

ARTICLE 209 - TREES, SHRUBS, PERENNIALS AND GRASSES

209.1 Description.

This work shall consist of furnishing and planting plants of the species, varieties and sizes specified, complete in place at the locations designated on the plans or as directed by the Landscape Architect, City Forester, Inspector or designee herein referred to as Engineer. This work shall include furnishing all necessary materials and performing all necessary work such as excavation of plant holes, salvaging topsoil, potting, transplanting, backfilling, pruning, mulching, watering, heeling in, fertilizing, wrapping, support staking, rodent protection and anti-desiccant, disposing of surplus waste materials, necessary care and required replacements pending acceptance, and such work necessary or incidental thereto to complete the item in accordance with the plans, specifications and contract.

209.2 Materials.

209.2(a) General.

Unless otherwise provided for or approved by the Engineer, all materials used shall conform to requirements hereinafter set forth.

209.2(b) Plant Materials.

1. General. Unless otherwise specified, all plants shall be nursery grown stock that has been transplanted or root-trimmed two or more times, according to the species and size of plants.

Applicable Specifications and Standards:

American Standard for Nursery Stock, ANSI Z60.1., current edition.

Standardized Plant Names. 1942 American Joint Committee on Horticulture Nomenclature.

Pruning Standards for Shade Trees, current edition. National Arborist Association.

American Nursery Standard For Tree Care Operations, Tree, Shrub And Other Woody Plant Maintenance- Standard Practices; ANSI A300, current edition

All plants shall be typical of their species and have well-formed tops (crowns) and root systems and shall be free from injurious insects, plant diseases or other plant pests. All plants shall be grown within the States of Wisconsin, Minnesota, Iowa, Michigan, or the parts of Illinois, Indiana, or Ohio located within Zone 5 of the "Plant Hardiness Zone Map" of the USDA, Miscellaneous Publication No. 814 - Revised 1990. Plants furnished shall conform to the American Standard for Nursery Stock and be free from the following defects:

Serious injuries to leader, branches (crown), trunk, bark or roots.

Dried out roots.

Girdling or encircling roots.

Prematurely opened buds.

Thin or poor tops (crowns) or root systems.

Evidence of molding.

Dry, loose or broken ball of earth in Balled and Burlapped (B& B) stock.

Dried out or damaged soil mass in Bare Root (BR), Balled and Burlapped (B&B) or Container Grown (CG) stock.

Part II - Earthwork

2. Substitution. Where evidence is submitted that a specified plant cannot be obtained, substitution may be made, only upon specific approval of the Engineer.
3. Grading Standards. Plant stock shall conform to the code of standards set forth in the current edition of the American Standard for Nursery Stock.
4. Inspection and Approval of All Plant Material. All plants shall be subject to the approval of the Engineer. Trees that will be inspected and tagged at the nursery or place of collection will be done at a time agreeable to the Contractor and Engineer. Approval of plants at the source does not alter the right of rejection at the project site. It is the right of the Engineer to reject plant material(s) at the project site. It is the responsibility of the Contractor to notify the Engineer forty-eight (48) hours prior to any plantings, as to which plants are to be planted and their location(s). Contractor shall furnish to the Engineer an invoice or order form from each nursery indicating the sources from which he proposes to obtain plant materials for the work at this time confirming what will be delivered. This list shall include species name, cultivar, root condition (container, bare root or B&B) and size. All plants shall conform to the measurements specified in the plant list. Measurements specified shall be the minimum size acceptable for each variety. Plants that meet the requirements specified in the itemized plant list, but that do not possess a normal balance between height and spread, will not be accepted. Plants shall not be pruned prior to delivery. Tree branching shall be evenly spaced around the trunk without excessive gaps between the whorls. Trees with multiple leaders, unless specified, will be rejected. Central leaders shall be left intact.

209.3 Digging, Handling and Packing Plant Stock.

209.3(a) General.

All plant stock shall be freshly dug and handled with care and skill to prevent injuries to the leaders, branches, trunk and roots, and shall be packed in accordance with the requirements of the current edition of the State of Wisconsin DOT Standard Specifications for Road and Bridge Construction.

