

Architecture and Engineering

---

# Church of Jesus Christ of Latter-Day Saints Landscape Management Plan



**Date: December 2024**

**Building Property No: 5068657**

**Complete Building Address: 135 A Street, Salt Lake City, Utah**

Prepared by: Larry A. Rupp (Senior Service Missionary), Sinc Constructors (Contractor),  
and Brandon Ruiz (MGB+A Landscape Architect)

## **Contents:**

- I. Introduction**
- II. General Maintenance Guidelines**
- III. Local Maintenance Guidelines**
- IV. Irrigation Section**
- V. Planting Section**
- VI. Irrigation System Approval**
- VII. Warranty**
- VIII. Completion Signatures**

## **I. Introduction**

---

The Landscape Management Plan (LMP) is a Facilities Manager's (FM) quick reference guide for landscape maintenance, and it is created by the project landscape architect in coordination with the landscape contractor. The document is to be used as a guide for training the FM, designated staff, and the maintenance personnel. Church standard specifications and details are the basis for this document, provide additional detailed descriptions, and are located on the Church as-built catalog.

## **II. General Maintenance Guidelines**

---

### **A. Plant Establishment**

1. During establishment care must be taken to ensure the plant rootballs remain moist, but not saturated, until roots extend into the native soil at which time irrigation may be reduced. Do not over-irrigate.
2. During the first two years tree trunks should be wrapped with white tree tape such as DeWitt white tree wrap. Tree trunks to be wrapped each fall (October) and removed each spring (March).

### **B. Turfgrass**

1. Mow at least weekly at a height of 3 ½ inches or as recommended for specific species.
2. Fertilize with nitrogen (N) at a rate of 1 pound N per 1000 sq ft in spring, early fall, and late fall. Complete fertilizers (N-P-K) should be used if additional nutrients are required based on soil testing.
3. Control weeds primarily by keeping the turfgrass vigorous through proper irrigation and fertilization. If needed use broadleaf herbicides in the fall of the year after temperatures have started to cool. Use pre-emergent herbicides in the spring as needed.
4. Catching and removing grass clippings is not recommended unless grass has grown enough between mowings that excessive clippings would remain.
5. While mowing, look for potential insect or disease problems. Address as appropriate using local USDA Extension Service recommendations.
6. Maintain grass-free tree circles (18" from trunk minimum) around each tree so equipment does not damage bark.
7. Aerate turfgrass annually in early spring.
8. If irrigation restrictions are required, irrigate turfgrass with one-inch of water at least monthly to keep it dormant, but alive through the summer season.

### C. Mulches

1. Keep mulched areas weed free by manually removing weeds or spot spraying with glyphosate (Roundup) or other approved non-selective herbicide.
2. Add bark mulch as needed to reduce weeds and soil water evaporation. Keep at least a 3-inch depth of mulch in place.
3. If stone and/or organic mulches slide downhill in steep areas, they will need to be restored to their original location and depth.
4. Clean stone mulch areas of organic material by blowing, collecting, and removing it.
5. Due to their high visibility, do not permit dead or dying material to remain in mulched areas. Remove as quickly as possible and replace as opportunity allows.

### D. Shrub beds

1. Keep shrub areas weed free by manually removing weeds or spot spraying with glyphosate (Roundup) or other approved non-selective herbicide
2. Shrubs do not need as much fertilizer as lawns and should be given 1 pound of N/1000 sq ft as a complete, slow-release fertilizer annually in the early spring
3. Specific pruning or dead-heading efforts should be done as described in the individual plant material specifications. While some plants will need to be sheared back to the base each year (i.e. ornamental grasses and bluebeard), none should be uniformly sheared into geometric shapes. Strive to maintain the natural form of the shrub.
4. Yuccas should have dead leaves and flower stalks removed but should never be pruned.

### E. Ornamental Grasses

1. Ornamental grasses should be left intact until late winter to capitalize on their winter appearance. Grasses should be sheared back in late winter or early spring prior to the appearance of new growth.
2. With age, ornamental grass crowns may begin to spread at the edges and decline in the center, at that time division and replanting of the grasses should be considered.

### F. Trees

1. Trees should be examined at least every three years and pruned by an arborist certified by the International Society of Arborists.
2. Trees in lawn and shrub beds should not require additional, separate fertilization from the shrubs and lawns
3. Mulches should be placed up to, but not touching, tree trunks.



## G. Soils

1. If there are indications of nutrient deficiencies the soil should be tested prior to adding supplemental fertilizer. Additional fertilization should be based on soil test recommendations. Periodically adding nitrogen to lawns is a standard practice and does not require a soil test.
2. Soil test results should be recorded in the LMP.

## H. Winter Care

1. Snow should be pushed onto lawn or mulched areas, not into shrubs or trees.
2. Ice melt should be used sparingly. Excessive applications may damage plant material.
3. Avoid winter or dry season desiccation of evergreen plants. Supplemental watering may be required during dry winter conditions.
4. Evergreen trees and shrubs should be well watered in November to ensure they go into the winter fully hydrated. During dry winters, additional irrigation with a hose may be required to prevent winter burning.

## I. Irrigation System

1. Spring startup
  - a) Close all drains
  - b) Inspect and clean filters
  - c) Inspect backflow preventer, close test cocks and close valves
  - d) Turn on water at point-of-Connection slowly.
  - e) Slowly turn on valves at backflow preventer.
  - f) Verify controller and sensors are operating. Replace batteries.
  - g) Charge system and run system through each circuit.
  - h) Check for breaks, leaks, misaligned heads, and plugged in-head filters
  - i) Repair as needed.
2. Operating the system
  - a) WeatherTRAK Controllers
    - (1) Take the controller out of winterized mode.
    - (2) Enable the flow sensor, if applicable.
    - (3) Run Valve Test from controller
    - (4) Run Test cycles for all zones.
    - (5) Confirm the controller is online.
    - (6) Verify that the date and time is correct in the RUN position.
    - (7) Check Alerts – address alerts as needed and clear.
  - b) Other Controllers
    - (1) Set up the controller for spring and use as designed. Do not shut the system off or go to a manual option. Learn how to use it.
    - (2) Verify controller operation and adjust at least monthly by monitoring sprinklers and observing plant growth.

- (3) Use the cycle/soak application feature in any area where irrigation water runs off the landscape.
  - c) Clean filters as needed
  - d) Repair leaks as quickly as possible to conserve water.
3. Winterization by blowing out lines
- a) Turn off water at point of connection
  - b) Connect air compressor downstream from the backflow preventer and flow sensor.
  - c) Close valves to prevent air from passing through and damaging the hydrometer
  - d) Run air compressor at 30 PSI and 185 cfm. Higher pressures and volumes will damage irrigation components.
  - e) Use the controller to manually cycle through stations until misting stops. Repeat.
  - f) Place WeatherTRAK controller in Winterized mode. For other controllers - Turn to off position.
  - g) Open manual drains and manual valves.
  - h) Drain, wrap, protect, or remove any backflow device exposed to freezing temperatures using manufacturer's recommendations and best practices.
  - i) Drain and remove pumps for storage.
  - j) Drain and clean filters using manufacturer's recommendations.
  - k) Check sprinkler heads to make sure they are below sidewalk and curb levels and not vulnerable to snowplow damage. Lower heads to proper elevation.
  - l) If winterization is done by a contractor, they should notify owner when completed.

#### J. Cleanliness

- 1. Debris such as pruned material should be picked up as a given project proceeds. The landscape should be clean at the end of each workday.
- 2. Fallen leaves should be collected and removed from lawns, rock mulched areas, and hardscaping.
- 3. Sidewalks should be kept clean of grass clippings, fertilizer prills, or other materials.
- 4. Weed beds weekly.

### III. Local Maintenance Guidelines

---

#### A. Local Requirements

1. Monitor drain system on north side of building to ensure it functions appropriately.
2. Monitor rock mulch on steep slope on north side. It may require occasional resetting.
3. Off-type mugo pines should be shaped by candling, not shearing.
4. Perennial flowers should be deadheaded as needed and cutback during the winter.
5. Remove tree stakes after trees are stabilized (after 1 year).
6. Monitor sidewalks on north side for soil runoff from the sloped landscape

## IV. Irrigation Section

### A. Estimated Water Use Calculations

Information from EPA Water Budget Tool V1.04

Note: #6 Groundcover is the unique garden area of the facility.

| Zone         | Hydrozone/<br>Landscape<br>Feature<br>Area (sq. ft.) | Plant Type or Landscape<br>Feature | Water Use | Irrigation Type   | Landscape<br>Coefficient (K <sub>L</sub> ) | Default DU<br>(hidden) | Distribution<br>Uniformity (DU <sub>u</sub> ) | LWR <sub>n</sub> (gal/month) |
|--------------|--|------------------------------------|-----------|---|--|------------------------|---|------------------------------|
| 1            | 1,315  | Permeable Hardscape                | Low       | No Irrigation   |  |                        | NA  | -                            |
| 2            | 1,815  | Nonvegetated Softscape             | Low       | No Irrigation   |  |                        |   | -                            |
| 3            | 2,115  | Turfgrass                          | Medium    | Fixed Spray   | 0.7  | 65%                    | 65%   | 13,649                       |
| 4            | 1,385  | Turfgrass                          | Medium    | tor (or rotating nozzle)                                    | 0.7  | 65%                    | 70%   | 8,300                        |
| 5            | 28,105   | Shrubs                             | Medium    | Drip - Standard   | 0.5  | 65%                    | 70%   | 119,220                      |
| 6            | 1,080  | Groundcover                        | High      | Fixed Spray   | 0.7  | 65%                    | 65%   | 6,970                        |
| 7            |  |                                    |           |   |  |                        |   | -                            |
| 8            |  |                                    |           |   |  |                        |   | -                            |
| 9            |  |                                    |           |   |  |                        |   | -                            |
| 10           |  |                                    |           |   |  |                        |   | -                            |
| 11           |  |                                    |           |   |  |                        |   | -                            |
| 12           |  |                                    |           |   |  |                        |   | -                            |
| 13           |  |                                    |           |   |  |                        |   | -                            |
| 14           |  |                                    |           |   |  |                        |   | -                            |
| 15           |  |                                    |           |   |  |                        |   | -                            |
| Total Area = |  | 35,815 of 35815 square feet        |           | Landscape Water Requirement or LWR for the Site (gal/month) |  |                        |   | 148,139                      |
|              |  |                                    |           | You have used   |  | 96%                    |   | of your allowance.           |
|              |  |                                    |           | This is   |  | 32%                    |   | below the baseline.          |

#### STEP 3A - REVIEW THE LWA AND LWR FROM PART 1 AND PART 2

LWA **153,618** (gallons/month) LWR **148,139** (gallons/month)

#### STEP 3B - REVIEW THE TOTAL AREA OF TURFGRASS\* IN THE DESIGNED LANDSCAPE FROM STEP 2B

The designed landscape contains **3,500** square feet of turfgrass.\* This is **10%** of the landscaped area.

\*This includes the area of any pools, spas, and/or water features, designated by WaterSense to be counted as turfgrass.

### B. Plant Establishment Watering Schedule

#### Controller A

| Zone | Irrigation Type           | GPM (LPM) | Precipitation Rate (Inches<br>(mm)/hour) | Water Days per Week | Run Times (Minutes) | Cycle Time | Soak Time | Plant Type | Soil Type  | Slope    | Sun Exposure |
|------|---------------------------|-----------|--|---------------------|---------------------|------------|-----------|------------|------------|----------|--------------|
| 1    | Drip W Bldg Plants        | 1.56      | 0.70                                     | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None     | Full sun     |
| 2    | Spray West Lawn           | 28.5      | 1.70                                     | 7                   | 10                  | 10         | 5         | Lawn       | Sandy Loam | Gentle   | Full sun     |
| 3    | Drip N Top Slope Plants   | 5.70      | 0.70                                     | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | Steep    | Most sun     |
| 4    | Drip N Bldg Plants        | 1.91      | 0.70                                     | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | Mild     | Most sun     |
| 5    | Drip N Lower Slope Plants | 5.45      | 0.70                                     | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | Steep    | Most sun     |
| 6    | Drip N Parkstrip Plants   | 2.91      | 0.70                                     | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | Moderate | Full sun     |
| 7    | Drip NE Walk Plants       | 7.64      | 0.70                                     | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | Gentle   | Full sun     |
| 8    | Drip POC Plants           | 7.33      | 0.70                                     | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | Gentle   | Full sun     |

|    |                          |      |      |   |    |    |    |        |            |          |          |
|----|--------------------------|------|------|---|----|----|----|--------|------------|----------|----------|
| 9  | Drip E Bldg Plants       | 3.66 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 10 | Drip E Parkstrip N       | 3.22 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | Mild     | Full sun |
| 11 | Drip SE Plants arnd Lawn | 2.81 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 12 | MP Rot SE Lawn           | 9.79 | 1.00 | 7 | 30 | 30 | 10 | Lawn   | Sandy Loam | Mild     | Full sun |
| 13 | Drip SE Entry Islands    | 1.74 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 14 | Drip S Bldg Plants       | 2.60 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 15 | Drip S Parking NW Plants | 3.64 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | Moderate | Full sun |
| 16 | Drip S Parking Plants    | 12.4 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | None     | Full sun |
| 17 | Drip S Parkstrip         | 2.81 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | None     | Full sun |
| 18 | Drip SE Corner Plants    | 4.70 | 0.70 | 7 | 30 | 30 | 30 | Shrubs | Sandy Loam | None     | Full sun |
| 19 | Garden – Hose Bibs       | -    | -    | - | -  | -  | -  | Garden | Sandy Loam | -        | -        |

#### Controller B

| Zone | Irrigation Type      | GPM (LPM) | Precipitation Rate (Inches (mm)/hour) | Water Days per Week | Run Times (Minutes) | Cycle Time | Soak Time | Plant Type | Soil Type  | Slope | Sun Exposure |
|------|----------------------|-----------|---------------------------------------|---------------------|---------------------|------------|-----------|------------|------------|-------|--------------|
| 1    | Drip SW Plants       | 3.29      | 0.70                                  | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
| 2    | Drip Parking Grasses | 2.87      | 0.70                                  | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
| 3    | Drip E Mid Plants    | 2.69      | 0.70                                  | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
| 4    | Drip E N Plants      | 2.43      | 0.70                                  | 7                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
|      |                      |           |                                       |                     |                     |            |           |            |            |       |              |

#### C. Established Plant Watering Schedule

##### Controller A

| Zone | Irrigation Type         | GPM (LPM) | Precipitation Rate (Inches (mm)/hour) | Water Days per Week | Run Times (Minutes) | Cycle Time | Soak Time | Plant Type | Soil Type  | Slope  | Sun Exposure |
|------|-------------------------|-----------|---------------------------------------|---------------------|---------------------|------------|-----------|------------|------------|--------|--------------|
| 1    | Drip W Bldg Plants      | 1.56      | 0.70                                  | 2                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None   | Full sun     |
| 2    | Spray West Lawn         | 28.5      | 1.70                                  | 3                   | 20                  | 10         | 10        | Lawn       | Sandy Loam | Gentle | Full sun     |
| 3    | Drip N Top Slope Plants | 5.70      | 0.70                                  | 2                   | 30                  | 10         | 10        | Shrubs     | Sandy Loam | Steep  | Most sun     |

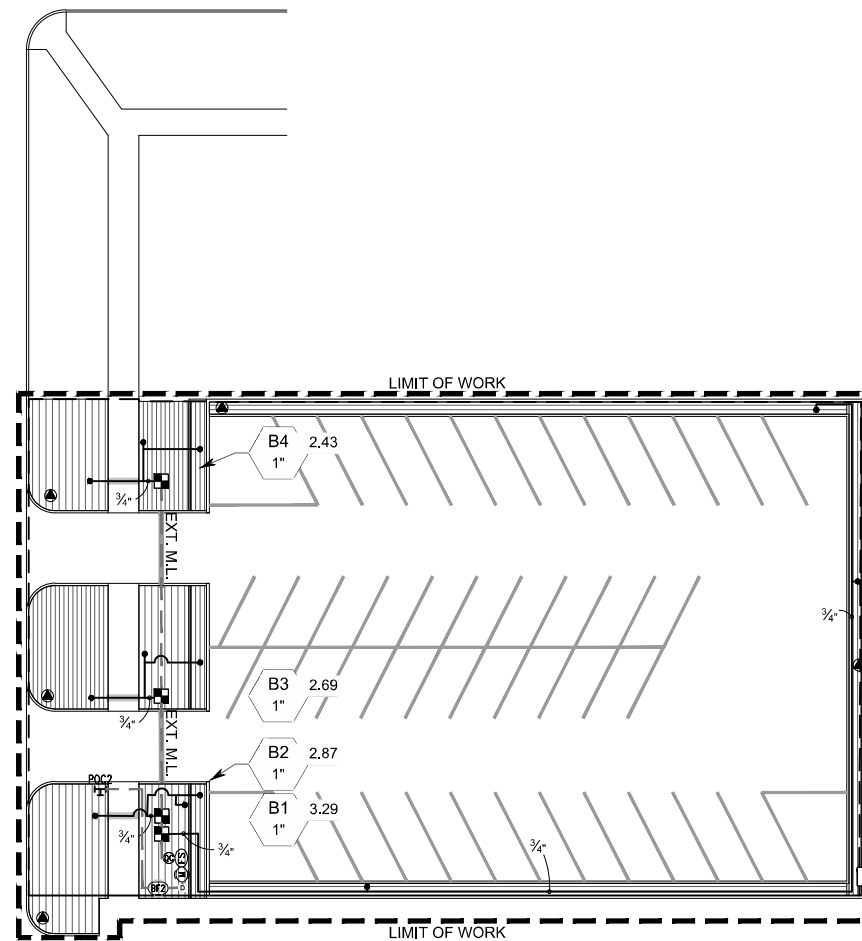
|    |                           |      |      |   |    |    |    |        |            |          |          |
|----|---------------------------|------|------|---|----|----|----|--------|------------|----------|----------|
| 4  | Drip N Bldg Plants        | 1.91 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Mild     | Most sun |
| 5  | Drip N Lower Slope Plants | 5.45 | 0.70 | 2 | 30 | 10 | 10 | Shrubs | Sandy Loam | Steep    | Most sun |
| 6  | Drip N Parkstrip Plants   | 2.91 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Moderate | Full sun |
| 7  | Drip NE Walk Plants       | 7.64 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 8  | Drip POC Plants           | 7.33 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 9  | Drip E Bldg Plants        | 3.66 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 10 | Drip E Parkstrip N        | 3.22 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Mild     | Full sun |
| 11 | Drip SE Plants arnd Lawn  | 2.81 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 12 | MP Rot SE Lawn            | 9.79 | 1.00 | 3 | 40 | 20 | 10 | Lawn   | Sandy Loam | Mild     | Full sun |
| 13 | Drip SE Entry Islands     | 1.74 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 14 | Drip S Bldg Plants        | 2.60 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Gentle   | Full sun |
| 15 | Drip S Parking NW Plants  | 3.64 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | Moderate | Full sun |
| 16 | Drip S Parking Plants     | 12.4 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | None     | Full sun |
| 17 | Drip S Parkstrip          | 2.81 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | None     | Full sun |
| 18 | Drip SE Corner Plants     | 4.70 | 0.70 | 2 | 30 | 30 | 30 | Shrubs | Sandy Loam | None     | Full sun |
| 19 | Garden – Hose Bibs        | -    | -    | - | -  | -  | -  | Garden | Sandy Loam | -        | -        |

#### Controller B





| Zone | Irrigation Type      | GPM (LPM) | Precipitation Rate (Inches (mm)/hour) | Water Days per Week | Run Times (Minutes) | Cycle Time | Soak Time | Plant Type | Soil Type  | Slope | Sun Exposure |
|------|----------------------|-----------|---------------------------------------|---------------------|---------------------|------------|-----------|------------|------------|-------|--------------|
| 1    | Drip SW Plants       | 3.29      | 0.70                                  | 2                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
| 2    | Drip Parking Grasses | 2.87      | 0.70                                  | 2                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
| 3    | Drip E Mid Plants    | 2.69      | 0.70                                  | 2                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
| 4    | Drip E N Plants      | 2.43      | 0.70                                  | 2                   | 30                  | 30         | 30        | Shrubs     | Sandy Loam | None  | Full sun     |
|      |                      |           |                                       |                     |                     |            |           |            |            |       |              |

#### D. Irrigation System Record and As-Built Drawings

1. Church Meetinghouse Sustainability, 135 A St. E, Sheet LI101 Irrigation Overview Record Drawing January 02, 2024.
2. Record Drawing inserted as 11"x17".

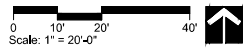


## EXISTING IRRIGATION SCHEDULE

| <u>SYMBOL</u>   | <u>MANUFACTURER/MODEL/DESCRIPTION</u> |
|---|---------------------------------------|
|  | EXISTING VALVE                        |
|  | EXISTING MAIN LINE                    |
|  | PROPERTY LINE                         |
|  | LIMIT OF WORK                         |

**RECORD DRAWING**  
DATE: JAN. 02, 2024

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE DESIGN PROFESSIONAL HAS NOT VERIFIED THE THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.



## E. Irrigation System Components

### 1. WeatherTRAK Controller



The image shows the WeatherTRAK ET Pro3 smart irrigation controller, a grey metal unit with a blue control panel. Next to it are a desktop monitor, a tablet, and a smartphone, all displaying the WeatherTRAK mobile app interface. The app shows a map of a landscape with various colored zones and data points. A circular logo for 'WaterSense' is visible in the top right corner of the image area.

# WeatherTRAK<sup>®</sup> ET Pro3<sup>®</sup>

## Smart Irrigation, Perfect Landscapes

The WeatherTRAK ET Pro3 smart irrigation controller uses ET Everywhere<sup>®</sup>, the most precise, high-resolution weather data available, to create specific schedules to maintain your landscape health with the least amount of water possible.

With its proven ability to tune irrigation to your unique landscape and site characteristics, the WeatherTRAK ET Pro3 controller reduces water waste by only irrigating when it is necessary – saving you time, resources, and money.



Get more done in less time with WeatherTRAK Central programming and management



Real-time flow alerts make every site and schedule perform more efficiently



Speed up wet checks, troubleshooting, and installs with WeatherTRAK Mobile


### Irrigation Tuned By The Cloud

WeatherTRAK algorithms consider factors such as weather, plant type, and soil type to know how much water is available to the plant within the soil. If the plant has enough water, irrigation isn't scheduled. These decisions are automatically planned and constantly optimized.

[hydropoint.com/weathertrak](http://hydropoint.com/weathertrak)



## 2. Netafim Hydrometer



# HYDROMETERS

Combination Master Valve and Water Meter/Flow Sensor

### APPLICATIONS

- For commercial, institutional and sports field irrigation applications
- Ideal for retrofits
- Designed for high pressure, remote operated applications
- Water meter can communicate with irrigation controllers and central control units
- Valve can function as a remote master valve for automated operation

### SPECIFICATIONS

- Sizes: 1 1/2", 2", 3", 4", 6" and 8"
- Maximum working pressure: Manual Electric - 235 psi
- Body: cast iron, polyester coated
- Valve diaphragm: reinforced natural rubber
- Pilot option: manual electric
- End connections: 1 1/2" - male pipe thread  
2" - female pipe thread  
3", 4", 6" 8" - flanged
- Flanges: drilled according to ANSI specification
- Standards: EEC approval (class A)
- Installation of a continuous acting air vent before the Hydrometer is highly recommended for accurate flow readings

### FEATURES & BENEFITS

**GLOBE CONFIGURATION WITH BUILT-IN STRAIGHTENING VANE**  
Requires no straight pipe for installation - saving space.


**± 2% ACCURACY ACROSS FLOW RANGES**  
No more false alarms.


**RUGGED, HEAVY DUTY CONSTRUCTION**  
Cast Iron with corrosion resistant coating.

**REGISTERS ARE STAINLESS STEEL/COMPOSITE ENCAPSULATED**  
Guaranteed against fogging due to moisture.


**DOUBLE-CHAMBERED VALVE**  
Provides quick acting and positive opening and closing.

**SUB-METERING**  
Meter dedicated to landscape irrigation water.






**REED SWITCH (RS) REGISTER**  
The reed switch register is a dry contact or simple switch closure for communicating with control and monitoring equipment. Flows are totaled in U.S. Gallons based on the multiplication factors indicated on the dial face.



