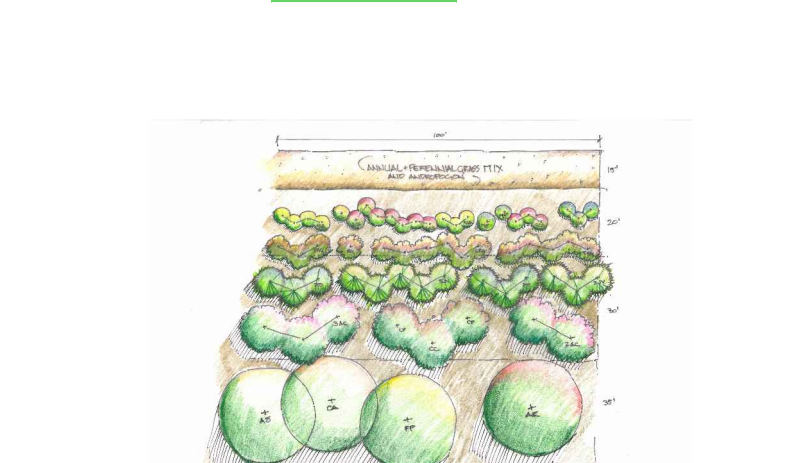
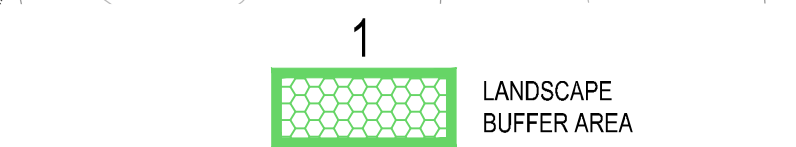
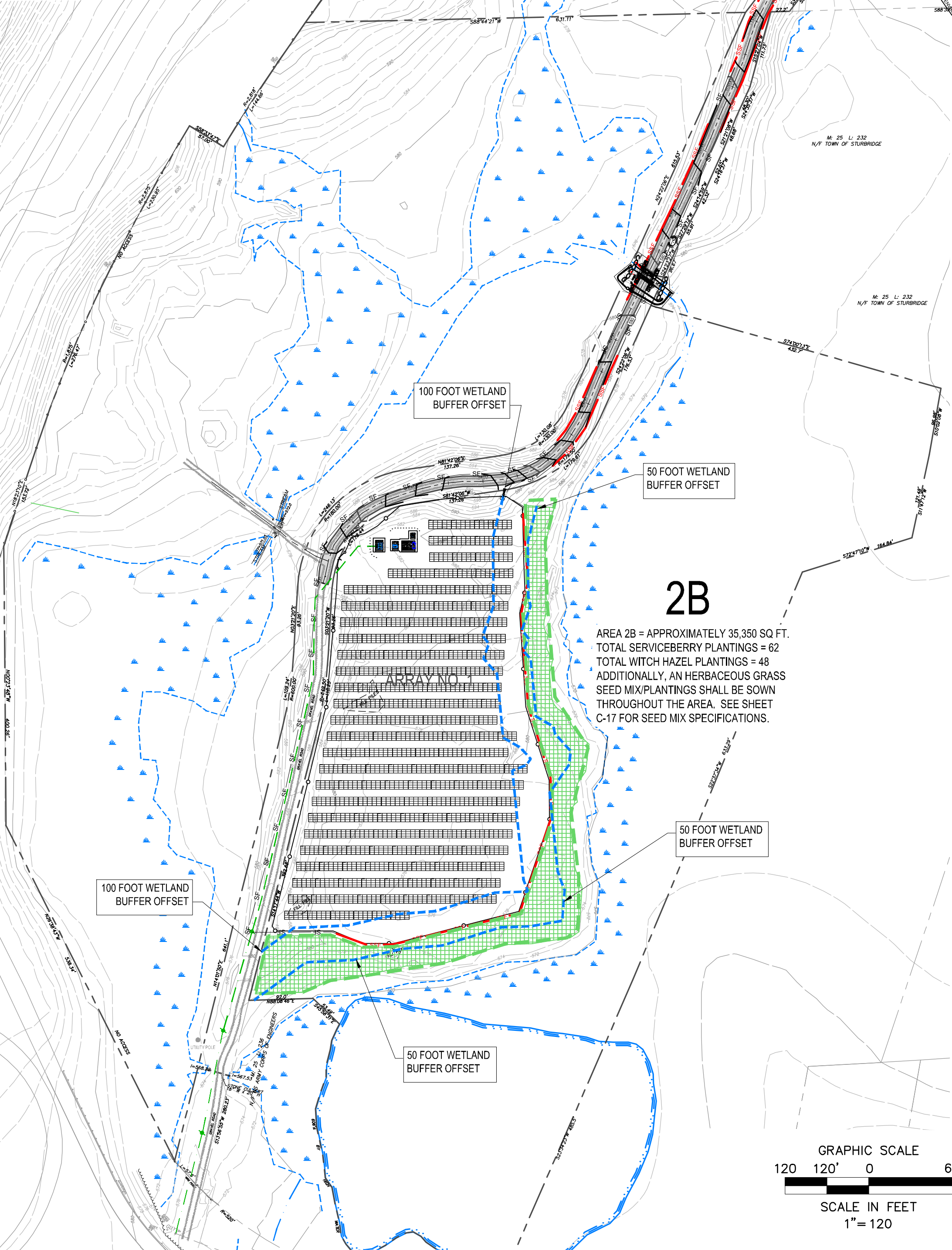


