

**CITY OF DANIA BEACH, FLORIDA
INVITATION TO BID FOR
“PRECIOUS PAWS DOG PARK”**

Bid No. 11-007

**SECTION 1.0
INTRODUCTION AND INFORMATION**

1.1 SCOPE

1.1.1 The City of Dania Beach, referred to as the “City”, is actively seeking bids from qualified Contractors, referred to as the "Contractor", in accordance with the terms, conditions and specifications contained in this Invitation to Bid. The City is requesting bids from qualified Contractors only to provide services for the construction of the “Precious Paws Dog Park” to be located at P. J. Meli Aquatic Complex, 2901 SW 52nd Street, Dania Beach, Florida 33004.

The successful bidder will construct the dog park in accordance with the specifications in this Invitation to Bid (“ITB”).

1.1.2 By submitting a bid, the bidder acknowledges that he or she is familiar with the scope of work prior to submitting a bid. Failure of a bidder to be familiar with the service requirements of the work does not relieve the Contractor of the responsibility for completion of all required services.

Bids will be considered if submitted by qualified Contractors which have experience, including successful work in the provision of the solicited services. Contractors offering full service will receive the highest consideration.

Applicants should submit one (1) original and three (3) copies and respond to each of the following items as clearly as possible:

1. Letter of Transmittal;
2. A brief but complete history of your company;
3. Anticipated time line to begin delivery of services;
4. Proof of Insurance;
5. A breakdown of costs for delivery of services for the construction of the dog park.
6. Résumés of key personnel who will actually be assigned to the project and a description of their roles;

Note: The City expects those listed to be those who will actually perform the work. **Substitutions (Contractors only) will be permitted only upon approval of the City's representative or designee.**

7. A list of five (5) similar projects performed in South Florida including the following information:
 - a. Name of the entity for which the work was performed;
 - b. Brief description of the scope of the project;
 - c. Amount of initial contract award;
 - d. Name of contact person with the entity and current telephone number who can knowledgeably discuss your firm's role and performance in the project;

a copy of the form to be used is attached as Exhibit "A", which form is made a part and incorporated into this Invitation to Bid by this reference.

8. Indication that the firm can provide increased levels of service (additional hours) at the same cost per hour;
9. Any other information the firm feels is relevant to evaluating the firm's qualifications; and
10. Complete and notarized bid submittal form.

1.2 INFORMATION

1.2.1 Sealed bids will be received until 10:00 a.m. on Friday, March 25, 2011, for the **"Precious Paws Dog Park"**.

1.2.2 Bids will be publicly opened at 10:30 a.m. in the Atrium Conference Room City of Dania Beach, City Hall, 100 West Dania Beach Boulevard, Dania Beach, Florida, 33004, in the presence of the City Clerk or her designee on the above stated date.

Mandatory Pre-Bid Conference

A **MANDATORY** Pre-Bid Conference is scheduled for 10:00 a.m., on Friday, March 11, 2011, to be held at P. J. Meli Aquatic Complex, 2901 SW 52nd Street, Dania Beach, Florida 33004. All Contractors planning to submit a bid are required to attend this meeting. Contractors must allow sufficient time to insure arrival prior to the indicated time. Bids from those Contractors who have failed to attend will not be opened. Contractors arriving past the indicated time will not be eligible to submit a bid.

1.2.3 All bids are to be submitted in a sealed envelope and clearly marked in the left hand corner, **"Precious Paws Dog Park"** and addressed and delivered to:

City of Dania Beach, Florida
Louise Stilson, City Clerk
Bid #11-007
100 West Dania Beach Boulevard
Dania Beach, FL 33004

1.2.4 All bidders or their representatives are invited to be present. Any bids received after the time and date specified will not be considered.

1.2.5 Any bid may be withdrawn up until the time set above for opening the bids. Any bids not so withdrawn shall, upon opening, constitute an irrevocable offer to provide the City the services set forth in the attached specifications until ninety (90) calendar days after bid opening.

1.2.6 If any bidder violates any provision of this Invitation to Bid or is a party to a violation of the code of ethics of the State of Florida with respect to this bid, such bidder may be disqualified from performing the work described in this bid or from furnishing the services for which the bid is submitted and shall be further disqualified from bidding on any future bids for work or for goods or services for the City.

1.2.7 All bidders shall use the Bid Proposal Form Document known as “**Bid Proposal Form**”, attached as Exhibit “B”, which form is made a part of and incorporated into this Invitation to Bid by this reference.

1.3 INFORMATION/CLARIFICATION

1.3.1 For technical information concerning this bid, contact the City’s Consultant, Calvin Giordano & Associates, Inc., Mr. Michael Conner (954) 921-7781. Such contact person is to be contacted for clarification purposes only. Material changes, if any, to the technical specifications or bid procedures will only be transmitted by written addendum or addenda. Oral and other interpretations or clarifications will be without legal effect.

1.3.2 ADDENDUM, ADDENDA, CHANGES OR INTERPRETATIONS DURING BID: Any inquiry or request for interpretation received ten (10) or more days prior to the date fixed for the opening of the bids will be given consideration. All such changes or interpretations will be made in writing in the form of an addendum or addenda and will be posted on the City’s website www.daniabeachfl.gov for prospective bidders no later than five (5) calendar days prior to the established bid opening date. The bidder shall not rely on oral representations, discussions, clarifications or modifications. Each prospective bidder shall acknowledge receipt of such addendum or addenda in the space provided in the bid form. In case any bidder fails to acknowledge receipt of such addendum or addenda, the bid will nevertheless be considered as though it had been received and acknowledged and the submission of the bid will constitute acknowledgment of the receipt of same. Any addendum and all addenda are a part of the contract documents and each bidder will be bound by such addendum or addenda, whether or not received. It is the responsibility of each prospective bidder to verify receipt of any addendum and

all addenda issued before bids are opened.

1.3.3 Questions concerning this bid should be sent to Kristen Jones, Director of Parks and Recreation, City of Dania Beach, 100 West Dania Beach Boulevard, Dania Beach, Florida 33004.

SECTION 2.0 **SPECIAL CONDITIONS**

2.1 PURPOSE

The purpose of this Invitation to Bid is to establish a contract from date of award for the services with prices to be firm and under the same terms and conditions by mutual consent, in writing, by both parties. The successful bidder shall supply a Performance Bond for 110% of the Contract Price made payable to the City of Dania Beach, within ten (10) days of notification of award of contract. A copy of the Performance Bond form is attached as Exhibit “C”, which form is made a part of the bid package by this reference.

2.2 DOCUMENTATION

2.2.1 Bidder/Contractor shall submit along with a bid the following:

- a. Evidence that the bidder/Contractor is certified and licensed to perform the required services and qualified to be so certified and licensed. The successful bidder/Contractor must be in compliance with all applicable laws and regulations;
- b. Experience – A statement of the number of years as a qualified provider of the services requested;
- c. The Bidder’s Questionnaire form is attached as Exhibit “D”, which form is made a part of and incorporated into this bid package by this reference;
- d. A statement that Certificates of Insurance will be provided to the City of Dania Beach, Florida, and the City will be a named insured on all Certificates of Insurance.

2.2.2 The successful bidder must have one or more current Certificates of Insurance demonstrating that it has secured the required insurance coverages, and place the certificates on file with the Risk Manager of the City *before work commences*, and Contractor must maintain all coverages under such certificates during the contract period. Such certificates must clearly identify the fact that they pertain to this contract.

2.3 CONTRACT AWARD

2.3.1 The City intends to award a contract to the lowest, responsive, responsible bidder for the services specified within this Invitation to Bid, taking into consideration experience, staffing, equipment, materials, references and past performances. The City reserves the right to reject any and all bids if the City deems such action to be in the best interests of the City. In case of disputes in the award of the contract, the decision of the City shall be final and binding on both parties. No bid award shall be binding upon the City until a written contract including these terms, this Invitation to Bid, and other necessary provisions as required by the City, has been fully executed by both parties.

2.3.2 The City reserves the right to initiate a trial test period. This trial period will be for a term not to exceed ninety (90) days for the City to determine if the Contractor can perform in accordance with the requirements of the contract, and to the satisfaction of the City. If the City invokes this test period, all terms and conditions of the Invitation to Bid shall apply and the Contractor shall provide all required documentation, prior to commencement of any work.

The City shall complete a performance evaluation prior to the end of the test period. This evaluation shall be given to the Contractor for review and comment and shall be the basis for continuation with or termination of, the Contractor. This trial period shall not be considered as part of the initial contract period should a contract be initiated.

2.4 CONTRACT TERMINATION

2.4.1 If the successful bidder fails to provide the services in this Invitation to Bid, or shall in any other manner commit a breach of contract and fails to remedy the same within five (5) calendar days after written notice from the City, the City may terminate the contract resulting from this bid without any further notice to the successful bidder. City representatives will review the services periodically to assure that the requirements of the contract have been met. If any work is unsatisfactory, the Contractor shall be contacted, and the discrepancies corrected at no additional cost to the City. If deficiencies are not corrected within two (2) working days, the City may, at its option, perform the required service and deduct the cost of the service from that month's invoice.

2.4.2 In addition, the City reserves the right to terminate the contract upon thirty (30) calendar days' written notice, without cause.

2.5 PRICING

2.5.1 Pricing shall remain firm and unchanged for the period of the contract. Please see the form titled "Bid Amounts" attached as Exhibit "E", which form is made a part and is incorporated in this Invitation to Bid

2.5.2 The City may require the addition or deletion of services from the Contractor if the requirements and needs of the City change. This may entail additional locations, additional

services required for locations serviced under the contract, or both. The Contractor shall provide the City with a cost for these additional locations, services, or both based upon the cost structure utilized in establishing the pricing for listed locations in initially contracted areas. Deletion of locations, services, or both shall be handled in the same manner as described above. If the cost offered is not acceptable to the City, the City reserves the right to procure the additional services from other Contractors.

2.6 BID DEPOSIT

2.6.1 Each bidder must submit cash, a certified check or cashier's check payable to the City in the amount of \$500.00. Bid deposits will be returned to all Bidders except the Successful Bidder. The bid deposit for the Successful Bidder will be returned after a contract has been awarded and fully signed. If the Successful Bidder fails to submit the required executed Contract within ten (10) calendar days after award, the Bidder agrees that the City may retain the bid deposit as the City's liquidated damages.

2.7 PROTECTION OF PROPERTY

2.7.1 The successful bidder shall at all times guard against damage or loss to City property or property of other persons, vendors or contractors, and shall be responsible for replacing or repairing any such loss or damage. The Contractor will be required to report any such damages immediately to the City's representative.

2.7.2 The City reserves the right to repair any damages created by the Contractor and to deduct the appropriate amount from any payment due to the Contractor. In all cases, the decision of the City is final.

2.8 TRASH

2.8.1 Contractor shall be responsible for the removal of trash and debris as may be specified in the Invitation to Bid documents.

2.9 DRUG FREE WORKPLACE

2.9.1 In accordance with Section 287.087, State of Florida Statutes, in the case of tie bids, preference shall be given to businesses with "drug-free workplace programs". Whenever two or more bids, which are equal with respect to price, quality, and service, are received for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace shall be given preference in the award process.

In order to have a drug-free workplace program, a business shall:

- (a) publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken

against employees for violations of such prohibition.

- (b) inform employees about the dangers of drug abuse in the workplace, the policy of the business in maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- (c) give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (a).
- (d) in the statement specified in subsection (a), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere (“no contest”) to, any violation of Florida Statutes Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) calendar days after such conviction.
- (e) impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- (f) make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

IF BIDDER'S COMPANY HAS A DRUG-FREE WORK-PLACE PROGRAM, SO CERTIFY BELOW:

AS THE PERSON AUTHORIZED TO SIGN THE STATEMENT, I CERTIFY THAT THIS FIRM COMPLIES FULLY WITH THE ABOVE REQUIREMENTS.

Signature of Bidder

PRINT Name of Bidder

Title

SECTION 3.0

INSTRUCTIONS TO BIDDERS

3.1 INCONSISTENCIES

Any seeming inconsistency between different provisions of the specifications, bid documents or contract, or any point requiring explanation must be inquired into by the bidder, in writing, within the time specified in Section 1.3.2. After bids are opened, the bidders shall abide by the decision of the City as to such interpretations. The City shall not be responsible for oral interpretations given by any City personnel, representative or others. The issuance of a written addendum is the only official method by which an interpretation, clarification or additional information can be given.

3.2 LEGAL CONDITIONS

Bidders are notified to familiarize themselves with the provisions of the laws of the State of Florida relating to hours of labor on municipal work.

3.3 FORMS OF BIDS

Each bid and its accompanying statements must be made on the blanks provided in the Instructions to Bidders. The forms must be submitted in good order and with all the blanks filled in. The forms must be enclosed in a sealed envelope when submitted to the Office of the City Clerk of the City of Dania Beach, Florida, and the envelope must show in the bottom left hand corner the title of the bid. The bid must be signed by one (1) representative of the Contractor duly authorized to do so, and, in case signed by a deputy or subordinate, the principal's properly written authority to such deputy or subordinate must accompany the bid. No bid will be accepted for any reason whatsoever, which is not submitted to the City Clerk's Office as stated above, within the specified time.

3.4 FILLING BIDS

3.4.1 Bidders shall completely fill out the bid, the questionnaire and the affidavit contained in the Instructions to Bidders. Bidders are invited to be present at the time of the opening of bids.

3.4.2 The City reserves the right to reject any or all bids or any part of any bid, and to waive any minor irregularity or informality in any bid.

3.4.3 It is the bidder's responsibility to read and understand the requirements of this bid. Bidders shall submit all pricing information on the furnished bid forms. All quotations and bids must be signed in those spaces provided with the firm name and by an officer or employee having the authority to bind the company or firm. Bids having any erasures or corrections must be initialed by the bidder in blue ink. Bids shall be typed or written with pen and blue ink. Signatures must be in blue ink.

3.4.4 Bidders should not include taxes in prices in the bid. The City is exempt from any taxes related to the services sought, which may otherwise be imposed by the state or federal government. An exemption certificate will be supplied upon request.

3.5 MISTAKES

Bidders are cautioned to examine all terms, conditions, specifications, exhibits, addendum or addenda, instructions, and special conditions pertaining to any bid. Failure of the bidder to examine all pertinent documents shall not entitle a bidder to any relief from the conditions imposed in the Instructions to Bidders or the Contract.

3.6 CAUSES FOR REJECTION

No bid will be canvassed, considered or accepted which in the opinion of the City is informal or unbalanced, or contains inadequate or unreasonable prices for any items; each item must carry its own proportion of the cost as nearly as is practicable. However, the City shall be under no obligation to investigate the correctness of any bid, and the bidder by signing the bid, shall be deemed to have verified that no errors appear in the bid as submitted. Any alteration, erasure, interlineations, or failure of a bid to contain all items called for in the Instructions to Bidders may result in rejection of the bid.

3.7 NO BIDS

If you do not intend to bid, please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason in the space provided in this Invitation to Bid. Failure to bid or return no bid comments prior to the bid due and opening date and time indicated in this bid, may result in your firm being deleted from the City's Bidder's Registration List for the services requested in this bid.

3.8 SAFETY REQUIREMENTS

Bidder, by submitting a bid, certifies that all equipment to be supplied pursuant to the bid meets all state and federal (including but not limited to, Occupational Safety and Health Act (OSHA)) requirements.

3.9 RETENTION OF RECORDS AND RIGHT TO ACCESS CLAUSE

The successful bidder shall preserve and make available all financial records, supporting documents, statistical records, and any other documents pertinent to the Contract for a period of three (3) years after termination of the Contract, or if an audit has been initiated and audit findings have not been resolved at the end of these three (3) years, the records shall be retained until resolution of audit finding.

3.10 ANTI-COLLUSION STATEMENT

By submitting this bid, the bidder affirms that this bid is without previous understanding, agreement, or connection with any person, business, or corporation submitting a bid for the services, and that this bid is in all respects fair, and without collusion or fraud. The Non-Collusion Affidavit form must be executed by the Bidder, a copy of the form is attached as Exhibit "F", which form is made a part of and incorporated into this Invitation to Bid by this reference.

SECTION 4.0 **GENERAL CONDITIONS**

4.1 GENERAL

The Contract to be awarded will be subject to the provisions of the Constitution of the State of Florida, the laws of the state of Florida and ordinances of the City.

4.2 SPECIAL CONDITIONS

Any and all Special Conditions contained in this bid that may be in variance or conflict with the General Conditions shall have precedence over the General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety.

4.3 INTENTION

The City intends to award a contract for the services to the lowest, responsive and responsible bidder who or which meets all specifications, terms and conditions set forth in the bid documents.

4.4 LEGAL REQUIREMENTS

4.4.1 Applicable provisions of all federal, state, and county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response to the Instructions to Bidders and shall govern any and all claims and disputes which may arise between person(s) submitting a bid and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge of any of the foregoing by any Bidder shall not constitute a cognizable defense against their legal effect.

4.4.2 The Legal Advertisement, the Notice of Invitation to Bid, Instructions to Bidders, Bidder's Questionnaire, Specifications, Exhibits, Addendum or Addenda and any other pertinent documents form a part of this bid and ultimately, the Contract, and by this reference all documents are made a part of any response to this Invitation to Bid and the Contract.

4.5 TERMINATION FOR CAUSE

If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under the Contract, or if the Contractor shall violate any of the provisions of the Contract, the City may upon written notice to the Contractor, terminate the right of the Contractor to proceed under the Contract, or with such part or parts of the Contract to which there has been a default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under the Contract shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed to the satisfaction of the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Contract by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.

4.6 MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS

The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet or exceed these items, and feels that the technical specifications are overly restrictive, the Bidder must notify Calvin, Giordano and Associates, Inc., Mr. Michael Conner (954) 921-7781, in writing immediately. Such notification must be received by the City prior to the deadline contained in the bid, for questions of a material nature, prior to ten (10) calendar days before the bid opening date. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all Bidders.

4.7 PUBLIC RECORDS

Florida law (Section 119.01, F.S., the "Public Records Law", provides that municipal records shall at all times be open for personal inspection by any person. Information and materials received by the City in connection with a Bid response shall be deemed to be public record subject to public inspection upon award, rejection for award, or ten (10) calendar days after bid opening, whichever occurs first. However, certain exemptions to the public records law are statutorily provided for in Section 119.07, F.S. If the Bidder believes any of the information contained in its, his or her response is exempt from the Public Records Law, then the Bidder must in the response, specifically identify the material which is deemed to be exempt and cite the legal authority for the exemption, otherwise, the City will treat all materials received as public record.

4.8 PROHIBITION OF INTEREST

No contract will be awarded to a Bidder who or which has City elected officials, officers or employees affiliated with it, unless the Bidder has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation.

Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's Bidder's List and a prohibition from engaging in any business with the City.

4.9 DISCRIMINATION

Contractor agrees that in the performance of any provisions of the Contract, it will not discriminate or permit discrimination in the hiring practices of Contractor or in the performance of the Contractor on the basis of age, race, sex, marital status, religion, creed, political affiliation, sexual orientation, physical or mental disability, color or national origin. The Contractor will strictly adhere to the equal employment opportunity requirements and any applicable requirements established by the State of Florida, Broward County and the federal government.

4.10 AGREEMENTS OUTSIDE THE AGREEMENT

The Contract will contain the complete agreement concerning the arrangements between the parties and shall as of the effective date of the Contract supersede all other agreements between the parties. The parties stipulate that neither of them has made any representation with respect to the subject matter of the Contract or its execution and duly accept such representations as are specifically set forth in the Contract. Each of the parties to the Contract acknowledges that it has relied on its own judgment in entering into the Contract.

4.11 MODIFICATION OF THE AGREEMENT

No waiver or modification of the Contract or any covenant, condition, or limitation contained in it shall be valid unless in writing and duly executed by all parties. No evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the parties arising out of or affecting the Contract or the rights and obligations of the parties unless such waiver or modification is in writing and duly executed. The parties to the Contract do acknowledge and agree that time is of the essence relative to the performance of any term, condition, or covenant in the Contract. In the event any litigation or other action shall arise from the Contract, the prevailing party shall be entitled to reasonable attorney fees and all costs and expenses, including attorney fees and all costs and expenses for any court proceedings relative to the disposition of any issues arising under the Contract.

4.12 NO CONTINGENT FEE

Contractor warrants that it has not employed or retained any company or person other than a bona fide employee working solely for the Contractor to solicit or secure the Contract and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of the Contract. For the breach or violation of this provision, the City shall have the right to terminate the Contract without liability at its discretion.

4.13 VENUE/SEVERABILITY

Venue shall be in Broward County, Florida, with respect to any and all actions that may be brought now or subsequently in connection with the Contract. In the event that any portion, provision, term, or condition of the Contract shall be found to be unconstitutional or illegal in any way, it shall be deemed severed and the remainder of the Contract shall remain in full force and effect.

4.14 VARIANCES

4.14.1 For purposes of bid evaluation, Bidders must indicate any variances, no matter how slight, from the bid General Conditions, Special Conditions, Specifications, Addendum or Addenda. No variations or exceptions by any Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and clearly referenced. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.

4.14.2 By receiving a bid, the City does not necessarily accept any variances contained in the bid. All variances submitted are subject to review and approval by the City. If any bid contains any material variance that, in the City's sole opinion, makes that bid conditional in nature, the City reserves the right to reject the bid or part of the bid that is declared by the City as conditional.

4.15 CONTRACTOR'S RELATION TO THE CITY

4.15.1 It is expressly agreed and understood that the Contractor will be in all respects an independent contractor as to work, and that the Contractor is in no respect an agent, servant or employee of the City. The Contract specifies the work to be done by the Contractor, but the method to be employed to accomplish the work shall be the responsibility of the Contractor, unless otherwise provided in the Contract and is subject to approval by the City.

4.15.2 Contractor and the employees of the Contractor are not entitled to any of the benefits that the City provides for City's employees.

4.16 QUANTITIES

4.16.1 The City's representative shall, in all cases of dispute, determine the amount or quantity of the several kinds of work which are to be paid for under the Contract, and shall decide all questions relative to the execution of the same, and such determinations shall be final and binding.

4.16.2 Any work not specified in the Instructions to Bidders or the Contract, which may be fairly implied as included in the Contract, of which the City's representative shall be the judge, shall be done by the Contractor without extra charge.

4.17 EMPLOYEES

4.17.1 Only skilled Contractors as employees shall be employed to provide the services specified in the Instructions to Bidders and Contract. Any person employed to provide the services who fails, refuses or neglects to obey the instructions of the City's representative in anything relating to this service, or who appears to be disorderly, insubordinate, or incompetent, shall upon the order of City's representative, be at once discharged and not again employed on any part of the services. Any interference with, or any abusive or threatening conduct toward any City's representative, its assistants or inspectors by the Contractor, or employees or agents, or any member of the public shall authorize the City to terminate the Contract and re-let the work. The Contractor shall furnish all labor, materials, supplies and equipment necessary to properly maintain all areas in an acceptable condition.

4.17.2 Contractor agrees that the owners of the bidder, or officers if a corporation if applicable, shall be held fully responsible, except as otherwise prohibited by law, for acts of their employees while on duty.

4.18 CODES AND STANDARDS

Work, materials, equipment and other items specified by reference to City standards shall, unless otherwise specified, comply with the latest revision of such codes and standards in effect on the date the Contractor's bid was submitted to the City.

4.19 AVAILABILITY OF FUNDS

The obligations of the City under the Contract will be subject to the availability of funds.

4.20 SELLING, TRANSFERRING OR ASSIGNING IS PROHIBITED

The successful bidder/Contractor shall not assign, transfer, convey, sublet or otherwise dispose of the Contract, or of any or all of its rights, title or interest in it, or its power to execute such Contract to any person, company or corporation without prior written consent of the City.

4.21 LICENSES, PERMITS AND FEES

4.21.1 In accordance with the Public Bid Disclosure Act, Section 218.80, Florida Statutes, each license, permit, or fee a Contractor will have to pay the City before or during the Work, items or services to be provided or the percentage method or unit method of all licenses, permits and fees required by the City and payable to the City by virtue of the Work, items or services as part of the Contract are as follows:

- 1) Contractor shall have and maintain during the term of the Contract any and all appropriate City licenses, fees (and business tax receipts, if applicable), which shall be paid in full in accordance with the City's fee

structure for such items. THERE WILL NOT BE ANY PERCENTAGE REDUCTION OR WAIVING OF CITY LICENSES, FEES (OR BUSINESS TAX RECEIPTS, IF APPLICABLE).

2) During the performance of the Contract, there may be times when the Contractor will be required to obtain a City permit for such Work, or in connection with the items or services. It is the responsibility of the Contractor to insure that it has the appropriate City permits as may become necessary during the performance of the Contract. Any fees related to the City required permits in connection with the Contract will be the responsibility of the Contractor and will be reimbursed by the City.

Licenses, permits, and fees that may be required by Broward County, state or federal entities are not included in the above list.

4.21.2 Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the work to be performed. The City shall not be responsible for monitoring the Contractor's compliance with any laws or regulations.

4.22 INDEMNIFICATION AND HOLD HARMLESS

The selected Contractor shall, in addition to any other obligation to indemnify the City and to the fullest extent permitted by law, protect, defend, indemnify and hold harmless the City, including its agents, elected officials and employees from and against all claims, actions, liabilities, losses (including economic losses), or costs arising out of any actual or alleged:

- (a) bodily injury, sickness, disease or death, or injury to or destruction of tangible property including the loss of use resulting from, or any other damage or loss arising out of or resulting or claimed to have resulted in whole or in part from any actual or alleged act or omission of the Contractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable in the performance of the work;
- (b) any violation of law, statute, ordinance, governmental administrative order, rule, regulation, or infringement of patent rights by Contractor in the performance of the work;
- (c) liens, claims, actions made by the Contractor or other party performing the work;
- (d) claims of whatsoever nature related to collection practices or any actions of a contradictory nature pursuant to Contract or in an attempt to collect monies due or claimed to be due to the City.

4.23 INSURANCE

4.23.1 The Contractor shall not commence work under the Contract until Contractor has obtained all insurance required by the City, as specified below and coverages and insurance have been approved by the Risk Manager of the City. In addition, Contractor shall be responsible for any policy deductibles and self-insured retentions.

4.23.2 Contractor shall file Certificates of Insurance with the City, reflecting evidence of the coverages. They shall be filed with the City's Risk Manager within ten (10) days of the date the Contract is fully executed. The Certificates shall contain a provision that coverages afforded under the policies will not be canceled until at least thirty (30) days' prior written notice has been given to the City. Policies for coverages shall be issued by companies authorized to do business under the laws of the State of Florida and any such companies' financial ratings must be no less than "A" in the latest edition of the "BEST'S KEY RATING GUIDE", published by A.M. Best Guide.

4.23.3 Coverages shall be in force until all work required to be performed under the terms of the Contract is satisfactorily completed as evidenced by the formal acceptance by the City. In the event insurance certificates provided to City indicate that the insurance shall terminate and lapse during the period of the Contract, then in that event, the Contractor shall furnish, at least thirty (30) days prior to the expiration of the date of such insurance, a renewed Certificate of Insurance as proof that equal and like coverages for the balance of the period of the Contract and any extension of it is in effect. **THE CONTRACTOR SHALL NOT PERFORM OR CONTINUE TO WORK PURSUANT TO THE CONTRACT UNLESS ALL COVERAGES REMAIN IN FULL FORCE AND EFFECT, SUCH DELAY BEING SUBJECT TO ANY APPLICABLE PROVISIONS DESCRIBED IN THE CONTRACT.**

4.24 REQUIRED INSURANCE COVERAGE

4.24.1 The following insurance must be provided:

4.24.1.1 General Liability Insurance, which includes coverage for death, bodily injury and property damage, products and completed operations and contractual liability with limits of not less than One Million Dollars (\$1,000,000.00) per occurrence. The City shall be as a "named insured" under the general liability policy, including product liability. The "named insured" clause shall be a rider or endorsement issued by the insurance home office, not by a local agent.

4.24.1.2 Workers' Compensation insurance shall be maintained by Contractor during the life of the Contract and provide coverage with statutory limits Part. A, and Five Hundred Thousand Dollars (\$500,000.00) Part, B, Employer's Liability. Certificates of Insurance evidencing such coverage for Contractor must be provided to the City as per Sections 11.1 through 11.3 above, prior to commencement of any Work.

4.24.1.3 Comprehensive Auto Liability insurance shall be provided with limits of not less than One Million Dollars (\$1,000,000.00) per occurrence combined single limit to include coverage for death, bodily injury and property damage for owned, hired, and non-owned vehicles. The City shall be named as a named insured under this policy.

The Contractor shall hold the City, its agents and employees, harmless on account of claims for damages to persons, property or premises arising out of the operations to complete the Project. The City reserves the right to require Contractor to provide and pay for any other insurance coverage the City deems necessary depending upon the possible exposure to liability.

5.1 AVAILABILITY OF CONTRACTOR

5.1.1 Contractor must provide a telephone number, and a cellular phone number or pager number for contact by the City on evenings and weekends, for emergencies.

5.2 MINIMUM PERFORMANCE

5.2.1 The Contractor will be responsible for all costs associated with performance under the Contract, including but not limited to supervision, labor, material, minor parts and supplies, equipment, tools, transportation, travel time, shop facilities, excluding replacement of components required for the services and in accordance with the specifications, terms and conditions.

5.3 SAFETY:

5.3.1 The successful Bidder/Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. The successful Bidder shall comply with the rules and regulations of the Florida Department of Commerce regarding industrial safety (Florida Statutes Section 440.56) and with the standards set forth in the Occupational Safety and Health Act of 1970 (OSHA) and its amendments.

5.3.2 The successful Bidder shall take all reasonable precautions for the safety of and shall provide all reasonable protection to prevent damage, injury or loss to:

- (a) all employees on the work site and all other persons who may be affected; and
- (b) the work, all materials and equipment incorporated in it.

5.4 WARRANTIES

5.4.1 The successful Bidder warrants that the services to be performed under the Contract will be performed in a workmanlike manner and in accordance with the specifications contained in the bid documents.

5.4.2 The successful Bidder warrants that it will comply with all applicable federal,

State of Florida, Broward County local laws and regulations in carrying out its obligations under the Contract.

5.4.3 The successful Bidder warrants that the consummation of the work of the Contract will not result in the breach of any terms or provisions or constitute default under any contract or agreement to which the successful Bidder is a party.