209.3(b) Digging and Handling of Plant Material.

Care shall be taken to prevent any damage to plant material during transit and handling. The Engineer shall check trees for any shipping or handling damages. Trees with excessive damage as determined by the Engineer shall be rejected.

Plant stock to be furnished Balled and Burlapped (B&B) shall be moved with a compact dug ball of earth so firmly wrapped in burlap that upon delivery the soil in the ball is still firm and compact about the root system. Each ball shall be of sufficient size to encompass all the fibrous roots necessary to insure successful recovery and development of the plant. Root balls shall not be allowed to dry out between digging and planting. The minimum sizes of balls, ball depth and diameters, and increased ball sizes for collected stock shall be in accordance with Recommended Balling and Burlapping Specifications as set forth in the current edition of the American Standard for Nursery Stock sponsored by the American Association of Nurserymen, Inc. No plant will be accepted when the burlap, twine, wire or ropes required to secure the root ball have been removed. Ropes, strings, wire baskets, burlap, and other wrappings shall be removed from the entire plant before installation is complete. The balance of the wrappings may be left intact around the bottom of the ball. All balled and burlapped plants that cannot be planted immediately on delivery shall be set on the ground and

Part II - Earthwork

the balls well covered with soil or other acceptable mulch material and shall be kept moist until planted.

Plant stock to be furnished Bare Root (BR) shall be dug with bare roots protected against drying out by use of moist sphagnum moss or other suitable material and covered with canvas or other suitable material in an approved manner.

Plants marked "CG" shall be container grown with a well-established root system. Container grown plants are to be well-established within the container, with a root system sufficiently developed to retain its shape and hold together when removed from the container. Roots should be noticeable when removed from the container, but not protruding outside the container. Soil within the container should be held together by the roots, in form and whole. Plants shall not be bound nor have kinked, circling, or bent roots.

All plants shall be handled so that the roots are adequately protected at all times. During shipment, all plants shall be properly protected by a tarpaulin or other suitable covering. No plant shall be so bound with rope or wire at any time as to damage the bark, break branches, or destroy its natural shape. All balled and burlapped and container grown plants which cannot be planted immediately on delivery shall be set on the ground and well-protected with soil or other acceptable material. Bare rooted plants shall be planted or heeled-in trenches immediately upon delivery. If heeled-in, all bundles of plants shall be opened and the plants separated before the roots are covered and care shall be taken to prevent air pockets among the roots. Until planted, all material shall be maintained.

Plants shall be marked for identification and for checking as designated on the plant list. Each bundle of plants and all separate plants shall have legible, waterproof labels securely attached thereto before delivery to the site.

Prior to any excavation, the Contractor shall notify Diggers Hotline at 1-800-242-8511 to determine the location of all electric, gas, water, sewer, oil and other utility lines, including tanks or other sub-surface encumbrances, and precautions shall be taken by the Contractor not to disturb or damage any utility lines. In the event of a conflict of a utility with the planting, the Contractor shall promptly request, in writing, from the Engineer a revised location for plant material.

209.4 Construction Methods.

209.4(a) General.

Unless otherwise specified on plans, the spring planting season for all plants is as follows: BR plants shall be planted from the time the frost is out of the ground to bud break; B&B plants shall be planted from the time frost is out of the ground to June 1st. Deciduous, grass or perennials container grown plants may be planted from the time frost is out of the ground through October 15th. Unless otherwise specified on plan, the normal fall planting season for all deciduous trees shall begin no earlier than October 1st. Fall evergreen tree and shrub planting shall be done between August 15th and September 15th. Unless otherwise approved, planting shall not be done where the ground is frozen or when soil is in an unsatisfactory condition for planting.

209.4(b) Delivery and Temporary Storage.

At least forty-eight (48) hours prior to each delivery of plant material to the potting, storing or project site, the Contractor shall notify the Engineer of delivery.