**PHOTO DIODE HIGH FREQUENCY (PDH) REGISTER**  
A photo coupler sensor that provides pulse output for communicating with control and monitoring equipment. Flows are totaled in U.S. Gallons based on the multiplication factors indicated on the dial face.



**DIGITAL (ER) REGISTER**  
Combines standard digital register features with dry pulse output for communicating with control and monitoring equipment. Rate of flow and volume readings in U.S. Gallons are clearly indicated on the LCD display.

### 3. Rain Sensor





Wireless Rain-Clik Sensor
Wireless Rain-Clik Receiver

## Wireless Rain-Clik™

*The first reliable wireless rain sensor provides fast installation on any system*

**I**f the thought of running wires from a controller has kept you from adding rain sensors to your systems, now there's a hassle-free alternative. The Hunter Wireless Rain-Clik™ attaches quickly and easily—simply install the receiver unit next to your irrigation controller, then install the transmitter anywhere that the device can receive representative rainfall. No ladders needed to attach to a high outcropping on a building, no messy wires to hide out of view. What also sets a Hunter Rain-Clik apart

are features no other rain-sensing device offers. The unique Quick Response™ feature allows the product to shut off immediately when it starts to rain. And, unlike its competition, Hunter's sophisticated sensing mechanism cannot be fouled by debris, giving the Wireless Rain-Clik the most highly accurate operation.



**Features & Benefits**



Improved metal mounting mechanism easily installs on fences or eaves.

|   |   |
|---|---|
| <b>Hassle-free, wire-free easy installation</b>         | Simple to add on to a new or existing installation                    |
| <b>Hunter's unique Quick Response feature</b>           | No need for water to accumulate for shutoff                           |
| <b>Rugged construction</b>                              | Heavy-duty polycarbonate housing and metal extension arm              |
| <b>Set a maximum dry-out period</b>                     | Adjust the irrigation re-start to account for varying amounts of rain |
| <b>Operates up to 300 meters from the receiver unit</b> | Typical wired system limitations vanish                               |
| <b>Maintenance-free design</b>                          | With a 10-year battery life there is no need to replace batteries     |
| <b>Built-in bypass switch on receiver panel</b>         | Adds flexibility to the system  |



### Instant Shut Off When it Rains

*There are a lot of rain-sensing devices on the market today, but all of them shut off an irrigation system only when a pre-set level of accumulated water is reached. That means that even after it has started raining, a system will continue to operate, an action that can give the impression water is being wasted (not the image that a municipality wants to give its constituents as they pass by parks, roadways, and other city-owned lands). Only the Hunter Rain-Clik products, with their unique Quick Response feature, allow an irrigation system to shut off immediately when it starts to rain.*



## PEB and PESB Series Valves

Designed to Outperform. Engineered to Outlast.

Pressure surges? Effluent water? Clogging debris? No problem. PEB and PESB Series valves offer long life and efficient, trouble-free performance—even under harsh conditions. Constructed of heavy-duty, glass-filled nylon, these valves resist clogging. And the PESB model features a patented scrubber to actively fight dirt, debris and particles.

### Features

- Body constructed of durable glass-filled nylon for long life and heavy-duty performance at 200 psi (13.80 bar) pressure
- Stainless steel studs molded into the body. Bonnet can be attached and removed more easily without damaging threads
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- External bleed protects the solenoid ports from debris when system is flushed
- Internal bleed operates the valve without allowing water into the valve box; allows pressure regulator to be adjusted without turning on the valve at the controller first
- Low flow operating capability (0.25 gpm; 0.06 m<sup>3</sup>/h; 1.2 l/m) for a wide range of applications. For flows below 5 gpm (1.14 m<sup>3</sup>/h; 19.2 l/m) or any Xerigation® application, install Rain Bird Y filter upstream
- Slow closing to prevent water hammer and subsequent system damage
- PESB only: Scrubber scrapes its stainless steel screen clean to break down grit and plant material. Prevents debris build-up and clogging

### Options (order separately)

- Accommodates optional, field installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Optional purple flow control handles for non-potable water applications
  - PEB-NP-HAN1 (1")
  - PEB-NP-HAN2 (1 1/2" and 2")
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 150 psi (10.35 bar)

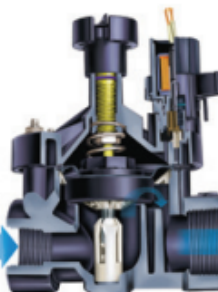
### Operating Range

- Pressure: 20 to 200 psi (1.38 to 13.80 bar)
- Flow: 0.25 to 200 gpm (0.06 to 45.40 m<sup>3</sup>/h; 1.2 to 757 l/m)

- Flow with PRS-D: 5 to 200 gpm
- (1.14 to 45.40 m<sup>3</sup>/h; 19.2 to 757 l/m)
- Temperature: up to 150° F (66° C)

### Electrical Specifications

- Power: 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush current: 0.41 A (9.84 VA) at 60 Hz
- Holding current: 0.14A (3.43VA) at 60Hz
- Coil resistance: 30-39 Ohms
- Compatible with ESP-LXD decoders



PESB Cutaway

| Flow GPM | 100-PEB 1" | 150-PEB 1 1/2" | 200-PEB 2" |
|----------|------------|----------------|------------|
| 0.25     | 0.8        | -              | -          |
| 0.5      | 1.0        | -              | -          |
| 1        | 1.3        | -              | -          |
| 5        | 1.7        | -              | -          |
| 10       | 1.8        | -              | -          |
| 20       | 2.9        | 3.9            | -          |
| 30       | 5.6        | 3.6            | -          |
| 40       | 10.0       | 3.5            | -          |
| 50       | 15.6       | 3.6            | 4.8        |
| 75       | -          | 5.4            | 4.5        |
| 100      | -          | 9.6            | 5.2        |
| 125      | -          | 14.6           | 8.2        |
| 150      | -          | 21.2           | 11.8       |
| 175      | -          | -              | 15.5       |
| 200      | -          | -              | 19.5       |

| Flow m <sup>3</sup> /h | Flow l/m | 100-PEB 2.5 cm | 150-PEB 3.8 cm | 200-PEB 5.1 cm |
|------------------------|----------|----------------|----------------|----------------|
| 0.06                   | 1        | 0.06           | -              | -              |
| 0.3                    | 5        | 0.09           | -              | -              |
| 0.6                    | 10       | 0.10           | -              | -              |
| 1.2                    | 20       | 0.12           | -              | -              |
| 3                      | 50       | 0.15           | -              | -              |
| 6                      | 100      | 0.32           | 0.26           | -              |
| 9                      | 150      | 0.68           | 0.24           | -              |
| 12                     | 200      | -              | 0.26           | 0.33           |
| 15                     | 250      | -              | 0.33           | 0.32           |
| 18                     | 300      | -              | 0.42           | 0.32           |
| 21                     | 350      | -              | 0.57           | 0.34           |
| 24                     | 400      | -              | 0.74           | 0.41           |
| 27                     | 450      | -              | 0.92           | 0.51           |
| 30                     | 500      | -              | 1.14           | 0.64           |
| 33                     | 550      | -              | 1.38           | 0.77           |
| 36                     | 600      | -              | -              | 0.90           |
| 39                     | 650      | -              | -              | 1.04           |
| 42                     | 700      | -              | -              | 1.18           |
| 45                     | 757      | -              | -              | 1.34           |

#### Notes

- 1) Loss values are with flow control fully open.
- 2) PRS-D module recommended for all flow ranges.

#### Recommendations

- 1) Rain Bird recommends flow rates in the supply line not to exceed 7.5 ft./sec. (2.29 m/s) in order to reduce the effects of water hammer.
- 2) For flows below 5 gpm (1.14 m<sup>3</sup>/h; 19.2 l/m), Rain Bird recommends use of upstream filtration to prevent debris from collecting below the diaphragm.
- 3) For flows below 10 gpm (2.27 m<sup>3</sup>/h; 37.8 l/m) Rain Bird recommends the flow control stem be turned down two full turns from the fully open position.

### Dimensions

| Size | Height           | Length       | Width        |
|------|------------------|--------------|--------------|
| 100  | 6 1/2" (16.5 cm) | 4" (10.2 cm) | 4" (10.2 cm) |
| 150  | 8" (20.3 cm)     | 6" (15.2 cm) | 6" (15.2 cm) |
| 200  | 8" (20.3 cm)     | 6" (15.2 cm) | 6" (15.2 cm) |

Note: The PRS-D option adds 2" (5.1 cm) to valve height.

### Models

- 100PEB and 100PESB 1" (26/34)
- 150PEB and 150PESB 1 1/2" (40/49)
- 200PEB and 200PESB 2" (50/60)

BSP threads available, specify when ordering.

### How To Specify

| 100   | - | PEB                                  | - | PRS-D   |
|---|---|--------------------------------------|---|---|
| Size<br>100: 1" (26/34)<br>150: 1 1/2" (40/49)<br>200: 2" (50/60) |   | Model<br>PEB<br>PESB: scrubber model |   | Optional Feature<br>PRS-Dial: pressure regulating module (must be ordered separately) |

Note: Valve and PRS-Dial module must be ordered separately. For non-U.S. applications, it is necessary to specify NPT or BSP thread type.

5. Valve Manifold

TOC

Action Manifold Fittings



Quality Products Made In the U.S.A.

## Manifold Fittings



### Features on all Action Machining, Inc. Manifolds

Rated at 235 max working pressure @ 73 degrees.

All parts are schedule 80 PVC.

O-Ring seals for tool-less installation and repair.

Buttress threads on fittings for a stronger seal.

### Benefits of using Action Machining, Inc. Manifolds

Heavy-duty construction to prevent flexing

Large o-ring sealing surface

Quick hand assembly for install

Ease of removing and replacing valves with 2 unions



#### Part Number

18011-.750

18011

18011-1.5

18011-2.0

18011-2015

#### Description

1/4" MIPT x 1" Buttress Transition Nipple

1" MIPT x Buttress Transition Nipple

1 1/2" MIPT x Buttress Transition Nipple

2" MIPT x Buttress Transition Nipple

1 1/2" MIPT x 2" Buttress Transition Nipple

#### Box Qty.

50

50

12

12

12



#### Part Number

18012

18012-1.5

18012-2.0

#### Description

1 1/4" Spigot x 1" Slip Adapter

1 1/2" Spigot x 1" Slip Adapter

2" Spigot x 1 1/2" Slip Adapter

#### Box Qty.

50

12

12



#### Part Number

18016

#### Description

1" Female Adapter

#### Box Qty.

50



#### Part Number

18017

#### Description

1" FIPT x Buttress Transition Nipple

#### Box Qty.

50





## Quick-Coupling Valves

Convenient water access in potable and non-potable systems

### Features

- Industrial-strength brass quick-coupling valves for convenient water access in potable and non-potable systems.
- Rugged, red brass construction for long life and reliable performance.
- Reliable leak proof operation with strong corrosion-resistant stainless steel spring.
- Optional locking cover on models 33-DLRC, 44-LRC, 5-LRC, 33-DNP, 44-NP, and 5-NP (use \* 2049 key to unlock). Metal cover on model 7 only
- One-piece body design (models 3-RC, 5-RC and 7)
- Two-piece body design for easy servicing (models 33-DLRC, 33-DRC, 44-LRC, 44-RC, 33-DNP, 44-NP, and 44-NP ACME)
- Thermoplastic rubber cover for durability
- 33-DNP, 44-NP, 44-NP ACME, and 5-NP covers marked with "Do Not Drink!" warnings in English and Spanish
- Three-year trade warranty

### Specifications

- Pressure: 5 to 125 psi (0.35 to 8.63 bar)
- Flow: 10 to 125 gpm (2.27 to 28.38 m<sup>3</sup>/h; 37.8 to 473 l/m)
- 33-DNP, 44-NP and 5-NP flow: 10 to 70 gpm (2.27 to 15.89 m<sup>3</sup>/h; 37.8 to 265 l/m)

### Models

- 3-RC: 3/4" (20/27) Rubber Cover, 1-Piece Body
- 33-DRC: 3/4" (20/27) Double Track Key Lug, Rubber Cover, 2-Piece Body
- 33-DLRC: 3/4" (20/27) Double Track Key Lug, Locking Rubber Cover, 2-Piece Body
- 44-RC: 1" (26/34) Rubber Cover, 2-Piece Body
- 44-LRC: 1" (26/34) Locking Rubber Cover, 2-Piece Body
- 5-RC: 1" (26/34) Rubber Cover, 1-Piece Body
- 5-LRC: 1" (26/34) Locking Rubber Cover, 1-Piece Body
- 7: 1 1/2" (40/49) Metal Cover, 1-Piece Body
- 5-RC-BSP: 1" (26/34) Rubber Cover, 1-Piece Body, BSP threaded



Quick Coupling Valves



Quick-Coupling Valve Cutaway



33-DNP, 44-NP, 44-NP ACME



7



3-RC, 5-RC, 5-LRC



33-DRC, 33-DLRC, 44-RC, 44-LRC

- 5-LRC-BSP: 1" (26/34) Locking Rubber Cover, 1-Piece Body, BSP threaded
- 33-DNP: 3/4" (20/27) Non-potable, Purple Locking Rubber Cover, 2-Piece Body
- 44-NP: 1" (26/34) Non-potable, Purple Locking Rubber Cover, 2-Piece Body
- 44-NP ACME: 1" (26/34) Non-potable, Purple Locking Rubber Cover, 2-Piece Body, ACME thread
- 5-NP: 1" (26/34) Non-potable, Purple Locking Rubber Cover, 1-Piece Body

**Note:** For non-US applications, it is necessary to specify NPT or BSP thread type

### Dimensions (height)

- 3-RC: 4 1/4" (10.8 cm)
- 33-DRC: 4 3/8" (11.1 cm)
- 33-DLRC: 4 5/8" (11.7 cm)
- 44-RC: 6" (15.2 cm)
- 44-LRC: 6" (15.2 cm)
- 5-RC: 5 1/2" (14.0 cm)

- 5-LRC: 5 1/2" (14.0 cm)
- 7: 5 3/4" (14.6 cm)
- 33-DNP: 4 3/8" (11.1 cm)
- 44-NP: 6" (15.2 cm)
- 44-NP ACME: 6" (15.2 cm)
- 5-NP: 5 1/2" (14.0 cm)

### How To Specify

#### 33 - DLRC

| Model | Cover | Thread                |
|-------|-------|-----------------------|
| 33    | RC    | Blank: NPT            |
| 44    | DRC   | BSP: 5-RC, 5-LRC only |
| 5     | DLRC  | ACME: 44-NP only      |
| LRC   |       |                       |
| DNP   |       |                       |
| NP    |       |                       |

**Note:** This specifies a 33-DLRC valve: 3/4" (20/27) quick coupling type; optional locking cover.

## 7. Ball Valves

### TOC



## Isolation Valve 94A SERIES Full-Port Brass Ball Valve

|               |                        |
|---------------|------------------------|
| Job Name:     | Contractor:            |
| Job Location: | P.O. Number:           |
| Engineer:     | Representative:        |
| Tag:          | Wholesale Distributor: |

### DESCRIPTION

The Apollo® International 94A forged brass ball valves combine reliable operation with maximum economy. Ideal for plumbing, HVAC and gas service applications. Valves include most pertinent agency approvals.

### FEATURES

- Full-Port
- Blow-out Proof Stem Design
- Adjustable Stem Packing Nut
- Silicone Free

### PERFORMANCE RATING

- Valve Design Rating: 600 CWP (400 CWP 2-1/2" to 4")
- Temperature Range 0°F - 400°F

### MATERIALS

| Part Name       | Material                            |
|-----------------|-------------------------------------|
| Body            | Forged Brass (Cu >57%)              |
| Retainer        | Forged Brass (Cu >57%)              |
| Ball            | Brass, Cr plated                    |
| Stem            | Brass, Cr plated                    |
| Seats           | PTFE                                |
| Stem Packing    | PTFE                                |
| Gland Nut       | Brass                               |
| Friction Washer | PTFE                                |
| Handle          | Steel w/corrosion resistant plating |
| Handle Cover    | PVC                                 |
| Handle Nut      | Steel w/corrosion resistant plating |

### APPROVALS

**CSA:** 1/2"-4" NPT per ANSI Z21.15/CGA 9.1 (1/2 psi)  
 1/2"-4" NPT per ASME B16.44 (5 psi)  
 1/2"-2" NPT per ASME B16.33 (125 psi)  
 2 1/2"-4" NPT per ASME B16.38 (125 psi)  
**UL:** Guides YQNZ, YRBX, YRPV, and YSDT (NPT only)  
**FM:** 1/2"-2" per FM1140 (<175 psi)  
**NSF:** 1/2"-2" meets ANSI/NSF 61 - 8, 2007  
**MSS SP-110:** Ball Valves Threaded, Socket-Welding, Solder joint, Grooved and Flared Ends

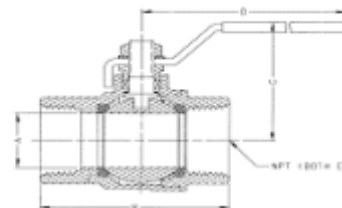
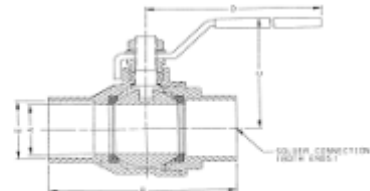
### OPTIONAL HANDLE KITS

| SIZE        | REPLACEMENT LEVER HANDLES | 2-1/4" STEM EXTENSION + MEMORY STOP |
|-------------|---------------------------|-------------------------------------|
| 1/4" - 3/8" | W932400                   | 78217101                            |
| 1/2"        | W932500                   | 78217201                            |
| 3/4"        | W936000                   | 78217301                            |
| 1"          | W932600                   | 78217401                            |
| 1-1/4"      | W932700                   | 78217501                            |
| 1-1/2" - 2" | W932800                   | 78217601                            |
| 2-1/2" - 3" | W932900                   | 78217701                            |
| 4"          | W933000                   | N/A                                 |



### DIMENSIONS

| Part No.     | Size   | A     | B     | C     | D     | E     | WL (lbs.) |
|--------------|--------|-------|-------|-------|-------|-------|-----------|
| <b>NPT</b>   |        |       |       |       |       |       |           |
| 94A10101     | 1/4"   | 0.395 | 1.746 | 1.278 | 3.543 | -     | 0.33      |
| 94A10201     | 3/8"   | 0.407 | 1.756 | 1.278 | 3.543 | -     | 0.30      |
| 94A10301     | 1/2"   | 0.583 | 2.047 | 1.921 | 3.543 | -     | 0.44      |
| 94A10401     | 3/4"   | 0.748 | 2.362 | 2.087 | 3.780 | -     | 0.66      |
| 94A10501     | 1"     | 0.945 | 2.756 | 2.559 | 4.528 | -     | 1.10      |
| 94A10601     | 1 1/4" | 1.260 | 3.307 | 2.953 | 4.528 | -     | 1.57      |
| 94A10701     | 1 1/2" | 1.575 | 3.661 | 3.346 | 5.512 | -     | 2.40      |
| 94A10801     | 2"     | 1.969 | 4.181 | 3.681 | 5.512 | -     | 3.37      |
| 94A10901     | 2 1/2" | 2.520 | 5.378 | 4.764 | 8.661 | -     | 7.60      |
| 94A10001     | 3"     | 2.953 | 6.039 | 5.079 | 8.661 | -     | 9.36      |
| 94A10A01     | 4"     | 3.898 | 7.386 | 5.866 | 9.606 | -     | 16.85     |
| <b>SWEAT</b> |        |       |       |       |       |       |           |
| 94A20301     | 1/2"   | 0.583 | 2.047 | 1.839 | 3.543 | 0.830 | 0.38      |
| 94A20401     | 3/4"   | 0.748 | 2.748 | 1.996 | 3.780 | 0.878 | 0.64      |
| 94A20501     | 1"     | 0.945 | 3.228 | 2.441 | 4.528 | 1.130 | 0.99      |
| 94A20601     | 1 1/4" | 1.260 | 3.819 | 2.854 | 4.528 | 1.378 | 1.40      |
| 94A20701     | 1 1/2" | 1.575 | 4.425 | 3.169 | 5.512 | 1.630 | 2.17      |
| 94A20801     | 2"     | 1.969 | 5.315 | 3.449 | 5.512 | 2.130 | 2.97      |
| 94A20901     | 2 1/2" | 2.520 | 6.283 | 4.764 | 8.661 | 2.630 | 6.36      |
| 94A20001     | 3"     | 2.953 | 7.150 | 5.079 | 8.661 | 3.130 | 8.32      |
| 94A20A01     | 4"     | 3.945 | 9.276 | 5.866 | 9.606 | 4.130 | 15.78     |

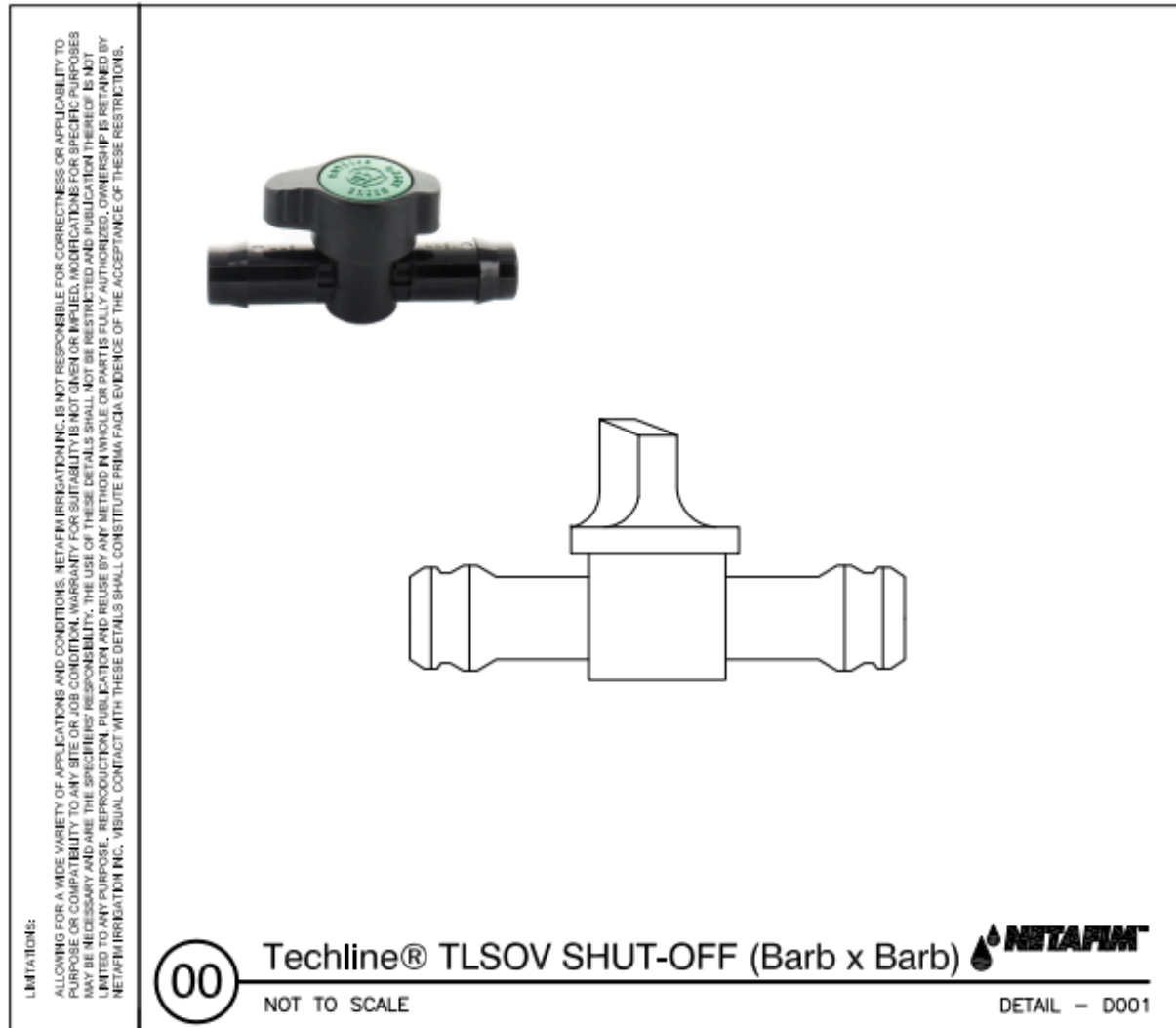


Conbraco Industries, Inc. 701 Matthews Mint Hill Rd. Matthews NC 28106 USA; [www.apollovalves.com](http://www.apollovalves.com); 704-841-6000

This specification is provided for reference only. Conbraco reserves the right to change any portion of this specification without notice and without incurring obligation to make such changes to Conbraco products previously or subsequently sold.