5.4.4 The successful Bidder warrants that there will be no violation of copyrights or patent rights in connection with the services performed under the Contract.

SECTION 6.0

CONTRACTOR RESPONSIBILITIES

6.1 RESPONSIBLE BIDDERS

6.1.1 No bid will be accepted from, nor will any contract be awarded to, any person or entity who or which is in arrears to the City of Dania Beach, upon any debt or contract, or who is in default, as surety or otherwise, upon any obligation to the City, or who is deemed irresponsible or unreliable by the City or has been found guilty or convicted of a Public Entity crime in any federal or state trial court of record. A Public Entity Crime form must be submitted by each bidder. A copy of the form is attached as Exhibit "G" and is made a part of and incorporated into this Invitation to Bid by this reference.

6.2 QUALIFICATIONS OF BIDDERS

6.2.1 Bidder must have adequate organization, facilities, equipment, tools and personnel to insure prompt and efficient service to the City. Bidder must provide references, names, addresses, telephone numbers, years of service, etc., which demonstrate that acceptable, reliable and quality service has been maintained for multiple locations.

6.2.2 Bidder must have all current licenses required to perform the specified service and must maintain such licenses throughout the contract period.

6.2.3 Personnel (Contractors only) of bidder shall be experienced in performing the services specified. The City reserves the right before recommending award of the Contract to inspect the offices of the bidder, or to take any other action necessary to determine the ability of Contractor to perform in accordance with the specifications, terms and conditions in this bid.

6.3 DEFAULT PROVISIONS

6.3.1 In the event of default by the bidder, the City reserves the rights specified above for a defaulting bidder. A Contractor who or which defaults on a City Contract may, in addition to termination of the Contract by City, be banned from doing business with the City for a period of thirty-six (36) months from the date of default.

6.4 CONTRACTOR'S FINANCIAL/EXPERIENCE RECORD

6.4.1 The City shall have the right to investigate the financial condition and experience record of each prospective bidder and determine to its satisfaction the competency of each to undertake the services requested in this bid.

6.5 BILLING PROCEDURE

6.5.1 All invoices for services must be billed by mailing invoices to:

City of Dania Beach, Florida
Attn: Nanci Denny, Purchasing Coordinator
100 West Dania Beach Boulevard
Dania Beach, FL 33004

6.5.2 Invoices shall show the following: Purchase Order Number if used; location; description; date; and time of services performed. Invoices without this information may not be processed for payment.

6.5.3 Payment is to be made in monthly amounts.

6.6 INSPECTION

6.6.1 It is the Contractor's responsibility to become fully informed as to the current condition, nature and extent of the services required for the Project.

6.7 PERSONNEL

6.7.1 All staff (Contractors only) used on City work shall be uniformed, with identification of Contractor's name and appropriately dressed, clean, courteous, sober and competent in operating skills. Contractor agrees to be responsible for such personnel. The Contractor agrees that the owners of the company, or officers if a corporation shall be held fully responsible, except as otherwise prohibited by law, for acts of their employees while on duty. The Contractor also agrees to maintain and, upon request, provide the following information to the Broward Sheriff's Office on all officers, employees, agents and servants, and be responsible for keeping the information accurate and current: Name, Address, Date of Birth, Driver's License Number, Social Security Number and Photograph. The Contractor agrees that the owners of the company or the officers of the company, if a corporation, shall be responsible, except as otherwise prohibited by law, for the acts of their employees while on duty.

SECTION 7.0

AWARD OF CONTRACT

7.1 DETERMINATION OF AWARD

7.1.1 The City reserves the right to reject any or all bids and subject to the restrictions stated above, the Contract shall be awarded by the City to the responsible Bidder who or which has submitted the bid and which bid is in the best interests of the City. The City may review and consider experience and past performance in its award.

7.1.2 The City reserves the right to accept all or any part of the bid, and to increase or decrease quantities to meet additional or reduced requirements of the City. The City reserves the right to waive any informality in any bid. The City reserves the right to reject all bids, and to re-advertise for bids. The bid of the lowest, responsive and responsible bidder meeting specifications of the bid may be accepted. The lowest responsive and responsible bidder shall mean, but is not limited to, that bidder who or which makes the lowest bid to provide goods and services of a quality which conforms closest to the quality of services set forth in the attached specifications as required by the City of Dania Beach, and who or which is known by the City or determined to be fit and capable to perform the bid as made.

7.1.3 Award shall be made on a total offer basis, as may be deemed in the best interests of the City of Dania Beach. **NOTE: NO CONTRACT SHALL BECOME EFFECTIVE UNLESS AND UNTIL IT HAS BEEN COMPLETELY EXECUTED BY BOTH PARTIES.**

7.1.4 In case of disputes in the award of the Contract, the decision of the City shall be final and binding on both parties.

7.1.5 A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 F. S. for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list. A form to that effect, as mentioned above, must be submitted by each bidder.

7.2 AWARD OF CONTRACT

7.2.1 The bidder to whom or to which an award is made, or its authorized representative, shall execute a written contract to do the work and maintain the same in good order until final acceptance by the proper authorities. If the bidder to whom or to which the first award is made fails to enter into a contract, the award may be annulled and the contract offered to

the next most qualified bidder who or which offered the next lowest, responsive and responsible bid in the opinion of the City.

EXHIBIT "A"

FIVE SIMILAR PROJECTS PERFORMED IN SOUTH FLORIDA WITHIN THE PAST THREE (3) YEARS

The following is a list of at least five (5) references from entities for which Bidder has provided similar services in the past three years:

1. Name of Entity for which work was performed: _____
Brief Description of Scope of Services: _____
Amount of Initial Contract Award: _____
Contact Name: _____
Telephone Number: _____

2. Name of Entity for which work was performed: _____
Brief Description of Scope of Services: _____
Amount of Initial Contract Award: _____
Contact Name: _____
Telephone Number: _____

3. Name of Entity for which work was performed: _____
Brief Description of Scope of Services: _____
Amount of Initial Contract Award: _____
Contact Name: _____
Telephone Number: _____

4. Name of Entity for which work was performed: _____
Brief Description of Scope of Services: _____
Amount of Initial Contract Award: _____
Contact Name: _____
Telephone Number: _____

5. Name of Entity for which work was performed: _____
- Brief Description of Scope of Services: _____
- Amount of Initial Contract Award: _____
- Contact Name: _____
- Telephone Number: _____

EXHIBIT "B"
BID PROPOSAL FORM
CITY'S BID NO. 11-007

In accordance with the "Notice to Bidders" titled "**PRECIOUS PAWS DOG PARK**" for bids to be received by _____, on _____, 2011, which is attached to this Form and made a part of this Form and Invitation to Bid, the undersigned Bidder proposes the following:

Company Name: _____

Address: _____

Telephone: _____

TOTAL

\$ _____
\$ _____
\$ _____

Signature of company's representative

Submitted on _____, 2011.

PRINTED Name of company's
Representative

Title

STATE OF FLORIDA)
) ss:
COUNTY OF BROWARD)

Sworn to and subscribed before me on _____, 2011, by _____,
as _____ of _____, a _____ corporation/partnership,
on behalf of the corporation/partnership, who [] is personally known to me or [] has produced
_____ as identification.

Notary Public, State of Florida

PRINTED Name of Notary

My Commission Expires:

EXHIBIT "C"

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or any other party shall be considered plural where applicable.

CONTRACTOR:

SURETY:

OWNER:

City of Dania Beach, Florida
100 West Dania Beach Boulevard
Dania Beach, Florida 33004

CONSTRUCTION CONTRACT

Date: _____
Amount: _____
Date: _____
Amount: _____

Description (name and location): **Precious Paws Dog Park
P. J. Meli Aquatic Complex
2901 SW 52nd Street
Dania Beach, Florida 33004**

Date (not earlier than
Construction Contract
Date): _____
Amount: _____

Modifications to this Bond: None _____ See Page(s) _____

CONTRACTOR AS PRINCIPAL:

SURETY:

Signature

Signature

PRINT Name

PRINT Name

Title

Title

FLORIDA RESIDENT AGENT

Address

Telephone

Facsimile

1. DEFINITIONS

- (A) **Balance of the Contract Price:** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
- (B) **Construction Contract:** The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes to them.
- (C) **Contractor Default:** Failure of the Contractor, which failure has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
- (D) **Owner Default:** Failure of the Owner, which failure has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms of it.

2. The Contractor and the Surety, jointly and severally bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated into this document by this reference.
3. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences.
4. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
 - (A) The Owner has notified the Contractor and the Surety at its address described in paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen (15) days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, to subsequently declare a Contractor Default; and
 - (B) The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than twenty (20) days after the Contractor and the Surety have received; and
 - (C) The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a Contractor selected to perform the Construction Contract in accordance with the terms of the Contract with the Owner.
5. When the Owner has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - (A) Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
 - (B) Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
 - (C) Obtain bids or negotiated proposals from qualified Contractors acceptable to the Owner for a Contract for performance and completion of the Construction Contract, arrange for a Contract to be prepared for execution by the Owner and the Contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified Surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

- (D) Waive its right to perform and complete, arrange for completion, or obtain a new Contractor acceptable to the Owner and with reasonable promptness under the circumstances:
1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
 2. Deny liability in whole or in part and notify the Owner citing reasons therefor.
6. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen (15) days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds, in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
7. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
- (A) The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - (B) Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and
 - (C) Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.

9. The Surety waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
10. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
11. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the first page of this document.
12. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with such statutory or legal requirement shall be deemed deleted from this document and provisions conforming to such statutory or other legal requirement shall be deemed incorporated into it. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL:

SURETY:

Signature

Signature

PRINT Name

PRINT Name

Title

Title

EXHIBIT "D"

BIDDER'S QUESTIONNAIRE

The undersigned guarantees the truth and accuracy of all statements and answers contained below.

1. How many years has your organization been in business? _____
2. List below (or on an attached sheet, if necessary) the names, addresses and telephone numbers of organizations, governmental, private or both located in Broward, Miami-Dade or Palm Beach Counties, for which you are now, or have within the past three years, provided services similar to that called for in this bid.

3. List below (or on an attached sheet, if necessary) all pertinent information and data that would indicate the ability of your organization and management personnel to perform satisfactorily.

4. Have you personally completed a plan for performance of the work?

5. Have you ever failed to complete work awarded to you? If so, when, where and why?

6. What equipment do you own that is available for work?

7. Has your company ever been debarred or held in default in Broward, Miami-Dade, or Palm Beach Counties or by any other governmental entity? _____
8. How many personnel (Contractors only) will be assigned to perform the services? _____
9. How many supervisors will be assigned to perform the services? _____

10. Will personnel be part of a regular crew assigned to perform the services?
Yes_____ No_____
11. Will you be able to provide service for special events, emergency situations or both?
Yes_____ No_____
- If so, how much notice is required? _____

EXHIBIT “E”

BID AMOUNTS

NOTE: This form must be completed in full for your bid to receive consideration (you may attach any supplemental documents you deem appropriate; however, information supplied in any such attachments does not satisfy this requirement).

I, the undersigned, as representative for _____ whose address is _____
(Company name)
_____ and whose phone number is _____,
submit the following bid amount to perform the Contract work.

BIDDER IS OFFERING FIRM PRICES FOR THE FULL CONTRACT PERIOD.

YES _____ NO _____

Please see the next page “Cost Estimate” Form for further information on bid amounts.

Dania Beach
Bid Form
Meli Dog Park
Contractors Pricing
4-Feb-10

ITEM NO.	DESCRIPTION	UNIT PRICE MAT. & LAB	UNIT	QTY.	ESTIMATED AMOUNT
1	Fencing - Vinyl-clad Chain link - 6' Ht. - Large Dog Run		LF	504	
2	Fencing - Vinyl-clad Chain link - 4' Ht. - Small Dog Run		LF	440	
3	Fence Gates - Vinyl-clad Chain link - 6' Ht. - Self-locking		EA	4	
4	Fence Gates - Vinyl-clad Chain link - 4' Ht. - Self-locking		EA	4	
5	Maintenance Gate - Vinyl-clad Chain link - 6' Ht.		EA	2	
6	Maintenance Gate - Vinyl-clad Chain link - 4' Ht.		EA	2	
7	Perimeter 4" Conc. Fibermesh Concrete		SY	595	
8	Brick Pavers supply & install per specifications (Qty. of donor pavers is to be determined & supplied by City)		SF	525	
9	Phase 1 Trees (Live Oak,Field Grown, 12' Ht. X 5' SPRD., 4' C.T., 2" DBH.)		EA	3	
10	Phase 1 Trees (East Lake Palatka Holly, 30 Gal. Min., 10' Ht., 4' SPRD., 30" C.T., 1 1/2" DBH.)		EA	3	
11	Phase 1 Trees (Verawood, Field Grown, 10'-12' Ht. X 4'-5' SPRD., 30" C.T., 1 1/2" DBH.)		EA	7	
12	Phase 1 shrubs (Yesterday, Today & Tomorrow, Full, 3 Gal., 2' X 2', 2' O.C.)		EA	273	
13	Phase 1 shrubs (Sandankwa Viburnum, Full, 3 Gal. 2'x2' Sprd., Full to Base, 2' O.C.)		EA	385	
14	Phase 1 shrubs (Green Island Ficus, Full, 3 Gal., 18" X 18", 18" O.C.)		EA	501	
15	Phase 1 shrubs (Duranta Gold Mound, Full, 3 Gal., 2' X2', 2' O.C.)		EA	23	
16	Phase 1 groundcover (New Look Red Pentas,Full, 1 Gal, 18" O.C.)		EA	68	
17	Dog-on-it-Parks Deluxe dog paw bench (7201-P) surface mounted		EA	6	
18	Trash Receptacles - 32 gal.		EA	2	
19	Trash Receptacles - 22 gal.		EA	2	
20	Doggie poop station		EA	2	
21	Waterfountain - Person+Pet+Auto-off Hose Bib		EA	1	
22	Ironsmith Aegean cap		EA	6	
23	4" x 60" galvanized steel schedule 40 pipe		EA	6	
24	St. Augustine 'Floritam'		SQ. FT.	3200	
	TOTAL BASE BID PRICE				

EXHIBIT "F"

NON-COLLUSION AFFIDAVIT

The undersigned Bidder has not divulged to, discussed, or compared his/her/its Bid with any other Bidders and has not colluded with any other Bidder or parties to this Bid whatsoever.

Name of City Project: **PRECIOUS PAWS DOG PARK**
City's Bid No.: **11-007**

Name of Bidder

Signature of Bidder or Authorized
Agent of Bidder

PRINT Name of Bidder or Authorized
Agent of Bidder

Title
_____, 2011.
Date

STATE OF FLORIDA)
) ss:
COUNTY OF _____)

Sworn to and subscribed before me on _____, 2011, by _____ ,
as _____ of _____, a _____ corporation/partnership, on
behalf of the corporation/partnership, who [] is personally known to me or [] has produced
_____ as identification.

Signature of Notary Public

PRINTED Name of Notary

My commission expires:

EXHIBIT "G"

**Sworn Statement Under Section §287.133(3)(a), Florida Statutes
Florida Statutes on Public Entity Crimes**

(This form must be signed in the presence of a Notary Public or other officer authorized to administer oaths.)

1. This sworn statement is submitted with Invitation to Bid No. **11-007**.

2. This sworn statement is submitted by: _____
(name of entity submitting sworn statement)

its business address is:

Federal Identification Number
(FEIN) is:

(if applicable)

Social Security Number:

(if the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement)

3. My name is: _____
(PRINT NAME of individual signing this document)

and my relationship to the entity is: _____
(President, General Partner, etc. as applicable)

4. I understand that a "public entity crime" as defined in Section 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in Section 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere (also known as "No Contest").

6. I understand that an "affiliate" as defined in Section 287.133(1)(a), Florida Statutes, means:
- (a) A predecessor or successor of a person or a corporation convicted of a public entity crime; or
 - (b) An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima-facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
7. I understand that a "person" as defined in Section 287.133(1)(e), Florida Statutes, means any natural person or any entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
8. Based on information and belief, the statement which that I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies):

_____ Neither the entity submitting the sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members or agents who are active in management of the entity nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members or agents who are active in management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989 and

(Please now indicate which additional statement below applies):

_____ There has been a proceeding concerning the conviction before a hearing officer of the State of Florida, Division of Administrative Hearings. The final

order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order)

_____ The person or affiliate was placed on the convicted list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order)

_____ The person or affiliate has not been placed on the convicted vendor list. (Please describe any action taken by or pending with the Florida Department of General Services)

Signature (of person whose name
first appears above)

Date

STATE OF FLORIDA)
) ss:
COUNTY OF _____)

Sworn to and subscribed before me on _____, 2011, by
_____, as _____ of _____, a
_____ corporation/partnership, on behalf of the corporation/partnership who (check one)
☐ is personally known to me or ☐ has produced _____ as
identification.

Signature of Notary Public

PRINTED Name of Notary

My commission expires:

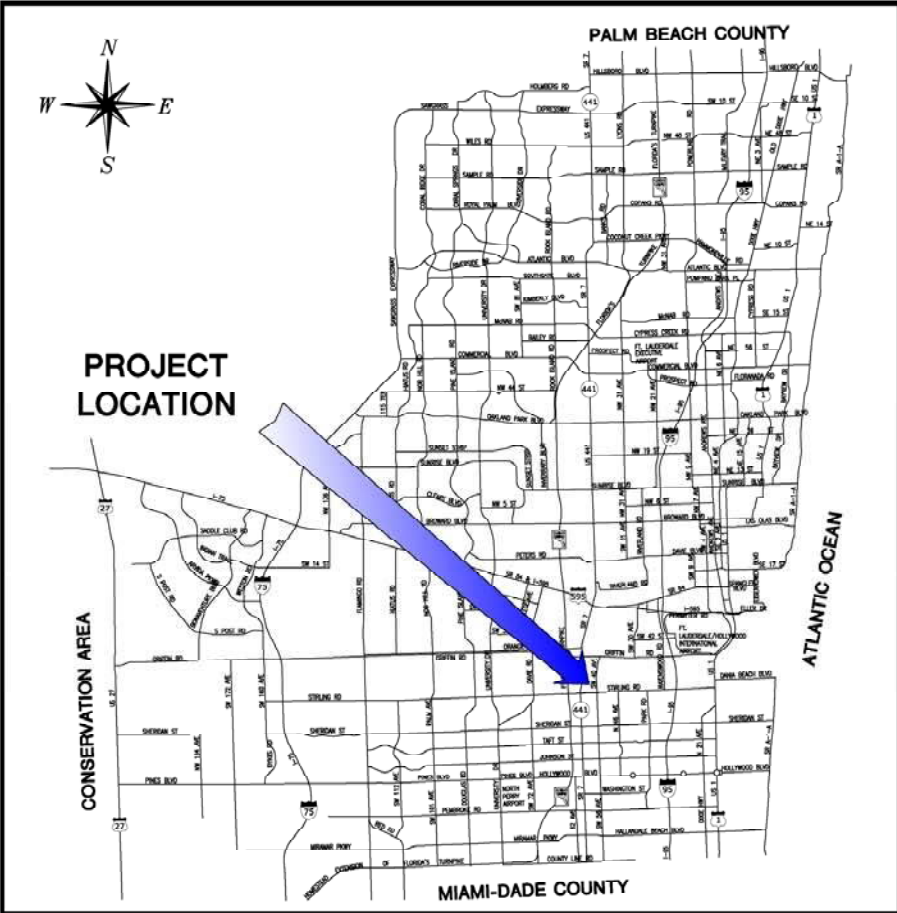
PRECIOUS PAWS

PET PARK & MEMORIAL GARDENS AT MELI PARK

CITY OF DANIA BEACH, FLORIDA

DRAWING INDEX

NO.	SHEET TITLE
SP100	SITE PLAN LAYOUT
SP401	DOG PARK PAVED AREA ENLARGEMENT
L010	GENERAL LANDSCAPE NOTES
L100	PLANTING PLAN
L501	TYPICAL PLANTING DETAILS
L502	SITE FURNISHINGS
L503	TYPICAL FENCING DETAILS



- NOTES:
1. RESPONSIBILITY FOR THE USE OF THESE PLANS FOR ANY PURPOSE PRIOR TO SECURING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THIS PROJECT WILL FALL SOLELY UPON THE USER.
 2. AN ELECTRONIC CAD FILE WILL BE PROVIDED FOR SURVEY LAYOUT.



Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS
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Phone: 954.921.7781 Fax: 954.921.8807
Certificate of Authorization LC 0000039

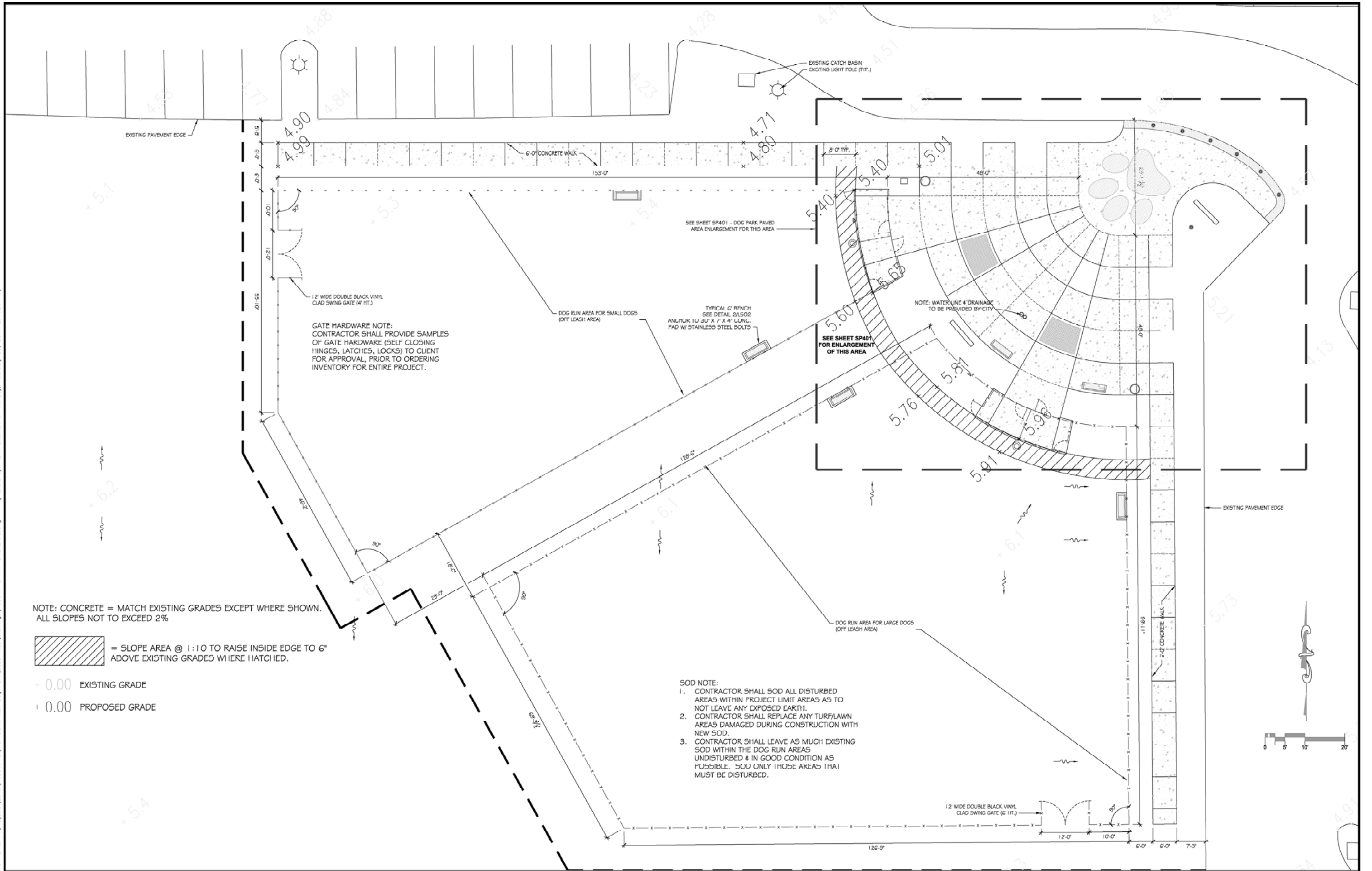
FOR BIDDING PURPOSES ONLY
PERMITS PENDING



NO	DATE	REVISION	BY	NO	DATE	REVISION	BY

CURRENT REV No.: ---- - ----	DATE: FEB. 7, 2011	SHEET: 1 1 OF --- SHEETS
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File Name: P:\Projects\2010\City Of Dania Meli Dog Park\Load Files\Drawings\103615-SP100-SITEPLAN.dwg - (Plotted by: Erin Sudman on Monday, February 07, 2011 2:44:59 PM)



NO	DATE	REVISION	BY	NO	DATE	REVISION	BY

DESIGNED DATE	ES 11/09/10
CHECKED DATE	MC 11/12/10
ISSUED FOR DATE	BID SET 11/15/10

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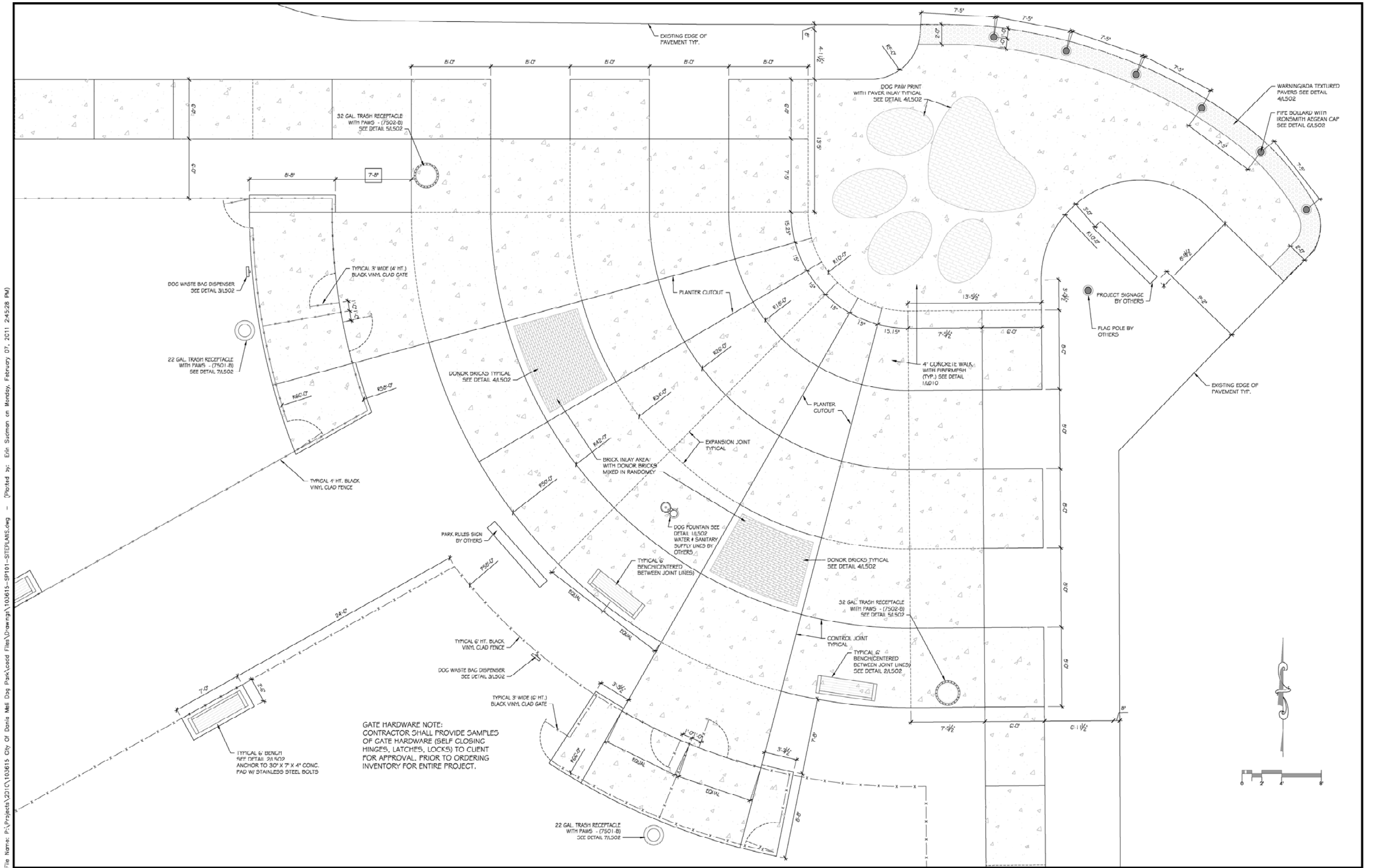
**PRECIOUS PAWS
PET PARK AND MEMORIAL GARDENS AT
MELI PARK
CITY OF DANIA BEACH, FLORIDA**

SITE PLAN LAYOUT

MICHAEL CONNER, R.L.A.
STATE OF FLORIDA REGISTERED LANDSCAPE ARCHITECT
LICENSE No. 1181
DATE FEB. 7, 2011

SCALE	1"=10'	SHEET
PROJECT No	10-3615	SP100
PURPOSE OF THIS SET	BID SET	

File Name: P:\Projects\2011\City Of Dania Beach Dog Park\Load Files\Drawings\103615-SP401-SITEPLANS.dwg - (Plotted by: Erin Sudman on Monday, February 07, 2011 2:45:28 PM)



NO	DATE	REVISION	BY	NO	DATE	REVISION	BY

DESIGNED DATE 11/09/10 BY ES	CHECKED DATE 11/12/10 BY MC	ISSUED FOR DATE 11/15/10 BY ---
		
Calvin, Giordano & Associates, Inc. EXCEPTIONAL SOLUTIONS 1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316 Phone: 954.921.7781 Fax: 954.921.8807 Certificate of Authorization LC00000339		

**PRECIOUS PAWS
PET PARK AND MEMORIAL GARDENS AT
MELI PARK
CITY OF DANIA BEACH, FLORIDA**

**DOG PARK PAVED AREA
ENLARGEMENT**

MICHAEL CONNER, R.L.A.
STATE OF FLORIDA REGISTERED LANDSCAPE ARCHITECT
LICENSE No. 1181
DATE FEB. 7, 2011

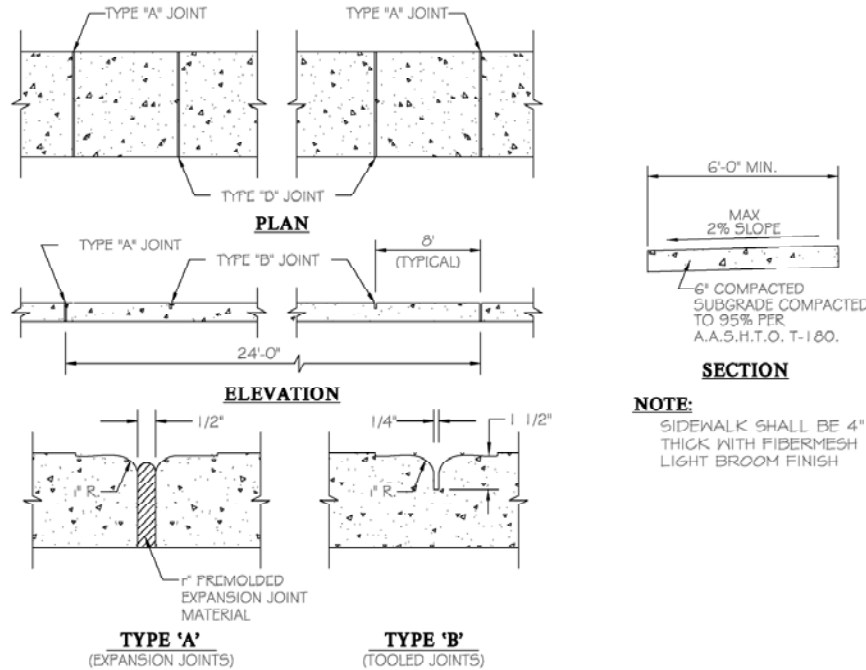
SCALE PROJECT No 10-3615 PURPOSE OF THIS SET BID SET	SHEET 1:4 SP401
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File Name: P:\Projects\201\City Of Dania Meli Dog Park\Landscaping\103615-L-500-LANDSCAPE-DETAILS.dwg (Plotted by: Erin Sudman on Monday, February 07, 2011 2:47:44 PM)

OVERALL PLANT LIST					
TREES:					
NATIVE & DROUGHT TOLERANT	QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SPECIFICATIONS
	7	BAV	Bulnesia arborea	Vera wood Tree	Field Grown, 10'-12' Ht. X 4'-5' SPDR., 30" C.T., 1 1/2" DBH.
Yes	3	IAH	Ilex x attenuata	East Lake Palatka Holly	30 Gal. Min., 10' Ht., 4" SPDR., 30" C.T., 1 1/2" DBH.
Yes	3	QV1	Quercus virginiana	Live Oak	Field Grown, 12' Ht. X 5' SPDR., 4" C.T., 2" DBH.
PALMS:					
NATIVE & DROUGHT TOLERANT	QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SPECIFICATIONS
	6		Relocated Royal Palms (By City)		Coordinate the root pruning, moving & re-planting of these palms with the City
SHRUBS & GROUNDCOVERS:					
NATIVE & DROUGHT TOLERANT	QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SPECIFICATIONS
	273	DTY	Drumstickia pauciflora	Yesterday, Today & Tomorrow	Full, 3 Gal., 2' X 2', 2" O.C.
	23	DEG	Duranta erecta 'Gold Mound'	Gold Mound duranta	Full, 3 Gal., 2' X 2', 2" O.C.
	501	FMG	Ficus microcarpa 'Green Island'	Green Island Ficus	Full, 3 Gal., 18" X 18", 18" O.C.
	68	PER	Pentas lanceolata 'New Look Red'	New Look Red Pentas	Full, 1 Gal, 18" O.C.
	385	VSS	Viburnum suspensum	Standard Viburnum	Full, 9 Gal 24" Spdr., Full In Base, 2" O.C.

