



Legislation Text

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Interoffice Memorandum

DATE: August 20, 2024

TO: Mayor Jerry L. Demings and County Commissioners

THROUGH: N/A

FROM: Ed Torres, M.S., P. E., LEED AP, Director, Utilities

CONTACT: Andres Salcedo, P. E., Deputy Director, Utilities

PHONE: 407-254-9719

DIVISION: Fiscal and Operational Support Division

ACTION REQUESTED:

Approval and execution of Interlocal Agreement (Orange County South Water Reclamation Facility Odor Control Project) by and between Orange County and Shingle Creek Transit and Utility Community Development District in the total payment obligation amount of \$23,769,738. District 6. (Fiscal and Operational Support Division)

PROJECT: N/A

PURPOSE: The South Water Reclamation Facility (SWRF) is the largest facility of its kind in Central Florida, with capacity to provide wastewater and reclaimed water service to a population of more than 500,000 people in south Orange County, including, among others, the I-Drive Activity Center, as well as other commercial activities on Sand Lake Road, the Tangelo Park Residential Community, and over 100,000 residences in south Orange County. Universal City Development Partners, Ltd. is developing the Epic Universe theme park immediately adjacent to SWRF and the theme park is currently under construction. On October 10, 2023, the Board approved the establishment of the Shingle Creek Transit and Utility Community Development District (CDD), which included an odor control project at the SWRF within its capital improvements program.

Orange County Utilities (OCU) capital improvements program includes over \$24 million for an odor control project at the SWRF facility. The CDD desires to make additional system upgrades to SWRF to benefit the surrounding community with an additional budget of approximately \$18 million. The County and the CDD recognize that by combining the components of the County's improvements and the CDD's improvements into a single odor control program (Odor Control Project), the SWRF odor

control measures will be implemented more efficiently, cost effectively, and timely. This Interlocal Agreement provides the terms under which the CDD and the County will collaborate and share the cost of the Odor Control Project. The CDD will be responsible for the project oversight design and construction through a design-build contractor. OCU will own and operate the odor control facilities after construction is completed.

On May 2, 2024, a Temporary Access and License Agreement was entered into under the Major Economic Development Project Program that grants the CDD the necessary access to the SWRF and allowed the CDD to proceed at its own risk with the preliminary design and odor control measures associated with the Odor Control Project to meet the common goal of completing the project in 2025. In accordance with the Temporary Access and License Agreement, its original six-month term will now extend until the completion of the Odor Control Project and its acceptance by the County.

The Interlocal Agreement provides for the reimbursement of listed at-risk cost associated with purchases and contracts entered into or assigned to the CDD prior to the agreement execution, which were coordinated with County staff. The total estimated cost for the Odor Control Project is \$41,733,860. The County's portion of the Odor Control Project is \$23,769,738, which includes \$5,018,782 of contingency based on actual preliminary bids associated with design, equipment, materials, and construction contracts.

The County Attorney's Office and Risk Management Division have reviewed the Agreement and find it acceptable as to form. Utilities Department staff recommends approval.

BUDGET: N/A

BCC Mtg. Date: September 10, 2024

INTERLOCAL AGREEMENT
(Orange County South Water Reclamation Facility Odor Control Project)

THIS INTERLOCAL AGREEMENT (the “**Interlocal Agreement**”) is made and entered into as of the date of last execution below (the “**Effective Date**”), by and between **Orange County**, a charter county and political subdivision of the State of Florida (the “**County**”), whose address is 201 South Rosalind Avenue, Orlando, Florida 32801-7600, and **Shingle Creek Transit and Utility Community Development District**, a local unit of special-purpose government (the “**District**”), whose address is 3501 Quadrangle Boulevard, Suite 270, Orlando, Florida 32817. In this Interlocal Agreement, the County and the District may be referred to individually as a “**Party**” or collectively as the “**Parties.**”

RECITALS:

WHEREAS, the District was established by County Ordinance No. 2023-40 pursuant to and governed by the provisions of Chapter 190, *Florida Statutes* (the “**Act**”); and

WHEREAS, Section 190.012(1)(b), *Florida Statutes*, gives the District the ability to equip and to operate a sewer system and to dispose of any effluent, residue or other byproducts of the sewer system, and Section 190.012(1)(g), *Florida Statutes*, additionally gives the District the ability to oversee any other project within or outside its boundaries when the project is the subject of an interlocal agreement; and

WHEREAS, pursuant to the Act, the District is accordingly authorized to finance, construct, acquire, maintain, and/or operate infrastructure improvements and services including, but not limited to, water, wastewater, and sewer utility improvements, serving and/or benefitting the lands within the District including portions of the area known as the “**I-Drive Activity Center**,” and

WHEREAS, the County owns, operates, and maintains the South Water Reclamation Facility (“**SWRF**”), which serves and lies adjacent to the District, the I-Drive Activity Center, the Tangelo Park Residential Community (“**Tangelo Park**”), and other commercial activities on Sand Lake Road; and

WHEREAS, Universal City Development Partners, Ltd. (the “**Developer**”) owns and develops property within the I-Drive Activity Center, and owns the majority of the lands within the District; and

WHEREAS, Orange County Utilities (“**OCU**”) included a Capital Improvement Project (“**CIP**”) for SWRF in its most recent *Orange County Utilities Capital Improvements Program Projects* plan, including a project entitled “SWRF Phase 6B – Biosolids Building Odor Control

System” (hereinafter, the “**Current County Improvements**”), which is projected to begin construction in 2025; and

WHEREAS, OCU has also identified additional odor control facilities as part of its overall CIP that are not part of its currently funded CIP program (the “**Future County Improvements**,” and together with the Current County Improvements, the “**County Improvements**”) that the County and the District would like to expedite; and

WHEREAS, based on a recent study of odor control measures completed by the Developer, the District desires to make additional system upgrades to SWRF (the “**District Improvements**”) and the County is amenable to same; and

WHEREAS, the Parties recognize that by combining all components of the County Improvements and the District Improvements into a single odor control program (hereinafter, the “**Consolidated Program**”), the SWRF odor control measures may be implemented more efficiently, cost effectively, and timely through completion of such a program than through multiple individual projects; and

WHEREAS, the Parties acknowledge and agree that the immediate advancement of a single Consolidated Program would reduce the overall schedule and increase the overall cost-benefits analysis versus the implementation of several individual capital improvement projects; and

WHEREAS, the Parties acknowledge and agree that the provision of the Consolidated Program by the District is beneficial to, and in the best interest of, the District and its landowners, the County, and users of the SWRF service area, including but not limited to the I-Drive Activity Center, Tangelo Park, and other commercial and residential developments adjacent to SWRF; and

WHEREAS, the Parties accordingly desire for the District to proceed with design and construction of the Consolidated Program on behalf of the County for the benefit of the District and its landowners, the County, and users of the SWRF service area, including but not limited to the I-Drive Activity Center, Tangelo Park, and other commercial and residential developments adjacent to SWRF; and

WHEREAS, it is in the mutual interest of the Parties to establish intergovernmental relations that encourage, promote, and improve the coordination, overall effectiveness, and efficiency of governmental activities and services; and

WHEREAS, Florida law permits governmental units to make the most efficient use of their powers by enabling them to cooperate with one another on a basis of mutual advantage through interlocal agreements; and

WHEREAS, the Parties find this Interlocal Agreement to be necessary, proper, and convenient to the exercise of their powers, duties, and purposes authorized by law; and

WHEREAS, the Parties desire to exercise jointly their common powers and authority concerning the provision of certain services and facilities to avoid unnecessary and uneconomic duplication of services and facilities and to clarify responsibilities, obligations, duties, powers, and liabilities relative to the Consolidated Program.

NOW, THEREFORE, in consideration of the mutual understandings and covenants set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

Section 1. Authority. This Interlocal Agreement is entered into pursuant to the authority set forth in Chapters 190 and 163, *Florida Statutes*, and other applicable law. This Interlocal Agreement shall be recorded in the Public Records of Orange County, Florida by the District at the District's sole cost and expense.

Section 2. Recitals. The recitals stated above are true and correct and by this reference are incorporated into and form a material part of this Interlocal Agreement.

Section 3. Authority to Contract. The execution of this Interlocal Agreement has been duly authorized by the appropriate body or official of each of the Parties, each Party has complied with all applicable requirements of law, and each Party has full power and authority to comply with the terms and provisions of this instrument.

Section 4. Relationship of the Parties. The Parties accept the contractual relationship established by this Interlocal Agreement. The Parties covenant to cooperate in the completion of all Work (as defined in Section 4.B. of this Interlocal Agreement) required to implement the Consolidated Program.

A. Further, the District acknowledges that:

1. The District has represented to the County that the District has and will retain consultants and contractors with specific expertise in contracting the planning, management, and construction of projects of a similar nature as the Consolidated Program; and

2. Such representation is a material inducement to the County to enter into this Interlocal Agreement.

B. For the purposes of this Interlocal Agreement, "**Work**" shall mean any and all obligations, duties, and responsibilities necessary for the successful completion of the design, engineering, construction, and commissioning of all requirements assigned to or undertaken in furtherance of the completion of the Consolidated Program. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials, equipment, and other incidentals into such construction, all as required by the contract documents relative to the Consolidated Program.

C. As set forth in Section 8.A. of this Interlocal Agreement, and notwithstanding anything to the contrary in the Design Criteria Professional Agreement, the Design-Build Agreement, or any other future construction or services agreements relating to the provision of the Work, the District is fully responsible to the County for the design and construction means, methods, techniques, sequences, and procedures in performing the Work, and for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of this Interlocal Agreement despite the District's delegation of the responsibility therefor to any of its consultants, contractors, and subcontractors. If the Work required in the contract documents requires the District to subcontract with any party to provide any professional

services constituting the practice of architecture, design, or engineering, the District shall be directly responsible to the County for any portion of the Work so required. The District shall use its best skill, effort, and judgment to cause the Work to be completed in the interest of the Parties; to furnish efficient business administration, management and supervision; to contract with consultants and contractors that will agree to furnish at all times an adequate supply of workers and materials; and to cause the completion of the Consolidated Program in a safe, expeditious and economical manner, consistent with the terms of the agreements through which the District has contracted to complete the Work.

D. The District shall be acting as an independent entity at all times during the performance of the Consolidated Program and no provision in this Interlocal Agreement shall create an employment or agent relationship between the Parties.

Section 5. Odor Control Design Criteria and Program Scope of Work. In order to ensure the safe, sustainable, and reliable operations of SWRF and to meet the County's requirements for limiting the release of nuisance or objectionable odors beyond SWRF property boundaries, the Design Criteria Professional (as hereinafter defined in Section 7.B. of this Interlocal Agreement) shall develop the "**Odor Control Design Criteria**" for the Consolidated Program, which shall be approved by the District and the County Representative (as hereinafter defined in Section 8.F. of this Interlocal Agreement) and set forth in the preliminary design report. The Parties acknowledge and agree that Odor Control Design Criteria shall be designed to treat at least 100/300 parts per million.

Section 6. Planning Activities.

A. Program Scope. The Parties, in consultation with OCU, have developed and agreed upon a comprehensive project scope for the Consolidated Program (the "**Program Scope**"), as shown in the attached **Exhibit A**. Any changes or modifications to the Program Scope after execution of this Interlocal Agreement shall be addressed pursuant to Section 8.K. of this Interlocal Agreement relative to the processing and approval of Change Orders (as defined in Section 8.K. of this Interlocal Agreement).

B. Program Schedule. The Parties, in consultation with OCU, have developed and agreed upon a comprehensive timetable of predicted tasks, milestones, task durations, deadlines, and start and end dates of the Consolidated Program for the completion of the design and construction of the Program Scope, which is included as **Exhibit B** to this Interlocal Agreement (the "**Program Schedule**"). Any changes or modifications to the Program Schedule after execution of this Interlocal Agreement shall be addressed pursuant to Section 8.K. of this Interlocal Agreement relative to the processing and approval of Change Orders. The Program Schedule includes the following:

1. A detailed fixed construction schedule for the completion of the portion of the Work authorized by Design-Build Amendment 1, Design-Build Amendment 2, and Design-Build Amendment 3 (each, defined in Section 7.A.2. of this Interlocal Agreement); and

2. A projected tentative construction schedule with commencement and completion dates for the portion of the Work required for the completion of the Consolidated Program but not yet authorized by a Design-Build Amendment as of the date of execution of this Interlocal Agreement (the "**Tentative Construction Schedule**"). Notwithstanding the foregoing

and for the avoidance of doubt, the Tentative Construction Schedule shall only be utilized for planning purposes and the contractual date(s) of completion for the portion of the Work not yet authorized shall be set forth in future Design-Build Amendments; provided, however, that there is no obligation created pursuant to this Interlocal Agreement for the District to enter into future Design-Build Amendments with the Design-Build Contractor and therefore the projected completion dates set forth in the Tentative Construction Schedule are not guaranteed by either the District or the Design-Build Contractor.

C. Base Program Budget, Contingency, and Program Budget. The Parties, in consultation with OCU, have developed and agreed upon a comprehensive budget necessary for the completion of the design and construction of the Program Scope in accordance with the Program Schedule in the amount of Thirty-Four Million One Hundred Fifty-Four Thousand Four Hundred Sixty-Seven Dollars (\$34,154,467.00) (the “**Base Program Budget**”). The Base Program Budget does not include a contingency. The contingency for the completion of the design and construction of the Program Scope is Seven Million Five Hundred Seventy-Nine Thousand Three Hundred Ninety-Three Dollars (\$7,579,393.00) (the “**Contingency**”). The “**Program Budget**” is the sum of the Base Program Budget and the Contingency, as more fully depicted in the attached **Exhibit C**. Any changes or modifications to the Base Program Budget after execution of this Interlocal Agreement shall be addressed pursuant to Section 8.K. of this Interlocal Agreement relative to the processing and approval of Change Orders. Any increase in the Base Program Budget will be deducted from the Contingency, and will not result in an increase in the Program Budget.

1. The Base Program Budget shall be separated into two (2) separate categories (the “**Cost Categories**”) as set forth below. Each Design-Build Amendment shall separate the total cost of the guaranteed maximum price (“**GMP**”) for the Work authorized by such amendment by Cost Categories.

i. Items which OCU and the District agree are County Improvements for which the County is responsible for providing funding to the District (the “**County Improvement Costs**”). As shown in **Exhibit C**, estimated County Improvement Costs of the Base Program Budget are Eighteen Million Seven Hundred Fifty Thousand Nine Hundred Fifty-Seven Dollars (\$18,750,957.00), which does not include any contingency for Change Orders.

ii. Items which OCU and the District agree may improve the Odor Control System and the District would like to include in the Work are District Improvements for which the District is responsible for funding (the “**District Improvement Costs**”). As shown in **Exhibit C**, estimated District Improvement Costs of the Base Program Budget are Fifteen Million Four Hundred Three Thousand Five Hundred Ten Dollars (\$15,403,510.00) which does not include any contingency for Change Orders.

Section 7. Preliminary Work. The Parties acknowledge and agree that the Parties, OCU, and the Developer have all taken certain actions in advance of the execution of this Interlocal Agreement in furtherance of the timely and efficient completion of the Consolidated Program (collectively, the “**Preliminary Work**”).

A. The Developer has taken the following actions:

1. Entered into that certain *Amended and Restated Standard Form of Agreement Between Owner and Design-Builder*, dated December 8, 2023 (the “**Design-Build Agreement**”) with Symbiont Science, Engineering and Construction, Inc. d/b/a Mead & Hunt, Inc. (the “**Design-Build Contractor**”). The Design-Build Contractor shall provide design-build engineering and construction services necessary to complete the Program Scope. For the avoidance of doubt, the Work shall be completed through amendments issued under the Design-Build Agreement (hereinafter, the “**Design-Build Amendments**”), and each Design-Build Amendment shall be based on design criteria packages prepared by the Design Criteria Professional for the completion of the Work included in the Program Scope. In accordance with Section 287.055, *Florida Statutes*, all Design-Build Amendments issued by the District for the Work shall include a GMP, a guaranteed completion date, and any special provisions regarding commissioning activities or warranty requirements for the portion of the Work included in such amendment.

2. Entered into three (3) initial Design-Build Amendments under the Design-Build Agreement as follows:

i. *Design-Build Amendment 1*, dated December 8, 2023 to complete the Work identified in or otherwise required by Design Criteria Package 1 referenced in Section 7.B.2.i. of this Interlocal Agreement (“**Design-Build Amendment 1**”);

ii. *Design-Build Amendment 2*, dated December 8, 2023, to complete the portion of the Work identified in or otherwise required by Design Criteria Package 2 that is referenced in Section 7.B.2.ii.a. of this Interlocal Agreement (“**Original Design-Build Amendment 2**”); and

iii. *Design-Build Amendment 3*, dated December 8, 2023 to complete the portion of the Work identified in or otherwise required by Design Criteria Package 2 that is referenced in Section 7.B.2.ii.b. of this Interlocal Agreement, as amended by that certain *Change Order #1*, dated December 14, 2023 (collectively, “**Original Design-Build Amendment 3**”).

B. The District has taken the following actions:

1. Entered into that certain *Agreement for District Engineering Services, Design Services, and Design Criteria Professional Services*, dated December 13, 2023 and associated work authorizations (the “**Design Criteria Professional Services Agreement**”) with Kimley-Horn and Associates, Inc. (the “**Design Criteria Professional**”), authorizing, in part, the development of multiple design criteria packages, that may be executed over time, to define the Work to be completed as part of the Program Scope (hereinafter, the “**Design Criteria Package**”).

2. Entered into that certain *Work Authorization No. 4*, dated January 10, 2024 (the “**Design Criteria Package Work Authorization**”) with the Design Criteria Professional relative to the preparation of two (2) initial Design Criteria Packages defining the following portions of the Program Scope:

i. “*Design Criteria Package 1:*” Odor control monitoring services including the installation, maintenance, data collection and reporting of the logging

devices that will provide the required monitoring and data collection to verify hydrogen sulfide concentrations defined in the Odor Control Design Criteria for an initial period through January 1, 2025.

ii. “Design Criteria Package 2:”

a. The authorization of certain design services portions of the Program Scope for i) the Current County Improvements, ii) the Future County Improvements that OCU determined are necessary to meet the Odor Control Design Criteria, and iii) any District Improvements that are desired to be advanced immediately; and

b. The specification and procurement of long-lead item equipment that the Design-Build Contractor has determined must be ordered prior to the final completion of the design included in Section 7.B.2.ii.a. of this Interlocal Agreement in order to meet the overall Program Schedule.

3. Accepted the assignment of the following agreements from the Developer (collectively, the “**Assigned Agreements**”) pursuant to that certain *Assignment and Assumption of Agreement*, dated December 21, 2023:

i. The Design Criteria Professional Services Agreement, including the Design Criteria Package Work Authorization; and

ii. The Design-Build Agreement, including Design-Build Amendment 1, Original Design-Build Amendment 2, and Original Design-Build Amendment 3.

4. Entered into the following agreements (collectively, the “**New Agreements**”) (the New Agreements, together with the Assigned Agreements, shall be collectively referred to herein as the “**District Agreements**”):

i. *Addendum to Design Build Agreement*, dated December 21, 2023;

ii. *Change Order #1*, dated August 5, 2024 to Original Design-Build Amendment 2 (“**Design-Build Amendment 2 Change Order 1**,” and together with Original Design-Build Amendment 2, collectively “**Design-Build Amendment 2**”);

iii. *Change Order #2*, dated January 3, 2024 to Original Design-Build Amendment 3 (“**Design-Build Amendment 3 Change Order #2**,” and together with Original Design-Build Amendment 3, collectively “**Design-Build Amendment 3**”);

iv. *Design-Build Amendment 4*, dated August 5, 2024, relative to a portion of the construction of the portion of the Work relating to certain temporary odor control measures, the “Influent Pump Station,” and the “Screen Building” (“**Design-Build Amendment 4**”);

v. *Design-Build Amendment 5*, dated August 5, 2024, relative to the provision of additional temporary odor control measures (“**Design-Build Amendment 5**”);

- vi. The *Purchase Order*, dated February 2, 2024 with PureAir Filtration, LLC;
- vii. The *Purchase Order*, dated February 5, 2024 with BioAir Solutions, LLC, as amended by that certain *Change Order #1*, dated June 20, 2024;
- viii. The *Purchase Order*, dated April 25, 2024 with The New York Blower Company;
- ix. The *Purchase Order*, dated June 24, 2024 with Piping and Equipment Company; and
- x. The *Purchase Order*, dated June 30, 2024 with Perry Fiberglass Products, Inc.

C. The District and the County have taken the following actions:

1. Entered into that certain *Temporary Access and License Agreement (Orange County South Water Reclamation Facility Odor Control Project)*, dated May 2, 2024 and attached hereto as **Exhibit D**, to allow for the construction of the Consolidated Program.

Section 8. Design and Construction of the Consolidated Program.

A. **Design and Construction.** For the benefit of the County and the District, the District will procure, administer, and manage all engineering, design, construction administration/project management and inspection, equipment procurement and installation, and construction contracts for all work required to complete the Consolidated Program while allowing the County to maintain safe, environmentally sound operations of SWRF, and protecting above and underground facilities. Above and underground facilities include, but are not limited to, all underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid Petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

1. The District will administer the Design Criteria Professional Agreement and the Design-Build Agreement, and any other contracts or agreements that the District executes in furtherance of the completion of the Work required for the completion of the Consolidated Program. The Design Criteria Professional will direct and oversee the Design-Build Contractor, and any other contracts or consultants necessary for the completion of the Work, and shall obtain approval from the County Representative prior to the acceptance of any Work as set forth in more detail in Section 9 of this Interlocal Agreement. The District shall use commercially reasonable efforts to ensure that i) commencement of design and construction activities occurs as soon as practicable, ii) construction proceeds in accordance with the Program Schedule and Construction Plan Documents (as defined in Section 8.B. of this Interlocal Agreement), and iii) the construction contractor(s) actively coordinate with the County to maintain continuous SWRF operations.

B. Approval of Construction Plan Documents. The drawings, specifications and other documents for each Design-Build Amendment (including shop drawings and samples), as may be further amended from time to time in accordance with this Interlocal Agreement and the Design-Build Agreement, setting forth the design of portions of the Consolidated Program and the requirements for its construction in sufficient detail for the construction thereof (hereinafter collectively referred to as the “**Construction Plan Documents**”) must be approved in writing by OCU prior to the District’s commencement of site construction relative to the Consolidated Program. For the avoidance of doubt, the District may execute purchase orders for long lead equipment by the Design Build Contractor as being required for any Design-Build Amendment prior to OCU’s approval of the associated Construction Plan Documents, in consultation with the County Representative.

1. The County’s approval is solely to confirm that such Construction Plan Documents are materially consistent with the Design Criteria Package, the Program Scope, Program Budget, and the Program Schedule as detailed in each Design-Build Amendment. Such approval by the County shall not be unreasonably withheld, conditioned or delayed and in any event the County’s written approval or denial shall be delivered within fifteen (15) calendar Days following receipt thereof (with any denial to include specific reasons for such denial). Once such Construction Plan Documents have been approved by the County, any changes shall be addressed pursuant to Section 8.K. of this Interlocal Agreement relative to the processing and approval of Change Orders. It is understood and agreed that the Construction Plan Documents and any other documents identified in or required by any Design-Build Amendment, including detailed reports, plans, original drawings, survey field notebooks, and all other data other than working papers, prepared or obtained by the Design Criteria Professional and/or Design-Build Contractor in connection with its services hereunder shall become the property of the County upon Final Acceptance (as defined in Section 9.A.3. of this Interlocal Agreement) by the County of the portion of the Work completed under each Design-Build Amendment.

C. No Liens. The District shall allow no lien to attach to the SWRF property or any improvements located on said property arising out of work performed by, for, or on behalf of the District pursuant to this Interlocal Agreement. The District shall pay or transfer to other security all such liens, claims or demands before any action is brought to enforce the same against the SWRF property or the County.

D. Conformance with Public Laws. The Consolidated Program shall be constructed in accordance with all applicable federal, state, County and local laws, statutes, codes, ordinances, rules, regulations, standards, or orders of any public authority having jurisdiction over the Consolidated Program, including trade practices, building, health, labor, safety, licensing, environmental or zoning laws, codes, ordinances, rules, regulations, standards, or orders of any such public authority (collectively, hereinafter referred to as the “**Public Laws**”).

E. District and Design-Build Contractor Procurement. As set forth in more detail in Section 7.B. of this Interlocal Agreement, prior to the execution of this Interlocal Agreement, the District accepted the assignment of the Assigned Agreements, all of which had previously been entered into by the Developer, and entered into the New Agreements. The County agrees that the District may continue to administer all District Agreements through the completion of the Work for the Consolidated Program.

1. The District shall cause the Design-Build Contractor to i) award all subcontractor and vendor work under the Design Build Agreement and the Design-Build Amendments in accordance with the criteria set forth by the District as described in **Exhibit E** and ii) require its subcontractors and vendors to comply with the applicable portions of the technical specifications as described in **Exhibit F**, as shall be determined by the District in consultation with the County Representative.

2. Pursuant to Section 8.D. of this Interlocal Agreement, any additional contracts, agreements, or other procurement actions the District deems necessary will be competitively procured in accordance with the Public Laws, including but not limited to Section 190.033, *Florida Statutes*.

3. The District shall not accept the assignment of any materials or equipment purchase orders and/or contracts for consultant or contractor services that include a mark-up greater than six (6%) percent.

4. Prior to the execution of this Interlocal Agreement, and in an attempt to expedite the completion of the Consolidated Program and to reduce costs, the District and other stakeholders have entered into certain materials or equipment purchase orders and/or contracts for consultant or contractor services necessary for the completion of such project as identified in Section 7 of this Interlocal Agreement. These purchase orders and/or contracts were entered into by the District at-risk. The County acknowledges and agrees that pre-approved costs expended by the District and other stakeholders prior to the execution of this Interlocal Agreement in furtherance of the completion of the Consolidated Program as set forth in Section 7 of this Interlocal Agreement are included within the Program Budget and subject to reimbursement to the District with respect to the County Improvement Costs; provided, however that in order for the materials and equipment procured by the District identified in Section 7.B.4.(vi)-(x) of this Interlocal Agreement to be included within the Program Budget, the materials or equipment ultimately received and accepted by the District shall be substantially compliant with the specifications for same as set forth in the relevant purchase order.

i. Any materials or equipment purchase orders not listed in Section 7 of this Interlocal Agreement but for which i) the District believes are included within the Program Budget and subject to reimbursement to the District with respect to the County Improvements Costs and ii) are entered into by the District prior to the Effective Date of this Interlocal Agreement, require separate approval by the Orange County Board of County Commissioners (the “**BCC**”) for reimbursement. Any such purchase orders entered into by the District without approval of the County Representative are considered at-risk and may not be subject to reimbursement by the County. Upon the Effective Date of this Interlocal Agreement, County staff shall promptly seek BCC approval for reimbursement to the District for all such purchase orders as are approved by the County Representative.

5. The County shall be a third-party beneficiary to all existing and future consultant and contractor contracts, and the District shall promptly deliver to the County fully executed copies of such contracts upon its request for same.

6. The District shall require its consultants and contractors, including subcontractors, to hold and maintain through the Final Acceptance of the Consolidated Program

insurance coverages in an amount necessary to insure the Parties' interests with respect to the Consolidated Program, but in any event the minimum insurance coverages as identified in the attached **Exhibit G**.

7. The District shall prepare and file a Notice of Commencement (the "NOC") relative to the Work and shall record the NOC in the public records of Orange County, Florida. Prior to commencing construction, or concurrent with an assignment of any existing and future construction contracts, as applicable, the District shall ensure that the applicable contractor(s) execute, record in the public records of Orange County, Florida, and deliver to the District a payment and performance bond in the amount of the construction contract and in compliance with the terms of Section 255.05, *Florida Statutes*, naming both the District and the County as obligees thereof.

F. *Coordination with the County.* The County shall designate persons(s) that shall be responsible for supervising all design and inspecting all construction work on the County's behalf (hereinafter referred to as the "**County Representative**"). The District agrees to keep the County Representative informed regarding the progress of the design and construction of the Consolidated Program including any material issues that may impact the foregoing or the schedule for completion of the Consolidated Program through meetings that are scheduled at mutually agreeable dates. In no event shall the County be deemed to have control over, charge of, or any responsibility for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Consolidated Program, notwithstanding any of the rights and authority granted the County in this Interlocal Agreement and the contract documents. The County Representative for the purposes of this Interlocal Agreement shall be the Chief Engineer for the design phase, and the Chief Inspector for the construction phase.

