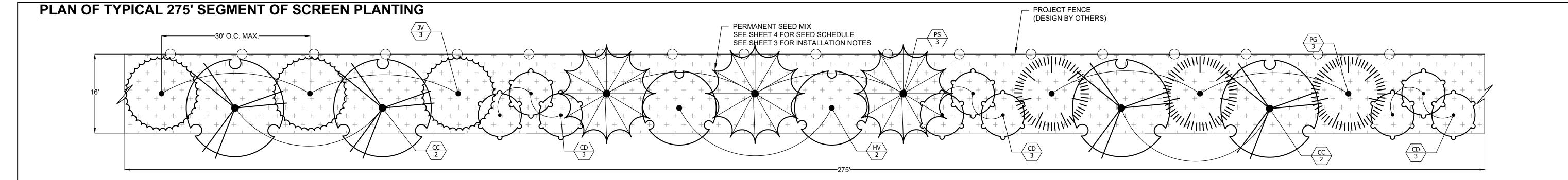
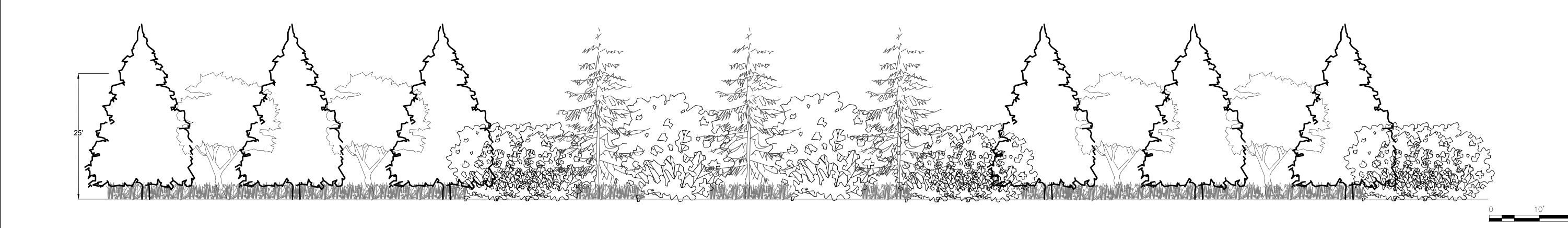


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# SECTION VIEW OF TYPICAL 275' SEGMENT OF SCREEN PLANTING

NOTE: SECTION VIEW REPRESENTS PLANTS 10-15 YEARS AFTER PLANTING.



PLAN	T SCHED	ULE					1		
QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	ZONE	APPROXIMATE MATURE HEIGHT	APPROXIMATE MATURE SPREAD	AVG. ANNUAL GROWTH	SPECIFICATION	NOTES
REES	(39)								
13	JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	2 TO 7	40' TO 50'	10' TO 20'	12" TO 24"	MIN. 4' HEIGHT - CONTAINER / B&B	SPACE PLANTS AS
13	PS	PINUS STROBUS	WHITE PINE	3 TO 8	50' TO 80'	20' TO 40'	12" TO 24"	MIN. 4' HEIGHT - CONTAINER / B&B	SHOWN IN TYPICAL
13	PG	PICEA GLAUCA	WHITE SPRUCE	2 TO 6	40' TO 60'	10' TO 20'	12" TO 24"	MIN. 4' HEIGHT - CONTAINER / B&B	LAYOUT
ALTER	NATE TREE	E SPECIES:							
	CA	CORNUS ALTERNIFOLIA	PAGODA DOGWOOD	3 TO 7	15' TO 25'	20' TO 32'	12" TO 18"	MIN. 4' HEIGHT - CONTAINER / B&B	
	MI	MALUS IOENSIS	PRAIRIE CRAB APPLE	3 TO 8	20' TO 25'	20' TO 25'	8" TO 16"	MIN. 4' HEIGHT - CONTAINER / B&B	
SHRUB	S (66)	•			•				
18	CC	CERCIS CANADENSIS	EASTERN REDBUD	4 TO 8	20' TO 30'	25' TO 35'	12" TO 24"	MIN. 3' HEIGHT - CONTAINER	SPACE PLANTS AS
39	CD	CORNUS DRUMMONDII	ROUGH LEAVED DOGWOOD	5 TO 8	6' TO 15'	6' TO 15'	12" TO 24"	MIN. 3' HEIGHT - CONTAINER	SHOWN IN TYPICAL
9	HV	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	3 TO 8	15' TO 20'	15' TO 20'	12" TO 24"	MIN. 3' HEIGHT - CONTAINER	LAYOUT

