

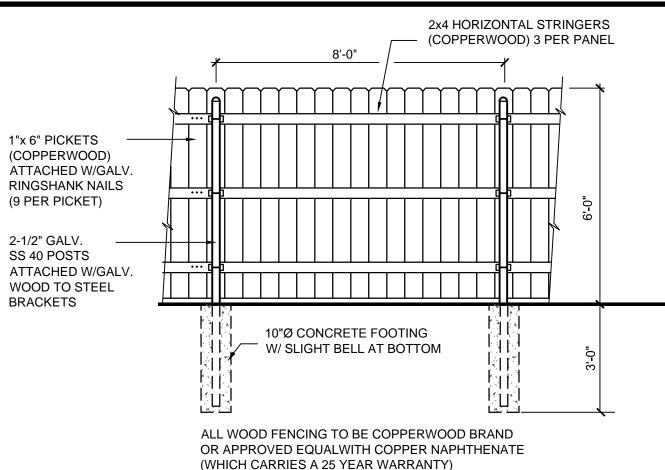
CERTAIN BULBS/PERENNIALS MAY REQUIRE OTHER PLANTING DEPTHS. CONSULT BUILD DISTRIBUTOR FOR PRECISE DEPTHS.

DIMENSION ON DRAWINGS

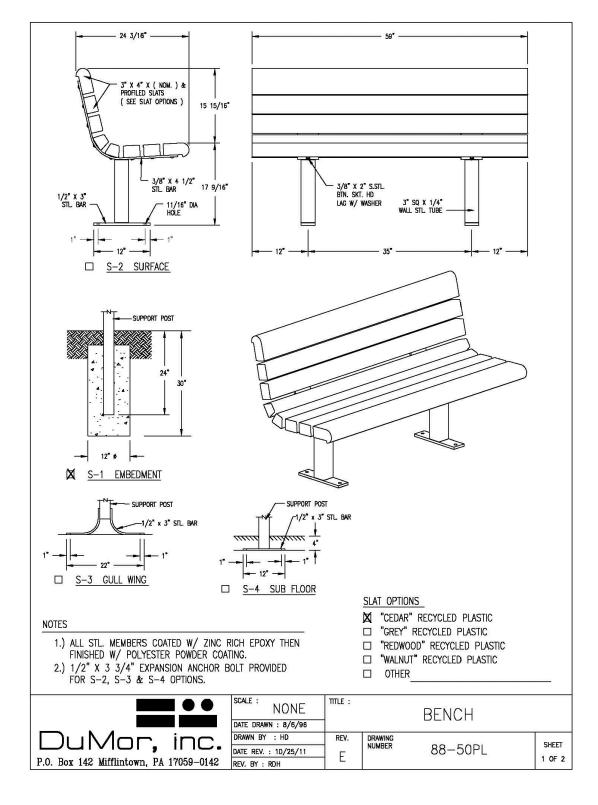
SLICE, CUT, OR SEPARATE EXTERIOR ROOTS ON ROOT-BOUND CONTAINER PLANTS TO PROMOTE ROOT GROWTH.

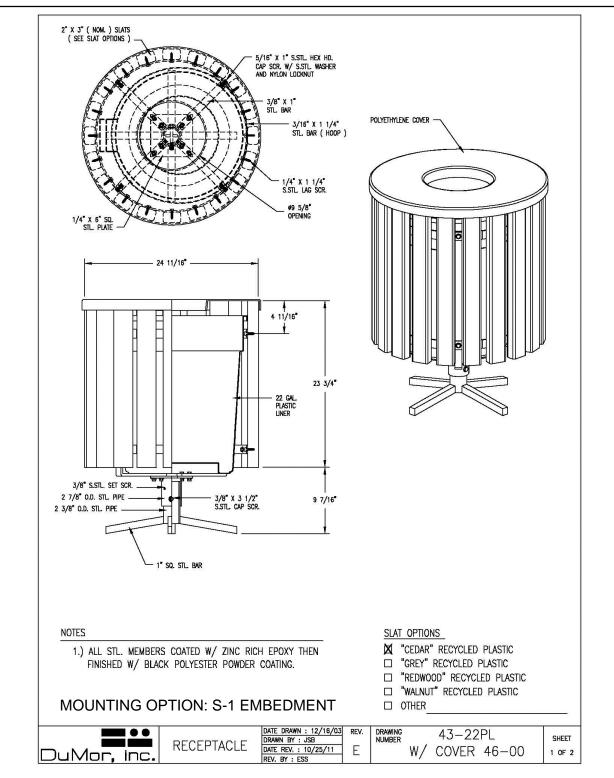
BED PLANTING DETAIL (PERENNIALS, ORNAMENTAL GRASSES