G. *Sales Tax Exempt Purchasing.* The District shall coordinate with consultants and contractors and use commercially reasonable efforts to purchase and install or cause to be installed construction materials and equipment relative to the Consolidated Program on a sales tax-exempt basis pursuant to Public Laws. Notwithstanding the foregoing, the District shall not be responsible for any failure to make such purchases on a sales tax-exempt basis, provided that it performs its obligations in accordance with the requirements of this Section 8.G.

H. *Construction, Material, and Equipment Warranties.* All materials or equipment purchase orders and/or contracts for consultant or contractor services issued or entered into by the District will include relevant construction and equipment warranty terms in accordance with the Design-Build Agreement, as clarified or modified by each Design-Build Amendment or direct purchase order issued by the District and approved by OCU; provided, however that the District shall ensure that the Work is warranted, at a minimum, to i) conform to the requirements of the Construction Plan Documents and ii) be free from defects for a period of one (1) year from Substantial Completion of each Project (as defined in Section 9.A.1. of this Interlocal Agreement).

I. *No District Warranties.* THE DISTRICT DISCLAIMS ANY AND ALL WARRANTIES RELATED TO ITS DESIGN AND CONSTRUCTION OF THE CONSOLIDATED PROGRAM, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, WORKMANSHIP, CONSTRUCTION OR PHYSICAL CONDITION OF THE FACILITY AND ALL FIXTURES OR ITEMS OF PERSONAL PROPERTY CONTAINED

THEREIN, REGARDLESS OF WHETHER THE WARRANTIES ARISE FROM CUSTOM, USAGE, COURSE OF TRADE, CASE LAW, STATUTORY LAW OR OTHERWISE. ANY CONVEYANCE OF THE WORK FROM THE DISTRICT IS ON AN “AS IS” BASIS, “WITH ALL FAULTS.”

J. County Reimbursement for Consolidated Program Costs.

1. County Improvement Costs: The County shall reimburse the District as described herein for all County Improvement Costs completed and accepted by OCU.

2. District Improvement Costs: The County shall not reimburse or otherwise be responsible for any District Improvement Costs.

3. County Reimbursement Methodology: Upon the District’s completion of any portion of the Work pursuant to an executed Design-Build Amendment, purchase order, agreement, or other District obligation, and the acceptance of that portion of the Work by OCU, the County shall reimburse the District for any Work categorized as County Improvement Costs using the following procedure:

i. The District shall provide a written request for reimbursement (“**Reimbursement Request**”) to OCU detailing all portions of the Work completed and accepted, and an accounting of all costs paid by the District for all County Improvement Costs. The District shall provide written documentation sufficient to allow the County to verify the accuracy of the costs included in the Reimbursement Request. The County will reimburse the District for the actual and reasonable costs of the Work for the County Improvements which may be requested by the District as often as on a monthly basis after all the following events have occurred:

a. Receipt by the County of a Reimbursement Request from the District. The Reimbursement Request must explicitly specify to whom the reimbursement check is made payable and the payee’s address;

b. An application and certificate for payment from the contractor, utilizing the American Institute of Architects (AIA) documents G702 and G703 for the portion of the Work for the County Improvements which reimbursement is being requested;

c. An invoice from the Design-Criterial Professional for the portion of the Work of the County Improvement Costs for which reimbursement is being requested;

d. An affidavit from the Design-Criteria Professional certifying to the District and the County the completion of the of Work for the portion of the County Improvements for which reimbursement is being requested;

e. Inspection, approval, and acceptance by the County Representative of the completed Work for the County Improvement Costs;

f. Receipt by the County of all documents set forth in Section 9 of this Interlocal Agreement; and

g. Receipt by the County of copies of such contracts, final release of liens in substantially the same form as the standardized County approved form, itemized invoices, and other documents evidencing the costs of and complete payment for the Work for the County Improvement Costs, including any retainage as may reasonably be requested by the County.

ii. Within twenty-one (21) calendar Days of OCU's receipt of a Reimbursement Request, OCU shall i) provide written notice to the District as to any disagreement with regard to the amount of the Reimbursement Request (the "**Disputed Reimbursement Costs**"), identifying by line item any costs which OCU contends are not a result of performing Work categorized as County Improvement Costs (the "**Notice of Disputed Costs**"), and ii) begin processing the Reimbursement Request (less any Disputed Reimbursement Costs).

iii. The County shall, within ninety (90) calendar Days of OCU's receipt of the Reimbursement Request, pay to the District the full amount of the Reimbursement Request, less any Disputed Reimbursement Costs.

4. Resolution of Disputed Reimbursement Costs. If the County disputes any portion of a Reimbursement Request pursuant to Section 8.J.3.ii. of this Interlocal Agreement, or if the District declines the County's request for additional information or documentation related to the Reimbursement Request pursuant to Section 8.J.3.i. of this Interlocal Agreement, the Parties shall, within twenty-one (21) calendar Days from the date of the District's receipt of the Notice of Disputed Costs, meet to discuss and attempt to amicably resolve such dispute. If the dispute cannot be resolved within such timeframe, the dispute shall be elevated to the Design Criteria Professional and County Representative for final determination. The Design Criteria Professional and County Representative shall meet with the Parties within fifteen (15) calendar Days after the dispute is elevated in such manner. Thereafter, the Design Criteria Professional and County Representative shall have ten (10) calendar Days to make a final decision. Such final decision may thereafter be challenged by an appropriate action filed in the 9th Judicial Circuit in and for Orange County, Florida subject to the mutual waiver of claims for damages and attorneys' fees as set forth herein. For the avoidance of doubt, the remedy set forth in this Section 8.J.4. is only available relative to the resolution of Disputed Reimbursement Costs under Section 8.J.3.ii. of this Interlocal Agreement and the resolution of all other disputes shall be governed by Section 13 of this Interlocal Agreement.

K. Change Orders and Cost Overruns.

1. Change Orders. The District shall timely process any change orders to the Program Scope, Base Program Budget, or Program Schedule (hereinafter referred to as the "**Change Order(s)**") to ensure timely completion of the Consolidated Program in accordance with the Program Schedule, subject to the County timely approving applicable change orders in accordance with this Interlocal Agreement. With the exception of portions of the Work subject to a Change Order that is currently being processed for approval, the Work shall not be interrupted while requests for Change Orders are evaluated.

i. County Review and Approval Right. The District shall not enter into or approve Change Orders without the prior written approval by the County. Any such

Change Orders entered into by the District without County approval are considered at-risk and may not be subject to reimbursement by the County.

a. The District shall send such Change Order documentation to the County Representative via the Orange County Box.com account and the E-Builder system. The District shall provide i) a description of the proposed change to the Work, ii) the justification for the Change Order, and iii) a calculation of the additional costs, if any, resulting from implementing such Change Order, together with reasonable documentation supporting such calculation. A Change Order request that does not comply with the foregoing requirements shall be invalid and no response is required by the County Representative; provided, however, that the County will use good faith efforts to notify the District of such non-compliance upon becoming aware thereof.

b. The County shall not unreasonably withhold, delay, or condition its approval of the Change Orders, which such approval may be via handwritten or electronic signature (including Docusign or similar platforms) and transmitted by email or similar correspondence. The County shall timely respond to the Change Order approval request with either i) an approval, ii) a rejection of the request along with the reasoning for the rejection, or iii) a request for additional information within three (3) business Days. If the County fails to respond to the Change Order approval request within three (3) business Days, the District will provide additional notice of the original Change Order approval request and the County shall respond within two (2) business Days of the second notice. If the County fails to respond to the second notice within such two (2) business Days, the County shall have waived its right to dispute such Change Order and the District shall be entitled to execute such Change Order and to seek reimbursement by the County pursuant to the terms of this Interlocal Agreement.

c. If the County requests additional information regarding the Change Order, the District shall furnish such additional information within three (3) business Days or other mutually agreeable timeframe. Upon receipt of the requested additional information from the District, the County will then have an additional three (3) business Days to respond to the Change Order request with either an approval or rejection of the request. If the County fails to respond to Change Order request upon receipt of the additional information within such three (3) business Days, the County shall have waived its right to dispute such Change Order and the District shall be entitled to execute such Change Order and to seek reimbursement by the County pursuant to the terms of this Interlocal Agreement.

d. If the County rejects the Change Order and the District wishes to dispute such disapproval, the dispute shall be resolved by the dispute resolution provisions under Section 13 of this Interlocal Agreement.

ii. *Voluntary Change Orders.*

a. The County may request Change Orders provided that it delivers adequate documentation to the District as determined by the District in its sole discretion. The Parties agree that in the event any County-requested Change Orders result in an increase to the Base Program Budget, the cost of such Change Order shall be at the sole cost and expense of the County.

b. The District may request Change Orders provided that it delivers adequate documentation to the County as determined by the County in its sole discretion. The Parties agree that in the event any District-requested Change Orders result in an increase to the Base Program Budget, the cost of such Change Order shall be at the sole cost and expense of the District.

2. *Cost Overruns.* Cost overruns that arise as part of the construction of the Consolidated Program which are not i) included in the Base Program Budget or ii) related to voluntary Change Orders requested by either Party as set forth in Section 8.K.1.ii of this Interlocal Agreement (hereinafter, “**Cost Overruns**”), shall be accordingly allocated to either the District or the County, in accordance with the proportions as depicted in **Exhibit C**, depending on whether the Cost Overrun relates to the portion of the Program Scope relating to the District Improvements or the County Improvements.

Section 9. Substantial Completion, Final Completion, Conveyance, and Acceptance of the Improvements.

A. The Parties acknowledge and agree that the Consolidated Program will be completed through the execution of multiple individual projects authorized pursuant to separate Design-Build Amendments, purchase orders, and other agreements (hereinafter referred to as a “**Project**” or “**Projects**”) in accordance with the Program Scope, Program Budget, and Program Schedule. Accordingly, substantial and final completion of the Consolidated Program shall occur in phases.

1. “**Substantial Completion**” of each Project shall occur upon the District’s close-out of the applicable County permit relative to such Project (i.e. receipt of a certificate of occupancy, certificate of completion, etc. from OCU).

2. Upon the occurrence of i) the close out of all punch list items and final payments under all applicable purchase orders and consultant and construction contracts relative to a Project and ii) the District’s execution of a final certificate of completion and approval thereof by OCU, such Project shall be deemed to have achieved “**Final Completion.**” The final certificate of completion shall be signed by the District only after OCU is assured by reasonable tests, inspection, or otherwise as may be desired by OCU, that all the provisions of this Interlocal Agreement for that Project have been carried out to OCU’s satisfaction.

3. “**Final Acceptance**” shall mean acceptance by OCU of a Project for which a final certificate of completion has been executed, and upon the expiration of the correction period for such Project as is required by the contract documents relative to same.

4. Upon completion of all Work relative to the Consolidated Program, including Final Acceptance of all Projects implemented by the District for the Work, the District and OCU shall jointly determine that the Consolidated Program has achieved “**Final Program Completion and Acceptance.**”

B. Upon achieving Substantial Completion, the District shall cause the Design Criteria Professional to conduct an operations and performance meeting at SWRF to test the equipment and train OCU staff in the use of the equipment.

C. Upon achieving Substantial Completion of a Project, the District shall additionally take such actions and execute such documents as are necessary to convey the improvements comprising such Project, including spare parts and any operating manuals, to OCU and shall assign to OCU all warranties, approvals, and other rights of the District relating to the Project. After such conveyance, OCU shall own, operate, and maintain the improvements comprising the Project in perpetuity.

D. Within ten (10) months after Substantial Completion of a Project, the District shall cause the Design Criteria Professional to inspect each substantially completed Project with the County Representative and representatives of OCU and the District to determine if any non-conformities or defects exist pursuant to Section 8.H. of this Interlocal Agreement (the “**Warranty Inspection**”). Promptly after the Warranty Inspection, the District shall cause the Design Criteria Professional to provide a written summary of findings of warranty work that require the Design-Build Contractor, or other contractors, subcontractors, or consultants, as applicable, to take corrective action. In the event that any warranty work is identified, OCU will oversee the completion of such work directly with the Design-Build Contractor or other relevant contractors, subcontractors or consultants, as applicable. In addition to the above-referenced coordination relative to the Warranty Inspection, the District shall also cause the Design Criteria Professional to assist OCU in the documentation and resolution of any other warranty issues within the first year of the warranty period for each Project.

Section 10. Cooperation and Coordination.

A. Promptness of the Parties.

1. The Parties shall reasonably expedite any actions or approvals requested or required of such Party in connection with the Consolidated Program, and except as otherwise provided in this Interlocal Agreement, all such actions or approvals shall not be unreasonably withheld, conditioned or delayed. Neither the District nor the County shall act, or fail to act, in a manner that would cause, or would reasonably be expected to cause, a delay in the completion of the Consolidated Program. Nothing in this Section 10 shall be construed to require the District or the County to violate any Public Laws.

2. For the purposes of this Interlocal Agreement, “**Day**” shall mean one calendar day of 24 hours measured from midnight to the next midnight when used in the contract documents, unless otherwise specifically stated. When any period of time is referenced by days in this Interlocal Agreement, it shall be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a County holiday as determined by Orange County, such day shall be omitted from the computation, and the last day shall become the next succeeding day which is not a Saturday, Sunday, or County holiday.

B. Force Majeure. The Parties shall be excused for the period of any delay in the performance of any obligation or failure caused by terrorist act, war, embargo, government requirement, civil or military authority, pandemic, epidemic, act of God, or other similar causes beyond the Parties’ control, or by any other such causes which the Parties decide in writing justify the delay. Notwithstanding the foregoing, there shall be no events of force majeure relative to the payment of the County Improvement Costs to the District pursuant to Section 8.J. of this Interlocal Agreement.

C. Notification of Legal Actions Relative to the Consolidated Program. The Parties shall promptly notify the other Party in writing of any suit, proceeding or action (each, an “**Action**”) that is initiated or threatened against it in connection with the design or construction of the Consolidated Program. Any Action against the Parties in connection with the design and development of the Consolidated Program shall be pursued and handled in all material respects by the Party for which the Action was initiated.

D. Reporting Requirements. The Parties agree to cooperate in the preparation and/or compilation of any documents or information that is requested by the State of Florida, holders of the District’s special assessment bonds, notes, or indebtedness, or any other entity with a legal right to request such documents or information relative to same.

Section 11. Notices. With the exception of Change Order documentation to be sent to the County Representative during the completion of the Work which shall be distributed pursuant to Section 8.K.1.i.a. of this Interlocal Agreement, any notice required or allowed to be delivered hereunder shall be in writing and be deemed to be delivered when (a) hand-delivered to the official hereinafter designated; (b) delivered when such notice is sent by Federal Express or other nationally recognized overnight courier service; or (c) received when such notice is sent by the United States mail, postage prepaid, certified mail, return receipt requested, all to be addressed to a Party at the address set forth opposite the Party’s name below, or such other address as the Party shall have specified by written notice to the other Parties delivered in accordance therewith.

If to the County: Orange County Utilities Department
9150 Curry Ford Road
Orlando, Florida 32825-7600
Attn: Director

With a copy to: Orange County Administrator’s Office
Orange County Administration Building
201 S. Rosalind Avenue, 5th Floor
Orlando, Florida 32801-3527
Attn: County Administrator

If to the District: Shingle Creek Transit and Utility
Community Development District
3501 Quadrangle Boulevard, Suite 270
Orlando, Florida 32817-8329
Attn: District Manager

With a copy to: Kutak Rock LLP
107 West College Avenue
Tallahassee, Florida 32301-7707
Attn: District Counsel

Section 12. Indemnification.

A. District Indemnification. To the maximum extent permitted by the Public Laws, the District shall indemnify, defend and hold harmless the County from and against any

claim, loss, damage, liability, cost or expense, including reasonable attorneys' fees, directly arising out of any and all personal injury or property damage claims, liabilities, losses and causes of action arising from such claim which may arise solely as a result of the negligence of the District in connection with its rights and obligations under this Interlocal Agreement; provided, however, that the foregoing indemnification shall not extend to those claims, losses, damages, liabilities, costs or expenses asserted against or suffered by the County (or its officers, employees, attorneys, agents or instrumentalities) to the extent due to the negligence or willful acts or omissions of the County (or its officers, employees, attorneys, agents or instrumentalities), or to any action taken by the County in violation of this Interlocal Agreement or any action not taken that is required under this Interlocal Agreement.

B. County Indemnification. To the maximum extent permitted by the Public Laws, the County shall indemnify, defend and hold harmless the District from and against any claim, loss, damage, liability, cost or expense, including reasonable attorneys' fees, directly arising out of any and all personal injury or property damage claims, liabilities, losses and causes of action arising from such claim which may arise solely as a result of the negligence of the County in connection with its rights and obligations under this Interlocal Agreement; provided, however, that the foregoing indemnification shall not extend to those claims, losses, damages, liabilities, costs or expenses asserted against or suffered by the District (or its officers, employees, attorneys, agents or instrumentalities) to the extent due to the negligence or willful acts or omissions of the District (or its officers, employees, attorneys, agents or instrumentalities), or to any action taken by the District in violation of this Interlocal Agreement or any action not taken that is required under this Interlocal Agreement.

Section 13. Dispute Resolution. In the event of any claim or dispute among the Parties arising out of or relating to this Interlocal Agreement or the breach thereof (each, a "**Dispute**"), the Parties shall use their best efforts to settle such Dispute in a reasonable manner through amicable negotiations. Upon written request from either the District or the County to conduct such negotiations (the "**Dispute Notice**"), each Party and its counsel shall meet or otherwise confer as soon as conveniently possible, but in no case later than ten (10) business Days following receipt of the Dispute Notice, to attempt to resolve such Dispute. Prior to any meetings between the Parties, said Parties shall exchange relevant information, as reasonably requested, that will assist in resolving their Dispute; provided, that for a dispute resolution regarding Change Orders, if requested by either the District or the County in writing, the Parties shall use reasonable best efforts to meet as soon as possible, ideally within forty-eight (48) business hours following receipt of the Dispute Notice, to attempt to resolve such Dispute. If a Dispute has not been settled or resolved pursuant to this Section 13, the District or the County can notify the other Party of its intent to pursue litigation in connection with the Dispute, whereupon such Party may then commence litigation in accordance with this Agreement.

Section 14. Sovereign Immunity; Limitation of Liability.

A. The Parties intend to avail themselves of the benefits of Section 768.28, *Florida Statutes*, and any other statutes and common law governing sovereign immunity, to the fullest extent possible. Neither this provision nor any other provision of this Interlocal Agreement or any contract documents relative to the Consolidated Program shall be construed as a waiver of the Parties' right to sovereign immunity under Section 768.28, *Florida Statutes*, or other limitations imposed on the Parties' potential liability under state or federal law. The Parties agree

that neither Party shall be liable under this Interlocal Agreement for punitive damages or interest for the period before judgment. Nothing in this Interlocal Agreement is intended to inure to the benefit of any third party for the purpose of allowing any claim which would otherwise be barred under the doctrine of sovereign immunity or by operation of law. This Article shall survive termination of this Interlocal Agreement.

B. The provisions of Section 768.28, *Florida Statutes*, applicable to the District and the County apply in full to this Interlocal Agreement. Any legal actions to recover monetary damages in tort for injury or loss of property, personal injury, or death caused by the negligent or wrongful act or omission of any employee of the Parties acting within the scope of his/her office or employment are subject to the limitations specified in this statute.

C. No officer, employee or agent of the Parties acting within the scope of his/her employment or function shall be held personally liable in tort or named as a defendant in any action for any injury or damage suffered as a result of any act, event, or failure to act unless such officer, employee, or agent acted in bad faith or with malicious purpose or in a manner exhibiting wanton and willful disregard of human rights, safety, or property.

D. Neither Party shall be liable in tort for the acts or omissions of an officer, employee, or agent committed while acting outside the course and scope of his/her employment. This exclusion includes actions committed in bad faith or with malicious purpose, or in a manner exhibiting wanton and willful disregard of human rights, safety, or property.

Section 15. Regulatory Authority. In the event that the County exercises its regulatory authority as a governmental body, the exercise of such regulatory authority and the enforcement of any rules, regulations, laws, and ordinances shall be deemed to have occurred pursuant to the County's authority as a governmental body and shall not be attributable in any manner to the County as a Party to this Interlocal Agreement.

Section 16. Public Records. The District will allow public access to all documents, papers, letters or other materials subject to the provisions of Chapter 119, *Florida Statutes*, and which have been made or received by the District in conjunction with the Work. Nothing herein shall require the District to allow public access to any records or information not pertaining specifically to the Work, or to any proprietary information or other records, regardless of form, which either does not meet the definition of Public Record in Chapter 119, *Florida Statutes*, or is exempt from production thereunder.

Section 17. Records and Audits. The District will maintain in its place of business all books, documents, papers and other evidence pertaining in any way to payments made pursuant to this Interlocal Agreement. Such records shall be available at the District's place of business at all reasonable times during the term of this Interlocal Agreement and for four (4) years from the date of final payment under this Interlocal Agreement for audit or inspection by the County upon prior written notice.

Section 18. Headings. The headings or captions of articles, sections, or subsections used in this Interlocal Agreement are for convenience of reference only and are not intended to define or limit their contents, nor are they to affect the construction of or to be taken into consideration in interpreting this Interlocal Agreement.

Section 19. Authority of Signatory. Each signatory below represents and warrants that they are duly authorized by their respective Party to bind that Party to the terms and obligations of this Interlocal Agreement.

Section 20. Attorneys' Fees and Costs. Each Party shall bear its own costs, expert fees, attorneys' fees, and other fees incurred in connection with the preparation of this Interlocal Agreement. In the event either Party is required to enforce this Interlocal Agreement by court proceedings or otherwise, then each Party shall be responsible for its own costs incurred, including reasonable attorneys' fees.

Section 21. No Third-Party Beneficiaries. This Interlocal Agreement is by and between the County and the District and establishes the relationship between these Parties. The provisions of this Interlocal Agreement do not create any rights in any third parties and no such rights should be implied.

Section 22. Negotiation at Arm's Length. This Interlocal Agreement has been negotiated fully between the Parties as an arm's length transaction and with the assistance of legal counsel. Both Parties participated fully in the preparation of this Interlocal Agreement. In the case of a dispute concerning the interpretation of any provision of this Interlocal Agreement, both Parties are deemed to have drafted, chosen and selected the language, and the doubtful language will not be interpreted or construed against either Party.

Section 23. Successors, Assignment or Transfer. The Parties each bind itself and its partners, successors, executors, administrators and assigns to the other Party of this Interlocal Agreement and to the partners, successors, executors, administrators and assigns of such other Party, in respect to all covenants of this Interlocal Agreement. Additionally, the Parties deem the services to be rendered pursuant to this Interlocal Agreement to be personal in nature. As such, neither Party may assign or transfer its rights or obligations under this Interlocal Agreement to another unit of local government, political subdivision or agency of the State of Florida without the prior written consent of the other Party, which consent may not be unreasonably withheld. Except as set forth herein, the District may not transfer its rights or obligations under this Interlocal Agreement to a private party or entity without the prior written consent of the County.

Section 24. Amendment. This Interlocal Agreement shall constitute the entire agreement between the Parties and may be modified in writing only by mutual agreement of both Parties. The Parties agree that this Interlocal Agreement may be amended by a written document approved by each Parties' governing board.

Section 25. Applicable Law. This Interlocal Agreement shall be construed, interpreted and controlled by and in accordance with the laws of the State of Florida without reference to any conflicts of law provisions. Each Party hereby submits to the exclusive jurisdiction of, and waives any venue or other objection against, the 9th Judicial Circuit in and for Orange County, Florida for any and all legal proceeding(s) that may arise either directly, or indirectly, from this Interlocal Agreement or the Consolidated Program. Should any federal claims arise for which the courts of the State of Florida lack jurisdiction, the Parties hereby agree that venue for those actions shall be in the Orlando Division of the Middle District, U.S. District Court of Florida.

Section 26. Jury Waiver. Each Party hereby irrevocably waives, to the fullest extent permitted by applicable law, any right that Party does or might have to a trial by jury in any legal

proceeding(s) that may arise either directly, or indirectly, from this Interlocal Agreement or the Consolidated Program.

Section 27. Representations and Construction. Each Party represents that they have had the opportunity to consult with an attorney and have carefully read and understand the scope and effect of the provisions of this Interlocal Agreement. Neither Party has relied upon any representations or statements made by the other Party hereto which are not specifically set forth in this Interlocal Agreement or the contract documents, and that this Interlocal Agreement is not to be construed against any Party as it were the drafter of this Interlocal Agreement.

Section 28. Remedies. No remedy conferred upon any Party in this Interlocal Agreement is intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy: (i) provided for in this Interlocal Agreement; and (ii) now or later existing at law or at equity. No single or partial exercise by any Party of any right, power, or remedy provided to that Party by this Interlocal Agreement shall preclude any other or further exercise of any such rights, powers, or remedies. The rights and remedies of the Parties provided for under this Interlocal Agreement are in addition to any other rights and remedies provided by law.

Section 29. Survivorship. Those provisions which by their nature are intended to survive the expiration, cancellation, or termination of this Interlocal Agreement, including, by way of example only, the indemnification provisions, shall survive the expiration, cancellation, or termination of this Interlocal Agreement.

Section 30. Severability. The provisions of this Interlocal Agreement are declared by the Parties to be severable. However, the material provisions of this Interlocal Agreement are dependent upon one another, and such interdependencies a material inducement for the Parties to enter into this Interlocal Agreement. Therefore, should any material term, provision, covenant, or condition of this Interlocal Agreement be held invalid or unenforceable by a court of competent jurisdiction, the Party protected or benefited by such term, provision, covenant, or condition may demand that the Parties negotiate such reasonable alternate Interlocal Agreement language or provisions as may be necessary either to restore the protected or benefited Party to its previous position or otherwise mitigate the loss of protection or benefit resulting from holding.

Section 31. Waiver. Neither the County's review, approval, or acceptance of, nor payment for, the Work required under this Interlocal Agreement shall be construed to operate as a waiver of any rights under this Interlocal Agreement or of any cause of action arising out of the performance of this Interlocal Agreement. No delay or failure on the part of any Party to this Interlocal Agreement to exercise any right or remedy accruing to such Party upon the occurrence of an event of violation shall affect any such right or remedy, be held to be an abandonment of any such right or remedy or preclude such Party from the exercise of any such right or remedy at any time during the continuance of any event of violation. No waiver of a single event of violation shall be deemed to be a waiver of any subsequent event of violation.

Section 32. Term. The term of this Interlocal Agreement shall commence on the Effective Date and shall continue until i) completion of the Work and ii) the County's full repayment of the County Improvement Costs to the District pursuant to Section 8.J. of this Interlocal Agreement.

Section 33. Interpretation.

A. Unless the context clearly and unmistakably requires otherwise:

1. Terms such as “Party A shall take Action X” or “Party A will take Action X” mean that Party A is required to take Action X.

2. Terms such as “may” will denote the permissive.

3. Likewise, terms such as “Party B shall not take Action Z” or “Party B will not take Action Z” mean that Party B is prohibited from taking Action Z.

[SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, this Interlocal Agreement has been executed by the Parties as of the date indicated below.