3,200 SQ. FT. ST. AUGUSTINE FLORATAM SOD

NOTE: SOD QUANTITY IS AN ESTIMATE ONLY. THIS INCLUDES AREAS IMMEDIATELY ADJACENT TO NEW CONCRETE WORK AREAS ONLY. CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY EXISTING ST. AUGUSTINE GRASS THAT IS DISTURBED DURING CONSTRUCTION.



SIDEWALK JOINTS

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
'A'	24'-0" CENTER TO CENTER P.C. AND P.T. OF CURVES, AND AS SHOWN ON PLANS.
'B'	8'-0" CENTER TO CENTER ON SIDEWALKS.

1

CONCRETE SIDEWALK DETAIL

NTS

PRESERVATION NOTES:

- THE OWNER OR DESIGNATED REPRESENTATIVE SHALL VERIFY THE CONDITION AND TAG ALL MATERIAL TO BE RELOCATED OR REMOVED PRIOR TO ANY CONSTRUCTION ACTIVITY.
- PRESERVED TREES (TO REMAIN OR RELOCATE) SHALL BE BARRICADED/DEFENDED BEFORE AND DURING CONSTRUCTION:
 - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING ALL EXISTING VEGETATION (INCLUDING TREES, PALMS, SHRUBS & GROUND COVERS) NOTED ON PLANS.
 - THE TEMPORARY FENCING SHOWN ON PLANS ARE APPROXIMATIONS ONLY. EXACT LOCATIONS FOR FENCING SHALL BE MADE IN THE FIELD BY THE OWNERS REPRESENTATIVE OR TREE SPECIALIST IN ORDER TO DETERMINE THE ACTUAL DRIP LINE LOCATION FOR THE TREES. EXISTING GROUND ELEVATION AROUND DRIP LINES OF THE PRESERVED TREES WILL NOT BE CHANGED.
 - REFER TO "PROTECTIVE FENCING/BARRICADE DETAIL" ON THE "STANDARD PLANTING DETAILS" SHEET FOR APPROVED METHOD(S) OF BARRICADING/FENCING AND THE DRIP LINE DEFINITION.
 - IF DURING THE COURSE OF CONSTRUCTION ANY OF THE PROTECTED VEGETATION DIES, IT SHALL BE REPLACED, AS REQUIRED BY THE LOCAL JURISDICTION, BY THE CONTRACTOR WITH EQUAL SIZE AND CALIBER. WHERE SUPPLEMENTAL LANDSCAPING INFRINGES ON THIS AREA, DISTURBANCE SHALL BE MINIMIZED.
 - COMPLETELY REMOVE BARRICADES WHEN CONSTRUCTION HAS PROCEEDED TO THE POINT THAT THEY ARE NO LONGER NEEDED AND WHEN APPROVED BY THE LANDSCAPE ARCHITECT.
- PROTECT ROOT ZONES OF ALL TREES AND PLANTS:
 - DO NOT ALLOW VEHICULAR TRAFFIC AND PARKING WITHIN THE FENCED AREA.
 - DO NOT STORE MATERIALS OR PRODUCTS NEAR TREES OR PLANTS.
 - PREVENT DUMPING OF REFUSE OR CHEMICALLY INJURIOUS MATERIALS OR LIQUIDS.
 - PREVENT PUDDING OR CONTINUOUS RUNNING WATER.
 - CAREFULLY SUPERVISE ALL WORK TO PREVENT DAMAGE.
- ALL TREES TO BE RELOCATED SHALL BE:
 - ROOT AND CANOPY PRUNED A MINIMUM OF SIX (6) WEEKS PRIOR TO RELOCATING ACCORDING TO SOUND ARBORECULTURAL STANDARDS. PRUNING SHALL BE IN ACCORDANCE WITH A.N.S.I. STANDARDS AND THE GOVERNING AGENCIES MINIMAL STANDARDS.
 - PRUNED BY A CONTRACTOR FAMILIAR WITH MAINTAINING THE CANOPY OF THE TREE. MINIMAL REQUIRED TRIMMING SHALL BE DONE.
 - ROOT PRUNED BY HAND DIGGING ONLY. NO MECHANICAL EQUIPMENT SHALL BE USED WHICH WOULD DAMAGE THE ROOT SYSTEM (SUCH AS A BACKHOE).
 - ROOT PRUNED AND MOVED PRIOR TO INITIATING ANY CLEARING OF THE SITE. IF A TREE SPECIES HAS A DORMANT PERIOD IT SHOULD BE TRANSPLANTED DURING THIS TIME. DO NOT TRANSPLANT ANY TREES DURING PERIODS OF STRONG DRY WATER WINDS AND/OR DURING PERIODS OF DROUGHT.
 - BRACED (SEE "STAKING DETAIL" ON "STANDARD PLANTING DETAILS" SHEET) DURING ROOT PRUNING AND UPON INSTALLATION FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR AFTER RELOCATING (TRANSPLANTING).
 - RELOCATED AS TO NOT INTERFERE WITH EXISTING OR PROPOSED UTILITIES ABOVE OR BELOW GROUND. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT WHERE PROPOSED LOCATIONS CONFLICT WITH EXISTING OR PROPOSED UTILITIES.
 - ADDITIONALLY WATERED THREE TIMES A WEEK FOR THE SIX WEEK PERIOD, AFTER ROOT-PRUNING AND BEFORE TRANSPLANTING. THE ROOT BALL AND TRUNK SHALL BE PROTECTED DURING THE RELOCATION PROCESS. ROOT BALLS SHALL BE KEPT MOIST AT ALL TIMES.
- ALL RELOCATED/TRANSPLANTED TREES SHALL BE:
 - WATERED ON A DAILY BASIS UNTIL TREE GROWTH IS ESTABLISHED. THIS SHALL INCLUDE TREE SHADE THREE TIMES A DAY. IF POSSIBLE, MIST IRRIGATION SHOULD ALSO BE PLACED UP IN THE CANOPY OF THE TREES.
 - FERTILIZED WITH AN APPROPRIATE TYPE OF FERTILIZER MIX TO ENCOURAGE NEW ROOT GROWTH (I.E. LOW IN NITROGEN AND HIGH IN OTHER NUTRIENTS).
- CONSULT THE OWNER DESIGNATED REPRESENTATIVE OR LANDSCAPE ARCHITECT AND REMOVE ACCRUE-ON ROOTS AND BRANCHES WHICH INTERFERE WITH CONSTRUCTION WORK AREA PRIOR TO INITIATING SITE CLEARING.
- EMPLOY QUALIFIED TREE SPECIALIST TO REMOVE BRANCHES, AND TREAT ANY CUTS.
- ALL EXOTIC PLANTS, AS DEFINED BY THE LOCAL JURISDICTION, SHALL BE REMOVED WITHIN THE LIMIT OF WORK. A FOLLOW-UP MAINTENANCE PLAN SHALL BE IMPLEMENTED TO PREVENT RE-INVASION OF EXOTIC VEGETATION.
- COMPLETELY REMOVE BARRICADES WHEN CONSTRUCTION HAS ENDED, AND/OR WHEN APPROVED BY THE LANDSCAPE ARCHITECT.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS FOR TREE REMOVAL/RELOCATION AS WELL AS ANY BONDS REQUIRED, FROM THE GOVERNING AGENCIES. CONTRACTOR SHALL PROVIDE FOR MITIGATION, AS REQUIRED, PRIOR TO CLEARING LAND AND OBTAINING A BUILDING PERMIT.
- LANDSCAPE CONTRACTOR SHALL INCLUDE IN HIS BID A WATERING CONTRACT AS PER THESE NOTES (4.g & 5.a).
- REFER TO PROPOSED PLANTING PLANS FOR ADDITIONAL REQUIREMENTS AND NOTES.

PLANTING NOTES:

- GENERAL:
- STATE LAW MANDATES CONTACTING "SUNSHINE STATE ONE-CALL OF FLORIDA, INC." AT 811 OR 1-800-432-4770, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OF CONSTRUCTION.
 - LANDSCAPE CONTRACTOR SHALL CONTACT THE COUNTY, CITY AND/OR UTILITY COMPANIES TO LOCATE ALL UNDERGROUND UTILITIES OR STRUCTURES PRIOR TO DIGGING. LANDSCAPE CONTRACTOR SHALL REPAIR ALL DAMAGE TO UNDERGROUND UTILITIES, AND/OR CONSTRUCTION CAUSED BY UTILITY DAMAGE, AT NO COST TO THE OWNER.
 - CONTRACTOR SHALL FURNISH A "UNIT PRICE BREAKDOWN" FOR ALL MATERIAL TO BE USED IN PROJECT:
 - MULCH, TOPSOIL, FERTILIZER, STAKING, ETC. SHALL BE INCLUDED IN THE UNIT PRICE BREAKDOWN. COST PER PLANT REQUESTS FOR SUBSTITUTIONS AND CHANGES SHALL BE IN WRITING BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
 - OWNERS REPRESENTATIVE MAY IN HIS/HER DISCRETION ADD OR DELETE UNINSTALLED PLANT MATERIAL FROM PROJECT UTILIZING THE "UNIT BREAKDOWN" UNIT COSTS SUBMITTED.
 - CONTRACTORS MUST OBTAIN SEPARATE LANDSCAPE, IRRIGATION & TREE RELOCATION/REMOVAL PERMITS FROM THE GOVERNING AGENCIES PRIOR TO THE ISSUANCE OF THE FIRST BUILDING PERMIT FOR THE PROJECT.
 - LANDSCAPE CONTRACTOR MUST CALL THE LANDSCAPE INSPECTOR WITH THE GOVERNING AGENCY TO SCHEDULE A PRE CONSTRUCTION MEETING, ALONG WITH THE OWNERS REPRESENTATIVE AND LANDSCAPE ARCHITECT PRIOR TO ANY SITE PREPARATION.
 - XERISCAPE LANDSCAPE PRINCIPLES SHALL BE APPLIED TO ALL SITES AS SPECIFIED IN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICTS "WATERWISE SOUTH FLORIDA LANDSCAPES" GUIDELINES.
 - LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT & GOVERNING AGENCIES OF ANY CHANGES IN MATERIAL FOR APPROVAL, PRIOR TO INSTALLATION.
 - LANDSCAPE CONTRACTOR SHALL REFER TO LANDSCAPE DETAILS FOR ADDITIONAL PLANTING REQUIREMENTS.
 - LANDSCAPE CONTRACTOR SHALL VERIFY ALL ESTIMATED QUANTITIES OF MATERIAL SHOWN ON THE DRAWINGS PRIOR TO SUBMITTING HIS BID. PLANTING PLAN IS TO TAKE PRECEDENCE OVER PLANT LISTS/SCHEDULE.
 - ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF NOT LESS THAN 12 MONTHS AFTER DATE OF FINAL ACCEPTANCE (SEE WATERING NOTE).
 - THE LANDSCAPE ARCHITECT OF RECORD SHALL PROVIDE A CERTIFICATION LETTER TO THE GOVERNING AGENCY CERTIFYING THAT THE LANDSCAPING WAS INSTALLED ACCORDING TO THE PLANS(S) AND SPECIFICATIONS(S) BEFORE THE LANDSCAPE INSPECTOR MAKES THE FINAL INSPECTION FOR ALL NON-RESIDENTIAL AND PLANNED COMMUNITY RESIDENTIAL PROJECTS.
 - OWNER(S) OF THE LAND OR THEIR AGENTS SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE, AFTER INSTALLATION.
 - SITE PREPARATION:
 - LANDSCAPE CONTRACTOR SHALL EXERCISE CAUTION TO PROTECT ALL EXISTING SOD AND IRRIGATION SYSTEMS ANY DAMAGE TO THE SOD OR IRRIGATION SHALL BE REPLACED/REPAIRED TO THE ORIGINAL STATE BY THE LANDSCAPE CONTRACTOR AT NO COST TO THE OWNER.
 - GENERAL CONTRACTOR TO REMOVE ALL EXISTING BRAZILIAN PEPPER, FLORIDA HOLLY AND ALL EXOTIC NUISANCE MATERIAL ON SITE, AS REQUIRED AND/OR AS SPECIFIED ON EXISTING PRESERVATION/DISPOSITION PLANS.
 - GENERAL CONTRACTOR SHALL ERADICATE & REMOVE ALL WEEDS & GRASS. CLEAN UP ANY DEAD MATERIAL, DEBRIS, AND RUBBISH PRIOR TO INSTALLING A NEW PLANT MATERIAL.
 - LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL FINAL GRADING WITHIN PLANTING AREAS.
 - PLANTING/TOP SOIL:
 - ALL BUILDING CONSTRUCTION MATERIAL AND FOREIGN MATERIAL SHALL BE REMOVED FROM THE PLANTING AREAS AND REPLACED WITH 50/50 MIX FILL SOIL OR AS OTHERWISE SPECIFIED.
 - ALL PARKING ISLANDS AND PLANTING BEDS AROUND BUILDINGS, SHALL BE EXCAVATED TO A DEPTH OF 36" MIN. AND REPLACED WITH 50/50 PLANT MIX, OR AS PER SPECIFICATIONS.
 - TOPSOIL SHALL BE CLEAN AND FREE OF CONSTRUCTION DEBRIS, WEEDS, ROCKS, NOXIOUS PESTS AND DISEASES, AND EXHIBIT A PH OF 6.5 TO 7.0. THE TOPSOIL FOR PLANTING AREAS SHALL BE AMENDED WITH HORTICULTURAL ACCEPTABLE ORGANIC MATERIAL. ALL SOILS USED SHALL BE SUITABLE FOR THE INTENDED PLANT MATERIAL. THE SOURCE OF THE TOPSOIL SHALL BE KNOWN TO THE APPLICANT AND MUST BE ACCEPTABLE TO THE GOVERNING AGENCIES.
 - LANDSCAPE CONTRACTOR TO SUPPLY & INSTALL 2" SOIL LAYER 50/50 MIX BLANKET FOR ALL NEW SOD AREAS.
 - THE MIN. PLANTING DEPTH SHALL BE SIX (6) INCHES FOR GROUND COVERS, FLOWERS, SHRUBS AND HEDGES.
 - TREES SHALL RECEIVE TWELVE (12) INCHES OF PLANTING SOIL AROUND THE ROOT BALL.
 - 6" TOP SOIL REQUIRED AROUND & BENEATH ALL PROPOSED PLANT MATERIAL ROOT BALLS. (UNLESS OTHERWISE NOTED)
 - CLEAN SAND SHALL BE USED TO BACKFILL ARID CLIMATE PALMS.
 - NATIVE TOPSOIL ON THE SITE SHALL BE RETAINED ON-SITE AND USED WHEN THERE IS SUFFICIENT QUANTITY TO COVER AT LEAST SOME OF THE ON-SITE LANDSCAPED AREAS.
 - PLANT MATERIAL:
 - ALL PLANT MATERIAL SHALL BE MIN. GRADE OF FLORIDA NO. 1 & BE INSTALLED AS SPECIFIED IN FLORIDA DEPT. OF AGRICULTURAL GRADES AND STANDARDS', CURRENT EDITION RESPECTIVELY.
 - LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ATTAINING PERMITS PRIOR TO INSTALLATION OF NEW PLANT MATERIAL.
 - ALL GUYING, STAKING & TREE BRACES SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. REFER TO PLANTING DETAILS FOR APPROVED METHODS. LANDSCAPE CONTRACTOR SHALL RETURN 12 MONTHS AFTER COMPLETION OF JOB AND REMOVE ALL GUYTS, STAKES & TREE BRACES.
 - ALL PLANT MATERIAL SYMBOLS SHOWN ON LANDSCAPE PLANS(S) SHALL BE CONSIDERED DIAGRAMMATIC AND SHOULD BE ADJUSTED IN THE FIELD BY CONTRACTOR TO AVOID UTILITY CONFLICTS AND OTHER OBSTRUCTIONS. WHERE SAID ADJUSTMENT CANNOT BE DONE WITHOUT SIGNIFICANT CHANGE TO THE PLANTING DESIGN CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT AND/OR OWNERS REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.
 - 1.1. TREES SHALL BE PLACED A MINIMUM OF 6 FT. FROM UNDERGROUND UTILITIES AND ALL SHADE TREES INSTALLED WITHIN SIX FEET OF PUBLIC/PRIVATE INFRASTRUCTURE (INCLUDING CURBS, WALKS, PAVEMENT, ETC.) SHALL UTILIZE A ROOT BARRIER SYSTEM, AS APPROVED BY THE GOVERNING AGENCY.
 - 2.1.2. ALL PLANT MATERIAL SHALL BE CLEAR 7-1/2 FT. IN FRONT & SIDES WITH 4 FT. IN REAR AROUND ALL FIRE HYDRANTS, CHECK VALVES, FIRE DEPT. EQUIPMENT, ETC., OR AS REQUIRED.
 - 2.1.3. SHADE TREES SHALL BE PLANTED MIN. OF 15 FT. FROM LIGHT POLES. ALL SMALL TREES AND PALMS TO BE PLANTED MIN. OF 7.5 FT. FROM LIGHT POLES, OR AS OTHERWISE SPECIFIED.
 - 2.1.4. ALL SHADE TREES SHALL HAVE A 4 1/2" MIN. CLEAR TRUNK HEIGHT (UNLESS OTHERWISE SPECIFIED) AND CALIPER SHALL BE MEASURED AT D.B.H. AT TIME OF PLANTING.

- NO TREES OR OTHER PLANT MATERIAL MAY BE PLANTED IN RIGHTS-OF-WAY (E. SWALE AREAS) WITHOUT A PERMIT. NO SHRUB SPECIES WITH A MATURE HEIGHT THAT WILL BLOCK THE CLEAR SIGHT ZONE FROM 30 INCHES IN HEIGHT TO SIX FEET IN HEIGHT WILL BE ALLOWED IN SAID SWALE AREAS.
 - ALL DUMPSTICKS, TRANSFORMERS, UTILITY BOXES, IRRIGATION PUMP HOUSES & MECHANICAL EQUIPMENT, INCLUDING BACK FLOW PREVENTOR, A.C. UNITS, ETC., SHALL BE SCREENED WITH HEDGE MATERIAL 10' TO THE HEIGHT OF EACH ABOVE GROUND ELEMENT FOR COMPLETE SCREENING ON THREE (3) SIDES MIN.
 - THE QUANTITY OF SCREENING SHRUBS IS IN ADDITION TO THE REQUIRED NUMBER OF SHRUBS AS PROVIDED IN THE CODE CALCULATION TABLE.
 - ALL SCREENING SHRUBS SHALL BE PLANTED IN SUCH A WAY AS TO PROVIDE ACCESS FOR PROPER OPERATION OF EQUIPMENT BEING SCREENED AND/OR PER THE REQUIREMENTS OF THE UTILITY AS NECESSARY.
 - ALL HEDGE MATERIAL REQUIRED FOR SCREENING PURPOSES SHALL BE PLANTED SO AS TO BE TIP TO TIP WITHIN SIX MONTHS OF PLANTING AND MAINTAINED SO AS TO FORM A CONTINUOUS VISUAL SCREEN. ADJUST SPACING AS NECESSARY AND/OR PROVIDE ADDITIONAL PLANTS TO PROVIDE AN ADEQUATE SCREEN.
 - SHRUBS USED AS HEDGES SHALL BE FL NO. 1 OR BETTER WITH A MIN. HT. OF 24" AND A MIN. SPREAD OF 18", WHEN MEASURED IMMEDIATELY AFTER PLANTING & SHALL BE A MIN. OF 3 HT. WITHIN 2 YRS. FROM THE DATE OF PLANTING.
 - ALL SIZES SHOWN FOR PLANT MATERIAL ON THE PLAN ARE TO BE CONSIDERED MINIMUM. ALL PLANT MATERIAL MUST MEET OR EXCEED THESE MINIMUM REQUIREMENTS FOR BOTH HEIGHT AND SPREAD. ANY OTHER REQUIREMENTS FOR SPECIFIC SHAPE OR EFFECT AS NOTED ON THE PLAN SHALL ALSO BE REQUIRED FOR ACCEPTANCE. ALL TREES ARE TO BE SINGLE TRUNK UNLESS OTHERWISE NOTED ON THE PLAN.
 - ALL SYNTHETIC BURLAP, SYNTHETIC STRING OR CORDS, OR WIRE BASKETS SHALL BE REMOVED BEFORE ANY TREES ARE PLANTED. ALL SYNTHETIC TAPE (I.E. TAGGING TAPE, NURSERY TAPE) SHALL BE REMOVED FROM TRUNKS, BRANCHES, ETC. BEFORE INSPECTION. THE TOP 1/3 OF ANY NATURAL DURLAP SHALL BE REMOVED OR TUCKED INTO THE PLANTING HOLE BEFORE THE TREES ARE BACK FILLED.
 - SET TREES NO DEEPER THAN IT WAS IN ITS ORIGINAL GROWING WITH THE ROOT BALLS EVEN WITH, OR SLIGHTLY HIGHER (+/- 1") THAN THE FINISHED GRADE.
 - ALL "GROUND COVER" REQUIRES 75% COVERAGE AND 100% WITHIN 3 MONTHS OF INSTALLATION.
 - PROPOSED UNDERSTORY PLANT MATERIAL SHALL NOT BE PLANTED ON TOP OF TREE OR PALM ROOT BALLS.
 - ALL PLANT MATERIAL SHALL BE FERTILIZED UPON INSTALLATION, SEE SPECIFICATIONS.
- MULCH:
- A THREE (3) INCH MIN. DEPTH OF APPROVED ORGANIC MULCH MATERIAL (MEASURED AT THE TIME OF FINAL INSPECTION) SHALL BE INSTALLED IN ALL LANDSCAPED AREAS NOT COVERED BY PAVEMENT, SOD, DECORATIVE STONES, OR ANNUAL FLOWER BEDS. ADDITIONALLY, EACH TREE SHALL HAVE A RING OF ORGANIC MULCH AT THE PERIMETER OF THE ROOT BALL:
 - 1.1. THE USE OF CYPRISS MULCH IS PROHIBITED, AS WELL AS ANY MULCH CONTAINING ARSENIC.
 - 2.1.2. A MIN. MULCH WIDTH OF 18" BEYOND THE TRUNK OF ALL TREES, PALMS, HEDGES AND SHRUBS.
 - 2.1.3. MULCH SHALL NOT BE PLACED CLOSER THAN 3" FROM THE TRUNK OF ALL TREES AND PALMS; THE MOUNDING OF MULCH IS NOT ACCEPTABLE.
 - 2.1.4. MULCH SHALL BE USED IN CONJUNCTION WITH GROUND COVER IN ALL PLANTING BEDS (UNLESS SPECIFIED OTHERWISE).
 - 2.1.5. DO NOT MULCH WITHIN DESIGNATED "PRESERVE AREAS" (UNLESS SPECIFIED OTHERWISE).
- LANDSCAPE/LAWN AREAS:
- LANDSCAPE MATERIAL SHALL BE PLACED ON ALL AREAS NOT COVERED BY MAIN AND ACCESSORY STRUCTURES, WALKS AND VEHICULAR USE AREAS. LANDSCAPE MATERIAL SHALL EXTEND TO ANY ADJUTING STREET, PAVEMENT EDGE AND TO THE MEAN WATER LINE OF ANY ADJUTING CANAL, LAKE OR WATERWAY.
 - 1.1. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE SODDED WITH ST. AUGUSTINE FLORATAM, UNLESS OTHERWISE NOTED.
 - 1.2. CONTRACTOR SHALL INCLUDE IN HIS BID ST. AUGUSTINE FLORATAM SOD FOR ALL LANDSCAPE AREAS VOID OF ANY PLANT MATERIAL (E.G. GROUND COVERS, SHRUBS, SODS NOT SPECIFIED IN PLANS, WITHIN THE LIMITS OF THE PROJECT. CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT PRIOR TO BIDDING IN REFERENCE TO "PROJECT LIMITS".
- IRRIGATION:
- LANDSCAPE CONTRACTOR TO PROVIDE AN AUTOMATIC LAWN IRRIGATION SYSTEM GUARANTEEING 100% COVERAGE & MAINTAIN A SOD MIN. OVERLAP TO ALL LANDSCAPED AREAS. THERE SHALL BE NO OVER SPRAY ONTO SIDEWALKS. IRRIGATION SYSTEM SHALL:
 - 2.1. HAVE A RAIN SENSOR DEVICE INSTALLED, AS REQUIRED.
 - 2.2. USE PURPLE CODED PIPE, HEADS, VALVES ETC. FOR IDENTIFYING RECLAIM WATER COMPONENTS, AS REQUIRED.
 - 2.3. IRRIGATION PLAN SHALL BE PROVIDED PRIOR TO BUILDING PERMIT.
- WATERING NOTE:
- ALL NEW PLANT MATERIAL SHALL HAVE AN ESTABLISHMENT PERIOD OF 12 MONTHS FROM THE TIME OF FINAL ACCEPTANCE. DURING THE ESTABLISHMENT PERIOD THE CONTRACTOR WILL BE RESPONSIBLE FOR THE FOLLOWING ITEMS: WATERING PER THE SCHEDULE ATTACHED#(23), RE-SETTING OF PLANTS, REPLACEMENT OF SICK OR DEAD PLANTS, ALL OTHER CARE REQUIRED FOR PROPER GROWTH. ANY PLANT MATERIAL NOT IN HEALTHY GROWING CONDITION SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CLIENT.
 - 1.1. THE 12 MONTH WARRANT/ESTABLISHMENT PERIOD SHALL BE EXTENDED BY 45 DAYS FOR ALL REPLACEMENT PLANT MATERIAL.
 - 2.1.2. AT THE CLIENTS EXPENSE, THE CONTRACTOR WILL REPLACE ANY PLANT MATERIAL DAMAGED AS A RESULT OF AUTOMOBILE ACCIDENTS OR "ACTS OF GOD" LIMITED TO HAIL, FREEZE, LIGHTNING, AND WINDS EXCEEDING 75 MPH AS DEFINED BY THE MIAMI HURRICANE CENTER.
 - 2.2. WATERING CONTRACT SHALL BE INCLUDED IN CONTRACTORS BID FOR ANY PLANT MATERIAL THAT HAS BEEN ROOT PRUNED, INSTALLED, DISTURBED BY CONSTRUCTION, OR WHERE PROPOSED OR EXISTING IRRIGATION SYSTEMS ARE NOT FUNCTIONAL. ALL WARRANTIES SHALL BE IN PLACE BY CONTRACTOR REGARDLESS OF NON-OPERATIONAL IRRIGATION SYSTEMS OR AREAS WHERE NO IRRIGATION IS PROPOSED.