Part II - Earthwork

Insofar as practicable, plant stock shall be planted on the day of delivery at the project site. In the event this is not possible, the plant stock shall be temporarily stored by "heeling-in" or by placing in a well-ventilated, cool, moist storage place and shall be adequately protected against drying by the use of moist sphagnum moss, straw or other suitable covering around the roots of BR stock and balls of B&B stock.

Bare root plants, when "heeled-in", shall be placed in a spade depth trench, have their roots fully covered with damp topsoil and be protected from the sun and wind. When "heeled-in", all plants shall be properly cared for by the Contractor. Failure to protect stock shall be cause for rejection of plant material.

Upon delivery, the Contractor shall furnish a delivery receipt or invoice from the nursery that includes the species, cultivar, quantity and size of plants delivered.

209.4(c) Layout of Planting.

The Engineer will designate the location of all trees and shrubs marker stakes or paint marks on the ground. The Engineer shall receive notice 48 hours minimum will be required of Contractor for all plant site selection. The plant location and type will be staked as permanently as possible. The Contractor shall be responsible for maintaining these locations until planting occurs.

209.4(d) Excavation of Plant Holes.

The plant holes shall be centered at the location stake, unless otherwise permitted by the Engineer. Plant holes to be 3 times the ball/pot diameter.

The plant hole, except for Machine Transport (MT) stock, shall be excavated to the minimum dimensions shown on the plans or established by the Engineer, provided, however, that the plant hole shall be large enough to permit placing at least six (6) inches of backfill material around the root system of BR stock and the pots, balls or containers of B&B and CG stock. When a minimum size hole is excavated, the hole shall be excavated cylindrical in shape with vertical sides and a flat or saucer-shaped bottom.

Unless soil conditions make it impractical, planting holes for Machine Transport plants shall be done by the tree moving machine and shall be approximately the same size and shape as the soil mass containing the root system of the machine moved plant. The plant shall be dug set to match existing grade, backfilled with screened topsoil and watered in to eliminate all voids.

The topsoil suitable for backfilling shall be kept separate from the excavated subsoil and sod.

When planting on a slope the minimum depth of the plant hole shall be measured from the downward side of the slope at the hole.

209.4(e) Pruning.

Any plants requiring pruning shall be pruned at the planting site as specified by the Engineer. Prior to planting, damaged or broken parts of the fleshy roots shall be cut off smoothly to a point where they are clean and clear of rot, while preserving as much of the root system as possible. When/where specified or directed by the Engineer, for all BR, B&B, or CG plant stock, pruning shall consist of

Part II - Earthwork

removing only dead, damaged, or broken branching. Pruning shall be done so that the plant retains its natural form and leaving the central leader intact.

Except when heading back, all pruning cuts shall be made at the branch bark ridge and branch collar leaving both branch features intact without leaving stubs or damaging adjacent trunk or branch tissue. When heading back or reducing a branch back to another lateral branch, all pruning cuts shall be made by bisecting the angle between the branch bark ridge and an imaginary line which is perpendicular to the branch being removed. The branch bark ridge must be left intact without leaving a stub and without damaging adjacent branch tissue. Evergreen plants shall not be pruned except to remove dead, damaged, or broken branches. All pruning cuts shall comply with the ANSI A300 current edition. See Part VIII, Standard Plates 2.04 and 2.05 for Proper Pruning Cuts

209.4(f) Anti-Desiccant.

Anti-desiccant, when specified, shall be applied to evergreen plants prior to or at the time of planting and to BR plants prior to shipment from the storage place. It shall be applied to plants to be transplanted prior to transplanting. The rate and method of application of the emulsion shall be according to the manufacturer's recommendations.

209.4(g) Planting.

All planting of BR, B&B, and CG stock. When a minimum size hole is excavated, the hole shall be excavated cylindrical in shape with vertical sides and a flat or saucer shaped bottom. Scarification of the excavated hole will be required to prevent glazing (as per planting detail).