VINES, GROUNDCOVERS & ANNUALS)



6' WOOD FENCE DETAIL (W/ STEEL POSTS)





STORMWATER SEED MIX

Cardno-JFNew - Apply @ 32.6 PLS pounds per acre BOTANICAL/ (COMMON) NAME PLS OZ./Ac PERMANENT MATRIX: Carex cristatella (Crested Oval Sedge) 1.00 Carex Iurida (Bottlebrush Sedge) 2.00 6.00 Carex vulpinoidea (Brown Fox Sedge) Elymus virginicus (Virginia Wild Rye) 12.00 1.25 Glyceria striata (Fowl Manna Grass) Juncus effusus (Common Rush) 1.00 0.25 Juncus torreyi (Torrey's Rush) Leersia oryzoides (Rice Cut Grass) 1.00 Panicum virgatum (Switch Grass) 8.00 Scirpus atrovirens (Dark Green Bulrush) 1.00 0.50 Scirpus cyperinus (Wool Grass) Scirpus fluviatilis (River Rush)) 0.25 Scirpus validus (Great Bulrush) 6.00 TOTAL 40.25 TEMPORARY COVER: Avena sativa (Seed Oats) 360.00 100.00 Lolium multiflorum (Annual Rye)

460.00 FORBS: Alisma spp. (Water Plantain Mix) 4.25 Asclepias incarnata (Swamp Milkweed) 1.50 2.00 Bidens spp. (Bidens Mix) Helenium autumnale (Sneezeweed) 2.00 0.25 Lycopus americanus (Common Water Horehound) 1.00 Mimulus ringens (Monkey Flower) 0.50 Penthorum sedoides (Ditch Stonecrop) 4.00 Polyonum pensylvanicum (Pinkweed) Rudbeckia subtomentosa (Sweet Black-Eyed Susan) 1.00 Sagittaria latifolia (Common Arrowhead) 1.00 1.00 Senna hebecarpa (Wild Senna) Thalictrum dasycarpum (Purple Meadow Rue) 20.50

WETLAND EDGE SEED MIX Cardno-JFNew

BOTANICAL/ (COMMON) NAME	PLS OZ./Ac
PERMANENT MATRIX:	
Carex comosa (Bristly Sedge)	1.00
Carex cristatella (Crested Oval Sedge)	2.00
Carex frankii (Bristly Cattail Sedge)	6.00
Carex vulpinoidea (Brown Fox Sedge)	3.00
Eleocharis palustris (Great Spike Rush)	0.50
Elymus virginicus (Virginia Wild Rye)	12.00
Glyceria striata (Fowl Manna Grass)	1.00
Leersia oryzoides (Rice Cut Grass)	1.50
Scirpus atrovirens (Dark Green Bulrush)	1.00
Scirpus cyperinus (Wool Grass)	0.75
Scirnus nungens (Chairmaker's Rush))	1.00

Scirpus pungens (Chairmaker's Rush)) Scirpus validus (Great Bulrush)	TOTAL	1.00 <u>2.50</u> 32.25
TEMPORARY COVER:		
Avena sativa (Seed Oats) Lolium multiflorum (Annual Rye)	TOTAL	360.00 100.00 460.00
FORBS:		

