

5' FOR DECIDUOUS TREES
8' FOR CONIFEROUS TREES



PLANTING DETAIL FOR MASS PLANTING BEDS



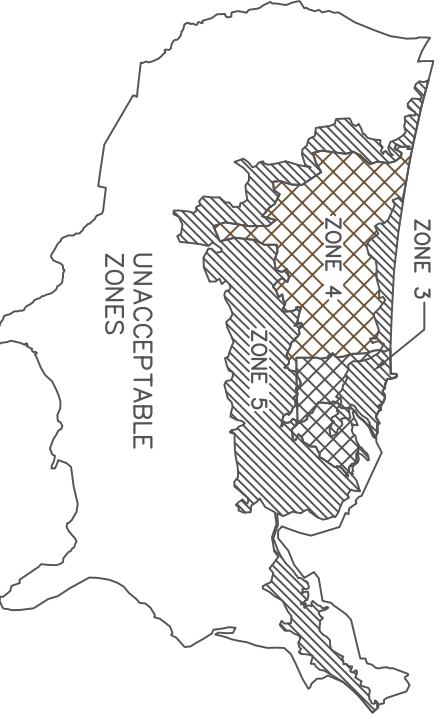
INDICATES PROJECT LOCATION

| KEY | SPRING | | | | FALL | | | |
|-----|------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| | PERENNIALS | CONIFEROUS | DECIDUOUS | SEEDLINGS | DECIDUOUS | CONIFEROUS | PERENNIALS | 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 | AUG. 25 TO SEPT. 15 | 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 | | | |

OPTIMUM PLANTING DATE ZONES IN MINNESOTA

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 FOR SPECIFIC PROJECT REQUIREMENTS. THE FOLLOWING BARE ROOT PLANTS ARE NOT RECOMMENDED FOR PLANTING IN FALL: DOGWOOD, POPULAR, HACKBERRY, LINDEN, IRONWOOD, HONEYLOCUST, BIRCH, MOUNTAIN ASH, MAPLE, WILLOW, CRABAPPLE, PLUMCHERRY, OAKS, AND SUMAC.



4a. ZONE LIMITS

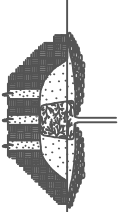


PLANT HARDINESS IN CHANHASSEN IS ZONE 4b
AVERAGE ANNUAL EXTREME MINIMUM TEMPERATURE RANGE FOR ZONE 4b IS -25 TO -20 DEGREES (F)

ALL PLANT STOCK SHALL BE DEEMED ACCEPTABLE FOR HARDINESS:
1.**IT IS HARDY TO THE MINNESOTA ZONE 4b WHERE THE PROJECT SITE IS LOCATED AND:
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.

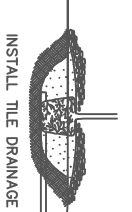
OR
B.**PLANT STOCK IF GROWN OUTSIDE THE ACCEPTABLE GROWING RANGE LIMITS, CAN BE DOCUMENTED AS HAVING THE SEED SOURCE AND ROOT AND GRAFT STOCK ORIGINATING FROM WITHIN THE ACCEPTABLE GROWING RANGE LIMITS.

ACCEPTABLE PLANT STOCK GROWING RANGE LIMITS SOURCE: USDA PLANT HARDINESS ZONE MAP



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).



INSTALL TILE DRAINAGE

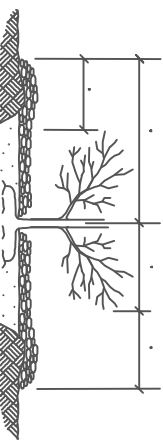
- 1.**EXCAVATE HOLE OR BED TO ALLOW PLACING THE TOP OF THE ROOT MASS 1'-3" HIGHER THAN FINISHED GRADE.
- 2.**INSTALL 4" MINIMUM DIAMETER DRAIN TILE DAYLIGHTING AT A LOWER GRADE AS APPROVED BY THE ENGINEER.
- 3.**COMPLETE PLANTING ACCORDING TO PLANTING DETAILS (SHEET A).



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 | VARIES | 3' MIN. | 4"-6" | 4"-6" |
| DECIDUOUS TREES | 3' MIN. | N/A | 4"-6" | 4"-6" |
| CONIFEROUS SHRUBS | VARIES | 3' MIN. | 3"-4" | 4"-6" |
| DECIDUOUS SHRUBS | 3' MIN. | N/A | 4"-6" | 4"-6" |
| VINES | N/A | N/A | 4"-6" | 4"-6" |
| PERENNIALS | VARIES | 2' MIN. | 2"-4" | 2"-4" |
| MACHINE-TRANSPLANTED TREES | 12" BEYOND EDGE OF HOLE | VARIES | 4"-6" | 4"-6" |

MULCH PLACEMENT DETAIL



REVISED: 3-14

FILE NAME: G:\ENG\SPCS\5310

ENGINEERING DEPARTMENT

PLATE: 5310

PLANTING DETAILS FOR STEEP SLOPES/MASS BED PLANTINGS