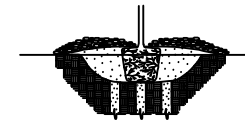


NOTES:

- 1.\*\*BARE ROOT PERENNIALS MUST BE INSTALLED IN THE SPRING BY JUNE 1ST. IF PLANTING IN FALL, FOLLOW FALL DECIDUOUS PLANTING DATES.
- 2.\*\*ACTUAL DATES MAY CHANGE DEPENDING UPON SEASONAL CONDITIONS, AS DETERMINED BY THE ENGINEER.
- 3.\*\*FALL PLANTING MAY NOT BE RECOMMENDED OR ALLOWED. SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS. THE FOLLOWING BARE ROOT PLANTS ARE NOT RECOMMENDED FOR FALL INSTALLATION: HAWTHORN, RUSSIAN OLIVE, DOGWOOD, POPLAR, HACKBERRY, LINDEN, IRONWOOD, HONEYLOCUST, BIRCH, MOUNTAIN ASH, MAPLE, WILLOW, CRABAPPLE, PLUM/CHERRY, OAKS, AND SUMAC.

KEY	SPRING				FALL	
	PERENNIALS	CONIFEROUS	DECIDUOUS	SEEDLINGS	DECIDUOUS	CONIFEROUS
1	MAY 1 TO JUNE 15	APRIL 21 TO JUNE 1	APRIL 21 TO JUNE 1	APRIL 21 TO JUNE 1	OCT. 1 TO NOV. 1	AUG. 25 TO SEPT. 15
2	MAY 1 TO JUNE 15	APRIL 7 TO MAY 17	APRIL 7 TO JUNE 1	APRIL 7 TO MAY 17	OCT. 10 TO NOV. 15	AUG. 25 TO SEPT. 15

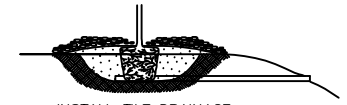
OPTIMUM PLANTING DATE ZONES IN MINNESOTA



INSTALL GRANULAR FILTER

- 1.\*\*EXCAVATE HOLE OR BED TO ALLOW PLACING THE TOP OF ROOT MASS 1"-3" HIGHER THAN FINISHED GRADE.
- 2.\*\*AUGER 8" DIAMETER HOLES ENTIRELY THROUGH IMPERVIOUS OR POORLY DRAINED HARD PAN SOIL LAYER TO ADEQUATELY DRAIN SUBSOIL.
- 3.\*\*THOROUGHLY BACKFILL AUGER HOLES WITH A UNIFORM INCORPORATED MIXTURE OF 50% SAND AND 50% INPLACE SOIL.
- 4.\*\*COMPLETE PLANTING ACCORDING TO PLANTING DETAILS ( SHEET A ) .

NOTE:  
THE NEED FOR USING ALTERNATIVE PLANTING DETAILS AND WHICH TYPE TO USE SHALL BE DETERMINED BY THE CONTRACTOR AND SUBJECT TO APPROVAL BY THE ENGINEER.



INSTALL TILE DRAINAGE

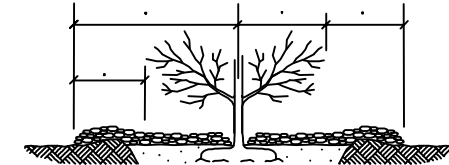
- 1.\*\*EXCAVATE HOLE OR BED TO ALLOW PLACING THE TOP OF THE ROOT MASS 1"-3" HIGHER THAN FINISHED GRADE.
- 2.\*\*INSTALL 4" MINIMUM DIAMETER DRAIN TILE DAYLIGHTING AT A LOWER GRADE, AS APPROVED BY THE ENGINEER.
- 3.\*\*COMPLETE PLANTING ACCORDING TO PLANTING DETAILS ( SHEET A ) .



INSTALL MINI-BERM

- 1.\*\*EXCAVATE HOLE OR BED 1/4 THE DEPTH OF THE ROOT MASS.
- 2.\*\*SET ROOT MASS IN HOLE.
- 3.\*\*CONSTRUCT BERM WITH SANDY LOAM TOPSOIL. EXTEND THE BERM BASE TO A WIDTH OF 3 TIMES THE BERM HEIGHT.
- 4.\*\*COMPLETE PLANTING ACCORDING TO PLANTING DETAILS ( SHEET A ) .