FORBS:	
Acorus calamus (Sweet Flag)	0.50
Alisma spp. (Water Plantain Mix)	2.00
Asclepias incarnata (Swamp Milkweed)	1.00
Aster puniceus (Bristly Aster)	1.00
Bidens spp. (Bidens Mix)	2.00
Eupatorium perfoliatum (Common Boneset)	1.00
Helenium autumnale (Sneezeweed)	2.00
Iris virginica (Blue Flag)	2.50
Lobelia siphiltica (Great Blue Lobelia)	1.00
Lycopus americanus (Common Water Horehound)	0.25
Mimulus ringens (Monkey Flower)	1.50
Penthorum sedoides (Ditch Stonecrop)	0.50
Polyonum spp. (Smartweed Mix)	0.50
Rudbeckia laciniata (Wild Golden Glow)	0.75
Sagittaria latifolia (Common Arrowhead)	2.00
Senna hebecarpa (Wild Senna)	2.00
Sparganium eurycarpum)Common Bur Reed)	4.00
Thalictrum dasycarpum (Purple Meadow Rue)	0.50

Verbena hastata (Blue Vervain)

Vernonia spp. (Ironweed Mix)

WET-TO-MESIC PRAIRIE SEED MIX

Cardno-JFNew			The
BOTANICAL/ (COMMON) NAME		PLS OZ/Ac	ins bai
PERMANENT MATRIX:			sp est
Andropogon gerardii (Big Bluestem)		24.00	ide apı
Calamagrostis canadensis (Bluejoint Grass)		1.00	bei
Carex spp (Prairie Sedge Mix)		4.00	qu
Carex Iurida (Bottlebrush Sedge)		2.00	fiel
Elymus virginicus (Virginia Wild Rye)		24.00	be
Panicum virgatum (Swtich Grass)		2.00	nat
Scirpus pendulus (Red Bulrush)		0.25	the
Sorghastrum nutans (Indian Grass)		6.00	pro
Spartna pectinata (Prairie Cord Grass)		<u>3.00</u>	Laı
	TOTAL	66.25	Th
TEMPORARY COVER:			ın
			1
Avena sativa (Seed Oats)		360.00	
Lolium multiflorum (Annual Rye)		100.00	
	TOTAL	460.00	2
FORBS:			
Aster novae-angliae (New England Aster)		0.25	
Baptisia lactea (White Wild Indigo)		0.75	3
Chamaecrista fasciculata (Partridge Pea)		12.00	3

Aster novae-angliae (New England Aster)	0.25
Baptisia lactea (White Wild Indigo)	0.75
Chamaecrista fasciculata (Partridge Pea)	12.00
Coreopsis lanceolata (Sand Coreopsis)	3.50
Coreopsis tripteris (Tall Coreopsis)	3.00
Desmodium illinoense (Illinois Tick Trefoil)	0.50
Echinacea purpurea (Purple Coneflower)	3.50
Eryngium yuccifolium (Rattlesnake Master)	2.00
Helenium autumnale (Sneezeweed)	2.50
Heliathus grosseserratus (Sawtooth Sunflower)	0.50
Liatris spicata (Marsh Blazing Star)	1.00
Monarda fistulosa (Wild Bergamot)	1.00
Parthenium integrifolium (Wild Quinine)	1.00
Physostegia virginiana (Obedient Plant)	0.25
Pycnanthemum virginianum (Common Mountain Mint)	1.00
Ratibida pinnata (Yellow Coneflower)	5.00
Rudbeckia hirta (Black-Eyed Susan)	5.50
Rudbeckia laciniata (Wild Golden Glow)	1.00
Rudbeckia subtomentosa (Sweet Black-Eyed Susan)	0.50
Silphium integrifolium (Rosin Weed)	1.00
Silphium laciniatum (Compass Plant)	2.00
Silphium perfoliatum (Cup Plant)	3.00
Silphium terebinthinaceum (Prairie Dock)	6.00
Solidago juncea (Early Goldenrod)	0.25
Solidago rigida (Stiff Goldenrod)	1.00
Solidago rugosa (Rough Goldenrod)	0.25
Tradescantia ohiensis (Common Spiderwort)	1.25
Vernonia spp. (Ironweed Mix)	3.00
Veronicastrum virginicum (Culver's Root)	0.25
Ziziz aurea (Golden Alexanders)	0.50
TOTAL	63.25