23. WATERING SCHEDULE (FIRST 6 MONTHS)*:

WEEK(S)	FREQUENCY (WATERING DATE)
1 THRU 6	MON., WED., FRI., SAT.
7 THRU 12	MON., WED., FRI.
13 THRU 24	MON., FRI.

*6 MONTH WATERING SCHEDULE IS A MINIMUM, CONTRACTOR IS RESPONSIBLE FOR WATERING PLANT MATERIAL FOR THE FULL 12 MONTH ESTABLISHMENT/WARRANTY PERIOD.

ABBREVIATIONS / DEFINITIONS:

ADA	AMERICAN WITH DISABILITIES ACT
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT (ARCHITECTURAL)
B&B	BALLED / BURLAPPED
BLDG	BUILDING (STRUCTURE)
BR	BARE ROOT
CAL	CALIPER
CKRT	CKEPTIFIED
CL	CENTERLINE
CLF	CHAIN LINK FENCE (VINYL CLAD FENCE)
COL	COLUMN
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONT	CONTINUOUS
CT	CLEAR TRUNK
DBL	DOUBLE
DBH	DIAMETER AT BREAST HEIGHT
DIA	DIAMETER
DWG(S)	DRAWING (DRAWINGS)
ELEC	ELECTRICAL (ELECTRICAL ENGINEER)
ENG	ENGINEER
EQUIP	EQUIPMENT
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
EXT	EXTERIOR
FBC	FLORIDA BUILDING CODE
FG	FIELD GROWN
FIN	FINISH
FT	FEET
GAL	GALLON
GW	GREY WOOD
HC	HANDICAP (ACCESSIBLE)
HT	HEIGHT
HORIZ	HORIZONTAL
ID	IDENTIFICATION
IN	INCH
MAX	MAXIMUM (MEASUREMENT MUST BE EQUAL OR LESS)
MIN	MINIMUM (MEASUREMENT MUST BE EQUAL OR GREATER)
MISC	MISCELLANEOUS
MULT	MULTIPLE
NIC	NOT IN CONTRACT (NOT INCLUDED, OR BY OTHERS)
NTS	NOT TO SCALE
OVER	OVERALL
OC	ON CENTERS
PL	PROPERTY LINE (OR PLAT LIMITLINE)
POC	POINT OF CONNECTION
PPM	PARTS PER MILLION
PPP	PLANTS PER FOOT
FT	FRESHLY TREATED FINE
SYM	SYMBOL
QTY	QUANTITY
RAD, (R)	RADIUS (OR RISER)
REINF	REINFORCE
SGL	SINGLE
SIM	SIMILAR
SPEC(S)	SPECIFICATION (SPECIFICATIONS)
SPRD	SPREAD (OVERALL WIDTH OF CANOPY)
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
TEMP	TEMPORARY
TD	TO BE DETERMINED
TYP	TYPICAL
W/	WITH
W/O	WITHOUT

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811 or 1-800-432-4770

SUNSHINE STATE ONE CALL OF FLORIDA, INC.



DESIGNED DATE 11/09/10
CHECKED DATE 11/12/10
ISSUED FOR DATE 11/16/10

ES
MC

Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS
1800 Eller Drive, Suite 800, Fort Lauderdale, Florida 33316
Phone: 954.921.7781 Fax: 954.921.8807
Certificate of Authorization LC00000339

PRECIOUS PAWS
PET PARK AND MEMORIAL GARDENS AT
MELI PARK
CITY OF DANIA BEACH, FLORIDA

GENERAL LANDSCAPE NOTES

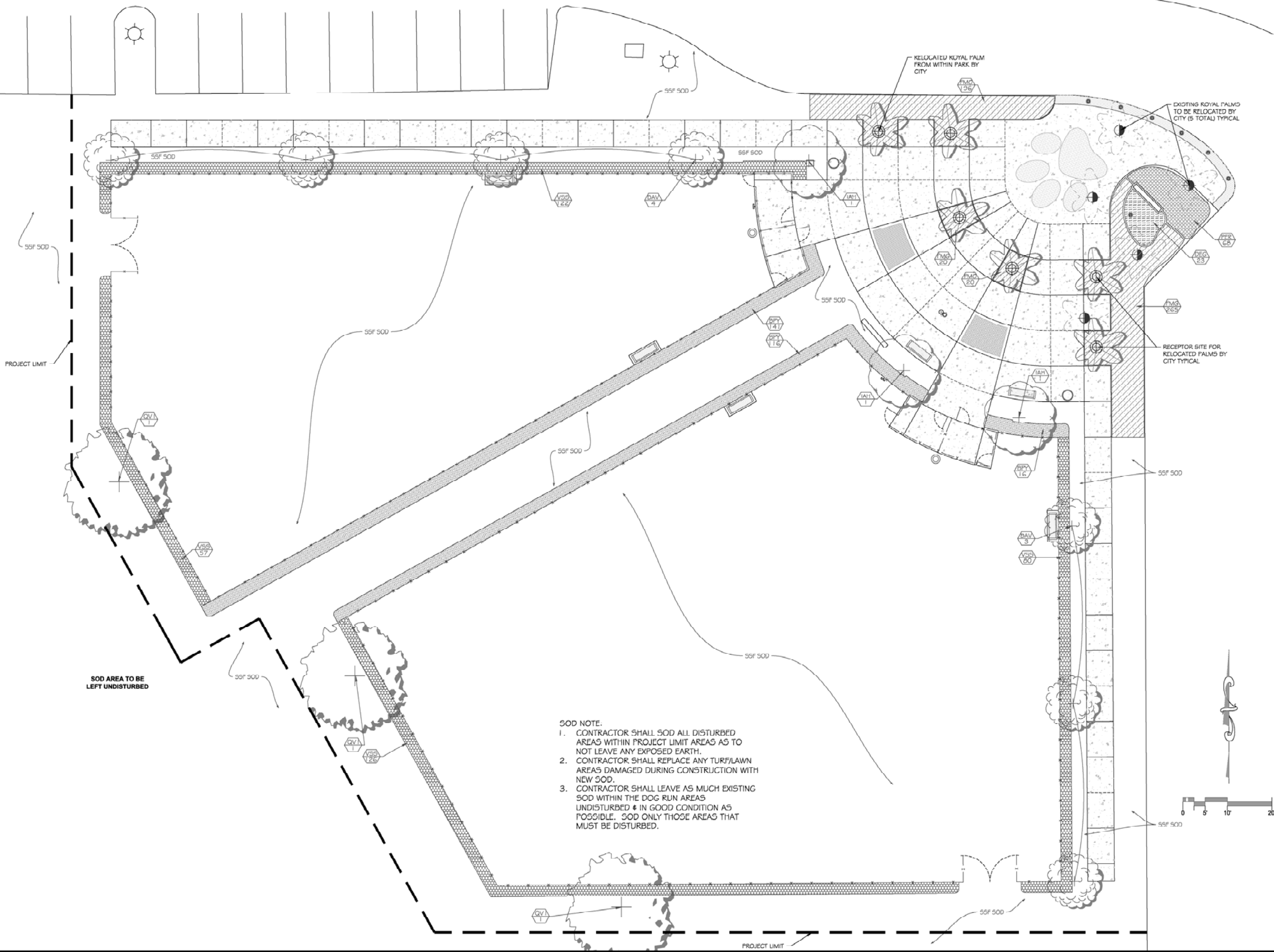
MICHAEL CONNER, R.L.A.
STATE OF FLORIDA REGISTERED LANDSCAPE ARCHITECT
LICENSE No.1181

SCALE
PROJECT No 10-3615
PURPOSE OF THIS SET BID SET
DATE FEB. 7, 2011

SHEET

L010

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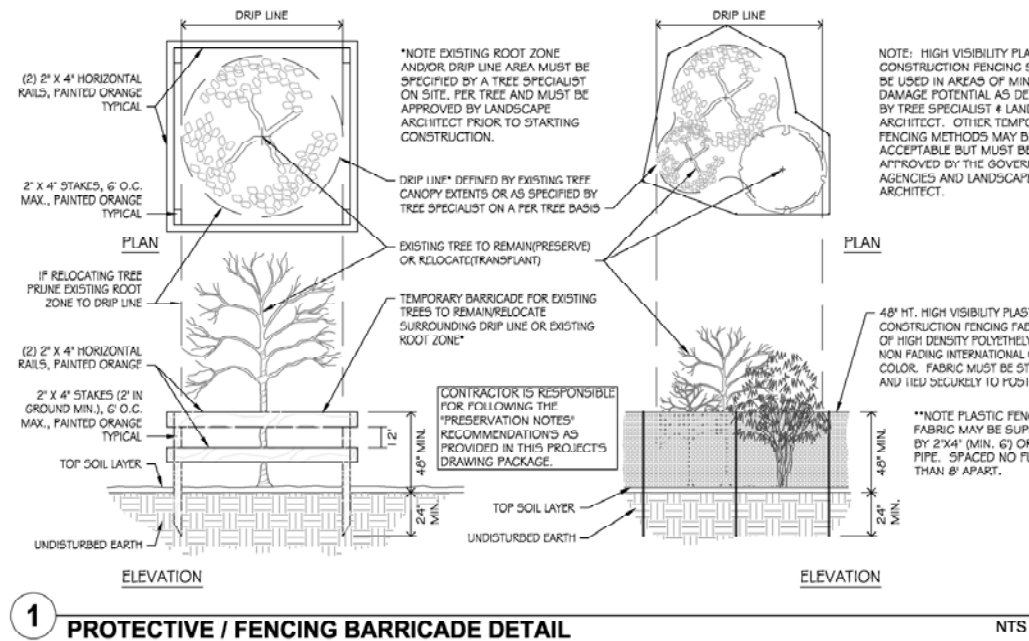
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Calvin, Giordano & Associates, Inc. EXCEPTIONAL SOLUTIONS 1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316 Phone: 954.921.7781 Fax: 954.921.8807 Certificate of Authorization LC00000339		

**PRECIOUS PAWS
PET PARK AND MEMORIAL GARDENS AT
MELI PARK
CITY OF DANIA BEACH, FLORIDA**

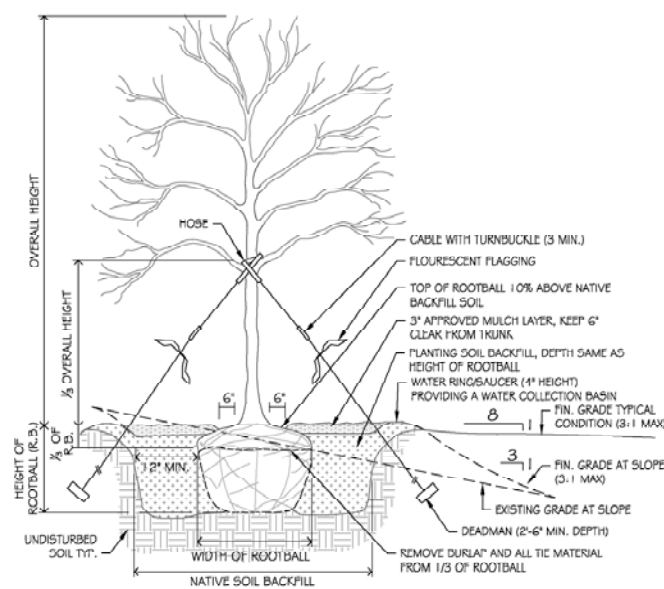
PLANTING PLAN

MICHAEL CONNER, R.L.A.
STATE OF FLORIDA REGISTERED LANDSCAPE ARCHITECT
LICENSE No. 1181
DATE FEB. 7, 2011

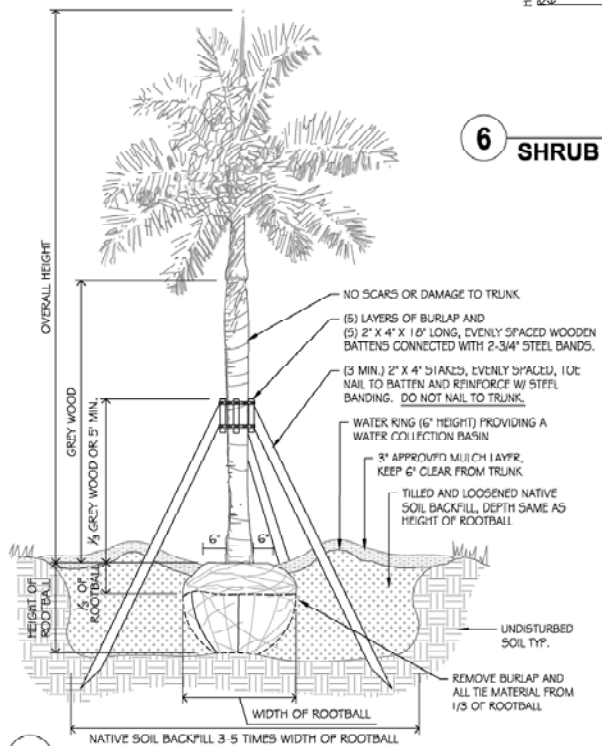
SCALE 1"=10'	SHEET L101
PROJECT No 10-3615	PURPOSE OF THIS SET BID SET



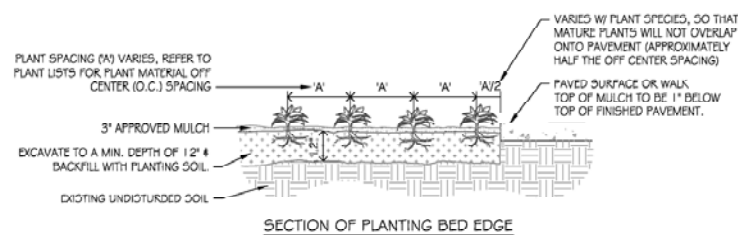
1 PROTECTIVE / FENCING BARRICADE DETAIL



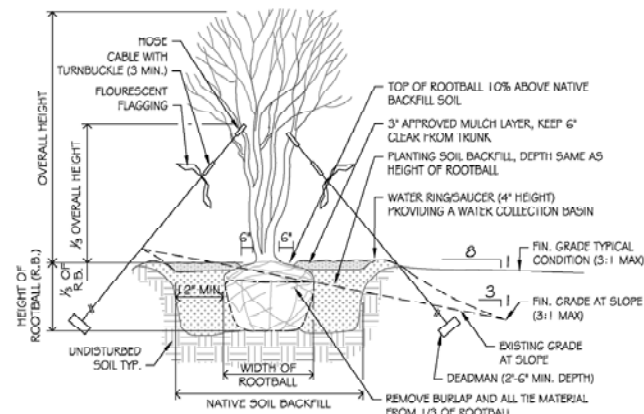
2 TREE PLANTING DETAIL



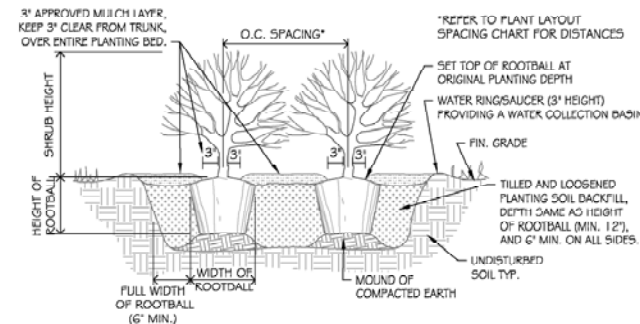
3 PALM PLANTING DETAIL



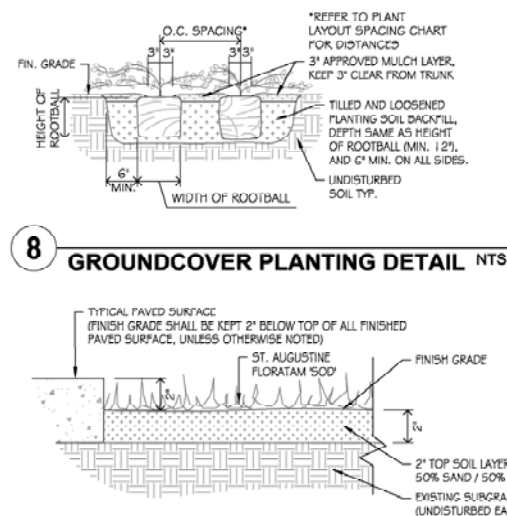
11 GROUNDCOVER & SHRUB LAYOUT & SPACING DETAIL



4 MULTI-STEM PLANTING DETAIL NTS

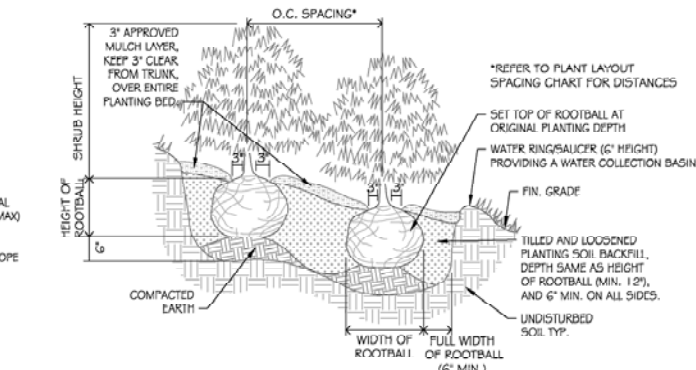


6 SHRUB PLANTING DETAIL NTS

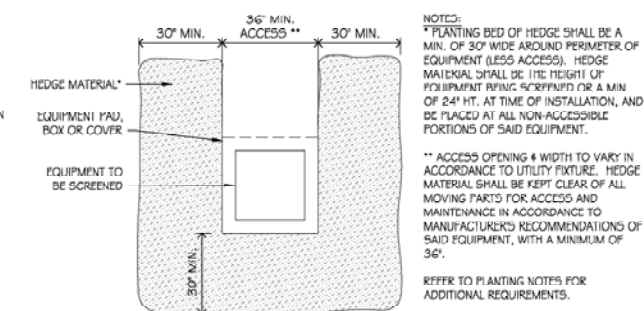


9 SOD PLANTING DETAIL NTS

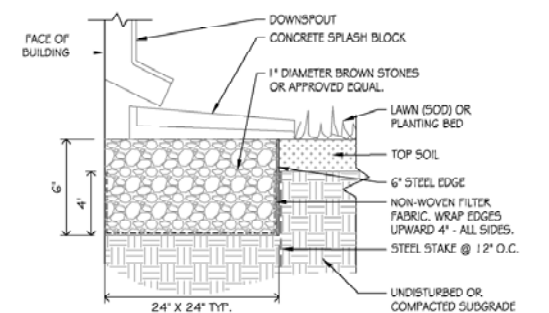
PLANT SPACING (A)	ROW SPACING (D)
6 IN. O.C.	5 IN. O.C.
8 IN. O.C.	7 IN. O.C.
10 IN. O.C.	9 IN. O.C.
12 IN. O.C.	10 IN. O.C.
15 IN. O.C.	13 IN. O.C.
18 IN. O.C.	15 IN. O.C.
24 IN. O.C.	21 IN. O.C.
30 IN. O.C.	26 IN. O.C.
36 IN. O.C.	31 IN. O.C.
48 IN. O.C.	41 IN. O.C.
54 IN. O.C.	46 IN. O.C.
60 IN. O.C.	52 IN. O.C.
ROW SPACING = PLANT SPACING X 0.86	



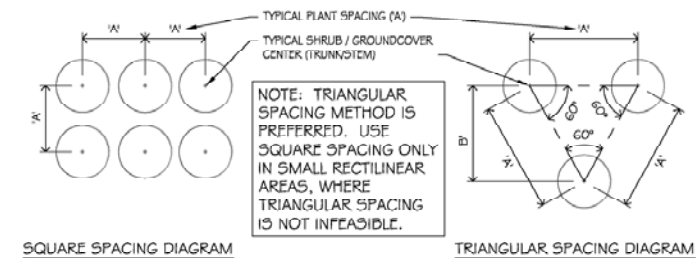
5 SHRUB PLANTING ON SLOPE DETAIL NT



7 UTILITY PAD SCREENING DETAIL NTS



10 **DETAIL AT DOWNSPOUTS (TYP)** NTS



NTS

LANDSCAPE DETAIL NOTES:

1. TYPICAL PLANTING DETAILS ARE DIAGRAMMATIC AND MUST NOT BE SCALED. REFER TO WRITTEN DIMENSIONS & NOTES FOR DISTANCES, AS SHOWN PER DETAIL.
2. ALL PLANT MATERIAL SHALL BE FLORIDA NUMBER 1 OR BETTER, AS DEFINED IN THE "GRADING & STANDARDS FOR NURSERY PLANTING" BY THE STATE OF FLORIDA DEPARTMENT OF AGRICULTURE.
3. IF ON SITE CONFLICTS OCCUR, WHEN APPLYING TYPICAL PLANTING INSTALLATION METHODS (PER THESE DETAILS) WITHIN CONFINED AREAS) OR OTHER NON-CONFORMING CONDITIONS) LANDSCAPE CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. REFER TO GENERAL PLANTING NOTES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

ABREVIATIONS / DEFINITIONS:

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OC	ON CENTERS
PL	PROPERTY LINE (OR PLAT LIMITATION)
POC	POINT OF CONNECTION
PPM	PARTS PER MILLION
PPP	PLANTS PER POT
PT	PRESSURE TREATED PINE
SYM	SYMBOL
QTY	QUANTITY
RAD, (R)	RADIUS (OR RIDGE)
REINF	REINFORCE
SGL	SINGLE
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SPEC(S)	SPECIFICATION (SPECIFICATIONS)
SPRD	SPREAD (OVERALL WIDTH OF CANOPY)
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TEMP	TEMPORARY
TBD	TO BE DETERMINED
TYP	TYPICAL
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WO	WITHOUT

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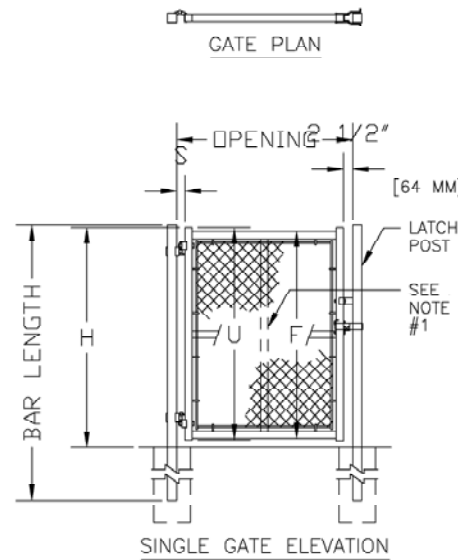
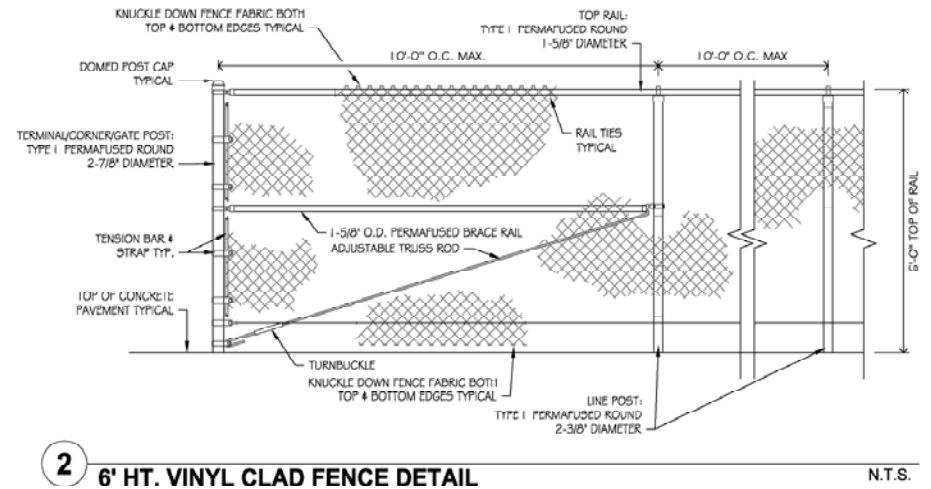
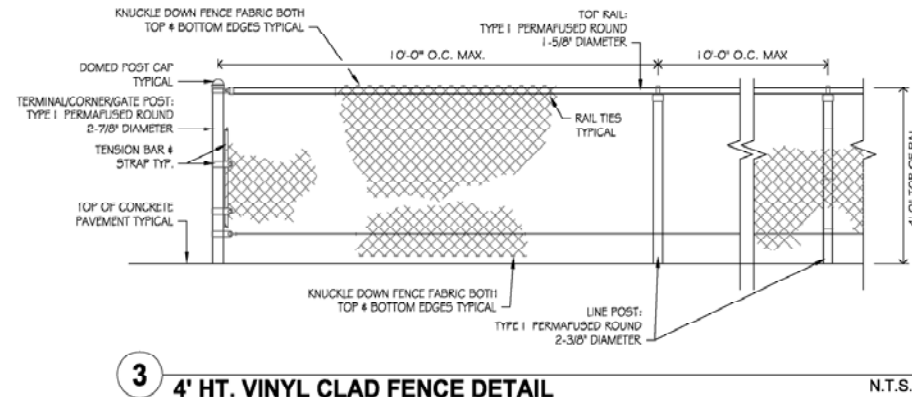


MICHAEL CONNER, R.L.A. STATE OF FLORIDA REGISTERED LANDSCAPE ARCHITECT LICENSE No.1181	SCALE	SHEET L501
	PROJECT No	
	10-3615	
DATE FEB. 7, 2011	PURPOSE OF THIS SET	
	BID SET	

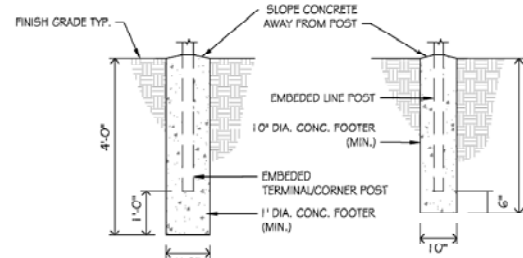
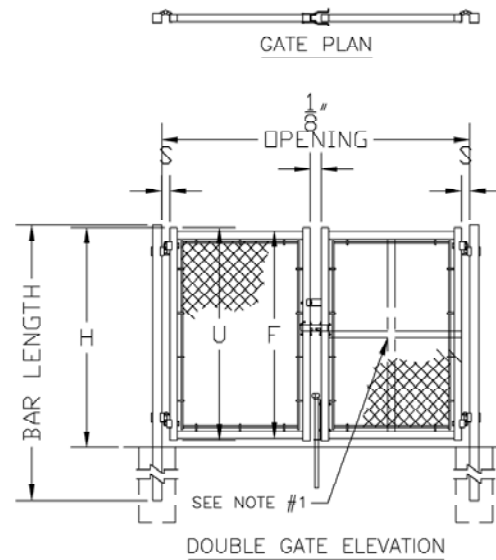
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SINGLE OR DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
WITHOUT BARBED WIRE	ACTUAL DIM	ACTUAL DIM
3'-0" [914MM]	2'-10" [864MM]	2'-8 1/2" [826MM]
3'-6" [1067MM]	3'-4" [1016MM]	3'-2 1/2" [978MM]
4'-0" [1219MM]	3'-10" [1168MM]	3'-8 1/2" [1130MM]
5'-0" [1524MM]	4'-10" [1473MM]	4'-8 1/2" [1435MM]
6'-0" [1829MM]	5'-10" [1778MM]	5'-8 1/2" [1740MM]
7'-0" [2134MM]	6'-10" [2083MM]	6'-8 1/2" [2045MM]
8'-0" [2438MM]	7'-10" [2388MM]	7'-8 1/2" [2350MM]
9'-0" [2743MM]	8'-10" [2692MM]	8'-8 1/2" [2654MM]
10'-0" [3048MM]	9'-10" [2997MM]	9'-8 1/2" [2959MM]
11'-0" [3353MM]	10'-10" [3302MM]	10'-8 1/2" [3264MM]
12'-0" [3658MM]	11'-10" [3607MM]	11'-8 1/2" [3569MM]



SINGLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
3'-0" [914MM] THROUGH 6'-0" [1829MM]	2 1/2" [63.5MM] SQ OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
7'-0" [2134MM] THROUGH 10'-0" [3048MM]	3" [76MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
11'-0" [3353MM] THROUGH 12'-0" [3658MM]	4" [102MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
13'-0" [3962MM] THROUGH 18'-0" [5486MM]	6" [152MM] SQ OR 6.625" [168MM] OD	FOR GATE POSTS: SQ-2 1/4" [57MM] RND-3 1/2" [89MM]
19'-0" [5791MM] THROUGH 20'-0" [6096MM]	8" [203MM] SQ OR 8.625" [219MM] OD	FOR GATE POSTS: SQ-2 1/4" [57MM] RND-3 1/2" [89MM]

- NOTES:
- SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER HALCO ONLY.
 - CENTER UPRIGHT REQUIRED ON GATE LEAVES 8'-0" [2438MM] & WIDER. CENTER RAIL REQUIRED ON GATE LEAVES 10'-0" [3048MM] & HIGHER.
 - THIS DWG CORRESPONDS WITH DWGS 3-1010R, 3-1015R, 3-1015M, & 3-1015L.

DOUBLE LEAF GATES		
OPENING	GATE POSTS	HINGE SPACE (S)
FACE TO FACE	SQ & RND SIZES	POST TO UPRIGHT
8'-0" [2438MM] THROUGH 12'-0" [3658MM]	2 1/2" [63.5MM] SQ OR 2.875" [73MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
14'-0" [4267MM] THROUGH 24'-0" [7315MM]	3" [76MM] SQ OR 4" [102MM] OD	FOR SQUARE & ROUND GATE POSTS: 2 1/4" [57MM]
26'-0" [7925MM] THROUGH 36'-0" [10973MM]	6" [152MM] SQ OR 6.625" [168MM] OD	FOR GATE POSTS: SQ-2 1/4" [57MM] RND-3 1/2" [89MM]
38'-0" [11582MM] THROUGH 40'-0" [12192MM]	8" [203MM] SQ OR 8.625" [219MM] OD	FOR GATE POSTS: SQ-2 1/4" [57MM] RND-3 1/2" [89MM]

FENCE MATERIAL SHALL BE:
PERMAFUSED® COMMERCIAL COLOR-CHAIN LINK FENCE SYSTEM:
TYPE 1: 9 GAUGE - CHAIN-LINK FABRIC (2" MESH)
TYPE 1: FITTINGS, FRAMEWORK, POSTS, RAILS & GATE

COLOR: MIDNIGHT BLACK

BY MASTER HALCO
PHONE: 1-888-289-3362
FAX: 1-800-542-6466
4000 W METROPOLITAN DR.
ORANGE, CA 92668

WWW.MASTERHALCO.COM
info@fenceonline.com



NOTE: INSTALLATION OF FENCE, POSTS & HARDWARE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS (INSTALLATION INSTRUCTIONS). CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS IN ORDER NOT TO VOID MANUFACTURER'S WARRANTY.