ALTERNATIVE PLANTING DETAILS FOR POORLY DRAINED SOIL



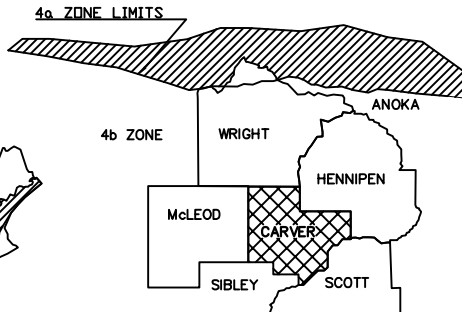
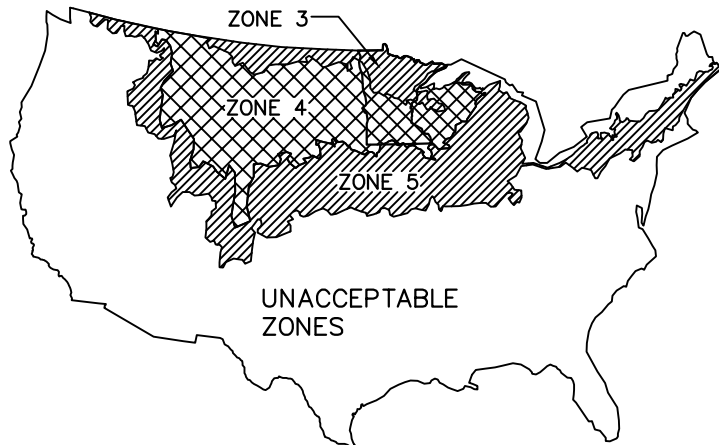
SUBSIDING OR DETERIORATING MULCH SHALL BE ACCEPTABLE THROUGHOUT THE CONTRACT PERIOD PROVIDED THE MULCH DEPTH IS MAINTAINED AT A MINIMUM 3" DEPTH AT ALL TIMES AND UPON FINAL ACCEPTANCE. REPLACEMENT MULCH SHALL BE REQUIRED WHEN THE CONTRACTOR'S OPERATIONS HAVE CONTAMINATED THE MULCH WITH SOIL.

NOTE:

- 1.\*\*REMOVE MULCH PLACED TO A DEPTH GREATER THAN THAT SPECIFIED WHEN DIRECTED BY THE ENGINEER.
- 2.\*\*PULL MULCH BACK NO LESS THAN 3" AND NO MORE THAN 6" FROM THE TRUNK

TYPE OF PLANT	W CENTER OF PLANT TO MULCH LINE	X EDGE OF BRANCHING TO MULCH LINE	Y DEPTH OF MULCH	Z DEPTH OF MULCH
CONIFEROUS TREES	VARIABLES	3' MIN.	4"- 6"	4"- 6"
DECIDUOUS TREES	3' MIN.	N/A	4"- 6"	4"- 6"
CONIFEROUS SHRUBS	VARIABLES	3' MIN.	3"- 4"	4"- 6"
DECIDUOUS SHRUBS	3' MIN.	N/A	4"- 6"	4"- 6"
VINES	2' MIN.	N/A	4"- 6"	4"- 6"
PERENNIALS	VARIABLES	2' MIN.	2"- 4"	2"- 4"
MACHINE-TRANSPLANTED TREES	12" BEYOND EDGE OF HOLE		4"- 6"	4"- 6"

MULCH PLACEMENT DETAIL



PLANT HARDINESS IN CHANHASSEN IS ZONE 4b

AVERAGE ANNUAL EXTREME MINIMUM TEMPERATURE RANGE FOR ZONE 4b IS -25 TO -20 DEGREES (F)

ALL PLANT STOCK SHALL BE DEEMED ACCEPTABLE FOR HARDINESS:

1.\*\*IF IT IS HARDY TO THE MINNESOTA ZONE 4b WHERE THE PROJECT SITE IS LOCATED AND:

OR

A.\*\*PLANT STOCK CAN BE DOCUMENTED AS CONTINUOUSLY GROWN FOR AT LEAST THE LAST TWO YEARS WITHIN THE ACCEPTABLE LIMITS ZONES 3,4 OR 5 SHOWN ON THE ACCEPTABLE PLANT STOCK GROWING RANGE ABOVE.

B.\*\*PLANT STOCK, IF GROWN OUTSIDE THE ACCEPTABLE GROWING RANGE LIMITS, CAN BE DOCUMENTED AS HAVING THE SEED SOURCE AND ROOT AND GRAFT STOCK ORIGINATING FROM WITHIN THE ACCEPTABLE GROWING RANGE LIMITS.

ACCEPTABLE PLANT STOCK GROWING RANGE LIMITS  
SOURCE: U.S.D.A. PLANT HARDINESS ZONE MAP



REVISED:  
3-14

FILE NAME:  
G:\ENG\SPCS\5310

ENGINEERING  
DEPARTMENT

PLATE:  
5310

PLANTING DETAILS FOR  
STEEP SLOPES/MASS BED PLANTINGS