ECONOMY DRAIDIE CEED MIV

ECONOMY PRAIRIE SEED MIX Cardno-JFNew - Apply at 37.2 PLS pounds per acre	
BOTANICAL/ (COMMON) NAME	PLS OZ./Ac
PERMANENT MATRIX:	
Andropogon gerardii (Big Bluestem) Bouteloua curtipendula (Side Oats Grama)	16.00 18.00

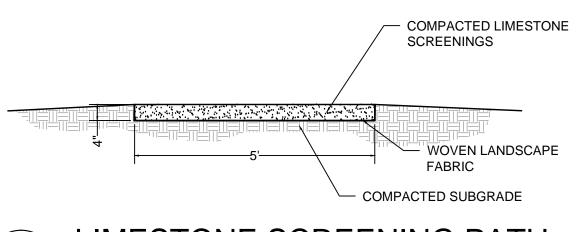
Bouteloua curtiperioula (Side Oats Glaria)		10.0
Carex spp. (Prairie Carex Mix)		1.00
Elymus canadensis (Canada Wild Rye)		16.0
Panicum virgatum (Prairie Switch Grass)		2.50
Schizachyrium scoparium (Little Bluestem)		24.0
Sorghastrum nutans (Indian Grass)		18.0
	TOTAL	95.5
TEMPORARY COVER:		
Avena sativa (Seed Oats)		360.0
Lolium multiflorum (Annual Rye)		100.0
	TOTAL	460.0

FORBS:	
Asclepias syriaca (Common Milk)	0.50
Asclepias tuberosa (Butterfly Weed)	1.00
Aster laevis (Smooth Blue Aster)	0.25
Aster novae-angliae (New England Aster)	0.75
Chamaecrista fasciculata (Partridge Pea)	12.00
Coreopsis lanceolata (Sand Coreopsis)	5.00
Echinacea purpurea (Purple Coneflower)	7.50
Heliopsis helianthoides (False Sunflower)	0.25
Lupinus perennis (Wild Lupine)	0.50
Monarda fistulosa (Wild Bergamot)	0.25
Pycnanthemum virginianum (Common Mountain Mint)	0.50
Ratibida pinnata (Yellow Coneflower)	3.50
Rudbeckia hirta (Black-Eyed Susan	8.00
TOTAL	40.00

NO MOW FESCUE SEED MIX Prairie Nursery Westfield, WI

COMMON NAME	PERCENT	GERMINATION
SR5100 Chewings Fescue	23.52%	85%
Sheep Fescue	23.52%	85%
Dawson Red Fescue	11.76%	85%
SR100 Hard Fescue	11.76%	85%
Scaidis Hard Fescue	11.76%	85%
Creeping Red Fescue	11.70%	85%
Annual Ryegrass	3.88%	90%

Seed Rate 5 lbs per 100 sq. ft. or 220 lbs per acre



LIMESTONE SCREENING PATH

1.50

2.00

28.50

TOTAL

NATIVE AREA MAINTENANCE

he Installing Contractor shall provide a three (3) year maintenance program as part of the stallation contract for all native prairie and native pond bottoms (if applicable), shorelines, and anks. The installing contractor shall be responsible for seeding, replanting, exotic and invasive pecies control, and any other factor that may contribute to the failure of the natural area stablishment. The contractor must have supervisors and crew who are experienced with entification of both native and non-native plants. All crew members performing chemical plications must be licensed in accordance with state laws pertaining to the specific application eing performed. to obtain qualified bids, the submittal should include a statement of contractor's ialifications including projects summaries with contact names and information, and resumes of ield installation personnel who will be working on the project. The maintenance contractor should versed in principals of restoration ecology and the tools utilized in site management. Because atural areas are dynamic systems, the maintenance plan must be flexible in order to accommodate he development of the site. The installing contractor may subcontract the required maintenance rogram to a qualified native plant community maintenance specialist contractor approved by the indscape Architect and/or Owner.