ANCHOR FENCE PRODUCTS
by Master Halco
Orange, CA
Phone No.: 800-229-5615
www.FenceOnline.com

TYPICAL SWING GATES WITHOUT BARBED WIRE

DIMENSIONS & SPECIFICATIONS

BY: JRR	DWG: 3-1000
DATE: 01-04-96	
REV: C	LAYER: 1
REV DATE: 08-25-06	SCALE: 1/4" = 1'-0"

4 TYPICAL GATE SPECIFICATIONS

N.T.S.

DESIGNED DATE	11/09/10	EG
CHECKED DATE	11/12/10	MC
ISSUED FOR DATE	11/15/10	



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PRECIOUS PAWS
PET PARK AND MEMORIAL GARDENS AT
MELI PARK
CITY OF DANIA BEACH, FLORIDA

TYPICAL FENCING DETAILS

MICHAEL CONNER, R.L.A.
STATE OF FLORIDA REGISTERED LANDSCAPE ARCHITECT
LICENSE No. 1181
DATE: FEB. 7, 2011

SCALE: ---
PROJECT No: 10-3615
PURPOSE OF THIS SET: BID SET

SHEET L503

TABLE OF CONTENTS

SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS

01010	Summary of Work
01015	General Requirements
01021	Cash Allowances
01025	Measurement for Payment
01030	Special Project Procedures
01100	Alternates
01152	Applications for Payment
01340	Shop Drawings, Working Drawings and Samples
01410	Testing and Testing Laboratory Services
01532	Tree and Plant Protection
01600	Material and Equipment
01701	Project Closeout
01720	Project Record Documents
01740	Warranties and Bonds

DIVISION 2 - SITEWORK

02100	Site Preparation
02200	Earthwork
02210	Fine Grading
02484	Soil Preparation and Soil Mixes
02487	Sodding
02490	Trees, Plants and Groundcover
02510	Walkways
02830	Chain Link Fence

DIVISION 3 - CONCRETE

03100	Concrete Formwork
03251	Joints
03350	Concrete Finishes

DIVISION 4 – 16 (NOT USED)

SECTION 01010
SUMMARY OF WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Contractor use of site
- B. Location of Work
- C. Description of Work
- D. Work Sequence
- E. Owner Occupancy

1.02 CONTRACTOR USE OF SITE

- A. Limit use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by others and Owner.

1.03 LOCATION OF WORK

- A. The work is located within P.J. Meli Park Aquatic Complex, located at 2901 S.W. 52nd Street in the City of Dania Beach, Florida.

1.04 DESCRIPTION OF WORK

- A. Installation of Vinyl-Clad Chain Link Fencing and Gates
- B. Installation of Concrete Walks
- C. Installation of Brick Pavers (including donor bricks to be supplied by City)
- D. Installation of Benches, Trash Receptacles, and "Doggie" Site Furniture
- E. Installation of Water Fountain (water line and drainage to be provided by the City)
- F. Installation of Steel Bollards with decorative caps
- G. Installation of Landscaping
- H. Relocation of Existing Royal Palms

1.05 WORK SEQUENCE

- A. Construct Work in stages to accommodate Owner's occupancy requirements during the construction period, coordinate construction schedule and operations with Owner.

1.06 OWNER OCCUPANCY

- A. The Owner may occupy portions of the premises during period of construction for beneficial occupancy.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate this requirement.

1.07 MAINTENANCE OF TRAFFIC

- A. Description: The Work to be performed under this section shall include furnishing all materials and labor necessary to maintain vehicular and pedestrian traffic.
- B. Applicable Codes, Standards and Specifications: The Work under this Contract shall be in strict accordance with the following codes and standards.
 - 1. Local, county and municipal codes.
- C. Traffic and Vehicular Areas:
 - 1. Major Road and Streets: No major roads or streets shall be blocked to traffic without adequate detour facilities for a period of more than 30 minutes or as directed by the governing authority.
 - 2. Commercial Properties: Access to commercial property shall not be blocked for a period of more than 30 minutes during the time such properties are open for business.
 - 3. Residential Property: Access to residential property shall not be blocked for a period of more than 2 hours.
 - 4. Precluded hours, 7:00 pm to 8:00 am.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01015

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

- A. General provisions of Contract, including General and Supplementary Conditions.

1.02 PROJECT DESCRIPTION

- A. The project generally consists of construction of certain improvements, including installation of chain link fencing and gates, installation of concrete walks, installation of brick pavers, installation of benches and other site furniture, installation of a water fountain, installation of steel bollard, and installation of landscaping.

1.03 CONTRACTOR USE OF PREMISES

- A. Contractor shall have limited use of the park for construction operations, including use of the project site. The Contractor's use of the premises is limited by the City's operation of the park and the Owner's right to perform construction operations with its own forces or to employ separate contractors on portions of the project.
- B. The Contractor shall be responsible for coordinating his daily activities in conjunction with City Staff and any Contractors presently working within the City of Dania Beach.
- C. Confine operations to areas within the park and the established limits for the project.
- D. Keep existing driveways and entrances serving the premises clear and available to the Owner and the Owner's employees at all times.
 - 1. Do not use these areas for parking or storage of materials.
 - 2. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
- E. Do not dispose of organic and hazardous material on site, either by burial or by burning.

1.04 ENVIRONMENTAL PROTECTION

- A. Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result.

1.05 SUBMITTALS

- A. General: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- B. Progress Schedule: Fully developed, horizontal bar chart type Contractor's construction schedule. Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue updated schedules monthly.
- C. Daily Construction Report: Record of construction activities and events at the site; submit two (2) copies as requested by the Landscape Architect.
- D. Shop Drawings: Newly prepared information, drawn to accurate scale. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.
 - 1. Shop Drawings shall include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings.
 - 2. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.
- E. Product Data: Collect into a single submittal for each element of construction or system. Includes printed information such as manufacture's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves.
- F. Samples: Submit samples as specified and physically identical with the material or product proposed.
- G. Submit shop drawings/product data for the following work:
 - 1. Vinyl-Clad Chain Link Fencing and Gates
 - 2. Benches
 - 3. Trash Receptacles
 - 4. Site Furniture
 - 5. Water Fountain
 - 6. Bollards
 - 7. Planting Soil
 - 8. Mulch
 - 9. Staking Material
 - 10. Fertilizer

1.06 QUALITY CONTROL

- A. The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity.

1. Costs for these services shall be included in the Contract Sum.
 2. The Owner will engage and pay for the services of an independent agency to perform inspections and tests specified as the Owner's responsibility.
- B. The Contractor is responsible for and shall pay costs of retesting when required by Landscape Architect or Owner and of additional testing needed or required by the Contractor.
- C. The Contractor shall pay costs for additional trips to the project by the agency when scheduled times for tests and inspections are canceled and agency is not notified sufficiently in advance of cancellation to avoid the trip.

1.07 MATERIAL AND EQUIPMENT

- A. Substitutions: After Bidding period, up to 15 days after date of Notice to Proceed, the Landscape Architect will consider written requests from Contractor for proposed substitutions of products. Subsequent requests will be considered only in case of product unavailability or other condition beyond control of the Contractor. Submit a separate request for each proposed substitution; two (2) copies each on the Substitution Request (SR) available from the Landscape Architect.
1. Do not order or install substitute products without written acceptance from the Landscape Architect.
 2. Do not imply or indicate substitutions on shop drawings or product data submittals without a separate formal request.
 3. Landscape Architect will determine acceptability of substitution.
 4. Only one request for substitution for each product will be considered. If not accepted, Contractor shall provide specified product.
- B. Product selection is governed by the Contract Documents and governing regulations, not by previous project experience.
1. Where a single or multiple products or manufacturers are named, provide one of the products indicated or submit a request for substitution for any product or manufacturer not named.
 2. Where the Specifications only require compliance with performance requirements, an imposed code, standard or regulation, select a product that complies with the requirements, standards, codes or regulations specified.
 3. Manufacturers named in a Specification section are those manufacturers considered capable of manufacturing products conforming to the specified requirements. The naming of a particular manufacturer does not imply acceptance or approval of just any standard product of that manufacturer.

1.08 RECORD DOCUMENTS

- A. Record construction information and changes on a set of Contract Drawings and Project Manual.
- B. Keep Record Documents current with construction progress and do not conceal any work until required information is recorded. Legibly mark to record actual construction:
 - 1. Location of miscellaneous components, secondary systems and accessories.
 - 2. Location and extent of interface with services and existing adjacent elements.
 - 3. Manufacturer, trade name and catalogue number of each product and item actually provided.
- C. Label each document PROJECT RECORD in 2 inch printed letters followed by the Contractor's name and address and the signature of the Contractor's authorized representative. No Record Documents will be accepted from Subcontractors.
- D. Submit completed Record Documents to the Landscape Architect prior to or in conjunction with request for Substantial Completion. Prior to final payment, revise Record Documents to show additional information, construction and changes and resubmit to the Landscape Architect.

1.09 TESTING

- A. The Contractor shall obtain the services of a professional testing laboratory approved by the Landscape Architect to perform the following type of tests and test frequencies. Copies of all reports are to be sent to the Landscape Architect as soon as possible.
- B. Density tests for roadway crossings at the rate of one test per lane per lift of compacted material, beginning one foot above the normal water table.
- C. If in the opinion of the Landscape Architect, suitable compaction has not been achieved around structures, density tests may be required.
- D. Should the above test results indicate deficiencies, the Landscape Architect may order additional tests at the Contractor's expense, and all reworked areas shall be retested at the Contractor's expense.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01021
CASH ALLOWANCES

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Schedule of monetary amounts of allowances in Contract Sum for purchase products.
- B. Costs in Contract Sum other than in Allowance.
- C. Procedures for administration of Allowances.

1.02 RELATED REQUIREMENTS

- A. Document 00700: General Conditions.
- B. Section 01410: Testing and Testing Laboratory Services.

1.03 COSTS INCLUDED IN ALLOWANCES

- A. Cost of product to Contractor, less applicable trade discounts.
- B. Delivery to site.
- C. Applicable taxes.
- D. Products handling at site, including unloading, uncrating, and storage.
- E. Protection of products from elements and from damage.
- F. Labor and installation and finishing, except when installation is specified as part of allowance.
- G. Other expenses required to complete installation.
- H. Contractor overhead and profit.

1.04 CONTRACTOR RESPONSIBILITIES

- A. Promptly notify Landscape Architect of any reasonable objections from supplier.
- B. On notification of selection, execute purchase agreement with designated supplier.
- C. Arrange for process shop drawings, product data, and samples.

- D. Arrange for delivery. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- E. Install, adjust, and finish products.
- F. Provide warranties for products and installation.

1.05 CORRELATION WITH CONTRACTOR SUBMITTALS

- A. Schedule shop drawings, product data, samples, and delivery dates, in Progress Schedule for products selected under allowances.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

- A. General provisions of Contract, including General and Supplementary Conditions.
- B. Other Division-1 Specification Sections.

1.02 SECTION INCLUDES

- A. Administrative and procedural requirements for determining Work completed under unit price contract.

1.03 GENERAL REQUIREMENTS

- A. Lump Sum and unit prices shall include the providing of all costs required for the complete construction of the specified unit of work including cost of materials and delivery; cost of installation labor, including social security, insurance, and other required fringe benefits, workman's compensation insurance; bond premiums; rental of equipment and machinery; taxes; testing; surveys and other incidental expenses; and supervision.
- B. The Owner reserves the right to reject the Contractor's measurement of completed work that involves use of established unit prices, and to have this Work measured by an independent surveyor acceptable to the Contractor at the Owner's expense.
- C. Contract Sum adjustments will be by Change Order on basis of net accumulative change for each unit price category.
 - 1. Except as otherwise specified, unit prices shall apply to both deductive and additive variations of quantities.
 - 2. Lump sum and unit prices in the Agreement shall remain in effect until date of final completion of the entire Work.
- D. Partial payment for material and equipment properly stored and protected will be made in accordance with requirements of the General Conditions.
- E. Payment will be made at the respective contract unit and lump sum price for each item shown in the Agreement, installed and accepted, which price and payment shall constitute full compensation for furnishing all materials and performing all Work in connection therewith and incidental thereto.
 - 1. No separate payment will be made for:
 - a. Record Drawings
 - b. Construction of haul roads as may be required.

c. Testing
F. Unit Price Abbreviations:

1. Lineal Feet - LF
2. Acre - AC
3. Cubic Yard - CY
4. Square Yard - SY
5. Each - EA
6. Lump Sum - LS
7. Ton - TN
8. Net Mile - NM
9. Gross Mile - GM
10. Gallons - GA
11. Thousand Gallons - MG
12. Assembly - AS
13. Per Item - PI

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

3.01 MEASUREMENT AND PAYMENT

A. Roadway Construction

1. Signing and Marking: Payment shall be made for:
 - a. Actual length of striping applied and for each sign and support post assembly installed.
 - b. Grinding and filling in accordance with FDOT requirements for the thermoplastic striping on a lump sum basis.
 - c. Number of raised reflectorized pavement markers (RPM's) installed or removed.
2. Baserock: Payment shall be made based upon the number of square yards of baserock provided and compacted.
3. Asphalt
 - a. Asphaltic Concrete Surface Course (Type S-III): Payment shall be based upon the number of square yards of Asphaltic Concrete Surface Course completed within the neat lines as indicated and accepted under terms of the contract.
 - b. Asphaltic Concrete Truing and Leveling Course: Payment shall be based upon the number of tons placed, as ordered by the Engineer.
4. Stabilization: Payment shall be made based upon the number of square yards stabilized in accordance with the specifications and accepted by the Engineer.
5. Asphalt Milling: Payment shall be made based upon the number of square yards of asphalt removed within the neat lines as indicated, and accepted under the terms of the Contract. No additional payment shall be made for milling required to match existing pavement.
6. Sawcut: No additional payment shall be made.
7. Tack Coat: No additional payment shall be made.

8. Cleaning Existing Pavement: No additional payment shall be made.
 9. Maintenance of traffic shall include the cost of barricades, construction signs, flashing arrow boards, and any other miscellaneous devices required to conform with the Manual of Uniform Traffic Control Devices and the current Florida Department of Transportation Roadway and Traffic Design Standards ("600" Series). Also includes the cost of providing temporary pavement markings indicating lane line and storage areas for turning movements, throughout the project, at the end of each day's operation.
- B. Asphalt Aprons around existing drainage structures: Payment shall be based upon the number of drainage structures modified as ordered by the Engineer.
- C. Contingency: See Specification Section 01021, "Cash Allowances."
- D. The Project Mobilization
1. The project mobilization item shall be administered in accordance with the Florida Department of Transportation, Standard Specifications for Road & Bridge Construction (latest edition); MOBILIZATION.
 2. The maximum amount allowed for the mobilization item shall be five (5) percent of the total contract amount.
 3. Mobilization includes, but is not limited to, mobilization of equipment, all surveying, all supervision, cost of all bonds and warranties, all permit fees, and all insurance.

3.02 PROTECTION

- A. Where pavement, trees, shrubbery, fences or other property or surface structures not designated as pay items, have been damaged, removed or disturbed by the Contractor, whether deliberately or through failure to carry out the requirements of the Contract Documents, state laws, municipal ordinances or the specific direction of the Engineer, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced or repaired at the expense of the Contractor to a condition equal to that before work began within a time frame approved by the Engineer.

END OF SECTION

SECTION 01030

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 OBSTRUCTIONS

- A. The attention of the Contractor is drawn to the fact that during digging at the Project site, the possibility exists of the Contractor encountering various water, sewer, petroleum, gas, telephone, electrical or other lines not shown on the Drawings. The Contractor shall exercise extreme care before and during digging to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, The Contractor shall repair the line at the no cost to the Owner.

1.02 PROVISIONS FOR THE CONTROL OF DUST

- A. Sufficient precautions shall be taken during construction to minimize the amount of dust created. Wetting down the site may be required or as directed by the Landscape Architect to prevent dust as a result of vehicular traffic.

1.03 SALVAGE

- A. Any existing equipment or material, including but not limited to, valves, pipes, fittings, couplings, etc., which is removed or replaced as a result of construction under this project may be designated as salvage by the Landscape Architect or Owner and if so shall be excavated, if necessary, and delivered to the Owner by a location directed by the Owner. Any equipment or material not worthy of salvaging, as directed by the Owner, shall be disposed of by the Contractor at a suitable location.

1.04 MAINTENANCE OF EXISTING WATER AND WASTEWATER FACILITIES OPERATION

- A. The Contractor shall take notice that existing water and wastewater facilities are operated in the construction area. It is the responsibility of the Contractor to contact the Owner's utility operator and ascertain the extent of any specific service area.
- B. The Contractor shall fully cooperate at all times with the Owner in order to maintain the operation of the existing facilities with the least amount of interference and interruption possible. Continuous service, public health and safety considerations shall exceed all others and the Contractor's schedule, plans and work shall at all times be subject to alteration and revision if necessary for above considerations.
- C. The Landscape Architect and Owner reserve the right to require the Contractor to work 24 hours per day in all cases where, in their opinion, interference with operation of the system may result.

- D. In no case will the Contractor be permitted to interfere with the existing system until all materials, supplies, equipment, tools and incidentals necessary to complete the interfering portion of the work are on the site. All existing utilities shall be pothole located prior to construction of conflicting yard piping.

1.05 UTILITY CROSSINGS

- A. It is intended that wherever existing utilities such as water, chemical, electrical or other service lines must be crossed, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated on the Drawings. However, when in the opinion of the Owner or Landscape Architect this procedure is not feasible he may direct the use of fittings for a utility crossing as detailed on the Drawings. All existing utilities shall be pothole located prior to construction of conflicting yard piping.

1.06 CONNECTIONS TO EXISTING SYSTEMS

- A. The Contractor shall perform all work necessary to locate, excavate and prepare for connections to the terminus of the existing mains all as shown on the Drawings or where directed by the Owner. The cost of this work and for the actual connection of the existing mains shall be included in the bid price for the pipe installation and shall not result in any additional cost to the Owner.

1.07 RELOCATIONS

- A. The Contractor shall be responsible for the relocation of structures, including but not limited to light poles, signs, sign poles, fences, piping, irrigation conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the bid for the project and shall not result in any additional cost to the Owner.

1.08 WARRANTIES

- A. All equipment supplied under these Specifications shall be warranted by the Contractor and the equipment manufacturers for a period of one (1) year, unless otherwise specified. Warranty period shall commence on the date of Owner acceptance.
- B. The equipment shall be warranted to be free from defects in workmanship, design and materials. If any part of the equipment should fail during the warranty period, it shall be replaced in the machine(s) and the unit(s) restored to service at no expense to the Owner.
- C. The manufacturer's warranty period shall run concurrently with the Contractor's warranty or guarantee period. No exception to this provision shall be allowed. The Contractor shall be responsible for obtaining equipment warranties in accordance with Section 01740 from each of the respective suppliers or manufacturers for all the equipment specified under Divisions 11 through 16.

- D. In the event that the manufacturer is unwilling to provide a one year warranty commencing at the time of Owner acceptance, the Contractor shall obtain from the manufacturer a two (2) year warranty commencing at the time of equipment delivery at the job site.

1.09 HURRICANE PREPAREDNESS PLAN

- A. Within thirty days of the date of Notice to Proceed, the Contractor shall submit to the Landscape Architect and Owner a Hurricane Preparedness Plan. The plan should outline the necessary measures which the Contractor proposes to perform at no additional cost to the Owner in case of a hurricane warning. The plan shall detail these measures with specific action items defining responsible personnel.
- B. In the event of inclement weather, or whenever Landscape Architect shall direct; Contractor will cause Subcontractors to protect carefully the Work and materials against damage or injury from the weather. If, in the opinion of the Landscape Architect, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of Contractor or any Subcontractor to so protect the Work, such Work and materials shall be removed and replaced at the expense of the Contractor.

1.10 DISINFECTION

- A. The Contractor shall clean, disinfect and bacteriologically test and clear, in accordance with the latest edition of the Florida Administrative Code (FAC), all water supply facilities affected by this project which shall come into contact with water being treated or treated water prior to placing the facility in operation. The above statement shall apply to both new facilities installed, and existing facilities which are to be modified.
- B. The Contractor shall employ a disinfection method approved by the Engineer and Owner, and shall fully satisfy the Owner that adequate disinfection has been achieved prior to placing a facility on line.

1.11 EQUIPMENT, TESTING & INSPECTION

- A. Regardless of the number of days specified in the individual sections for the manufacturers representative to be present on the site for inspection and testing, if the equipment fails to perform as specified then the representative shall remain on site until the malfunction is corrected and the Owner received specified days of inspection or testing.
- B. The cost for the additional days required shall not be added to the cost of the Owner, but shall be to the account of the Contractor.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01100

ALTERNATES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. This section identifies procedures for proposing Alternates, and describes the basic changes to be incorporated into the Work, only when that Alternate is made a part of the Work by specific provisions in the Owner-Contractor Agreement.

1.02 RELATED REQUIREMENTS

- A. Bidding Documents: Method of quotation of the cost of each Alternate, and the basis of the Owner's acceptance of Alternates.
- B. Owner-Contractor Agreement: Incorporation of Alternates into the Work.
- C. Sections of the Specifications as listed under the respective Alternates.
- D. Referenced sections of Specifications stipulate pertinent requirements for products and methods to achieve the work stipulated under each Alternate.
- E. Coordinate pertinent related work and modify surrounding work as required to properly integrate the work under each Alternate, and to provide the complete construction required by Contract Documents.

1.03 PROCEDURES

- A. Alternates will be exercised at the option of the Owner.
- B. Coordinate related work and modify surrounding work as required to complete the Work, including changes under each Alternate, and to provide the complete construction required by Contract Documents.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01152

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Submit Applications for Payment to the Owner in accordance with the schedule established by Conditions of the Contract and Agreement Between Owner and Contractor.

1.02 RELATED REQUIREMENTS

- A. Agreement between Owner and Contractor consisting of an approved payment schedule by the City of Dania Beach.
- B. Conditions of the Contract: Progress Payments, Retainages, Final Payment, schedule of values and Record Documents.
- C. Section 01720: Project Record Documents

1.03 FORMAT AND DATA REQUIRED

- A. Submit applications typed on forms provided by the Owner, Application for Payment, with itemized data typed on 8 1/2 inch x 14 inch white paper and continuation sheets.
- B. Payment forms shall show significant detail to substantiate request. Additional detail may be required by the Engineer.

1.04 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
 - 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
 - 3. Execute certification with signature of a responsible officer of Contract firm.
- B. Continuation Sheets:
 - 1. Fill in total list of scheduled component items of work, with item number and scheduled dollar value for each item.

2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored.
 - a. Round off values to nearest dollar, or as specified.
3. List each Change Order Number, and description, as for an original component item or work.
 - a. List by Change Order Number, and description, as for an original component item or work.
4. Payment for Material and Equipment stored, but not yet incorporated into the Work, will be allowed.

1.05 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. When the Owner or the Landscape Architect requires substantiating data, Contractor shall submit suitable information, with a cover letter identifying:
 1. Project
 2. Application number and date
 3. Detailed list of enclosures
 4. For stored products:
 - a. Item number and identification as shown on application.
 - b. Description of specific material.
- B. Submit one copy of data cover letter for each copy of application.
- C. As a prerequisite for payment, Contractor is to submit a "Surety Acknowledgment of Payment Request" letter showing amount of progress payment which the Contractor is requesting.
- D. The Contractor shall maintain an updated set of drawings to be used as a record drawings in accordance with Section 01720. As a prerequisite for monthly progress payments, the Contractor shall submit the updated record drawings for review by the City and Landscape Architect.

1.06 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in Application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting as specified in the Contract.
- C. Submit final record drawings.

1.07 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to the City at the times stipulated in the Agreement.
- B. Number: Two copies of each Application.
- C. When the City and Landscape Architect find Application properly completed and correct, the City will transmit certificate of payment to the Contractor.

PART 2 - PRODUCTS (Not Used).

PART 3 - EXECUTION (Not Used).

END OF SECTION

SECTION 01340

SHOP DRAWINGS, WORKING DRAWINGS AND SAMPLES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The contractor shall submit to the Landscape Architect for review, such working drawings, shop drawings, test reports, data on materials and equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of work, including but not limited to those working drawings, shop drawings, data, and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
- B. The Contractor shall submit two (2) copies of shop drawings or other data to the Landscape Architect plus the number the Contractor desires to be returned. For electrical or irrigation submittals, the Contractor shall submit four copies plus the number desired to be returned.
- C. Within thirty (30) calendar days after the effective date of the Agreement, the Contractor shall submit to the Landscape Architect a complete list of preliminary data for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specific items. Review of this list by the Landscape Architect shall in no way expressed or implied relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Specifications. This procedure is required in order to expedite final review of Shop Drawings.
- D. The contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the Owner and Landscape Architect. This log should include the following items:
 - 1. Submittal-Description and Number assigned.
 - 2. Date to Landscape Architect.
 - 3. Date returned to Contractor (from Landscape Architect).
 - 4. Status of Submittal.
 - 5. Date of Resubmittal and Return (as applicable).
 - 6. Projected date of delivery to site.

1.02 RELATED REQUIREMENTS

- A. Document 00700: Standard General Conditions of the Construction Contract
- B. Designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Shop Drawings, Working Drawings, and Samples will be needed.

1.03 CONTRACTOR'S RESPONSIBILITY

- A. It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the Landscape Architect for review. Each and every copy of the Drawings and data shall bear Contractor's stamp will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents.
- B. Determine and verify:
 - 1. Field measurements
 - 2. Field construction criteria
 - 3. Catalog numbers and similar data
 - 4. Conformance and Specifications
- C. The Contractor shall furnish the Landscape Architect a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies, and equipment. This schedule shall indicate those that are critical to the progress schedule.
- D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the Landscape Architect approved.
- E. The Contractor shall submit to the Landscape Architect all drawings and schedules sufficiently in advance of construction requirements to provide no less than twenty-one (21) calendar days for checking and appropriate action from the time the Landscape Architect receives them.
- F. The Contractor shall submit two (2) copies of descriptive or product data submittals to complement shop drawings for the Landscape Architect plus the number of copies which the Contractor requires. The Landscape Architect will retain two (2) sets. All blueprint shop drawings shall be submitted with one (1) set of reproducible and four (4) sets of print.

The Landscape Architect will review the drawings and return to the Contractor the set of marked-up drawings with appropriate review comments.
- G. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the review by Landscape Architect of the necessary Shop Drawings.

1.04 LANDSCAPE ARCHITECT'S REVIEW OF SHOP DRAWINGS

- A. The Landscape Architect's review of drawings, data, and samples submitted by the Contractor will cover only general conformity to the Specifications, external

connections, and dimensions which affect the installation. The Landscape Architect's review will not constitute an approval of dimensions, quantities, and details of the material, equipment, device, or item shown.

- B. The review of drawings and schedules will be general and shall not be construed:
 - 1. as permitting any departure from the Contract requirements;
 - 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
 - 3. as approving departures from details furnished by the Landscape Architect, except as otherwise provided herein.
- C. If the drawings or schedule as submitted describe variations per subparagraph (1.05.C), and show a departure from the Contract requirements which Landscape Architect finds to be in the interest of the Owner and to be minor as not to involve a change in the Contract Price or time for performance, the Landscape Architect may return the reviewed drawings without noting an exception.
- D. When reviewed by the Landscape Architect, each of the Shop Drawings will be identified as having received such review being so stamped and dated. Shop Drawings stamped "REJECTED" and with required corrections shown will be returned to the Contractor for correction and resubmittal.
- E. Resubmittals will be handled in the same manner as the first submittals. On resubmittals, the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the Landscape Architect on previous submissions. The Contractor shall make any corrections required by the Landscape Architect.
- F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Landscape Architect.
- G. The Landscape Architect will review a submittal/resubmittal a maximum of two (2) times after which cost of review will be borne by the Contractor. The cost of reviewing shall be equal to the Landscape Architect's charges to the Owner under the terms of the Landscape Architect's agreement with the Owner.
- H. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Landscape Architect.
- I. No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor, and will not be considered "Rejected" until resubmitted.

1.05 SHOP DRAWINGS

- A. When used in the Contract Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance and test data, shall be considered only as supportive to required Shop Drawings as defined above.
- B. Drawings and schedules shall be checked and coordinated with work of all trades involved, before they are submitted for review by the Landscape Architect and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.
- C. Each Shop Drawing, shall have a blank area 3 1/2 inches by 3 1/2 inches, located adjacent to the title block. The title block shall display the following:
 - 1. Number and title of the drawing.
 - 2. Date of drawing or revision.
 - 3. Name of project building or facility.
 - 4. Name of contractor and subcontractor submitting drawing.
 - 5. Clear identification of contents and location of work.
 - 6. Specification title and number.
- D. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such drawings have been reviewed.
- E. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.
- F. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, address and telephone number of the manufacturer's representative and service company so that service and spare parts can be readily obtained. In addition, a maintenance and lubrication schedule for each piece of equipment shall be submitted along with each shop drawing submittal.
- G. All manufacturers or equipment supplier who propose to furnish equipment or products under Divisions 11, 12, 13, 14, 15, and 16 shall submit an installation list to the Landscape Architect along with the required shop drawings. The installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.

- H. Only the Landscape Architect will utilize the color "red" in marking Shop Drawing submittals.
- I. Before final payment is made, the Contractor shall furnish to Landscape Architect two (2) sets of record shop drawings all clearly revised, complete and up to date showing the permanent construction as actually made for all reinforcing and structural steel, miscellaneous metals, process and mechanical equipment, yard piping, electrical system, and instrumentation system.