QUANTITIES BY SEGMEN						
		SEGN	IENT			
TOTAL QTY	SYMBOL	1	2			
LINEAR	FT	725	480			
TREES	(39)					
13	JV	8				
13	PS	8				
13	PG	8				
TOT	TAL TREES					
PER	SEGMENT:	24	1			
SHRUBS	66)					
18	CC	11				
39	CD	24	1			
9	HV	5				
	AL SHRUBS SEGMENT:	40	2			

### NOTE

- TREES AND SHRUBS INSTALLED AT A MINIMUM 4 FOOT HEIGHT WILL ACHIEVE MINIMUM 7 FOOT HEIGHT AFTER THE THIRD YEAR OF GROWTH.
- SCREENING IS INTENDED TO PROVIDE 100% SCREENING TO 7' FEET WHEN FULLY ESTABLISHED.

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	Client/Project	Title	_		
•	LONE TREE SOLAR PROJECT	PLANTING SCHEDULE & DETAILS			
	TOWNSHIP OF FREEMONT, JOHNSON COUNTY, IOWA	Project No. 193709077	Scale AS SHOWN		
		Drawing No.	Sheet	Revision	
	File Name: 193709077 Lone Tree Solar Landscape PlaRB CD RB 11.16.2023  Dwn. Chkd. Dsgn. YY.MM.DD	2	2 of 4	0	

ORIGINAL SHEET - ANS

### SEED INSTALLATION NOTES

CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING PERENNIAL VEGETATION WITHIN THE LANDSCAPE SCREENING AREA WITHIN 25 FEET OF THE FENCE LINE IN AREAS WHERE SCREENING TREES AND SHRUBS ARE TO BE INSTALLED. CONTRACTOR WILL PREPARE A SEEDBED, SEED, AND MAINTAIN THE PERENNIAL VEGETATION THROUGHOUT THE MAINTENANCE PERIOD. THE FOLLOWING SPECIFICATIONS ARE INTENDED TO DESCRIBE THE NECESSARY CONDITIONS REQUIRED TO ENSURE ADEQUATE GERMINATION AND ESTABLISHMENT OF THIS SEED MIX. A VARIETY OF METHODS CAN BE USED TO ACHIEVE THESE CONDITIONS. PROPOSED METHODS MUST BE APPROVED PRIOR TO SEED INSTALLATION.