SELECTIVE VEGETATIVE REMOVAL AND PLANTING TO BE IMPLEMENTED IN COORDINATION WITH THE PLANNING BOARD AND CONSERVATION COMMISSION

1. THIS VEGETATIVE REMOVAL AND PLANTING PLAN DEPICTS A REPRESENTATIVE 100 FOOT SECTION WITHIN THE INDUSTRIAL ZONE SETBACKS ADJACENT TO AREAS OF DISTURBANCE. EXISTING DECIDUOUS TREES OVER 75 FEET IN HEIGHT WOULD BE SELECTIVELY REMOVED WITHIN THE INDUSTRIAL ZONE SETBACK;
2. YOUNG TREES OF TALL GROWING SPECIES SUCH AS AMERICAN SYCAMORE (PLATANUS OCCIDENTALIS), AMERICAN BEECH (FAGUS GRANDIFOLIA), ATLANTIC WHITE CEDAR (CHAMAECYPARIS THYOIDES), TULIP TREE (LIRIODENDRON TULIPIFERA), RED OAK (QUERCUS RUBRA), AND WHITE OAK (QUERCUS ALBA) WILL ALSO BE REMOVED WITHIN THE INDUSTRIAL ZONE SETBACK;
3. WHERE POSSIBLE, OTHER SPECIES OF DECIDUOUS AND EVERGREEN TREES WILL BE PRESERVED WITHIN 15 FEET OF THE LIMIT OF DISTURBANCE. GAPS WHERE EXISTING TREES WERE REMOVED WILL BE PLANTED WITH VEGETATION TO CREATE A VISUALLY OPAQUE BUFFER.
4. ANNUAL/PERENNIAL GRASSES AND NEW ENGLAND CONSERVATION/WILDLIFE MIX AS SPECIFIED ON THE PLAN WOULD BE SEEDED WITHIN 15 FEET OF THE LIMIT OF DISTURBANCE. SHRUBS INCLUDING REDOSIER DOGWOOD (CORNUS SERICEA), INKBERRY (ILEX GLABRA), BAYBERRY (MYRICA PENNSYLVANICA), AND SWEETSHRUB (CALYCANTHUS FLORIDUS) WILL BE PLANTED BETWEEN THE GRASS AREA AND A LINE OF SMOOTH SUMAC (RHUS GLABRA) (BETWEEN 15 AND 35 FEET FROM THE LIMIT OF DISTURBANCE).
5. SMALL AND FLOWERING TREE SUCH AS SHADBLOW SERVICEBERRY (AMELANCHIER CANADENSIS), EASTERN REDBUD (CERCIS CANADENSIS), AND FLOWERING DOGWOOD (CORNUS FLORIDA) WILL FILL IN AREAS OF THE UNDERSTORY BETWEEN THE SMOOTH SUMAC AND THE CANOPY TREES (BETWEEN 35 AND 65 FEET FROM THE LIMIT OF DISTURBANCE).
6. IN AREAS WHERE CANOPY TREES ARE REMOVED, SPECIES SUCH AS SWEET GUM (LIQUIDAMBAR STYRACIFLUA), GREEN ASH (FRAXINUS PENNSYLVANICA), AMERICAN HORNBEAM (CARPINUS CAROLINIANA), AND RIVER BIRCH (BETULA NIGRA) WILL BE REPLANTED (BETWEEN 65 AND 100 FEET FROM THE LIMIT OF DISTURBANCE).