1.06 WORKING DRAWINGS

- A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's plans for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and false-work; for underpinning; and for such other work as may be required for construction, but does not become an integral part of the project.
- B. Copies of working drawings as noted in subparagraph 1.06A above, shall be submitted to the Landscape Architect where required by the Contract Documents or requested by the Landscape Architect, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Landscape Architect) in advance of their being required for work.
- C. Working drawings shall be signed by a Registered Professional Engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such work, working drawings must have been reviewed without specific exceptions by the Landscape Architect, which review will be for general conformance and will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the Contractor; the Owner and Landscape Architect shall have no responsibility therefore.

1.07 SAMPLES

- A. The Contractor shall furnish, for the approval of the Landscape Architect, samples required by the Contract Documents or requested by the Landscape Architect. Samples shall be delivered to the Landscape Architect as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until approved by the Landscape Architect.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
 - 2. Full range of color, texture, and pattern.

3. A minimum of two samples of each item shall be submitted.

C. Each sample shall have a label indicating

1. Name of Project
2. Name of Contractor and Subcontractor
3. Material or Equipment Represented
4. Place of Origin
5. Name of Producer and Brand (if any)
6. Location in Project

(Samples of finished materials shall have additional marking that will identify them under the finished schedules.)

D. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in subparagraph 1.07B above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Landscape Architect. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any Contract requirements.

E. Approved samples not destroyed in testing shall be sent to the Landscape Architect or stored at the site of the work. Approved samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the approved samples. Samples which failed testing or were not approved samples will be returned to the Contractor at his expense, if so requested at time of submission.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01410

TESTING AND TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall employ and pay for the services of an Independent Testing Laboratory to perform testing as required by the Owner to verify conformity with the Contract Documents. Testing is to be included in the bid price.
 - 1. Contractor shall cooperate with the laboratory to facilitate the execution of its required services.
 - 2. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities.
- B. Respective sections of specifications: Certification of products.
- C. Each specification section listed: Laboratory tests required and standards for testing.
- D. Testing laboratory inspection, sampling and testing is required for, but not limited to the following:
 - 1. Section 02210: Fine Grading
 - 2. Section 02510: Walkways

1.03 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
 - 1. Release, revoke, alter or enlarge on requirements of Contract Documents
 - 2. Approve or accept any portion of the Work
 - 3. Perform any duties of the Contractor

1.04 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel, and provide access to Work and pay for testing.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for

concrete, and other materials mixes which require control by the testing laboratory.

- D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Landscape Architect may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contractor Documents. All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.
- E. Furnish incidental labor and facilities:
 - 1. To provide access to Work to be tested
 - 2. To obtain and handle samples at the Project site or at the source of the product to be tested
 - 3. To facilitate inspections and tests
 - 4. For storage and curing of test samples
- F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
- G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the Contractor's convenience.
- H. Provide the Landscape Architect with a copy of all test and reports.

1.05 TYPES OF TEST REQUIRED

- A. Density tests for roadway crossings at the rate of one test per lane per lift of compacted material, beginning one foot above the normal water table.
- B. If in the opinion of the Landscape Architect, suitable compaction has not been achieved around structures, density tests may be required.
- C. Should the above test results indicate deficiencies, the Landscape Architect may order additional tests at the Contractor's expense, and all reworked areas shall be retested at the Contractor's expense.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01532

TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Provide all equipment and materials, and do all work necessary to protect existing trees and plants from damage as a result of the contractor's operations.

1.02 RELATED WORK

- A. Section 02210 - Fine Grading
- B. Section 02490 - Trees, Plants and Groundcover

1.03 REFERENCED STANDARDS

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 - 1. International Society of Arboriculture (ISA): Guide for establishing values of trees and other plants.

1.04 SUBMITTALS

- A. Proposed methods, materials to be employed, and schedule for effecting tree and plant protection shall be submitted for approval.

1.05 DAMAGE PENALTIES

- A. Certain specimen trees adjacent to construction areas and in other key locations will be identified by the Owner and the Landscape Architect, and marked with red tags. Loss or damage to these trees will result in replacement with equal canopy.
- B. If any trees or shrubs designated to be saved are damaged and replacement is required, a number and diameter of trees or shrubs of the same species and variety, as specified by the Owner and Architect, shall be furnished and planted by the Contractor. The total inch diameter of the replacement trees or shrubs shall equal the diameter of the tree or shrub to be replaced. The Contractor shall not be liable for any loss or damage which occurs while the Contractor is complying with instructions given by the Owner, Landscape Architect, or Arborist working of the project.

PART 2 - PRODUCTS

2.01 TREE PROTECTION FENCING

- A. Tree protection fencing shall be:

1. Mesh fence 6 ft. high minimum, with 4"x4"x6' pressure treated wood posts.
- B. Posts shall be spaced 10ft. o.c. maximum.
- C. Fencing other than that specified above shall be subject to the approval of the Landscape Architect.

PART 3 - EXECUTION

3.01 INSTALLATION OF FENCING

- A. Prior to start of demolition work and clearing and grubbing operations, tree protection fencing shall be installed in accordance with the following:
 1. Fencing shall be installed at the tree protection areas as directed by the Landscape Architect.
 2. Fencing shall be located along the cut and fill lines staked by the project surveyor and approved by the Landscape Architect and Owner.

3.02 ROOT PRUNING

- A. Where construction will be in close proximity to existing trees designated to remain, roots shall be pruned. Proximity shall be as determined in the field by the Landscape Architect. Root pruning shall be performed as specified in Section 02490 TREES, PLANTS AND GROUND COVERS.

3.03 CLEARING WITHIN PROTECTION AREAS

- A. Selective clearing within tree protection areas shall only be performed when and as directed by the Landscape Architect.

3.04 REMOVAL OF PROTECTION

- A. Except as otherwise indicated or requested by Landscape Architect, temporary protection devices and facilities installed during course of the work shall be removed only after all work which may injure or damage trees and plants is completed.

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDE

- A. Material and equipment incorporated into the Work:
 - 1. Conform to applicable specifications and standards.
 - 2. Comply with size, make, type, and quality specified, or as specifically approved in writing by the Engineer.
 - 3. Manufactured and Fabricated Products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like part of duplicate units to standard sizes and gauges, to be interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 - 4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 RELATED REQUIREMENTS

- A. Document 00700: Conditions of the Contract
- B. Section 01010: Summary of Work
- C. Section 01030: Special Project Procedures
- D. Section 01340: Shop Drawings, Working Drawings and Samples
- E. Section 01720: Project Record Documents
- F. Section 01740: Warranties and Bonds

1.03 APPROVAL OF MATERIALS

- A. Only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the work without prior approval of the Engineer.
- B. Within 30 days after the effective date of the Agreement, the Contractor shall

submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product and to form an opinion as to its conformity to the specifications. The data shall comply with Paragraph 1.07 of this Section.

- C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, either prior to beginning or during progress of the work, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense. Except as otherwise noted, the Owner will make arrangements for and pay for the tests.
- D. The Contractor shall submit data and samples sufficiently early to permit consideration and approval before materials are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against the Owner or the Engineer.
- E. In order to demonstrate the proficiency of workmen or to facilitate the choice among several textures, types, finishes, and surfaces, the Contractor shall provide such samples of workmanship or finish as may be required.
- F. The materials and equipment used on the work shall correspond to the approved samples or other data.

1.04 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instruction, obtain and distribute copies of such instructions to parties involved in the installation, including copies to the Engineer.
 - 1. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accord with such instructions and in conformity with specified requirements.
 - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.
 - 2. Do not proceed with work without clear instructions.
- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.05 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of Products in accord with construction schedules, coordinate to avoid conflict with work and conditions at the site.

1. Deliver Products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that Products are properly protected and undamaged.
- B. Provide equipment and personnel to handle Products by methods to prevent soiling or damage to Products or packaging.

1.06 STORAGE AND PROTECTION

- A. The Contractor shall furnish a covered, weather-protected storage structure providing a clean, dry, noncorrosive environment for all mechanical equipment, valves, electrical and instrumentation equipment, and special equipment to be incorporated into this project. Storage of equipment shall be performed to allow easy access and be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including weather/humidity protection, connection of heaters, placing of storage lubricants in equipment, blocking, or skid storage, etc. Corroded, damaged or deteriorated equipment and parts shall be replaced before acceptance of the project. Equipment and materials not properly stored will not be included in a payment estimate.

Store Products in accord with manufacturer's instructions, with seals and labels intact and legible.

1. Store products subject to damage by the elements in weather-tight enclosures.
 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 3. Store fabricated products above the ground on blocking or skids, prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.
 4. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- C. All materials and equipment to be incorporated in the work shall be handled and stored by the Contractor before, during, and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft or damage of any kind whatsoever to the material or equipment.
- D. Cement, sand, and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All structural and miscellaneous steel, and reinforcing steel shall be stored off the ground or otherwise to prevent accumulations of dirt or grease, and to minimize rusting. Brick, block and similar masonry products shall be handled and stored in a manner to reduce breakage, chipping, cracking, and spalling to a minimum.
- E. Moving parts shall be rotated a minimum of once weekly to insure proper

lubrications and to avoid metal-to-metal "welding". Upon installation of the equipment, the Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to insure that the equipment does not deteriorate from lack of use.

- F. All materials which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the work, and the Contractor shall receive no compensation for the damaged material or its removal.
- G. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored Products to assure that Products are maintained under specific conditions, and free from damage or deterioration.
- H. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove covering when no longer needed.
- I. The Contractor shall be responsible for all materials, equipment, and supplies sold and delivered to the Owner under this Contract until final inspection of the work and acceptance thereof by the Owner. In the event any such material, equipment, and supplies are lost, stolen, damaged, or destroyed prior to final inspection and acceptance, the Contractor shall replace same without additional cost to the Owner.
- J. Should the Contractor fail to take proper action on storage and handling of equipment supplied under this Contract within seven days after written notice to do so has been given, the Owner retains the right to correct all deficiencies noted in previously transmitted written notice and debit the cost associated with these corrections from the Contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administrative, clerical, engineering and any other costs associated with making the necessary corrections.

1.07 SUBSTITUTIONS AND PRODUCT OPTIONS

A. Contractor's Options:

- 1. For Products specified only by reference standard, select any product meeting that standard.
- 2. For Products specified by naming several products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications.
- 3. For products specified by naming one or more Products or manufacturers and "or equal", Contractor must submit a request as for substitutions for any Product or manufacturer not specifically named.

B. Substitutions:

- 1. For a period of 30 days after the effective date of the Agreement, the Engineer will consider written requests from Contractor for substitution of Products.

2. Submit a separate request for each Product, supported with complete data, with drawings and samples as appropriate, including:
 - a. Comparison of the qualities of the proposed substitution with that specified
 - b. Changes required in other elements of the work because of the substitution
 - c. Effect on the construction schedule
 - d. Cost data comparing the proposed substitution with the Product specified
 - e. Any required license fees or royalties
 - f. Availability of maintenance service, and source of replacement materials
3. The Engineer shall be the judge of the acceptability of the proposed substitution.
4. No substitutions will be considered by the Engineer after 30 days from the Contract Date.

C. Contractor's Representation:

1. A request for a substitution constitutes a representation that Contractor:
 - a. Has investigated the proposed Product and determined that it is equal to or superior in all respects to that specified
 - b. Will provide the same warranties or bonds for the substitution as for the Product specified
 - c. Will coordinate the installation of an accepted substitution into the Work, and make such other changes as may be required to make the Work complete in all respects
 - d. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.
- D. The Engineer will review requests for substitutions with reasonable promptness, and notify Contractor, in writing, of the decision to accept or reject the requested substitution.

1.08 SPECIAL TOOLS

- A. Manufacturers of equipment and machinery shall furnish any special tools (including grease guns or other lubricating devices) required for normal adjustment, operations and maintenance, together with instructions for their use. The Contractor shall preserve and deliver to the Owner these tools and instructions in good order no later than upon completion of the Contract.

1.09 STORAGE AND HANDLING OF EQUIPMENT ON SITE

- A. Because of the long period allowed for construction, special attention shall be given to the storage and handling of equipment on site. As a minimum, the procedure outlined below shall be followed:

1. Equipment shall not be shipped until approved by the Engineer. The intent of this requirement is to reduce on-site storage time prior to installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from the Engineer unless it is to be stored as specified in Paragraph 1.06 herein upon arrival.
2. All equipment having moving parts such as gears, electric motors, etc. and/or instruments shall be stored in a temperature and humidity controlled building approved by the Engineer, until such time as the equipment is to be installed.
3. All equipment shall be stored fully lubricated with oil, grease, etc. unless otherwise instructed by the manufacturer.
4. Manufacturer's storage instructions shall be carefully studied by the Contractor and reviewed with the Engineer by him. These instructions shall be carefully followed and a written record of this kept by the Contractor.
5. Moving parts shall be rotated a minimum of once weekly to insure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, the Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to insure that the equipment does not deteriorate from lack of use.
6. Lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. Mechanical equipment to be used in the work, if stored for longer than ninety (90) days, shall have the bearings cleaned, flushed and lubricated prior to testing and start up, at no extra cost to the Owner.
7. Prior to acceptance of the equipment, the Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guarantee the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.

1.10 WARRANTY

- A. For all major pieces of equipment, submit a warranty from the equipment manufacturer as specified in Section 01740.

1.11 SPARE PARTS

- A. Spare parts for certain equipment provided under Division 11 through 16 have been specified in the pertinent sections of the Specifications. The Contractor shall collect and store all spare parts so required in an area to be designated by the Engineer. In addition, the Contractor shall furnish to the Engineer an inventory listing all spare parts, the equipment they are associated with, the name and address of the supplier, and the delivered cost of each item. Copies of actual

invoices for each item shall be furnished with the inventory to substantiate the delivered cost.

1.12 GREASE, OIL AND FUEL

- A. All grease, oil and fuel required for testing of equipment shall be furnished with the respective equipment. The Owner shall be furnished with a year's supply of required lubricants including grease and oil of the type recommended by the manufacturer with each item of the equipment supplied under Division 11 through 16.
- B. The Contractor shall be responsible for changing the oil in all drives and intermediate drives of each mechanical equipment after initial break-in of the equipment, which in no event shall be any longer than three weeks of operation.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01701
PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED REQUIREMENTS

- A. General provisions of Contract, including General and Supplementary Conditions.
- B. Warranty and bond submittal.
- C. Closeout submittals, warranties and bonds required for specific products of work.

1.02 SECTION INCLUDES

- A. Administrative and procedural requirements for project closeout.
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Final cleaning.

1.03 SUBSTANTIAL COMPLETION

- A. Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise Owner of pending insurance change-over requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 - 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
 - 5. Submit record drawings, maintenance manuals, and similar final record information.
 - 6. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
- B. When the Contractor considers the Work to be substantially complete, he shall submit a written notice to the Engineer that the Work, or designated portion of the Work, is complete and ready for inspection.
- C. Within a reasonable time of receipt of a request for inspection, the Engineer will

either proceed with inspection or advise the Contractor of unfulfilled requirements. When the Engineer and Owner concur that the Work, or designated portion of the Work, is substantially complete, the Engineer will prepare the Certificate of Substantial Completion following inspection.

- D. Should the Engineer determine that the Work is not substantially complete, he will advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - 1. The Engineer will repeat inspection when requested and assured that the Work has been substantially completed.
 - 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.04 FINAL COMPLETION

- A. When Contractor considers the Work to be complete, he shall submit written certification to the Engineer that the Work is completed and ready for final inspection. Include the following:
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 - 3. Submit a certified copy of the Engineer's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, the list has been endorsed and dated by the Engineer.
 - 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion, or when the Owner took possession of and responsibility for corresponding elements of the Work.
 - 5. Submit consent of surety to final payment.
 - 6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. The Engineer will inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Engineer.
 - 1. Upon completion of inspection, the Engineer will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete, or of obligations that have not been fulfilled but are required for final acceptance.
 - 2. If necessary, reinspection process will be repeated.

1.05 RECORD DOCUMENT SUBMITTALS

- A. Maintain at the site one complete set of record documents; protect from deterioration and loss in a secure, fire-resistive location.
1. Provide access to record documents for the Engineer's reference during normal working hours.
 2. Label each document "PROJECT RECORD" in 2 inch high printed letters.
 3. Do not use for construction purposes.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
 2. Mark new information that was not shown on Contract Drawings or Shop Drawings.
 3. Note related Change Order numbers where applicable.
 4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

The record drawings shall correctly and accurately show all changes from the Contract Documents made during construction and shall reflect surveyed information which shall be verified and certified by an independent Professional Land Surveyor registered in the State of Florida. The drawings shall be neat and legible. Show all elevations and horizontal control of all pipes and structures, as defined below:

- a. Record Drawings Submittal Requirements: Record drawings to be submitted shall consist of:
 - 1) Three sets of signed and sealed sets of prints.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction.
1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 2. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
 3. Note related record drawing information and Product Data.
- D. Record Product Data: Maintain one copy of each Product Data submittal.

1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations.
 2. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation.
 3. Note related Change Orders and mark-up of record drawings and Specifications.
- E. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Engineer and the Owner to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.
- F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work.
- G. At Contract close-out, deliver one copy of Record Documents to Engineer for Owner. Accompany submittal with transmittal letter in duplicate containing the following information:
1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each Record Document.
 5. Signature of Contractor or his authorized representative.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 FINAL CLEANING

- A. Remove temporary protection and facilities installed for protection of the Work during construction.
- B. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
- C. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Maintain at the site for the Owner one record copy of:
 - 1. Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other Modifications to the Contract
 - 5. Engineer's Field Orders or Written Instructions
 - 6. Approved Shop Drawings, Working Drawings, and Samples
 - 7. Field Test Reports
 - 8. Construction Photographs

1.02 RELATED REQUIREMENTS

- A. Section 01340: Shop Drawings, Working Drawings, and Samples
- B. Section 01701: Project Closeout

1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
- B. File documents and samples in accordance with CSI format number system.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the Engineer.
- E. As a prerequisite for monthly progress payments, the Contractor is to exhibit the currently updated "record documents" for review by the Engineer and the Owner.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress.
- C. Drawings; Legibly mark record actual construction:

1. Depths of various elements of foundation in relation to finish first floor datum.
 2. All underground piping with elevations and dimensions. Changes to piping location. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Actual installed pipe material, class, etc.
 3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 4. Field changes of dimensions and details.
 5. Changes made by Field Order or by Change Order.
 6. Details not on original contract drawings.
 7. Equipment and piping relocations.
 8. Building and tank locations.
- D. Specifications and Addenda; legibly mark each Section to record:
1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 2. Changes made by field order or by Change Order.
- E. Shop Drawings (after final review and approval):
1. One set of record shop drawings for each process equipment, piping, (including casings) electrical system and instrumentation system.

1.05 SUBMITTAL

- A. At Close-out, deliver Record Documents to the Engineer for the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
1. Date
 2. Project Title and Number
 3. Contractor's Name and Address
 4. Title and Number of each Record Document
 5. Signature of Contractor or his Authorized Representative
- C. Submittal of Record Drawings shall be in accordance with Section 01050, 1.06.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds, as in Articles 5 and 13 of the General Conditions and Section 01030 of these Specifications.
- B. Co-execute submittals when so specified.
- C. Review submittals to verify compliance with Contract Documents.
- D. Submit to the Engineer for review and transmittal to Owner.

1.02 RELATED REQUIREMENTS

- A. Instructions to Bidders: Bid or Proposal Bonds
- B. Conditions of the Contract: Performance Bond and Payment Bond
- C. Section 01030: Special Project Procedures
- D. Section 01701: Contract Closeout

1.03 SUBMITTAL REQUIREMENTS

- A. Assemble warranties, bond, service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
- B. Number of original signed copies required: two each.
- C. Table of Contents: neatly typed, in orderly sequence. Provide complete information for each item.
 - 1. Product or work item
 - 2. Firm, with name of principal, address and telephone number
 - 3. Scope
 - 4. Date of beginning of Warranty, bond or service and maintenance contract
 - 5. Duration of warranty, bond or service maintenance contract
 - 6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure
 - b. Instances which might affect the validity of warranty or bond
 - 7. Contractor, name of responsible principal, address and telephone number

1.04 FORM OF SUBMITTALS

- A. Prepare in duplicate packets
- B. Format:
 - 1. Size 8 1/2 inches x 11 inches, punch sheets for standard 3-post binder
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
 - a. Title of Project
 - b. Name of Contractor
- C. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of 2 inches.

1.05 WARRANTY SUBMITTAL REQUIREMENTS

- A. For all major pieces of equipment, submit a one-year warranty from the equipment manufacturer. The manufacturer's warranty period shall be concurrent with the Contractor's for one (1) year commencing at the time of acceptance by the Owner (see Section 01030).
- B. The Contractor shall be responsible for obtaining certificates for equipment warranty for all major equipment specified under division 11, 13, 14, 15 and 16 and which has a 1 HP motor or which lists for more than \$1,000. The Engineer reserves the right to request warranties for equipment not classified as major. The Contractor shall still warrant equipment not considered to be "major" in the Contractor's one-year warranty period even though certificates of warranty may not be required.
- C. In the event that the equipment manufacturer or supplier is unwilling to provide a one-year warranty commencing at the time of Owner acceptance, the Contractor shall obtain from the manufacturer a two (2) year warranty commencing at the time of equipment delivery to the job site. This two-year warranty from the manufacturer shall not relieve the Contractor of the one-year warranty starting at the time of Owner acceptance of the equipment.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 02100
SITE PREPARATION

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. This Section covers clearing, grubbing, stripping and demucking of the construction site, complete as specified herein.
- B. Clear and demuck the area within the limits of construction as required, including utility easements. The width of the area to be cleared and demucked shall be established by the Landscape Architect prior to the beginning of any work.
- C. Removal, hauling, and disposing of existing trees. Contractor shall obtain all permits necessary for the removal of these trees.

PART 2 - PRODUCTS

2.01 SPRAYING ROUND-UP

- A. Apply post-emergent herbicide "Round-Up" as manufactured by Monsanto Corporation, or approved equal, per manufacturer's rate and method of application to all landscape areas as necessary.

PART 3 - EXECUTION

3.01 CLEARING

- A. The surface of the ground, for the area to be cleared and grubbed shall be completely cleared, as indicated on the plans, as well other objectionable obstructions resting on or protruding through the surface of the ground. However, those trees which are designated on the plans to remain shall be preserved as hereinafter specified. Clearing operations shall be conducted so as to prevent damage to existing structures and installations, and to those under construction, so as to provide for the safety of employees and others. Clearing for structures shall consist of topsoil, vegetation and lime sludge removal.

3.02 GRUBBING

- A. Grubbing shall consist of the complete removal of all stumps, roots larger than 1 1/2 inches in diameter, matted roots, brush, timber, logs and any other organic or metallic debris resting on, under or protruding through the surface of the ground to a depth of 18 inches below the subgrade. All depressions excavated below the original ground surface for or by the removal of such objects, shall be refilled with suitable materials and compacted to a density conforming to the surrounding ground surface.

3.03 STRIPPING

- A. In areas so designated, top soil, not muck shall be stockpiled. Topsoil so stockpiled shall be protected until it is placed as specified. Any topsoil remaining after all work is in place shall be disposed of by the Contractor.

3.04 DISPOSAL OF CLEARTED AND GRUBBED MATERIAL

- A. The Contractor shall dispose of all material and debris from the clearing and grubbing operation by shipping such material and debris and disposing such material to a suitable location as required by the Landscape Architect or the governmental agencies. Disposal by deep burial will not be permitted. The cost of disposal of material (including hauling) shall be considered a subsidiary obligation of the Contractor, the cost of which shall be included in the contract prices.

3.05 REMOVAL AND DISPOSAL OF EXISTING TREES

- A. Tree Removal: Standard removal shall include the canopy and trunk, leaving a stump cut as flush to the ground as possible.
- B. Stump Grinding: Standard grinding shall include stump and all exposed roots to be ground to six inches below surface of soil. Grinding debris shall be compacted into stump hole to two inches below surface soil, then sodded with Floratam sod. Leftover grinding debris shall be hauled from the work location and lawfully disposed of at the Contractor's expense.
- C. Disposal of Chipped and Solid Wood Products: Contractor shall haul and lawfully dispose of chipped and solid wood products generated by work under this Agreement at his own expense. Storage and/or disposal of chips and solids generated by work performed under this Agreement shall not be permitted in City properties or within public right-of-way.
- D. Disposal of Trunks and Fronds: Contractor shall haul and lawfully dispose of trunks and fronds generated by work performed under this Agreement at his own expense. Storage and/or disposal of trunks and fronds generated by work performed under this Agreement shall not be permitted on City properties or within public right-of-way.
- E. Disposal of Clean-up: Clean-up of all debris generated by the work performed under this Agreement shall be achieved not later than two hours after completion of the work for each tree and/or stump, and the Contractor shall not leave the work location until clean-up is achieved. The work location shall be left equal to or cleaner than pre-work conditions. All debris shall be kept off private properties.

END OF SECTION

SECTION 02200

EARTHWORK

PART 1 - GENERAL

1.01 RELATED SECTIONS

- A. Section 01015: General Requirements

1.02 SECTION INCLUDES

- A. Preparation of subgrade for building slabs, walks, and pavements.
- B. Excavation, fill, and backfill.

1.03 QUALITY ASSURANCE

- A. Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.

1.04 PROJECT CONDITIONS

- A. Locate existing underground utilities in areas of work. Provide adequate means of support and protection during earthwork operations.
- B. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
- C. Do not interrupt existing utilities serving occupied facilities.
- D. Use of Explosives: If the use of explosives is necessary for the execution of the work the Contractor shall conduct his blasting operations in conformance with these specifications and all applicable state and local codes and regulations.
- E. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. Satisfactory Soil Materials: ASTM D2487 soil classification groups GW, GP, GM, SM, SW and SP.

- B. Unsatisfactory Soil Materials: ASTM D2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH and PT.
- C. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, crushed slag, natural or crushed sand.
- D. Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, with 100 percent passing a 1-1/2 in. sieve and not more than 5 percent passing a No. 4 sieve.
- E. Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than 2 in. in any dimension, debris, waste, frozen materials, vegetable and other deleterious matter.

PART 3 - EXECUTION

3.01 EXCAVATION

- A. Excavation is Unclassified, and includes excavation to subgrade elevations indicated, regardless of character of materials and obstructions encountered.
- B. Unauthorized Excavation: Removal of materials beyond indicated subgrade elevations or dimensions without specific direction. Unauthorized excavation, as well as remedial work directed by Engineer, shall be at Contractor's expense.
- C. Additional Excavation:
 - 1. When unsuitable bearing materials are encountered at required subgrade elevations, carry excavations deeper and replace excavated material as directed by Engineer.
 - 2. Removal of unsuitable material and its replacement as directed will be paid on basis of contract conditions relative to changes in work.
- D. Stability of Excavations:
 - 1. Slope sides of excavations to comply with local codes and ordinances having jurisdiction.
 - 2. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated.
 - 3. Maintain sides and slopes of excavations in safe condition until completion of backfilling.
- E. Shoring and Bracing:
 - 1. Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction.
 - 2. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.

- F. Dewatering:
1. Prevent surface water and subsurface or ground water from flowing into excavations.
 2. Do not allow water to accumulate in excavations.
 3. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
- G. Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage.
- H. Excavation for Trenches: Dig trenches to the uniform width required for particular item to be installed, sufficiently wide to provide ample working room. Provide minimum 6 in. clearance on each side of pipe or conduit.
1. Excavate trenches to depth indicated or required for indicated flow lines and invert elevations.
 2. Where rock is encountered, carry excavation 6 in. below scheduled elevation and backfill with a 6 in. layer of crushed stone or gravel prior to installation of pipe.
 3. For pipes or conduit 5 in. or less, excavate to indicated depths. Hand excavate bottom cut to accurate elevations and support pipe or conduit on undisturbed soil.
 4. For pipes or conduit 6 in. or larger, tanks and other work indicated to receive subbase, excavate to subbase depth indicated, or, if not otherwise indicated, to 6 in. below bottom of work to be supported.
 5. Except as otherwise indicated, excavate for exterior water-bearing piping so top of piping is minimum 3'-6" below finished grade.
 6. Grade bottoms of trenches as indicated, notching under pipe bells to provide solid bearing for entire body of pipe.
- I. Do not backfill trenches until tests and inspections have been made and backfilling authorized by Engineer.

3.02 COMPACTION

- A. Areas to be compacted shall be moistened and compacted by either rolling, tamping or any other approved method by the Engineer in order to obtain the desired density. The Contractor shall inspect all compacted areas prior to further construction operations to ensure that satisfactory compaction has been obtained. All backfill adjacent to structures and pipes, shall be compacted to a density of not less than 100 percent of the maximum density as determined by AASHTO T-99. Density tests are required, such tests shall be made as directed by the Engineer at the expense of the Contractor. The Contractor shall instruct the testing laboratory to forward copies of all test reports to the Engineer.
- B. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.

3.03 BACKFILL AND FILL

- A. Place specified soil material in layers to required subgrade elevations:
 - 1. In excavations, use satisfactory excavated or borrow material.
 - 2. Under grassed areas, use satisfactory excavated or borrow material.
 - 3. Under walks and pavements, use subbase material, or satisfactory excavated or borrow material, or combination of both. Place shoulders along edges of subbase course to prevent lateral movement with satisfactory excavated or borrow material.
 - 4. Under steps, use subbase material.
 - 5. Under building slabs, use drainage fill material.
 - 6. Under piping and conduit, use subbase material where subbase is indicated under piping or conduit; shape to fit bottom 90 degrees of cylinder.
- B. Backfill excavations as promptly as work permits, but not until completion of the following:
 - 1. Acceptance of construction below finish grade including waterproofing and perimeter insulation.
 - 2. Inspection, testing, approval, and recording locations of underground utilities.
 - 3. Removal of shoring and bracing, and backfilling of voids with satisfactory materials.
- C. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow strip, or break-up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.
- D. When existing ground surface has a density less than that specified for particular area classification, break up ground surface, pulverize, moisture-condition to optimum moisture content, and compact to required depth and percentage of maximum density.
- E. Place backfill and fill materials in layers of 8 in. loose depth for material compacted by heavy compaction equipment, and 4 in. in loose depth for material compacted by hand operated tampers.
- F. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
- G. Place backfill and fill materials evenly adjacent to structures, without wedging against structures or displacement of piping or conduit. Compaction equipment used within 10 ft. of buried walls and soil supported structures shall not exceed 2000 lbs.