SS 1001.doc © 8/09 Page 7 - 1 of 1


## 8. Drip System Valves



## 9. Valve Wiring

**TOC**

**Irrigation 14 Gauge Wire**




P.O. Box 368, Union, NJ 07083-0368, 908-687-7810, 800-327-2443, Fax: 908-687-2722

**P7079D - Rev 12**

**DIRECT BURIAL  
GOLF COURSE SPRINKLER WIRE**

**INSULATION: POLYETHYLENE**

**SIZES: 14 AWG - 10 AWG SOLID**



**1.0 SCOPE:**

**1.1** This specification covers single conductor insulated wire sizes 14 AWG, through 10 AWG, utilizing low density high molecular weight polyethylene insulation, suitable for direct burial applications for operating temperatures up to 60°C. Listed by UL or ETL or CSA.

**2.0 CONSTRUCTION:**

**2.1 Conductor:**  
Soft drawn bare copper meeting the requirements of ASTM specification B-3 or B-8.

**2.2 Temperature Rating:**  
-55°C +60°C.

**2.3 Insulation Thickness:**  
.045"

**2.4 Sunlight Resistance:**  
Available as an option

**2.5 Manufacturer's Identification:**  
Surface marked with Paige-Electric, voltage rating, size and type, Listing file number, RoHS.

**2.6 Listing:**  
All cables shall be tested physically and electrically in accordance with UL Standard 493, and 83. All reels and cartons bear Listing labels.

**3.0 SPlicing RECOMMENDATIONS:**  
Wire splices are the weak link of any electrical circuit. It is especially important to make proper joints in irrigation systems because the joints are exposed to wet and damp environments that can cause corrosion of the copper conductor and premature failure. Here are Paige Electric's recommendations:

- For direct burial, above ground, or in valve box installations: Model DBR/Y-6 as manufactured by the 3M Company (Paige specification P7364D)
- For installation above ground or in valve boxes: Models 316IR or MGC as manufactured by the 3M Company (Paige specification P7365D), or Silicone-filled wire nuts as manufactured by IDEAL Industries (Paige specification P7372D)

3/30/11

**20 - 1 of 1**



## Rain Bird® DB Series Wire Connectors

### Connections Made Easy

#### Install Faster

When your installation crew is making countless wire connections on a jobsite, why slow them down with unnecessary work steps?

Using Rain Bird's DB Series Wire Connectors, they get the job done faster. Rain Bird's wire connectors are quick to install and provide reliable moisture sealing for controller and valve electrical connections you can count on.

#### Simplify Inventory

This is the only wire connector you'll need! It is ideal for use on two wire decoder control systems.

- Use for standard controllers, valve boxes and soil moisture sensors.
- Wire combinations ranging from 22ga to 8ga.
- Use on connections from 24 VAC to 600 VAC.
- UL 486D certified for direct burial.

#### Avoid Call Backs

Locating and repairing a corroded wire splice costs your business time and money. Avoid unnecessary service call backs. Use the Rain Bird DB Series Wire Connector for reliable connections.

- The Strain Relief ensures wires are secure and won't pull apart.
- Waterproof silicone sealant protects against corrosion.
- UV- material ensures product performance does not degrade even after long periods of exposure to sunlight.

#### UV Protection Matters

Exposure to the sun's UV rays can damage unprotected plastic while in the cargo bed of your crew pickup truck. Although many brands offer UL certified products, Rain Bird is the only brand to also offer UV protection. The results of UV testing show the difference. Exposed to an equivalent period and intensity of UV, the competitive direct bury connector cracked. Demand UV protection in your wire connector!

#### Specifications

- Maximum Voltage Rating: 600V
- Temperature Rating: 221° F (105° C)
- Silicon Sealant Temperature: -45° F to 400° F (-43° C to 204° C)

#### Dimensions

- Height: 3<sup>9</sup>/<sub>16</sub>" (9.37 cm)
- Width: 1<sup>1</sup>/<sub>2</sub>" (3.81 cm)
- Depth: 1<sup>3</sup>/<sub>16</sub>" (3.02 cm)

#### How To Specify

DB TO 20  
Quantity  
20: 1 bag of 20 connectors

Model  
T0: Tan Wire Nut  
RY: Red Yellow Wire Nut

Model  
DB: Direct Bury Silicone Tube



5 x 14 AWG



2 x 14 AWG



2 x 14 AWG

## TOC



# SOLVENT WELD

## SCHEDULE SERIES

### SUBMITTAL AND DATA SHEET

**JM EAGLE™ PVC SCHEDULE 40**

Specifications: ASTM D1785 &amp; ASTM D2665 ::

Listed : ANSI/NSF-PW NSF-DW/V  
Standard 61, Standard 14: : Standard Color: White, Standard Length 10' & 20',  
Plain End and Belled End.

| NOM. PIPE SIZE (IN) | O.D. (IN) | NOM. I.D. (IN) | MIN. T. (IN) | WATER PRESSURE RATING AT 23°C (73°F) | APPROX. WEIGHT (LBS/FT) |
|---------------------|-----------|----------------|--------------|--------------------------------------|-------------------------|
| ½                   | 0.840     | 0.609          | 0.109        | 600                                  | 0.164                   |
| ¾                   | 1.050     | 0.810          | 0.113        | 480                                  | 0.218                   |
| 1                   | 1.315     | 1.033          | 0.133        | 450                                  | 0.324                   |
| 1¼                  | 1.660     | 1.363          | 0.140        | 370                                  | 0.439                   |
| 1½                  | 1.900     | 1.593          | 0.145        | 330                                  | 0.525                   |
| 2                   | 2.375     | 2.049          | 0.154        | 280                                  | 0.705                   |
| 2½                  | 2.875     | 2.445          | 0.203        | 300                                  | 1.118                   |
| 3                   | 3.500     | 3.042          | 0.216        | 260                                  | 1.463                   |
| 4                   | 4.500     | 3.998          | 0.237        | 220                                  | 2.083                   |
| 6                   | 6.625     | 6.031          | 0.280        | 180                                  | 3.663                   |
| 8                   | 8.625     | 7.942          | 0.322        | 160                                  | 5.512                   |
| 10                  | 10.750    | 9.976          | 0.365        | 140                                  | 7.815                   |
| 12                  | 12.750    | 11.889         | 0.406        | 130                                  | 10.333                  |
| 14                  | 14.000    | 13.073         | 0.437        | 130                                  | 12.220                  |
| 16                  | 16.000    | 14.940         | 0.500        | 130                                  | 15.980                  |

**JM EAGLE™ PVC SCHEDULE 80 PIPE**

Specifications: ASTM D1785 ::

Listed : ANSI/NSF-PW Standard 61, Standard 14

: : Standard Color: Dark Gray, Standard Length: 20  
overall, Plain End Only

† Available in Western Region Only.

I.D. : Inside Diameter

O.D. : Outside Diameter

T. : Wall Thickness

| NOM. PIPE SIZE (IN) | O.D. (IN) | NOM. I.D. (IN) | MIN. T. (IN) | PRESSURE RATING (psi) | APPROX. WEIGHT (LBS/FT) |
|---------------------|-----------|----------------|--------------|-----------------------|-------------------------|
| ½                   | 0.840     | 0.528          | 0.147        | 850                   | 0.210                   |
| ¾                   | 1.050     | 0.724          | 0.154        | 690                   | 0.285                   |
| 1                   | 1.315     | 0.936          | 0.179        | 630                   | 0.419                   |
| 1¼                  | 1.660     | 1.255          | 0.191        | 520                   | 0.579                   |
| 1½                  | 1.900     | 1.476          | 0.200        | 470                   | 0.701                   |
| 2                   | 2.375     | 1.913          | 0.218        | 400                   | 0.969                   |
| 2½                  | 2.875     | 2.290          | 0.276        | 420                   | 1.479                   |
| 3                   | 3.500     | 2.864          | 0.300        | 370                   | 1.979                   |
| 4                   | 4.500     | 3.786          | 0.337        | 320                   | 2.892                   |
| 6                   | 6.625     | 5.709          | 0.432        | 280                   | 5.516                   |
| 8                   | 8.625     | 7.565          | 0.500        | 250                   | 8.336                   |
| 10†                 | 10.750    | 9.493          | 0.593        | 230                   | 12.375                  |
| 12†                 | 12.750    | 11.294         | 0.687        | 230                   | 17.027                  |

**JM EAGLE™ SOLARBLOK  
UVR SCHEDULE 40 IPS SIZE**

Specifications: ASTM D1785

Listed : ANSI/NSF 61

Pipe color is beige.

Pipe is produced with integral Solvent Weld bells.  
Available in 20 foot lengths only.PVC material is specially formulated to increase  
resistance to ultraviolet rays.The material includes the maximum amount of  
titanium dioxide allowed by the PPI PVC Range  
Composition for pressure pipe applications.

| NOM. PIPE SIZE (IN) | O.D. (IN) | APPROX. I.D. (IN) | MIN. T. (IN) | PRESSURE RATING (psi) | APPROX. WEIGHT (LBS/FT) |
|---------------------|-----------|-------------------|--------------|-----------------------|-------------------------|
| ½                   | 0.840     | 0.609             | 0.109        | 600                   | 0.164                   |
| ¾                   | 1.050     | 0.810             | 0.113        | 480                   | 0.218                   |
| 1                   | 1.315     | 1.033             | 0.133        | 450                   | 0.324                   |
| 1¼                  | 1.660     | 1.363             | 0.140        | 370                   | 0.439                   |
| 1½                  | 1.900     | 1.593             | 0.145        | 330                   | 0.525                   |
| 2                   | 2.375     | 2.049             | 0.154        | 280                   | 0.705                   |
| 2½                  | 2.875     | 2.445             | 0.203        | 300                   | 1.118                   |
| 3                   | 3.500     | 3.042             | 0.216        | 260                   | 1.463                   |
| 4                   | 4.500     | 3.998             | 0.237        | 220                   | 2.083                   |

Revised 3/2/2012. This information may have been updated. Please download the latest version at [www.jmeagle.com/onesheets](http://www.jmeagle.com/onesheets).



## PVC SCHEDULE 40 FITTINGS

40-2-0604

### Performance Engineered & Tested



SPEARS® Schedule 40 PVC fitting designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure the very best PVC fittings available.

#### Full 1/4" Through 12" Availability

Spears® comprehensive line of PVC fittings offers a variety of injection molded configurations in Schedule 40 sizes 1/4" through 12" conforming to ASTM D 2466.

#### Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

#### High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

#### Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

#### Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

#### Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

#### PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity; see SPEARS® THERMOPLASTIC VALVES PRODUCT GUIDE & ENGINEERING SPECIFICATIONS (V-4).

#### Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

#### Sample Engineering Specifications

All PVC Schedule 40 fittings shall be produced by Spears® Manufacturing Company from PVC Type I cell classification 12454, conforming to ASTM D 1784. All injection molded PVC Schedule 40 fittings shall be Certified for potable water service by NSF International and manufactured in strict compliance to ASTM D 2466. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings.



**PROGRESSIVE PRODUCTS FROM SPEARS® INNOVATION & TECHNOLOGY**

Visit our web site: [www.spearsmfg.com](http://www.spearsmfg.com)

2 - 1 of 2



## Turf Swing Joints

### TSJ Series and TSJ-PRS Series Swing Joints

#### Primary Application

Rain Bird's patented Turf Swing Joints (TSJ) connect rotors and quick coupler valves to lateral irrigation pipes. Made from rigid PVC, Type I, the ¾", 1" and 1 ½" swing joints are designed to optimize rotor performance, reduce costs associated with irrigation system installation, and to be maintenance free. Available with and without pressure-regulation, they allow irrigation professionals to adjust rotor heads to grade and prevent heads or pipes from breaking when run over by equipment.

#### Optimize Rotor Performance

Rain Bird's Turf Swing Joints are over 50 percent more efficient than the competition. As water flows through poorly designed swing joints, it experiences turbulence and pressure loss due to sharp inner corners and internal obstructions. Rain Bird's smooth, swept elbow design reduces pressure loss, resulting in higher efficiency and better rotor performance.

#### Reduce Installation Costs

Rain Bird's preassembled swing joints come in a variety of sizes in order to address multiple irrigation installation requirements. Oversized threaded inlets and grips simplify hand tightening. Each is ready-to-install, saving contractors time when connecting lateral lines to the rotor heads. Contractors, distributors and landscape architects install Rain Bird swing joints knowing that they have been tested to the industry's highest standards.



TSJ-075-PRS, TSJ-100-PRS



TSJ-12075, TSJ-12, TSJ-12150, TSJ-18

#### Maintenance Free

Rain Bird's swing joints are designed with double O-rings that provide extra protection against leaks and keeps threads clean of debris. Visible thread stops prevent over-tightening. Once installed, the contractor will not need to worry about this aspect of the installation ever again.

#### Pressure Regulation

Rain Bird's Turf Swing Joint with Pressure Regulating System (TSJ-PRS) models control and maintain preset inlet pressures for rotors with ¾" and 1" inlets. Pressure regulation at the rotor gives designers more control over the irrigation system performance. In high pressure or fluctuating pressure situations, the TSJ-PRS ensures optimal droplet size and eliminates misting, resulting in improved uniformity and reduced water consumption. The TSJ-PRS can be used to provide the same pressure to each rotor on a zone in applications where high flow rates result in significant friction losses or where there are elevation changes.

#### How to Specify

##### TSJ - XXXXXX - PRS

**Optional Feature**  
PRS: Pressure  
Regulating System

##### Size

12075: 12" long, ¾" M x M NPT  
12: 12" long, 1" M x M NPT  
12-150: 12" long, 1 ½" M x M NPT  
18: 18" long, 1" M x M NPT

075: ¾" M x M NPT  
100: 1" M x M NPT

##### Model

TSJ: Turf  
Swing Joint





## Swing Pipe Tubing and Fittings

### SPX Series – Swing Pipe

#### Primary Applications

Use Rain Bird Swing Pipe with Spiral Barb Fittings as a flexible swing assembly for sprays and rotors.

#### Features & Benefits

##### SPX-100

- Quick and easy installation lowers material and labor costs
- Installs quickly leaving time for additional system installations and incremental revenue opportunities

##### SPX-FLEX100

- Superior flexibility allows pipe to be efficiently routed around hardscape, terraces, and uneven terrain to turn landscape design into reality
- Textured surface makes product easier to handle, contributing to labor efficiency, especially under wet conditions

- Up to 30% more flexible than competitors (test proven)
- Enhanced kink resistance

#### Specifications

- Inside diameter: 0.49"
- Operating pressure up to 80 psi and 110° F

#### Models

- SPX-100: 100' (30 m) coil
- SPX-FLEX-100: 100' (30 m) coil

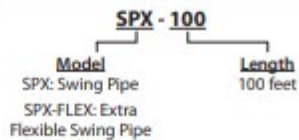


SPX-FLEX100



SPX-100

#### How to Specify/Order



Up to 30% More Flexible than Competitors

### SB Series –

### Spiral Barb Fittings

#### Primary Applications

For use in conjunction with Swing Pipe as a flexible swing assembly.

#### Features & Benefits

- Fittings are made of robust acetal material to make connecting swing pipe fast and easy
- Easy twist-in insertion – no glue or clamps needed for installation
- Aggressive barb lip makes a secure connection that is less likely to leak
- Broad range of shapes and sizes allow the contractor to choose the best fitting for the application

- Extended length and aggressive barb lip prevent blow outs, reducing likelihood of contractor call backs

#### Specifications

- Up to 80 psi and 110° F

#### Models

- SBE-050: 1/2" M NPT x 1/2" barb elbow
- SBE-050B: 1/2" M NPT x 1/2" barb elbow - bulk package
- SBE-075: 3/4" M NPT x 1/2" barb elbow
- SBE-075B: 3/4" M NPT x 1/2" barb elbow - bulk package
- SBA-050: 1/2" M NPT x 1/2" barb adapter
- SBA-075: 3/4" M NPT x 1/2" barb adapter
- SB-TEE: 1/2" barb x 1/2" barb x 1/2" barb tee

- SB-CPLG: 1/2" barb x 1/2" barb coupling
- SBFE-050: 1/2" F NPT x 1/2" barb elbow
- SB-NPT-TEE: 1/2" M NPT x 1/2" barb x 1/2" spiral barb tee

SB-CPLG SBA-050 SBFE-050 SBE-075



SBE-050 SB-TEE SBA-075



## VB-STD

### Standard Series Valve Boxes

#### Primary Application

Protects in-ground irrigation valves. Functions as a durable enclosure that provides easy access to valves for maintenance. Used in turf applications to house single valves, multiple valves, or other subsurface components of an irrigation system.

#### Features

- Easily removable knock-outs simplify pipe placement and reduce installation time. Two large center knock-outs accommodate up to 3.5" diameter pipe and eleven knock-outs accommodate up to 2.0" diameter pipe. (Extensions do not have knock-outs.)
- Knock-out retainers hold removed knock-outs in place above the pipe to help keep dirt out during backfill.
- Corrugated sides provide strength both before and after knock-outs are removed.
- Shovel access slot on body allows for easy lid removal.
- Beveled lid edges help prevent damage to lids from lawn equipment.
- Bolt hole knock-out in the lid keeps insects out of the box when bolt is not used.
- Interlocking bottoms allow boxes to mate securely together bottom-to-bottom for deep installations.
- Optional stainless steel bolt and clip securely fasten the lid to the body.
- Lid marking area provides dedicated location for valve identification.
- Available lid colors are green, black and purple (to indicate non-potable water).
- Wide flange anchors box to grade, minimizing settling and service call backs.

#### Models and Dimensions

##### VB-STD: Standard Rectangular Valve Boxes

VB-STD (SKU A11400)  
 VB-STD-P (SKU A11401)  
 VB-STD-B (SKU A11403)  
 VB-STD-L (SKU A11404)  
 VB-STD-PL (SKU A11405)  
 VB-STD-BKL (SKU A11407)  
 VB-STD-H (SKU A11408)\*  
 VB-STD-6EXT-B (SKU A11420)  
 VB-STD-6EXT (SKU A11421)

Top Opening:  
 14.5" x 9.4" (36.8 cm x 23.9 cm)

Maximum Top:  
 17.5" x 13.0" (44.4 cm x 33.1 cm)

Bottom Opening:  
 18.7" x 14.1" (47.6 cm x 35.9 cm)

Maximum Bottom:  
 23.2" x 19.3" (59.0 cm x 49.0 cm)

Height:  
 12.1" (30.7 cm)

##### Knockouts: 13

Small knockouts – 11 total (4 on one side, 3 on the other side and 2 on each end)  
 Height 4.4" x Max Width 2.5"  
 (11.1 cm x 6.4 cm)

Large knockouts – 2 total (1 on each end)  
 Height 5.9" x Max Width 3.8"  
 (30.7 cm x 9.5 cm)

##### • VB-STD-6EXT Standard Extension

Top Opening:  
 15.3" x 10.2" (39.0 cm x 26.0 cm)  
*(note, no secondary, internal lid rest lip as found on the VB-STD models)*

Maximum Top:  
 17.5" x 12.1" (44.3 cm x 30.8 cm)

Bottom Opening:  
 15.5" x 11.1" (39.3 cm x 28.3 cm)

Maximum Bottom:  
 20.0" x 14.8" (50.8 cm x 37.5 cm)

Height:  
 6.8" (17.2 cm)

##### Pallet Quantity (body + lid)

• STD = 52

\* Includes 2 hex head 1/4" x 3.0" (1.0 x 7.6 cm) bolts, washers and clips.

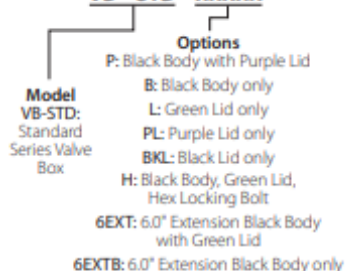
VB-STD



VB-STD-6EXT

#### How to Specify

**VB - STD - XXXXX**



## TOC



## Backflow Preventer

### Model 375XL

#### Reduced Pressure Principle Assembly

**Application**

Ideal for use where Lead-Free\* valves are required. Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Assembly shall provide protection where a potential health hazard exists.

**Standards Compliance**

- ASSE® Listed 1013
- IAPMO® Listed
- CSA® Certified B64.4
- AWWA compliant C511
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- UL® Classified (less shut-off valves only, 3/4"-2")
- C-UL® Classified (less shut-off valves only, 3/4"-2")
- Meets the requirements of NSF/ANSI 61\* (0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

**Materials**

|             |                                  |
|-------------|----------------------------------|
| Housing     | Reinforced Nylon, FDA approved   |
| Fasteners   | Stainless Steel, 300 Series      |
| Elastomers  | Silicone (FDA Approved)          |
|             | Buna Nitrile (FDA Approved)      |
| Internals   | Delrin, Nylon                    |
| Springs     | Stainless Steel, 300 series      |
| Ball Valves | Low Lead Cast Bronze, ASTM B 584 |
| Struts      | Stainless Steel, 300 Series      |

**Features**

|                                   |                                    |
|-----------------------------------|------------------------------------|
| Sizes:                            | 1/2", 3/4", 1", 1-1/4", 1-1/2", 2" |
| Maximum working water pressure    | 175 PSI                            |
| Maximum working water temperature | 180°F                              |
| Hydrostatic test pressure         | 350 PSI                            |
| End connections Threaded FNPT     | ANSI B1.20.1                       |

**Options**

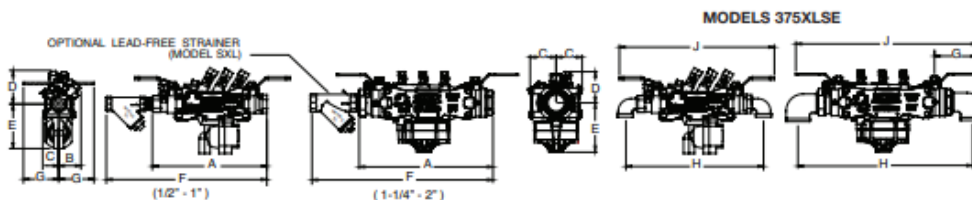
(Suffixes can be combined)

- ☒ - with full port QT ball valves (standard)
- ☐ L - less ball valves, male pipe thread (3/4" - 2" only)
- ☐ S - with Model SXL lead-free bronze "Y" type strainer
- ☐ FT - with integral male 45° flare SAE test fitting
- ☐ AG - with air gap
- ☐ SAG - with Model SXL lead-free bronze "Y" strainer and air gap
- ☐ BOF - with Blow out/Flush fitting
- ☐ B - with black fusion epoxy coated ball valves & struts for theft protection
- ☐ PF - with Z-Bite™ push fit connections\* (1/2" - 1" only)
- ☐ PR - with Z-Press™ press fit connections\*

\*Fittings ship in box with valve and must be threaded into valve by hand on site.