Bare root plants shall have their roots spread into a natural position, free of bunching, kinking, or circling. All broken or damaged roots shall be cut back to the closest point where they are clean and free of rot. No other root pruning shall be done

For plants in plastic, biodegradable or metal containers, the container shall be removed before planting. If roots are crowded or coiled on the bottom, sides, or surface of the root ball, they shall be gently separated from the edges or surface. Ropes, strings, wire baskets, burlap, and other wrappings shall be removed from the top one-half (1/2) of the ball after the plant has been set. The balance of the wrappings may be left intact around the bottom of the ball. For all plants moved with a tree spade, all holes and cavities between the ball and the surrounding soil shall be filled. Glazed planting hole surface shall be sufficiently roughened prior to backfilling. The ball shall be thoroughly watered at planting time.

Plants shall be set with the root flare at the finished grade (root flare shall be determined 1" above the upper-most woody support root). Plants must be centered in the hole and set plumb. Plants shall be set so that they will be at the same depth at the end of the guarantee period.

Planting holes shall be backfilled with excavated soil. Salvaged topsoil shall be placed in layers around the roots or ball. Frozen or muddy soil will not be acceptable suitable backfill material. Backfilling shall be carefully done in a manner that avoid injury to the roots or ball or disturbing the position of the plant. When holes are approximately two-thirds full, they shall be thoroughly watered to eliminate air pockets. After this initial watering, excavated soil shall be installed to the top of the hole and thoroughly watered. Puddled soil conditions shall be avoided.

Planting areas shall be finish-graded to conform to drawings after full settlement has occurred.

Part II - Earthwork

All plants shall be mulched with either shredded hardwood bark or wood chips over the root system from two (2) inches to a maximum depth of 4 inches immediately after planting. Mulching material shall be pulled back one (1) to two (2) inches away from the trunk of the tree. Mulch shall not be in contact with the trunks.

All twine rope, transit guards or wrappings, and plant labels secured around the trunk or branches shall be removed after the planting is completed.

209.4(h) Planting Large Caliper Tree Spade Stock.

The grading of the tree pit shall form a saucer at least four (4) inches in depth. Care shall be taken when lowering and raising the tree ball into the hole by use of a sling and an appropriate device as agreed upon by the Engineer. When centering the tree in the hole, the tree trunk is not to be used as the lever device to move the ball, rather some other lever method must be used at the approval of the Engineer. The center of the tree shall be centered within the tree grate to + 1" from the true center of the tree grate to the center of the tree trunk at the finished sidewalk grade.

209.4(i) Water Tubes.

Watering tubes shall not be routinely installed in any tree planting process. When directed by Engineer during the planting process, watering tubes shall be installed by contractor.

209.4(j) Fertilizer.

Unless otherwise specified, the Contractor shall furnish and place around trees and shrubs one ounce (1 oz.) root contact packets, place after plant hole has been two-thirds (2/3) backfilled. Number of packets to place shall be as follows: 1 packet - bare root shrubs, 2 packets - bare root trees and balled and burlapped shrubs, 4 packets - B&B trees up to three (3) inch caliper, 6 packets - B&B trees three (3) inch caliper and larger. Trees shall not be routinely fertilized when planted.

209.4(k) Mulching.

After planting operations have been completed, planted areas shall be entirely covered with a layer of mulch that is two (2) to four (4) inches deep at the rate of nine (9) cubic yards per 1,000 square feet. The mulch shall be applied one (1) to two (2) inches away from the trunk of the tree. Mulch shall not be in contact with the trunk and shall be maintained as such during the guarantee period. Mulch shall not come in contact with the trunk. When/where indicated on plan or by Engineer, a 6 oz. non-woven permeable landscape fabric/soil separator shall be placed between mulch and soil.

For trees in tree grates and when/where specified, #2 washed stone mulch shall be installed in the watering tubes and grate opening. Mulch shall be three (3) to six (6) inches deep, flush with the underside of the tree grate after settlement and compaction.

Landscape fabric, when/where specified, shall be placed within the layer of washed stone mulch at a depth of 2" below the finish grade of mulch prior to installing the tree grate. The landscape fabric should be cut and installed to the size and shape of the tree grate, including the tree trunk opening. The tree trunk opening of this landscape fabric shall be the same size as the grate opening to facilitate watering and root collar development.