- 1. SEED PLACEMENT SHALL BE 1/8TH OF AN INCH OR LESS. MANY OF THE SPECIES INCLUDED IN THIS MIX HAVE VERY SMALL SEEDS AND WILL NOT GERMINATE IF PLANTED TOO DEEP.
- 2. SEED MUST BE PLACED IN DIRECT CONTACT WITH THE SOIL, SEEDING ON TOP OF OR INTO EXCESS THATCH (LESS THAN 70 PERCENT OF THE SOIL VISIBLE) IS NOT ACCEPTABLE.
- 3. SEED BED MUST BE UNIFORM AND LEVEL, FREE OF CLODS, ROCKS, CLUMPS, RUTS, AND OTHER SURFACE DISRUPTIONS THAT WOULD PREVENT ACCURATE PLACEMENT BY SEEDING EQUIPMENT OR ALLOW SEED TO FALL BETWEEN CRACKS OR LOOSE CLUMPS.
- 4. SEED BED MUST BE FREE OF ACTIVELY GROWING WEEDS.
- 5. SURFACE SOILS MUST BE FREE FROM COMPACTION AND MEASURE LESS THAN 200 PSI WHEN TESTED WITH A PENETROMETER TO A DEPTH OF 6 INCHES.
- 6. FIELDS TO BE SEEDED WITH A BROADCAST SPREADER SHALL BE PREPARED TO RECEIVE THE SEED, ROLLED AFTER SEEDING, OR BOTH TO ENSURE ADEQUATE SEED SOIL CONTACT.
- 7. SEEDS INSTALLED WITH A DRILL WILL HAVE ROWS NO WIDER THAN 8 INCHES.
- 8. FIELDS TO BE SEEDED WITH A DRILL WILL BE FIRM ENOUGH SO THE PLANTING DISKS DO NOT SINK LEAVING THE SEED AT THE BOTTOM OF A FURROW
- 9. SEEDS INSTALLED WITH A NO TILL DRILL WITH WILL HAVE CULTIVATORS SET TO ADEQUATELY LOOSEN SOIL WITHOUT CREATING EXCESSIVE CLODS OR FURROWS.
- 10. SEEDS SHALL NOT BE INSTALLED OR SEEDBED PREPARED WHEN SOILS ARE WET OR MUDDY
- 11. THIS SEED CAN BE INSTALLED IN THE SPRING WINDOW OF MARCH 1 MAY 1 OR THE FALL WINDOW FROM OCTOBER 1 DECEMBER 1. DORMANT SEEDING IN FROZEN CONDITIONS IS ACCEPTABLE PROVIDING ADEQUATE GROUND PREPARATION IS ACHIEVED.
- 12. SEED MUST BE INSTALLED AT THE RATE PRESCRIBED AND EVENLY DISTRIBUTED ACROSS THE SEEDBED.
- 13. SEED SHALL BE CERTIFIED TO BE TRUE TO SPECIES AND FREE FROM NOXIOUS WEEDS.
- 14. SEEDING RATE WILL BE MEASURE IN PURE LIVE SEED AND BULK RATES ADJUSTED TO ACHIEVE RECOMMENDED PLANTING RATES.
- 15. NO SUBSTITUTIONS IN SPECIES OR RATES SHALL BE MADE WITHOUT WRITTEN APPROVAL FROM AN APPROVED INVENERGY REPRESENTATIVE.
- 16. AREAS LARGER THAN ONE SQUARE METER WILL BE RE-SEEDED AT THE CONTRACTORS EXPENSE.

#### PLANTING SEQUENCE

- DIG THE PLANTING HOLE A MINIMUM OF 2x WIDTH OF ROOTBALL FOR AT LEAST THE FIRST 12 INCHES OF DEPTH. BELOW 12 INCHES, DIG HOLE WIDE ENOUGH TO PERMIT ADJUSTING. DO NOT DIG THE HOLE DEEPER THAN ROOT BALL DEPTH.
- HOLES FOR INDIVIDUAL PLANTINGS SHALL BE EXCAVATED TO PRODUCE VERTICAL SIDES AND FLAT BOTTOMS. ALL PLANTING HOLES SHALL HAVE ROUGHED, SCARIFIED SIDES AND BOTTOMS.
- LIFT AND SET THE TREE BY ROOT BALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS A LEVER.
- SET THE TOP OF THE ROOT BALL LEVEL WITH THE SOIL SURFACE OR SLIGHTLY HIGHER.
- BACKFILL WITH EXISTING SOIL THAT HAS BEEN WELL-TILLED OR BROKEN UP.
- PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY AND SHALL BE IN ACCORDANCE WITH ANSI A300 SPECIFICATIONS.
- REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO WRAPS SHALL BE PLACED ON TRUNK.
- APPLY GRANULAR MYCORRHIZALINOCULANT SOIL ENHANCER AT EACH PLANT PER MANUFACTURER RECOMMENDATIONS.
- THE CONTRACTOR SHALL RESTORE AREAS DISTURBED BY THE INSTALLATION OF SHRUBS AND TREES.

### VEGETATIVE SCREENING NOTES: SHRUB AND TREE INSTALLATION

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL WORK COVERED UNDER THESE PLANS.
- 2. ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE FROM DEFECTS, DECAY, DISEASES, INSECT PEST EGGS, AND ALL FORMS OF INFESTATION. ALL PLANT MATERIAL SHALL BE FRESH, FREE FROM TRANSPLANT SHOCK OR VISIBLE WILT. PLANTS DEEMED UNHEALTHY SHALL BE REJECTED.
- 3. ALL PLANT MATERIAL SHALL MEET THE MINIMUM SPECIFICATIONS AND STANDARDS DESCRIBED IN THE CURRENT ISSUE OF "THE AMERICAN STANDARD FOR NURSERY STOCK," PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, 1250 I STREET, N.W., SUITE 500, WASHINGTON, D.C. 20005.
- 4. ALL CONTAINER STOCK SHALL HAVE BEEN PROPAGATED IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL. CONTAINER STOCK WITH POORLY DEVELOPED ROOT SYSTEMS SHALL NOT BE ACCEPTED.
- 5. PLANTS SHALL BE PREPARED FOR SHIPMENT IN A MANNER THAT SHALL NOT CAUSE DAMAGE TO THE BARK, BUDS, BRANCHES, STEMS, OR OVERALL SHAPE OF THE STOCK.