**Accessories**

- ☐ Repair kits
- ☐ Thermal expansion tank (Mdl. XT)
- ☐ Soft seated check valve (Mdl. 40XL2)
- ☐ Shock arrester (Model 1250XL)
- ☐ QT-SET Quick Test Fitting Set
- ☐ Blow out / Flush fitting (RK34-375BOF (1/2" or 3/4"), RK1-375BOF or RK114-350-375BOF)

**Dimensions & Weights (do not include pkg.)**

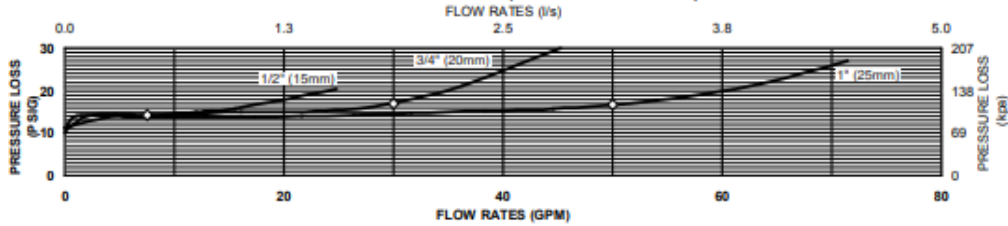
| MODEL<br>375XL<br>SIZE | DIMENSIONS (approximate) |         |                             |        |     |         |     |         |     |         |     |       |     |         |     |       |       |        |     |        | WEIGHT                 |      |                        |      |      |
|------------------------|--------------------------|---------|-----------------------------|--------|-----|---------|-----|---------|-----|---------|-----|-------|-----|---------|-----|-------|-------|--------|-----|--------|------------------------|------|------------------------|------|------|
|                        | A                        |         | A<br>LESS<br>BALL<br>VALVES |        | B   |         | C   |         | D   |         | E   |       | F   |         | G   |       | H     |        | J   |        | LESS<br>BALL<br>VALVES |      | WITH<br>BALL<br>VALVES |      |      |
|                        | in.                      | mm      | in.                         | mm     | in. | mm      | in. | mm      | in. | mm      | in. | mm    | in. | mm      | in. | mm    | in.   | mm     | in. | mm     | lbs.                   | kg   | lbs.                   | kg   |      |
| 1/2                    | 20                       | 8 7/8   | 225                         | n/a    | n/a | 1 15/16 | 49  | 1 3/8   | 35  | 2 15/16 | 75  | 3 7/8 | 98  | 12 1/4  | 311 | 3     | 76    | 10 7/8 | 276 | 12 1/4 | 311                    | 4.7  | 2.1                    | 5.7  | 2.6  |
| 3/4                    | 20                       | 8 7/8   | 225                         | 7 1/8  | 181 | 1 15/16 | 49  | 1 3/8   | 35  | 2 15/16 | 75  | 3 7/8 | 98  | 12 5/8  | 321 | 3     | 76    | 11     | 279 | 12 1/4 | 311                    | 4.7  | 2.1                    | 5.7  | 2.6  |
| 1                      | 25                       | 11 3/16 | 284                         | 8 7/8  | 225 | 2 1/4   | 57  | 1 13/16 | 46  | 3 7/16  | 87  | 4     | 102 | 14 9/16 | 370 | 4     | 102   | 13 3/4 | 349 | 15 1/4 | 387                    | 8.2  | 3.7                    | 9.7  | 4.4  |
| 1-1/4                  | 32                       | 14 7/8  | 378                         | 14 3/8 | 367 | 3 3/8   | 86  | 3 1/8   | 80  | 3 3/4   | 95  | 5 3/4 | 146 | 20 1/2  | 521 | 3 3/4 | 95    | 18     | 457 | 18 1/2 | 470                    | 18.7 | 8.5                    | 20.5 | 9.3  |
| 1-1/2                  | 40                       | 15 1/4  | 387                         | 14 3/8 | 367 | 3 3/8   | 86  | 3 1/8   | 80  | 3 3/4   | 95  | 5 3/4 | 146 | 22      | 559 | 4 1/2 | 114   | 18 3/4 | 476 | 20 1/4 | 514                    | 18.3 | 8.0                    | 21.5 | 9.8  |
| 2                      | 50                       | 16      | 406                         | 14 3/8 | 367 | 3 3/8   | 86  | 3 1/8   | 80  | 3 3/4   | 95  | 5 3/4 | 146 | 24      | 610 | 4 3/4 | 120.7 | 20 3/4 | 527 | 20 3/4 | 527                    | 19.4 | 8.8                    | 23.5 | 10.7 |

Zurn Industries, LLC | Wilkins  
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766  
In Canada | Zurn Industries Limited  
3544 Nashua Drive, Mississauga, Ontario L4V 1L2 Ph. 905-405-8272, Fax 905-405-1292  
[www.zurn.com](http://www.zurn.com)

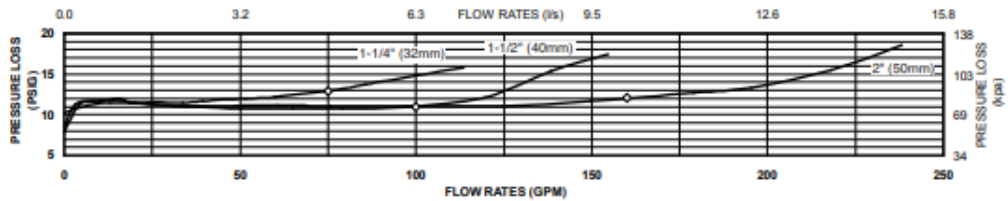
Rev. K  
Date: 4/17  
Document No. BF-375XL  
Patent No. 6, 513, 543, 7,784,483, & 7,905,250  
Product No. Model 375XL

6 - 1 of 3

### MODEL 375XL 1/2" - 1" (STANDARD & METRIC)



### MODEL 375XL 1-1/4" - 2" (STANDARD & METRIC)

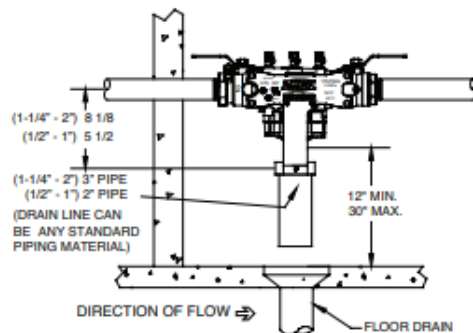
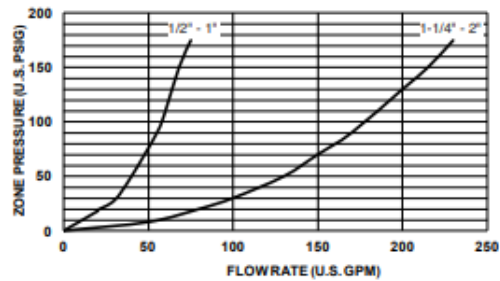


#### Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

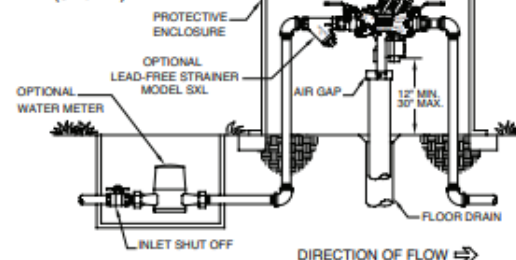
#### Relief Valve Discharge Rates

(Worst case condition - 1st check or relief valve is lodged wide open)



INDOOR INSTALLATION

#### MODEL 375XLSAG (SHOWN)



OUTDOOR INSTALLATION

#### Specifications

The Reduced Pressure Principle Backflow Preventer shall be certified to NSF/ANSI 61, ASSE® Listed 1013, rated to 180°F, and supplied with full port ball valves. The main body shall be Nylon and the seat disc elastomers shall be silicone. If installed indoors, the installation shall be supplied with an air gap adapter. The Reduced Pressure Principle Backflow Preventer shall be a ZURN WILKINS Model 375XL.

Zurn Industries, LLC | Wilkins  
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766  
In Canada | Zurn Industries Limited  
3544 Nashua Drive, Mississauga, Ontario L4V 1L2 Ph. 905-405-8272, Fax 905-405-1292  
[www.zurn.com](http://www.zurn.com)



### 13. Backflow Enclosure

#### TOC

#### Aluminum Backflow Enclosure



#### BACKFLOW ENCLOSURES ALUMINUM



##### VANDAL-RESISTANT EASY ACCESS BACKFLOW ENCLOSURE

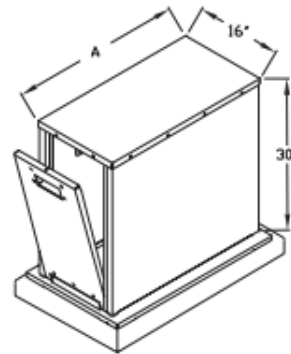
- Marine grade aluminum alloy construction provides lasting durability and strength, with light weight for ease of handling
- 100% stainless steel hardware assures long-term, rust proof durability and additional strength
- Enclosures secured to mounting hardware providing easy access for service and repair
- Flush-mounted locking mechanism and solid sheet construction ensures maximum security
- Chameleon effect of the natural finish provides an unobtrusive quality
- Expansion module allows for length adjustments to meet field requirements
- Five year limited warranty
- All aluminum enclosures may be powder coated in many colors at an extra charge

##### Low Profile Enclosure

|           | "A" Length | Height | Width  |
|-----------|------------|--------|--------|
| SBBC-15AL | 15"        | 30"    | 16.25" |
| SBBC-30AL | 30"        | 30"    | 16.25" |
| SBBC-45AL | 45"        | 30"    | 16.25" |
| SBBC-60AL | 60"        | 30"    | 16.25" |

Note: For inside dimensions, see Backflow Cover Sizing Chart on pages 28-29.

- Marine Grade Aluminum
- Stainless Steel Hardware
- Weather Resistant
- Patented Locking System Accepts Padlock

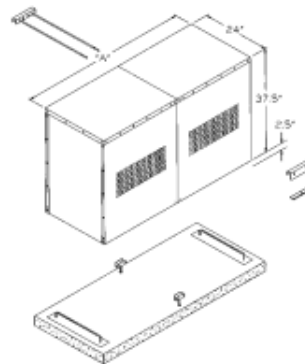


##### High Profile Two Piece Enclosure

|              | "A" Length | Height | Width |
|--------------|------------|--------|-------|
| SBBC-40ALHP* | 40"        | 39"    | 24"   |
| SBBC-60ALHP  | 60"        | 39"    | 24"   |
| SBBC-75ALHP  | 75"        | 39"    | 24"   |
| SBBC-90ALHP  | 90"        | 39"    | 24"   |

Note: For inside dimensions, see Backflow Cover Sizing Chart on pages 28-29.  
\* Available as a solid panel model only, no side holes.

- Marine Grade Aluminum
- Stainless Steel Hardware
- Weather Resistant
- Patented Locking System Accepts Padlock



14. Drip System Components
  - a) Drip Control Kit

TOC

Drip Control Kits in Lieu of Specified Netafim Drip Control Kits

LANDSCAPE DRIP

Control Zone Kit Selection Guide

**Rain Bird Control Zone Kits** give you the components necessary for on/off control, filtration, and pressure regulation—all in one single package.




**Convenient**  
Simple to order and easy to install

**Innovative**  
Contains cutting-edge products such as the Low Flow Valve and Flow Indicating Basket Filter. Every kit uses the revolutionary PR Filter which combines the filter and pressure regulator into one unit

**Flexible**  
Provides options compatible with a variety of control systems

**Comprehensive**  
The most complete line of Control Zone Kits on the market, giving contractors and specifiers the ability to meet every need from 0.2 to 60 gpm

RESIDENTIAL CONTROL ZONE KITS








XACZ-075-PRF  
FLOW: 0.2 - 5 gpm

XCZ-075-PRF  
FLOW: 0.2 - 5 gpm

XCZLF-100-PRF  
FLOW: 0.2 - 10 gpm

Residential Low Flow: 0.2 - 10 gpm






XACZ-100-PRF  
FLOW: 3 - 15 gpm

XCZ-100-PRF  
FLOW: 3 - 15 gpm

XCZPGA-100-PRF  
FLOW: 3 - 15 gpm

Residential Medium Flow: 3 - 15 gpm

COMMERCIAL CONTROL ZONE KITS

XCZ-100-PRB-LC  
FLOW: 0.3 - 20 gpm



XCZ-100-PRB-COM  
FLOW: 0.3 - 20 gpm

XCZ-100-PRB-R  
FLOW: 0.3 - 20 gpm

XCZ-100-FLOW  
FLOW: 0.3 - 20 gpm

XCZ-100-IVM  
FLOW: 0.3 - 20 gpm


Commercial Wide Flow: 0.3 - 20 gpm

XCZ-150-LCS  
FLOW: 15 - 62 gpm

XCZ-150-LCDR  
FLOW: 15 - 62 gpm

Commercial High Flow: 15 - 62 gpm



16 - 1 of 2

## Select Your Kit

Use the chart below to compare components and identify the most appropriate Control Zone Kit for your application.

|                         | Model                      | Operating Flow Range                | Minimum Diagnostic Flow | Flow Rate Capability<br>(3.5 gph dripline with 12" emitter spacing) | Inlet / Outlet             | Valve   | Controller Compatibility <sup>a</sup> |         |     |                 | Inlet Pressure                     | Regulated Pressure  | Filter Type  | Size         | Minimum Valve Box Size     |  |   |            |
|-------------------------|----------------------------|-------------------------------------|-------------------------|---|----------------------------|---------|---------------------------------------|---------|-----|-----------------|------------------------------------|---------------------|--|--------------|----------------------------|--|---|------------|
|                         |                            |                                     |                         |   |                            |         | Traditionally Wired                   | TBOS/DC | IWM | 2-Wire Decoders |                                    |                     |  |              |                            |  |   |            |
| RESIDENTIAL LOW FLOW    | XACZ-075-PRF <sup>1</sup>  | 0.2 to 5 gpm<br>(0.8 to 18.9 l/m)   | N/A                     | 13 to 300 ft of dripline  | 3/4" x 3/4" NPT            | ASLV075 | Y                                     | Y       | Y   | N               | 20 to 150 psi<br>(1.4 to 10.3 bar) | 30 psi<br>(2.1 bar) | Stainless steel screen filter<br>200 mesh<br>(75 micron) | 14" Height   | Above Ground               |  |   |            |
|                         | XCZ-075-PRF                | LFV075                              |                         | 10" Length  | Mini-Standard or 10" Round |         |                                       |         |     |                 |                                    |                     |  |              |                            |  |   |            |
|                         | XCZLF-100-PRF              | 0.2 to 10 gpm<br>(0.8 to 37.85 l/m) |                         | 13 to 650 ft of dripline  | 1" x 1" NPT                | LFV100  |                                       |         |     |                 |                                    |                     |  |              |                            |  |   |            |
| RESIDENTIAL MEDIUM FLOW | XACZ-100-PRF <sup>1</sup>  | 3 to 15 gpm<br>(11.4 to 56.8 l/m)   | N/A                     | 200 to 1,000 ft of dripline   | 1" x 1" NPT                | 100ASV  | Y                                     | Y       | Y   | N               | 20 to 150 psi<br>(1.4 to 10.3 bar) | 40 psi<br>(2.8 bar) | Stainless steel screen filter<br>200 mesh<br>(75 micron) | 14" Height   | Above Ground               |  |   |            |
|                         | XCZ-100-PRF                |                                     |                         |   |                            | 100DV   |                                       |         |     |                 |                                    |                     |  | 10" Length   | Mini-Standard or 10" Round |  |   |            |
|                         | XCZPGA-100-PRF             |                                     |                         |   |                            | 100PGA  |                                       |         |     |                 |                                    |                     |  | 14" Length   |                            |  |   |            |
| COMMERCIAL WIDE FLOW    | XCZ-100-PRB-LC             | 0.3 to 20 gpm<br>(1.13 to 75.7 l/m) | N/A                     | 20 to 1,300 ft of dripline  | 1" x 1" NPT                | 100PEB  | Y                                     | Y       | Y   | Y               | 15 to 150 psi<br>(1 to 10.3 bar)   | 40 psi<br>(2.8 bar) | Basket Filter<br>200 mesh<br>(75 micron)                 | 12" Length   | Mini-Standard Rectangular  |  |   |            |
|                         | XCZ-100-PRB-COM            | 0.3 to 20 gpm<br>(1.13 to 75.7 l/m) | 3 gpm                   |   |                            | 100PEB  |                                       |         |     |                 |                                    |                     | Quick-Check Basket Filter<br>200 mesh<br>(75 micron)     | 14" Length   |                            |  |   |            |
|                         | XCZ-100-PRB-R <sup>2</sup> | 0.3 to 20 gpm<br>(1.13 to 75.7 l/m) | N/A                     |   |                            | 100PEBR |                                       |         |     |                 |                                    |                     | Basket Filter<br>200 mesh<br>(75 micron)                 | 10.5" Length |                            |  |   |            |
|                         | XCZ-100-FLOW               | 0.3 to 20 gpm<br>(1.13 to 75.7 l/m) | 3 gpm                   |   |                            | 100PEB  |                                       |         |     |                 |                                    |                     |  |              |                            |  | Flow-Indicating Basket Filter<br>150 mesh<br>(100 micron) | 14" Length |
|                         | XCZ-100-IWM                |                                     |                         |   |                            |         |                                       |         |     |                 |                                    |                     |  |              | 15.5" Length               |  | Standard Rectangular                                      |            |
| HIGH FLOW               | XCZ-150-LCS                | 15 to 62 gpm<br>(56.8 to 234.7 l/m) | N/A                     | 1,000 to 4,000 ft of dripline                                       | 1.5" x 1.5" NPT            | 150PEB  | Y                                     | Y       | Y   | Y               | 15 to 115 psi<br>(1 to 7.9 bar)    | 40 psi<br>(2.8 bar) | Large capacity screen filter<br>120 mesh<br>(130 micron) | 20.5" Length | Jumbo Rectangular          |  |   |            |
|                         | XCZ-150-LCDR <sup>2</sup>  |                                     |                         | 1,000 to 4,000 ft of dripline                                       |                            | 150PEBR |                                       |         |     |                 |                                    |                     | Large capacity disc filter<br>120 mesh<br>(130 micron)   | 23.5" Length |                            |  |   |            |

<sup>1</sup>With Anti-Siphon<sup>2</sup>For Reclaimed Water<sup>3</sup>Controller Compatibility Definitions - Bold represents compatibility out of the box.

- Compatible with traditionally-wired controllers with traditional solenoid.
- Compatible with TBOS / DC controller when used with DC latching solenoid.
- Compatible with IWM controllers (ESP-LXIVM/LXIVMP) when used with IWM SOL.
- Compatible with 2-wire decoder systems like ESP-LXD controller.

## WATER SAVING TIP:

Combine a Xerigation® Control Zone Kit with a Rain Bird controller product to precisely regulate zone watering times.

b) Dripline

TOC

Netafim Dripline for Planter Area and Subsurface Lawn

NETAFIM™

TECHLINE® CV

Maximum Uniformity in  
Subsurface and On-Surface  
Including Slopes

17mm DRIPLINE

### APPLICATIONS

- Subsurface or on-surface installations
- Turf, shrubs, trees and flowers
- Sports turf, tennis courts, golf courses
- Slopes
- Longer lateral runs
- Curved, angular or narrow planting areas
- High traffic/high liability areas
- Areas subject to vandalism
- High wind areas
- At-grade windows
- Green walls, green roofs
- Raised planters

### SPECIFICATIONS

- Broadest choice of emitter flow rates: 0.26, 0.4, 0.6 and 0.9 GPH
- Emitter spacings: 12", 18" and 24" (24" spacing available for 0.6 and 0.9 GPH only)
- Pressure compensation range: 14.5 to 58 psi
- Bending radius: 7"
- Maximum recommended system pressure: 58 psi
- Minimum pressure required: 14.5 psi
- Tubing diameter: 0.66" OD; 0.56" ID; 0.050" wall
- Coil lengths: 100', 250', 500', 1,000'
- Recommended minimum filtration: 120 mesh
- Diaphragm made of silicon
- ISO 9261 Standard Compliance

### FEATURES & BENEFITS

#### 2 psi CHECK VALVE IN EACH EMITTER

All emitters turn on and off at the same time, maximizing balance of application. Holds back up to 4.6' of water (elevation change). No low emitter drainage, great on slopes. Delivers more precise watering.

#### UNIQUE PATENTED EMITTER DESIGN WITH PHYSICAL ROOT BARRIER

Offset flow path, extra large bath area and raised outlet prevent root intrusion without chemical reliance.

#### PRESSURE COMPENSATING

Precise and equal amounts of water are delivered over a broad pressure range.

#### CONTINUOUS SELF-FLUSHING EMITTER DESIGN

Flushes debris as it is detected, throughout operation, not just at the beginning or end of a cycle, ensuring uninterrupted emitter operation.

#### EMITTER WITH ANTI-SIPHON FEATURE

Prevents ingestion of debris into tubing caused by vacuum.

#### SELF-CONTAINED, ONE-PIECE DRIPLINE CONSTRUCTION


Assures reliable, easy installation.


#### FLEXIBLE UV RESISTANT TUBING


Adapts to any planting area shape - tubing curves at a 7" radius. For on-surface installations withstands heat and direct sun.


#### MAKES INSTALLATION QUICKER

Does not require air/vacuum relief vent or automatic flush valve for on-surface or subsurface installations. Use manual flush valves at exhaust headers.



 **LASER ETCHING**  
FOR EASY IDENTIFICATION

 **TECHLINE CV**  
MADE WITH POST CONSUMER RECYCLED MATERIAL

 **QUALIFIES FOR USE ON LEED PROJECTS**

#### LIMITED WARRANTY FOR DRIPLINES

Netafim warrants any polyethylene tubing and driplines (Techline® HCVXR, HCVXR-RW and RWP; CV, DL, RW, RWP and EZ) sold to be free from original defects in materials and workmanship for a period of seven (7) years and ten (10) years for environmental stress cracking - from the date of original delivery.