Part II - Earthwork

Following installation of the grate, additional stone mulch shall be installed around tree trunk until even with the top of the tree grate.

209.4(l) Wrapping.

Before trees are wrapped, the Engineer shall inspect the plant stock.

When specified to be wrapped, the trunks of trees shall be wrapped with wrapping material overlapping one and one-half inches, starting from the ground line to the lowest main branches. The wrapping shall be secured in at least three places with masking tape, including the top, middle and bottom. The wrapping shall be done as soon as practical after planting as specified by the Engineer.

209.4(m) Protection.

When required, a protective material shall be applied to plants. This shall consist of one of the materials permitted under Subsection 209.5(e) applied or installed according to Special Provisions and Details.

209.4(n) Support Staking.

When specified, trees shall be supported with at least two (2) stakes driven into the ground near the base of the tree to a depth of two (2) to three (3) feet or until sufficiently solid to support the tree, and shall extend upward to about six (6) inches below the lowest main branches. The tree shall be fastened to the stake by means of soft strapping at least one (1) inch wide, or banding in such a manner as to avoid injury to the tree. In no case shall the strap or banding extend completely around the trunk. Material should be attached loosely enough to allow a small amount of play at the trunk. Stakes are to be placed within the mulched area. Plant stakes shall be removed by the Contractor within a one year period subject to the approval of the Engineer.

209.4(o) Disposal of Excess and Waste Material.

All excess excavation, waste materials, or other debris shall be removed and disposed of by the Contractor.

209.5 Backfill Material.

209.5(a) Topsoil.

All plant holes shall be backfilled with excavated soil. Topsoil shall be salvaged from the planting site whenever suitable for reuse as determined by the Engineer. When holes are approximately two-thirds full, they shall be thoroughly watered to eliminate air pockets. Remaining/additional soil to be installed to the top of the hole and watered. Puddled soil conditions shall be avoided. Additional topsoil shall be of a reasonably fine granulated texture suitable for the purpose and acceptable to the Engineer. Additional topsoil will be supplied by the Contractor as required at no additional cost to the City. Topsoil used as backfill material for plant material to be amended with an acrylamide copolymer soil amendment when/where specified as approved by the Engineer.

The sod from the plant hole excavation may not be used for backfill.

Part II - Earthwork

209.5(b) Fertilizer.

Fertilizers when/where specified, shall be of the slow release type contained in polyethylene, perforated bags with micropore holes. Each bag shall contain a minimum of one(1) ounce of soluble fertilizer with an analysis of 16-8-16 per unit or approved equal. The minimum guaranteed analysis shall be total nitrogen 16%, 9% annomical nitrogen, 7% nitrate nitrogen. Available phosphoric acid P2 O5 (from ammonium phosphate) 8%, soluble potash (from potassium chloride) 16%.

209.5(c) Mulch.

Mulch shall consist of shredded hardwood bark or wood chips or an equivalent material as approved by the Engineer and shall be free of objectionable foreign material. Contractor shall furnish a sample of the mulch that will be used. Where shrubs or perennials/annuals or bulbs are installed in planting bed, shredded or ground hardwood bark shall be used or product approved by the Engineer prior to installation. When/where indicated on plan or by Engineer, a 6 oz. non-woven permeable landscape fabric/soil separator shall be placed between mulch and soil.

209.5(d) Wrapping.

Before trees are wrapped, the Engineer shall inspect the plant stock.

Wrapping, when/where specified, shall consist of a two-ply waterproofed crepe tree wrapping paper, laminated with a layer of pliable asphalt material. The wrap shall tightly cover the entire surface of the trunk, overlapped one and one-half inches in spiral fashion, starting at the base of the tree and extending to the height of the first branches. The wrapping shall be secured in at least three places with masking tape. The contractor will be responsible for removing and disposing of the tree wrap after a one year period.

209.5(e) Protection.