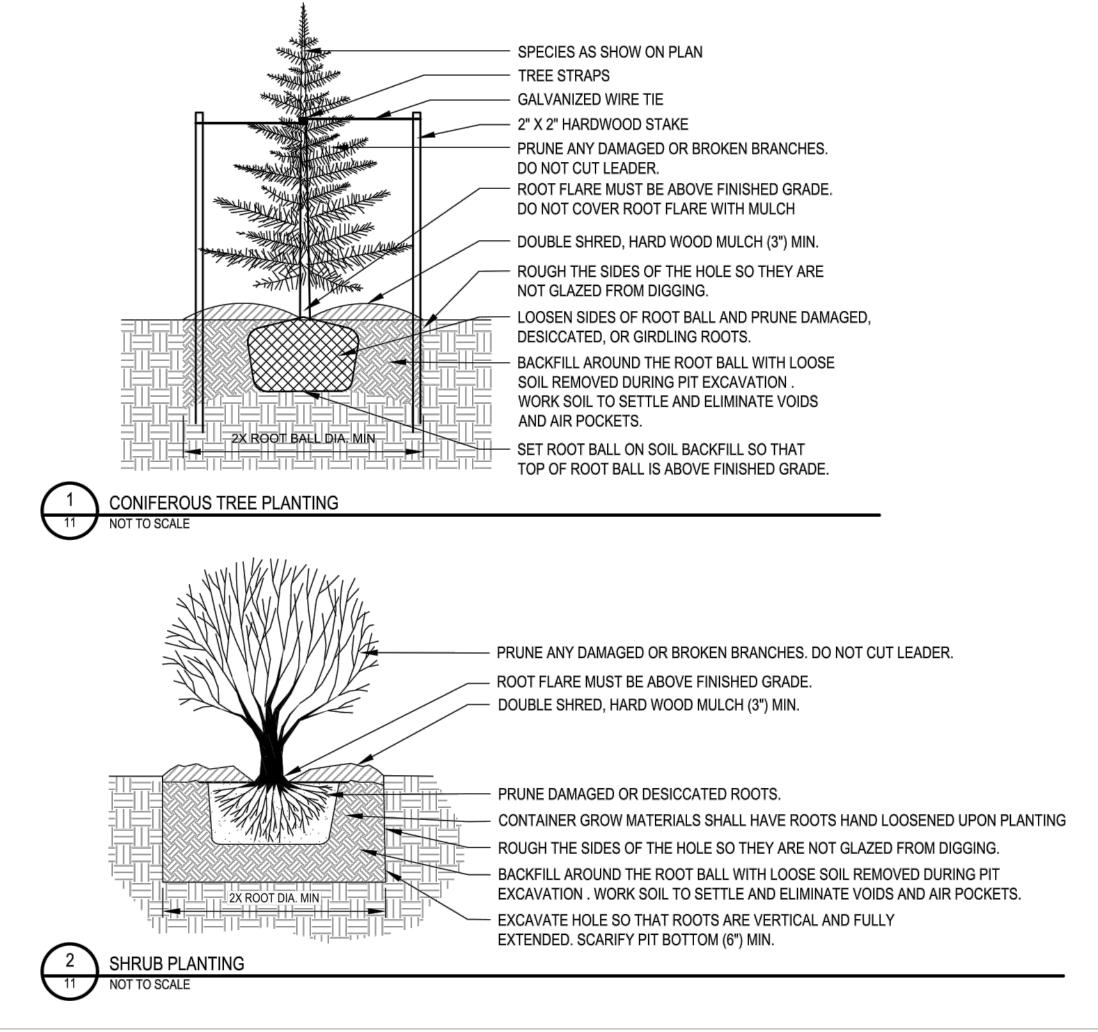
  CONTAINER GROWN PLANTS SHALL BE TRANSPORTED IN THE CONTAINERS IN WHICH THEY HAVE BEEN GROWN.
- 6. CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY FIELD PREPARATIONS WHERE PLANTINGS WILL OCCUR.