17 - 1 of 2

## GENERAL GUIDELINES

|                                       | TURF  |                |                |                | SHRUB & GROUND COVER   |                |                |                |
|---------------------------------------|---|----------------|----------------|----------------|--|----------------|----------------|----------------|
|                                       | CLAY SOIL                                     | LOAM SOIL      | SANDY SOIL     | COARSE SOIL    | CLAY SOIL  | LOAM SOIL      | SANDY SOIL     | COARSE SOIL    |
| EMITTER FLOW                          | 0.26 GPH                                      | 0.4 GPH        | 0.6 GPH        | 0.9 GPH        | 0.26 GPH   | 0.4 GPH        | 0.6 GPH        | 0.9 GPH        |
| EMITTER SPACING                       | 18"   | 12"            | 12"            | 12"            | 18"  | 18"            | 12"            | 12"            |
| LATERAL (ROW) SPACING                 | 18" 20" 22"                                   | 12" 14" 16"    | 12" 14" 18"    | 12" 14" 16"    | 18" 21" 24"  | 18" 21" 24"    | 16" 18" 20"    | 16" 18" 20"    |
| BURIAL DEPTH                          | Bury evenly throughout the zone from 4" to 6" |                |                |                | On surface or bury evenly throughout the zone to a maximum of 6" |                |                |                |
| APPLICATION RATE (INCHES/HOUR)        | 0.19 0.17 0.15                                | 0.04 0.55 0.43 | 0.98 0.84 0.65 | 1.48 1.27 1.11 | 0.19 0.16 0.14   | 0.30 0.26 0.23 | 0.73 0.65 0.59 | 1.11 0.99 0.89 |
| TIME TO APPLY 1/4" OF WATER (MINUTES) | 80 89 97                                      | 23 27 35       | 15 18 23       | 10 12 13       | 80 93 106  | 50 58 66       | 20 23 26       | 13 15 17       |

Following these maximum spacing guidelines, emitter flow selection can be increased if desired by the designer.  
0.9 GPH flow rate available for areas requiring higher infiltration rates, such as coarse sandy soils.

Note: 0.4, 0.6 and 0.9 GPH are nominal flow rates. Actual flow rates used in the calculations are 0.42, 0.61 and 0.92 GPH.

## SPECIFYING MODEL NUMBER

Reference for Ordering Information Chart

**A** Techline CV Dripline = TLCV

**B** EMITTER FLOW RATE  
0.26 GPH = 26  
0.4 GPH = 4  
0.6 GPH = 6  
0.9 GPH = 9

**C** EMITTER SPACING  
12" = 12  
18" = 18  
24" = 24

**D** COIL LENGTH  
100' = 01  
250' = 025  
500' = 05  
1,000' = 10

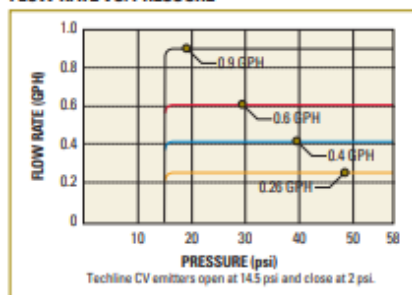
**SAMPLE MODEL NUMBER**  
**TLCV4-1210**

**BLANK TUBING MODEL NUMBERS:**  
100' = TLCV001  
250' = TLCV0025  
500' = TLCV005  
1,000' = TLCV010

## ORDERING INFORMATION

| FLOW RATE    | EMITTER SPACING | COIL LENGTH | MODEL NUMBER |
|--------------|-----------------|-------------|--------------|
| 0.26 GPH     | 12"             | 100'        | TLCV26-1201  |
|              |                 | 250'        | TLCV26-12025 |
|              |                 | 1,000'      | TLCV26-1210  |
|              | 18"             | 100'        | TLCV26-1801  |
|              |                 | 250'        | TLCV26-18025 |
|              |                 | 1,000'      | TLCV26-1810  |
| 0.4 GPH      | 12"             | 100'        | TLCV4-1201   |
|              |                 | 250'        | TLCV4-12025  |
|              |                 | 1,000'      | TLCV4-1210   |
|              | 18"             | 100'        | TLCV4-1801   |
|              |                 | 250'        | TLCV4-18025  |
|              |                 | 1,000'      | TLCV4-1810   |
| 0.6 GPH      | 12"             | 100'        | TLCV6-1201   |
|              |                 | 250'        | TLCV6-12025  |
|              |                 | 500'        | TLCV6-1205   |
|              | 18"             | 100'        | TLCV6-1801   |
|              |                 | 250'        | TLCV6-18025  |
|              |                 | 500'        | TLCV6-1805   |
| 0.9 GPH      | 12"             | 100'        | TLCV9-1201   |
|              |                 | 250'        | TLCV9-12025  |
|              |                 | 500'        | TLCV9-1205   |
|              | 18"             | 100'        | TLCV9-1801   |
|              |                 | 250'        | TLCV9-18025  |
|              |                 | 500'        | TLCV9-1805   |
| BLANK TUBING | 12"             | 100'        | TLCV001      |
|              |                 | 250'        | TLCV0025     |
|              |                 | 500'        | TLCV005      |
|              | 18"             | 100'        | TLCV010      |
|              |                 | 250'        | TLCV010      |
|              |                 | 1,000'      | TLCV010      |

## FLOW RATE VS. PRESSURE



0.4 GPH x 18"  
Tubing for all Planter Areas  
~~0.4 GPH x 12"  
Tubing for Subsurface Grass Areas (per Netafim's recommendations)~~

## FLOW PER 100 FEET

| EMITTER SPACING | 0.26 EMITTER |      | 0.4 EMITTER |      | 0.6 EMITTER |      | 0.9 EMITTER |      |
|-----------------|--------------|------|-------------|------|-------------|------|-------------|------|
|                 | GPH          | GPM  | GPH         | GPM  | GPH         | GPM  | GPH         | GPM  |
| 12"             | 26.4         | 0.44 | 42.3        | 0.71 | 60.8        | 1.01 | 92.5        | 1.54 |
| 18"             | 17.6         | 0.29 | 28.2        | 0.47 | 40.5        | 0.68 | 61.6        | 1.03 |
| 24"             | -            | -    | -           | -    | 30.4        | 0.51 | 46.2        | 0.77 |

## MAXIMUM LENGTH OF A SINGLE LATERAL (FEET)

| EMITTER SPACING | 12"  |     |     |     | 18"  |     |     |     | 24"  |     |     |     |
|-----------------|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|
|                 | 0.26 | 0.4 | 0.6 | 0.9 | 0.26 | 0.4 | 0.6 | 0.9 | 0.26 | 0.4 | 0.6 | 0.9 |
| 20 psi          | 331  | 242 | 190 | 144 | 488  | 344 | 270 | 204 | 342  | 260 |     |     |
| 25 psi          | 413  | 302 | 238 | 180 | 584  | 429 | 338 | 257 | 430  | 326 |     |     |
| 35 psi          | 518  | 380 | 299 | 227 | 737  | 540 | 426 | 323 | 542  | 412 |     |     |
| 45 psi          | 594  | 436 | 343 | 260 | 845  | 620 | 489 | 371 | 622  | 472 |     |     |
| 55 psi          | 655  | 480 | 378 | 287 | 932  | 684 | 539 | 410 | 686  | 522 |     |     |
| 60 psi          | 681  | 500 | 393 | 298 | 969  | 713 | 561 | 426 | 716  | 544 |     |     |

**NETAFIM™**  
NETAFIM USA  
CS 888 638 2346  
www.netafimusa.com

TLCV 1/18



c) Drip Fittings

TOC

Drip Tube Fittings



Tech Spec








## XF Insert Fittings & Insertion Tool

### Features

- Complete line of 17mm insert fittings to simplify installation of XF Series Dripline
- High quality barbs grab tubing for a secure fit
- Unique barb design to reduce insertion force and still retain a secure fit
- Proprietary Insertion Tool significantly reduces the effort required to insert XF Insert Fittings into the tubing
- Brown color to match XF Dripline
- Compatible with XF Series dripline and most polyethylene tubing with 17mm OD
- Made of sturdy, break-resistant plastic

### Operating Range

- Pressure: 0 to 50 psi (0,0 to 4,14 bar)

|   | MODEL              | DESCRIPTION  | APPLICATION  |
|---|--------------------|--|--|
|   | <b>XFF-COUP</b>    | Barb coupling 17 x 17mm  | For 2-way joints   |
|  | <b>XFF-ELBOW</b>   | Barb elbow 17 x 17mm   | Elbow joint connection   |
|  | <b>XFF-TEE</b>     | Barb tee 17 x 17 x 17mm  | For 3-way joints   |
|  | <b>XFF-MA-050</b>  | Barb male adapter 17mm x 1/2" MPT  | For transition from 1/2" pipe to XF series dripline                              |
|  | <b>XFF-MA-075</b>  | Barb male adapter 17mm x 3/4" MPT  | For transition from 3/4" pipe to XF series dripline                              |
|  | <b>XFF-TMA-050</b> | Tee male adapter 17mm x 1/2" MPT x 17mm  | For a 3-way joint connection to 1/2" pipe  |
|  | <b>FITINS-TOOL</b> | Tool aids in reducing the effort required to insert fittings into the dripline tube. | Works with Rain Bird XF Flanged Fittings:<br>• XFF-COUP • XFF-ELBOW<br>• XFF-TEE |

19 - 1 of 1

## 1800™ Series Spray Heads

### Industry's Leading Spray Heads

Trusted for over 30 years, 1800 Series Spray Heads have provided unmatched durability, reliability, and performance.

Superior components and features make the 1800 Series Spray Head the spray head of choice for a wide variety of applications.

#### Features

Co-molded, pressure-activated, multi-functional wiper seal assures positive seal without excess "flow-by" which enables more heads to be installed on the same valve.

- Designed for use with all Rain Bird plastic spray head nozzles – U-Series, HE-VAN, R-VAN, MPR, VAN, and XPCN Series.
- Precision controlled flush at pop-down clears debris from unit, assuring positive stem retraction in all soil types.
- Strong stainless steel spring provides reliable stem retraction.
- Ratchet mechanism on all models allows easy nozzle pattern alignment without tools.
- Pre-installed 1800 Pop-Top™ flush plug blocks debris from entering after flushing. Allows for easy nozzle installation.
- Constructed of time-proven UV-resistant plastic and corrosion resistant stainless steel parts, assuring long product life.
- All sprinkler components are removable from the top without special tools, providing for quick and easy flushing and maintenance of the sprinkler.
- Side inlets featured on 1806, 1806PRS, 1806P45, 1812, 1812PRS, and 1812P45 models only.
- Five-year trade warranty.

#### Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 15 to 70 psi (1.0 to 4.8 bar)

#### Specifications

- Flow-by: 0 at 8 psi (0.6 bar) or greater; 0.1 gpm (0.02 m<sup>3</sup>/h; 0.006 l/s) otherwise

#### Dimensions/Models

- ½" (15/21) NPT female threaded inlet
- Models and height:
  - 1802:** 4" (10 cm) body height; 2" pop-up height (5 cm)
  - 1803:** 5" (12.7 cm) body height; 3" pop-up height (8 cm)
  - 1804:** 6" (15 cm) body height; 4" pop-up height (10 cm)
  - 1806:** 9 ½" (24 cm) body height; 6" pop-up height (15 cm)
  - 1812:** 16" (40 cm) body height; 12" pop-up height (30 cm)
- Exposed surface diameter: 2 ¼" (5.7 cm)

#### How To Specify

##### 1804 - SAM - PRS

|  |  |
|--|--|
| Optional Feature<br>SAM:<br>Seal-A-Matic™<br>check valve | Optional Feature<br>PRS: 30psi (2.1 bar) in-stem<br>pressure regulation<br>P45: 45psi (3.1 bar) in-stem<br>pressure regulation |
| Model<br>1804: 4" (10.2 cm) pop-up height                |  |

#### How To Specify

##### 1804 - SAM-P45 - R-VAN18-360

|  |  |
|--|--|
| Optional Feature<br>SAM:<br>Seal-A-Matic™<br>check valve | Radius Range<br>8' - 14' (2.4 to 4.6m)<br>R-VAN14: 45° - 270°<br>R-VAN14-360: 360°   |
| P45: 45psi (3.1 bar) in-stem<br>pressure regulation      | 13' - 18' (4.0 to 5.5m)<br>R-VAN18: 45° - 270°<br>R-VAN18-360: 360°  |
|  | 17' - 24' (5.2 to 7.3m)<br>R-VAN24: 45° - 270°<br>R-VAN24-360: 360°  |
|  | Strip Nozzles<br>R-VAN-LCS: 5' x 15'<br>(1.5 x 4.6m)<br>R-VAN-RCS: 5' x 15'<br>(1.5 x 4.6m)<br>R-VAN-SST: 5' x 30'<br>(1.5 x 9.1m) |
| Model<br>1804: 4" (10.2 cm) pop-up height                |  |

Note: Specify sprinkler bodies and nozzles separately.

~~4" pop ups for bubblers per plans~~

6" pop ups for turf spray areas per plans

~~12" pop ups w/ MP rotator nozzles in lieu of shrub rotors~~

SAM



PRS-30



PRS-45



SAM-PRS-30



SAM-PRS-P45

### 1800 SAM-PRS-30 Series

Meets the needs of spray body applications using Spray Nozzles regardless of changing elevation or water pressures. Incorporates 1800 Series SAM feature and regulates operating pressure at 30 psi (2.1 bar).

- Designed to maximize application efficiency when using Spray Nozzles.
- Maintains constant outlet pressure at 30psi (3.1 bar) at varying inlet pressures. Maintains constant pressure regardless of nozzle used.
- "SAM-PRS-30" stamped on cap for easy identification and maintenance.
- Five-year trade warranty.

### Operating Range

- Spacing: 2.5 to 24 feet (0.8 to 7.3 m)
- Pressure: 25 to 70 psi (1.7 to 4.8 bar)

### Specifications

- SAM capability: holds up to 14 feet (4.2 m) of head; 6 psi (0.3 bar)
- Flow-by: 0 at 8 psi (0.6 bar) or greater; 0.1 gpm (0.02 m<sup>3</sup>/h; 0.006 l/s) otherwise
- Installation: bottom inlet only
- Regulates nozzle pressure to an average 30 psi (2.1 bar) with inlet pressures of up to 70 psi (4.8 bar)

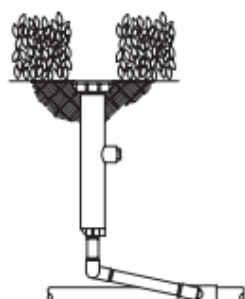
### Dimensions

- ½" (15/21) NPT female threaded inlets
- Body height: 1804 SAM-PRS - 6" (15 cm), 1806 SAM-PRS - 9" (24 cm), 1812 SAM-PRS - 16" (40 cm)
- Exposed diameter: 2¼" (5.7 cm)

### Models

- 1804 SAM-PRS: 4" pop-up height (10 cm)
- 1806 SAM-PRS: 6" pop-up height (15 cm)
- 1812 SAM-PRS: 12" pop-up height (30 cm)

1806 with Swing Joint on Bottom Inlet



### 1800 SAM-P45 Series

Meets the needs of spray body applications using Rotary Nozzles regardless of changing elevation or water pressures. Incorporates 1800 Series SAM feature and regulates operating pressure at 45 psi (3.1 bar).

- Designed to maximize application efficiency when using Rotary Nozzles.
- Maintains constant outlet pressure at 45psi (3.1 bar) at varying inlet pressures. Maintains constant pressure regardless of nozzle used.
- "SAM-PRS-45" stamped on cap for easy identification and maintenance.
- Five-year trade warranty.

### Operating Range

- Spacing: 8 to 24 feet (2.4 to 7.3 m)
- Pressure: 25 to 70 psi (1.7 to 4.8 bar)

### Specifications

- SAM capability: holds up to 14 feet (4.2 m) of head; 6 psi (0.3 bar)
- Flow-by: 0 at 8 psi (0.6 bar) or greater; 0.1 gpm (0.02 m<sup>3</sup>/h; 0.006 l/s) otherwise
- Installation: bottom inlet only
- Regulates nozzle pressure to an average 45 psi (3.1 bar) with inlet pressures of up to 70 psi (4.8 bar)

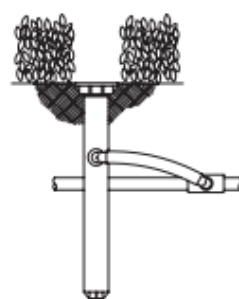
### Dimensions

- ½" (15/21) NPT female threaded inlets
- Body height: 1804 SAM-P45 - 6" (15 cm), 1806 SAM-P45 - 9" (24 cm), 1812 SAM-P45 - 16" (40 cm)
- Exposed diameter: 2¼" (5.7 cm)

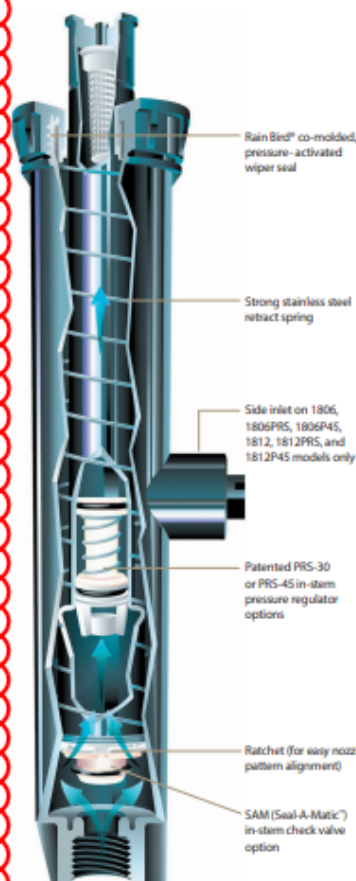
### Models

- 1804 SAM-P45: 4" pop-up height (10 cm)
- 1806 SAM-P45: 6" pop-up height (15 cm)
- 1812 SAM-P45: 12" pop-up height (30 cm)

1812 with Swing Pipe on Side Inlet



All Rain Bird Spray Bodies with PRS are WaterSense certified





## 16. MP Rotator Spray Heads

TOC

ROTATOR®

MP800 SERIES

Spray Head Nozzles

# MP ROTATOR®

Radius: 8' to 35'

### FEATURES

- Radius can be reduced up to approximately 25% on all models
- Easy arc adjustment
- Color-coded for easy identification
- Removable filter screen ensures hassle-free service
- Wind-resistant multi-stream technology

- ▶ Automatic matched precipitation
- ▶ Double-pop
- ▶ Distribution uniformity
- ▶ Low precipitation rate

### OPERATING SPECIFICATIONS

- Recommended operating pressure: 40 PSI
- Recommended filtering when operating on dirty water

### OPTIONS

- Specify Pro-Spray® PRS40 pop-up for accurate pressure regulation at 40 PSI
- Adding "HT" will specify male threaded nozzles

▶ = Advanced Feature descriptions on page 81

#### MP1000 8' to 15' radius

**MP-1000-90**  
90° to 210°

**MP-1000-210**  
210° to 270°

**MP-1000-360**  
360°

#### MP2000 13' to 21' radius

**MP-2000-90**  
90° to 210°

**MP-2000-210**  
210° to 270°

**MP-2000-360**  
360°

#### MP3000 22' to 30' radius

**MP-3000-90**  
90° to 210°

**MP-3000-210**  
210° to 270°

**MP-3000-360**  
360°

#### MP3500 31' to 35' radius

**MP-3500-90**  
90° to 210°

#### MP ROTATOR - SPECIFICATION BUILDER: ORDER 1 + 2

| 1 Model  | 2 Options  |
|--|--|
| <b>MP-1000-90</b> = 8' to 15' radius, adjustable from 90° to 210°    | <b>(blank)</b> = No option   |
| <b>MP-1000-210</b> = 8' to 15' radius, adjustable from 210° to 270°  | <b>HT</b> = Male threaded version (Not available in 3500 and 1000-210) |
| <b>MP-1000-360</b> = 8' to 15' radius, 360°                          |  |
| <b>MP-2000-90</b> = 13' to 21' radius, adjustable from 90° to 210°   |  |
| <b>MP-2000-210</b> = 13' to 21' radius, adjustable from 210° to 270° |  |
| <b>MP-2000-360</b> = 13' to 21' radius, 360°                         |  |
| <b>MP-3000-90</b> = 22' to 30' radius, adjustable from 90° to 210°   |  |
| <b>MP-3000-210</b> = 22' to 30' radius, adjustable from 210° to 270° |  |
| <b>MP-3000-360</b> = 22' to 30' radius, 360°                         |  |
| <b>MP-3500-90</b> = 31' to 35' radius, adjustable from 90° to 210°   |  |
| <b>MP-LCS-515</b> = Left corner strip, 5' x 15'                      |  |
| <b>MP-RCS-515</b> = Right corner strip, 5' x 15'                     |  |
| <b>MP-SS-530</b> = Side strip, 5' x 30'                              |  |
| <b>MP-CORNER</b> = 8' to 15' radius, adjustable from 45° to 105°     |  |

**Examples:**  
 MP-1000-210 = 8' to 15' radius, adjustable from 210° to 270°  
 PROS-06 - PRS40-CV - MP-2000-90 = 6" pop-up regulated at 40 PSI, drain check valve, with MP 2000-90.

82

Hunter®

[Visit hunterindustries.com](http://www.hunterindustries.com)

13 - 1 of 3

17. Site Specific Operation and Maintenance Instructions



1299 West 75 North  
Centerville, UT 84014  
Tel: 801-898-4448

Date: Monday, October 30, 2023

Project: Church of Jesus Christ of Latter Day Saints - A Street Chapel

Location: 135 A Street, Salt Lake City, Utah



NATIONAL  
ASSOCIATION OF  
LANDSCAPE  
PROFESSIONALS

## Operation and Maintenance Instructions for Landscape and Irrigation Systems

**Irrigation System Shut Down Procedure:** The entire system should be blown out with compressed air. After shutting off the water at each point of connection, connect air compressor to the quick coupler located immediately downstream of the point of connection to blow out the system. With the compressed air flowing, zone valves may be manually or automatically opened to allow air to flow through the lateral lines and push any remaining water out. Leave each zone valve open until no more water is observed coming out of the drip emitters or heads. Place the controller in the off position. Remove the backflow devices and store indoors for the winter. Do not allow to freeze.

**Irrigation Start up Procedure:** Make sure all valves, including hose bibs, quick couplers, etc., are closed. Re-install the backflow device. Slowly open the water at the point of connection and allow the mainline to fill. Manually or automatically open each zone valve to let the lines fill. Monitor operation and check for leaks.

**Maintenance of Plant Material:** No special care or treatment of the trees and plant material installed is required. Standard best management practices for watering and fertilization should be followed. Treat with pesticides as needed. Pruning and or trimming to produce optimal size, shape and growth habits should be done while plants are dormant.

**Maintenance of Mulch Areas:** Treat weeds with Round-Up or similar non-selective herbicide as needed to kill weeds. Pre-emergents may also be applied as needed.

