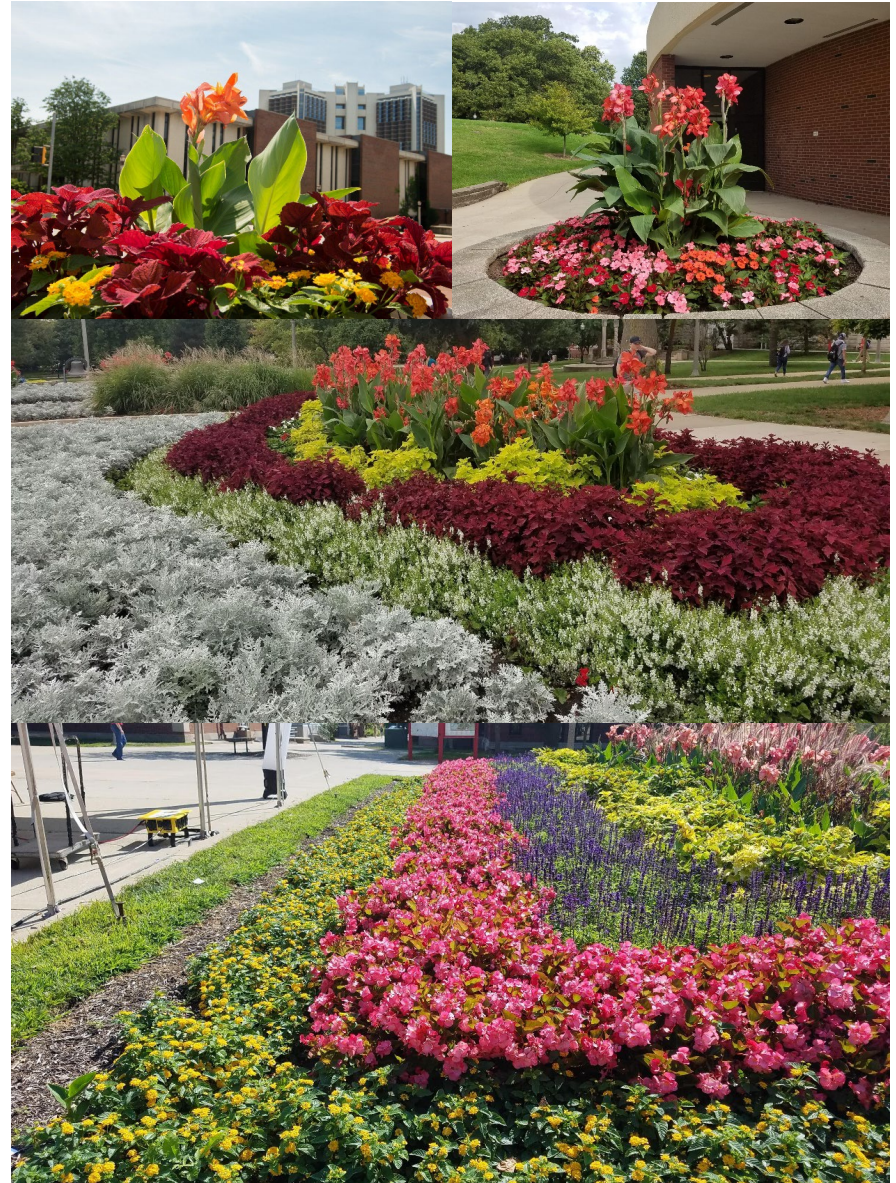
## Seasons

- **Summer**

- Mid-May thru June1
- 15,000 plants installed (grown in-house)
- 100 tropicals overwintered
- Coleus, begonia, lantana
- Color themes

- **Focus**

- Preview





## Seasons

- **Fall**

- Mid-September
- 4,300 plants installed (wholesale vendor)
- Mums, cabbage, kale

- **Focus**

- Homecoming





## Beautification

### Logistics

### Staff

- (1) Nursery Worker
- (1) Grounds Gardener
- (1) 900 hr Grounds Gardener\*
- (2) Student Workers

### Equipment

- (2) Water trucks
- (1) Water gator
- 2700 Square Feet of Greenhouse Finishing Space



## Financials

- All beautification in shared spaces is Grounds responsibility.
- Most containers tied to buildings are at the expense of the individual department.
- Any newly requested **“beautification”** comes at the owners expense.
  - Containers and seasonal changeouts billed to customer
  - Grounds is responsible for soil, summer install





## Fell Arboretum

- **490-acre site, representing over 154 species**
  - Living Laboratory
    - 2,500 students
    - CO2 sequestration studies, living asset studies, field lab work
  - Tree Campus USA
    - \$34,000 and 98.5 labor hours (104 contractor hours) in tree cost and initial care
    - \$18,000 and 674 labor hours (12 contractor hours) in tree management costs

## Level 1 Locations

- **Ewing Cultural Center**

- Event space, weddings, Illinois Shakespeare Festival
- 6 acres
- 3,500 square feet of annual install space
- 47 containers that receive 3-season turnover
- 60% of annual spaces are irrigated
- Holiday decor



**Ewing Cultural Center**

- **President's Residence**

- University Residence and fundraising/event space
- 5 acres
- 1,200 square feet of annual install space and 7 containers that receive 3-season turnover
- Annual beds not currently irrigated
- Holiday decor



**University Residence**



# Questions?

## Contact Information

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