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- 7. PLANTS NOT INSTALLED ON THE DAY OF ARRIVAL AT THE SITE SHALL BE STORED AND PROTECTED BY THE CONTRACTOR. OUTSIDE STORAGE AREAS SHALL BE SHADED AND PROTECTED FROM THE WIND AND SUN. PLANTS STORED ON SITE SHALL BE PROTECTED FROM ANY DRYING AT ALL TIMES BY COVERING THE BALLS OR ROOTS WITH MOIST SAWDUST, WET BURLAP, WOOD CHIPS, SHREDDED BARK, PEAT MOSS, OR OTHER SIMILAR MULCHING MATERIAL, OR OTHER METHODS APPROVED BY OWNER.
- 8. PLANT SUBSTITUTIONS MAY BE MADE BASED ON AVAILABILITY BUT MUST BE OF SIMILAR SIZE AND LANDSCAPE (SCREENING) VALUE. ALL SUBSTITUTIONS MUST BE APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- 9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.

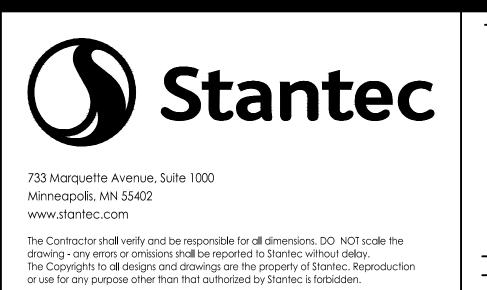
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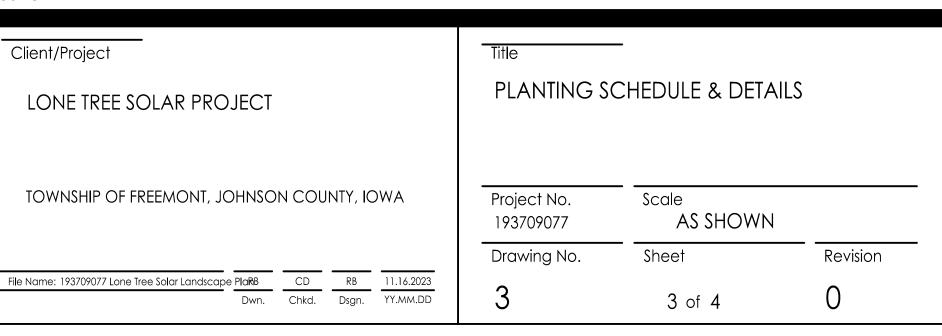
10. NO PLANTING SHALL OCCUR WHEN THE SOIL IS FROZEN.