Orange County, Florida

By: Board of County Commissioners

By: *Jerry L. Demings*
Jerry L. Demings
Orange County Mayor

Date: *10 September 2024*

Attest: Phil Diamond, County Comptroller
As Clerk of the Board of County Commissioners

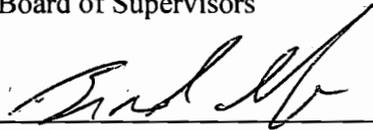
[SEAL]

By: *[Signature]*
Deputy Clerk

DAVID ROONEY
Printed Name

**Shingle Creek Transit and Utility
Community Development District**

By: Board of Supervisors

By: 
Chairperson

Date: 8-15-24

Attest:

By: Erica Klostermeier

Name: Erica Klostermeier

Title: Assistant Treasurer

EXHIBIT A

Program Scope

(One attached page)

EXHIBIT A Program Scope

AREA	DESCRIPTION OF PROPOSED ODOR CONTROL IMPROVEMENTS	DESCRIPTION OF COUNTY IMPROVEMENT COSTS	DESCRIPTION OF PROPOSED DISTRICT IMPROVEMENT COSTS
Odor Control Monitoring	Collect and distribute odor data at agreed upon Odor Control Monitoring locations throughout the design, construction, and post construction phases. Maintain monitors, provide weekly raw data reports and monthly reports.	None	Collect and distribute odor data at agreed upon Odor Control Monitoring locations throughout the design, construction, and post construction phases. Maintain monitors, provide weekly raw data reports and monthly reports.
Screenings Building	Add exhaust duct to convey combined exhaust from the screen channels inside the building. Provide 12 air changes per hour inside the screen room. Modify inlet louvers to provide fresh air flow to new exhaust. Add bioscrubbers to treat collected foul air, with air supplied by new fiberglass fans (three total: two duty, one standby) sized to convey air through the bioscrubbers and one downstream carbon adsorber (total system airflow capacity 33,500 cubic feet per minute (cfm) with two fans operating). Modify existing roadway alignment to accommodate proposed odor control improvements. Upgrade Motor Control Center (MCC). Provide controls necessary for odor control system operation.	Equal Cost Share of Improvements excluding: Standby fan with associated duct and electrical. Carbon unit with associated duct.	Equal Cost Share of Improvements including: Standby fan with associated duct and electrical. Carbon unit with associated duct.
Influent Pump Station	Replace existing fiberglass foul air fan with two fiberglass fans at existing bioscrubber. One fan is intended to operate continuously with the other on standby. Replace existing above-grade ducting as required to convey design airflows from wet wells to fans, existing bioscrubber, and into carbon adsorber. Existing bioscrubber will be reused at its current rated airflow capacity (approximately 16,200 cfm).	None	Replace existing fiberglass foul air fan with two fiberglass fans at existing bioscrubber. One fan is intended to operate continuously with the other on standby. Replace existing above-grade ducting as required to convey design airflows from wet wells to fans, existing bioscrubber, and into carbon adsorber. Existing bioscrubber will be reused at its current rated airflow capacity (approximately 16,200 cfm).
Preliminary Treatment Unit Upper Deck	A new 5,000 cfm bioscrubber will be added to operate in parallel to the existing 9,000 cfm bioscrubber. The design will include three fans; two are expected to operate continuously with a third on standby. Fans will convey air through the bioscrubbers and through a carbon adsorber. Replace existing ducting as required to convey design airflows from collection points on the structure to fans, to bioscrubbers, and through the carbon adsorber. Covering or closing openings at all slide gates and weir gates on the structure and maintaining the covers in position is an integral part of this design. It is understood that the County has installed cover systems at all gates. Installed covers will be reviewed and enhancements will be added if determined necessary and approved by the County. Add a new breaker and 2 new electrical feeders to the West electrical building. Upgrade Motor Control Center (MCC).	Equal Cost Share of Improvements excluding: Standby fan with associated duct and electrical. Carbon unit with associated duct.	Equal Cost Share of Improvements including: Standby fan with associated duct and electrical. Carbon unit with associated duct.
Preliminary Treatment Unit Truck Loading Bay	Replace existing exhaust system with fiberglass fans (one duty, one standby), and one carbon adsorption unit with prefilter. Provide 12 air changes per hour inside the truck bay to exhaust accumulated gases. Add fiberglass ducts and dampers as required to convey design airflows	Equal Cost Share of Improvements excluding: Standby fan with associated duct and electrical. Carbon unit with associated duct.	Equal Cost Share of Improvements including: Standby fan with associated duct and electrical. Carbon unit with associated duct.
Dewatering Building and WAS Area	Modify exhaust duct to convey approximately 90,000 cfm from dewatering building to new carbon adsorbers; cover Waste Activated Sludge (WAS) tanks with truss-supported aluminum covers. Remove rotating mechanisms and treat exhaust air from three WAS tanks in a carbon adsorber. Two 10,000 cfm fans will be included for the WAS tank carbon adsorber (one operating continuously; one standby). Three 45,000 cfm fans will be included for the dewatering building (two operating continuously; one standby). No redundant carbon adsorbers are included.	Modify exhaust duct to convey approximately 90,000 cfm from dewatering building to new carbon adsorbers; cover Waste Activated Sludge (WAS) tanks with truss-supported aluminum covers. Remove rotating mechanisms and treat exhaust air from three WAS tanks in a carbon adsorber. Two 10,000 cfm fans will be included for the WAS tank carbon adsorber (one operating continuously; one standby). Three 45,000 cfm fans will be included for the dewatering building (two operating continuously; one standby). No redundant carbon adsorbers are included.	None

Note: Improvements described above will include necessary fiberglass duct, electrical equipment, civil and sitework improvements, structural and stormwater protection features to be coordinated with other work in progress at the Orange County South Water Reclamation Facility. Non potable water supply piping and drain piping are to be installed as necessary for each unit. Each odor abatement system is to be guaranteed to achieve 99% H2S removal or an outlet concentration of 0.5 parts per million by volume (ppmv), whichever is greater.

EXHIBIT B

Program Schedule

(One attached page)

EXHIBIT B

Program Schedule

SHINGLE CREEK TRANSIT AND UTILITY COMMUNITY DEVELOPMENT DISTRICT SOUTH WATER RECLAMATION FACILITY - ODOR CONTROL PROJECT

The following is a projected schedule for this project:

Odor Control Monitoring	November 2023 - December 2024
Odor Abatement 60% Design	November 2023 - June 2024
Odor Abatement 90% Design and Guaranteed Maximum Price (GMP)	June 2024 - August 2024
Procure Equipment	December 2023 - November 2024
Dewatering Building Construction	May 2024 – March 2025
Dewatering Building Commissioning	March 2025 - May 2025
Screenings, Pump Station, Preliminary Treatment Area Construction	March 2024 – February 2025
Screenings, Pump Station, Preliminary Treatment Area Commissioning	December 2024 – April 2025
Substantial Completion	July 2025
Final Completion	August 2025

EXHIBIT C

Program Budget

(Four attached pages)

**EXHIBIT C
Program Budget**

AREA	PDS CFM	Estimated Cost from PDS	District Alternate CAU and Standby Fan Equipment Cost	Project Cost Without District Alternate	County Improvement Costs	District Improvement Costs without Alternate	District Improvement Costs with Alternate
Odor Control Monitoring	NA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 159,212
Dump Pad Aeration Basin	NA	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 159,091
Screenings Building	33,500	\$ 14,100,000	\$ 1,651,392	\$ 12,448,608	\$ 6,224,304	\$ 6,224,304	\$ 7,875,696
Influent Pump Station	16,200	\$ 1,200,000		\$ 1,200,000	\$ -	\$ 3,945,557	\$ 3,945,557
Preliminary Treatment Unit Upper Deck	14,000	\$ 9,170,000	\$ 1,550,536	\$ 7,619,464	\$ 3,809,732	\$ 3,809,732	\$ 5,360,268
Preliminary Treatment Unit Truck Loading Bay	5,500						
Dewatering Area	90,000	\$ 14,200,000	\$ 464,297	\$ 13,735,703	\$ 13,735,703	\$ -	\$ 464,297
WAS Area	10,000						
Total	169,200	\$ 38,670,000	\$ 3,666,226	\$ 35,003,774	\$ 23,769,738	\$ 13,979,593	\$ 17,964,122

Total County Estimated Improvement Costs	\$ 23,769,738
Total District Estimated Improvement Costs with Alternate	\$ 17,964,122
Total Estimated Project Cost	\$ 41,733,860

Notes:

1. Program Budget costs are estimated and will adjust based upon actual bids during the Design Build process.
2. A 22% Contingency is included in the Program Budget.

EXHIBIT C
Program Budget

Contract/Description	Item	Preliminary Treatment and Truck Bay			
		Preliminary Treatment and Truck Bay	County Share	District Share	Alternate By District
			50%	50%	
Design Build Amendment #1	Monitoring Services				
Design Build Amendment #2 Design Services	Basic Services- General Items, Meetings and Expenses	\$ 117,207	\$ 43,952	\$ 43,952	\$ 29,302
	Detailed Design Services	\$ 269,998	\$ 101,249	\$ 101,249	\$ 67,500
	Detailed Design Expenses (Subconsultants, Travel, Etc.)	\$ 220,022	\$ 82,508	\$ 82,508	\$ 55,006
	Allowance	\$ 30,874	\$ 11,578	\$ 11,578	\$ 7,719
	Dump Pad and Aeration Design 10% prior to stop	\$ -	\$ -	\$ -	\$ -
Design Build Amendment #2 Change Order 1	Bidding and Pre Construction Services	\$ 77,161	\$ 28,935	\$ 28,935	\$ 19,290
	Deduct 90% Remaining Dump Pad and Aeration Basin Design	\$ -	\$ -	\$ -	\$ -
	Civil Stormwater Redesign (Includes 6% DBF and 1.4% Insurance)	\$ 14,620	\$ 7,310	\$ 7,310	\$ -
Design Build Amendment #2 Change Order 2	Deduct Basic Services-General Items, Meetings and expenses for Dump Pad and Aeration basin				
Design Build Amendment #3 Equipment procurement and purchase	Procurement Services	\$ 61,536	\$ 23,076	\$ 23,076	\$ 15,384
	Allowance	\$ 6,140	\$ 2,302	\$ 2,302	\$ 1,535
	BTF Equipment Cost (Includes 6% DBF)	\$ 357,526	\$ 178,763	\$ 178,763	\$ -
	CAU Equipment Cost (Includes 6% DBF)	\$ 448,126	\$ -	\$ -	\$ 448,126
	Fan (Includes 6% DBF)	\$ 238,576	\$ 119,288	\$ 119,288	\$ -
	Standby Fan Cost (Includes 6% DBF)	\$ 157,156	\$ -	\$ -	\$ 157,156
	FRP Ductwork (Includes 6% DBF)		\$ -	\$ -	\$ -
	Duct Supports (Includes 6% DBF)		\$ -	\$ -	\$ -
Design Build Amendment #3 Future Change Order Remaining Equipment	Deduct 70% procurement services for Dump Pad and Aeration Basin				
	Ductwork Estimate (Includes 6% Fee)	\$ 480,000	\$ 180,000	\$ 180,000	\$ 120,000
	Special Duct Support Estimate (Includes 6% Fee)	\$ 150,000	\$ 56,250	\$ 56,250	\$ 37,500
	WAS Tank Covers Estimate (Includes 6% Fee)		\$ -	\$ -	
	Gate Cover Estimate (Includes 6% Fee)	\$ 150,000	\$ 75,000	\$ 75,000	
	New MCC (Includes 6% Fee)	\$ 400,000	\$ 200,000	\$ 200,000	
Subtotal Design And Equipment	Subtotal of Design and Equipment Costs	\$ 3,178,942	\$ 1,110,213	\$ 1,110,213	\$ 958,516
Design Build Amendment #4 Construction Services	Professional Services	\$ 1,032,712	\$ 387,267	\$ 387,267	\$ 258,178
	Subconsultants and Expense	\$ 319,990	\$ 119,996	\$ 119,996	\$ 79,998
	Builder Risk Insurance	\$ 15,000	\$ 5,625	\$ 5,625	\$ 3,750
	Sales Tax on Expenses	\$ 11,811	\$ 4,429	\$ 4,429	\$ 2,953
	Civil Construction-Earthwork, Stormwater, Asphalt, Landscaping (Including Sales Tax, 25% contingency, 6% DBF and 1.4% Insurance))		\$ -	\$ -	\$ -
	Structural Construction - Concrete/Curb and Gutter (Including Sales Tax, 15% contingency, 6% DBF and 1.4% Insurance))		\$ -	\$ -	\$ -
	Mechanical Construction- Demo, Process, HVAC, FRP Welding (Including Sales Tax, 20% contingency, 6% DBF and 1.4% Insurance))		\$ -	\$ -	\$ -
Design Build Amendment #4 Future Change Order Remaining Work	Demolition Estimate (Includes 6% Fee)	\$ 100,000	\$ 50,000	\$ 50,000	
	HVAC Installation Estimate (Includes 6% Fee)	\$ 25,000	\$ 12,500	\$ 12,500	
	Mechanical (Includes 6% Fee)	\$ 600,000	\$ 300,000	\$ 300,000	
	Duct Coating Estimate	\$ 75,000	\$ 37,500	\$ 37,500	
	Site Grading, Paving, Drainage, Seeding Estimate (Includes 6% Fee)	\$ 140,000	\$ 70,000	\$ 70,000	
	Architectural Estimate (Includes 6% Fee)	\$ 50,000	\$ 25,000	\$ 25,000	
	Structural Foundation Estimate (Includes 6% Fee)	\$ 375,000	\$ 187,500	\$ 187,500	
	Electrical Installation Estimate (Includes 6% Fee)	\$ 400,000	\$ 200,000	\$ 200,000	
	Controls/Integration Estimate	\$ 200,000	\$ 100,000	\$ 100,000	
	Electrical Upgrades to PTU (Includes 6% Fee)	\$ 200,000	\$ 100,000	\$ 100,000	
Design Build Amendment #5 Temporary Odor Control	Temporary Odor Control (Including Sales Tax, 25% contingency, 6% DBF and 1.4% Insurance))	\$ 859,929	\$ 429,965	\$ 429,965	
	Relocate Septage Acceptance Connection (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)		\$ -	\$ -	
	Temporary Odor Containment Structure (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)		\$ -	\$ -	
	Perimeter Mist System (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)	\$ 125,000	\$ 62,500	\$ 62,500	
TOTAL		\$ 7,708,384	\$ 3,202,495	\$ 3,202,495	\$ 1,303,394
CURRENT CONTINGENCY		\$ 1,461,616	\$ 607,237	\$ 607,237	\$ 247,142
TOTAL ESTIMATE OF PROBABLE COST		\$ 9,170,000	\$ 3,809,732	\$ 3,809,732	\$ 1,550,536

PRELIMINARY DESIGN ESTIMATE OF PROBABLE COST	\$ 9,170,000			
VARIANCE	\$ -			
ESTIMATED COUNTY COSTS		\$3,809,732		
ESTIMATED DISTRICT COSTS			\$3,809,732	\$1,550,536

EXHIBIT C
Program Budget

Contract/Description	Item	Screen Building				Influent Pump Station		
		Screen Building	County Share	District Share	Alternate By District	Influent Pump Station	County Share	District Share No Alternate
			50%	50%			0%	100%
Design Build Amendment #1	Monitoring Services							
Design Build Amendment #2 Design Services	Basic Services- General Items, Meetings and Expenses	\$ 117,207	\$ 47,586	\$ 47,586	\$ 22,035	\$ 117,207		\$ 117,207
	Detailed Design Services	\$ 231,634	\$ 94,043	\$ 94,043	\$ 43,547	\$ 71,294		\$ 71,294
	Detailed Design Expenses (Subconsultants, Travel, Etc.)	\$ 341,638	\$ 138,705	\$ 138,705	\$ 64,228	\$ 34,023		\$ 34,023
	Allowance	\$ 30,874	\$ 12,535	\$ 12,535	\$ 5,804	\$ 30,874		\$ 30,874
	Dump Pad and Aeration Design 10 % prior to stop	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -
Design Build Amendment #2 Change Order 1	Bidding and Pre Construction Services	\$ 111,300	\$ 45,188	\$ 45,188	\$ 20,924	\$ 99,036		\$ 99,036
	Deduct 90% Remaining Dump Pad and Aeration Basin Design	\$ -	\$ -	\$ -		\$ -		\$ -
	Civil Stormwater Redesign (Includes 6% DBF and 1.4% Insurance)	\$ 14,620	\$ 7,310	\$ 7,310		\$ 14,620		\$ 14,620
Design Build Amendment #2 Change Order 2	Deduct Basic Services-General Items, Meetings and expenses for Dump Pad and Aeration basin							
Design Build Amendment #3 Equipment procurement and purchase	Procurement Services	\$ 36,205	\$ 14,699	\$ 14,699	\$ 6,806	\$ 29,258	\$ -	\$ 29,258
	Allowance	\$ 6,140	\$ 2,493	\$ 2,493	\$ 1,154	\$ 6,140	\$ -	\$ 6,140
	BTF Equipment Cost (Includes 6% DBF)	\$ 1,137,107	\$ 568,553	\$ 568,553		\$ -	\$ -	\$ -
	CAU Equipment Cost (Includes 6% DBF)	\$ 769,857			\$ 769,857	\$ 377,501	\$ -	\$ 377,501
	Fan (Includes 6% DBF)	\$ 195,759	\$ 97,880	\$ 97,880		\$ 198,515	\$ -	\$ 198,515
	Standby Fan Cost (Includes 6% DBF)	\$ 97,880	\$ -	\$ -	\$ 97,880		\$ -	\$ -
	FRP Ductwork (Includes 6% DBF)	\$ 940,485	\$ 470,243	\$ 470,243		\$ 421,615	\$ -	\$ 421,615
	Duct Supports (Includes 6% DBF)	\$ 194,192	\$ 97,096	\$ 97,096		\$ 121,688	\$ -	\$ 121,688
Design Build Amendment #3 Future Change Order Remaining Equipment	Deduct 70% procurement services for Dump Pad and Aeration Basin							
	Ductwork Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	Special Duct Support Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	WAS Tank Covers Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	Gate Cover Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	New MCC (Includes 6% Fee)	\$ 300,000	\$ 150,000	\$ 150,000			\$ -	\$ -
Subtotal Design And Equipment	Subtotal of Design and Equipment Costs	\$ 4,524,896	\$ 1,746,330	\$ 1,746,330	\$ 1,032,236	\$ 1,521,769	\$ -	\$ 1,521,769
Design Build Amendment #4 Construction Services	Professional Services	\$ 1,039,751	\$ 422,139	\$ 422,139	\$ 195,473	\$ 391,784	\$ -	\$ 391,784
	Subconsultants and Expense	\$ 382,052	\$ 155,113	\$ 155,113	\$ 71,826	\$ 124,727	\$ -	\$ 124,727
	Bulldozer Risk Insurance	\$ 15,000	\$ 6,090	\$ 6,090	\$ 2,820	\$ 15,000	\$ -	\$ 15,000
	Sales Tax on Expenses	\$ 19,027	\$ 7,725	\$ 7,725	\$ 3,577	\$ 2,625	\$ -	\$ 2,625
	Civil Construction-Earthwork, Stormwater, Asphalt, Landscaping (Including Sales Tax, 25% contingency, 6% DBF and 1.4% Insurance)	\$ 709,767	\$ 354,884	\$ 354,884		\$ 44,647	\$ -	\$ 44,647
	Structural Construction - Concrete/Curb and Gutter (Including Sales Tax, 15% contingency, 6% DBF and 1.4% Insurance)	\$ 343,113	\$ 171,557	\$ 171,557	\$ -	\$ 310,463	\$ -	\$ 310,463
	Mechanical Construction- Demo, Process, HVAC, FRP Welding (Including Sales Tax, 20% contingency, 6% DBF and 1.4% Insurance)	\$ 1,564,565	\$ 777,283	\$ 777,283	\$ 10,000	\$ 721,767	\$ -	\$ 721,767
Design Build Amendment #4 Future Change Order Remaining Work	Demolition Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	HVAC Installation Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	Mechanical (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	Duct Coating Estimate	\$ 100,000	\$ 50,000	\$ 50,000		\$ 30,000	\$ -	\$ 30,000
	Site Grading, Paving, Drainage, Seeding Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	Architectural Estimate (Includes 6% Fee)	\$ 150,000	\$ 75,000	\$ 75,000			\$ -	\$ -
	Structural Foundation Estimate (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -
	Electrical Installation Estimate (Includes 6% Fee)	\$ 600,000	\$ 300,000	\$ 300,000		\$ 100,000	\$ -	\$ 100,000
	Controls/Integration Estimate	\$ 300,000	\$ 150,000	\$ 150,000		\$ 25,000	\$ -	\$ 25,000
Electrical Upgrades to PTU (Includes 6% Fee)		\$ -	\$ -			\$ -	\$ -	
Design Build Amendment #5 Temporary Odor Control	Temporary Odor Control (Including Sales Tax, 25% contingency, 6% DBF and 1.4% Insurance)	\$ 1,262,585	\$ 631,293	\$ 631,293		\$ 532,775		\$ 532,775
	Relocate Septage Acceptance Connection (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)	\$ 50,000	\$ 25,000	\$ 25,000				\$ -
	Temporary Odor Containment Structure (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)	\$ 50,000	\$ 25,000	\$ 25,000				\$ -
	Perimeter Mist System (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)	\$ 125,000	\$ 62,500	\$ 62,500		\$ 125,000		\$ 125,000
TOTAL		\$ 11,235,756	\$ 4,959,912	\$ 4,959,912	\$ 1,315,932	\$ 3,945,557	\$ -	\$ 3,945,557
CURRENT CONTINGENCY		\$ 2,864,244	\$ 1,264,392	\$ 1,264,392	\$ 335,460	\$ -	\$ -	\$ -
TOTAL ESTIMATE OF PROBABLE COST		\$ 14,100,000	\$ 6,224,304	\$ 6,224,304	\$ 1,651,392	\$ 3,945,557	\$ -	\$ 3,945,557

PRELIMINARY DESIGN ESTIMATE OF PROBABLE COST	\$ 14,100,000				\$ 1,200,000	
VARIANCE	\$ -				\$ (2,745,557)	
ESTIMATED COUNTY COSTS		\$ 6,224,304			\$ -	
ESTIMATED DISTRICT COSTS			\$ 6,224,304	\$ 1,651,392		\$ 3,945,557

EXHIBIT C
Program Budget

Contract/Description	Item	Dewatering and WAS				Dump Pad and Aeration Basin	Odor Control Monitoring	Subtotal (Pages 1, 2, 3)	Total (Pages 1, 2, 3)
		Dewatering and WAS	County Share	District Share	Alternate By District	District Additional Cost			
			100%	0%					
Design Build Amendment #1	Monitoring Services						\$ 159,212	\$ 159,212	\$ 159,212
Design Build Amendment #2 Design Services	Basic Services- General Items, Meetings and Expenses	\$ 117,207	\$ 114,276		\$ 2,930	\$ 234,413		\$ 703,240	
	Detailed Design Services	\$ 410,536	\$ 400,273		\$ 10,263	\$ 374,466		\$ 1,357,928	
	Detailed Design Expenses (Subconsultants, Travel, Etc.)	\$ 214,214	\$ 208,859		\$ 5,355	\$ 261,833		\$ 1,071,730	
	Allowance	\$ 30,874	\$ 30,102		\$ 772	\$ 61,748		\$ 185,244	
	Dump Pad and Aeration Design 10 % prior to stop	\$ -	\$ -		\$ -	\$ 63,630		\$ 63,630	
Design Build Amendment #2 Change Order 1	Bidding and Pre Construction Services	\$ 210,274	\$ 205,017		\$ 5,257			\$ 497,771	
	Deduct 90% Remaining Dump Pad and Aeration Basin Design	\$ -	\$ -			\$ (572,669)		\$ (572,669)	
	Civil Stormwater Redesign (Includes 6% DBF and 1.4% Insurance)	\$ 14,620	\$ 14,620					\$ 58,480	
Design Build Amendment #2 Change Order 2	Deduct Basic Services-General Items, Meetings and expenses for Dump Pad and Aeration basin					\$ (301,043)		\$ (301,043)	
Design Build Amendment #3 Equipment procurement and purchase	Procurement Services	\$ 61,205	\$ 59,675		\$ 1,530	\$ 122,376		\$ 310,579	
	Allowance	\$ 6,140	\$ 5,986		\$ 153			\$ 24,558	
	BTF Equipment Cost (Includes 6% DBF)	\$ -	\$ -					\$ 1,494,633	
	CAU Equipment Cost (Includes 6% DBF)	\$ 2,298,080	\$ 2,298,080					\$ 3,893,563	
	Fan (Includes 6% DBF)	\$ 465,404	\$ 465,404					\$ 1,098,254	
	Standby Fan Cost (Includes 6% DBF)	\$ 273,659	\$ -		\$ 273,659			\$ 528,695	
	FRP Ductwork (Includes 6% DBF)							\$ 1,362,100	
Duct Supports (Includes 6% DBF)							\$ 315,880		
Design Build Amendment #3 Future Change Order Remaining Equipment	Deduct 70% procurement services for Dump Pad and Aeration Basin					\$ (85,663)		\$ (85,663)	
	Ductwork Estimate (Includes 6% Fee)	\$ 800,000	\$ 780,000		\$ 20,000			\$ 1,280,000	
	Special Duct Support Estimate (Includes 6% Fee)	\$ 70,000	\$ 68,250		\$ 1,750			\$ 220,000	
	WAS Tank Covers Estimate (Includes 6% Fee)	\$ 1,200,000	\$ 1,200,000					\$ 1,200,000	
	Gate Cover Estimate (Includes 6% Fee)		\$ -					\$ 150,000	
	New MCC (Includes 6% Fee)		\$ -					\$ 700,000	
Subtotal Design And Equipment	Subtotal of Design and Equipment Costs	\$ 6,172,212	\$ 5,850,542	\$ -	\$ 321,670	\$ 159,091	\$ 159,212	\$ 15,716,122	
Design Build Amendment #4 Construction Services	Professional Services	\$ 1,033,774	\$ 1,007,930		\$ 25,844			\$ 3,498,021	
	Subconsultants and Expense	\$ 382,052	\$ 372,501		\$ 9,551			\$ 1,208,821	
	Builder Risk Insurance	\$ 15,000	\$ 14,625		\$ 375			\$ 60,000	
	Sales Tax on Expenses	\$ 19,027	\$ 18,551		\$ 476			\$ 52,490	
	Civil Construction-Earthwork, Stormwater, Asphalt, Landscaping (Including Sales Tax, 25% contingency, 6% DBF and 1.4% Insurance)		\$ -					\$ 754,414	
	Structural Construction - Concrete/Curb and Gutter (Including Sales Tax, 15% contingency, 6% DBF and 1.4% Insurance)		\$ -					\$ 653,576	
Design Build Amendment #4 Future Change Order Remaining Work	Mechanical Construction- Demo, Process, HVAC, FRP Welding (Including Sales Tax, 20% contingency, 6% DBF and 1.4% Insurance)		\$ -					\$ 2,286,332	
	Demolition Estimate (Includes 6% Fee)	\$ 250,000	\$ 250,000					\$ 350,000	
	HVAC Installation Estimate (Includes 6% Fee)	\$ 150,000	\$ 150,000					\$ 175,000	
	Mechanical (Includes 6% Fee)	\$ 1,200,000	\$ 1,200,000					\$ 1,800,000	
	Duct Coating Estimate	\$ 125,000	\$ 125,000					\$ 330,000	
	Site Grading, Paving, Drainage, Seeding Estimate (Includes 6% Fee)	\$ 350,000	\$ 350,000					\$ 490,000	
	Architectural Estimate (Includes 6% Fee)	\$ 150,000	\$ 150,000					\$ 350,000	
	Structural Foundation Estimate (Includes 6% Fee)	\$ 375,000	\$ 375,000					\$ 750,000	
	Electrical Installation Estimate (Includes 6% Fee)	\$ 60,000	\$ 60,000					\$ 1,160,000	
	Controls/Integration Estimate	\$ 300,000	\$ 300,000					\$ 825,000	
Electrical Upgrades to PTU (Includes 6% Fee)		\$ -					\$ 200,000		
Design Build Amendment #5 Temporary Odor Control	Temporary Odor Control (Including Sales Tax, 25% contingency, 6% DBF and 1.4% Insurance)	\$ 239,402	\$ 239,402					\$ 2,894,691	
	Relocate Septage Acceptance Connection (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)		\$ -					\$ 50,000	
	Temporary Odor Containment Structure (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)		\$ -					\$ 50,000	
	Perimeter Mist System (Estimate)(Including Labor, Materials, Taxes, Fee, Insurance)	\$ 125,000	\$ 125,000					\$ 500,000	
TOTAL		\$ 10,946,467	\$ 10,588,550	\$ -	\$ 357,917	\$ 159,091	\$ 159,212	\$ 34,154,467	
CURRENT CONTINGENCY		\$ 3,253,533	\$ 3,147,152	\$ -	\$ 106,381			\$ 7,579,393	\$ 7,579,393
TOTAL ESTIMATE OF PROBABLE COST		\$ 14,200,000	\$ 13,735,703	\$ -	\$ 464,297	\$ 159,091	\$ 159,212	\$ 41,733,860	\$ 41,733,860

PRELIMINARY DESIGN ESTIMATE OF PROBABLE COST	\$ 14,200,000					\$ -		\$ 38,670,000
VARIANCE	\$ -					\$ (159,091)	\$ (159,212)	\$ (3,063,860)
ESTIMATED COUNTY COSTS	\$ 13,735,703							\$ 23,769,738
ESTIMATED DISTRICT COSTS		\$ -		\$ 464,297	\$ 159,091	\$ 159,212		\$ 17,964,122

0.267654688

	Total	Contingency	Total + Contingency
COUNTY IMPROVEMENT COSTS	\$ 18,750,957	\$ 5,018,782	\$ 23,769,738
DISTRICT IMPROVEMENT COSTS	\$ 15,403,510	\$ 2,560,612	\$ 17,964,122
TOTAL ESTIMATED PROJECT COSTS	\$ 34,154,467	\$ 7,579,393	\$ 41,733,860

EXHIBIT D

District License Agreement

(15 attached pages)

**MAJOR ECONOMIC DEVELOPMENT PROJECT
(MEDP) PROGRAM**

**REVIEWED AND APPROVED BY THE
COUNTY PROJECT MANAGER
ON BEHALF OF ORANGE COUNTY, FLORIDA
PURSUANT TO SECTION 38-30
OF THE ORANGE COUNTY CODE**

TEMPORARY ACCESS AND LICENSE AGREEMENT

(Orange County South Water Reclamation Facility Odor Control Project)

This Temporary Access and License Agreement (“**Agreement**”) is entered into as of the date of last execution below (“**Effective Date**”) by and between **ORANGE COUNTY**, a charter county and political subdivision of the State of Florida, whose address is 201 South Rosalind Avenue, Orlando, Florida 32801 (“**Licensor**” or “**County**”), and **SHINGLE CREEK TRANSIT AND UTILITY COMMUNITY DEVELOPMENT DISTRICT**, a local unit of special-purpose government established pursuant to Chapter 190, *Florida Statutes*, and located in Orange County, Florida, whose address is 3501 Quadrangle Boulevard, Suite 270, Orlando, Florida 32817 (“**District**”). In this Agreement, Licensor and the District may be referred to individually as a “**Party**” or collectively as the “**Parties**.”