Protection, when/where specified, shall consist of galvanized hardware cloth, extruded aluminum mesh or a durable pre-formed plastic material. The hardware cloth or aluminum mesh, if used, shall have at least three meshes per linear inch and shall be used in conjunction with a steel rod having a minimum size of 3/8 x 48 inches. The plastic material shall be a durable, resilient, preformed plastic spiral acceptable to the Engineer. Such material shall have a natural, earth-tone color. . The contractor will be responsible for removing and disposing of the protection at the end of the guarantee period unless otherwise specified by the Engineer.

209.5(f) Support Staking Materials.

When/where specified, these materials shall consist of such wood or steel stakes, soft straps or banding material as needed to perform the work. Support stakes shall be of solid durable wood approximately two by two inches and of the required length.

In no case shall the strap or banding material extend completely around the tree trunk. Material should be attached loosely enough to allow a small amount of play in the trunk.

The Contractor will be responsible for removing all stakes and straps after a one year period, subject to approval of the Engineer.

Part II - Earthwork

209.5(g) Anti-Desiccant.

Anti-desiccant, when/where specified, shall be an approved emulsion which will provide a film over plant surfaces permeable enough to permit transpiration.

209.5(h) Watering Tubes.

Watering tubes shall not be routinely installed as part of any tree planting process. Watering tubes, when specified, shall be six (6) inch diameter perforated Poly (Vinyl Chloride) (PVC) pipe, twenty-four (24) to thirty (30) inches long and shall be filled with a 1-1/2 - 2 inch river-washed stone.

209.5(i) Watering Equipment.

The Contractor shall furnish and have available sufficient watering equipment, including tanks, pumps, hoses, root feeders and incidentals to fully perform all of the watering. Water will be furnished to the Contractor by the City from existing facilities if requested by the Contractor in accordance with Section 107.11 of these Specifications. When the Contractor chooses to use City of Madison water for any part of the project, then the Contractor must proceed as follows:

1. Request Water Utility to install valve on convenient hydrant.
2. Agree to pay Water Utility charges for installation, use and removal of the valve.
3. Notify Water Utility immediately when use of valve is no longer necessary.

The Contractor shall not make connections to Water Utility facilities without permission from the Water Utility.

209.5(j) Drought Watering.

The Contractor shall receive additional compensation for watering required to keep plants in a healthy growing condition ONLY when the following conditions are present and have been met:

1. The U.S Drought Monitor has classified the City of Madison as "D-3 Drought-Extreme" status. Weekly updates provided by the U.S. Drought Monitor are available at: http://droughtmonitor.unl.edu/DM_state.htm?WI,MW.
2. The plantings were installed greater than ten (10) days from the date seeking additional compensation.

Once the U.S. Drought Monitor has classified the City of Madison as "D-3 Drought Extreme," the Contractor must notify the Engineer of the dates of additional watering(s) to occur within the next (7) days, and of watering(s) that occurred seven (7) days prior to classification of "D-3 Drought Extreme." The Contractor shall receive compensation for up to four (4) additional drought waterings performed seven (7) days prior to the classification of "D-3 Drought Extreme" and four (4) additional waterings during the seven (7) day period after the U.S. Drought Monitor has classified the City of Madison as "D-3 Drought Extreme." The Contractor will not receive "double" payments for waterings during periods of consecutive weeks of "D-3 Drought Extreme" status.

The request for additional waterings will be made on a weekly basis according to the weekly reports of the U.S. Drought Monitor.

Part II - Earthwork

In the event that there is significant rainfall (>1"), after the U.S. Drought Monitor has classified the City of Madison as "D-3 Drought Extreme," the Contractor must notify the Engineer of the revised dates of additional watering that will occur within the next (7) days.

The Engineer shall not be held responsible for informing the Contractor that additional watering(s) are necessary because of the "D-3 Drought Extreme" status by the U.S. Monitor. Plants that perish or do not thrive in a flourishing condition because of lack of watering(s) shall be the responsibility of the Contractor per Section 209.6(a) Acceptance, Section 209.6(b) Care and Section 209.6(c) Guarantee.

209.6 Acceptance and Guarantee.

209.6(a) Acceptance.

Upon completion of all required planting, an inspection of the work will be made by the Engineer. All plants which are dead or found not to be in a normal, healthy condition or do not conform to specifications, in the judgment of the Engineer will not be accepted. All rejected work shall be replaced by the Contractor, including removal and repair of all work affected by the replacement, at no cost to the City.