7. EXISTING INDIVIDUAL TREES WITHIN THE INDUSTRIAL ZONE SETBACKS OF ARRAY AREAS 2, AND 5 WILL BE SELECTIVELY REMOVED BASED UPON THEIR LOCATION IN CONTEXT TO THE ARRAY, SPECIES, AND EXISTING HEIGHT AND POTENTIAL FOR GROWTH (SLOW GROWING V. FAST GROWING SPECIES). THE AREA FOR TREE REMOVAL SHALL BE DIFFERENT THAN THE ONE DESIGNATING THE LIMIT OF DISTURBANCE DEPICTED ON THE GRADING PLANS AND BE WITHIN THE DESIGNATED SELECTIVE CLEARING AND PLANTING AREAS.
8. A COMMONWEALTH OF MASSACHUSETTS REGISTERED LANDSCAPE ARCHITECT OR AN ISA CERTIFIED ARBORIST WILL IDENTIFY AND LOCATE THE TREES WITHIN THE FIELD AND MARK THOSE FOR REMOVAL WITH BRIGHTLY-COLORED SURVEYORS TAPE AND A PAINT STRIPE WITHIN 12" OF THE EXISTING GRADE. EFFORTS WILL BE MADE TO RETAIN AS MUCH EXISTING VEGETATION AS POSSIBLE WHILE ALLOWING MAXIMUM SUNLIGHT TO REACH THE SOLAR ARRAY. A MEMBER OF THE TOWN OF STURBRIDGE CONSERVATION COMMISSION OR THEIR DESIGNEE WILL WALK THE AREA WITH THE PROJECT OWNER'S LANDSCAPE ARCHITECT OR ARBORIST TO CONCUR WITH TREE REMOVAL.
9. AREAS WHERE TREES HAVE BEEN SELECTIVELY REMOVED WILL BE RE-PLANTED WITH A COMBINATION OF SHRUBS, SMALL FLOWERING TREES, EVERGREEN TREES, OR CANOPY TREES DEPENDING ON LOCATION CONTEXT TO THE ARRAY AND DENSITY OF SURROUNDING VEGETATION. A TYPICAL BUFFER PLANTING IS DEPICTED ON THIS PLAN AND ILLUSTRATES THE LAYERS OF VEGETATION. THE NATIVE AND NATURALIZED SPECIES IDENTIFIED IN THE PLANT LIST CAN BE USED IN COMBINATION TO REPLICATE THE FOREST EDGE WITHIN THE INDUSTRIAL ZONE SETBACK AND 25 FOOT NO-BUILD SETBACK. REPLANTING OF CANOPY TREES WILL BE LOCATED NO CLOSER THAN 90 FEET FROM THE SOLAR ARRAY. EVERGREEN AND FLOWERING TREES WILL BE LOCATED NO CLOSER THAN 70 FEET FROM THE ARRAY.
10. TREES SELECTED FOR REMOVAL WILL BE CUT AT THE STUMP AND PRUNING WILL NOT BE ALLOWED.
11. FOR THOSE TREES SELECTED FOR REMOVAL, STUMPS WILL REMAIN IN PLACE AND NO GRADING WILL BE PERFORMED BY THE CONTRACTOR WITHIN THE SELECTIVE VEGETATIVE REMOVAL AND PLANTING AREAS. TREES REMOVED WILL BE CONVERTED TO WOOD CHIPS AND TRANSPORTED OFF-SITE BY THE CONTRACTOR FOR DISPOSAL.