3.04 GRADING

- A. Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from structures and to prevent ponding and as follows:
 - 1. Finish to within not more than 0.10 ft. above or below required subgrade elevations.
 - 2. Walks: Shape surface to line, grade and cross-section, with finish surface not more than 0.10 ft. above or below required subgrade elevation.
 - 3. Pavements: Shape surface to line, grade and cross-section, with finish surface 1/2 in. above or below required subgrade elevation.
- B. Grading Surface of Fill under Building Slabs: Grade smooth and even, free of voids, compacted as specified, and to 1/2 in. below required elevation.

3.05 FIELD QUALITY CONTROL

- A. Contractor will engage soil testing and inspection service for quality control testing during earthwork operations.
- B. Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed.
- C. If in opinion of Engineer, based on testing service reports and inspection, subgrade or fills which have been placed below specified density, provide additional compaction and testing at no additional expense to Owner.

3.06 CLEANING AND PROTECTION

- A. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Remove excess excavated and waste materials, including unacceptable excavated material, trash and debris, and legally dispose of it off Owner's property.

END OF SECTION

SECTION 02210

FINE GRADING

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Provide all labor, materials, necessary equipment or services to complete the Fine Grading work, as indicated on the drawings, as specified herein or both.

1.02 RELATED WORK

- A. Section 02484 – Soil Preparation and Soil Mixes
- B. Section 02487 – Sodding
- C. Section 02490 – Trees, Plants, and Groundcovers

1.03 SITE INSPECTION

- A. The Contractor shall visit the site and acquaint himself with all existing conditions. The Contractor shall be responsible for his own subsurface investigations, as necessary, to satisfy requirements of this section. All subsurface investigations shall be performed only under time schedules and arrangements approved in advance by the Landscape Architect or Owner's Representative.

1.04 EXISTING CONTOURS

- A. The existing grades shown on the drawings are approximate only (within +2 inches) and the contractor is responsible for grading to meet existing grades as required.
- B. The contours and grades established under contract will be the finished grades shown. The Contractor under this Contract shall perform the work for construction using the finished grades previously established and making whatever corrections and/or repairs to grades to make them consistent with the requirements of the drawings and specifications.
- C. Established finished grades shall be approved by the Landscape Architect for all project areas prior to initiating landscape planting.

1.05 UTILITIES

- A. Locate all existing, active utility lines traversing the site and determine the requirements for their protection. Preserve in operating condition all active utilities adjacent to or traversing the site that are designated to remain.

- B. Observe rules and regulations governing respective utilities in working under requirements of this section. Adequately protect utilities from damage, remove or relocate as indicated, specified or required. Remove, plug or cap inactive or abandoned utilities encountered in excavation. Record location of active utilities.

PART 2 – MATERIALS

2.01 TOP SOIL

- A. In areas to receive turf, rough grade to allow for sod thickness in all areas to be sodded, verify that soil contains enough organic matter to support and encourage rooting of sod. Fill is to be fine, compacted satisfactory fill material with no rocks larger than 2-inches.
- B. Both surface and subsurface before and after fill operations shall be checked to confirm that percolation/compaction levels meet the needs of the proposed planting for that area.

PART 3 – EXECUTION

3.01 EXCAVATION

- A. Excavate or fill where necessary to obtain subgrades, percolation and surface drainage as required.
- B. Materials to be excavated are unclassified.
- C. Remove entirely any existing obstructions after approval by the Landscape Architect's or Owner's Representative.
- D. Remove from site and dispose of debris and excavated material not required.

3.02 GRADING

- A. The Contractor shall establish finished grades as shown on the proposed Median Landscape Plans, and as directed by Landscape Architect and/or Owner's Representative, including areas where the existing grade has been disturbed by other work.
- B. Finished grading shall be smooth, aesthetically pleasing, drain well and be ready to receive sod and other plant material to the full satisfaction of Landscape Architect and Owner's Representative.

3.03 COMPACTION

- A. Compact each layer of fill in designated areas with approved equipment to achieve a maximum density at optimum moisture, AASHTO T 180 – latest edition at time of bid.

1. Under landscape areas, compaction shall not exceed 85% of maximum density.
- B. No backfill shall be placed against any masonry or other exposed building surface until permission has been given by the Owner's Representative, and in no case until the masonry has been in place seven days.
- C. Compaction in limited areas shall be obtained by the use of mechanical tampers or approved hand tampers. When hand tampers are used, the materials shall be deposited in layers not more than four inches thick. The hand tampers used shall be suitable for this purpose and shall have a face area of not more than 100 square inches. Special precautions shall be taken to prevent any wedging action against masonry, or other exposed building surfaces.

3.04 CORRECTION OF GRADE

- A. Bring to required grade levels areas where settlement, erosion or other grade changes occur. Adjust grades as required to carry drainage away from buildings and to prevent ponding around the buildings and on pavements.
- B. Remove all rock or objectionable material larger than 2 inches any direction prior to commencing landscaping.
- C. Contractor shall be responsible for stabilizing grades by approved methods prior to landscaping, and shall be responsible for correction of grades as mentioned above, and cleanup of any wash outs or erosion.

END OF SECTION

SECTION 02484
SOIL PREPARATION AND SOIL MIXES

PART 1 -GENERAL

1.01 SCOPE OF WORK

- A. Provide all labor, materials, necessary equipment and services to complete the soil preparation and soil mixes work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".
- B. Including, but not limited to:
 - 1. Existing Soil
 - 2. Soil Conditioners
 - 3. Planting Soil Mixes

1.02 RELATED WORK

- A. Section 02210 - Fine Grading
- B. Section 02487 - Sodding
- C. Section 02490 - Trees, Plants, and Groundcover

1.03 QUALITY ASSURANCE

- A. Testing Agency: Independent testing laboratory
- B. Requirements or Regulatory Agencies: Conform to requirements of all City, County and State agencies.
- C. Reference standards.

1.04 SUBMITTALS:

- A. Test Reports: Test reports shall consist of pH range, major and minor element analysis, soluble salt concentrations, and recommendations. Reports shall be identified by project name, date, and soil mix type.
 - 1. Results of topsoil (on-site existing soil) analysis.
 - 2. Results of planting soil mix(es) analysis: One test required per each type of soil mix (note: pH ranges for plant type).
- B. Certificates:
 - 1. The Contractor must submit certificates from suppliers stating that the topsoil mix, sod and other landscape material used comply with requirements specified.
 - 2. Manufacturer's certificate of fertilizer's chemical composition including but not limited to percentage and derivation of nitrogen, phosphorus, potassium, and micro-nutrients.

3. Manufacturer's certification and/or testing laboratory certification that content of soil conditioners meet specification requirements.

C. Soil Samples:

1. Submit a one-pound sample of each soil mix specified.

1.05 JOB CONDITIONS

- A. Contractor shall become familiar with the site and the required work to complete this section in accordance with the drawings and what is specified herein.
- B. Responsibility for fine grading shall occur under this contract. Any changes, modifications, or disturbances to the fine grading shall be corrected by the contractor.
- C. PROTECTION: Protect and avoid any damage whatsoever to existing walks, pavement, curbs, utilities, plant material, and any other existing work.

PART 2 - PRODUCTS

2.01 PLANTING SOIL MIXES

- A. Planting Soil Mix shall be a 80-20 mix, 80% fresh water sand (medium to coarse grade) and 20% inland glades muck thoroughly mixed with a commercial shredder/blender. Sterilize all muck to make free of all viable nut grass and other undesirable weed seeds.
- B. Mechanical analysis: Planting soil mixture(s) shall meet these specifications and the following mechanical analysis, and shall be proportioned by volume rather than by weight.

Sieve Size	% Passing By Dry Weight
1 inch	99-100
¼ inch	97-99
No. 100	40-60

Materials larger than two inches inch shall be disposed of off the site or as directed by the Landscape Architect. Existing leaf litter and plant material shall be excluded from the planting soil mix.

- C. Maximum Soluble Salts: 300 ppm.
- D. Contractor shall supply Percolation Tests (only in areas to be regraded, where required).
- E. The Owner has the right to require that existing soil be amended (with soil conditioners). Soil will be tested at Owners request for suitability of horticultural use.

2.02 SOIL CONDITIONERS

- A. Dolomitic Limestone: Approved product, designated for agriculture use.
- B. Aluminum Sulfate: Manufacturer's standard commercial grade.
- C. Florida Peat: Suitable for plant growth, capable of sustaining vigorous plant growth, and specifically pulverized for agricultural use. Florida peat shall be free of deleterious materials that would be harmful to plant growth, shall be free of nematodes, shall be of uniform quality, and shall have a pH value between 5.5 and 6.5 (as determined in accordance with ASTM E70). Florida peat shall be sterilized to make free of all viable nut grass and other undesirable weeds.
- D. Pesticides: As recommended by applicable Agricultural Public Agencies. Need to be stored in containers that will protect against accidental leaks, or off site.
- E. Herbicides: As recommended by applicable Agricultural Public Agencies. Need to be stored in containers that will protect against accidental leaks, or off site.
- F. Soil Fumigants: As recommended by applicable Agricultural Public Agencies. Need to be stored in containers that will protect against accidental leaks, or off site.
- G. Fertilizer:
 - 1. Commercial grade fertilizer to comply with State of Florida Fertilizer laws. Chemical designation shall be as specified with at least 50% of the nitrogen derived from a non-water soluble organic source and all potash to be derived from sulfate forms for all plantings excluding sod and plantings on the lake edges.

The following minor elements shall be included:

2.2% ZnO	0.25% CuO
4.0% MgO	0.005% Fe ₂ O ₃
0.5% MnO	0.1 % 8203

 - a. Federal Specifications O-F0241 Type 1, Grade A or B.
 - b. The chemical designation for granular fertilizer for all plantings shall be 14-14-14.
- H. Water: Free of substances harmful to growth of plants. Water shall also be free of staining agents as well as elements causing odors.
- I. Soil Sterilizers: As recommended by State and Local Agriculture agencies.
- J. Sand: Clean, white, coarse-grained builders sand, free of substances harmful to growth of plants.
- K. Supply complete information on all analysis/test methodologies and results; laboratory certifications, manufacturer's specifications, and agency approvals to Landscape Architect prior to placement of soil conditioners. Landscape contractor shall make all modifications and improvements to soil and soil mixes deemed necessary by Landscape Architect to meet requirements herein, and to ensure proper growing

medium for all plant material without cost to Owner, prior to planting.

PART 3 - EXECUTION

3.01 INSPECTIONS

- A. Examine areas to receive soil preparation to assure work of other trades have been completed.
- B. Verify that plants to remain undisturbed have been clearly identified and protected from injury during construction. If not, identify and protect plants to remain according to procedures set forth in Section 02490 – Trees, Plants and Groundcover. Refer to Protective Fencing on plans.
- C. Remove all construction materials and debris from all areas to be landscaped, without additional expense to Owner, prior to subsoil preparation.
- D. Do not proceed with soil preparation until all unsatisfactory conditions are corrected.

3.02 SITE PREPARATION

- A. General: Within the entire area to be landscaped as shown on the drawings, the contractor shall complete the following site preparation items to eradicate all existing weed and/or natural groundcover. Initiate site preparation as stated herein and coordinate all work with the existing underground sprinkler system and utility lines.
- B. Post Emergence Herbicide: Apply “Roundup” as manufactured by Monsanto Corp. according to manufacturer’s recommended rate and specification within the limits of all areas to be landscaped not specified as existing, to be relocated, or to be removed. Protect existing plants from overspray.
- C. Pre-Emergence Herbicide: Apply “Ron-Star” or approved equal to all areas to be landscaped according to the manufacturer’s recommended rate and specification. Contractor shall be responsible to re-apply appropriate herbicide to eradicate all remaining weeds and maintain a weed-free condition in all areas throughout all landscape planting operations.

3.03 PERFORMANCE

- A. Existing Soil: Remove all debris, gravel, rocks and other deleterious material over 2 inches in diameter, within 12 inches of surface in areas to receive plant material, from the project site. Fine grade existing soil to assure finish grades are achieved by adding the specified depth of planting soil mixture.
- B. Planting Soil mixtures:

1. Remove rocks and other objects over 2 inch diameter.
2. Smooth planting soil mixtures to two (2) inches below top of surrounding paving, wherever planting beds abut paved surfaces.
3. Scarify existing soil with the first lift of proposed soil to integrate the two soils.
4. Do not compact planting soil mixture, but do wet-soak planting areas to assure proper settlement. Replace planting soil mixture to specified grade after watering, where necessary.
5. Smooth planting soil mixtures to two inches (2") below finish grade in areas to be sodded. Remove plant material not indicated as existing or relocated in order to adhere to sod lines.
6. Prior to installing planting soil, test tree pits and planting areas for percolation by approved means.
7. Remove limerock or soil cement in tree planter islands within paved parking areas. Do not damage sub-base material for paved surfaces. Assure percolation and then backfill with approved planting soil mixtures.

3.04 CLEAN-UP

- A. Immediately clean up spills, soil and conditioners on paved and finished surface areas, refer to CITY requirements and approved Traffic Maintenance Plan.
- B. Remove debris and excess materials from project site immediately.

END OF SECTION

SECTION 02487

SODDING

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Provide all labor, materials, necessary equipment and services to complete the Sodding work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

1.02 RELATED WORK

- A. Section 02210 - Fine Grading
- B. Section 02484 - Soil Preparation and Soil Mixes
- C. Section 02490 - Trees, Shrubs, and Groundcover

1.03 QUALITY ASSURANCE

- A. Standards: Federal Specifications (FS) 0-F-241c (1), Fertilizers, Mixed, Commercial.
- B. Testing Agency: Independent Testing Laboratory.
- C. Requirements or Regulatory Agencies: Conform to the requirements of the State Department of Agriculture.

1.04 SUBMITTALS

- A. Certificates:
- B. Growers Certification:
 - 1. Grass species, and location of field from which sod is cut.
 - 2. Compliance with state and federal quarantine restrictions.
- C. Manufacturer's certification of fertilizer and herbicide composition.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver sod on pallets.
- B. Protect root system from exposure to wind or sun.
- C. Protect sod against dehydration, contamination, and heating during transportation and delivery.

- D. Do not deliver more sod than can be installed within 24 hours.
- E. Keep stored sod moist and under shade, or covered with moistened burlap.
- G. Do not tear, stretch, or drop sod.

1.06 JOB CONDITIONS

- A. Begin installation of sod after preceding related work is accepted.
- B. Environmental Requirements:
 - 1. Install sod during months acceptable to the Landscape Architect.
 - 2. Do not install sod on saturated soil.
- C. Protection: Erect signs and barriers against vehicular traffic.

1.07 GUARANTEE

- A. Guarantee sod for period of twelve months after date of Substantial Completion.
- B. Replacement sod under this guarantee shall be guaranteed for twelve months from the date of installation.
- C. Repair damage to other plants during sod replacement at no cost to the Owner.

PART 2 - PRODUCTS

2.01 SOD

- A. Grass Species: *Stenotaphrum secundatum* "Florata", St. Augustine "Florata" Grass.
 - 1. American Sod Producers Association (ASPA) Grade: Nursery Grown or Approved. Field grown sod is not acceptable.
- B. All sod shall conform to the following requirements:
 - 1. Furnish in pads that are not stretched, broken, or torn.
 - a. St. Augustine Sod pads shall be 18x24 inches in size (plus or minus 5%) with a 1-1/2 inch thickness (excluding top growth and thatch).
 - 2. Uniformly mowed height when harvested:
 - a. St. Augustine Sod - 2 inches in height.
 - 3. Thatch: Maximum 1/2 inch uncompressed.
 - 4. Inspected and found free of diseases, nematodes, pests, and pest larvae, by entomologist of State Department of Agriculture.

5. Weeds:
 - a. Free of horse grass, nut grass or other objectionable weeds or weed seeds.
6. Uniform in color, leaf texture, and density.

2.02 WATER

- A. Free of substances harmful to plant growth, objectionable odor or staining agents.

2.03 FERTILIZER

- A. FS 0-F-241c(1), Grade A or B.
- B. The Chemical designation for granular fertilizer shall be a St. Augustine Weed and Feed (Lesco or approved equal) with at least 50% of the nitrogen form a non-water-soluble organic source for all plantings except on lake banks.
- C. Apply and distribute by methods and rates as recommended by manufacturer.

2.04 HERBICIDES

- A. As recommended by the State Department of Agriculture.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Verify that soil to depth of 12 inches in compacted areas has been tilled to produce a loose, friable soil conducive to exceptional sod growth.
- B. Water dry soil to depth of 6 inches 48 hours before sodding.

3.02 INSTALLATION

- A. Transplant sod within 48 hours after harvesting.
- B. Begin sodding at bottom of slopes.
- C. Lay first row of sod in straight line with long dimension of pads parallel to slope contours.
- D. Butt side and end joints. Ensure that joints are tight, thereby eliminating the need to patch and/or topdress to eliminate gaps.
- E. Stagger end joints in adjacent rows.
- F. Do not stretch or overlap rows.
- G. Water sod immediately after transplanting.

- H. Top dressing for sodded areas may be clean sand(sterilized), mined from fresh water sources. Sand mined from salt water is unacceptable.

3.03 LAWN ESTABLISHMENT

- A. Watering:

- 1. Keep sod moist during first week after planting.
 - 2. After first week, supplement rainfall to produce a total of 2 inches per day(until final acceptance).
 - 3. It is the contractors responsibility to water all plant material.

- B. Mowing:

- 1. Maintain St. Augustine grass between 2 inches and 2-1/2 inches in height. When grass reaches 3 inches in height, mow to 2 inches in height.
 - 2. Do not cut off more than 40% of grass leaf in single mowing.
 - 3. Remove all grass clippings throughout.

- C. Resod spots larger than 1 square foot not having uniform stand of grass.

- D. Weed Eradication: Between second and third mowing, apply herbicide specifically recommended for grass type uniformly at manufacturer's recommended rate.

- E. Fertilizer: Apply fertilizer uniformly at manufacturer's recommended rate two days after sodding and at three-month intervals thereafter. Water in to avoid "burning" or damaging grass.

- F. Establishment period shall extend until final acceptance by the Owner according to the conditions of the Contract.

3.04 CLEANING

- A. Immediately clean spills from paved and finished surface areas.

- B. Remove debris and excess materials from project site.

- C. Dispose of protective barricades and warning signs at termination of lawn establishments.

END OF SECTION

SECTION 02490
TREES, PLANTS AND GROUNDCOVER

PART 1 -GENERAL

1.01 SCOPE OF WORK

- A. Provide all labor, materials, necessary equipment and services to complete the Trees, Plants and Groundcover work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

1.02 RELATED WORK

- A. Section 02210 - Fine Grading
- B. Section 02484 - Soil Preparation and Soil Mixes
- C. Section 02487 - Sodding

1.03 QUALITY ASSURANCE

- A. Inspection
 - 1. Furnish plant materials inspected by State Department of Agriculture at the growing site and tagged or otherwise approved for delivery by Landscape Architect.
 - 2. Inspection at growing site does not preclude right of rejection at project site.
- B. Furnish plant materials certified by State Department of Agriculture to be free from harmful insects or apparent disease. Verify that all plant material is free of harmful insects and disease.
- C. All plant material shall be Florida #1 or better as defined by the Florida Department of Agriculture "Codes and Standards for Nursery Plants Part I and II".

1.04 SUBMITTALS

- A. Certificate of inspection of plant material by State Authorities.
- B. Test Reports: Analysis of samples from planting soil supply areas.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Inventory:

1. Verify that species of plants in holding area matches that on plant list and drawings.
- B. Preparation for Delivery:
1. Prune head and/or roots of all trees under direction of Landscape Architect, and as required to assure safe loading, shipment and handling without damaging the natural form and health of the plant.
 2. Balled and Burlapped (B&B) Plants:
 - a. Dig and prepare for shipment in manner that will not damage roots, branches, shape, and future development after replanting. Oak trees shall be root pruned 30 days prior to digging and hardened off at the supplier's nursery under mist for 30 to 60 days.
 - b. Ball with firm, natural balls of soil, per Florida Grades and Standards.
 - c. Wrap ball firmly with burlap or strong cloth and tie: ANSI Z60.1.
 3. Specimen Plants: Exercise care in digging, wrapping, and binding of such specimens to assure safe loading, shipment and handling.
 4. Bare Root Plants:
 - a. Refer to Section 02481 in its entirety for trees and palms.
- C. Delivery:
1. Deliver soil conditioners (pesticides, herbicides, fumigants, and fertilizers) to site in original unopened containers bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark, and conformance to state law. Store in designated areas only.
 2. Deliver planting soil mixes and mulch in bulk with manufacturer's guaranteed mix, name, and conformance to State law. Store in designated areas only. Deliver plants with legible identification labels.
 3. Protect all plant material during delivery to prevent damage or desiccation to root ball or desiccation of crown and leaves.
 4. Mist root balls, tree and palm crowns during delivery and handling to ensure against drying.
 5. Remove unacceptable plant material immediately from job site.
- D. Storage:
1. Balled and burlapped plant stock: Deliver direct from nursery.
 2. Bare root plant material: Deliver direct from supplier.
 3. Protect roots of all plant material from drying or other possible injury. Keep plant root ball and crown moist at all times.
 4. Store plants in shade and protect from weather. Heel in trees in a vertical position as required. Irrigate all stored plants as required.
 5. Maintain and protect plant material not to be planted within four hours. Plant palms upon delivery.
- E. Handling:
1. Do not drop plants.

2. Do not pick-up container or balled plants by stems or trunks.
3. Do not use chains or cables on any trees or palms. Handle using nylon straps, 2 inch-width min.

1.06 JOB CONDITIONS

- A. Planting Season: Perform actual planting only when weather and soil conditions are suitable in accordance with locally accepted practice. Notify City of days not working.
- B. Verify that all existing trees to remain are properly identified and barricaded to prevent damage under this and future construction. Landscape Contractor shall be responsible for maintaining adequate identification and barricading of all existing plant material to remain throughout the installation and required - - maintenance period.

1.07 GUARANTEE

- A. Guarantee all plant material for one year after substantial completion.
- B. Replacement plants under this guarantee shall be replaced within two weeks of rejection and guaranteed for twelve months from date of installation(at no additional cost to City).
- C. Repair damage to other plants, lawn or construction work during plant replacement at no cost to the Owner (this includes, but is not limited to, damage to curbs, walks, roads, fences, site furnishings, etc.).

1.08 SCHEDULING

- A. Install trees, shrubs, and ground cover before lawns are installed.
- B. Notify Landscape Architect of anticipated installation date at last two weeks in advance.

PART 2 – PRODUCTS

2.01 PLANT MATERIAL

- A. Well-formed and shaped, true to type, and free from disease, insects, and defects such as knots, sun-scald, windburn, injuries, abrasion or disfigurement.
- B. True to botanical and common name and variety: American Joint Committee on Horticultural Nomenclature, Standardized Plant Names, latest edition.
- C. Minimum grade of Florida No. 1 in accordance with "Florida Grades and Standards for Nursery Plants Part II" published by the State of Florida Department of Agriculture.
All plants not listed in "Grades and Standards for Nursery Plants", published by the Division of Plant Industry, shall conform to a Florida No. 1 as to:

1. Health and vitality
2. Condition of foliage
3. Root system
4. Freedom from pests or mechanical damage
5. Heavily branched and densely foliated according to the accepted normal shape.

D. Nursery Grown: ANSI Z60.1 - 1969

1. Grown under climatic conditions similar to those in locality of project.
2. Container Grown Stock:
 - a. Growing in container for minimum 30 days before delivery, with sufficient root system for container.
 - b. Not root-bound or with root systems hardened off.
3. Use only ground cover plants well-established in removable containers, integral containers, or formed homogenous soil sections.

E. Minimum root ball sizes for all palms shall be as delineated within "Grades and Standards for Nursery Plants, Part II, Palms and Trees", published by the State of Florida Department of Agriculture.

1. All plants not listed in Grades and Standards for Nursery Plants, published by the Division of Plant Industry, shall conform to a Florida No. 1 as to:
 - a. Health and vitality
 - b. Condition of foliage
 - c. Root system
 - d. Freedom from pests or mechanical damage
 - e. Heavily branched and densely foliated according to the accepted normal shape of the species or sport.

2.02 PLANTING SOIL

A. Planting soil mixture for backfill around trees, shrubs, and groundcover shall be as specified in Section 02484 - Soil Preparation and soil mixes.

1. Terrasorb may be added to all backfill.

2.03 SOIL CONDITIONERS

A. Soil conditioners shall be as specified in Section 02484 - Soil Preparation and soil mixes.

1. As a fertilizer supplement to Phoenix Palms, a foliar spray shall be applied one week after installation (excluding summer months) and again at three-month intervals. The chemical designation shall be 8-6-6 with at least 95% of the nitrogen derived from a water-soluble, organic source. The potash source shall be derived from sulphate forms. The following minor elements shall be included:
 - .06% MG

- .02% B
- .05% CU
- 1.00% Fe
- 1.00% Mn

2.04 TOP MULCH

- A. Shredded Eucalyptus, recycled Melaleuca or approved equal, shredded, loose, substantially free of mineral waste materials, and showing an acid reaction.
- B. Minimum organic matter by weight on an oven dry basis: 85%
- C. Processed specifically for use as top mulch around plant beds.

2.05 GUYING AND STAKING MATERIAL

- A. Stakes for Tree Support:
 - 1. Construction grade lumber.
 - 2. Braces and Vertical Stakes: Nominal 2" x 2".
 - 3. Stakes: Nominal 2" x 4" x 4' long and pointed at one end.
 - 4. Cross Braces: Nominal 1" x 4" boards.
- B. Guying Wires: Annealed, galvanized iron or galvanized steel 12 gauge wire. Wire shall be flagged with florescent surveyor tape minimum 2 per guy wire, (one flag near ground level and one flag near the middle of the length of wire).
- C. Hose:
 - 1. Type: New /12 inch diameter 2-ply reinforced rubber (garden) or plastic hose.
 - 2. Minimum size: ¾ in.
- D. Turnbuckles:
 - 1. Landscape Contractor shall be responsible for keeping taut all guyed plant material and for keeping flagging in place. One turnbuckle per guy wire is required.
 - 2. Method of tightening guy wires to be approved by Landscape Architect.
 - 3. Guying to be tightened as needed, but always within two days of when found necessary.

2.06 SLOPE STABILIZATION

2.07 DRAINAGE GRAVEL

- A. Drainage gravel shall be River Run Gravel and shall be of graduated sizes.
- B. River Run Gravel shall be no smaller than one-half inch nor larger than two

inches in any direction.

- C. Gravel shall be installed as shown on drawings or to a minimum depth of 2 inches above drains, and 4 inches throughout planters.
- D. Gravel shall be washed clean and contain no chemical elements harmful to plant growth.
- E. Coral rock shall not be used.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Verify final grades have been established prior to beginning planting operation.
- B. Inspect trees, shrubs, and ground cover plants for injury, insect infestation, and trees and shrubs for improper pruning.
- C. Do not begin planting of trees until deficiencies are corrected, or plants replaced.

3.02 LOCATION/STAKING

- A. Stake out locations for plants and outline of planting beds on ground.
- B. Do not begin excavation until stake out of plant locations and plant beds are acceptable to the Landscape Architect.

3.03 PREPARATION

A. Pits and Trenches:

- 1. Shape:
 - a. Vertical sides and flat bottom.
 - b. Plant pits to be circular.
- 2. Size:
 - a. For Trees:
 - (1) Depth: Minimum 2 ft. from finish grade and increased as necessary to accommodate planting ball. Bottom of root ball shall rest on unexcavated soil or compacted soil at bottom of pit to prevent settling. Do not plant too deep. The top of root ball should be 10% above finished grade.
 - (2) Width or Diameter: 2 ft. greater than diameter of planting ball (unless otherwise approved by Landscape Architect for special planting areas.
 - b. For Shrubs and Groundcovers:
 - (1) Depth:
 - (a) All 7 and 3-gallon plant material shall receive a minimum of 2" of planting soil mixture beneath the root ball. Top of root ball should be 10% above finished grade.

- (b) Plant materials sized 1 gallon or less, or materials planted 18 inches O.C. or less shall receive a full 12 inches of amended planting soil mix tilled to a minimum depth of 12 inches.
NOTE: All annuals beds shall receive a full 6 inches of amended planting soil mix tilled to a minimum depth of 6 inches.
- (c) For plants not requiring soil mix the entire bed shall be tilled by mechanical means to a depth of 12 inches.
- (2) Width or Diameter:
 - (a) All 7 and 3-gallon material shall be placed within a planting hole that is a minimum 6 inches wider than the container, and backfilled with the specified planting soil mix.
 - (b) All plant material sized 1 gallon or less, or material planted 18 inches O.C. or less shall receive complete bed amending. That is excavation of existing soil to a minimum of 12 inches. (Note: 6 inches for all annual beds) below finished soil elevation, backfilling with a minimum 3 inches of planting soil mix, and then tilling with all required amendments to a depth of not less than 12 inches.
- (3) Bring all beds and pits to smooth, even surface conforming to established grades after full settlement has occurred.
NOTE: Amending of and quantities of planting soil mixes as outlined above contingent with existing soil conditions.

B. Planting Beds:

- 1. Planting beds to have a minimum depth of 12 inches of planting soil mixture.
- 2. Bring beds to smooth, even surface conforming to established grades after full settlement has occurred.
- 3. Use acceptable excess excavated soil to form watering berms around the plants.

- C. Test fill all tree pits with water before planting to assure proper drainage percolation is available. Pits which are not adequately draining shall be excavated to a depth sufficient for drainage and backfilled with gravel or crushed rock. No allowances will be made for lost plants due to improper drainage. Landscape Contractor shall replace with same species, size, and specification at no cost to Owner.

3.04 PLANTING

A. General

- 1. Center plant in pit or trench.
- 2. Face for best effect, or as directed by Landscape Architect.
- 3. Set plant plumb and hold rigidly in position until soil has been tamped firmly around planting ball.