209.6(b) Care.

The Contractor shall properly care for all plants while the payment and performance bond remains in effect. The performance and payment bond shall remain in effect for one year from the date on the certificate of completion.

Proper care of plants shall consist of doing such watering, weeding, cultivating, pruning, spraying, securing of braces and guys, wrapping, re-mulching and such other work as may be necessary to keep the plants in a neat appearance and in a healthy growing condition. No additional compensation will be given to Contractors for watering related to dry conditions, except as specified in Subsection 209.6(c).

It shall be the Contractors responsibility to thoroughly water and care for plants, especially during the ten (10) day period after initial planting. No additional compensation will be given for watering during the first ten (10) days of initial planting, regardless of drought status.

Street trees shall be pruned by the City Forester. In addition to the waterings required in Subsection 209.4(g), entitled Planting, additional waterings may be ordered by the Engineer at any time, for the duration of the guarantee period. Should conditions require such waterings, Contractor shall water within three (3) days of notification. The volume of each watering and intervals between waterings shall depend upon weather conditions and soil moisture. Contractor shall monitor weather and soil condition of each planting.

Care must be taken when watering not to wash away mulch and topsoil. Mulch and topsoil displaced by the Contractor must be replaced immediately per section 209.4(k).

209.6(c) Guarantee.

Plants shall be guaranteed for two years from the date of on the certificate of completion.

Part II - Earthwork

At any time within the period of the guarantee, the Contractor shall replace any plant which, for any reason, has died or is in a dying condition, or which has failed to flourish in such a manner or to such a degree that its usefulness or appearance has been impaired. Replacement shall include removal and repair of all affected work. The decision of the City as to the necessity of replacing any plants shall be conclusive and binding on the Contractor. No more than two (2) replacements per plant shall be required after acceptance.

Following the completion of the replacements, a re-inspection will be made prior to final acceptance.

All replacement plantings are to be selected and tagged by the Engineer prior to being brought to the job site. It is the responsibility of the Contractor to notify the Engineer forty-eight (48) hours prior to any replacement plantings as to what they are to be planting and in what location.

Prior to the termination of the guarantee period, the Contractor shall request a final inspection by the City. All plants found unacceptable for reasons herein before stated shall be replaced at the first planting season and thereafter the responsibility for such plants or material shall lie with the City, no additional guarantee period will be required for these plantings.

209.6(d) Contract Time.

Contract time will not be charged when making replacements, unless other contract operations are in progress during said period.

209.7 Method of Measurement.

209.7(a) Plants.

This work will be measured by the number of plants of each species, variety and size complete in place and accepted in accordance with the terms of the contract.

209.7(b) Drought Watering.

Drought Watering shall be measured by unit price for additional watering visits necessary to thoroughly soak the root zones of all plants in the contract. The number of watering visits shall be defined such that one watering visit thoroughly waters all of the plants in the contract, once.

209.8 Basis of Payment.

209.8(a) Plants.

The number of plants, furnished and planted, measured as provided above, will be paid for at the contract unit price each for Trees (Species and Size), Shrubs (Species and Size), or Vines (Species and Size) and Perennials/Grasses (Species and Size), as the case may be, which price shall be payment in full for furnishing, transporting, handling, potting, storing, pruning, placing and replacing plant materials; for all excavation of plant holes, salvaging of topsoil, mixing and backfilling; for furnishing and applying all required fertilizer, mulch, water, wrapping, guys and braces, rodent protection, herbicides and anti-dessicant spray; for removing guys and braces; for disposal of all excess and waste materials; for care; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work, except topsoil for use in planting, which will be paid for on a cubic yard basis.

Part II - Earthwork

209.7(b) Drought Watering

Drought Watering, shall be paid for at the contract unit price each, which shall be full compensation for furnishing, transporting and watering plants; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. In order to receive payment for drought watering, the Contractor must submit proof of watering for each watering. This proof must including photos of the watering with the date and time that each watering occurred.