RECITALS:

WHEREAS, the District was established by Orange County Ordinance No. 2023-40 pursuant to and governed by the provisions of Chapter 190, *Florida Statutes* (the “**Act**”); and

WHEREAS, pursuant to the Act, the District is authorized to finance, construct, acquire, maintain, and/or operate infrastructure improvements and services including, but not limited to, water, wastewater and sewer utility improvements, serving and/or benefitting the lands within the District; and

WHEREAS, Licensor is the owner of certain real property located at 4760 West Sand Lake Road, Orlando, Florida 32819, Parcel ID # 32-23-29-0000-00-003, known as the Orange County South Water Reclamation Facility (“**SWRF**”) (the “**Licensor’s Property**”) which serves and lies adjacent to the District; and

WHEREAS, the District desires to make certain odor control system upgrades as identified in the attached **Exhibit A** to the Licensor’s Property, as approved by Licensor (collectively, the “**Odor Control Project**”), and contemporaneously with this Agreement the Parties are negotiating to enter into that certain *Interlocal Agreement Regarding the SWRF Odor Control Project* relative to such project (the “**Interlocal Agreement**”); and

WHEREAS, in furtherance thereof, pursuant to that certain *Assignment and Assumption of Agreement*, dated December 21, 2023, the District has taken assignment of that certain *Amended and Restated Standard Form of Agreement Between Owner and Design-Builder*, dated December 8, 2023 by and between Universal City Development Partners, Ltd. and Symbiont Science, Engineering and Construction, Inc. d/b/a Mead & Hunt, Inc. (the “**Design-Build Contractor**”) and three (3) initial Design-Build Amendments, as amended from time to time, relative to the Design-Build Contractor’s provision of engineering and construction services necessary to complete the Odor Control Project; and

WHEREAS, in furtherance thereof, the District desires to obtain from Licensor, and Licensor desires to grant to the District, a temporary license over, under, upon, across, and through that portion of the Licensor’s Property as depicted in **Exhibit B** attached hereto and incorporated

herein by reference (the “**License Area**”) in order to allow the District to complete the Odor Control Project; and

WHEREAS, Licensor deems the granting of the license providing temporary access to the License Area for the completion of the Odor Control Project to serve a public purpose; and

WHEREAS, the Parties desire to set forth the terms and conditions under which the District will be permitted to enter the License Area.

NOW THEREFORE, for \$10.00 paid to Licensor, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Licensor and the District do hereby agree as follows:

Section 1. Grant of License and Purpose. Licensor hereby grants a temporary non-exclusive license to the District and its employees, authorized agents, contractors, and subcontractors to enter the License Area for purposes of undertaking the Odor Control Project. The final scope of the Odor Control Project shall be as defined in the approved Construction Plan Documents (as defined in the Interlocal Agreement).

Section 2. The District’s Use of the Licensor’s Property. The District’s use of the Licensor’s Property, including the License Area, shall be subject to, and shall not unreasonably interfere with, Licensor’s use of the Licensor’s Property; provided, however, that the District’s performance of the Odor Control Project shall not be deemed to be unreasonable interference in accordance with this Section 2. The District agrees to minimize any unreasonable interference with Licensor’s use of the Licensor’s Property by providing reasonable notice prior to, and cooperation in the scheduling of, all activities that may unreasonably interfere with the activities by Licensor. The District will confine its operations on the Licensor’s Property (except as required for egress and ingress) to the License Area. In no event shall the District, or the District’s employees, authorized agents, contractors, or subcontractors place, locate, insert, install, construct, or otherwise perform any work within the Licensor’s Property or License Area that is not included in the Construction Plan Documents, as amended from time to time pursuant to the terms of the Interlocal Agreement, or as otherwise permitted by this Agreement or any amendments thereto. The District will direct the District’s contractors, including but not limited to the Design-Build Contractor, and shall obtain approval from the County Representative prior to completing any work that deviates from 1) the Odor Control Project Scope set forth in the attached **Exhibit A** or 2) the final Construction Plan Documents, upon approval thereof in accordance with the Interlocal Agreement. For the purposes of this Section 2, the “**County Representative**” shall be the Chief Engineer for the design phase, and the Chief Inspector for the construction phase. Any other use of the Licensor’s Property or License Area by the District, or the District’s employees, authorized agents, contractors or subcontractors not otherwise provided for in this Agreement or any amendments thereto shall be deemed a breach of this Agreement and may result in termination of this Agreement if not cured.

Section 3. No Liens. The District shall allow no lien to attach to the SWRF property or any improvements located on said property arising out of work performed by, for, or on behalf of the District pursuant to this Agreement. The District shall pay or transfer to other security all

such liens, claims, or demands before any action is brought to enforce the same against the SWRF property or Licensor.

Section 4. Term and Termination.

4.1 Term. The “**Term**” of this Agreement shall commence on the Effective Date and continue until the earlier of 1) the Parties executing the Interlocal Agreement, or 2) six (6) months from the Effective Date of this Agreement. Upon the execution of the Interlocal Agreement, the Term of this Agreement shall automatically extend subject to the same terms and conditions set forth herein until the completion of the Odor Control Project and acceptance thereof by the County pursuant to the terms of the Interlocal Agreement. Upon expiration of the Term, this Agreement and the license granted hereunder shall be deemed expired. Any extension to the Term other than due to execution of the Interlocal Agreement shall require prior written approval by Licensor, which shall be attached to and made a part of this Agreement (the “**Extension**”). Licensor and the District agree that any Extension shall be subject to the same terms and conditions set forth herein unless otherwise amended in writing and signed by both Parties.

4.2 Automatic Termination Upon Termination of the Interlocal Agreement. In the event that the Interlocal Agreement is terminated, this Agreement shall automatically terminate without further action of the Parties.

4.3 Termination by the Parties. In the event Licensor finds the District to be in breach of any term of this Agreement, Licensor shall notify the District in writing within ten (10) business days of such breach. The notice shall describe in sufficient detail the nature of the breach. If within thirty (30) business days of receipt of such notification, the District has not cured or, if such breach is not capable of being cured within said thirty (30) business day period, commenced to cure the breach, Licensor may unilaterally terminate this Agreement, effective fifteen (15) business days after providing written notification of intent to terminate.

Section 5. Property “As Is.” Licensor makes no representations about the condition of the Licensor’s Property, including the License Area, or the suitability of the Licensor’s Property, including the License Area, for the District’s intended use. This License is conditioned upon the District’s use of the License Area “AS IS” and “WITH ALL FAULTS.”

Section 6. Restoration of Property and License Area.

6.1 In the event that the District or the District’s respective employees, authorized agents, contractors, and subcontractors cause damage to the License Area or any of the improvements located within the License Area, or cause damage to Licensor’s other property or any improvements located thereon, in the exercise of the license rights granted herein, the District, at its sole cost and expense, agrees to immediately commence and diligently pursue the restoration of the damages to as nearly as practical to the original condition and grade while maintaining normal operations after receiving written notice of the occurrence of any such damage. If the District fails to restore the License Area within thirty (30) business days, Licensor may undertake such maintenance and repair and invoice

the District for the reasonable cost thereof. The District shall pay such invoice within forty-five (45) days after the District's receipt of such invoice and documentation supporting the cost.

6.2 Upon expiration or termination of this Agreement, the District agrees to restore the License Area at its sole cost and expense to the condition shown in the Construction Plan Documents, including, without limitation, all property, facilities, or improvements located within the License Area or such other condition as existed prior to commencement of the work. If the District fails to restore the License Area within thirty (30) business days of expiration or termination of this Agreement, Licensor may restore the License Area to as near the condition as existed prior to the commencement of the Odor Control Project as is reasonably possible and the District shall be immediately liable for and shall reimburse Licensor for reasonable out-of-pocket costs and expenses incurred by Licensor in restoring the License Area. This provision shall survive the termination of this Agreement.

Section 7. Ownership of Property. This Agreement is intended and shall be construed only as a temporary license to enter and conduct the Odor Control Project and construct the Odor Control Project upon the License Area and does not grant an easement, or create or confirm any ownership or possessory interest in any portion of the License Area or the Licensor's Property.

Section 8. Indemnification.

8.1 To the maximum extent permitted by law, the District shall indemnify, defend and hold harmless Licensor from and against any claim, loss, damage, liability, cost or expense, including reasonable attorneys' fees, directly arising out of any and all personal injury or property damage claims, liabilities, losses and causes of action arising from such claim which may arise solely as a result of the negligence of the District in connection with its rights and obligations under this Agreement; provided, however, that the foregoing indemnification shall not extend to those claims, losses, damages, liabilities, costs or expenses asserted against or suffered by Licensor (or its officers, employees, attorneys, agents or instrumentalities) to the extent due to the negligence or willful acts or omissions of Licensor (or its officers, employees, attorneys, agents or instrumentalities), or to any action taken by Licensor in violation of this Agreement or any action not taken that is required under this Agreement.

8.2 To the maximum extent permitted by law, Licensor shall indemnify, defend and hold harmless the District from and against any claim, loss, damage, liability, cost or expense, including reasonable attorneys' fees, directly arising out of any and all personal injury or property damage claims, liabilities, losses and causes of action arising from such claim which may arise solely as a result of the negligence of Licensor in connection with its rights and obligations under this Agreement; provided, however, that the foregoing indemnification shall not extend to those claims, losses, damages, liabilities, costs or expenses asserted against or suffered by the District (or its officers, employees, attorneys, agents or instrumentalities) to the extent due to the negligence or willful acts or omissions of the District (or its officers, employees, attorneys, agents or instrumentalities), or to any

action taken by the District in violation of this Agreement or any action not taken that is required under this Agreement.

Section 9. Sovereign Immunity; Limitation of Liability.

9.1 The Parties intend to avail themselves of the benefits of Section 768.28, *Florida Statutes*, and any other statutes and common law governing sovereign immunity, to the fullest extent possible. Neither this provision nor any other provision of this Agreement shall be construed as a waiver of the Parties' right to sovereign immunity under Section 768.28, *Florida Statutes*, or other limitations imposed on the Parties' potential liability under state or federal law. The Parties agree that neither Party shall be liable under this Agreement for punitive damages or interest for the period before judgment. Nothing in this Agreement is intended to inure to the benefit of any third party for the purpose of allowing any claim which would otherwise be barred under the doctrine of sovereign immunity or by operation of law. This Section 9 shall survive termination of this Agreement.

9.2 The provisions of Section 768.28, *Florida Statutes*, applicable to the District and Licensor apply in full to this Agreement. Any legal actions to recover monetary damages in tort for injury or loss of property, personal injury, or death caused by the negligent or wrongful act or omission of any employee of the Parties acting within the scope of his/her office or employment are subject to the limitations specified in this statute.

9.3 No officer, employee or agent of the Parties acting within the scope of his/her employment or function shall be held personally liable in tort or named as a defendant in any action for any or damage suffered as a result of any act, event, or failure to act unless such officer, employee, or agent acted in bad faith or with malicious purpose or in a manner exhibiting wanton and willful disregard of human rights, safety, or property.

9.4 Neither Party shall be liable in tort for the acts or omissions of an officer, employee, or agent committed while acting outside the course and scope of his/her employment. This exclusion includes actions committed in bad faith or with malicious purpose, or in a manner exhibiting wanton and willful disregard of human rights, safety, or property.

Section 10. Insurance. The District shall require its consultants and contractors, including subcontractors, to hold and maintain through the completion of the Odor Control Project and acceptance thereof by the County pursuant to the terms of the Interlocal Agreement, insurance coverages in an amount necessary to insure the Parties' interests, but in any event the minimum insurance coverages as identified in the attached **Exhibit C**.

Section 11. Notices.

11.1 Notice of Default. Notwithstanding anything herein to the contrary, no Party shall be considered in default for failure to perform the terms and conditions hereof, unless said Party shall have first received written notice specifying the nature of such failure, and said Party fails to cure the same within the time specified in such notice, or in

the event no such time is provided within thirty (30) business days of receipt of such written notice, unless otherwise provided for herein.

11.2 Notices. Any notice required or permitted hereunder shall be delivered by hand delivery, express courier, or certified mail, return receipt requested, and shall be effective upon receipt of the same. Notices shall be delivered to each of the Parties at the following addresses or at such other addresses as specified by written notice in compliance with the terms of this paragraph.

Licensor: Orange County Utilities Department
9150 Curry Ford Road
Orlando, Florida 32825-7600
Attn: Director

With copy to: Orange County Administrator
201 South Rosalind Avenue, 5th Floor
Orlando, Florida 32801-3527
Attn: County Administrator

District: Shingle Creek Transit and Utility
Community Development District
3501 Quadrangle Boulevard, Suite 270
Orlando, Florida 32817-8329
Attn: District Manager

With copy to: Kutak Rock LLP
107 West College Avenue
Tallahassee, Florida 32301-7707
Attn: District Counsel

Section 12. Assignment. The District shall not assign or transfer any interest, rights, or duties under this Agreement to any other party except upon written approval by Licensor, which shall not be unreasonably withheld, conditioned, or delayed.

Section 13. Permits and Licenses. The District, with reasonable cooperation of Licensor, but at no expense to Licensor, shall obtain any and all permits, approvals, and licenses which may be required for the Odor Control Project it conducts pursuant to this Agreement.

Section 14. Compliance with Applicable Laws. The District shall comply with all applicable federal, state and local rules, orders, laws and regulations pertaining to the use of the Licensor's Property and License Area.

Section 15. Entire Agreement. This Agreement contains the entire understanding between the Parties. Any change, amendment, or alteration shall be in writing and signed by both Parties. This Agreement supersedes all prior discussions and agreements between the Parties with respect to the subject matter hereof.

Section 16. Admission of Facts. Nothing contained in this Agreement shall be construed as an admission of any fact or liability of any Party to this Agreement.

Section 17. Waiving or Right to Jury, Attorneys' Fees, and Venue. Both Parties hereby waive their right to a jury trial for any dispute or legal action resulting from or associated with this Agreement. All claims, controversies, or disputes arising out of this Agreement shall be settled as required herein or by law in the Ninth Judicial Circuit, Orange County, Florida. Each Party shall be responsible for all of its attorneys' fees and costs associated with any legal action arising out of this Agreement. However, if any legal action is subject to mediation, the Parties shall share the fees and costs of the mediator equally.

Section 18. Severability. The provisions of this Agreement are declared by the Parties to be severable. However, the material provisions of this Agreement are dependent upon one another, and such interdependence is material inducement for the Parties to enter into this Agreement. Therefore, should any material term, provision, covenant or condition of this Agreement be held invalid or unenforceable by a court of competent jurisdiction, the Party protected or benefited by such term, provision, covenant, or condition may demand that the Parties negotiate such reasonable alternate agreement language or provisions as may be necessary either to restore the protected or benefited Party to its previous position or otherwise mitigate the loss of protection or benefit resulting from the holding. This Agreement shall be governed by the laws of the State of Florida.

Section 19. Captions. Titles used throughout this Agreement are intended for ease of reference only and are not intended to be dispositive.

Section 20. Time is of the Essence. Time is hereby declared of the essence as to the lawful performance of all duties and obligations set forth in this Agreement.

Section 21. Construction of Agreement. This Agreement shall not be construed against either Licensor or the District on the basis of it being the drafter of the Agreement. Licensor and the District agree that both herein played an equal part in negotiating the terms and conditions of this Agreement. Captions and section headings in this Agreement are provided for convenience only and shall not be deemed to explain, modify, amplify, or aid in the interpretation, construction, or meaning of this Agreement.

Section 22. No Real Property Rights. This Agreement shall not be construed as to grant the District any ownership rights, easement rights, or other real property rights of any kind or nature in or to any portion of the Licensor's Property, including without limitation, the License Area.

Section 23. Covenant Against Recording. The Parties acknowledge and agree that this Agreement shall not be recorded in the Official Records of Orange County, Florida.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the dates set forth below by their duly authorized representatives.

LICENSOR:

ORANGE COUNTY, FLORIDA

MAJOR ECONOMIC DEVELOPMENT PROJECT
(MEDP) PROGRAM

REVIEWED AND APPROVED BY THE
COUNTY PROJECT MANAGER
ON BEHALF OF ORANGE COUNTY, FLORIDA
PURSUANT TO SECTION 38-30
OF THE ORANGE COUNTY CODE

By: Board of County Commissioners

By: 
for Jerry L. Demings
Orange County Mayor

Date: May 2, 2024

ATTEST: Phil Diamond, CPA, County Comptroller
as Clerk of the Board of County Commissioners

By: Craig Stopyra
for Deputy Clerk

Print: Craig Stopyra

[REMAINING SIGNATURES ON THE FOLLOWING PAGE]

WITNESSES:

DISTRICT:

**SHINGLE CREEK TRANSIT AND
UTILITY COMMUNITY
DEVELOPMENT DISTRICT**

By: [Signature]

Print Name: Michael Donny

By: [Signature]

Print Name: Samantha C. Franchim

[Signature]

Bradley Goeb
Chairperson, Board of Supervisors

Date: 4-24-24

STATE OF FLORIDA
COUNTY OF ORANGE

The foregoing instrument was sworn to, subscribed and acknowledged before me this 24th day of April, 2024, by Bradley Goeb as Chairperson of the Board of Supervisors of the Shingle Creek Transit and Utility Community Development District. He appeared before me by means of [] online notarization or [] physical presence and [] is personally known to me or [] has produced _____ as identification.

(SEAL)

[Signature]

(Signature of Notary Public)

Print Name: Samantha C. Franchim

Notary Public, State of Florida

Commission No.: HH 217152

My Commission Expires: 2/19/2026

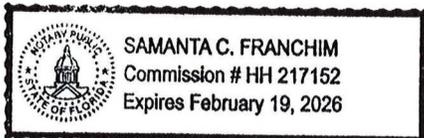


EXHIBIT A
General Description of the Odor Control Project

AREA	DESCRIPTION OF PROPOSED ODOR CONTROL IMPROVEMENTS
Odor Control Monitoring	Collect and distribute odor data at agreed upon locations throughout the design, construction, and post construction phases. Maintain monitors, provide weekly raw data reports and monthly reports.
Screenings Building	Add exhaust duct to convey combined exhaust from the screen channels inside the building. Provide 12 air changes per hour inside the screen room. Modify inlet louvers to provide fresh air flow to new exhaust. Add bioscrubbers to treat collected foul air, with air supplied by new fiberglass fans (three total: two duty, one standby) sized to convey air through the bioscrubbers and one downstream carbon adsorber (total system airflow capacity 33,500 cubic feet per minute (cfm) with two fans operating). Modify existing roadway alignment to accommodate proposed odor control improvements. Upgrade Motor Control Center (MCC). Provide controls necessary for odor control system operation.
Influent Pump Station	Replace existing fiberglass foul air fan with two fiberglass fans at existing bioscrubber. One fan is intended to operate continuously with the other on standby. Replace existing above-grade ducting as required to convey design airflows from wet wells to fans, existing bioscrubber, and into carbon adsorber. Existing bioscrubber will be reused at its current rated airflow capacity (approximately 16,200 cfm).
Preliminary Treatment Unit Upper Deck	A new 5000 cfm bioscrubber will be added to operate in parallel to the existing 9,000 cfm bioscrubber. The design will include three fans; two are expected to operate continuously with a third on standby. Fans will convey air through the bioscrubbers and through a carbon adsorber. Replace existing ducting as required to convey design airflows from collection points on the structure to fans, to bioscrubbers, and through the carbon adsorber. Covering or closing openings at all slide gates and weir gates on the structure and maintaining the covers in position is an integral part of this design. It is understood that the County has installed cover systems at all gates. Installed covers will be reviewed and enhancements will be added if determined necessary and approved by the County. Add a new breaker and 2 new electrical feeders to the West electrical building, Upgrade Motor Control Center (MCC).
Preliminary Treatment Unit Truck Loading Bay	Replace existing exhaust system with fiberglass fans (one duty, one standby), and one carbon adsorption unit with prefilter. Provide 12 air changes per hour inside the truck bay to exhaust accumulated gases. Add fiberglass ducts and dampers as required to convey design airflows.
Dewatering Building and WAS Tanks	Modify exhaust duct to convey approximately 90,000 cfm from dewatering building to new carbon adsorbers; cover Waste Activated Sludge (WAS) tanks with truss-supported aluminum covers. Remove rotating mechanisms and treat exhaust air from three WAS tanks in a carbon adsorber. Two 10,000 cfm fans will be included for the WAS tank carbon adsorber (one operating continuously; one standby). Three 45,000 cfm fans will be included for the dewatering building (two operating continuously; one standby). No redundant carbon adsorbers are included.

Note: Improvements described above will include necessary fiberglass duct and accessories, electrical and control connections, civil and sitework improvements, and structural and stormwater protection features to be coordinated with other work in progress at the South Water Reclamation Facility (SWRF). Non potable water supply piping and drain piping are to be installed as necessary for each unit. Each odor abatement system is to be guaranteed to achieve 99% H₂S removal or an outlet concentration of 0.5 ppmv, whichever is greater.

Exhibit B: License Area



Exhibit C

Minimum Insurance Coverages

The District shall require and ensure that each of its consultants and contractors (“**Contractor**”) maintain insurance until the completion of their work under any contract associated with the completion of the Odor Control Project contemplated by this Agreement. Failure of the District to ensure that its Contractors maintain insurance coverage as listed below shall not relieve the District of any contractual responsibility, obligation or liability.

All Contractors hired by the District shall maintain on a primary basis and at their sole expense, at all times throughout the duration of their work on this project the following types of insurance coverage with limits and on forms (including endorsements) as described herein. These requirements, as well as the County’s review or acceptance of insurance maintained by the Contractor is not intended to and shall not in any manner limit or qualify the liabilities assumed by the District under this Agreement. The Contractor shall maintain any coverage required by federal and state workers’ compensation or financial responsibility laws including but not limited to Chapter 324 and 440, *Florida Statutes*, as may be amended from time to time. Insurance carriers providing coverage shall be authorized and/or eligible to do business in the State of Florida and shall possess a current A.M. Best’s Financial Strength Rating of A- Class VIII.

The minimum types and amounts of insurance inclusive of any amount provided by an umbrella or excess policy, shall be as indicated herein.

When a self-insured retention or deductible exceeds \$100,000 the County reserves the right to request a copy of the Contractor’s most recent annual report or audited financial statement. For policies written on a “Claims-Made” basis the Contractor agrees to maintain a retroactive date prior to or equal to the effective date of this Agreement. In the event the policy is canceled, non-renewed, switched to occurrence form, or any other event which triggers the right to purchase a Supplemental Extended Reporting Period (“**SERP**”) during the life of this Agreement the Contractor agrees to purchase the SERP with a minimum reporting period of not less than two (2) years. Purchase of the SERP shall not relieve the Contractor of the obligation to provide replacement coverage.

The Contractor shall be responsible for all risk of loss whether insured or not until final completion and acceptance of the Odor Control Project by the County pursuant to the terms of the Interlocal Agreement. The Contractor agrees to be fully and solely responsible for any costs or expenses resulting from a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the application of said deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. The County has the right to request that the Contractor procure and maintain a surety bond for any deductible amounts that exceed any amount stated herein in such amount and on such form that are acceptable to the County.

The County reserves the right, but not the responsibility to periodically review any and all policies of insurance and to reasonably adjust the limits and/or types of coverage required herein, from time to time throughout the term of this Agreement. In such event, the County will provide the

Contractor written notice of such adjustments and the Contractor shall comply within thirty (30) days of receipt thereof. Any request for an exception to these insurance requirements must be submitted in writing to the County for approval.

The Contractor agrees to specifically include the County as an additional insured on the Commercial General Liability policy with a CG 20 37 – Additional Insured - Owners, Lessees or Contractors-Completed Operations or CG 20 10 – Additional Insured-Owners, Lessees or Contractors-Scheduled Person or Organization Endorsement, or their equivalent. The Contractor shall also specifically include the County as an Additional Insured on any Commercial Umbrella or Excess policies unless the County is automatically defined under the policy as an Additional Protected Person. Additionally, the Contractor agrees to specifically include the County as an Additional Insured under the Design-Build Contractor's Pollution Liability coverage (when applicable). The name of the organization identified in each Additional Insured endorsement's schedule shall read Orange County, Florida.

The Contractor agrees to provide a Waiver of Subrogation in favor of the County, the District, the Contractor, and subcontractors for each required policy providing coverage during the life of this Agreement. When required by the insurer, or should a policy condition not permit an endorsement, the Contractor agrees to notify the insurer and request that the policy(ies) be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or an equivalent endorsement. This Waiver of Subrogation requirement shall not apply to any policy, which includes a condition that specifically prohibits such an endorsement or voids coverage should the Contractor enter into such an agreement on a pre-loss basis.

Before execution of this Agreement by the County and the start of any work and for the duration of this Agreement, the Contractor shall provide the County with current certificates of insurance evidencing all required coverage. The certificates shall clearly indicate that the Contractor has obtained insurance of the type, amount and classification as required for strict compliance with this insurance section. No material change or cancellation of the insurance shall be effective without thirty (30) days prior written notice to the County. Certificates shall specifically reference the project title and contract number. The certificate holder shall read:

**Orange County, FL
C/O Risk Management Division
109 E. Church Street, Suite 200
Orlando, Florida 32801**

Prior to commencement of any work performed by subcontractors (if any), the Contractor shall obtain certificates of insurance evidencing coverage from each of its subcontractors and shall furnish within five (5) business days, copies of said certificates upon request by the County. In addition to the certificate(s) of insurance, the Contractor shall also provide a blanket or specific additional insured endorsement and all waivers of subrogation or transfer of rights of recovery endorsements for each policy.

Failure of the County to demand such certificate or other evidence of full compliance with these insurance requirements or failure of the County to identify a deficiency from evidence provided will not be construed as a waiver of the Contractor's obligation to maintain such insurance.

Workers' Compensation

The Contractor shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the Schedule of Limits (see below) for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the County. The County will not accept elective exemptions. Any Contractor using an employee leasing company shall complete the County's *Leased Employee Affidavit*.

- Schedule of Limits for Employer's Liability
 - Contract Amount Up to \$10 Million: Statutory/\$500,000
 - Contract Amount Over \$10 Million: Statutory/\$1,000,000
- Required Endorsements
 - Waiver of Subrogation - WC 00 03 13 or its equivalent

Commercial General Liability

The Contractor shall maintain coverage issued on ISO form CG 00 01 or its equivalent, with a limit of liability of not less than the limits indicated in the Schedule of Limits (see below). The Contractor further agrees coverage shall not contain any endorsement(s) excluding or limiting product/completed operations, independent Contractors, contractual liability, or separation of insureds. The General Aggregate limit shall either apply separately to this Agreement or shall be at least twice the required occurrence limit.

All Contractors with a contract amount greater than \$20,000,000 shall be written on a Designated Premises or Projects basis. Commercial umbrella and excess coverage shall include liability coverage for damage to the Contractor's completed work equivalent to that provided under ISO Form CG 00 01 04 13.

- Schedule of Limits for Commercial General Liability
 - Contract Amount Up to \$10 Million: \$1,000,000
 - Contract Amount Over \$10 Million: \$5,000,000
- Required Endorsements
 - Additional Insured – CG 20 10 04 13 and CG 20 37 04 13 or its equivalent
 - Waiver of Subrogation – CG 24 04 05 09 or its equivalent

Note: If blanket endorsements are being submitted please include the entire endorsement. The policy number to which the endorsement applies shall be indicated directly on the endorsement.