4. Use only planting soil backfill as specified hereinbefore.
5. Place sufficient compacted planting soil mix under plant to bring top of planting ball to an elevation 10% above the finish grade.
6. Backfill pit or trench with planting soil in 9 in. layers and water each layer thoroughly to settle soil and work soil completely around roots and planting ball.
7. After soil settles fill pit with planting soil, water, and leave pit surface even with finish grade.
8. Water Saucer Berm:
 - a. Construct an earthen berm 6 in. above finish grade forming a watering basin with a level bottom around each palm or tree.
 - b. Size: 2 ft. greater than diameter of planting ball.
 - c. Leave saucer for 3 months or as directed by Owner's Representative. At the end of 3 months regrade area and re-mulch 12 inches out from trunk (or planting bed) for all plantings. Keep mulch 3 inches away from the trunk of the tree or palm. Remove excess from basin and clean area.

B. Balled Plants (B & B) and (WB & B):

1. Place in pit on planting soil backfill material that has been hand tamped prior to placing plant.
2. Place with burlap intact so location of ground line at top of ball is same as at nursery where grown.
3. Remove binding at top ½ of planting ball and lay top of burlap back 6 inches. For wire balled trees, remove wire from entire ball.
4. Do not pull wrapping from under planting ball.
5. Do not plant if planting ball is cracked, broken or showing evidence of voids before or during planting process. Replace with plant of same species, size, and specification at no cost to Owner.

C. Container-Grown Plants:

1. Can/Container Removal:
 - a. Cut cans on two sides with an acceptable can clutter.
 - b. Do not injure planting ball.
 - c. Do not cut cans with spade or ax.
 - d. Do not cut sides on knockout cans.
 - e. Carefully remove plants without injury or damage to planting ball.
 - f. After removing plant, superficially cut edge roots with knife on three sides.
2. Dig planting holes to size as specified.
3. Hand place plants which are in containers less than one gallon in size.
4. Hand backfill and hand tamp leaving slight depression around bases of plants.
5. Do not cover top of root ball.
6. Water for settlement and replace required planting soil.

3.05 FERTILIZER APPLICATIONS

- A. Apply granular fertilizer at time of planting and repeat 3 months from first application. Schedule fertilization with Landscape Architect.
- B. Apply granular fertilizer at following rates, to planting bed and saucer areas around each tree, palm and shrub:
 - 1. Trees:
 - a. Caliper 4 inches and larger: 5 lbs. Per in. of Caliper
 - b. Caliper under 4 inches: 3 lbs. Per in. of Caliper
 - c. Shrubs: 2 lbs. Per 100 sq. ft. of area/or .25 lbs. per plant.
 - d. Ground Cover Plants: 2 lbs. Per 100 sq. ft. of area/or .25 lbs. per plant.
 - e. Palms: 3 lbs. Per palm.
 - 2. Note: Trees may be fertilized using tree spikes (lesco or equal). Min 4 spikes per tree.
- C. Broadcast under foliage canopy and incorporate into soil.
- D. Water immediately until root structure of plant is wet. Assure protection from fertilizer burn.
- E. Apply foliar nutrient spray at time of planting (summer excluded) and repeat three months from first application. Schedule fertilization with Landscape Architect. For all Phoenix Palm species, drench palm leaves with foliar nutrient spray at the manufacturer's recommended rate.

3.06 WEED CONTROL

- A. Apply pre-emergent herbicide "Ron-Star" before mulching and again as necessary throughout required maintenance period to prevent weed seed germination.
- B. Apply post-emergent herbicide, "Round-up" as manufactured by Monsanto Corp. or approved equal, per manufacturer's rate and method of application to all landscape bed areas as necessary.
- C. The Landscape Contractor shall verify that the herbicide and application technique will not damage plant material prior to application, and shall replace, and/or repair damage to any plant injured by herbicide application at no cost to the owner.

3.07 TOP MULCHING

- A. Top mulch planting pits, trenches, and areas within two days after planting.
- B. Cover watering basin or bed evenly with 3 inch compacted depth of top mulch material. Keep mulch 3 inches away from the trunk of any tree or palm.
- C. Water thoroughly, immediately after mulching.

- D. "Cut in" mulch at plant bed/sod line.
- E. Hose down planting area with fine spray to wash leaves of plants at least twice a week, or as required.
- F. Exclude mulch from annual and Bromeliad and Liriope beds.

3.08 GUYING AND STAKING OF TREES

- A. Stake trees as shown on the drawings except where they are planted in special locations where guying is not feasible.
 - 1. Stake Installations:
 - a. Drive stakes perpendicularly, 3 feet into ground into undisturbed soil. Do not drive stake through soil separator or drainage gravel if present. Do not drive stakes through root ball.
 - b. Number of stakes as shown.
 - 2. Tying and Cross-bracing:
 - a. For trees over 4 inch caliper:
 - (1) Stake and tie firmly with guy wire.
 - (2) Separate guy wire from bark by garden hose section.
 - b. For trees under 4 inches in caliper:
 - (1) Nail cross-brace between stakes.
 - (2) Tie tree to cross-brace with guy wire.
 - (3) Separate guy wire from bark by hose section.
- B. Stake palm trees as shown.

3.09 PRUNING

- A. Prune minimum necessary to remove injured twigs and branches, deadwood, and suckers. Pruning shall be done with regard to natural form of plant material or as directed by the Landscape Architect.
 - 1. Do not prune prior to delivery to site. All tree pruning shall be done in accordance with ANSI-A300 Standards and acceptable arboricultural practices.
Note: Pruning is required for collected palms and trees per "Grades and Standards for Nursery Plants Part II, Palms and Trees" and Section 02481.
- B. Landscape Contractor shall perform all specialized shearing and or pruning as directed by the Landscape Architect and as shown on the drawings at no additional cost to the Owner.

3.10 MAINTENANCE

- A. General:
 - 1. Begin maintenance immediately after each item is planted and continue until final inspection and acceptance.

2. Maintain a health growing condition by pruning, watering, cultivating, weeding, mowing, mulching, tightening, and repairing of guys, resetting plants to proper grades or upright position, restoration of plant saucer, and furnishing and applying such sprays as necessary to keep planting free of insects and diseases.
 3. The root system of plants shall be watered at such intervals as will keep the surrounding soil in best condition for promotion of root growth and plant life.
 4. Keep planting saucers and beds free of weeds, grass and other undesired vegetation growth.
 5. Protect planting areas and plants against trespassing and damage of any kind for the duration of the maintenance period.
 6. Inspect plants at least once a week and perform maintenance promptly. Replace impaired or dead plants promptly. Do not wait until near the end of the guarantee period to make replacements of plants which have become unacceptable.
 7. Remove soil berms and saucer ridges from around watering basins prior to end of maintenance period, as directed by the Landscape Architect.
- B. Watering: Water when soil moisture is below optimum level for best plant growth.

3.11 CLEANING

- A. Fill all pits/depressions in holding area and rough grade to meet surrounding elevations. Remove any organic or other debris resulting from the plant relocation process.
- B. Sweep and wash all paved surfaces.
- C. Remove planting debris from project site and holding area.
- D. Remove soil conditioners, soil mixes, gravel, etc. from project site and holding area.

END OF SECTION

SECTION 02510

WALKWAYS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish all labor, materials and equipment necessary to complete all walkways and related items shown in the drawings and specified herein.

1.02 REFERENCES

- A. All materials and methods of construction shall conform to the requirements of the "Florida Department of Transportation, Standard Specifications for Road and Bridge Construction".

1.03 SUBMITTALS

- A. Submit to the Engineer, as provided in the General Conditions, shop drawings showing dimensions and layouts of sidewalks and reinforcement for concrete work.

1.04 RELATED WORK

- A. Site preparation is specified in Section 02100.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Concrete Materials:
 - 1. Concrete for work under this section shall be no less than 3000 psi at 28 days.
 - 2. Reinforcing bars shall be deformed type bars conforming to AASHTO M31 Grade 40 or 60. All reinforcing steel shall be shop fabricated, of size, cross-section and arrangement as described on approved shop drawings.
 - 3. Welded wire fabric shall be as shown on the drawings and shall conform to all requirements of AASHTO M55.
 - 4. Expansion joint material shall be 1/2 inch or 3/4 inch thickness where shown, bituminous type meeting AASHTO spec. M-213-65.
 - 5. Joint sealant shall be hot poured rubber confirming to Fed. Spec. SS-S-164.
- B. Base Course Material:
 - 1. Base course material shall be graded aggregate conforming to the FDOT.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Sub-grade shall be thoroughly compacted as specified in Division 2.
- B. Forms shall conform to the shapes, lines and dimensions of the members as called for on the plans and shall be substantial and sufficiently tight to prevent leakage of mortar. They shall be properly braced or tied together so as to maintain position and shape.
- C. Finishing:
 - 1. Float concrete until 1/4-inch cement gel is brought to surface; steel trowel until dense surface is obtained.
 - 2. Finish with broom at right angles to alignment of work, then round all exterior edges with 3/4-inch radius after brooming.
- D. Curing:
 - 1. Cover walks with sand, sawdust or shavings and keep wet for three (3) days.
 - 2. Cover walks until final clean-up to prevent damages.
 - 3. Other methods of curing may be used subject to approval of the Engineer prior to implementation.
- E. Concrete walks shall be constructed to lines, widths, grades and thickness as shown on the Drawings, but sloped not less than 1/8-inch per foot in direction of water flow. Concrete shall be placed on thoroughly compacted subgrade, having smooth surface and kept moist until time concrete is placed.
 - 1. Isolation joints shall be installed at all intersections with other walks, at head and bottom of steps, curbs and maximum 12-foot O.C. in runs. Expansion material shall be 1/2-inch thick, but not less than 1/4-inch, by depth of concrete; 3/4-inch thick where abutting curbs and gutters, and at parking bays. Expansion material shall extend from bottom of walk slab to within 1/2-inch of top, to be filled with poured joint filler.
 - 2. Dummy grooves shall be 1/2-inch x 1/2-inch having 1/2-inch aprons.
- F. Local conditions, codes and practices shall govern all drive cuts and aprons.

3.02 CLEANUP

- A. At the completion of the work, Contractor shall clean up all scraps, rubbish and surplus materials caused by this work and haul them away from the site and leave job in a neat, clean and orderly condition.

END OF SECTION

SECTION 02830
CHAIN LINK FENCING

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Fence framework, fabric, and accessories.
- B. Excavation for post bases; concrete foundation for posts and center drop for gates.
- C. Manual gates and related hardware.

1.02 REFERENCES

- A. ANSI/ASTM A123 - Zinc (Hot Dip Galvanized) Coating on Iron and Steel Products.
- B. ANSI/ASTM F567 - Installation of Chain-Link Fence.
- C. ASTM A120 - Pipe, Steel, Black and Hot-Dipped Zinc Coated (Galvanized) Welded and Seamless, for Ordinary Uses.
- D. ASTM A121 - Zinc-Coated (Galvanized) Steel Barbed Wire.
- E. ASTM A392 - Zinc-Coated Steel Chain-Link Fence Fabric.
- F. ASTM C94 - Ready - mixed Concrete.

1.03 SYSTEM DESCRIPTION

- A. Fence Height: To match existing.
- B. Line Post Spacing: At intervals not exceeding 10 feet.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with ANSI/ASTM F567.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum three years documented experience.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Framing (Steel): ASTM A120; Schedule 40 steel pipe, standard weight, welded joints permitted.
- B. Fabric Wire (Steel): ASTM A392 zinc coated wire fabric.
- C. Concrete: ASTM C94; Normal Portland Cement, 3,000 psi strength at 28 days, 3 inch (75 mm) slump.

2.02 COMPONENTS

- A. Line Posts: 2.375 inch outside diameter.
- B. End, Corner and Pull Posts: 2.875 inch outside diameter.
- C. Gate Posts: Up to 6 foot gate leaf - 4.0 inch outside diameter. From 6 foot to 13 foot leaf - 6.625 inch outside diameter.
- D. Top, Brace Rail: 1.66 inch diameter, plain end, sleeve coupled.
- E. Gate Frame: 1.90 inch outside diameter for fittings and truss rod fabrication. welded
- F. Fabric: 2 inch diamond mesh interwoven wire, 6 gage, top and bottom selvages twisted tight.
- G. Truss Rods: 3/8 inch diameter steel.
- H. Tension Band: 1/8 inch thick steel..
- I. Tension Bar: steel; minimum cross-section of 3/16 inch x 3/4 inch.
- J. Tension Wire: 6 gage steel.
- K. Tie Wire: 9 gage steel wire.

2.03 ACCESSORIES

- A. Caps: Cast steel galvanized; sized to post diameter, set screw retainer.
- B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; steel.
- C. Gate Hardware: For double swing gates, provide center gate stop and drop rod; for single swing gates, include fork latch; 3 - 180 degree non-lift off gate hinges per leaf and hardware for padlock.
- D. Vinyl Inserts: Match existing inserts for color and installation pattern.

2.04 FINISHES

- A. Components and Fabric: Galvanized to ANSI/ASTM A123; 2.0 oz/sq. ft coating.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install framework, fabric, accessories and gates in accordance with ANSI/ASTM F567.
- B. Set corner, end, gate and line posts plumb, in concrete footings with top of footing 2 inches above finish grade. Slope top of concrete for water runoff.
- C. Line post footing depth below finish grade: ANSI/ASTM F567.
- D. Corner, pull, gate and end post footing depth below finish grade: ANSI/ASTM F567.
- E. Brace each gate, end and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail, one bay from end and gate posts.
- F. Provide top rail through line post and splice with 6 inch long rail sleeves.
- G. Install bottom brace rail or tension wire (to be specified by the City) between all terminal (end, corner and gate), and line posts.
- H. Stretch fabric between terminal posts or at intervals of 300 feet maximum, whichever is less.
- I. Position bottom of fabric 2 inches above finished grade.
- J. Fasten fabric to stop rail, line posts, braces, and bottom rail/tension wire with tie wire at maximum 15 inches on centers.
- K. Attach fabric to end, corner, pull and gate posts with tension bars and tension bands.
- L. Install support arms sloped outward and attach barbed wire (where applicable); tension and secure.
- M. Install gate with fabric and barbed wire overhang (where applicable); to match fence. Install three hinges per leaf, latch, catches, and drop bolt.
- N. Provide concrete center drop to footing depth and drop rod retainers at center of double gate openings.

3.02 - ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.

- B. Maximum Offset From True Position: 1 inch.
- C. Components shall not infringe adjacent property lines.

END OF SECTION

SECTION 03100

CONCRETE FORMWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. The extent of formwork is indicated by the concrete structures shown on the drawings.
- B. The Work includes formwork, and shoring for architectural and structural cast-in-place concrete, and the installation into formwork of items furnished under other divisions, such as anchor bolts, setting plates, bearing plates, anchorages, inserts, frames, nosings and other items to be imbedded in concrete (but not including reinforcing steel).
- C. Related Work
 - 1. Section 03200
 - 2. Section 03300
 - 3. Section 04220

1.2 CODES AND STANDARDS

- A. Unless otherwise shown or specified, design, construct, erect, maintain and remove forms and related structures for cast-in-place concrete Work in compliance with the American Concrete Institute Standard ACI 347, "Recommended Practice for Concrete Formwork".

1.3 SUBMITTALS

- A. Comply with the General Conditions.
- B. Product Data
 - 1. Form Coatings
 - 2. Form Ties
 - 3. Accessories
- C. Shop Drawing
 - 1. Formwork

1.4 DESIGN OF FORMWORK

- A. Design, erect, support, brace and maintain formwork so that it will safely support all vertical and lateral loads that might be applied until such loads can be supported by the concrete structure. Carry vertical and lateral loads to the ground by the formwork system and by in-place construction that has attained adequate strength for that purpose. Construct formwork so that concrete members and structures are of the correct size, shape, alignment, elevation and position.

1.5 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Standards: In addition to complying with pertinent regulations of governmental agencies having jurisdiction, comply with pertinent provisions of ACI 347.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with pertinent provisions of the General Conditions.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

- A. Except for metal forms, use new materials. Materials may be re-used during progress of the Work, provided they are completely cleaned and reconditioned, recoated for each use, and capable of producing formwork of the required quality.
- B. For footings and foundations, use Douglas Fir boards or planks secured to wood or steel stakes, substantially constructed to shapes indicated and to support the required loads.
- C. For studs, walers, and supports, use Standard grade or better Douglas Fir, dimensions as required to support the loads but not less than 2"x 4" (nominal).

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 GENERAL

- A. Construct forms complying with ACI 347 to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, and level and plumb work in the finished structure. Provide necessary camber in forms and account for all deflections.
- B. Provide for openings, offsets, keyways, recesses, dovetails, moldings, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts, and other features as required.
- C. Locate control joints as indicated on the Drawings and where required but not shown on the Drawings, as accepted by the Architect.
- D. Provisions for Other Trades
 - 1. Provide openings in concrete formwork to accommodate work of other trades.
 - 2. Verify size and location of openings, recesses, and chases with the trade requiring such items.

3. Accurately place and securely support items to be built into the concrete.

3.3 FORM COATINGS

- A. Coat form contact surfaces with form coating compound before reinforcement is placed.
 1. Do not allow excess form coating material to accumulate in the forms or to come in contact with surfaces which will bond to fresh concrete.
 2. Apply the form coating material in strict accordance with its manufacturer's recommendations.

3.4 FORMWORK TOLERANCES

- A. Construct formwork to comply with the following tolerances which are to be adhered to in the construction of all concrete work. Where not specifically indicated herein, completed concrete

surfaces complying with the tolerances specified in ACI 347, Section 2.4 shall be provided, after removal of forms and prior to patching and finishing of cast-in-place formed surfaces.

- B. Tolerances

1. Variation from the plumb:
 - a. In the lines and surfaces of columns, piers, and walls 1/4 inch per 10 feet, but not more than 1/2 inch (totally).
2. Variation from the level or from the grades indicated on the drawings.
 - a. For exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines: In any bay or 20 ft. maximum - 1/4 inch in 40 ft. or more - 1/2 inch.
 - b. For slabs on grade or elevated: 1/8 inch in 10 ft. cumulative, and no ponding in excess of thickness of a standard United States 25-cent coin.
3. Variation in cross-sectional dimensions of columns and beams and in the thickness of slabs and walls.

Minus - 1/4 inch.

Plus - 1/2 inch.

4. Footings
 - a. Variation in dimensions in plan:

Minus - 1/2 inch.

Plus - 2 inches.
 - b. Misplacement or eccentricity: Two percent (2%) of the footing in the direction of misplacement but not more than two inches (2").

- c. Reduction in thickness: Minus - five percent (5%) of specified thickness.
- C. Check formwork during concrete placement to ensure that forms, shores, falsework, ties and other features have not been unduly disturbed by concrete placement methods or equipment. Report in writing to the Architect/Engineer any deviations from the allowable tolerances.

3.5 FORMWORK CONSTRUCTION

A. General

1. Construct forms, complying with ACI 347, to the exact sizes, shapes, lines and dimensions shown, and as required to obtain accurate alignment, location, grades, level and plumb work in the finished structures. Provide for openings, offsets, keyways, moldings, rustications, recesses, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required on the Work. Use selected materials to obtain the required finishes.
2. Fabricate forms for easy removal without hammering or prying against the concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and assure ease of removal.
3. Control Joints
 - a. Locate where shown or directed. See Section 03300 for treatment of control and construction joints, including wood screeds, metal keyways and sawcuts.
4. Provisions for Other Work
 - a. Provide openings in concrete formwork to accommodate other work. Size and location of openings, recesses and chases are the responsibility of those requiring such items. Accurately place and securely support items to be built into forms.
5. Construction Joints
 - a. Provide construction joints as shown on plans and as required by field conditions. Construction joints in concrete slabs shall be preformed metal with a keyway and slats to allow reinforcement to extend through the joint. Construction joints in beams shall be composed of a similar material as the side forms, contain a keyway, and permit all continuous reinforcement to extend through.

3.6 PREPARATION OF FORM SURFACES

- A. Coat the contract surfaces of forms with a form-coating compound before reinforcement is placed. Provide commercial formulation form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces, and will not impair subsequent treatment of concrete surfaces requiring bond or adhesion, nor impede the wetting of surfaces to be cured with water or curing compounds. Thin form-coating compounds only with the thinning agent of the type and in amount, and under the conditions of the form-coating compound manufacturer's directions. Do not allow excess form-coating material to accumulate in the forms or to come into contact with concrete surfaces against which fresh concrete will be placed. Apply in compliance with the manufacturer's instructions.

3.7 REMOVAL OF FORMS

- A. Formwork not supporting the weight of concrete, such as sides of beams and similar parts of the Work, may be removed 24 hours after placing the concrete, provided the concrete is sufficiently hard to not be damaged by the form removal operations, and provided that curing and protection operations are maintained.

3.8 RE-USE OF FORMS

- A. Clean and repair the surfaces of forms that are to be reused in the Work, except that split, frayed, delaminated or otherwise damaged form facing material will not be acceptable. Apply new form coating compound material to all concrete contact for surfaces as specified for new formwork.
- B. When forms are intended for re-use in successive concrete placement, thoroughly clean surfaces, remove fine and laitance, and tighten forms to close all joints. Align and secure all joints to avoid offsets. Do not use "patched" forms for exposed concrete surfaces, except as acceptable to the Owner and Architect/Engineer.

3.9 STRUCTURAL NOTES AND INSPECTION PLAN

- A. Refer to drawings for additional data and requirements.

END OF SECTION

SECTION 03251

JOINTS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish all materials, labor, equipment and incidentals required to make all joints tight in the concrete as detailed on the Drawings and as specified herein.

1.02 SUBMITTALS

- A. Submit shop drawings showing placement of forms, form joints major inserts and blockouts in accordance with Section 01340.

1.03 RELATED WORK

- A. Section 03300: Cast-In-Place Concrete

PART 2 - PRODUCTS

2.01 EXPANSION JOINTS - FLOOR

- A. Floor expansion joints shall be types UX-FIOO and UX-JIOO 1-inch joint systems as manufactured by MM Systems Corporation, Tucker, Georgia or approved substitution.
- B. Retainers shall be extruded aluminum alloy 6063-T5. Aluminum retainers shall be chemically treated to prepare surfaces for complete adhesion of the sealant.
- C. Sealant shall be an elastomeric material capable of allowing multi-directional movement while maintaining cohesion and adhesion capabilities. The sealant shall have a maximum hardness of Shore A25 with tensile strength and elongation to meet ASTM D412. The sealant shall perform between temperatures of -20AF and 150AF. Moisture vapor transmission shall meet ASTM C355.
- D. The joint assembly shall be capable of a minimum of 50 percent movement in any direction from the normal position.
- E. All aluminum surfaces in contact with concrete or masonry shall receive one sprayed-on, factory applied coat of baked-on epoxy primer.
- F. Sealant color shall be selected by the Engineer.

2.02 EXPANSION JOINTS - OTHER

- A. Premolded joint filler shall be 3/4-inch thick or as shown on the Drawings and

shall be a self-expanding cork, Servicised Products, W.R. Grace and Company, Code No. 4324 equal by W.R. Meadows, Inc., or approved substitution.

- B. Joint sealant shall be a two-component synthetic rubber compound based on Thiokol liquid polysulphide polymer by W.R. Grace and Company, Toch Bros., Tremco Co., or equal. Sealant shall develop a Shore Hardness of at least 30 after seven days curing. Back-up material where required shall be approved closed cell polyethylene foam rods of diameters to suit joint conditions.
- C. Primer shall be as recommended by sealant manufacturer.

2.03 WATERSTOPS

- A. Waterstops for construction joints, where indicated, shall be 8 or 12 inches x 1/8-inch steel and be hot-dipped galvanized.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Steel waterstops shall have all joints fully welded and shall be carefully set and held in place so that 4-inches extends straight into concrete placement at each side of joint.
- B. Premolded joint fillers shall be installed at all locations shown on the Drawings.
- C. Joint sealant for all joints indicated on the Drawings shall be placed to the depths shown. Preparation of surfaces, priming, and the handling and preparation of materials shall be in complete compliance with the manufacturer's instructions as approved.
- D. Flex-Seal systems shall be installed in accordance with the manufacturer's recommendations.

END OF SECTION

SECTION 03350

CONCRETE FINISHES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish labor, materials, equipment and incidentals required to finish cast-in-place concrete surface as specified herein.

1.02 RELATED WORK

- A. Walkways are specified in Section 02510.

1.03 REFERENCES

- A. ACI 301 - Specifications for Structural Concrete for Buildings.

1.04 SUBMITTALS

- A. Submit, as provided in the General Conditions and Section 01340 shop drawings of the proposed chemical hardener, manufacturer's surface preparation and application procedures.

1.05 SCHEDULE OF FINISHES

- A. Concrete for the project shall be finished in the various specified manners either to remain as natural concrete or to receive an additional applied finish or material under another Section.
- B. The base concrete for the following conditions shall be finished as noted and as further specified herein:
 - 1. Concrete to receive cementitious finish or stucco finish - Off-form finish.
 - 2. Concrete to receive dampproofing - Off-form finish.
 - 3. Interior exposed slab concrete - steel trowel finish (two trowelings to a burnished finish).
 - 4. Bottom slab of exposed tanks - steel trowel finish.
 - 5. Exterior, exposed above water concrete slabs and stairs - Broomed finish.
 - 6. Concrete where not exposed in the finished work and not scheduled to receive an additional applied finish or material - Off-form finish.
 - 7. Gunite areas - wood float with broomed finish.
 - 8. Concrete to receive chemical hardener - wood float finish.

1.06 RESPONSIBILITY FOR CHANGING FINISHES

- A. The surface finishes specified for concrete to receive additional applied finishes or materials are the finishes required for the proper application of the actual

products specified under other Sections. Where different products are approved for use, it shall be the Contractor's responsibility to determine if changes in finishes are required and to provide the proper finishes to receive these products.

- B. Changes in finishes made to accommodate products different from those specified shall be performed at no additional cost to the Owner. Submit the proposed finishes and their construction methods to the Engineer for approval.

1.07 MANUFACTURER'S SUPERVISION

- A. The manufacturer of the metallic aggregate hardener material shall make available at no cost, upon 72 hours notification, the services of a qualified field representative to make sure the Contractor is providing the proper application of the product under prevailing job conditions and to observe installation as required.
- B. The Contractor shall make arrangements for the field representative to be present.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Portland cement and component materials required for finishing the concrete surfaces shall be as specified by the local supplier.

PART 3 - EXECUTION

3.01 FORMED SURFACES

- A. Forms shall not be stripped before the concrete has attained a strength of at least 30 percent of the ultimate design strength. This is equivalent to approximately "100-day-degrees" of moist curing.
- B. Care shall be exercised to prevent damaging edges on obliterating the lines of chamfers, rustications or corners when removing the forms or doing any work adjacent thereto.
- C. Clean all exposed concrete surfaces and adjoining work stained by leakage of concrete, to the satisfaction of the Engineer.
- D. Off-form finish. Fins and other projections shall be removed as approved. Tie cone holes and other minor defects shall be filled as specified in Section 03300.

3.02 FLOORS AND SLABS

- A. Floors and slabs shall be screeded to the established grades and shall be level with a tolerance of 1/8 inch when checked with a 12 foot straightedge, except where drains occur, in which case floors shall be pitched to drains as indicated.

Failure to meet either of above shall be cause for removal, grinding or other correction.

- B. After Paragraph 3.02A procedures are accomplished, floors and slabs for particular conditions shall be completed as scheduled in one of the following finishes:
1. Wood flat finish. Hand wood float with no coarse aggregate visible, maintaining the surface tolerance to provide a grained, non-slip finish as approved.
 2. Broomed finish. Hand wood float maintaining the surface tolerance and then broom with a stiff bristle broom in the direction of drainage to provide a non-slip finish as approved.
 3. Steel trowel finish. Steel trowel to a perfectly smooth, hard even finish free from high or low spots or other defects as approved and described in Paragraph 3.02C herein.
- C. Following screeding as specified above, power steel trowel as follows:
1. Immediately after final screeding a dry cement/sand shake in the proportion of 2 sacks of portland cement to 350 pounds of coarse natural concrete sand shall be sprinkled evenly over the surface at the rate of approximately 500 pounds per 1,000 square feet of floor. Neat, dry cement shall not be sprinkled on the surface. This shake shall be thoroughly floated into the surface with an approved disc type power compacting machine weighing at least 200 pounds if a 20 inch disc is used or 300 pounds if a 24 inch disc is used (such as a "Kelly Float" as manufactured by the Weisner-Rapp Corporation of Buffalo, New York). A mechanical blade-type float or trowel is not acceptable for this work.
 - a. NOTE: This operation (application of the cement/sand shake) may be eliminated at the discretion of the Engineer if the base slab concrete exhibits adequate fattiness and homogeneity, and the need is not indicated.
 2. In lieu of power steel troweling, small areas shall be compacted by hand steel troweling with the dry cement/sand shake as ordered.
 3. The floor or slab shall be compacted to a smooth surface and the floating operation continued until sufficient mortar is brought to the surface to fill all voids. The surfaces shall be tested with a straightedge to detect high and low spots which shall be eliminated.
 4. Compactions shall be continued only until thorough densification is achieved and a small amount of mortar is brought to the surface. Excessive floating shall be avoided.
 5. After the surface moisture has disappeared, surface shall be steel-troweled to a smooth, even, impervious finish, free from trowel marks. After cement has set enough to ring the trowel, the surfaces of all slabs except concrete roof slabs and bottom tanks shall be given a second steel-troweling to a burnished finish.

3.03 HARDENED APPLICATION

- A. Where floor slabs are not be otherwise coated or covered, a hardener shall be applied to the floor slabs with monolithic finish after 28 days, minimum, concrete

cure. The floors shall be thoroughly cured, cleaned, and perfectly dry with all work above them completed. The hardener shall be applied evenly and freely, using three coats, allowing 24 hours between coats. The first coat of fluorsilicate hardeners shall be 1/3 strength, second coat 1/2 strength and third coat 2/3 strength, and each coat shall be applied so as to remain wet on the concrete surface for 15 minutes. Sodium silicate hardener shall be applied in three coats, each at full strength and at the rate of 1/3 gallon per 100 square feet. Approved proprietary hardeners shall be applied in conformance with manufacturer's instructions. After the final coat is completed and dry, surplus hardener shall be removed from the surface by scrubbing and mopping with water.

3.04 WATERTIGHTNESS

- A. All structures to contain water shall be watertight and shall be free from any perceptible leakage.

3.05 APPROVAL OF FINISHES

- A. All concrete surfaces will be inspected during the finishing process by the Engineer.
- B. Surfaces which, in the opinion of the Engineer, are unsatisfactory shall be refinished or reworked until approved by the Engineer.

END OF SECTION