CONCEPTUAL LANDSCAPE BUFFER - PLAN
NOT TO SCALE



CONCEPTUAL LANDSCAPE BUFFER - ELEVATION
NOT TO SCALE

REPLACEMENT PLANT LIST

Key	Common / Botanical Name	Size	
SHRUBS			
CL	Sweetshrub (Calycanthus floridus)	36" ht x 30" w	B&B
CS	Redosier dogwood (Cornus sericea)	24" ht x 18" w	B&B
IG	Inkberry (Ilex glabra)	24" ht x 18" w	B&B
KS	Mountain laurel (Kalmia sp.)	36" ht x 30" w	B&B
MP	Bayberry (Myrica pennsylvanica)	30" ht x 24" w	B&B
RS	Rhododendron (Rhododendron sp.)	30" ht x 30" w	B&B
RG	Smooth sumac (Rhus glabra)	30" ht x 24" w	B&B
RU	Blackberry (Rubus sp.)	30" ht x 24" w	B&B
SA	Sassafras (Sassafras albidum)	24" ht x 18" w	B&B
VA	Mapleleaf viburnum (Viburnum acerifolium)	30" ht x 24" w	B&B
SMALL & FLOWERING TREES			
AC	Shadblow serviceberry (Amelanchier canadensis)	8' - 10' ht.	B&B
CC	Eastern redbud (Cercis canadensis)	6' - 8' ht.	B&B
CF	Flowering dogwood (Cornus florida)	6' - 8' ht.	B&B
CW	Winterhazel (Corylopsis sp.)	6' - 8' ht.	B&B
MS	Crabapple (Malus sp.)	8' - 10' ht.	B&B
EVERGREEN TREES			
JV	Eastern red cedar (Juniperus virginiana)	6' - 7' ht., single trunk,	B&B
PG	White spruce (Picea glauca)	6' - 7' ht., single trunk,	B&B
PS	Eastern white pine (Pinus strobus)	7' - 8' ht., single trunk,	B&B
TO	Dark green arborvitae (Thuja occidentalis 'Nigra')	7' - 8' ht., single trunk,	B&B
LARGE TREES			
AR	October Glory red maple (Acer rubrum 'October Glory')	3 1/2" - 4" cal.,	B&B
AS	Silver maple (Acer saccharinum)	3 1/2" - 4" cal.,	B&B
BN	River birch (Betula nigra)	3 1/2" - 4" cal.,	B&B
CA	American hornbeam (Carpinus caroliniana)	3 1/2" - 4" cal.,	B&B
FP	Green ash (Fraxinus pennsylvanica)	3 1/2" - 4" cal.,	B&B
LS	Sweet gum (Liquidambar styraciflua)	3 1/2" - 4" cal.,	B&B

2A & 2B

AMELANCHIER CANADENSIS (SHADBLOW SERVICEBERRY), HAMAMELIS VIRGINIANA (COMMON WITCH HAZEL), AND HERBACEOUS GRASS PLANTINGS

- NOTES:
- PLANTINGS SHALL OCCUR IN GROUPINGS OR NUMBERS OF 3, 5, OR 7
 - WITH LIKE OR SIMILAR SPECIES WHENEVER POSSIBLE
 - ASSUME THAT 60 PERCENT OF THE AREA SHALL BE PLANTED WITH SERVICEBERRY SHRUB PLANTINGS
 - ONE (1) SERVICEBERRY SHALL BE PLANTED EVERY 350 SQ FT OF AREA
 - ASSUME THAT 40 PERCENT OF THE AREA SHALL BE PLANTED WITH WITCH HAZEL SHRUB PLANTINGS
 - ONE (1) WITCH HAZEL SHALL BE PLANTED EVERY 300 SQ FT. OF AREA

HERBACEOUS GRASS PLANTINGS SEED MIX

ERNST NEW ENGLAND PROVINCE FAWC MIX (ERNMX-251)
(FOR WET MEADOWS AND WETLANDS)

28.0%	Carex vulpinoidea (Fox Sedge)
25.0%	Elymus virginicus (Virginia Wildrye)
15.0%	Carex lurida (Lurid (Shallow) Sedge)
4.0%	Juncus effusus (Soft Rush)
4.0%	Scirpus cyperinus (Woolgrass)
2.5%	Aster prenanthoides (Zigzag Aster)
2.5%	Aster puniceus (Purplestem Aster)
2.0%	Carex comosa (Cosmos Bristly)
2.0%	Cinna arundinacea (Wood Reedgrass)
2.0%	Eupatorium fistulosum (Joe Pye Weed)
2.0%	Eupatorium maculatum (Spotted Joe Pye Weed)
2.0%	Liatris spicata (Marsh (Dense) Blazing Star)
2.0%	Scirpus atrovirens (Green Bulrush)
1.0%	Aster umbellatus (Flat Topped White Aster)
1.0%	Carex intumescens (Bladder Sedge)
1.0%	Glyceria canadensis (Rattlesnake Grass)
1.0%	Lobelia siphilitica (Great Blue Lobelia)
1.0%	Mimulus ringens (Square Stemmed Monkey Flower)
1.0%	Polygonum pensylvanicum (Pennsylvania Smartweed)
1.0%	Veronica noveboracensis (New York Ironweed)