Business Automobile Liability

The Contractor shall maintain coverage for all owned; non-owned and hired vehicles issued on ISO form CA 00 01 or its equivalent, with limits of not less than the limits indicated in the Schedule of Limits (see below). In the event the Contractor does not own automobiles, the Contractor shall

maintain coverage for hired and non-owned auto liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

- Schedule of Limits for Commercial General Liability
 - Contract Amount Up to \$10 Million: \$1,000,000
 - Contract Amount Over \$10 Million: \$5,000,000

Builders' Risk

The Contractor shall maintain builders' risk insurance providing coverage to equally protect the interests of the County, the Contractor, and subcontractors of any tier. Coverage shall be written on a completed value form in an amount at least equal to 100% of the estimated completed value of the project plus any subsequent modifications of that sum.

The coverage shall be written on an "all-risk" basis and shall, at a minimum cover the perils insured under the ISO CP 10 30 Special Causes of Loss Form and shall include property in transit and property stored on or off premises, which shall become part of the project. The Contractor agrees not to maintain a wind or flood sub-limit less than 25% of the estimated completed value of the project. The Contractor agrees any flat deductible(s) shall not exceed \$25,000, and any wind percentage deductible (when applicable) shall not exceed five percent (5%). The coverage shall not be subject to automatic termination of coverage in the event the project/building is occupied in whole or in part, or put to its intended use, or partially accepted by the County. If such restriction exists, the Contractor shall request that the carrier endorse the policy to amend the automatic termination clause to only terminate coverage if the policy expires, is cancelled, the County's interest in the project ceases, or the project is accepted and insured by the County.

Design-Build Contractor's Pollution Liability

The Design-Build Contractor agrees to maintain Contractor's Pollution Liability with a limit of not less than \$1,000,000 per occurrence on a per-project basis.

EXHIBIT E

Design-Build Contractor Subcontractor/Vendor Procurement Evaluation Criteria

(One attached page)

EXHIBIT E

Program Bid Scoring Matrix

SHINGLE CREEK TRANSIT AND UTILITY COMMUNITY DEVELOPMENT DISTRICT SOUTH WATER RECLAMATION FACILITY - ODOR CONTROL PROJECT

EQUIPMENT SCORING MATRIX

EVALUATION CRITERIA	WEIGHT (%)	Score	Formula/Logic
Price	50%	Calculated score	Score= [(Bidder group with lowest price)/ (Bidder price)]*(Weight*100)
Total Delivery Time (Submittals + Delivery)	15%	Calculated score	Score= [(Bidder group with shortest time for total delivery time)/ (Bidder time)]*(Weight*100)
MWBE	10%	Yes or No	Score = (Yes=10, No=0)
Vendor support, responsiveness and proposal strength	10%	Rated score	Score Range (0-10) 0= Bidder does not meet evaluation criteria in any capacity 2= Bidder meets some of the evaluation criteria with >5 exceptions 5= Bidder meets most of the evaluation criteria with <5 exceptions 8= Bidder meets evaluation criteria 10= Bidder exceeds evaluation criteria
Operation Cost	5%	Calculated score	If not applicable Score = 0 If Applicable, Formula varies by type of equipment (i.e. Fans based upon fan rotational speed, Score= (Min fan RPM all Bidders /Bidder fan RPM)*5%*100)
Experience	10%	Rated score	Score Range (0-10) 0= Bidder has experience < 5 years 5= Bidder has experience > 10 years 10= Bidder has experience >20 years
Total	100%		

CONTRACTING SCORING MATRIX

EVALUATION CRITERIA	WEIGHT (%)	Score	Formula/Logic
Price	50%	Calculated score	Score= [(Bidder group with lowest price)/ (Bidder price)]*(Weight*100)
Scope Duration	15%	Calculated score	Score= [(Bidder group with shortest time for scope duration)/ (Bidder time)]*(Weight*100)
MWBE	10%	Yes or No	Score = (Yes=10, No=0)
Vendor support, Responsiveness and Proposal Strength	10%	Rated score	Score Range (0-10) 0= Bidder does not meet evaluation criteria in any capacity 2= Bidder meets some of the evaluation criteria with >5 exceptions 5= Bidder meets most of the evaluation criteria with <5 exceptions 8= Bidder meets evaluation criteria 10= Bidder exceeds evaluation criteria
Safety	5%	Rated score	Score Range (0-5) 0= Bidder did not provide safety information as part of bid 0 to 5= Bidder did provide safety information as part of bid with violations deduct 1 point for each 5= Bidder did provide safety information as part of bid with no violations
Available Manpower	10%	Calculated score	Score= [(Bidder total # employees)/ (Bidder group with the highest # of employees)]*(Weight*100)
Total	100%		

EXHIBIT F

Sample Division 1 General Requirements for Subcontractor/Vendor Contracts

(191 attached pages)

**ORANGE COUNTY UTILITIES
SOUTH WATER RECLAMATION FACILITY
ODOR ABATEMENT PROJECT**

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DIVISION 1

GENERAL REQUIREMENTS

SECTION 01001

GENERAL WORK REQUIREMENTS

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SECTION 01001

GENERAL WORK REQUIREMENTS

PART 1 - GENERAL

1.01 NOTICES

- A. All notices or other papers required to be delivered by the Contractor to the County shall be delivered to the office of Field Services, Orange County Utilities Department, 9150 Curry Ford Road, Orlando, FL 32825.

1.02 WORK TO BE DONE

- A. The Contractor shall furnish all labor, materials, equipment, tools, services, and incidentals to complete all work required by these specifications and as shown on the Drawings, at a rate of progress which will ensure completion of the Work within the Contract Time stipulated.
- B. The Contractor shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, clean up, replacements, and restoration required as a result of damages caused during this construction.
- C. The Contractor shall comply with all City, County, State, Federal, and other codes, which are applicable to the proposed Work.
- D. All newly constructed Work shall be carefully protected from injury in any way. No wheeling, walking, or placing of heavy loads on it shall be allowed and all portions damaged shall be reconstructed by the Contractor at his own expense.
- E. Scope of Work: See Section 01010 "Summary of Work" and the Bid Schedule for details.

1.03 DRAWINGS AND PROJECT MANUAL

- A. The Work shall be performed in accordance with the Drawings and Specifications

prepared by the County/Professional. All work and materials shall conform to the Orange County Utilities Standards and Construction Specifications Manual, latest edition or as indicated in these Specifications or Drawings.

- B. The Contractor shall verify all dimensions, quantities and details shown on the Drawings, Supplementary Drawings, Schedules, Specifications or other data received from the County/Professional, and shall notify same, in writing, of all errors, omissions, conflicts and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory Work, faulty construction or improper operation resulting there from, nor from rectifying such conditions at his own expense.
- C. All schedules are given for the convenience of the County and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quantity of materials and equipment included in the Work to be done under this Contract.
- D. Intent:
 - 1. All Work called for in the Specifications applicable to this Contract, but not shown on the Drawings in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified either in the Drawings or in the Specifications but involved in carrying out their intent or in the complete and proper execution of the Work, is required and shall be performed by the Contractor as though it were specifically delineated or described.
 - 2. Items of material, equipment, machinery, and the like may be specified on the Drawings and not in the Specifications. Such items shall be provided by the Contractor in accordance with the specification on the Drawings.
 - 3. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any Work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.
- E. Refer to the Contract for the order of precedence of items and documents.

1.04 PROTECTION AND RESTORATION

- A. The Contractor shall be responsible for the preservation of all public and private property and shall use every means of protection necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or the Contractor shall make good the damage in other manner acceptable to the County/Professional.

- B. Protection of Trees and Shrubs
 - 1. Protect with boxes or other barricades.
 - 2. Do not place excavated material so as to injure trees or shrubs.
 - 3. Install pipelines in short tunnels between and under root systems.
 - 4. Support trees to prevent root disturbance during nearby excavation.

- C. Tree and Limb Removal
 - 1. Tree limbs, which interfere with equipment operation and are approved for pruning, shall be neatly trimmed and the tree cut coated with tree paint.

 - 2. The County may order the Contractor, for the convenience of the County, to remove trees along the line or trench excavation. The Contractor shall obtain any permits required for removal of trees. Ordered tree removal shall be paid for under the appropriate Contract Items.

- D. Trees or shrubs destroyed by negligence of the Contractor or his employees shall be replaced by the Contractor with new stock of similar size and age, at the proper season and at the sole expense of the Contractor.

- E. Lawn Areas: All lawn areas disturbed by construction shall be replaced with like kind to a condition similar or equal to that existing before construction. Where sod is to be removed, it shall be carefully removed, and the same re-sodded, or the area where sod has been removed shall be restored with new sod in the manner described in the applicable section.

- F. Where fencing, walls, shrubbery, grass strips or area must be removed or damaged incident to the construction operation, the Contractor shall, after completion of the work, replace or restore to the original condition.

- G. The cost of all labor, materials, equipment, and work for restoration shall be deemed included in the appropriate Contract Item or items, or if no specific item is provided therefore, as part of the overhead cost of the Work, and no additional payment will be made therefore.

1.05 PUBLIC NUISANCE

- A. The Contractor shall not create a public nuisance including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, or excessive noise.
- B. Sound levels measured by the County/Professional shall not exceed 45 dBA from 8 p.m. to 8 a.m. or 55 dBA 8 a.m. to 8 p.m. This sound level shall be measured at the exterior of the nearest exterior wall of the nearest residence. Levels at the equipment shall not exceed 85 dBA at any time. Sound levels in excess of these values are sufficient cause to have the Work halted until equipment can be quieted to these levels. Work stoppage by the County/Professional for excessive noise shall not relieve the Contractor of the other portions of this specification including, but not limited to, completion dates and bid amounts.
- C. No extra charge may be made for time lost due to work stoppage resulting from the creation of a public nuisance.

1.06 CONTRACTOR'S PAYMENTS TO COUNTY FOR OVERTIME WORK

- A. County Inspector Work Hours: Normal work hours for the County's inspector(s) are defined as any 8-hour period between the hours of 7:00 a.m. and 7:00 p.m. on the weekdays of Monday through Friday. Any County Inspector(s) work beyond the aforementioned normal work hours shall be requested in writing 48-hours in advance. All overtime, any County holidays or weekend work compensation for the County's Inspector(s) to work beyond the normal working hours are considered overtime compensation and shall be paid for by the Contractor. The overtime pay rate will be \$51.00 per hour or the most current rate as listed in the County Fee Directory prepared by the Office of Management and Budget, in section "Orange County Utilities Engineering & Construction", under the heading of "Inspection Fee other than Normal Working Hours". The Contractor agrees that the County shall deduct charges for work outside normal work hours and for overtime pay from payments due the Contractor.

1.07 MAINTENANCE OF SERVICE

- A. Unless noted otherwise on the plans, the operation of the existing water, reclaimed water or wastewater facility on each of the respective locations shall remain in

service until the transfer of service has been completed. Contractor shall, prior to interrupting any utility service (water, sewer, etc.) for the purpose of making cut- ins to the existing lines or for any other purposes, contact the County and make arrangements for the interruption which will be satisfactory to the County.

- B. Utility lines that are damaged during construction shall be repaired by the Contractor and service restored within 4-hours of the breakage. The County retains the option of repairing any damage to utility pipes in order to expedite service to the customers. The Contractor will remain responsible for all costs associated with the repair.

1.08 TRANSFER OF SERVICE

- A. When the County has accepted a proposed facility and placed it into operation, the transfer of service is complete. The Contractor may begin the work of removing the existing or temporary facilities.

1.09 LABOR

- A. Supervision: The Contractor shall supervise and direct the Work efficiently and with his best skills and attention. The Contractor shall have a competent, English speaking superintendent or representative, who shall be on the site of the Project at all working hours, and who shall have full authority by the Contractor to direct the performance of the Work and make arrangements for all necessary materials, equipment, and labor without delay.
- B. Jurisdictional Disputes: It shall be the responsibility of the Contractor to pay all costs that may be required to perform any of the Work shown on the Drawings or specified herein to avoid any work stoppages due to jurisdictional disputes. The basis for subletting work in question, if any, shall conform to precedent agreements and decisions on record with the Building and Construction Trades Department, AFL-CIO, dated June 1973, including any amendments thereto.
- C. Apprenticeship: The Contractor shall comply with all the requirements of Section 446, Florida Statutes, for all contracts in excess of \$25,000 excluding roadway, highway or bridge contracts and the Contractor agrees to insert in any subcontract under this Contract the requirements of this Article.

1.10 MATERIALS AND EQUIPMENT

- A. MANUFACTURER

1. All transactions with the manufacturers or Subcontractors shall be through the Contractor, unless the Contractor and the County/Professional request that the manufacturer or Subcontractor communicate directly with the County/Professional. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.
2. All workmanship and materials shall be of the highest quality. The equipment shall be the product of manufacturers who are experienced and skilled in the field with an established record of research and development. No equipment will be considered unless the manufacturer has designed and manufactured equipment of comparable type and size and have demonstrated sufficient experience in such design and manufacture.
3. No material shall be delivered to the Site without prior approval of the County/Professional.
4. All apparatus, mechanisms, equipment, machinery, and manufactured articles for incorporation into the Project shall be the new (most current production at time of bid) and unused standard products of recognized reputable manufacturers.
5. Manufactured and fabricated products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - c. Any two or more pieces of material or equipment of the same kind, type or classification, and being used for identical types of service, shall be made by the same manufacturer.
 - d. Products shall be suitable for service conditions as specified and as stated by manufacturer.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 - f. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.11 MANUFACTURER'S SERVICE

- A. Where service by the manufacturer is specified to be furnished as part of the cost of

the item of equipment, the Work shall be at the Contractor's expense.

- B. The services provided shall be by a qualified manufacturer's service representative to check and verify the completed installation, place the equipment in operation, and instruct the County's operators in the operation and maintenance procedures. Such services are to be for period of time and for the number of trips specified. A working day is defined as a normal 8- hour working day on the job and does not include travel time.

- C. The services shall further demonstrate to the County/Professional's complete satisfaction that the equipment will satisfactorily perform the functions for which it has been installed.

1.12 INSPECTION AND TESTING

A. General

1. All materials and equipment furnished by the Contractor shall be subject to the inspection, review and acceptance of the County and meet the requirements as outlined in the Orange County Utilities Standards and Construction Specifications Manual. If in the testing of any material or equipment it is ascertained by the County/Professional that the material or equipment does not comply with the Contract, the Contractor shall be notified thereof, and the Contractor will be directed to refrain from delivering said material or equipment, or to remove it promptly from the Site or from the Work and not accepted by the County shall be replaced with acceptable material, without cost to the County.

2. Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with recognized test codes of the ANSI, ASME, or the IEE, except as may otherwise be stated herein.

3. The Contractor shall give notice in writing to the County sufficiently in advance of his intention to commence the manufacture or preparation of materials especially manufactured or prepared for use in or as part of the permanent construction. Such notice shall contain a request for inspection, the date of commencement and the expected date of completion of the manufacture or preparation of materials. Upon receipt of such notice, the County shall arrange to have a representative present at such times during the manufacture as may be necessary to inspect the materials; or the County will notify the Contractor that the inspection will be made at a point other than the point of manufacture; or the County will notify the Contractor that inspection will be waived.

4. When inspection is waived or when the County/Professional so requires, the Contractor shall furnish to the County authoritative evidence in the form of Certificates of Manufacture that the materials to be used in the Work have been manufactured and tested in conformity with the Contract Documents. These certificates shall be notarized and shall include five (5) copies of the results of physical tests and chemical analysis, where necessary, that have been made directly on the product or on similar products of the manufacturer.
5. The Contractor must comply with these provisions before shipping any material. Such inspections by the County shall not release the Contractor from the responsibility for furnishing materials meeting the requirements of the Contract Documents.

B. Cost

1. County shall employ and pay for the services of an independent testing laboratory to perform testing indicated on the Contract Documents, or at the County's discretion to ensure conformity with the Contract Documents.
2. The cost of field leakage and pressure tests and shop tests of materials and equipment specifically called for in the Contract Documents shall be borne by the Contractor. Such costs shall be deemed to be included in the Contract price.
3. The Contractor shall notify the County laboratory a minimum of 48-hours in advance of operations for scheduling of tests. When tests or inspections cannot be performed after such notice, the Contractor shall reimburse County for expenses incurred.
4. The Contractor shall pay for all work required to uncover, remove, replace, retest, etc., any work not tested due to the Contractor's failure to provide the 48-hours advance notice or due to failed tests. The Contractor shall also provide compensation for the County/Professional's personnel for required re-testing due to failed or rescheduled testing.

C. Shop Testing

1. Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function or special requirements are specified shall be tested in the shop of the manufacturer in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract

Documents. No such equipment shall be shipped to the worksite until the County/Professional notifies the Contractor, in writing, that the results of such tests are acceptable.

2. The manufacturing company shall provide five (5) copies of the manufacturer's actual shop test data and interpreted results signed by a responsible official of the manufacturing company and notarized, showing conformity with the Contract Documents as a prerequisite for the acceptance of any equipment. The cost of shop tests (excluding cost of County's representative) and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor and shall be included in the Contract price.

D. Field Testing:

1. The County shall employ and pay for services of an independent testing laboratory to perform testing specifically indicated in the Contract Documents. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract. The Contractor shall provide compensation for retesting of all failed tests.
2. The County may at any time during the progress of the Work, request additional testing beyond that which is specified in the Contract. This testing will be at the County's expense. Contractor shall:
 - a. Cooperate with laboratory personnel, provide access to the Project.
 - b. Secure and deliver to the laboratory adequate quantities of representative 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 material mixes, which require control by the testing laboratory.

E. Demonstration Tests: Upon completion of the Work and prior to final payment, all equipment and piping installed under this Contract shall be subjected to acceptance or demonstration tests as specified or required to provide compliance with the Contract Documents. The Contractor shall furnish all labor, fuel, energy, water and all other equipment necessary for the demonstration tests at no additional cost to the County.

F. Final Inspection: Prior to preparation of the final payment application, a final inspection will be performed by the County to determine if the Work is properly and satisfactorily constructed in accordance with the requirements of the Contract Documents. See also Section 01700 "Project Closeout."

- G. Inspection by existing utility owners: The Contractor shall pay for all inspections during the progress of the work required and provided by the owner of all existing public utilities paralleling or crossing the Work, as shown on the Drawings. All such inspection fees shall be deemed included in the appropriate Contract Item or items, or if no specific item is provided therefore, as part of the overhead cost of the Work, and no additional payment will be made therefore.

- H. Inspection by Other Agencies: The Florida Department of Transportation, the Florida Department of Environmental Protection, and other authorized governmental agencies shall have free access to the site for inspecting materials and work, and the Contractor shall afford them all necessary facilities and assistance for doing so. Any instructions to the Contractor resulting from these inspections shall be given through the County. These rights of inspections shall not be construed to create any contractual relationship between the Contractor and these agencies.

1.13 PROJECT SITE AND ACCESS

A. RIGHT-OF-WAY AND EASEMENTS

1. The use of public streets and alleys shall be such as to provide a minimum of inconvenience to the public and to other traffic. Any earth or other excavated material shall be removed by the Contractor and the streets cleaned to the satisfaction of the County.

2. The Contractor shall not enter or occupy private land outside of easements, except by written permission of the property owner.

3. At the time of the Pre-Construction meetings, the Contractor shall become fully acquainted with the status of all easements. Should easements not be acquired by the County in specific areas of the Work, the Contractor shall sequence and schedule his work therein so as not to interfere with the progress of work in other areas of the Project. Any rescheduling of work due to easement acquisitions shall be performed by the Contractor at no additional cost to the County. The County agrees that it will make every effort to acquire all remaining easements with all speed and diligence possible so as to allow the completion of the Work within the Contract time.

B. ACCESS

1. Neither the material excavated, nor the materials or equipment used in the

construction of the Work shall be so placed as to prevent free access to all fire hydrants, valves or manholes.

2. Access to businesses located adjacent to the project site must be maintained at all times. Contractor may prearrange the closing of business access with the business Owner. Such prearranged access closing shall not exceed two (2) hours. Property drainage and grading shall be restored, and all construction debris removed within 48-hours of backfilling trench.
3. Contractor agrees that representatives of the County and any governmental agents will have access to the Work wherever it is in preparation or progress and that the Contractor shall provide facilities for such access and inspection.

1.14 UTILITIES

A. UTILITY CONSTRUCTION

1. Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes and all other appurtenances and facilities pertaining thereto, whether owned or controlled by governmental bodies or privately owned by individuals, firms or corporations, used to serve the public with transportation, traffic control, gas, electricity, telephone, sewerage, drainage or water. Other public or private property, which may be affected by the Work, shall be deemed included hereunder.
2. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required.
3. The length of open trench will be controlled by the particular surrounding conditions, but shall always be confined to the limits described by the County. If any excavation becomes a hazard, or if it excessively restricts traffic at any point, the County may require special construction procedures. As a minimum, the Contractor shall conform to the following restoration procedures:
 - a. Interim Restoration: All excavations shall be backfilled and compacted as specified by the end of each working day. For excavations within existing

paved areas; limerock base or soil cement base (match existing) shall be spread and compacted to provide a relatively smooth surface free of loose aggregate material. At the end of each workweek, the S-I asphaltic surface course shall be completed and opened to traffic. Contractor shall coordinate his construction activity including density tests and inspections to allow sufficient time to achieve this requirement. All driveway cuts shall be backfilled, compacted, and limerock base spread and compacted immediately after installation. Contractor shall coordinate with the individual property owners prior to removing the driveway section. Any utility crossing an existing roadway, parking lot or other paved area shall be patched by the end of the working day.

- b. All pipe and fittings shall be neatly stored in a location, which will cause the least disturbance to the public. All debris shall be removed and properly disposed of by the end of each working day.
- c. Final Restoration Overlay: After completing all installations, and after testing of the pipe (but no sooner than 30-days after applying the S-I asphaltic surface), final restoration shall be performed. In no event shall final restoration begin after substantial completion. Final restoration shall provide an S-III asphaltic overlay as specified in an uninterrupted continuous operation until completion. Any additional restoration required after testing shall be repaired in a timely manner at no additional cost to the County.
- d. Maintenance of all restored facilities shall be the Contractor's responsibility. This maintenance shall be performed on an on-going basis during the course of construction. The Contractor's Progress Schedule shall reflect the above restoration requirements.
- e. Additional Restoration for Work in Business or Commercial Districts: The Contractor shall restore all private property, damaged by construction, to its original condition. Access to businesses located adjacent to the project site must be maintained at all times. Contractor may prearrange the closing of business accesses with the business owner. Such prearranged access closing shall not exceed two (2) hours. Property drainage and grading shall be restored within 24-hours of backfilling trench.

B. EXISTING UTILITIES

1. The locations of all existing underground piping, structures and other facilities are shown based on information received from the respective owner. The locations are shown without express or implied representation, assurance, or guarantee that they are complete or correct or that they represent a true picture of underground piping, conduit and cables to be encountered. It is the Contractor's responsibility to verify all existing underground piping, structures and other facilities.
2. The Contractor shall, at all times, employ acceptable methods and exercise

reasonable care and skill so as to avoid unnecessary delay, injury, damage or destruction of existing utility installations and structures; and shall, at all times in the performance of the Work, avoid unnecessary interference with, or interruption of, utility services; and shall cooperate fully with the owners thereof to that end.

3. When existing facilities are found to be in conflict with the Work, the County reserves the right to modify alignments to avoid interference with existing facilities.
4. All utilities, which do not interfere with the work, shall be carefully protected against damage. Any existing utilities damaged in any way by the Contractor shall be restored or replaced by the Contractor at his expense as directed by the County. Any existing facilities, which require operation to facilitate repairs, shall be operated only by the owner of the respective utility.
5. It is the responsibility of the Contractor to ensure that all utility and/or poles, the stability of which may be endangered by the proximity of excavation, be temporarily stayed and/or shored in position while work proceeds in the vicinity of the pole and that the utility or other companies concerned be given reasonable advance notice of any such excavation.

C. NOTICES

1. All governmental utility departments and other owners of public utilities, which may be affected by the Work, will be informed in writing by the Contractor two (2) weeks after the execution of the Contract or Contracts covering the Work. Such notice will be sent out in general, and directed to the attention of the governmental utility departments and other owners of public utilities for such installations and structures as may be affected by the Work.
2. The Contractor shall comply with Florida Statute 553.851 regarding protection of underground gas pipelines. Evidence of notification to the gas pipeline owner shall be furnished to the County within two (2) weeks after the execution of the Contract.
3. It shall be the Contractor's responsibility to contact utility companies at least 72-hours in advance of breaking ground in any area or on any unit of the work so maintenance personnel can locate and protect facilities, if required by the utility company.

4. The Contractor shall give a minimum five (5) working day notice to utility personnel prior to interrupting a utility service (water, sewer, etc.).

D. EXPLORATORY EXCAVATIONS

1. Exploratory excavations shall be conducted by the Contractor for the purpose of locating underground pipelines or structures in advance of the construction. Test pits shall be excavated in areas of potential conflicts between existing and proposed facilities and at piping connections to existing facilities a minimum of 48-hours or 1,000-feet in advance of work. If there is a potential conflict, the Contractor shall notify the County/Professional immediately. Information on the obstruction to be furnished by the Contractor shall include: Location, Elevation, Utility Type, Material and Size. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the County.

E. UTILITY CROSSINGS

1. It is intended that wherever existing utilities must be crossed, deflection of the pipe within specified limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated on the Drawings. However, when in the opinion of the County this procedure is not feasible, the County may direct the use of fittings for a utility crossing or conflict transition as detailed on the Drawings.

F. RELOCATIONS

1. Relocations shown on the Drawings: Public utility installations or structures, including but not limited to poles, signs, fences, piping, conduits and drains that interfere with the positioning of the work which are shown on the Drawings to be removed, relocated, replaced or rebuilt by the Contractor shall be considered as part of the general cost of doing the Work and shall be included in the prices bid for the various contract items. No separate payment shall be made therefore.
2. Relocations not shown on the Drawings
 - a. Where public utility installations or structures are encountered during the course of the work, and are not indicated on the Drawings or in the Specifications, and when, in the opinion of the County, removal, relocation, replacement or rebuilding is necessary to complete the Work, such work shall be accomplished by the utility having jurisdiction, or such

- work may be ordered, in writing by the County, for the Contractor to accomplish.
- b. If such work is accomplished by the utility having jurisdiction, it will be carried out expeditiously and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement or rebuilding as required.
 - c. If such work is accomplished by the Contractor, it will be paid for as a Change Order.
3. All existing castings, including valve boxes, junction boxes, manholes, hand holes, pull boxes, inlets and similar structures in the areas of construction that are to remain in service and in areas of trench restoration and pavement replacement, shall be adjusted by the Contractor to bring them flush with the surface of the finished work.
 4. All existing utility systems which conflict with the construction of the work, which can be temporarily removed and replaced, shall be accomplished at the expense of the Contractor. Work shall be done by the utility unless the utility approves in writing that the Work may be done by the Contractor.

1.15 RELATED CONSTRUCTION REQUIREMENTS

A. BARRIER AND LIGHTS

1. The Contractor shall exercise extreme care in the conduct of the Work to protect health and safety of the workmen and the public. The Contractor shall provide all protective measures and devices necessary, in conformance with applicable local, state and federal regulations. Protective measures shall include but are not limited to barricades, warning lights/flashers and safety ropes.
2. All equipment and vehicles operating within 10-feet of the roadway shall have flashing strobe lights attached.

B. DEWATERING AND FLOTATION

1. The Contractor, with his own equipment, shall do all pumping necessary to dewater any part of the work area during construction operations to insure dry working conditions. The Contractor shall take the necessary steps to protect on-site and off-site structures. Damage to any structures due to dewatering shall be repaired or the structures replaced at the Contractor's expense.
2. The Contractor shall be completely responsible for any tanks, wetwells or similar structures that may become buoyant during the construction and modification operations due to the ground water or floods and before the

structure is put into operation. The proposed final structures have been designed to account for buoyancy; however, the Contractor may employ methods, means and techniques during construction which may affect the buoyancy of structures. The Contractor shall take the necessary steps to protect structures. Damage to any structures due to floating or flooding shall be repaired, or the structures replaced at the Contractor's expense.