**\*\*Warranty Letter: Submitted Separately\*\***

Signature: \_\_\_\_\_

Printed Name: Blake Tingey - VP of Business Development

## V. Planting Section

---

### A. Construction Data

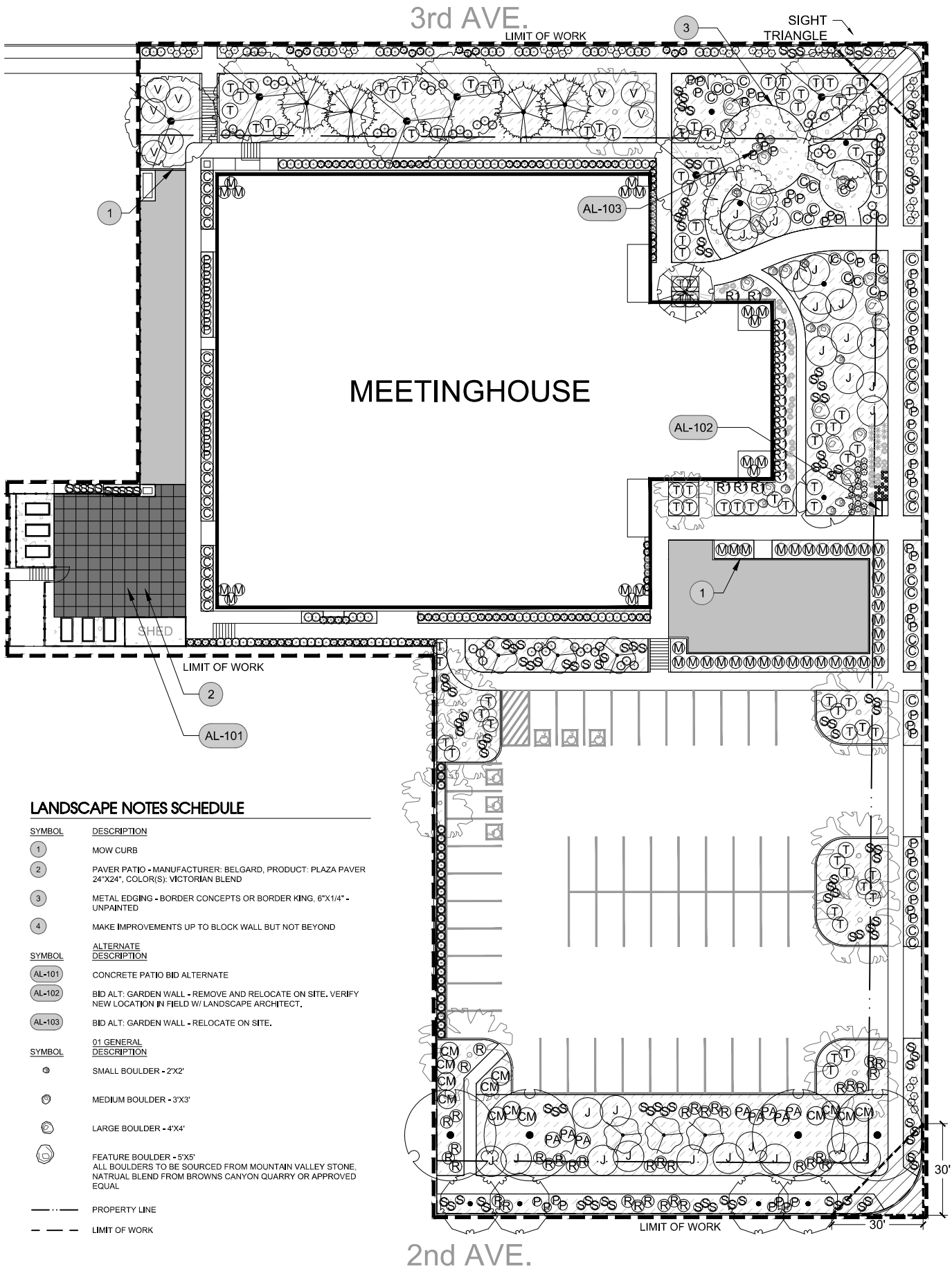
1. Water Source
  - a) City Potable Water
2. Water Restrictions
  - a) None at this time
3. Soil conditions
  - a) Information from SoilWeb via Grant Cardon, USU Extension Soil Specialist
  - b) This soil is in a broad map class called "urban soils" (very highly disturbed from native condition) but is located in a landform where the Bingham and Parley soil series generally occur in similar locations in the valley. The likely is Bingham and it is a gravelly loam, grading to a gravelly sandy loam, so I don't see many concerns other than very low native water holding capacity. Amending planted areas with OM and irrigating accordingly will be important.
  - c) Soil Test Results USU Analytical Laboratory, Logan, Utah

| Test Results USU Analytical Laboratory |          |                |      |            |      |      |      |
|--|----------|----------------|------|------------|------|------|------|
| pH                                     | Salinity | Organic Matter | SAR  | Texture    | Sand | Silt | Clay |
|  | dS/m     | %              |      | -----%     |      |      |      |
| 7.6                                    | 0.59     | 7.1            | 0.43 | Sandy Loam | 69   | 18   | 13   |

4. Notes: Ten samples were taken to a depth of 6-7 inches. A single test hole showed uniform soil to a depth of about 6-inches where it transitioned to a subsoil of gravel and rock.

B. Planting Plan Record Drawing

1. Church Meetinghouse Sustainability, 135 A St. E, Sheets LP101 and LP102 Planting Plan Record Drawings January 02, 2024.
2. Record Drawing inserted as 11"x17".
3. There is no *Picea omorika* (Serbian spruce). It appears to have been substituted with *Pinus heldreichii* (Bosnian pine).
4. *Adagio Eulalia* Grasses (M) are at the corners of the building 3 each corner. Yaku Jima Maiden Grass are around the perimeter of the existing lawn at the southeast corner of the building.



LANDSCAPE NOTES SCHEDULE

| SYMBOL   | DESCRIPTION  |
|--|--|
| 1  | MOW CURB   |
| 2  | PAVER PATIO - MANUFACTURER: BELGARD, PRODUCT: PLAZA PAVER 24\"X24\", COLOR(S): VICTORIAN BLEND           |
| 3  | METAL EDGING - BORDER CONCEPTS OR BORDER KING, 6\"X1/4\" - UNPAINTED                                     |
| 4  | MAKE IMPROVEMENTS UP TO BLOCK WALL BUT NOT BEYOND  |
| SYMBOL   | ALTERNATE DESCRIPTION  |
| AL-101   | CONCRETE PATIO BID ALTERNATE   |
| AL-102   | BID ALT: GARDEN WALL - REMOVE AND RELOCATE ON SITE. VERIFY NEW LOCATION IN FIELD W/ LANDSCAPE ARCHITECT. |
| AL-103   | BID ALT: GARDEN WALL - RELOCATE ON SITE.   |
| SYMBOL   | 01 GENERAL DESCRIPTION   |
| ●  | SMALL BOULDER - 2\"X2'   |
| ●  | MEDIUM BOULDER - 3\"X3'  |
| ●  | LARGE BOULDER - 4\"X4'   |
| ●  | FEATURE BOULDER - 5\"X5'   |
| ALL BOULDERS TO BE SOURCED FROM MOUNTAIN VALLEY STONE, NATURAL BLEND FROM BROWNS CANYON QUARRY OR APPROVED EQUAL |  |
| ---  | PROPERTY LINE  |
| - - -  | LIMIT OF WORK  |

PLANT SCHEDULE

| SYMBOL             | CODE | BOTANICAL NAME                               | COMMON NAME                      | SIZE                      | MATURE SIZE (HXW) | HYDROZONE | QTY     |           |
|--------------------|------|--|----------------------------------|---------------------------|-------------------|-----------|---------|-----------|
| TREES              |      |  |                                  |                           |                   |           |         |           |
|                    | AG   | ACER GRISEUM                                 | PAPERBARK MAPLE                  | 2" CAL                    | 20' X 20'         | TD3       | 2       |           |
|                    | CC   | CERCIS CANADENSIS                            | EASTERN REDBUD                   | 2" CAL                    | 30' X 30'         | TD2       | 6       |           |
|                    | MR   | MAGNOLIA STELLATA 'ROYAL STAR'               | ROYAL STAR MAGNOLIA              | 25 GAL                    | 15' X 12'         | TD3       | 6       |           |
|                    | MR2  | MAGNOLIA X SOULANGEANA 'RUSTICA RUBRA'       | RUSTIC RUBY MAGNOLIA             | 1.75" CAL                 | 20' X 20'         |           | 1       |           |
|                    | MS   | MALUS X 'SPRING SNOW'                        | SPRING SNOW CRABAPPLE            | 2" CAL                    | 20' X 20'         | TD2       | 4       |           |
|                    | PC   | PRUNUS VIRGINIANA 'CANADA RED'               | CANADA RED CHOKECHERRY           | 2" CAL                    | 25' X 25'         | TD2       | 3       |           |
|                    | ZV   | ZELKOVA SERRATA 'VILLAGE GREEN'              | VILLAGE GREEN JAPANESE ZELKOVA   | 2" CAL                    | 40' X 30'         | TD4       | 4       |           |
| EVERGREEN TREES    |      |  |                                  |                           |                   |           |         |           |
|                    | PO2  | PICEA OMORIKA                                | SERBIAN SPRUCE                   | 8'-10' B&B                | 30' X 20'         | TE3       | 4       |           |
| SHRUBS             |      |  |                                  |                           |                   |           |         |           |
|                    | CM   | CHAMAEBATIARIA MILLEFOLIUM                   | FERNBUSH                         | 5 GAL                     | 6' X 6'           | SD0       | 13      |           |
|                    | R    | RIBES ALPINUM                                | ALPINE CURRANT                   | 5 GAL                     | 4' X 4'           | SD2       | 38      |           |
|                    | V2   | VIBURNUM OPULUS 'NANUM'                      | DWARF EUROPEAN CRANBERRYBUSH     | 5 GAL                     | 30' X 30"         | SD2       | 82      |           |
| EVERGREEN SHRUBS   |      |  |                                  |                           |                   |           |         |           |
|                    | BS   | BUXUS SEMPERVIRENS 'SUFFRUTICOSA'            | SUFFRUTICOSA COMMON BOXWOOD      | 5 GAL                     | 2' X 2'           | SE3       | 9       |           |
|                    | J    | JUNIPERUS SABINA 'BUFFALO'                   | BUFFALO JUNIPER                  | 5 GAL                     | 9' X 10'          | SE1       | 25      |           |
|                    | PM   | PINUS MUGO 'SLOWMOUND'                       | SLOWMOUND MUGO PINE              | 5 GAL                     | 3' X 3'           | SE2       | 142     |           |
|                    | T    | TAXUS X MEDIA 'DENSIFORMIS'                  | DENSE JAPANESE YEW               | 5 GAL                     | 3' X 5'           | SE3       | 90      |           |
| FLOWERING SHRUBS   |      |  |                                  |                           |                   |           |         |           |
|                    | C    | CARYOPTERIS X CLANDONENSIS 'BLUE MIST'       | BLUE MIST BLUEBEARD              | 2 GAL                     | 4' X 4'           | SD2       | 57      |           |
|                    | PA   | PEROVSKIA ATRIPLICIFOLIA                     | RUSSIAN SAGE                     | 2 GAL                     | 5' X 5'           | P1        | 8       |           |
|                    | P    | POTENTILLA FRUTICOSA 'GOLD DROP'             | GOLD DROP BUSH CINQUEFOIL        | 5 GAL                     | 3' X 3'           | SD2       | 71      |           |
|                    | R1   | ROSA X 'RADTKO'                              | DOUBLE KNOCK OUT® RED ROSE       | 5 GAL                     | 4' X 4'           | SD2       | 20      |           |
|                    | S    | SPIRAEA JAPONICA 'NEON FLASH'                | NEON FLASH JAPANESE SPIREA       | 5 GAL                     | 3' X 3'           | SD3       | 123     |           |
|                    | V    | VIBURNUM OPULUS 'ROSEUM'                     | EUROPEAN SNOWBALL VIBURNUM       | 5 GAL                     | 8' X 8'           | SD2       | 8       |           |
| ORNAMENTAL GRASSES |      |  |                                  |                           |                   |           |         |           |
|                    | CK   | CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'   | KARL FOERSTER FEATHER REED GRASS | 1 GAL                     | 5' X 3'           | TW2       | 27      |           |
|                    | H    | HELICTOTRICHON SEMPERVIRENS 'SAPPHIRE'       | SAPPHIRE BLUE OAT GRASS          | 1 GAL                     | 30" X 30"         | TW1       | 51      |           |
|                    | M    | MISCANTHUS SINENSIS 'YAKU JIMA'              | YAKU JIMA MAIDEN GRASS           | 5 GAL                     | 4' X 4'           | TW2       | 52      |           |
| PERENNIAL          |      |  |                                  |                           |                   |           |         |           |
|                    | GG   | GAILLARDIA X GRANDIFLORA 'GOBLIN'            | GOBLIN BLANKETFLOWER             | 1 GAL                     | 1' X 1'           | P1        | 23      |           |
|                    | HP   | HEMEROCALLIS X 'PARDON ME'                   | PARDON ME DAYLILY                | 1 GAL                     | 2' X 2'           | P3        | 14      |           |
|                    | IR   | IRIS X GERMANICA 'LEMON CLOUD'               | LEMON CLOUD GERMAN IRIS          | 1 GAL                     | 3' X 2'           | P3        | 20      |           |
|                    | LC   | LAVANDULA ANGUSTIFOLIA 'HIDCOTE BLUE'        | HIDCOTE BLUE LAVENDER            | 1 GAL                     | 2' X 2'           | P2        | 42      |           |
| SYMBOL             | CODE | BOTANICAL NAME                               | COMMON NAME                      | SIZE                      | MATURE SIZE (HXW) | HYDROZONE | SPACING | QTY       |
| GROUND COVERS      |      |  |                                  |                           |                   |           |         |           |
|                    | BU   | BARK MULCH                                   | UNCOLORED BARK MULCH             | MULCH                     |                   |           |         | 23,468 SF |
|                    | TG   | EXISTING LAWN                                | EXISTING LAWN                    | EXISTING                  |                   |           |         | 3,538 SF  |
|                    | CH   | WASATCH GRAY CRUSHER FINES - CHAT 3/8" MINUS | STABILIZED CHAT                  | 3/8" MINUS CRUSHED GRAVEL |                   |           |         | 1,814 SF  |

RECORD DRAWING

DATE: JAN. 02, 2024

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE DESIGN PROFESSIONAL HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

Church Meetinghouse Sustainability

135 A St. E

Salt Lake City, UT

Project #: 23-103

Drawn: EJR Checked: GB

Date: 07/18/23

Status: BID SET

01/02/24

RECORD DRAWINGS

Sheet Name:

PLANTING PLAN

Sheet Number:

LP101

MGB+A

The Grassli Group

Urban Designers

Land Planners

Landscape Architects

145 West 200 South

Salt Lake City, Utah 84101

Tel (801) 364-9696

Fax (801) 364-9719

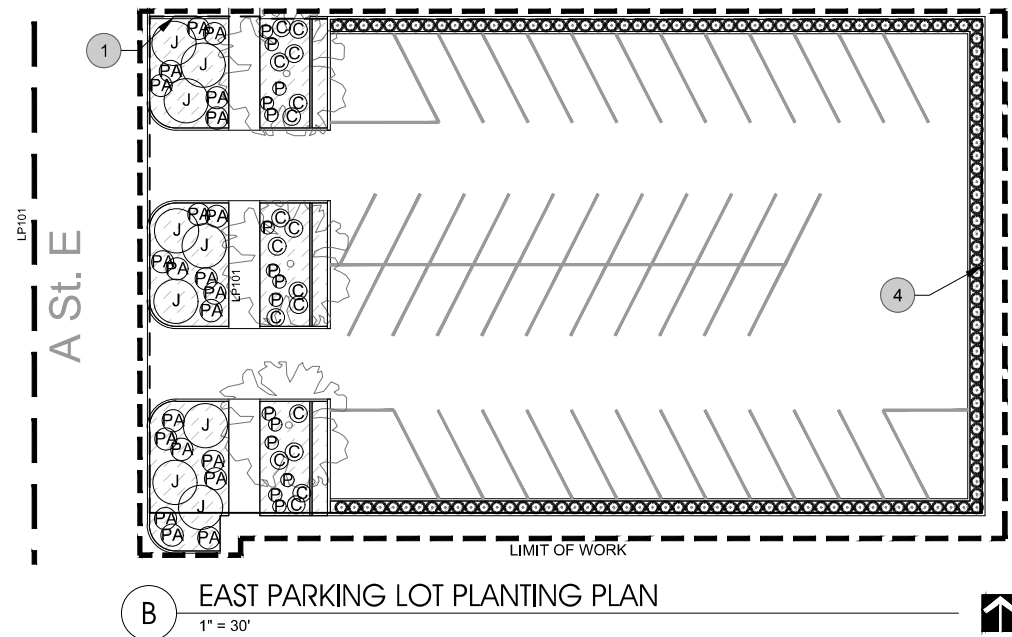
www.mgba-studio.com






STATE OF UTAH

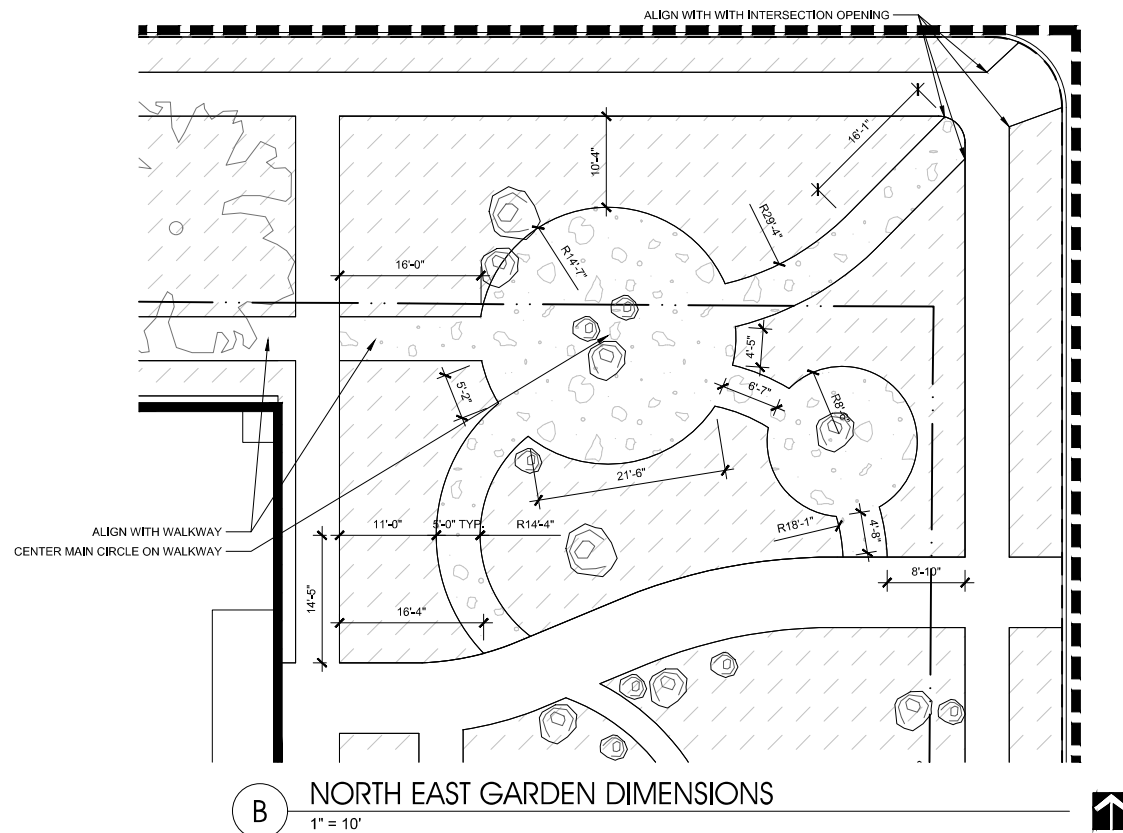
JAY BOLLWINKEL

Professional Landscape Architect





| EVERGREEN SHRUBS  |    | CODE                                       | BOTANICAL NAME                   | COMMON NAME | SIZE     | MATURE SIZE (HxW) | HYDROZONE | QTY     |          |
|---|----|--|----------------------------------|-------------|----------|-------------------|-----------|---------|----------|
|  | J  | JUNIPERUS SABINA 'MONNA'                   | CALGARY CARPET® JUNIPER          | 5 GAL       | 9' X 10' | SE1               | 9         |         |          |
| FLOWERING SHRUBS  |    | CODE                                       | BOTANICAL NAME                   | COMMON NAME | SIZE     | MATURE SIZE (HxW) | HYDROZONE | QTY     |          |
|  | C  | CARYOPTERIS X CLANDONENSIS 'BLUE MIST'     | BLUE MIST BLUEBEARD              | 2 GAL       | 4' X 4'  | SD2               | 17        |         |          |
|  | PA | PEROVSKIA ATRIPLICIFOLIA                   | RUSSIAN SAGE                     | 2 GAL       | 5' X 5'  | P1                | 21        |         |          |
|  | P  | POTENTILLA FRUTICOSA 'GOLD DROP'           | GOLD DROP BUSH CINQUEFOIL        | 5 GAL       | 3' X 3'  | SD2               | 15        |         |          |
| ORNAMENTAL GRASSES  |    | CODE                                       | BOTANICAL NAME                   | COMMON NAME | SIZE     | MATURE SIZE (HxW) | HYDROZONE | QTY     |          |
|  | CK | CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' | KARL FOERSTER FEATHER REED GRASS | 1 GAL       | 5' X 3'  | TW2               | 136       |         |          |
| GROUND COVERS   |    | CODE                                       | BOTANICAL NAME                   | COMMON NAME | SIZE     | MATURE SIZE (HxW) | HYDROZONE | SPACING | QTY      |
|  | BU | BARK MULCH                                 | UNCOLORED BARK MULCH             | MULCH       |          |                   |           |         | 3,794 SF |
|  |    | EXISTING DECIDUOUS TREE                    |                                  |             |          |                   |           |         |          |
|  |    | EXISTING EVERGREEN TREE                    |                                  |             |          |                   |           |         |          |



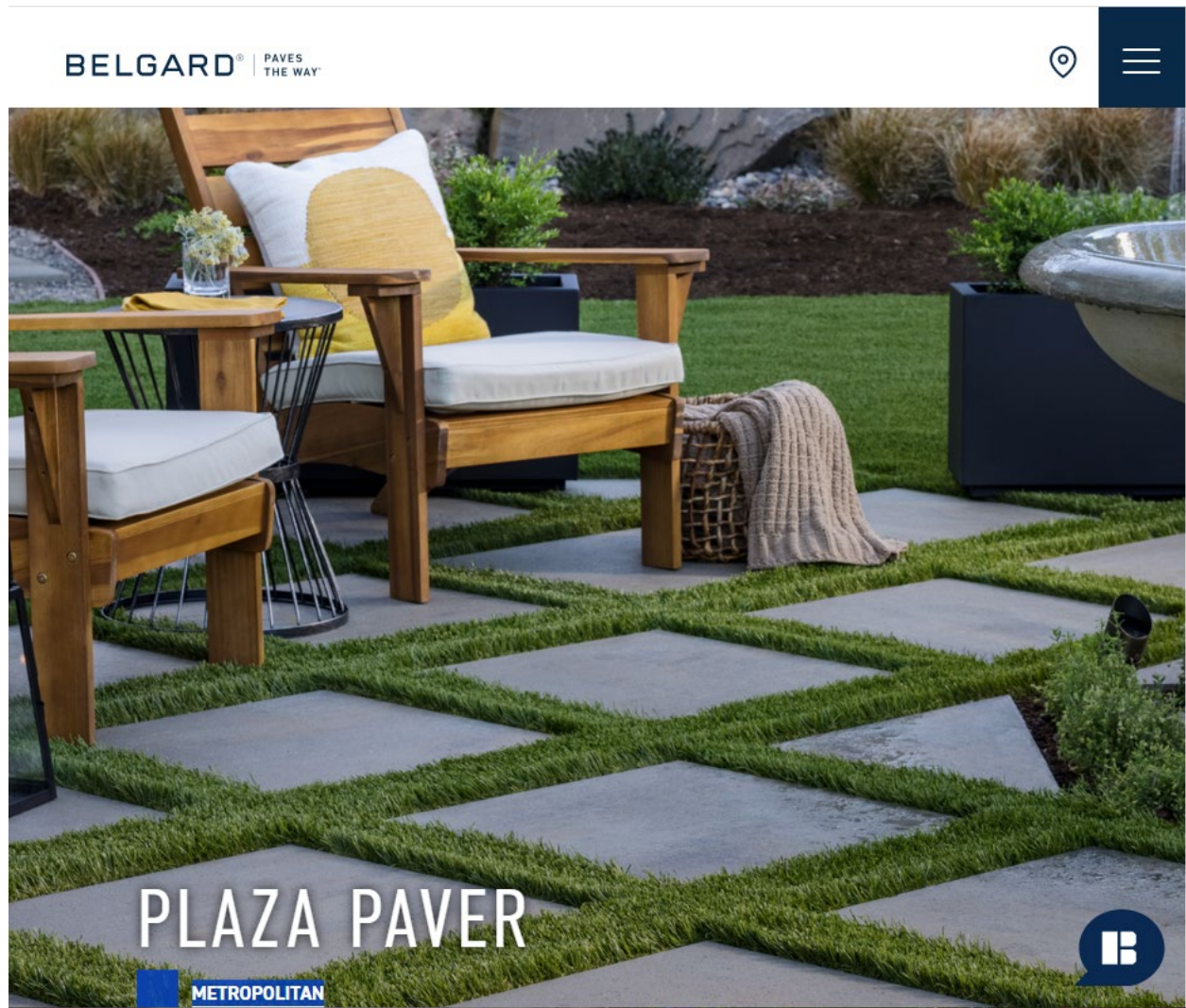
| <u>SYMBOL</u> | <u>DESCRIPTION</u>   |
|---------------|--|
| ①             | MOW CURB   |
| ②             | PAVER PATIO - MANUFACTURER: BELGARD, PRODUCT: PLAZA PAVER 24"X24", COLOR(S): VICTORIAN BLEND |
| ③             | METAL EDGING - BORDER CONCEPTS OR BORDER KING, 6"X1/4" - UNPAINTED                           |
| ④             | MAKE IMPROVEMENTS UP TO BLOCK WALL BUT NOT BEYOND  |


THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE DESIGN PROFESSIONAL HAS NOT VERIFIED THE THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

**Church Meetinghouse Sustainability**  
135 A St. E  
Salt Lake City, UT

## C. Landscape Components

### 1. Pavers





**STAKER PARSON**  
MATERIALS & CONSTRUCTION  
A CRH COMPANY

About Us  
▼

Decorative Landscape Products

# Wasatch Grey

Wasatch Grey is sold in a 1/4" at the Beck Street Landscape Yard. 1" is sold at the Beck Street & Ogden Landscape Yards. Products are also available in bags.