his program shall include:

- The Contractor shall be responsible for volunteer cattail control by way of wicking with Rodeo herbicide and/or burning for a period of three (3) years.
- 2. If Installed, the Contractor shall be responsible for protecting the emergent aquatic plants from predators (e.g., geese, ducks) for a minimum of one (1) full growing season. Goose grids, mesh barriers, etc. shall be employed as the Contractor sees fit to insure development of an erect emergent plant community as specified on the drawings. Over planting to attain required minimum established quantities is suggested.
- All areas specified for native seed mixes shall be subject to a three (3) maintenance contract by the Installing Contractor. The installing contractor may subcontract the required maintenance program to a qualified native plant community maintenance specialist contractor approved by the Landscape Architect and/or Owner. The Contractor will be responsible for prairie maintenance until Final Acceptance. This maintenance program shall consist of mowing, burning and selective herbicide control of invasive perennial weeds according to the schedule below.

Invasive and non-native species, and non-native woody plant species not specified as part of the planting plan shall be controlled by appropriate management practices. None of the three most dominant species may be non-native or invasive or constitute greater than 25% aerial coverage (individually or cumulatively) by the end of the third growing season. Invasive species for the purpose of this project shall include, but not be limited too, the following; Ambrosia artemisiifolia & trifida (Common & Giant Ragweed), Cirsium arvense (Canada Thistle), Dipsacus Iaciniatus (Cut-leaf Teasel), Dipsacus sylvestris (Common Teasel), Lythrum salicaria (Purple Loosestrife), Melilotus sp. (Sweet Clover), Phalaris arundinacea (Reed Canary Grass), Phragmides australis (Gaint Reed), and Polygonum cuspidatum (Japanese Knotweed).

Selective herbicide treatment of certain aggressive perennial weeds may be necessary during the 2nd & 3rd growing seasons if mowing and burning fail to control them. Only careful contact application shall be performed. NO SPRAYING WILL BE ALLOWED. As a general rule of thumb, most species are most effectively treated at or near the time of inflorescence. Control methods shall

- a. Direct hand application via "herbicide glove" to the individual plant consisting of a rubber herbicide glove with a large absorbent cotton glove over the rubber glove. A strong solution of Round-up or other appropriate herbicide shall be mixed in a small non spill squirt or spray bottle. As needed, use the bottle to carefully saturate the cotton glove(s) and then grab the leaves and stem of the unwanted perennial weed to apply the herbicide to that plant only. Take acre not to touch or drip the herbicide on other adjacent plantings. Perform only on cool,
- b. Cut unwanted perennial weeds (esp. Canada Thistle) to the ground when they are one foot (1') or taller, but prior to flowering. The cut stump should be treated with undiluted Garlon-3 using a small plastic bottle set on 'stream' rather than 'spray' or 'mist'. The herbicide should be applied sparingly so that it just soaks the cut stem of the unwanted perennial weed.

Maintenance Schedule:

1st Growing Seasor

Mow up to three times (3x) to keep annual weeds from going to seed and to avoid too much shade for young seedlings. Maintain to a height of between 6" and 12". Note: Burning should always be utilized in lieu of mowing when enough plant material fuel is available to conduct a burn.