SEEDING RATE = 20 lb. Per Acre

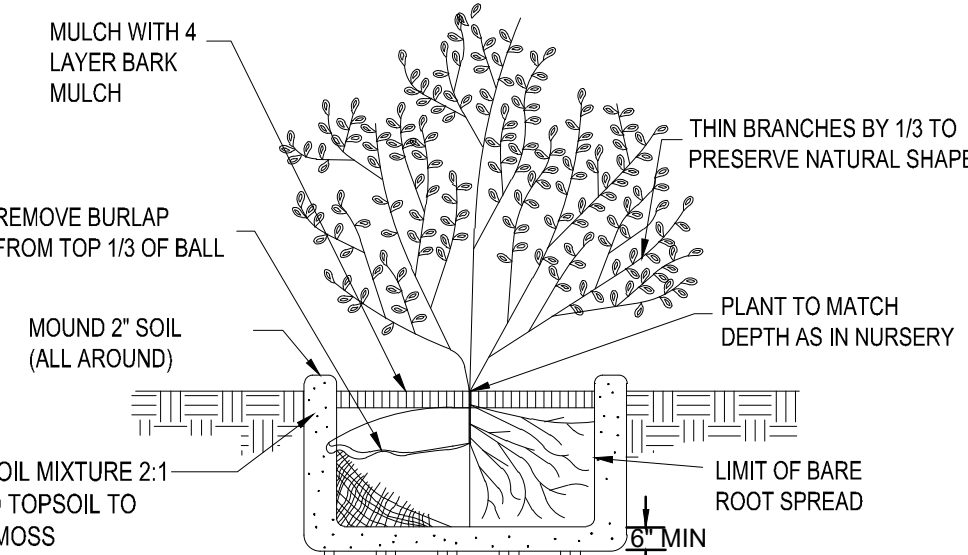
WETLAND BUFFER TREE CLEARING NOTES

1. TREE CLEARING THAT OCCURS WITHIN THE WETLAND BUFFER AREAS SHALL BE DONE IN A MANNER WHERE THE TREES ARE TOPPED, GIRDLED, AND LEFT AS STANDING SNAGS ENCOURAGING WILDLIFE HABITAT FEATURES TO DEVELOP TO THE GREATEST EXTENT WHERE EVER POSSIBLE.

2. AS AN OPTION, THE REMAINING SLASH COULD BE PILED TO CREATE WILDLIFE SHELTERS AND THE LARGER WOOD LEFT TO LAY ON THE GROUND TO CREATE ADDITIONAL WILDLIFE HABITAT FEATURES.