3. Contractor shall be responsible for any required permits for the discharge of ground water.

C. DUST AND EROSION CONTROL

1. The Contractor shall prevent dust nuisance from his operations or from traffic.
2. Contractor is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.
3. Temporary erosion controls include, but are not limited to, grassing, mulching, netting, watering and reseeding on-site surfaces and soil and borrow area surfaces and providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the County, FDEP and any other agency having jurisdiction.
4. Temporary sedimentation controls include, but are not limited to; silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the County, FDEP and any other agency having jurisdiction.
5. The construction of temporary erosion and sedimentation control facilities shall be in accordance with the technical provision of section 104 "Prevention, Control, and Abatement of Erosion and Water Pollution" of the FDOT Standard Specifications for Road and Bridge Construction, latest edition.

D. LINES AND GRADES

1. All Work under this Contract shall be constructed in accordance with the lines and grades shown on the Drawings, or as given by the County/Professional.
2. When the location of the Work is dimensioned on the Drawings, it shall be installed in that location; when the location of the Work is shown on a scaled drawing, without dimensions, the Work shall be installed in the scaled location unless the County approves an alternate location for the piping. Where fittings are noted on the Drawings, such notation is for the Contractor's convenience

and does not relieve the Contractor from laying and jointing different or additional items where required. The County/Professional may require detailed pipe laying drawings and schedules for project control.

3. The Contractor shall, at his own expense, establish all working or construction lines and grades as required from the project control points set by the County, and shall be solely responsible for the accuracy thereof.
4. Water main and forcemain shall be installed to provide long uniform gradient or slope to pipe to minimize air pockets and air release valves. The stationing shown on the Drawings for air and vacuum release valve assemblies are approximate and the Contractor shall field adjust these locations to locate these valves at the highest point in the pipeline installed. All locations must be accepted by the County.
5. To ensure a uniform gradient for gravity pipe and pressure pipe, all lines shall be installed using the following control techniques as a minimum:
 - a. Gravity lines; continuous control, using laser beam technology.
 - b. Pressure lines; control stakes set at 50-foot intervals using surveyors' level instrument.

E. TEMPORARY CONSTRUCTION

1. Temporary fences: If, during the course of the Work, it is necessary to remove or disturb any fencing, the Contractor shall at his own expense, provide a suitable temporary fence which shall be maintained until the permanent fence is replaced.
2. Responsibility for Temporary Structures: In accepting the Contract, the Contractor assumes full responsibility for the sufficiency and safety of all temporary structures or work and for any damage which may result from their failure or their improper construction, maintenance or operation.

F. DAILY REPORTS

1. The Contractor shall submit to the County's Representative daily reports of construction activities including non-workdays. The reports shall be complete in detail and shall include the following information:
 - a. Days from Notice to Proceed; Days remaining to substantial and final completion.
 - b. Weather information
 - c. Work activities with reference to the Critical Path Method (CPM) schedule activity numbers (including manpower, equipment and daily production quantities for each individual activity).
 - d. Major deliveries

- e. Visitors to site
 - f. Test records
 - g. New problems, and
 - h. Other pertinent information
2. A similar report shall be submitted for/by each Subcontractor.
 3. The report(s) shall be submitted to the County Representative within 2 days of the respective report date. Each report shall be signed by the Contractor's Superintendent or Project Manager. Pay request will not be processed unless daily reports are current.
 4. If a report is incomplete, in error, or contains misinformation, a copy of the report shall be returned by the County Representative to the Contractor's Superintendent or Project Manager with corrections noted. When chronic errors or omissions occur, the Contractor shall correct the procedures by which the reports are produced.

G. CLEANING

1. During Construction
 - a. During construction of the Work, the Contractor shall, at all times, keep the Site free from material, debris and rubbish as practicable and shall remove the same from any portion of the Site if, in the opinion of the County, such material, debris, or rubbish constitutes a nuisance or is objectionable.
 - b. Provide on-site containers for the collection of waste materials, debris and rubbish and remove such from the Site periodically by disposal at a legal disposal area away from the Site.
 - c. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished. Use cleaning materials which will not create hazards to health or property, and which will not damage surfaces. Use only those cleaning materials and methods recommended by the manufacturer of the surface material. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.
 - d. Contractor shall remove from the site all surplus materials and temporary structures when no longer necessary to the Work at the direction of the County.
2. Final Cleaning
 - a. At the conclusion of the Work, all equipment, tools, temporary structures and materials belonging to the Contractor shall be promptly taken away, and the Contractor shall remove and promptly dispose of all water, dirt, rubbish or any other foreign substances. Employ skilled workmen for final

cleaning. Thoroughly clean all installed equipment and materials to a bright, clean, polished and new appearing condition. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight- exposed interior and exterior surfaces. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.

- b. The Work shall be left in a condition as shown on the Drawings and the remainder of the site shall be restored to a condition equal or better than what existed before the Work.
- c. Prior to final completion, or County occupancy, Contractor shall conduct an inspection of interior and exterior surfaces, and all work areas to verify that the entire Work is clean. The County will determine if the final cleaning is acceptable.

1.16 CONSTRUCTION NOT PERMITTED

A. USE OF EXPLOSIVES

- 1. No blasting shall be done except as approved by the County and the governmental agency or political subdivision having jurisdiction.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. This Contract is for the South Water Reclamation Facility Odor Abatement Improvements as shown on the Drawings and specified herein. The Work consists of furnishing all labor, equipment, and materials for the construction of the portion of the facilities consisting of, but not limited to:

- 1. [Insert subcontractor/vendor scope]

1.02 CONTRACTOR'S USE OF PREMISES

- A. The Contractor shall assume full responsibility for the protection and safekeeping of products and materials at the job site. If additional storage or work areas are required, they shall be obtained by the Contractor at no additional cost to the Owner.

1.03 SEQUENCE OF WORK

- A. The Contractor shall establish his work sequence based on the use of crews to facilitate completion of construction and testing within the specified Contract Time.
- B. The Contractor shall submit a schedule and work sequence to the Owner in accordance with the Contract Documents. Work on all utility lines shall be accomplished so that the water reclamation facility will stay in operation.
- C. All tie-ins to existing facilities shall be coordinated with and approved by the Owner.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 GENERAL

- A. The Contractor shall receive and accept the compensation provided in the Proposal and the Contract as full payment for furnishing all materials, labor, tools and equipment, for performing all operations necessary to complete the work under the Contract, and also in full payment for all loss or damages arising from the nature of the work, or from any discrepancy between the actual quantities of work and quantities herein estimated by the Engineer, or from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the Owner.

- B. The prices stated in the proposal include all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the work as shown on the Drawings and specified herein. The basis of payment for an item at the unit price shown in the proposal shall be in accordance with the description of that item in this Section.

- C. The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Bid Form or Payment Items, he shall include the cost for that work in some other applicable bid item, so that his proposal for the project does reflect his total price for completing the work in its entirety.

1.02 MEASUREMENT

- A. The quantities for payment under this Contract shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the Owner, in accordance with the applicable method of measurement therefore contained herein.

1.03 WORK NOT PAID FOR SEPARATELY

- A. Delivery: Payment for equipment delivery, storage or freight shall be included in the pay items including their installation and no other separate payment will be made therefore.
- B. Bonds: Payment for bonds required by the Contract shall be included in the pay items for the Work covered by the required bonds and no separate payment will be made.
- C. Preparation of Site: Payment for preparation of site shall be included in pay items proposed for the various items of Work and no separate payment will be made therefore. Preparation of site includes setting up construction plant, offices, shops, storage areas, sanitary and other facilities required by the specifications or state law or regulations; providing access to the site; obtaining necessary permits and licenses; payments of fees; general protection, temporary heat and utilities including electrical power; providing shop and working drawings, certificates and schedules; providing required insurance; preconstruction photographs and videos; clearing and grubbing; removal of existing pavements, sidewalks and curbs; trench excavation, sheeting, shoring and bracing; dewatering and disposal of surplus water; structural fill, backfill, compaction and grading; testing materials and apparatus; maintenance of drainage systems; appurtenant work; record drawing and close-out documentation; cleaning up; and all other work regardless of its nature which may not be specifically referred to in a Bid Item but is necessary for the complete construction of the project set forth by the Contract.
- D. Permitting & Permit Fees:
 - 1. The County shall pay the general building permit fee and any related impact fees or assessments to be paid to Orange County for the issuance of only that permit and the permits specified in Section 01065.
 - 2. The Contractor shall pay all fees associated with obtaining Orange County trade permits in accordance with the General Conditions. Sub-permit fees shall be 0.2% of the bid price. The payment amount made by the County for permits shall be the pre-established percentage of the total bid amount and listed on the bid form. The invoicing for this lump sum item should be a proportional amount to the contract invoicing.
 - 3. All other permits and fees shall be included in Item 1.

- E. The County reserves the right to delete any item included in the Schedule of Values and decrease the Contract Price by the scheduled amount for the item deleted.

1.04 MEASUREMENT FOR PAYMENT

A. Lump Sum Contracts/Items - Generally:

1. Quantities provided in the Schedule of Values are for the purpose of estimating the completion status for progress payments. Payment will be made for each individual item on a percentage of completion basis as estimated by the Contractor and approved by the County.
2. Adjustments to costs provided in the accepted Schedule of Values may be made only by Change Order.
3. The County reserves the right to delete any item included in the Schedule of Values and decrease the Contract Price by the scheduled amount for the item deleted.

1.05 MEASUREMENT AND PAYMENT ITEMS

A. Items are as enumerated on the bid form.

1. Item 1 – Odor Abatement Improvements Project
 - a. Measurement: Measurement for this item shall be based on satisfactory construction of [insert subcontractor/vendor scope].
 - b. Payment: Payment of the applicable Contract lump sum price as stated in the proposal will be full compensation for furnishing all labor, materials, and equipment necessary to construct [insert subcontractor/vendor scope] as indicated on the Drawings. Contractor shall include in the lump sum price, the Orange County Building Department fee, as noted in Section 01010 Summary of Work. Work includes but is not necessarily limited to the following: mobilization and demobilization, bonds, permits, movement of those personnel, equipment, supplies and incidentals to the project site, establishment of temporary offices and buildings, sanitary and other facilities required by these specifications, and providing safety equipment and first aid supplies; preparation of submittals, field surveys, a comprehensive pre-construction video in accordance with

the County requirements and specification; Project Record Drawings, including the certified as-built survey, in accordance with the County requirements and specifications; constructing [insert subcontractor/vendor scope] as shown on the Drawings; all associated electrical and instrumental work as shown on Drawings; restoration of site as shown on Drawings; all coordination with the electric power company, materials, equipment, tools, labor and fees to install an electrical service connection; installation of all site and adjacent improvements noted on Drawings including driveways and driveway connections, fencing with curb and gate, masonry walls and gates, asphalt and concrete paving, rock fill and sodding.

2. Item 2 – Orange County Permits as defined in Section 01065
 - a. Measurement: Measurement for various items covered under Orange County permits as defined in Section 01065 will not be made for payment, and all items shall be included in the lump sum price.
 - b. Payment for Orange County Permits as defined in Section 01065 shall be 0.2% fixed percentage of the total bid and pre-established on the bid form. Payment for the lump sum item shall be proportional to the amount to the contract payment for Item No. 1.

**PART 2 - PRODUCTS (NOT
USED) PART 3 - EXECUTION (NOT
USED)**

END OF SECTION

SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.01 REQUIREMENT

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
- B. Prior to submitting a monthly payment application, the [insert deliverables] for the period covered by the monthly payment application shall be submitted and accepted by the County.

1.02 FORMAT

- A. Format and Content: Use the accepted Schedule of Values.
 - 1. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:
 - a. Generic name
 - b. Related specification section
 - c. Name of subcontractor
 - d. Name of manufacturer or fabricator
 - e. Name of supplier
 - f. Dollar value
 - 2. Round amounts off to the nearest whole dollar. The total shall equal the Contract Amount.

1.03 PREPARATION OF APPLICATION

- A. Each Application for Payment shall be consistent with previous applications for payments as certified and paid for by the County.
- B. Payment Application Times: As stated in the General Conditions, Payment

Applications shall be submitted monthly on a day of the month established by the County at the Pre-Construction Conference.

- C. Application Preparation: Contractor shall complete every entry on the Pay Application form. The form shall be executed by a person authorized to sign legal documents on behalf of the Contractor and the signature notarized. Incomplete applications will be returned without action. The following procedure shall be followed by the Contractor:
1. Submit applications typed on forms provided by the County.
 2. Use data on Bid Form and approved Schedule of Values. Provide dollar value
 3. in each column for each line item for portion of Work performed and for stored products.
 4. List each authorized Change Order and use additional sheets if necessary, list Change Order number and dollar amount for the original item of work.
 5. Each item shall have an assigned dollar value for the current pay period and a cumulative value for the project to-date.
 6. Submit stored material log, partial waivers of claims and mechanic liens, and Consent of Surety with each application, as further explained below.
- D. Contractor shall submit a stored material log with each application for payment that identifies the type, quantity, and value of all stored material that tracks when the stored materials were installed and deducts the installed material from the stored quantity at that time. Include original invoices for all stored materials for which payment is requested.
- E. Waivers of Claims and Mechanics Lien (Waivers): With the final Application for Payment the Contractor shall submit waivers of claims and mechanic liens from Subcontractors, Sub-subcontractors, and suppliers for the construction period covered by the previous application.
1. The Contractor shall submit the final Application for Payment with, if not already submitted, the final waivers from every entity involved with performance of work covered by the Application that could lawfully be entitled to a payment claim or lien.

2. Format of Waiver Forms: The Contractor shall submit executed waivers of claims and liens on forms acceptable to the County.
 3. The County reserves the right to designate which entities involved in the Work must submit waivers.
- F. Transmittal of Pay Applications: Contractor shall submit seven (7) executed copies of each Application for Payment to the County. One (1) copy shall include all waivers of lien and similar attachments.
1. The Contractor shall transmit each Pay Application package with a transmittal form that lists attachments and all appropriate information related to the application. The transmittal form shall be acceptable to the County.
 2. The Contractor shall include a certification with each application stating that all previous payments received from the County under the Contract have been applied by the Contractor to discharge, in full, all obligations of the Contractor in connection with the Work covered by prior applications for payment. The Contractor shall also certify that all materials and equipment incorporated into the Work are free and clear of all liens, claims, security interest, and encumbrances.
- G. Initial Application for Payment Submittal: Administrative actions and submittals that must precede or coincide with submittal of the initial Application for Payment include the following:
1. List of Subcontractors
 2. List of principal suppliers and fabricators
 3. Schedule of Values
 4. Contractor's Construction Progress Schedule (accepted)
 5. List of Contractor's staff assignments
 6. Copies of building permits

7. Copies of authorizations and licenses from governing authorities for performance of the Work
 8. Certificates of insurance and insurance policies
 9. Performance and Payment bonds (if required)
 10. Data needed to acquire County's insurance
- H. Monthly Application for Partial Payment Submittals: Administrative actions and submittals that must precede or coincide with submittal of Monthly Applications for Partial Payment include the following, as applicable:
1. Relevant tests
 2. Progressive As-builts Survey Drawings - one (1) paper copy and electronic copy
 3. Table 01050-2 Asset Attribute Data -one (1) paper copy and electronic copy (see Specification Section 01050 "Surveying and Field Engineering" Table 01050-2)
 4. Table 01050-3 Pipe Deflection Table - one (1) paper copy and electronic copy (see Specification Section 01050 "Surveying and Field Engineering" Table 01050-3)
 5. Table 01050-4 Gravity Main Table - one (1) paper copy and electronic copy (see Specification Section 01050 "Surveying and Field Engineering" Table 01050-4)
 6. Boundary Surveys on 8 1/2"X11" format of fee simple and permanent easements for pump stations, treatment facilities, and constructed pipe in easements
 7. An electronic copy of all survey field notes
 8. Partial Release of Lien
 9. Partial Consent of Surety

10. Site photographs
11. Updated Progress Schedule: submit one (1) electronic copy and five (5) copies
12. Summary of Values
13. Pay Request
14. On-Site Storage of materials

I. Substantial Completion Application for Payment Submittal: Following issuance of the Certificate of Substantial Completion, Contractor shall submit an Application for Payment. This Application shall reflect any Certificates of Partial Substantial Completion issued previously for the County's occupancy of designated portions of the Work.

1. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Occupancy permits and similar approvals
 - b. Warranties (guarantees) and maintenance agreements
 - c. Test/adjust/balance records
 - d. Maintenance instructions
 - e. Meter readings
 - f. Start-up performance reports
 - g. Change-over information related to the County's occupancy, use, operation and maintenance
 - h. Final Cleaning
 - i. Application for reduction of retainage and consent of surety
 - j. Advice on shifting insurance coverage
 - k. List of incomplete Work, recognized as exceptions to County's Certificate of Substantial Completion

J. Final Completion Application for Payment Submittal: Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:

1. Prior to submitting a request for final payment or the County issuing a

Certificate of Completion for the Work, the Contractor shall submit the final Record Documents to the County for approval. Retainage funds will be withheld at the County's discretion based on the quality and accuracy of the final Record Documents.

2. Written signed statements by the Contractor
 - a. Completion of project close-out requirements
 - b. Completion of items specified for completion after Substantial Completion
 - c. Assurance that unsettled claims are settled
 - d. Assurance that work not complete and accepted is now completed
3. Transmittal of Record Documents to the County
4. Proof that taxes, fees, and similar obligations have been paid
5. Removal of temporary facilities and services has been completed
6. Removal of surplus materials, rubbish, and similar elements
7. Prepare Application for Final Payment as required in General Conditions

1.04 PAY APPLICATION SUBSTANTIATING DATA

- A. When the County requires substantiating data for a Pay Application, submit data justifying Pay Application line item amounts in question.
- B. Provide one (1) copy of data with a transmittal letter for each copy of Pay Application submittal. The Pay Application number, date, and line item by number and description shall be clearly stated.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01050

SURVEYING AND FIELD ENGINEERING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Professional Surveyor: Provide professional surveying and mapping work required for the execution of the Contract, including verification of existing survey data, construction layout, and production of the As-Built Drawings. This Work shall be performed by a Surveyor that is licensed by the State of Florida as a Professional Surveyor and Mapper pursuant to Chapter 472, F.S.
- B. Professional Engineer: The Contractor shall provide the services of a Registered Professional Engineer currently licensed in the State of Florida for the required field engineering services as applicable to the work.

1.02 REQUIREMENTS

A. Survey Services

- 1. The Contractor shall retain the services of a registered Surveyor and Mapper licensed in the State of Florida to provide professional surveying and mapping services necessary for the construction including a control survey and an as-built survey during construction. The Surveyor will identify control points (monuments and benchmarks noted on the Drawings). The construction layout survey shall be established from the control points shown on the Construction Drawings. The control points shall be confirmed by the contractor prior to start of construction. The accuracy of any method of staking shall be the responsibility of Surveyor. All staking shall be done to provide for easy verification of the work by the County.

B. Field Engineering Services

- 1. The Engineer shall be of the discipline required for the work.
- 2. The Engineer shall be responsible for duties during Construction to include, but not limited to:

- a. Inspections, testing, witnessing requiring a licensed Professional Engineer.
 - b. Design of temporary shoring, bridging, scaffolding or other temporary construction, formwork and protection of existing structures.
 - c. Other requirements as specified herein.
3. Engineering related designs and inspections shall be signed by the licensed Professional Engineer as required by the County.

1.03 SUBMITTALS

- A. Provide qualifications of the Surveyor or Engineer.
 1. A Florida Registered Professional Engineer or Registered Surveyor and Mapper, who is proposed by the Contractor to provide services for the work, shall be acceptable to the County prior to field services being performed.
 2. Submit name, address and telephone number of the Surveyor and/or Engineer, as appropriate to the County for acceptance before starting survey or engineering work.
 3. Submit written acknowledgement from the Surveyor stating that he has the hardware, software and adequate scope of services in his agreement with the Contractor to fully comply with the requirements of this specification.
- B. On request, submit documentation verifying accuracy of survey work.
- C. Surveyor shall submit certified Tables 01050 – 2, 3 and 4.

PART 2 - PRODUCTS

2.01 SURVEY DOCUMENTS

- A. Survey documents shall comply with the Minimum Technical Standards of Chapter 5J-17 of the Florida Administrative Code (FAC) and Table 01050-1 Minimum Survey Accuracies, whichever are more stringent. All coordinates shall be geographically registered in the Florida State Plane Coordinate System using the contract Drawings control points for horizontal and vertical controls.
- B. The Surveyor shall not copyright any of their work related to this project.

- C. For ease of calculating pipe deflections in Table 01050-3, begin by providing a unique asset ID for each utility (water, wastewater or reclaimed water) type, numbered sequentially along the pipe run (including changes in direction) from start to finish of the pipe in Table 01050-2 (Pipe Worksheet). Then branches and services of the same utility type can be numbered. It is recommended that each utility numbering format be distinguishable from the other. This will allow organization and convenient sorting after the individual asset table worksheet tabs are combined in the spreadsheet program prior to copying and pasting to the deflection table spreadsheet. The Microsoft Excel spreadsheet template shall be provided by the County.. The numbering system shall be approved by the County before commencing with production of the spreadsheet.

**Table 01050-1
Minimum Survey Accuracies**

Type	Horizontal Accuracy (feet)	Elevation Accuracy (feet)	Location: Horizontal Center and Vertical Top, unless otherwise specified
Bench Marks	0.01	0.01	Point
Baseline Control Locational Accuracy	0.01	N/A	Point
Tract and Easement Corners	*	N/A	Survey Monuments
Pipe, at 100-foot maximum intervals	0.1	0.1	Pipe, Pipe at Valves, Pipe at Bore & Jack Casing
Pipe, (PVC) >16-inch at every pipe joint	0.1	0.1	Pipe, Pipe at Valves, Pipe at Bore & Jack Casing
Fittings, Sleeves, Tapping Saddle, Service Saddles, Cap or Plugs.	0.1	0.1	
Pipe, Restrained	0.1	0.1	Restrained Joint Limits
Connections	0.1	0.1	Pipe
Bore & Jack Casing	0.1	0.1	Top of Casing at the Casing Limits
Directional Drill	0.1	0.1	10-foot intervals during the directional drill operation or intervals not to exceed the drilling rod length
Hydrants	0.1	0.1	Operating Nut
Valves (Operating Nut)	0.1	0.1	Operating Nut
Valve (Pipe Location)	0.1	0.1	Top of Pipe at Valve location
Air Release, Blow off, and Backflow Valves	0.1	0.1	Valve Enclosure
Master Meters, Deduct Meters & Wastewater Meters	0.1	0.1	Register
Meter Box	0.1	0.1	
Clean out -	0.1	0.1	
Manhole Rim	0.1	0.1	Manhole – top of rim
Manhole Inverts	N/A	0.01	Pipe Inverts
Pump Station (Public & Private)	0.1	0.01	Wetwell top of slab and Pipe Inverts
Production Well or Monitoring Well	0.1	0.1	Well – top of casing
Grease Interceptor	0.1	0.1	
Oil / Water Separators	0.1	0.1	
Pipe, abandoned in place or removed	0.1	0.1	Limits of Abandoned or Removed Pipe
Existing Utilities and appurtenant structures**	0.1	0.1	underground feature or structure
<p>* Shall conform to the requirements of the "Chapter 5J-17, 'Minimum Technical Standards', FAC", certified by a SURVEYOR.</p> <p>** Existing utilities including but not limited to water, wastewater, reclaimed water, stormwater, fiber optic cable, electric, gas and structures within the limits of construction.</p> <p>*** Fittings rotated in X,Y,Z plane or vertical shall be shot to maintain flowline for the horizontal and vertical locations of the coordinate</p> <p>Note: All survey values to be reported to second decimal point (x.xx)</p>			

**TABLE 01050-2
Asset Attribute Data Examples**

Hydrants Worksheet

	A	C	D	E	F	G	H	I
1	ID Number	Plan Sheet #	Easting	Northing	Elevation	Manufacturer	Model #	Comments
2	FH-1	C-7	518456.40	1483743.63	49.53	Brand B	XJ7-B	
3	FH-2	C-9	518477.68	1483758.95	54.23	Brand B	XJ7-B	
4								
5								

Hydrant / Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement Corner / Existing OC Utility Crossing

Valves Worksheet

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	ID Number	Plan Sheet #	Easting	Northing	Elevation	Valve Type	Main Type	Valve Size	Valve Manufacturer	Valve Model #	# of Turns to Close	Gear Actuator	Gear Ratio	Side Actuator	Actuator Manufacturer	Comments
2	ARV-1	C300	518060.09	1483231.33	81.72	ARV Combination	Water Main	2	Brand H	100XT						
3	ARV-1	C303	518083.55	1483280.50	81.15	ARV_Vacuum Backflow Preventer	Force Main Reclaimed Water Main	4	Brand G	1000						
4	BFP-1	C303	518086.00	1483282.88	78.21		Water Main	8	Brand F	2000 fgs						
5	BO-9	C405	518088.83	1483289.43	78.20	Blowoff	Water Main	2	Brand E	14 turbo						
6	BFV-1	C405	518088.11	1483295.00	81.95	Butterfly	Water Main	30	Brand D	230 v/s	200	Yes	3 to 1	Yes	Brand C	
7	GV-3	C405	518132.54	1483372.75	81.23	Gate	Water Main	16	Brand C	2225846	300	Yes	3 to 1	NO		
8	LS-W1	C405	576779.36	1539706.97	64.30	Line Stop	Water Main	16	Brand B	7r644						
9	PV-22	C405	576880.60	1539718.32	64.52		Force Main	12	Brand A	Z100	200	Yes	3 to 1	Yes	Brand A	
10																

General Info / Hydrant / Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property of

Manhole Worksheet

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	ID Number	Plan Sheet #	Easting	Northing	Rim Elevation	Invert Elv N	Invert Elv NE	Invert Elv E	Invert Elv SE	Invert Elv S	Invert Elv SW	Invert Elv W	Invert Elv NW	Manufacturer	Comments
2	SAN-MH01	AT-2	475216.00	1501637.12	115.89									Del Zotto	
3	SAN-MH02	AT-2	474885.63	1501636.02	114.98				110.22			111.28		Del Zotto	
4	SAN-MH03	AT-2	474849.33	1501600.22	115.18		109.96			109.86				Del Zotto	
5	SAN-MH04	AT-2	474850.21	1501416.85	115.91	109.19		110.42		108.56				Del Zotto	
6	SS-1	C1.05A	478117.70	1501622.99	118.13					113.73				Del Zotto Products of Florids Inc.	Del Zotto Products of Florids Inc.
7	SS-2	C1.05A	478116.77	1501534.19	117.79	113.41				113.38				Del Zotto Products of Florids Inc.	Del Zotto Products of Florids Inc.
8	SS-3	C1.05	478111.28	1501152.49	116.45	111.98				111.94				Del Zotto Products of Florids Inc.	Del Zotto Products of Florids Inc.
9	SS-4	C1.05A	478105.19	1500781.07	115.72	110.76		110.75						Del Zotto Products of Florids Inc.	Del Zotto Products of Florids Inc.
10															

General Info / Hydrant / Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Prop

Meter Worksheet

	A	C	D	E	F	G	H
1	ID Number	Plan Sheet #	Easting	Northing	Elevation	Main Type	Comments
2	MM-1	C-6	576533.64	1539520.08	58.01	Water Main	
3	RWMM-1	C-6	576937.42	1539598.78	64.84	Reclaimed Water Main	
4							

Hydrant / Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement Corner / Existing OC Utility Crossing

Fitting Worksheet

	A	C	D	E	F	G	H	I
1	ID Number	Plan Sheet #	Easting	Northing	Elevation	Main Type	Fitting Type	Comments
2	FM-1	C-3	572399.28	1539339.13	46.27	Force Main	Bend 11 1/4"	
3	FM-2	C-3	574840.74	1539856.91	51.73	Force Main	Bend 22-1/2"	
4	RW-1	C-4	574887.22	1539849.64	51.75	Reclaimed Water Main	Cross	
5	RW-2	C-4	574904.30	1539849.58	48.98	Reclaimed Water Main	Reducer	
6	WM-1	C-5	572532.38	1539848.16	54.42	Water Main	Tapping Saddle	
7	WM-2	C-5	572631.00	1539337.10	45.27	Water Main	Tee	
8								

General Info / Hydrant / Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement

Cleanout Worksheet

Asset Attribute Table Examples						
A	C	D	E	F	G	
ID Number	Plan Sheet #	Easting	Northing	Elevation	Comments	
2	CO-1	C-6	576533.64	1539520.08	58.01	
3	CO-2	C-6	576937.42	1539598.42	64.84	Sanitary Service
4						

General Info / Hydrant / Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement

Pipes Worksheet

Asset Attribute Table Examples												
A	C	D	E	F	G	H	I	J	K	L	M	
ID Number	Plan Sheet #	Easting	Northing	Elevation	Main Type	Type of Shot	Construction Method	Material	Pressure Class	Manufacturer	Comments	
2	CSNG-1	C-4	517827.57	1482195.46	78.83	Force Main	Bore & Jack (Casing)		PVC	DR18	Brand A	
3	CSNG-2	C-4	517848.20	1482195.31	78.38	Force Main	Bore & Jack (Casing)		PVC	DR18	Brand A	
4	RW-1	C-7	517731.98	1482237.24	80.42	Reclaimed Water Main	Restraint Joint Limit	Open Cut	DIP	Class 250	Brand B	
5	RW-2	C-7	517732.85	1482338.10	80.94	Reclaimed Water Main	Restraint Joint Limit	Open Cut	DIP	Class 250	Brand B	
6	WM-1	C-9	573309.07	1539372.90	56.10	Water main	Shot on Pipe	Open Cut	PVC	DR18	Brand C	
7	WM-2	C-9	573308.75	1539375.00	54.66	Water main	Shot on Pipe	Open Cut	PVC	DR18	Brand C	
8	FMDD-1	C-4	504345.94	1488969.20	114.14	Force Main	Shot on Pipe	Directional Drill	HDPE	DR17	Brand X	
9	FMDD-2	C-4	504360.86	1488970.60	112.74	Force Main	Shot on Pipe	Directional Drill	HDPE	DR17	Brand X	
10	FMDD-3	C-4	504377.19	1488971.20	106.14	Force Main	Shot on Pipe	Directional Drill	HDPE	DR17	Brand X	
11	FM-9	C-4	504480.47	1488952.90	105.24	Force Main	Shot on Pipe	Open Cut	PVC	DR18	Brand C	
12												

General Info / Hydrant / Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement

Pump Station Worksheet

Asset Attribute Table Examples						
A	C	D	E	F	G	
ID Number	Plan Sheet #	Easting	Northing	Elevation	Comments	
2	PS-1	C-40	517914.35	1482906.66	83.91	
3						

Valve / Manhole / Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement Corner / Existing OC Utility Crossing

Well Worksheet

Asset Attribute Table Examples						
A	C	D	E	F	G	I
ID Number	Plan Sheet #	Easting	Northing	Elevation	Well Type	Comments
2					Well	
3					Monitoring Well	
4						

Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement Corner / Existing OC Utility Crossing / Grease Interceptor

Easements Worksheet

Asset Attribute Table Examples							
A	C	D	E	F	G	H	
ID Number	Plan Sheet #	Easting	Northing	Elevation	Boundary Corner Type	Comments	
2	Corner-1	C-8	463484.59	1511029.72		Pump Station Tract	N.W. CORNER
3	Corner-2	C-8	463523.24	1511040.01		Pump Station Tract	N.E. CORNER
4	Corner-3	C-8	463480.45	1511015.23		Pump Station Tract	S.W. CORNER
5	Corner-4	C-8	463526.97	1511025.49		Pump Station Tract	S.E. CORNER
6					Easement		
7					Property		
8							

Meter / Fitting / Cleanout / Pipe / Pumpstation / Well / Property or Easement Corner / Existing OC Utility Crossing / Grease Interceptor

Existing OC Utility Crossing

Asset Attribute Table Examples								
	A	C	D	E	F	G	H	I
1	ID Number	Plan Sheet #	Easting	Northing	Existing Pipe Elevation	Proposed Crossing Elevation	Existing Main Type	Comments
2								
3	CR-02	AT-1	474767.95	1500585.09	98.20	106.20	Force Main	
4	CR-03	AT-1	475239.63	1500596.35	99.10	113.88	Force Main	
5	CR-04	AT-1	475239.61	1500588.49	94.30	112.45	Reclaimed Water Main	
6	Conf-1	C-750	463464.47	1511013.75	100.54	104.88	Water main	
7	Conf-2	C-750	463163.91	1510693.49	98.32	103.57	Storm Main	
8								

Navigation: Pipe / Pumpstation / Well / Property or Easement Corner / Existing OC Utility Crossing / Grease Interceptor

Grease Interceptor

Asset Attribute Table Examples							
	A	C	D	E	F	G	H
1	ID Number	Plan Sheet #	Easting	Northing	Elevation	Volume (Gallons)	Comments
2	GI-1	C-400	508387.30	1487203.18	89.70	1000.00	
3							
4							

Navigation: Pipe / Pumpstation / Well / Property or Easement Corner / Existing OC Utility Crossing / Grease Interceptor

**TABLE 01050-3
Pipe Deflection Data EXAMPLE**

Project Contractor: Progress Mtg Date: Contract # Dwg Sheet # Utility Type Pipe Manufacturer Pipe size & material PVC Manufacturer Deflection County Allowable Deflection 75% Allowable Angle of Offset Allowable Radius of Curvature Laying Length of Pipe	FM National Pipe 16" PVC C905 6 inches 4.5 inches 1.5 degrees 764 feet 20 feet	
--	---	--

ID	Size and Type	Northing	Easting	Elev.	Calculations Including Elevation (XYZ)							
					Distance between points AB	Distance between points BC	Distance between points AC	Total Deflection ϕ^A	Radius of Curve ^{AA}	Average Offset Angle ^{AAA}	Average Offset ^{AAAA}	
					Length AB ft	Length BC ft	Length AC ft	XYZ (w elevation) degrees	XYZ (w elevation) ft	per laying length degrees	per laying length inches	
14041	16" FM	1505131.50	468948.53	107.68	-	-	-	-	-	-	-	-
7000	16" FM	1505059.60	468932.08	108.15	73.76	38.93	112.66	5.48	1,178.35	0.97	4.07	
2128	16" FM	1505022.11	468921.60	108.55	38.93	39.61	78.54	2.29	1,961.65	0.58	2.45	
2127	16" FM	1504983.85	468911.35	108.29	39.61	38.35	77.96	1.78	2,505.50	0.46	1.92	
2126	16" FM	1504946.67	468901.96	107.81	38.35	39.13	77.42	8.79	505.16	2.27	9.51	
2125	16" FM	1504908.11	468895.31	107.48								

Data that has been inputted
 Values in yellow are over spec

*Uses law of cosines to determine angle ABC and θ .
 $\text{angle } ABC = \arccos((AB^2+BC^2-AC^2)/(2*AB*BC))$
 $180-\theta/2 = \text{angle } ABC$
 Calculate the total deflection θ .
 to the outer point (A or C) is equal in angle to
 the approach from the next point along the

** Uses law of sines, using the chord length AC and radius R.
 Since $\sin(\theta/2)*(PI/180)=(\text{Chord}/2)/R$ and length $AC=\text{Chord}$
 $R=AC/(2*\sin(\theta*PI/360))$
 This calculation assumes an average radius over the bend between three points.

*** Adds the lengths of $AB + BC / 20\text{ft}$ to get an approximate number of bends over the span.
 This value is divided by the total deflection
 angle to calculate the average bend angle of
 This assumes that the bend angle consistent across the entire length.

**** Uses average offset angle and laying length of pipe.

**TABLE 01050-4
 Gravity Main Table**

Downstream		Upstream		Length (ft)	Gravity Main Diameter (inches)	Design Slope (%)	Const. Slope (%)	Allowable Minimum Constructed Slope (%)
Manhole Number	Invert Elev.	Manhole Number	Invert Elev.					
					8	0.31		0.28
					10	0.24		0.21
					12	0.20		0.17

PART 3 - EXECUTION

3.01 SURVEY FIELD WORK

- A. Locate, reference, and preserve existing horizontal and vertical control points and

property corners shown on the Drawings prior to starting any construction. If the Surveyor performing the work discovers any discrepancies that will affect the Project, the Contractor must immediately report these findings to the County. All survey work shall meet the requirements as defined in Florida Administrative Code 5J-17. Reference and preserve all survey pins/monuments during Construction. If survey pins/monuments are disturbed, it is the responsibility of the Surveyor to reset the pins/monuments at the Contractor's expense. If the monuments are disturbed, any Work that is governed by these monuments shall be held in abeyance until the monuments are reestablished by the Surveyor and approved by the County. The accuracy of all the Contractor's stakes, alignments and grades is the responsibility of the Contractor. However, the County has the discretionary right to check the Contractor's stakes, alignments, and grades at any time. Copies of the Surveyor's field notes and/or electronic files for point replacement shall be provided to the County.

- B. The construction layout shall be established from the reference points shown or listed on the Drawings. The accuracy of any method of staking shall be the responsibility of the Contractor. All construction layout staking shall be done such as to provide for easy verification of the Work.
- C. The Surveyor shall locate all improvements for the project As-Built Asset Attribute Data using State Plane Coordinates as the horizontal datum and the benchmark referenced on the Drawings as the vertical datum. The County will provide electronic files of the Drawings to be used by the Surveyor.
- D. Use survey control points to layout such work tasks including but not limited to:
 - 1. Clearing, grubbing, work limits, right-of-way lines and easements
 - 2. Locations for pipelines and all associated structures and appurtenances
- E. The Surveyor shall reference and replace any project control points, boundary corners, benchmarks, section corners, and right-of-way monuments that may be lost or destroyed, at no additional cost to the County based on the original survey control.

3.02 SURVEY DOCUMENTS DELIVERABLES

- A. All survey documents required under Section 01720 Project Record Documents, Part 2 – Products, paragraphs 2.01 and 2.02.

END OF SECTION

SECTION 01065

PERMITS AND FEES

PART 1 - GENERAL

1.01 REQUIREMENTS

A. General

1. Upon Notice of Award, obtain and pay for all appropriate and applicable permits and licenses as provided for in the General Conditions, except as otherwise provided herein.
2. Schedule all inspections and obtain all written approvals of the agencies required by the permits and licenses.
3. Strictly adhere to the specific requirements of the governmental unit(s) or agency(cies) having jurisdiction over the Work. Whenever there is a difference in the requirements of a jurisdictional body and the Contract Documents, the more stringent shall apply.
4. A copy of the permits obtained by the County are furnished in Appendix C "Permits Obtained by County" of these specifications.
5. Unless otherwise specified, the cost of work specified in the various sections of Division 1, will not be paid for separately but the cost therefore shall be considered incidental to and included in the bid prices of the various Contract items.

B. Building Permit (Orange County)

1. The County will pay the general building permit fee and any related impact fees or assessments to be paid to Orange County for the issuance of that permit only.
2. The general building permit has been issued and the Contractor shall obtain the permit from the Orange County Building Department within 14 days of the notice to proceed. The Contractor shall pay for all Subcontractor's building permit fees.
3. The Contractor shall pay all fees associated with obtaining Orange County trade permits in accordance with the General Conditions. Sub-permit fees shall be 0.2% of the bid price.
4. Information on Orange County Building Department fees is included in the Instructions to Bidders in Division 0. Information on Orange County Building Department fees is included in the Instructions to Bidders in Division 0.

5. The Contractor shall be responsible for scheduling all permit inspections and obtaining inspection approval from Orange County, as required by the building and sub-discipline construction permits.

C. Construction Dewatering Permit

The Contractor shall apply and pay for all fees associated with obtaining Florida Department of Environmental Protection District Office construction dewatering permits, if required. The Contractor shall provide all materials and equipment to comply with the permit requirements at no additional cost to the County.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01070

ABBREVIATIONS AND SYMBOLS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Reference to the following standards of any technical society, organization or body shall be construed to mean the latest standard, code or specification or tentative specification adopted and published at the date of advertisement for bids, even though reference has been made to an earlier standard. Such reference is hereby made a part of the Contract the same as if herein repeated in full and in the event of any conflict between any of these specifications, standard codes or tentative specifications and the Contract Documents, the most stringent shall govern.

AA	Aluminum Association
AASHTO	American Association of State Highway and Transportation Officials
ABPA	Acoustical and Board Products Association
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AIMA	Acoustical and Insulating Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	American Moving and Conditioning Association
ANSI	American National Standards Institute
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	American Standards Association (now ANSI)
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSCBC	American Standard Safety Code for Building Construction
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWBP	American Wood Preservers Board

AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard
DOT Spec	Standard Specification for Road and Bridge Construction –
FDOT	Florida Department of Transportation
FAC	Florida Administrative Code
FS	Federal Standard
IEEE	Institute of Electrical and Electronic Engineers
IPCEA	Insulated Power Cable Engineers Association
NACE	National Association of Corrosion Engineers
NASSCO	National Association of Sewer Service Companies
NBFU	National Board of Fire Underwriters
NBS	National Bureau of Standards
NEC	National Electrical Code
NECA	National Electrical Contractor's Association
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NPT	National Pipe Threads
NSF	National Science Foundation
OSHA	U.S. Department of Labor, Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PS	United States Products Standards
SAE	Society of Automotive Engineers
SDI	Steel Decks Institute
SJI	Steel Joists Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Structural Steel Painting Council
UL	Underwriter's Laboratories, Inc.
USASI	United States of American Standards Institute (Now ANSI)

B. UNITS OF MEASUREMENT

CU FT	cubic feet
CU IN	cubic inch(es)
CY	cubic yard(s)
DegC	degree(s) Centigrade
DegF	degree(s) Fahrenheit
F	Fahrenheit
FT	feet, foot
G	gram(s)

GA	gage
GAL	gallon(s)
GPH	gallon(s) per hour
GPM	gallon(s) per minute
GPS	gallon(s) per second
HR	hour(s)
IN	inch(es)
IPS	iron pipe size
KG	kilogram(s)
L	liter(s)
LB	pound(s)
LBF-IN	pound (force) inch
LF	linear foot, linear feet
MIN. min.	minute(s), minimum
ml	milliliter
MO	month(s)
OZ	ounce(s)
QT	quart
RH	relative humidity
SF	square foot, square feet
SQ IN	square inch(es)
YD	yard(s)
YR	year(s)

C. TERMINOLOGY

@	at
AB	anchor bolt
ADJ	adjust, adjustable
ADMIN	administration
AFG	above finished grade
AGGR	aggregate
AL	aluminum
ALT	alternate
APPX	appendix
APX	approximate
ART	article
ASPH	asphalt
ASSY	assembly
AUTO	automatic
AUX	auxiliary
AVE	avenue
AVG	average
AWG	American Wire Gauge

BAR	barrier
BCCMP	bituminous coated corrugated metal pipe
BL	base line
BLDG	building
BLKG	blocking
BM	beam
C to C	center to center
CCB	concrete block, masonry
CEM	cement
CIP	cast iron pipe, cast in place
CJ	construction joint
CL	center line, clearance
CM	Construction Manager
CMP	corrugated metal pipe
CO	cleanout
CONC	concrete
CONN	connection
CONST	construction
CONT	continuous
CONTR	contractor
CU, COP	copper
ORR	corridor
CRIT	critical
CTD	coated
CTR	center
CULV	culvert
d	delta
DBL	double
DEM	demolition, demolish
DEPT	department
DET	detail
DIA, D	diameter
DIAG	diagonal
DIM	dimension
DWG	drawing
FEM	female
FUT	future
FV	field verify
FM	force main
FH, HYD	fire hydrant
ID	inside diameter
MAS	masonry
MATL	material
MAX	maximum
MFD	manufactured

MFG	manufacturing
MFR	manufacturer
MH	manhole, metal hallide
MIN	minimum
MISC	miscellaneous
MPS	Master Pump Station
MTL	material
NAT	natural
NATL	national
NOM	nominal
NTS	not to scale
OD	outside diameter
PP	power pole
R	radius
Rd	road
REIN	reinforce
REL A	relief air
REQD	required
REV	revision
RR	railroad
R/W	right-of-way
RWM	reclaimed water main
RY	railway
SAN	sanitary
SCH	schedule
SECT	section
SLV	sleeve
SQ	square
SST	stainless steel
ST	street
STA	station
STD	standard
SURF	surface
SUSP	suspend(ed)
SYM	Symbol, symmetrical
SYS	system
TEMP	Temperature, temporary
TYP	typical
UTIL	utility
W	West
WLD	welded
WM	water main
W/O	without
WT	weight
YD	yard

YR	year
Y W	wye

END OF SECTION

SECTION 01091

REFERENCE SPECIFICATIONS

PART 1 - GENERAL

1.01 GENERAL

- A. **Applicable Publications:** Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the Work is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of or omission from said standards or requirements.

- B. **Assignment of Specialists:** In certain instances, specification test requires (or implies) that specific work is to be assigned to specialist or expert entities who must be engaged for the performance of the Work. Such assignments shall be recognized as special requirements over which the Contractor has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the Work. They are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of Work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of Contract requirements remains with the Contractor.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the Specifications, all Work specified herein shall conform to or exceed the requirements of such referenced documents which are not in conflict with the requirements of these Specifications or applicable codes.

- B. References herein to "Building Code" shall mean the Florida Building Code. The latest edition of the code shall apply to the Work herein, including all addenda, modifications, amendments, or other lawful changes thereto.

- C. In case of conflict between codes, reference standards, Drawings, and the other

Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the Engineer for clarification and directions prior to ordering or providing any materials or labor. The Contractor shall bid the most stringent requirements.

- D. Applicable Standard Specifications: The Contractor shall construct the Work specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01100

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 HAULING AND CONSTRUCTION OPERATIONS ON SITE

- A. The Contractor shall conduct access, hauling, filling, and storage operations as specified herein and as shown on the Contract Drawings.
 - 1. On-site borrow areas are designated as follows: Suitable material, as approved by Engineer, from excavations for project structures. Any additional borrow material required shall be provided by the Contractor from off-site.
 - 2. On-site spoil areas will become property of the Contractor and are to be disposed off-site.
- B. Construct all fill areas so runoff shall not flood improved areas.

1.02 EXCAVATION AROUND AND CONNECTION TO EXISTING UTILITIES

- A. The Contractor shall coordinate and consult with the Owner's personnel and the County Construction RPR before excavating around or cutting into existing utilities on the site.
- B. The Contractor shall take necessary steps to verify the location of all underground utilities shown prior to commencing any excavation work. Where work is to be conducted through congested utility corridors where the likelihood exists that all underground utilities may not be shown, the Contractor shall use methods such as the use of ground penetrating radar, or equal, in order to establish the locations of potential conflicts within the proposed alignment. Where potential conflicts are identified, the Contractor shall submit (within seven (7) days of discovery) to the Engineer for review, a plan for avoiding such conflict.
- C. Some areas within the construction site will require hand excavation due to the congestion of underground piping systems and/or due to the criticality of piping systems that may be damaged unavoidably during machine excavation.

- D. Cover for underground piping shall not be less than that indicated on the Drawings, or a minimum of 36 inches of cover where obtainable.
- E. All connections to existing piping systems shall be made as shown or indicated on the Drawings after consultation, cooperation, and coordination with the Owner's personnel. Some such connections may have to be made during off-peak hours (late night or early morning hours). The Contractor shall give a minimum of 72 hours notice to the Owner when tie-ins with the existing utilities are required.
- F. For tie-ins and relocations, the Contractor shall submit a detailed Plan of Action for review and approval by the Owner and the Engineer. No tie-ins shall proceed until the Plan of Action for that Work is approved.

1.03 JURISDICTIONAL DISPUTES

- A. It shall be the responsibility of the Contractor to pay all costs that may be required to perform any of the Work shown on the Drawings or specified herein in order to avoid any work stoppages due to jurisdictional disputes.

1.04 INCLEMENT WEATHER

- A. In the event of inclement weather, the Contractor shall, and shall cause subcontractors to protect carefully the Work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any portion of work or materials have been damaged or injured by reason of failure on the part of the Contractor or any subcontractors to so protect the Work, such Work and materials shall be removed and replaced at the expense of the Contractor.

1.05 COORDINATION OF WORK

- A. The Contractor shall cooperate fully so as to eliminate or minimize the creation of conflicts. Adjustments from time to time may be required in the Contractor's work location and/or schedule provided a reasonable notice is given by the Owner or Engineer.

1.06 USE OF PUBLIC STREETS

- A. The use of public streets and roads shall be such as to provide a minimum of an inconvenience to the public and to other traffic. Any earth or other excavated

materials spilled from trucks shall be removed by the Contractor and the streets and roads cleaned to the satisfaction of the Owner.

1.07 CHEMICALS

- A. All chemicals used during project construction, or furnished for Owner's operations, whether herbicide, pesticide, disinfectant, or of other classification, must show approval of the State Department of Health, Florida Department of Environmental Protection and if required, also the EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with the manufacturer's instructions or recommended use procedures.

1.08 EQUIPMENT LIFTING DEVICES

- A. All lifting devices for equipment provided on the project shall be left on the equipment unless directed otherwise by the Owner.

1.09 SAFETY AND HEALTH REGULATIONS

- A. The Contractor shall comply with the Department of Labor Safety & Health Regulations for construction promulgated under the Occupational Safety & Health Act of 1970, (PL 91-596) and under Section 107 of the Contract Work Hours & Safety Standards Act (PL 91-54).
- B. All equipment furnished and installed under this Contract shall comply with Part 1910, Occupational Safety & Health Standards & Amendments thereto.
- C. The Contractor shall comply with the Florida Trench Safety Act (90-96, Florida Law).
- D. All materials, equipment, and components that come in contact with drinking water or drinking water chemicals shall be in conformance with ANSI/NSF Standard 61.
- E. All raw water and potable piping and equipment that will contact raw water or potable water shall be disinfected in accordance with County and FDEP requirements prior to being put into service.

1.10 STATE AND FEDERAL PERMITS

- A. Construction in Florida Department of Transportation rights-of-way, wetlands and navigable water bodies will be governed by applicable State and Federal permits. All conditions set forth on the permits shall be a part of the Contract and they shall be attached by addendum.

1.11 INSPECTION

- A. The authorized representatives and agents of the Environmental Protection Agency and Controlling State and Local Pollution Control Agencies shall be permitted to inspect all work, material, payrolls, personnel records, invoices of materials and any other relevant data and records. The Owner and Engineer shall be permitted access to any work area for the inspection of work and materials. The Owner may, at the Contractor's expense, order the uncovering or removal of any finished work if circumstances indicate faulty work or materials were used in the original installation. The Owner and Engineer shall also be permitted to inspect material invoices, payrolls or any other relevant data or records as may be necessary or required to satisfy the requirements of the Contract.

1.12 ENVIRONMENTAL PROTECTION

- A. General:

1. Contractor shall comply with all Federal, State and Local laws and regulations controlling pollution of the environment. Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter. In the event of conflict between such laws and regulations and the requirements of the Specifications, the more restrictive requirements shall apply. Environmental protection requirements specified in other Sections shall be considered as supplementing the requirements of this Section.
2. Failure of the Contractor to fulfill any of the requirements of this Section may result in the Owner ordering the stopping of construction operations.
3. Failure on the part of the Contractor to perform the necessary measures to control erosion, siltation, and pollution will result in the Owner notifying the Contractor to take such measures. In the event that the Contractor fails to perform such measures within 24 hours after receipt of such notice, the

Owner may stop the Work as provided above, or may proceed to have such measures performed by others. The cost of such work performed by others plus related fees by the Engineer will be deducted from monies due the Contractor on his Contract.

4. All erosion and pollution control features installed by the Contractor shall be acceptably maintained by the Contractor during the time that construction work is being done.
5. Repair or replace damaged or inoperative erosion and pollution control devices as directed by the Engineer or the Owner's Representative.
6. Where there is a high potential for erosion and possible water pollution, the Contractor shall not expose, by his construction methods or procedures, an area of erosive land at any one time larger than the minimum amount required for the proper and efficient construction operation. If the exposure of any incomplete work corresponding to the exposure period required for erosion is anticipated, temporary protective measures shall be taken to prevent the erosion or collapse of land in that immediate construction area.

B. Erosion and Pollution Control Schedule: At or prior to the preconstruction conference, the Contractor shall submit to the Owner for his information, three (3) copies of his erosion and pollution control work schedule. This schedule shall show the time relationship between phases of the Work which must be coordinated to reduce erosion and pollution, and shall describe construction practices and temporary control measures which will be used to minimize erosion and pollution. The schedule shall also show the Contractor's proposed method of erosion control on haul roads and borrow and material pits, and his plan for disposal of waste materials or other sources of pollution. Maps or other documents may also be required to show the proposed final surface gradient of proposed borrow pits, soil type base course pits, and waste areas. No work shall be started until the erosion and pollution control schedules and methods of operations have been submitted to the Owner for his information.

C. Air Pollution Controls:

1. Contractor shall control dust caused by his operations in the construction of the Project, including but not specifically limited to the following:
 - a. Clearing, grubbing, and stripping.
 - b. Excavation and placement of embankment.

- c. Cement and aggregate handling.
- d. Limerock stabilization.
- e. Use of haul roads.
- f. Sandblasting or grinding.

2 Contractor shall control air pollution from the following causes in constructing the project:

- a. Volatiles escaping from asphalt and cutback materials.
- b. Use of herbicides or fertilizers.

3 Control of dust and other air pollutants by the Contractor shall include:

- a. Exposing the minimum area of land.
- b. Applying temporary mulch with or without seeding.
- c. Use of water sprinkler trucks.
- d. Use of covered haul trucks.
- e. Use of stabilizing agents in solution.
- f. Use dust palliatives and penetration asphalt on temporary roads.
- g. Use of wood chips in traffic and work areas.
- h. Use of vacuum-equipped sandblasting systems.
- i. Use of plastic sheet coverings.
- j. Restricting the application rate of herbicides to recommended dosage. Materials shall be covered and protected from the elements. Application equipment and empty containers shall not be rinsed and discharged so as to pollute a stream, river, lake, pond, water impoundment, or the ground water.
- k. Relay of operations until climate or wind conditions dissipate or inhibit the potential pollutants.

D. Open Burning of Combustible Wastes: No open burning of combustible waste materials or vegetation shall be permitted. All waste materials shall be removed from the site or within public rights-of-way and disposed in a legal manner.

E. Permanent and Temporary Water Pollution Control (Soil Erosion):

- 1. Sufficient precautions shall be taken during construction to minimize the run-off of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other polluting materials harmful to humans, fish, or other life, into the supplies and surface waters of the State. Control measures must be adequate to assure that turbidity in the receiving water will not be

increased more than allowed by the State or controlling agency. Such measures may consist of construction of berms, dikes, dams, drains and sediment basins, or use of fiber mats, woven plastic filter cloths, gravel, mulches, quick growing grasses, sod, bituminous spray and other erosion control devices or methods approved by the State or controlling agency.

2. The Contractor shall not be permitted frequent fording of live streams with construction equipment; therefore, temporary bridges or other structures shall be used wherever such crossings adversely affect sediment levels and an appreciable number of stream crossings are necessary.
3. The Contractor shall promptly clear all waterways and drainage patterns of false work, piling, debris, or other obstructions placed during construction work and not a part of the finished work.
4. The Contractor shall remove and dispose of silt accumulations as directed by the Engineer or the Owner's Representative.
5. If new and additional erosion control structures are to be installed, under this project, to prevent possible future erosion as a result of work under this contract, they shall be constructed concurrently with the other work, as early as possible, and as conditions permit.

F. Noise Control: The Contractor shall provide adequate protection against objectionable noise levels caused by the operation of construction equipment in order to comply with all current City ordinances and these Specifications. Sound levels shall be measured at the exterior of the nearest exterior wall of the nearest residence or building. Levels at construction equipment shall not exceed 85 dBA at any time. Sound levels in excess of allowable values are sufficient cause to have the work halted until equipment can be quieted to these levels. Work stoppage by the Engineer or Owner for excessive noise shall not relieve the Contractor of the other portions of this Specification including, but not limited to completion dates and bid amounts.

1.13 TREE AND SHRUB PROTECTION AND TRIMMING

A. Contractor shall exercise care to protect all trees and shrubs designated to remain. Trees and shrubs outside construction limits shall remain and shall be protected and where damaged, restored to original condition. Contractor shall obtain approval from the Owner prior to removing any trees. Trees damaged within construction limits due to negligence shall be restored to original condition.

- B. Tree limbs which interfere with construction operations and are approved for pruning shall be neatly cut with sharp pruning instruments; do not break or chop. All cut faces shall be coated with an approved tree pruning compound which is waterproof, antiseptic, elastic and free of kerosene, coal tar, creosote and other substances harmful to plants. Pruning operations shall be extended to restore the natural shape of the entire tree or shrub. Do not allow fires under or adjacent to trees or other plants which are to remain.

- C. Contractor shall protect tree and shrub root systems. Do not store construction materials, debris or excavated materials beyond construction limits. Do not permit vehicles or construction equipment beyond the limits of utility line construction. Restrict foot traffic to prevent excessive compaction of soil over root system. Excavated material shall be stockpiled away from tree drip lines as approved by the Engineer. Protect tree and shrub root systems from damage due to noxious materials in solution caused by run-off or spillage during construction operations, or drainage from stored materials. Protect root systems from flooding, erosion or excessive wetting resulting from dewatering operations. Excavate within the drip line of trees only when approved by the Engineer. Where trees are designated to remain within the limits of construction and trenching for utilities is required within tree drip lines, cut roots with sharp pruning instruments; do not break or chop. Paint roots over 2" caliper with approved tree pruning compound.