---


AVAILABLE AT THESE LOCATIONS

- Staker Parson Landscape Centers

[Request a Quote](#)

[Calculators](#)





**STAKER PARSON**  
MATERIALS & CONSTRUCTION  
A CRH COMPANY

### 3. Pathway stabilizer



#### STABILIZER® WATER BINDING TECHNOLOGY

The only patented natural soil binder formulation. Derived from rapidly renewable organic materials, Stabilizer increases accessibility in natural aggregates. Many products call themselves "stabilizers" but this is the original natural binder trademarked over 30 years ago.



##### *How does it work?*

**Integration** - Blends into pore space of soil aggregate

**Absorption** - Absorbs 12 X its weight in water

**Cohesion** - Forms a cohesive gel that binds soil particles, keeping stability between soil particles during periods of excessive moisture


**Balance** - Maintains damp soil consistency longer when wet, and slowly releases moisture back into the soil in dry conditions

**Stability** - All of this equals a more stable and accessible footing for traffic

**Related Products:** [Stabilizer](#) | [Original Stabilized Decomposed Granite](#)



#### 4. Boulders

**MOUNTAIN VALLEY STONE**  
Brown's Canyon Quarry | Peoa, Utah

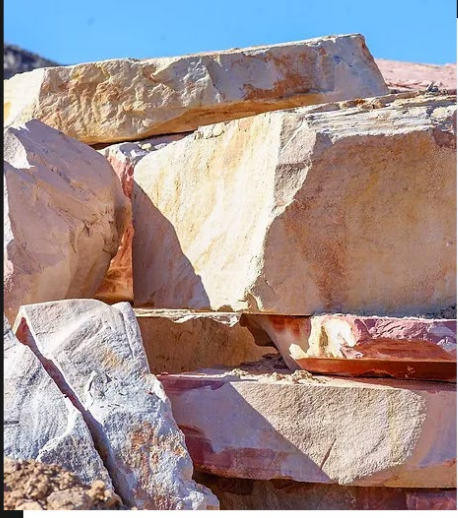
Home Products Sustainability Contact Brochures Stone Hub info@mountainvalleystone.com (435) 654-0120

## LANDSCAPING

*The Natural Choice*

Beautify your yard with Mountain Valley Sandstone boulders and wall stone, an attractive blond-colored sandstone with occasional rust-colored and golden-brown streaks running through it. Mountain Valley Sandstone is available in various shapes, colors, and sizes to add interest to diverse landscape designs.

Products



#### 5. Metal Edging

- a) Metal edging – 1/4" x 6", unpainted.
- b) Source – Wasatch Steel, flat bar

#### 6. Wood Mulch

- a) Uncolored bark mulch
- b) Source – Diamond Tree Natural, Medium Mulch



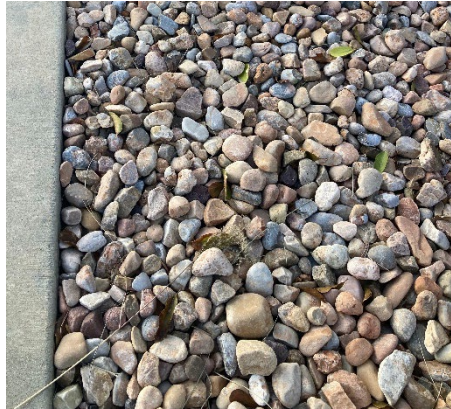
Medium Mulch





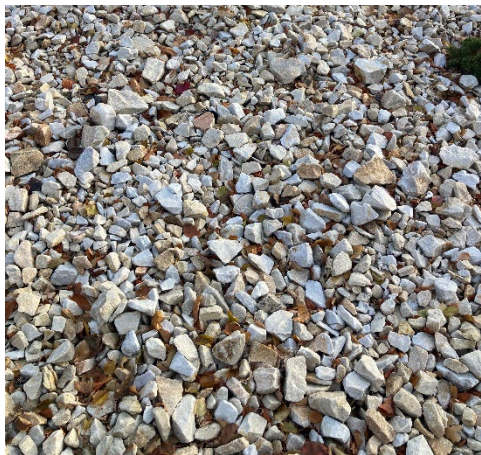
7. Cobble Stone Mulch

- a) Source – Utah Landscaping Rock, South Town Cobble, 1-1/2”



8. Coarse broken stone mulch

- a) Source – R.A. Johnson Rock Products – 1-1/2” and 3”-4” Crushed



## D. Plant Materials

### New plants added in renovation

#### Trees

*Acer griseum*  
*Cercis canadensis*  
*Magnolia stellata* 'Royal Star'  
*Magnolia x soulangeana* 'Rustic Rubra'  
*Malus* 'Spring Snow'  
*Picea omorika*  
*Pinus heldreichii*  
*Prunus virginiana* 'Canada Red'  
*Zelkova serrata* 'Village Green'

#### Shrubs

*Buxus sempervirens* "suffruticosa"  
*Caryopteris x clandonensis* 'Blue Mist'  
*Chamaebatiaria millefolium*  
*Juniperus sabina* 'Buffalo'  
*Juniperus sabina* 'Monna'  
*Perovskia atriplicifolia*  
*Pinus mugo* 'Slowmound'  
*Potentilla fruticosa* 'Gold Drop'  
*Ribes alpinum*  
*Rosa x* 'Radtko'  
*Spiraea japonica* 'Neon Flash'  
*Taxus x media* 'Densiformis'  
*Viburnum opulus* 'Nanum'  
*Viburnum opulus* 'Roseum'

#### Ornamental grasses

*Calamagrostis x acutiflora* 'Karl Foerster'  
*Helictotrichon sempervirens* 'Sapphire'  
*Miscanthus sinensis* 'Adagio'  
*Miscanthus sinensis* 'Yaku Jima'

#### Perennials

*Gaillardia x grandiflora* 'Goblin'  
*Hemerocallis x* 'Pardon Me'  
*Iris x germanica* 'Lemon Cloud'  
*Lavandula angustifolia* 'Hidcote Blue'

Paperbark maple  
Eastern redbud  
Royal Star magnolia  
Rustica Rubra saucer magnolia  
Spring Snow crabapple  
Serbian Spruce  
Bosnian pine  
Canada Red chokecherry  
Village green Japanese zelkova

Suffruticosa Common Boxwood  
Blue mist bluebeard  
Fernbush  
Buffalo juniper  
Calgary Carpet juniper  
Russian sage  
Slowmound mugo pine  
Gold Drop potentilla  
Alpine currant  
Double Knock Out rose  
Neon Flash Japanese spiraea  
Densiformis yew  
Dwarf European cranberrybush  
Roseum European cranberrybush

Karl Foerster feather reed grass  
Sapphire blue oat grass  
Adagio maiden grass  
Yaku Jima maiden grass

Goblin blanketflower  
Pardon Me daylily  
Lemon Cloud German iris  
Hidcote English lavender

### Plants retained from original landscape

#### Trees

*Fraxinus pennsylvanica*  
*Koelreuteria paniculata*  
*Magnolia* spp.  
*Pinus nigra*  
*Sophora japonica*

#### Shrubs

*Rosa* spp.

Green ash  
Goldenraintree  
Magnolia  
Austrian pine  
Japanese pagoda tree

Shrub rose



Fall Color

**Name (Common/Scientific)** – Paperbark Maple / *Acer griseum*

**Category** – Small tree

**Mature Size (Height x Width)** – 20-30' x 15-25'

**Eco-Region** – Eco-region 5.0, 6.0, 7.0, 8.1, 9.1, 9.2, 10.1, 11.0, 13.0

**SLC Plant List Hydrozone** – Td4

**USDA Hardiness** – Zones 4 - 8

**Water Use** – Moderate

**Solar Exposure** – Full Sun to partial shade

**Notes** – Exfoliating bark is one of the nicest features of this tree. Red-orange fall color.

**Plant establishment period recommendations**

- Prefers moist, well-drained soils. Do not over or under water.

**Post plant establishment period recommendations**

- Prune as per International Society of Arboriculture standards
- Apply slow release fertilizer at one pound N/1000 sq ft /year

**References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=q110>





Spring flowers

**Name (Common/Scientific)** – Eastern redbud / *Cercis canadensis*

**Category** – Flowering Tree

**Mature Size (Height x Width)** – 20-30' X 25-35'

**Eco-Region** – Eco-regions 5.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 11.0, 13.0

**SLC Plant List Hydrozone** – Td4

**USDA Hardiness** – Zones 4 - 8

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Bright pink to magenta blooms occur prior to leaf formation. Lots of pea-like seed pods in the fall and winter.

**Plant establishment period recommendations**

- Hard to transplant so best to leave alone once planted. Best in moderately moist, well drained soils.

**Post plant establishment period recommendations**

- Prune as per International Society of Arboriculture standards
- Maintain low irrigation and mulching. If leaves are scorched, increase irrigation.
- Susceptible to canker, verticillium wilt and many insects. Keep vigor high to avoid insects and diseases.

**References –**

Missouri Botanical Garden. Accessed December 2023.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=h550>



Existing Tree

**Name (Common/Scientific)** – Green Ash / *Fraxinus pennsylvanica*

**Category** – Shade tree

**Mature Size (Height x Width)** – 20-50' X 20-50'

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 10.1, 13.0

**SLC Plant List Hydrozone** – Td1-2

**USDA Hardiness** – Zones 4-9

**Water Use** – Low to moderate

**Solar Exposure** – Full sun

**Notes** – Very tough tree.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Adaptable to a range of soils and pH's. Tolerates urban and other conditions.

#### **Post plant establishment period recommendations**

- Susceptible to a number of insects the most serious of which is the emerald ash borer which is an invasive insect that has eliminated ash as a choice for future landscape plantings. Specimen trees can be maintained, but must be closely monitored and treated as needed.
- Tolerates some drought once established
- Consider treating specimen trees to resist EAB
- Prune as per International Society of Arboriculture standards
- Apply slow release fertilizer at one pound N/1000 sq ft/year

#### **References –**

Dirr, M.A. 2009. Manual of Woody Landscape Plants. 6th Ed. Stipes Publishing, Champaign





Existing Tree

**Name (Common/Scientific)** – Goldenrain tree / *Koelreuteria paniculata*

**Category** – Tree

**Mature Size (Height x Width)** – 30-40' x 30-40'

**Eco-Region** – Eco-region 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0, 13.0

**SLC Plant List Hydrozone** – Td2

**USDA Hardiness** – Zones 5 - 9

**Water Use** – Dry to Moderate

**Solar Exposure** – Full Sun

**Notes** – Tolerant to both drought and air pollution. Great yellow summer flowers with showy seed pods in the fall.

**Plant establishment period recommendations**

- Soil tolerant but needs good drainage.

**Post plant establishment period recommendations**

- No serious problems. A great, tough tree.
- Prune as per International Society of Arboriculture standards
- Apply slow release fertilizer at one pound N/1000 sq ft/year

**References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=a550>



Photo: Missouri Botanical Garden, spring flowering

**Name (Common/Scientific)** – Royal Star magnolia / *Magnolia stellata* ‘Royal Star’

**Category** – Flowering Tree

**Mature Size (Height x Width)** – 10-20’ X 8-15’

**Eco-Region** – Eco-regions 5.0, 6.0, 8.1, 8.2, 9.1, 9.2, 10.1, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – Td4

**USDA Hardiness** – Zones 4 - 8

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Small specimen tree with white flowers blooming in March. Royal Star blooms later in the season than the species, so less frost risk.

#### **Plant establishment period recommendations**

- Easy to establish. Does best in well-drained, consistently moist soils with lots of organic matter.

#### **Post plant establishment period recommendations**

- Minimal pruning required.
- Apply slow release fertilizer at one pound N per 1000 sq ft annually.
- Few insect or disease problems.

#### **References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=249462&isprofile=1&basic=Magnolia%20stellata>



Photo: Landscape Plants Oregon State University, spring flowering

**Name (Common/Scientific)** – Rustica Rubra saucer magnolia / *Magnolia x soulangeana* ‘Rustica Rubra’

**Category** – Flowering Tree

**Mature Size (Height x Width)** – 25’ X 25’

**Eco-Region** – Eco-regions 5.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – Td4

**USDA Hardiness** – Zones 4-9

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Small specimen tree with purple, saucer-shaped flowers blooming early. Late frosts can kill flower buds.

#### **Plant establishment period recommendations**

- Easy to establish. Does best in well-drained, consistently moist soils with lots of organic matter.

#### **Post plant establishment period recommendations**

- Minimal pruning required.
- Apply slow release fertilizer at one pound N per 1000 sq ft annually.
- Few insect or disease problems.

#### **References –**

Utah State University Botanical Center

<https://extension.usu.edu/botanicalcenter/trees-of-varga-arboretum/rustica-rubra-magnolia>



Photo: Missouri Botanical Garden, spring flowering

**Name (Common/Scientific)** – Spring Snow crabapple / *Malus* ‘Spring Snow’

**Category** – Flowering Tree

**Mature Size (Height x Width)** – 20-25’ X 15-20’

**Eco-Region** – Eco-regions 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 12.0, 13.0

**SLC Plant List Hydrozone** – Td3

**USDA Hardiness** – Zones 3-7

**Water Use** – Moderate

**Solar Exposure** – Full sun

**Notes** – Spring blooming with white flowers. The primary asset of this crabapple is that it is fruitless.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Adaptable to a range of soils but should be well drained.

#### **Post plant establishment period recommendations**

- Maintain low irrigation and mulching. If leaves are scorched, increase irrigation.
- Prune as per International Society of Arboriculture standards
- Apply slow release fertilizer at one pound N per 1000 sq ft annually.
- Highly susceptible to apple scab, less so to other apple diseases and insects. Keeping vigor high should prevent most problems.

#### **References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=d738>





Photo: Missouri Botanical Garden

**Name (Common/Scientific)** – Serbian spruce / *Picea omorika*'

**Category** – Evergreen Tree

**Mature Size (Height x Width)** – 40-60' X 15-20'

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 10.1

**SLC Plant List Hydrozone** – Te3

**USDA Hardiness** – Zones 4-7

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Low maintenance, prefers cooler temperatures, pyramidal shape.

**Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant.

**Post plant establishment period recommendations**

- Maintain low irrigation and mulching.
- Apply slow release fertilizer at one pound N per 1000 sq ft annually.
- Disease resistant, may be susceptible to some insects.

**References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=h220>





**Name (Common/Scientific)** – Bosnian pine / *Pinus heldreichii*

**Category** – Evergreen tree

**Mature Size (Height x Width)** – 50-70' x 20-40'

**Eco-Region** – Eco-region 5.0, 6.0, 7.0, 8.1, 9.1, 10.1, 13.0

**SLC Plant List Hydrozone** – Te3

**USDA Hardiness** – Zones 3-8

**Water Use** – Moderate

**Solar Exposure** – Full Sun

**Notes** – Soil tolerant with good drainage. Prefers cool summer conditions.

#### **Plant establishment period recommendations**

- Keep moist with good drainage

#### **Post plant establishment period recommendations**

- Adapted to dry, limestone soils
- Watch for pine needle scale, but otherwise largely pest free.
- Fertilize with one pound N/1000 sq ft/year

#### **References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=285051&isprofile=1&basic=bosnian%20pine>



Existing Tree

**Name (Common/Scientific)** – Austrian pine / *Pinus nigra*

**Category** – Evergreen tree

**Mature Size (Height x Width)** – 40-60' x 20-40'

**Eco-Region** – Eco-region 5.0, 6.0, 7.0, 8.1, 9.1, 9.2, 10.1, 13.0

**SLC Plant List Hydrozone** – Te3

**USDA Hardiness** – Zones 4 - 7

**Water Use** – Moderate

**Solar Exposure** – Full Sun

**Notes** – Soil tolerant with good drainage. Also tolerant of urban conditions.

**Plant establishment period recommendations**

- Soil tolerant but needs good drainage.

**Post plant establishment period recommendations**

- Tolerates some drought once established
- Susceptible to *Sphaeropsis* (Diplodia) tip blight and *Dothistroma* needle blight
- Not too many serious problems. Overall a great pine tree.
- With maturity they do shed a fair amount of needles.
- Apply slow release fertilizer at one pound N per 1000 sq ft annually

**References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=284999>



Photo: <https://affordabletrees.com/products/canada-red-chokecherry>

**Name (Common/Scientific)** – Canada Red chokecherry / *Prunus virginiana* ‘Canada Red’

**Category** – Flowering Tree

**Mature Size (Height x Width)** – 20-25’ X 15-20’

**Eco-Region** – Eco-regions 5.0, 6.0, 8.1, 8.2, 9.1, 10.1, 13.0

**SLC Plant List Hydrozone** – Sd3

**USDA Hardiness** – Zones 2-7

**Water Use** – Low to Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Leaves emerge green and then become dark purple. Showy, fragrant white flowers. Will sucker unless on sucker-free rootstock.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant.

#### **Post plant establishment period recommendations**

- Maintain low irrigation and mulching. If leaves are scorched, increase irrigation.
- Branching structure is irregular and both branches and suckers should be pruned annually
- Apply slow release fertilizer at one pound N per 1000 sq ft annually
- Susceptible to many diseases and insects. Keeping vigor high should prevent most problems.

#### **References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=286359&isprofile=1&basic=Prunus%20virginiana>



Existing Tree

**Name (Common/Scientific)** – Japanese pagoda tree / *Sophora japonica* (*Styphnolobium japonicum*)

**Category** – Tree

**Mature Size (Height x Width)** – 50-75' x 50-75'

**Eco-Region** – Eco-region 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 13.0

**SLC Plant List Hydrozone** – Td3

**USDA Hardiness** – Zones 4 - 8

**Water Use** – Moderate

**Solar Exposure** – Full Sun to partial shade

**Notes** – Tolerant to both drought and air pollution. Attractive leaves and flowers are its best attributes.

#### **Plant establishment period recommendations**

- Soil tolerant but needs good drainage.

#### **Post plant establishment period recommendations**

- No serious problems, but watch for leafhoppers and *Verticillium* wilt
- Should get adequate fertilizer through lawn fertilization and ability to fix nitrogen
- Prune according to International Society of Arboriculture standards

#### **References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=254548>





Photo: Missouri Botanical Garden

**Name (Common/Scientific)** – Village Green Japanese Zelkova / *Zelkova serrata* 'Village Green'

**Category** – Deciduous Shade Tree

**Mature Size (Height x Width)** – 40' X 40'

**Eco-Region** – 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – Td4

**USDA Hardiness** – Zones 5-8

**Water Use** – Moderate

**Solar Exposure** – Full sun

**Notes** – Tolerant urban tree.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant.

#### **Post plant establishment period recommendations**

- Maintain low irrigation and mulching. If leaves are scorched, increase irrigation.
- Heavily branched with narrow crotch angles, so careful annual pruning required using International Society of Arboriculture standards
- Apply slow release fertilizer at one pound N per 1000 sq ft annually
- Pest and disease resistant.

#### **References –**

Missouri Botanical Garden.

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=255875&isprofile=1&basic=Zelkova%20serrata>





Photo: Progressive Plants

**Name (Common/Scientific)** – Suffruticosa Common Boxwood / *Buxus sempervirens* ‘suffruticosa’

**Category** – Evergreen shrub

**Mature Size (Height x Width)** – 2’ X 2’

**Eco-Region** – Eco-regions 8.1, 8.2

**USDA Hardiness** – Zones 5-8

**Water Use** – Moderate

**Solar Exposure** – Full sun, part sun / shade

**Notes** – Slow growing. Dwarf habit makes this ideal for edging and borders along pathways or around flowerbeds.

**Plant establishment period recommendations**

- Standard planting practices work well. Adaptable to a range of soils but should be well drained with not too much sand or too much clay.
- Full sun may scorch the foliage.
- Mulch and control weeds.

**Post plant establishment period recommendations**

- Maintain moderate irrigation and mulching. If leaves are scorched, increase irrigation.
- Pruning as needed on an annual basis in early spring.
- Apply slow release fertilizer at one pound N per 1000 sq ft annually.

**References –**

Gardenia. Accessed November 2024.

<https://www.gardenia.net/plant/buxus-sempervirens-suffruticosa-boxwood>



**Name (Common/Scientific)** – Blue Mist bluebeard / *Caryopteris x clandonensis* ‘Blue Mist’

**Category** – Flowering shrub

**Mature Size (Height x Width)** – 3’ X 4’

**Eco-Region** – Eco-regions 5.0, 6.0, 9.1, 9.2, 10.1, 11.0, 13.0

**SLC Plant List Hydrozone** – Sd2

**USDA Hardiness** – Zones 5-9

**Water Use** – Moderate

**Solar Exposure** – Full sun

**Notes** – Blue flowers bloom on new season’s growth. Usually dies back to the ground in zones 5-6, so it generally should be pruned to the ground each winter. Soil tolerant but must have good drainage. Aromatic when touched.