## PROJECT ACCEPTANCE, MAINTENANCE, AND WARRANTY

- 1. PLANTED AREAS WILL BE INSPECTED AT COMPLETION OF INSTALLATION AND ACCEPTED (INITIAL ACCEPTANCE) WITH SPECIFIED MATERIALS AND INSTALLATION REQUIREMENTS. FOLLOWING INITIAL ACCEPTANCE OF THE COMPLETE INSTALLATION OF ALL PLANT MATERIAL, THE WARRANTY PERIOD WILL BEGIN.
- 2. CONTRACTOR IS RESPONSIBLE FOR ANY SOIL DAMAGE CREATED BY VEHICLES OR INSTALLATION PROCEDURES THAT ALTER EXISTING GRADES. THIS INCLUDES SOIL RUTS OR DEPRESSIONS. CONTRACTOR SHALL RESTORE AREAS DISTURBED.
- 3. CONTRACTOR SHALL MAINTAIN INSTALLED SHRUBS AND TREES WITHIN THE PROJECT LIMITS UNTIL FINAL ACCEPTANCE OF THE PROJECT BY THE FINAL ACCEPTANCE SHALL BE AT THE END OF THE WARRANTY PERIOD. MAINTENANCE SHALL INCLUDE PRUNING, CULTIVATING, WEEDING, WATERING, AND METHODS NECESSARY TO MAINTAIN PLANTS FREE OF INSECT, DISEASE, OR OTHER HERBIVORY DAMAGE UNTIL ACCEPTANCE. MAINTENANCE PERIOD SHALL BE ASSUMED TO CONTINUE THROUGH THE DURATION OF THE WARRANTY PERIOD.
- 4. WARRANT PLANT MATERIAL TO REMAIN ALIVE AND BE IN HEALTHY, VIGOROUS CONDITION FOR A PERIOD OF THREE (3) YEARS AFTER INITIAL ACCEPTANCE. IF PLANTING TAKES PLACE OVER MULTIPLE PLANTING WINDOWS, THIS WARRANTY WILL REMAIN IN AFFECT ON ALL PLANT MATERIAL BASED ON THE WARRANTY PERIOD OF THE MOST RECENTLY INSTALLED PLANT MATERIAL.
- 5. REMOVE AND IMMEDIATELY REPLACE ALL PLANTS, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, TO BE UNSATISFACTORY DURING THE INITIAL PLANTING INSTALLATION.
- 6. REPLACE AT ONCE, IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, ALL PLANTS THAT ARE DEAD OR, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, OR ARE IN SEVERELY UNHEALTHY CONDITION WITHIN THE WARRANTY PERIOD. REPLACEMENTS TO BE INSTALLED AT NEXT BEST PLANTING SEASON.
- 7. TREE STAKING SHOULD BE REMOVED AFTER ONE COMPLETE GROWING SEASON. IF STAKING IS REQUIRED ON REPLACED WARRANTED MATERIAL AT THE TIME OF WARRANTY PLANTING, THESE STAKES SHALL BE REMOVED AFTER ONE COMPLETE GROWING SEASON FOLLOWING INSTALLATION.
- 3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING HERBIVORY AND DEER PROTECTION DURING THE MAINTENANCE AND WARRANTY PERIOD. REPLACEMENT OF PLANTS DUE TO DAMAGE FROM HERBIVORY WILL BE AT THE CONTRACTOR'S EXPENSE.
- 9. UPON FINAL ACCEPTANCE, THE OWNER WILL ASSUME PLANT MAINTENANCE. LANDSCAPE SCREENING TREES AND SHRUBS WILL BE INCLUDED IN THE ANNUAL MONITORING PER THE VEGETATION MANAGEMENT PLAN. OWNER WILL REPLACE ANY REQUIRED VEGETATIVE COVER THAT FAILS TO ESTABLISH OR DIES DURING THE LIFE OF THE PROJECT.





Revision

Common Name	Scientific Name	Sun Exposure <sup>2</sup>	Ounces per Acre
Western Wheatgrass	Pascopyrum smithii Endophyte Free Variety	SU	15
Path Rush	Juncus tenuous	SU PS	0.2
Side Oats	Bouteloua curtipendula	SU PS	32
Little Bluestem	Schizachyrium scoparium	SU PS	32
Prairie June Grass	Koeleria macrantha	SU PS	2
Kentucky Bluegrass	Poa pratensis Balin Endophyte Free Variety	SU PS	7
Redtop	Agrosostis alba/Agrostis gigantea R Endophyte Free Variety	SU PS	1
Creeping Red Fescue	Festuca rubra Endophyte Free Variety	SU PS	20
Plains Oval Sedge	Carex brevior	SU PS SH	2
Canada Wild Rye	Elymus canadensis Endophyte Free Variety	SU PS	4
Common Spiderwort Tradescantia ohiensis		SU PS	0.1
Roundhead Lespedeza	Lespedeza capitata	SU PS	0.1
Purple Coneflower	Echinacea pallida	SU	0.1
Stiff Goldenrod	Oligoneuron rigidum	SU PS	0.1
Nodding Wild Onion	Allium cernuum	SU PS	0.5
Partridge Pea	Chamaecrista fasciculata	SU PS	4
Sand Coreopsis	Coreopsis lanceolata	SU PS	4
White Prairie Clover	Dalea candida	SU PS	2
Purple Prairie Clover	Dalea purpurea	SU	2
Black-eyed Susan	Rudbeckia hirta	SU PS	6
Purple Coneflower	Echinacea purpurea	SU	2
Golden Alexanders	Zizia aurea	SU PS	1
Mexican hat	Ratibida columnifera	SU	2
Clover	Trifolium spp.	SU PS	8

<sup>1</sup>This mix represents the designed and intended list to be installed, final species composition and rates subject to minor alterations due to market availability and Zoning Administrator approval.