PLANTING NOTES

1. MINIMUM ACCEPTABLE SIZES OF TREES TO BE PLANTED SHALL BE AS FOLLOWS: LARGE-GROWING - 2 1/2" TRUNK DIAMETER CALIPER AT 1' ABOVE THE GROUND. MEDIUM-GROWING - 2 1/2" TRUNK DIAMETER, CALIPER AT 1' ABOVE THE GROUND. SMALL-GROWING - 9" CROWN HEIGHT, 5' SPREAD. SHRUBS-GROWING - 24" HEIGHT WITH AN 18" SPREAD
2. ALL DISTURBED AREAS SHALL BE STABILIZED WITH A NEW ENGLAND CONSERVATION/WILDLIFE MIX WITH AN APPLICATION RATE OF 25 POUNDS PER ACRE, SPREAD MECHANICALLY OR WITH HYDROSEED.
3. THE NEW ENGLAND CONSERVATION/WILDLIFE MIX WILL CONSIST OF THE FOLLOWING: BIG BLUESTEM (ANDROPOGON GERARDII); UMBRELLA ASTER (ASTER UMBELLATUS); PARTRIDGE PEA (CHAMAECRISTA FASCICULATA); VIRGINIA WILD RYE (ELYMUS VIRGINICUS); GRASS LEAVED GOLDENROD (EUTHAMIA GRAMINIFOLIA); CREEPING RED FESCUE (FESTUCA RUBRA); DEER TONGUE (PANICUM CLANDESTINUM); LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM); EARLY GOLDENROD (SOLIDAGO JUNCEA); INDIAN GRASS (SORGHASTRUM NUTANS); BLUE VERVAIN (VERBENA HASTATA); GOLDEN ALEXANDERS (ZIZIA AUREA).
4. ACCEPTABLE TYPES OF SCREEN TREES MAY BE SELECTED FROM THOSE RECOMMENDED BY THE ASSOCIATED LANDSCAPE CONTRACTORS OF MASSACHUSETTS AND APPROVED BY THE TOWN OF STURBRIDGE, AND DESIGNATED ON THE PLAN AND PLANT LIST BY THE PROJECT LANDSCAPE ARCHITECT, WHICH INCLUDES LARGE-GROWING, MEDIUM-GROWING, AND SMALL-GROWING DECIDUOUS TREES AS WELL AS EVERGREEN AND DECIDUOUS SHRUBS.
5. OPERATIONS SHALL BE AS SPECIFIED IN THE APPROPRIATE SECTIONS OF THE RECOMMENDED STANDARD SPECIFICATIONS FOR PLANTING TREES, SHRUBS, AND VINES--ASSOCIATED LANDSCAPE CONTRACTORS OF MASSACHUSETTS.
6. REQUIREMENTS FOR SUPPORT STAKES, GUY WIRE AND CABLE, GROUND ANCHORS, HOSE, AND WRAPPING MATERIAL SHALL BE THOSE CONTAINED IN SECTION 6 OF THE RECOMMENDED STANDARD SPECIFICATIONS FOR PLANTING TREES, SHRUBS, AND VINES, COMPILED AND ISSUED BY THE ASSOCIATED LANDSCAPE CONTRACTORS OF MASSACHUSETTS, INC.
7. THE APPLICANT, HIS SUCCESSOR OR ASSIGNS SHALL BE RESPONSIBLE FOR MAINTENANCE OF PLANTED TREES AND REPLACEMENT OF THOSE WHICH HAVE DIED OR BECOME DISEASED FROM THE TIME OF PLANTING THROUGH ONE FULL YEAR FROM TIME OF PLANTING.