**Plant establishment period recommendations**

- Standard planting practices work well

**Post plant establishment period recommendations**

- Minimal disease and insect problems.
- Do not over irrigate
- Fertilize with 1 pound N/1000 sq ft/ year

**References –**

Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=244664&isprofile=0>



Flowering

**Name (Common/Scientific)** – Fernbush / *Chamaebatiaria millefolium*

**Category** – Semi-deciduous flowering shrub

**Mature Size (Height x Width)** – 6-8' X 6-8'

**Eco-Region** – Eco-regions 6.0, 8.1, 9.1, 9.2, 10.1, 10.2, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – Sd0

**USDA Hardiness** – Zones 4-9

**Water Use** – Low

**Solar Exposure** – Full sun

**Notes** – White blooms in summer. Leaves look like ferns. Attracts bees and butterflies.

#### **Plant establishment period recommendations**

- Easy to transplant to the field and standard planting practices work well
- Best in coarse, well-drained soils

#### **Post plant establishment period recommendations**

- Do not over irrigate
- Fertilize with 1 pound N/1000 sq ft / year
- Minimal disease and insect problems. Root rot can occur if overwatered.
- Annual renewal pruning required to keep attractive

#### **References –**

Native Plants for the Intermountain West

[https://cwelwnp.usu.edu/westernnativeplants/plantlist\\_view.php?id=56&name=chamaebatiariamillefolium](https://cwelwnp.usu.edu/westernnativeplants/plantlist_view.php?id=56&name=chamaebatiariamillefolium)





Photo: Conservation Garden Park

**Name (Common/Scientific)** – Buffalo juniper / *Juniperus sabina* ‘Buffalo’

**Category** – Evergreen shrub

**Mature Size (Height x Width)** – 1’ X 10’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – GV1

**USDA Hardiness** – Zones 2-8

**Water Use** – Low

**Solar Exposure** – Full sun to partial shade

**Notes** – Soil tolerant. Good low-water plant. Nice ground cover but needs to be kept weed-free and mulched. Keep natural form for best results.

**Plant establishment period recommendations**

- Standard planting practices work well

**Post plant establishment period recommendations**

- Minimal disease and insect problems
- Do not over irrigate
- Minimal pruning required if used in appropriate locations
- Fertilize with 1 pound N/1000 sq ft/ year

**References –**

Conservation Garden Park

<https://conservationgardenpark.org/plants/997/buffalo-juniper/>



Photo: North Carolina State Extension

**Name (Common/Scientific)** – Calgary Carpet juniper / *Juniperus sabina* ‘Monna’

**Category** – Evergreen shrub

**Mature Size (Height x Width)** – 1’ X 10’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 9.2, 10.1, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – GV1

**USDA Hardiness** – Zones 3-7

**Water Use** – Low

**Solar Exposure** – Full sun to partial shade

**Notes** – Soil tolerant. Good low-water plant. Nice ground cover but needs to be kept weed-free and mulched. Keep natural form for best results.

**Plant establishment period recommendations**

- Standard planting practices work well

**Post plant establishment period recommendations**

- Minimal disease and insect problems
- Do not over irrigate
- Minimal pruning required if used in appropriate locations
- Fertilize with 1 pound N/1000 sq ft / year

**References –**

North Carolina Extension

<https://plants.ces.ncsu.edu/plants/juniperus-sabina-monna/>





Photo: Missouri Botanical Garden

**Name (Common/Scientific)** – Russian sage / *Perovskia atriplicifolia*

**Category** – Flowering herbaceous perennial

**Mature Size (Height x Width)** – 3-5' X 2-4'

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – P1

**USDA Hardiness** – Zones 5-9

**Water Use** – Low

**Solar Exposure** – Full sun

**Notes** – Blue flowers bloom on new season's growth. Prune back to ground each spring. Soil tolerant but must have good drainage. Can be invasive in some instances.

**Plant establishment period recommendations**

- Standard planting practices work well. Must have good drainage.

**Post plant establishment period recommendations**

- Minimal disease and insect problems.
- Do not over irrigate
- Fertilize with 1 pound slow release N/1000 sq ft/ year

**References –**

Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=e540>



**Name (Common/Scientific)** – Slowmound mugo pine / *Pinus mugo* ‘Slowmound’

**Category** – Narrowleaf evergreen shrub

**Mature Size (Height x Width)** – 4’ X 6’ (1-2 feet after 10 years)

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 9.2, 10.1

**SLC Plant List Hydrozone** – Se2

**USDA Hardiness** – Zones 2-7

**Water Use** – Low

**Solar Exposure** – Full sun

**Notes** – Soil tolerant with good drainage. Good low-water plant. Attractive pine in the correct location. Tends to get bigger than expected over time, so early intervention with pruning may be helpful. Keep natural form for best results. Do not shear.

**Plant establishment period recommendations**

- Standard planting practices work well

**Post plant establishment period recommendations**

- Minimal disease and insect problems. Watch for pine needle scale.
- Do not over irrigate
- Fertilize with 1 pound N/1000 sq ft / year
- Minimal pruning required if used in appropriate locations. Best to prune by candling.

**References –**

Iseli Nursery

<https://www.iselinursery.com/colorful-conifers/trudwarf-mugo-pine-collection/pinus-mugo-slowmound/>



Photo: The Tree Farm, mid-summer

**Name (Common/Scientific)** – Gold Drop Potentilla / *Potentilla fruticosa* (*Dasiphora fruticosa*)

**Category** – Flowering shrub

**Mature Size (Height x Width)** – 4' X 4'

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 10.1, 12.0, 13.0

**SLC Plant List Hydrozone** – Sd2

**USDA Hardiness** – Zones 3-7

**Water Use** – Moderate

**Solar Exposure** – Full sun

**Notes** – Yellow flowers.

**Plant establishment period recommendations**

- Standard planting practices work well. Must have good drainage.

**Post plant establishment period recommendations**

- Minimal disease and insect problems.
- Do not over irrigate
- Fertilize with 1 pound N/1000 sq ft / year
- Flowering declines on older stems. Should have renewal pruning of 1/3 of the oldest stems annually.

**References –**

Conservation Garden Park

<https://conservationgardenpark.org/plants/449/gold-drop-shrubby-cinquefoil>





Winter dormancy

**Name (Common/Scientific)** – Alpine currant / *Ribes alpinum*

**Category** – Deciduous shrub

**Mature Size (Height x Width)** – 3-6 X 3-6

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 9.2, 10.1

**SLC Plant List Hydrozone** – Sd4

**USDA Hardiness** – Zones 2-7

**Water Use** – Moderate

**Solar Exposure** – Full sun to shade

**Notes** – Soil tolerant. Very cold hardy. Basically an easy-to-maintain, attractive, compact, green shrub. No apparent flowers. Alternative host to white pine blister rust, so may be restricted in some areas.

**Plant establishment period recommendations**

- Standard planting practices work well

**Post plant establishment period recommendations**

- Minimal disease and insect problems
- Minimal pruning required if used in appropriate locations
- Fertilize with 1 pound N/1000 sq ft / year

**References –**

Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=286877&isprofile=1&basic=Ribes%20alpinum>



Photo: <https://www.knockoutroses.com/the-double-knock-out-rose>

**Name (Common/Scientific)** – Double Knock Out rose / *Rosa* x ‘Radtke’

**Category** – Deciduous shrub

**Mature Size (Height x Width)** – 3-4’ X 3-4’

**Eco-Region** – Eco-regions 5.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0, 12.0

**SLC Plant List Hydrozone** – Sd3

**USDA Hardiness** – Zones 5-11

**Water Use** – Medium

**Solar Exposure** – Full sun to partial shade

**Notes** – Cherry red, prolific flowering. Moist, well-drained soil.

#### **Plant establishment period recommendations**

- Standard planting practices work well

#### **Post plant establishment period recommendations**

- Good resistance to typical rose diseases
- Fertilize with 1 pound N/1000 sq ft / year
- Prune spent blossoms to encourage repeat blooming
- Annually pruning to shape and remove dead canes should be done in late winter. Remove dead leaves and stems to reduce disease problems.

#### **References –**

Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b481>





Existing shrub

**Name (Common/Scientific)** – Shrub rose (possibly Pink Meidiland shrub rose / *Rosa* X ‘MElpoque’)

**Category** – Deciduous shrub

**Mature Size (Height x Width)** – 3-5’ X 3’

**Eco-Region** – Eco-region 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0, 12.0

**SLC Plant List Hydrozone** – Sd2

**USDA Hardiness** – Zones 4 - 9

**Water Use** – Moderate

**Solar Exposure** – Full Sun to partial shade, flowering better in full sunlight

**Notes** –

**Plant establishment period recommendations**

- Standard practices.

**Post plant establishment period recommendations**

- Requires annual pruning for shaping, removal of dead canes, and optimizing flowering
- Susceptibility to insects and diseases varies with location. Check with local Extension service for pest management recommendations.
- Fertilize with one pound N/1000 sq ft /year

**References** –



Photo: Doreen Wynja, mid-summer

**Name (Common/Scientific)** – Neon Flash Japanese spiraea / *Spiraea japonica* ‘Neon Flash’

**Category** – Flowering deciduous shrub

**Mature Size (Height x Width)** – 3’ X 3’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0

**SLC Plant List Hydrozone** – Sd3

**USDA Hardiness** – Zones 4-9

**Water Use** – Moderate

**Solar Exposure** – Full sun

**Notes** – Neon red flower color.

**Plant establishment period recommendations**

- Standard planting practices work well. Must have good drainage and regular irrigation.

**Post plant establishment period recommendations**

- Minimal disease and insect problems.
- Do not over irrigate
- Fertilize with 1 pound N/1000 sq ft / year
- Flowering declines on older stems. Should have renewal pruning of 1/3 of the oldest stems annually. Dead head spent blossoms.

**References –**

The Spruce

<https://www.thespruce.com/neon-flash-spiraea-shrubs-2132730>



Photo: Missouri Botanical Garden

**Name (Common/Scientific)** – Densiformis Yew / *Taxus x media* ‘Densiformis’

**Category** – Narrow-leaf evergreen shrub

**Mature Size (Height x Width)** – 3-4’ X 5-7’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 9.2, 10.1, 11.0

**SLC Plant List Hydrozone** – Se3

**USDA Hardiness** – Zones 4-7

**Water Use** – Moderate

**Solar Exposure** – Full sun to shade

**Notes** – Soil tolerant with good drainage. Avoid winter wind and southwest winter sun.

**Plant establishment period recommendations**

- Standard planting practices work well

**Post plant establishment period recommendations**

- Minimal disease and insect problems.
- Do not over irrigate, well-drained soils
- Fertilize with 1 pound N/1000 sq ft / year
- Minimal pruning required if used in appropriate locations.

**References –**

Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=f860>





Photo: Missouri Botanical Garden, fall color

**Name (Common/Scientific)** – Dwarf European cranberrybush / *Viburnum opulus* ‘Nanum’

**Category** – Deciduous shrub

**Mature Size (Height x Width)** – 2’ X 3’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 11.0, 12.0

**SLC Plant List Hydrozone** – Sd4

**USDA Hardiness** – Zones 3-8

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Soil tolerant but prefers evenly moist soils. The cultivar ‘Nanum’ does not flower or bear fruit.

**Plant establishment period recommendations**

- Standard planting practices work well

**Post plant establishment period recommendations**

- Minimal disease and insect problems
- Minimal pruning required if used in appropriate locations
- Apply one pound N/1000 sq ft /year

**References –**

Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=255713>



Photo: Missouri Botanical Garden

**Name (Common/Scientific)** – Roseum European cranberrybush / *Viburnum opulus* ‘Roseum’

**Category** – Flowering deciduous shrub

**Mature Size (Height x Width)** – 10-12’ X 12-14’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0

**SLC Plant List Hydrozone** – Sd4

**USDA Hardiness** – Zones 3-8

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – White bloom color fading to pink. This cultivar is sterile, so no risk of invasion. Your basic snowball bush. Reddish orange fall color.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant but must have good drainage and regular irrigation.

#### **Post plant establishment period recommendations**

- Minimal disease and insect problems except for aphids which are common and can disfigure leaves.
- Do not over irrigate
- Fertilize with 1 pound N/1000 sq ft / year
- Prune after flowering.

**References** – Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=254951&isprofile=0&letter=v>





Mid-summer

**Name (Common/Scientific)** – Karl Foerster feather reed grass / *Calamagrostis X acutiflora* ‘Karl Foerster’

**Category** – Ornamental bunch grass

**Mature Size (Height x Width)** – 3-5’ X 1-2’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.1, 10.1, 10.2, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – Tw2

**USDA Hardiness** – Zones 5-9

**Water Use** – Moderate

**Solar Exposure** – Full sun

**Notes** – Can handle wet soils. Seeds are sterile.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant but should have regular irrigation.

#### **Post plant establishment period recommendations**

- Minimal disease and insect problems.
- Fertilize with 1-2 pounds N/1000 sq ft / year
- Over time will die out in the center of the clump and need to be divided
- Shear clumps back to ground in mid- to late-winter before new blades emerge

**References** – Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b810>



Photo: Rocky Knoll Farm

**Name (Common/Scientific)** – Sapphire blue oat grass / *Helictotrichon sempervirens* ‘Sapphire’

**Category** – Ornamental bunch grass

**Mature Size (Height x Width)** – 2-3’ X 2-3’

**Eco-Region** – Eco-regions 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – Tw1

**USDA Hardiness** – Zones 4-9

**Water Use** – Dry to moderate

**Solar Exposure** – Full sun

**Notes** – Blue foliage. Sapphire has narrower leaves and bluer color than the species. Can handle wet soils. Seeds are sterile. Semi-evergreen in mild climates.

**Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant but requires good drainage.

**Post plant establishment period recommendations**

- Minimal disease and insect problems.
- Fertilize with 1-2 pounds N/1000 sq ft/ year
- Over time will die out in the center of the clump and need to be divided
- Shear clumps back to ground in mid- to late-winter before new blades emerge

**References** – University of Wisconsin-Madison Extension

<https://hort.extension.wisc.edu/articles/blue-oat-grass-helictotrichon-sempevirens/>



Photo: Missouri Botanical Garden

**Name (Common/Scientific)** – Adagio maiden grass / *Miscanthus sinensis* ‘Adagio’

**Category** – Ornamental bunch grass

**Mature Size (Height x Width)** – 3-4’ X 3-4’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0

**SLC Plant List Hydrozone** – Tw2

**USDA Hardiness** – Zones 5-9

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade, best in full sun

**Notes** – ‘Adagio’ is a dwarf cultivar. Can be somewhat invasive by seed. Prefers moist soils.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant but requires good drainage.

#### **Post plant establishment period recommendations**

- Minimal disease and insect problems, but miscanthus mealybug and blight occurs in some areas

Fertilize with 1-2 pounds N/1000 sq ft/ year

- Over time will die out in the center of the clump and need to be divided
- Good winter effect, so wait to shear clumps back to ground in late winter before new blades emerge

#### **References** – Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=i500#AllImages>





Photo: Missouri Botanical Garden, Fall

**Name (Common/Scientific)** – Yaku Jima maiden grass / *Miscanthus sinensis* ‘Yaku Jima’

**Category** – Ornamental bunch grass

**Mature Size (Height x Width)** – 3-4’ X 3-4’

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 10.2, 11.0

**SLC Plant List Hydrozone** – Tw2

**USDA Hardiness** – Zones 5-9

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade, best in full sun

**Notes** – Can be somewhat invasive by seed. Prefers moist soils. Smaller size and narrower leaves than the species.

#### **Plant establishment period recommendations**

- Standard planting practices work well. Soil tolerant but requires good drainage.

#### **Post plant establishment period recommendations**

- Minimal disease and insect problems, but miscanthus mealybug and blight occurs in some areas
- Fertilize with 1-2 pounds N/1000 sq ft/ year
- Over time will die out in the center of the clump and need to be divided
- Good winter effect, so wait to shear clumps back to ground in late winter before new blades emerge

**References** – Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=250978>



Photo: Conservation Garden Park

**Name (Common/Scientific)** – Goblin blanketflower / *Gaillardia x grandiflora* ‘Goblin’

**Category** – Perennial flower

**Mature Size (Height x Width)** – 12-15” x 18”

**Eco-Region** – Eco-regions 6.0, 9.1, 9.2, 10.1, 10.2, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – P1

**USDA Hardiness** – Zones 3-9

**Water Use** – Low

**Solar Exposure** – Full sun

**Notes** – Cultivar has red petals with yellow tips. A fairly short-lived perennial usually lasting only two years.

**Plant establishment period recommendations**

- Standard planting practices work well. Best in coarse, well-drained soil.

**Post plant establishment period recommendations**

- Minimal disease and insect problems
- Fertilize with 1 pound N/1000 sq ft/ year
- Dead-heading is optional, but should be cut back in winter.

**References** – Conservation Garden Park

<https://conservationgardenpark.org/plants/28/goblin-blanket-flower>





Photo: Bay Gardens

**Name (Common/Scientific)** – Pardon Me daylily / *Hemerocallis* x 'Pardon Me'

**Category** – Perennial flower

**Mature Size (Height x Width)** – 12-18" x 12-18"

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – P3

**USDA Hardiness** – Zones 3-9

**Water Use** – Moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Red flowers with a yellow-green throat. Vigorous grower. In general a tough, long-lived perennial.

**Plant establishment period recommendations**

- Standard planting practices work well. Best in well-drained soil.

**Post plant establishment period recommendations**

- Minimal disease and insect problems
- Fertilize with 1 pound N/1000 sq ft/ year
- Should be cut back in winter.

**References** – Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=246909&isprofile=0&>



Photo: Ripple Effect Iris Farm

**Name (Common/Scientific)** – Lemon Cloud German iris / *Iris x germanica* ‘Lemon Cloud’

**Category** – Perennial flower

**Mature Size (Height x Width)** – 36” x 24-36”

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 8.2, 9.1, 9.2, 10.1, 11.0, 12.0, 13.0

**SLC Plant List Hydrozone** – P3

**USDA Hardiness** – Zones 3-9

**Water Use** – Dry to moderate

**Solar Exposure** – Full sun to partial shade

**Notes** – Tall, bearded iris with yellow and white flowers. In general a tough, long-lived perennial. Soil tolerant.

**Plant establishment period recommendations**

- Standard planting practices work well. Best in well-drained soil.

**Post plant establishment period recommendations**

- Minimal disease and insect problems
- Fertilize with 1 pound N/1000 sq ft/ year
- Should be cut back in winter.

**References** – National Gardening Association

<https://garden.org/plants/view/73107/Tall-Bearded-Iris-Iris-Lemon-Cloud/>



Photo: High Country Gardens

**Name (Common/Scientific)** – Hidcote English lavender / *Lavandula angustifolia* ‘Hidcote Blue’

**Category** – Perennial flower

**Mature Size (Height x Width)** – 12-18” x 12-18”

**Eco-Region** – Eco-regions 5.0, 6.0, 7.0, 8.1, 9.2, 10.1, 10.2, 11.0

**SLC Plant List Hydrozone** – P2

**USDA Hardiness** – Zones 5-8

**Water Use** – Dry to moderate

**Solar Exposure** – Full sun

**Notes** – Soil tolerant, semi-woody perennial. Aromatic. Flowers on 10-15-inch stalks, silvery foliage.

**Plant establishment period recommendations**

- Standard planting practices work well. Best in well-drained soil.

**Post plant establishment period recommendations**

- Susceptible to root rot in wet soils
- Remove flower stalks after fading
- Prune back in spring to 8-inches every three years to control size and foster new growth
- Apply fertilizer at one pound N/1000 sq ft/year

**References** – Missouri Botanical Garden

<https://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=249421&isprofile=1&gen=Lavandula>

## VI. Irrigation System Approval

---

### A. Irrigation System Approval

## Memo – Irrigation System Approval

Date: September 31, 2024

To: John Doe  
Facilities Manager  
Church of Jesus Christ of Latter-Day Saints

From: Jane Buck  
Landscape Architect

Landscape Architect's Company

Landscape Architect's Phone Number



As per contract documents irrigation specification number 32 8423, Underground Sprinklers – No Controllers, Section 1.06 Submittals Paragraph C:

To the best of my knowledge the irrigation system for the meetinghouse facility located at 135 A Street in Salt Lake City, Utah is in full compliance with the contract documents.

Please let me know if you have any questions or need additional information.

## VII. Warranty

---

### A. Contractor Warranty



*Inspiring • Building • Creating*

Date: Monday, October 30, 2023

Project: Church of Jesus Christ of Latter Day Saints - A Street Chapel

Location: 135 A Street, Salt Lake City, Utah

1299 West 75 North  
Centerville, UT 84014  
Tel: 801-898-4448



NATIONAL  
ASSOCIATION OF  
LANDSCAPE  
PROFESSIONALS

---

### Letter of Warranty for Irrigation Systems and Landscaping

---

Sinc Constructors Co. does hereby warrant that all work was performed with according to the approved submittals and plans provided by MGB+A, with all materials true to name, and all work done in a workmanlike manner according to standard practices in the trade. All plant material was alive and viable at the time of installation and are guaranteed to remain so for a period of (1) year from the date of substantial completion is achieved. All sprinkler and irrigation systems, and any other items installed by Sinc Constructors Co. are also guaranteed to remain free from all defects in workmanship or material, to function properly, and to comply with all the specific requirements of the plans and other contract documents governing the work for the same period of time.

It is understood and agreed that in the event of defects and the necessity of making repairs, the owner will immediately notify Sinc Constructors Co. in writing of its conditions and shall provide reasonable time in which to make said repairs. If any person, firm, or corporation other than Sinc Constructors Co. has, since the completion of the above work, performed or attempted to perform any repairs to the property then this warranty could become null and void. This warranty does not cover any repairs made by anyone other than Sinc Constructors Co. or one of its authorized representatives.

Sinc Constructors Co. shall not be under any responsibility or liability whatsoever to make repairs occasioned by injury to the property caused wholly or in part by windstorm, tornado, lightning, hail or other casualty, or by reasons of negligence by any party not directly occasioned with the Sinc Constructors Co. Failures of or defects in materials or living material due to the owner's negligence, unreasonable use, animal and pet damage or lack of proper care or maintenance also fall outside of this warranty.

---

Signature: \_\_\_\_\_

Printed Name: Blake Tingey - VP of Business Development

Warranty End Date: October 31st, 2024

---



## VIII. Completion Signatures

---

THE ESTABLISHMENT PERIOD MAINTENANCE PLAN WAS SUBMITTED TO THE FM MANAGER FOR THIS SITE ON  
\_\_\_\_ Oct 31, 2024 \_\_\_\_ (DATE).

THE ESTABLISHMENT PERIOD SHOULD EXTEND FOR A PERIOD OF ONE YEAR, BEGINNING ON  
\_\_ Oct 31, 2024 \_\_\_\_ (DATE) AND ENDING ON \_\_ Oct 31, 2025 \_\_\_\_ (DATE).

THE FACILITIES MANAGER HAS RECEIVED TRAINING FOR LANDSCAPE MAINTENANCE DURING THE  
ESTABLISHMENT PERIOD AND A COPY OF THE INSTRUCTIONS ARE ATTACHED TO THIS DOCUMENT.

\_\_\_\_\_  
*John Doe*

FACILITIES MANAGER SIGNATURE

\_\_\_\_\_  
*Jane Doe*

LANDSCAPE CONTRACTOR SIGNATURE

\_\_\_\_\_  
*John Buck*

CATEGORY MANAGEMENT SIGNATURE