2nd Growing Season

Mow in Spring to the ground and remove cuttings. Repeat mowing in late spring or early summer if weeds remain a problem. Target biennial weeds by mowing to six inches (6") when in bloom. Sweet Clover in particular must be mowed if present.. Mowing in full bloom (mid-summer) will kill it. Native species shall be allowed to seed. Selective herbicide application of perennial weeds shall be performed in accordance with the provisions of item No. 3 above. Note: Burning should always be utilized in lieu of mowing when enough plant material fuel is available to conduct a burn.

3ed Growing Season

Burn between October 15 and May 1, with a mid Spring burning being preferred, and continue other weed management practices as needed during the 3rd growing season. Note: Contractor shall be responsible for all burning.

NATIVE AREA MAINTENANCE

NATIVE PRAIRIES, NATIVE POND SHORELINES & BANKS

The Contractor shall be responsible for the satisfactory growth of permanent species of grasses, forbs, reeds and sedges on all areas seeded and/or planted under the contract until final acceptance of the work. The Contractor shall conduct an inspection of the native planting areas during the 1st and 2nd growing seasons and provide the Owner with a written assessment of the establishment progress and remedial action taken or proposed by January 31st of the following year. A more detailed inspection shall be conducted at the end of the 3rd growing season for the purpose of Final Acceptance. A written report of this inspection shall also be provided to the Owner by January 31st of the following year. Acceptance of the work will be determined using a time meander search. The time meander search shall be conducted at the end of the 3rd full growing season after after seeding and/or planting (not to exceed thirty-six (36) months). The search will sample 20% of each plant community that was seeded and/or planted. If a minimum of 80% ground cover by native vegetation and a cumulative native floristic quality index (FQI) of 20 and a (C-) value of 3.5 or greater is achieved, the work will be approved. If not accepted, the Contractor will replant, to fulfill Contract responsibilities, at no additional cost to the Owner.

None of the three (3) most dominate species may be non-native or weedy species, including but not limited to, Canary Reed Grass, Common Reed Grass, Teasel, Canadian Thistle, Horse-nettle, Spotted Knapweed, Purple Loosestrife, Sandbar Willow, Sweet Clover or Cattails, unless otherwise indicated on the approved planting plan.

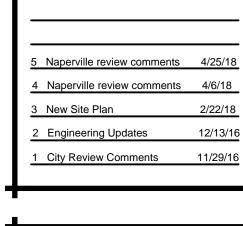
LONG TERM MAINTENANCE (OWNER)

The Contractor shall provide a copy of the Long-Term Operation and Maintenance Plan to the Owner, Facilities Manager or Home Owners Association for continued maintenance of the native planting areas. Best Management Practices shall be maintained according to approved management practices and shall include:

- 1. Prescribed burning every other year, or at least every three (3) years. Burning requires a permit requires a permit from Illinois EPA and notification of the local fire department. Burning shall be performed by a contractor with prior prescribed burn experience.
- 2. Late winter/early spring mowing to a height of six to twelve inches, with removal of hay, may be performed in alternate years where burning is not practical or conditions not conductive to burning.
- 3. Application of herbicide to control invasive species may be necessary if burning does not control or eliminate them. A certified and licensed pesticide applicator shall select herbicide, which is non-toxic to animals and aquatic life, and shall apply herbicide by the appropriate method, to prevent killing of desirable native species.
- 4. A schedule for inspection and removal of sediments deposited in the native areas is required.

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REVISIONS



McDOWELL NAPERVILLE, ILLINOIS

AG Real Estate Investors LLC 1000 Devonshire Avenue Naperville, IL 60540

> IRG Ives/Ryan Group, Inc. 324 EISENHOWER LANE N. LOMBARD, IL 60148 PHONE: 630.717.0726

Landscape Architecture Park & Recreation Design Site & Community Planning

www.ivesryangroup.com

DETAILS SEED MIXES

PROJECT NO .: JOB NO .: L1916 8878A

DATE: <u>10/11/16</u> SCALE: 1"=30' PLANNER: JMR DRAWN BY: RM CHECKED: __

SHEET