<sup>2</sup>Sun exposure, SU = Full Sun, PS – Part Shade, as reported in Minnesota Department of Transportation "Native seed mix design worksheet" available online at <a href="https://www.dot.state.mn.us/environment/erosion/vegetation.html">https://www.dot.state.mn.us/environment/erosion/vegetation.html</a>

LANDSCAPING MANAGEMENT AND MAINTENANCE ACTIVITIES WILL BE REPORTED TO THE COUNTY FOR A MINIMUM OF FIVE YEARS AT WHICH POINT A REQUEST FOR REDUCED FREQUENCY CAN BE REQUESTED AND APPROVED AT THE DISCRETION OF THE ZONING ADMINISTRATOR.

LANDSCAPE SCREENING TREES AND SHRUBS WILL BE INCLUDED IN THE ANNUAL MONITORING PER THE VEGETATION MANAGEMENT PLAN AND INCLUDED IN THE REPORTING TO THE COUNTY. MONITORING WILL BE PERFORMED BY QUALIFIED PROFESSIONALS. ANY VEGETATION NOT MEETING THE STANDARDS OUTLINED IN THE LANDSCAPE SCREENING PLAN OR VEGETATION MANAGEMENT PLAN WILL BE ADDRESSED.

Table A.3 Pollinator Refuge Prairie Seed Mix

<b>Botanical Name</b>	Common Name	Ounces/Acre
Permanent Grasses:		
Bouteloua curtipendula	Side-Oats Grama	16.00
Carex spp.	Prairie Sedge Species	4.00
Elymus canadensis	Canada Wild Rye	32.00
Koeleria macrantha	June Grass	1.00
Panicum virgatum	Switch Grass	1.00
Schizachyrium scoparium	Little Bluestem	36.00
•	Total	90.00
Forbs:		
Amorpha canescens	Lead Plant	0.50
Asclepias syriaca	Common Milkweed	2.00
Asclepias tuberosa	Butterfly Weed	2.00
Baptisia lactea	White Wild Indigo	2.00
Chamaecrista fasciculata	Partridge Pea	10.00
Coreopsis lanceolata	Sand Coreopsis	5.00
Dalea candida	White Prairie Clover	1.50
Dalea purpurea	Purple Prairie Clover	1.50
Desmanthus illinoensis	Illinois Sensitive Plant	3.00
Echinacea purpurea	Broad-Leaved Purple Coneflower	8.00
Eryngium yuccifolium	Rattlesnake Master	2.00
Lespedeza capitata	Round-Headed Bush Clover	2.00
Liatris aspera	Rough Blazing Star	0.50
Lupinus perennis v. occidentalis	Wild Lupine	3.00
Monarda fistulosa	Wild Bergamot	0.50
Oligoneuron rigidum	Stiff Goldenrod	1.00
Parthenium integrifolium	Wild Quinine	1.00
Penstemon digitalis	Foxglove Beard Tongue	0.50
Penstemon hirsutus	Hairy Beard Tongue	1.00
Ratibida pinnata	Yellow Coneflower	4.00
Rudbeckia hirta	Black-Eyed Susan	5.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	1.00
Silphium laciniatum	Compass Plant	2.00
Solidago juncea	Early Goldenrod	0.25
Solidago speciosa	Showy Goldenrod	0.50
Symphyotrichum laeve	Smooth Blue Aster	1.00
Symphyotrichum novae-angliae	New England Aster	0.50
Symphyotrichum oolentangiense	Sky-Blue Aster	0.50

Botanical Name	Common Name	Ounces/Acre
Tephrosia virginiana	Goat's Rue	1.00
Tradescantia ohiensis	Common Spiderwort	1.00
Verbena stricta	Hoary Vervain	1.00
Veronicastrum virginicum	Culver's Root	0.25
	Т	otal 65.00

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Client/Project SEED MIXES LONE TREE SOLAR PROJECT TOWNSHIP OF FREEMONT, JOHNSON COUNTY, IOWA Project No. Scale **AS SHOWN** 193709077 Drawing No. Sheet Revision File Name: 193709077 Lone Tree Solar Landscape PlaRB CD RB 11.16.2023

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