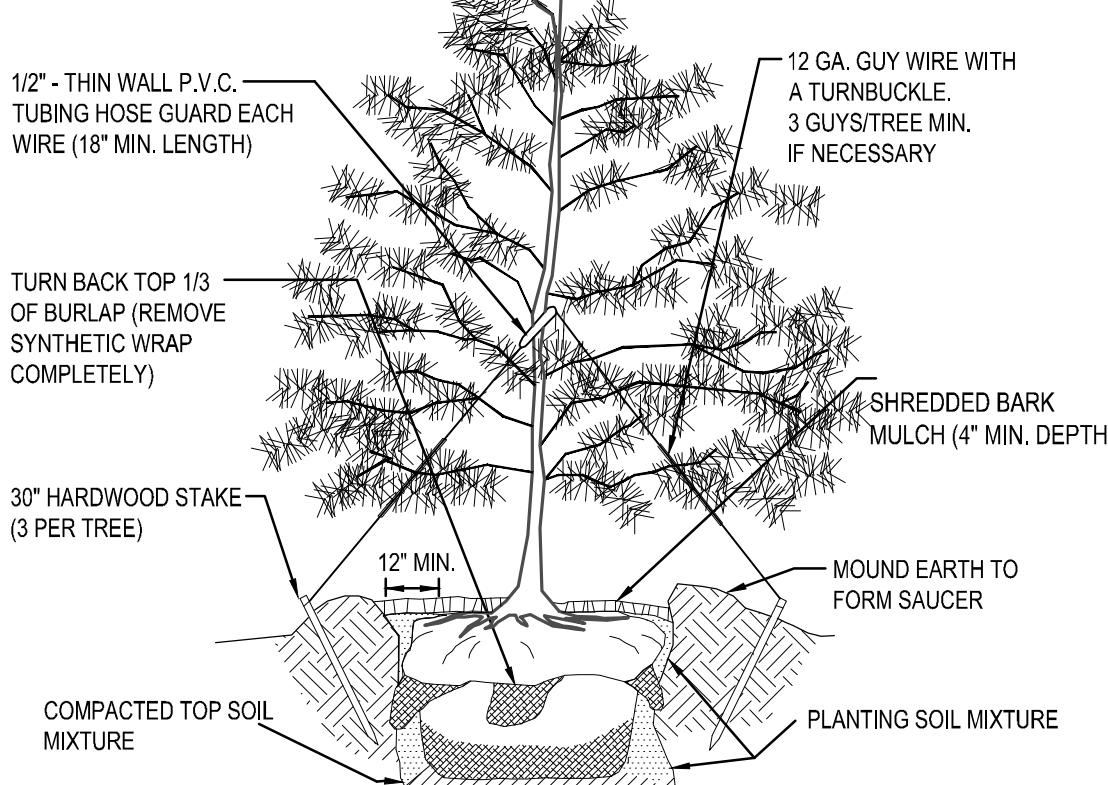
SHRUB PLANTING DETAIL
NOT TO SCALE



SOLAR SHADE ELEVATION: NORTH - SOUTH AXIS
NOT TO SCALE

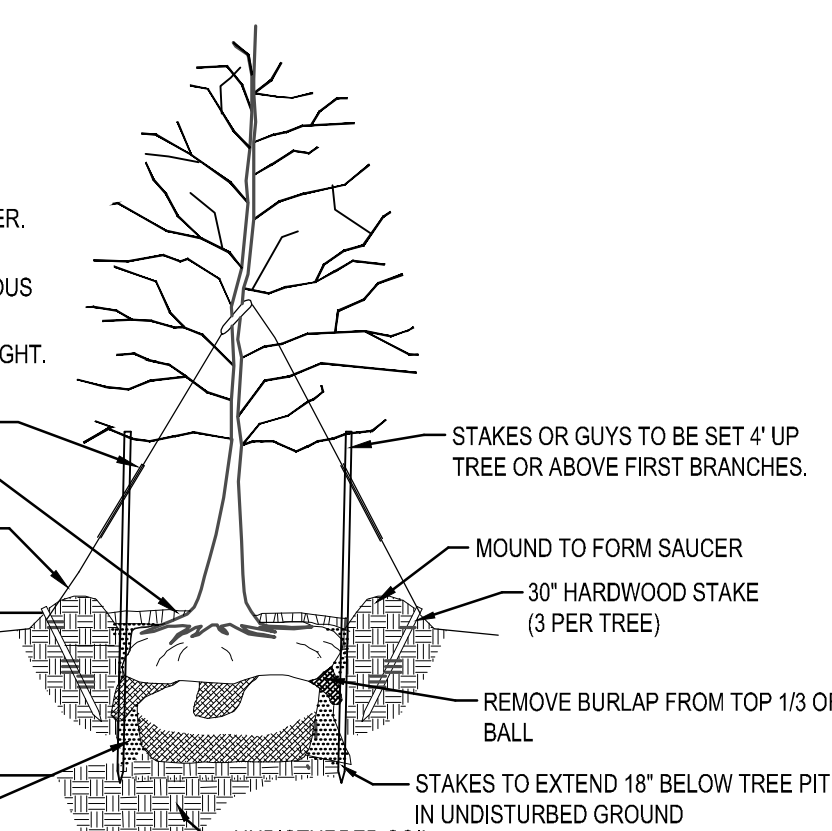


SOLAR SHADE ELEVATION: EAST - WEST AXIS
NOT TO SCALE



EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

- NOTES:
- STAKE TREES UNDER 3" CAL.
 - GUY TREES 3" CAL & OVER.
 - SELECTIVELY PRUNE AND RETAIN LEADER.
 - TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE.
 - SET STAKES VERTICAL AND AT SAME HEIGHT.



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

ISSUED FOR CONSTRUCTION

REFERENCE DRAWINGS

NO.	REVISION	DATE	BY	CK	P.E. ISSUED BY	P.E. No.
2	REVISED PER OWNER	06/05/18	ROE	MJR	SML	53021
1	REVISED PER OWNER	04/12/17	SLP	SML	SML	53021
0	ISSUED FOR CONSTRUCTION	10/14/16	TRC	TRC	REJ	48086

CLIENT APPROVAL

APPROVED BY

COMPANY

DATE

TRC DESIGNED

TRC DRAWN

TRC CHECKED

SML APPROVED

REVIEWED

HARE ROAD SOLAR PROJECT

LANDSCAPE PLANS & DETAILS

STURBRIDGE

AMERESCO
Green • Clean • Sustainable

Wannalancit Mills
650 Suffolk Street, Suite 200
Lowell, MA 01854

SCALE: AS NOTED

DATE: 6/06/2014

MA

C-17

REV. 1