- D. Trees damaged by construction operations shall be repaired promptly after damage occurs to prevent progressive deterioration of damaged trees. Removed trees, branches, roots and other excess materials shall be removed from the construction site to an approved landfill at the expense of the Contractor.

1.14 SITE CLEANUP AND RESTORATION

- A. The Contractor shall keep the working area free at all times of tools, materials and equipment not essential to the progress of the Work. Debris, waste materials, and rubbish shall be properly disposed of and not allowed to accumulate. If the Contractor should fail to do this, the Owner will make the necessary arrangements to affect the cleanup by others and will back charge the cost to the Contractor. If such action becomes necessary on the part of and in the opinion of the Owner, the Owner will not be responsible for the inadvertent removal of material which the Contractor would not have disposed of had he affected the required cleanup.

- B. Where material or debris has washed or flowed into or been placed in watercourses, ditches, gutters, drains, catch basins, or elsewhere as result of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily

disposed of during progress of the Work, and the ditches, channels, drains etc., kept in a clean and neat condition.

- C. On or before the completion of the Work, the Contractor shall, unless otherwise especially directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by him; shall remove all rubbish from any grounds he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations, in a neat and satisfactory condition.
- D. The Contractor shall restore the entire project site to its original or better condition, with the exception of any area(s) designated for alteration by the Contract Documents. The Contractor shall restore or replace; when and as directed, any public or private property damaged by his work, equipment, or employees to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration.
- E. The Contractor shall thoroughly clean all materials and equipment installed by him and his subcontractors and on completion of the Work shall deliver it undamaged and in fresh and new appearing condition.

1.15 LAWS AND REGULATIONS

- A. It shall be the responsibility of the Contractor to give all notices and comply with all the laws, rules, regulations, ordinances, etc., that may be applicable at the time the Work is started on the project. Should the Contractor discover the Drawings or Specifications are contradictory to, or in variance with the above, he shall notify the Engineer immediately, in writing, in order that any required changes or modifications can be made. It is not the Contractor's responsibility to make certain that the Drawings or Specifications are in non-compliance with any of the above; however, should he be aware of any existing discrepancy, or have reason to believe such may exist and performs work without proper notice to the Engineer, the Contractor shall be responsible for any cost involved in making the necessary alterations or corrections.

1.16 CONTRACTOR'S USE OF PREMISES

- A. All project construction work will be accomplished on the Owner's property, public rights-of-way or within temporary construction easements and the Contractor shall confine his activity to those designated areas. The Contractor shall not enter upon private property for any reason without securing prior permission from the property owner. Such permission, including any stipulations, shall be in writing and a copy shall be delivered to the Engineer prior to the Contractor's entry or occupation of the subject property. This requirement will be rigidly enforced, particularly with regard to the utilization of vacant areas adjacent to the work site for the storage of materials or parking equipment.

- B. The Contractor shall perform his work in such manner that he will not damage adjacent public or private property. Any damage to existing physical structures or utility services shall be repaired or restored promptly at no expense to the Owner.

- C. The Contractor shall avoid damage to and preserve all existing vegetation (grass, shrubs, trees, etc.) on or near the work area which do not, within reason, interfere with construction. The Contractor will be responsible for and required to replace or restore all such vegetation damaged or destroyed at no cost to the Owner. The Contractor will also be responsible for any unauthorized cutting or damage to trees, shrubs, etc., and also damage caused by careless operation of equipment, storage of materials and rutting or tracking of grass by equipment.

- D. The Contractor shall conduct access, hauling, filling, and storage operations as specified herein and as shown on the Contract Drawings.
 - 1. On-site borrow areas are designated as follows: Suitable material, as approved by Engineer, from excavations for project structures. Any additional borrow material required shall be provided by the Contractor from off-site.

 - 2. On-site spoil areas will become property of the Contractor and are to be disposed off-site.

- E. Construct all fill areas so runoff will not flood improved areas.

- F. All connections to existing piping systems shall be made as shown or indicated on the Drawings after consultation, cooperation, and coordination with the Owner. Some such connections may have to be made during off-peak hours (late night or early morning hours). The Contractor shall give a minimum of 72 hours notice to the Owner when tie-ins with the existing utilities are required.

1.17 HAZARDOUS LOCATIONS

- A. The Contractor shall be responsible for identification of hazardous locations, appropriate construction methods, and all other safety issues.

1.18 ADDITIONAL PROVISIONS, PROJECT SEQUENCE

- A. The Contractor shall provide at his own cost all necessary temporary facilities for access to, and for protection of, all existing structures. The Contractor is responsible for all damage to existing structures, equipment, and facilities caused by his construction operations, and must repair all such damage when and as ordered by the Engineer.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01150

PROJECT REQUIREMENTS

1. GENERAL DESCRIPTION OF WORK. The Work to be performed under these Contract Documents is generally described as follows:

- [Insert subcontractor/vendor scope]

The Contractor shall furnish all labor, equipment, tools, services and incidentals to complete all Work required by these Specifications.

2. UNITS OF MEASUREMENT. Both inch-pound (English) and SI (metric) units of measurement are specified herein; the values expressed in inch-pound units shall govern.

3. WORK BY PUBLIC UTILITIES. None.

4. WORK BY COUNTY None.

5. OFFSITE STORAGE. Offsite storage arrangements shall be approved by County. Offsite storage facilities shall be accessible to County and Engineer.

6. SUBSTITUTES AND "OR-EQUAL" ITEMS. Consideration of Substitutions shall be in accordance with Division 0.

7. PREPARATION FOR SHIPMENT. All materials shall be suitably packaged to facilitate handling and protect against damage during transit and storage. Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage. All painted surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of Engineer. Each item, package, or bundle of material shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of material shall be included with each shipment.

8. LAND FOR CONSTRUCTION PURPOSES. Contractor will be permitted to use available land belonging to County, on or near the Site, for construction purposes and for storage of materials and equipment.

Contractor shall immediately move stored materials or equipment if any occasion arises, as determined by County, requiring access to the storage area. Materials or equipment shall not be placed on the property of County until County has agreed to the location to be used for storage.

9. OPERATION OF EXISTING FACILITIES. The existing treatment plant must be kept in continuous operation throughout the construction period. The Contractor shall submit a Contractor's Assistance Request for Access to County Facilities at least 72 hours in advance for entering buildings or other restricted areas or equipment.

10. NOTICES TO COUNTIES AND AUTHORITIES. Contractor shall, as provided in the General Conditions, notify Counties of adjacent property and utilities when prosecution of the Work may affect them.

When it is necessary to temporarily deny access to property, or when any utility service connection must be interrupted, Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and, whether delivered orally or in writing, shall include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.

Utilities and other concerned agencies shall be notified at least 24 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.

11. CONNECTIONS TO EXISTING FACILITIES. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from County or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage. Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously (around the clock) if necessary to complete connections in the minimum time. Operation of valves or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the County or the owning Utility.

12. UNFAVORABLE CONSTRUCTION CONDITIONS. During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to work which will not be affected adversely by such conditions. No portion of the Work shall be

constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

13. CUTTING AND PATCHING. Contractor shall perform all cutting and patching required for the Work and as may be necessary in connection with uncovering Work for inspection or for the correction of defective Work.

Contractor shall provide all shoring, bracing, supports, and protective devices necessary to safeguard all Work and existing facilities during cutting and patching operations. Contractor shall not undertake any cutting or demolition which may affect the structural stability of the Work or existing facilities without Engineer's concurrence.

Materials shall be cut and removed to the extent indicated on the Drawings or as required to complete the Work. Materials shall be removed in a careful manner, with no damage to adjacent facilities or materials. Materials which are not salvable shall be removed from the site by Contractor.

All Work and existing facilities affected by cutting operations shall be restored with new materials, or with salvaged materials acceptable to Engineer, to obtain a finished installation with the strength, appearance, and functional capacity required. If necessary, entire surfaces shall be patched and refinished.

14. HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE. No Hazardous Environmental Conditions at the Site in areas that will be affected by the Work are known to the County.

15. CLEANING UP. Contractor shall keep the premises free at all times from accumulations of waste materials and rubbish. Contractor shall provide adequate trash receptacles about the Site and shall promptly empty the containers when filled.

Construction materials, such as concrete forms and scaffolding, shall be neatly stacked by Contractor when not in use. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from surfaces to prevent marring or other damage.

Volatile wastes shall be properly stored in covered metal containers and removed daily.

Wastes shall not be buried or burned on the Site or disposed of into storm drains, sanitary sewers, streams, or waterways. All wastes shall be removed from the Site and disposed of in a manner complying with local ordinances and antipollution laws.

Adequate cleanup will be a condition for recommendation of progress payment applications.

16. APPLICABLE CODES. References in the Contract Documents to local codes mean the following:

2017 Florida Building Code

Other standard codes which apply to the Work are designated in the Specifications.

17. REFERENCE STANDARDS. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or laws or regulations in effect at the time of opening of Bids (or on the effective date of the Contract or Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents. However, no provision of any referenced standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of County, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to County, Engineer, or any of Engineer's CONSULTANTS, agents, or employees, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

18. PRECONSTRUCTION CONFERENCE. Prior to the commencement of Work at the Site, a preconstruction conference will be held at a mutually agreed time and place. The conference shall be attended by:

1. Contractor and its superintendent. Principal Subcontractors.
2. Representatives of principal Suppliers and manufacturers as appropriate. Engineer.
3. Representatives of County. Government representatives as appropriate. Others as requested by Contractor, County, or Engineer.

Unless previously submitted to Engineer, Contractor shall bring to the conference a preliminary schedule for each of the following:

1. Progress Schedule. Procurement Schedule.
2. Schedule of Values for progress payment purposes.
3. Schedule of Shop Drawings and other submittals.

The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:

1. Contractor's preliminary schedules.
2. Transmittal, review, and distribution of Contractor's submittals. Processing Applications for Payment.
3. Maintaining record documents. Critical Work sequencing.
4. Field decisions and Change Orders.
5. Use of premises, office and storage areas, security, housekeeping, and County's needs. Major equipment deliveries and priorities.
6. Contractor's assignments for safety and first aid.

Engineer will preside at the conference and will arrange for keeping the minutes and distributing the minutes to all persons in attendance.

19. PROGRESS MEETINGS. Contractor shall schedule and hold regular progress meetings at least monthly and at other times as requested by County or required by progress of the Work. Contractor, Engineer, and all Subcontractors active on the Site shall be represented at each meeting. Contractor may at its discretion request attendance by representatives of its Suppliers, manufacturers, and other Subcontractors.

County shall preside at the meetings. Meeting minutes shall be prepared and distributed by the Engineer. The purpose of the meetings will be to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop.

Each week, on the same day of the week as the monthly meeting, when there is no monthly meeting, the Contractor will hold a coordination meeting to discuss planned work for that week and for periods of two additional weeks. Contractor and contractor's Superintendent, foreman, and subcontractors that are involved with the planned work, should be in attendance with the County's RPR. Contractor will provide a planned work Schedule for each meeting and make necessary corrections and changes after the meeting and distributed to attendees.

20. SITE ADMINISTRATION. Contractor shall be responsible for all areas of the Site used by it and by all Subcontractors in the performance of the Work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to County or others. Contractor shall have the right to exclude from the Site all persons who have no purpose related to the Work or its inspection, and may require all persons on the Site (except County's employees) to observe the same regulations as Contractor requires of its employees.

Access to the Site will be limited to the west gate off Sand Lake Road unless specific alternate arrangements are made with the Owner. Contractor shall supply a list, and periodically update it, that contains the names of all personnel with driver licenses numbers and license plate numbers of all vehicles that will be on-site during construction. Contractor shall also supply County's Security Representative a daily list of any scheduled visitors. Only scheduled visitors will be permitted to enter upon verification of identity.

County reserves the right to direct CONTRACTOR to permanently remove any subcontractor or subcontracted employee from the site for breach of security, policy, unsafe working practice, unprofessional behavior, or failure to comply with access restrictions.

21. SECURITY. CONTRACTOR shall be responsible for protection of the Site, and all Work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons. Contractor shall comply with Orange County's security requirements to protect the South Water Reclamation Facility site.

The County has a contract to provide guard services at the plant site from 5:00 AM to 5:00 PM Monday through Friday. Site access through the west gate off Sand Lake Road is controlled by the guard service. The Contractor shall be required to pay for additional guard services to accommodate work outside of these hours and holidays to provide the same level of security. In addition, the Contractor shall provide the following security measures:

- a. The Contractor will supply a list of all personnel that will be on Site to County's R.P.R. The list must be kept current and provided at least one day in advance of the personnel's arrival.
- b. All personnel, employees and or subcontractors and suppliers that pass through the security perimeter shall wear Contractor issued photo identification badges.
- c. Contractor will supply list with names, driver license, and license plate numbers of all personnel.
- d. All Contractor's and subcontractor's personnel passing through the security perimeter shall have background checks to identify any historical crimes dealing with terrorism, sabotage, or other government related illegal activities at the cost of the Contractor and before entering Orange County Utilities' South Water Reclamation Facilities. Proof of background checks shall be submitted, in sealed envelopes, to County's Safety Division.
- e. All project deliveries shall be inspected prior to entering the security perimeter of the Facility in order to verify contents. All delivery personnel and delivery vehicles shall be under supervision while within the security perimeter of the Facility in lieu of issuance of photo identification badges. The Contractor shall maintain staff to accept all deliveries to the site; the County will not be responsible for receipt of any deliveries.
- f. If access other than the west gate off Sand Lake Road is utilized, a full time guard shall be provided at the construction gate during contractor working hours at the cost of the Contractor. All arrangements for alternative access shall be pre-arranged with the County. All alternative access must be secured and locked when not in use.

No Claim shall be made against County by reason of any act of an employee or trespasser, and CONTRACTOR shall make good all damage to County's property resulting from CONTRACTOR's failure to provide security measures as specified.

22. CONSTRUCTION ASSISTANCE REQUEST (CAR) FORM. The Contractor shall submit CAR to the Owner's Representative for any interaction requiring the involvement of the Owner's Operational Staff at SWRF, including but not limited to the following examples; existing valve actuation, process interruptions, equipment operation interruption, power interruption, flow diversions, spare parts transfers, and training. The Contractor shall not have contact with the Operations Staff without the knowledge of the Owner's Representative. The Owner's Representative reserves the right to direct the Contractor to provide a CAR at his discretion. Unless otherwise noted by the Owner's Representative, a CAR shall be submitted a minimum of seven

(7) calendar days in advance of the intended operation noted within the CAR. Unless otherwise noted in the Contract Documents, for all activities affecting treatment process operation, a CAR shall be submitted a minimum of thirty (30) days in advance of the scheduled activity. Unless otherwise noted in the Contract Documents, the schedule for performing work which will require shutting down a unit process must be coordinated with the Owner by CAR submittal a minimum of sixty (60) days in advance of the scheduled activity. Reference a blank copy of the form within this section.

23. TOBACCO FREE POLICY – TOBACCO FREE CAMPUS. In order to protect the public health, safety, and welfare of citizens and employees, smoking tobacco or any other substance is prohibited in County owned or operated facilities and vehicles. Contractor's personnel will not be permitted to use tobacco products on County property, including County parking lots, break areas, and worksites. Smoking means the lighting of any cigarette, cigar or pipe, or the possession of any lighted cigarette, cigar or pipe, regardless of its composition. This requirement shall be enforced from the beginning of construction and violators will be removed from the property.

24. COUNTY'S WORK SCHEDULE. The County reserves the right to have their Resident Project Representative (RPR) present to witness and inspect all Work performed by the Contractor. Working hours for the RPR are a 10-hour period between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. Any Work beyond the 10-hour period shall be considered overtime and shall be requested in writing 24 hours prior. Contractor, with verbal permission of the RPR, may work 24 hours a day to provide clean-up, maintenance of vehicles and equipment, and other such items without the RPR present.

Any Work required on Saturday or Sunday shall be considered overtime and shall be requested in writing 48 hours in advance. All requests must be approved by County in advance. Under emergency situations a verbal request may be made with a follow-up written request.

County observes the following holidays: New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

Contractor shall pay for the RPR's overtime. Overtime shall be defined as time beyond the working period between 7:00 a.m. and 7:00 p.m. on Monday through Friday, and all time on Saturdays, Sundays, and on holidays observed by the County. Hourly rates for the Resident Project Representatives shall be \$51 per hour.

26. TRAINING. Unless otherwise specified, a minimum of 2 days of training shall be provided for each piece of equipment supplied, including all electrical installation, instruments, and testing equipment. Contractor shall video and audio record the training. The Contractor shall submit a C.A.R (Construction Assistance Request) form seven days prior to beginning of training. Contractor shall submit training agenda, instructor names and resumes, and training handouts to be used. Training shall be based on O&M manuals supplied by the Contractor. Manuals shall be supplied prior to training.

27. PERMITS. The Contractor shall comply with all laws, rules, regulations, and ordinances of any authority having jurisdiction over the work as required by the General Conditions. Permits obtained by the County are appended to this section. The term, "Engineer", in the building department permit, refers to the Contractor's engineer.

END OF SECTION

**CONTRACTOR'S ASSISTANCE REQUEST
FOR ACCESS TO COUNTY FACILITIES**

PROJECT: SOUTH WATER RECLAMATION FACILITY – ODOR ABATEMENT
IMPROVEMENTS

DATE: _____ NUMBER: _____

LOCATION/STRUCTURE: _____

PURPOSE: _____

ADDITIONAL ASSISTANCE REQUESTED: _____

DATE ACCESS NEEDED: _____

DURATION OF WORK: _____

CONTRACTOR

OCU CONSTRUCTION

COMMENTS/RESTRICTIONS: _____

PLANT SUPERVISOR

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor participation in pre-construction conferences, progress meetings and specially called meetings.

1.02 MEETINGS CALLED BY THE COUNTY

- A. The County will schedule and administer a pre-construction conference, periodic progress meetings and specific topic meetings throughout the progress of the Work. The County will:

1. Prepare and distribute a notification of the meeting to required attendees.
2. Make physical arrangements for the meetings.

The Engineer will:

1. Establish, prepare and distribute an agenda.
 2. Preside at meetings.
 3. Prepare and distribute minutes of meetings including significant proceedings and decisions, within 15 working days after each meeting. Minutes will be forwarded to all participants and to parties affected by decisions made at the meeting.
- B. Representatives of the Contractor, Subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
 - C. The meeting location will generally be a central site, convenient for all parties, designated by the County.

- D. All meetings shall be digitally recorded with files provided to all requesting parties.

1.03 PRE-CONSTRUCTION CONFERENCE

A. Attendance:

1. County
2. Contractor and superintendent
3. Subcontractors as appropriate to the agenda
4. Representatives of suppliers and manufacturers as appropriate to the agenda
5. County MBE/WBE representative
6. Other agency representatives (FDEP, EPA, City, etc.)
7. Surveyor – recommended but required if Surveyor has not previously performed work for the County
8. Others as requested by the County or Contractor

B. Suggested Agenda:

1. Distribution and discussion of:
 - a. List of major Subcontractors and suppliers
 - b. Construction schedules
 - c. Contact information
2. Organizational arrangement of Contractor's forces and personnel, and those of Subcontractors, material and equipment suppliers, and the County

3. Critical work sequencing
4. Major equipment deliveries
5. Project coordination
 - a. Designation of responsible personnel
 - b. Channels and procedures for communication
6. Procedures and processing of:
 - a. Field decisions
 - b. Proposal requests
 - c. Submittals
 - d. Change orders
 - e. Applications for payment/Schedule of Values
 - f. Contractor quality control
 - g. Submittal of Shop Drawings, project data and samples
7. Adequacy of distribution of Contract Documents
8. Procedures for maintaining as built and record documents
9. Use of premises:
 - a. Office, work and storage areas
 - b. County's requirements
 - c. Housekeeping
10. Temporary construction facilities
11. Temporary utilities
12. Safety and first aid procedures
13. Rules and regulations
14. Security procedures
15. Place, date and time for regular progress meetings

16. Completion time for Contract and liquidated damages

1.04 PROGRESS MEETINGS

- A. The County shall schedule progress meetings at least once per month as required by progress of the Work with the first meeting approximately one (1) month after the pre-construction meeting.

- B. Attendance:
 - 1. County
 - 2. Contractor
 - 3. Subcontractors as appropriate to the agenda
 - 4. Suppliers as appropriate to the agenda
 - 5. Others as appropriate

- C. The Contractor's representative is to attend the project meetings and have the authority to act on behalf of the entity represented on field related matters. Contractor's representative is to study previous meeting minutes and current agenda items, in order to be prepared to discuss pertinent topics and provide specific information including but not limited to:
 - 1. Status of submittals and actions necessary to expedite them
 - 2. Status of activities behind schedule and actions necessary to regain the approved schedule
 - 3. Status of materials and equipment deliveries and action necessary to expedite materials and equipment and maintain the approved schedule
 - 4. Status of open RFI's and actions necessary to address them

- D. To the maximum extent practicable, the Contractor is to assign the same personnel to represent the Contractor at Progress Meetings throughout the

progress of the work.

- E. The Contractor is to provide a current Shop Drawing submittal log at each progress meeting.
- F. The Contractor is to provide copies of the updated Progress Schedule at each project meeting in accordance with the General Conditions including a 3 week look ahead schedule for upcoming events.
- G. Suggested Agenda:
 - 1. Review and approve minutes from previous meeting
 - 2. Review of work progress since previous meeting to include current As-Builts
 - 3. Contractor's/Subcontractor's workforce and equipment
 - 4. Progressive As-Built Drawings
 - 5. Surveyor's submittals
 - 6. Field observations, problems and conflicts
 - 7. Construction progress and problems which impede construction schedule
 - 8. Shop Drawing submittal status
 - 9. Requests for Information (RFI) status
 - 10. Change Order status
 - 11. Review of off site fabrication and delivery schedules
 - 12. Corrective measures and procedures to regain approved schedule

13. Revisions to construction schedule
14. Job progress and schedule for succeeding work period
15. Coordination of schedules
16. Maintenance of quality standards
17. Review submittal schedule; expedite as required
18. Pending requests for information, changes and substitutions
19. Review proposed changes for effect on construction schedule and completion date
20. Pay application status
21. Other business

H. Revision to Minutes:

1. Unless minutes are challenged, in writing, prior to the next regularly scheduled Progress Meeting, they will be accepted as properly summarizing the discussions and decisions of the meeting.
2. Persons challenging minutes shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of minutes.
3. Challenge to minutes shall be settled as priority portion of "old business" at next regularly scheduled meeting.

PART 2 - PRODUCTS (NOT USED)

2.01 PRE-CONSTRUCTION MEETING

- A. Pre-construction Meeting: At the pre-construction meeting the Contractor shall be provided with a blank electronic version of the spreadsheets for: Asset

Attribute Data and Pipe Deflection tables. The Contractor's Surveyor shall use these tables to input the data and shall not alter the table format or formulas.

2.02 CONSTRUCTION PROGRESS MEETINGS

A. Contractor shall provide the following:

1. Progressive As-Built Drawings
2. Surveyor submittals
 - As-Built Asset Attribute Data Table (see Specification Section 01050 "Surveying and Field Engineering" Table 01050-2)
 - Pipe Deflection Table (see Specification Section 01050 "Surveying and Field Engineering" Table 01050-3)
 - Gravity Main Table (see Specification Section 01050 "Surveying and Field Engineering" Table 01050-4)
 - Boundary Surveys of fee simple and permanent easements for pump stations, treatment facilities, and constructed pipe in easements
3. Construction Contract, As-Built Drawings, Specifications, General Conditions, Supplemental Conditions, Bid Proposal, Instruction to Bidders, Addenda, and all other Contract Documents
4. Specifications and Addenda: Record manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed as well as any changes made by Field Order, Change Order or other
5. Change orders, verbal orders, and other modifications to Contract
6. Written instructions by the County as well as correspondence related to Requests for Information (RFIs).
7. Accepted Shop Drawings, samples, product data, substitution and "or-equal" requests.

8. Field test records, inspection certificates, manufacturer certificates and construction photographs.
9. As-Built Asset Attribute Data: Surveyor shall obtain field measurements of vertical and horizontal dimensions of constructed improvements. The monthly submittal shall include the Surveyor's certified statement regarding the constructed improvements being within the specified accuracies as described in Specification Section 01050 "Surveying and Field Engineering", Table 01050- 1 Minimum Survey Accuracies or if not, indicating the variances.
10. Gravity Main Table: Surveyor shall prepare and update a Gravity Main Table to include as a minimum the pipe segment identification, pipe lengths, manhole inverts and tops, and slopes for gravity mains. Surveyor shall certify the data entered are correct and indicate if the minimum slopes have not been met.
11. Pipe Deflection Table: Surveyor shall input the type of pipe, pipe manufacturer, PVC manufacturer deflection allowance, allowable angle of offset and radius of curvature, laying length of pipe, and coordinates. Surveyor shall certify the data entered are correct and indicate if the deflection allowance, offset or radius of curvature exceeds the manufacturer's recommendations.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

Work completed without approved Shop Drawings and/or samples shall be considered installed at the Contractor's risk.

1.01 SHOP DRAWINGS AND DATA

- A. Shop Drawings defined in the General Conditions, shall complement design and construction Drawings, and shall contain sufficient detail to clearly define all aspects of the Construction. These Drawings shall be complete and detailed.
- B. Contractor and Supplier's catalog sheets, brochures, diagrams, illustrations and other standard descriptive data shall be clearly marked with specification title and numbers to identify pertinent materials, product or models. Delete information which is not applicable to the Work by striking or cross-hatching.
- C. If Shop Drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in the letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, the Contractor shall not be relieved of the responsibility for executing the Work in accordance with the Contract, even though such Drawings have been reviewed.
- D. Data on materials and equipment shall include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, verification of conformance with applicable standards or codes, materials of construction and similar descriptive material. Materials and equipment list shall, for each item, give the name and location of the Supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.
- E. For all equipment furnished, the Contractor shall provide a list including the equipment name and address and telephone number of the Supplier's representative and service company so that service and/or spare parts can be readily obtained.

- F. The Contractor will obtain an installation list from suppliers and equipment suppliers who propose to furnish equipment or products for submittal to County/Professional along with the required Shop Drawings. The installation list shall include at least 5 installations where identical equipment has been installed and has been in operation for a period of at least 1-year.

1.02 REVIEW OF SHOP DRAWINGS AND SAMPLES

- A. The County /Professional's review of Shop Drawings, Data, and Samples as submitted by the Contractor will be to determine if the items(s) generally conform(s) to the information in the Contract Documents and is/are compatible with the design concept. The County/Professional's review and exceptions, if any, will not constitute an approval of dimensions, connections, 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 Documents
 - 2. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials
 - 3. As approving departures from details furnished by the County/Professional, except as otherwise provided herein
- C. If the drawings or schedules as submitted describe variations and show a departure from the Contract Documents which the County/Professional finds to be in the interest of the County and to be so minor as not to involve a change in Contract Price or Contract Time, the County/Professional may return the reviewed drawings without noting an exception.
- D. "Approved As Noted": Contractor shall incorporate County/Professional's comments into the submittal before release to manufacturer. The Contractor shall send a letter to the County/Professional acknowledging the comments and their incorporation into the Shop Drawing.
- E. "Amend and Resubmit": Contractor shall resubmit the Shop Drawing to the County/Professional. The resubmittal shall incorporate the

County/Professional's comments highlighted on the Shop Drawing.

- F. "Rejected": Contractor shall correct, revise and resubmit Shop Drawing for review by County/Professional.
- G. Resubmittals will be handled in the same manner as first submittals. For resubmittals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by County/Professional on previous submissions. The Contractor shall make any corrections required by the County/Professional.
- H. If the Contractor considers any correction indicated on the Drawings to constitute a change to the Drawings or Specifications, the Contractor shall give written notice thereof to the County/Professional.
- I. When the Shop Drawings have been completed to the satisfaction of the County/Professional, the Contractor shall carry out the Construction in accordance therewith and shall make no further changes therein except upon written instructions from the County/Professional.
- J. No partial submittals will be reviewed. Submittals not deemed complete will be stamped "Rejected" and returned to the Contractor for resubmittal. Unless otherwise specifically permitted by the County/Professional, make all submittals in groups containing all associated items for:
 - 1. Systems
 - 2. Processes
 - 3. As indicated in specific Specifications Sections
 - 4. All drawings, schematics, manufacturer's product data, certifications, and other Shop Drawing submittals required by a system specification shall be submitted at one time as a package to facilitate interfaces checking.
- K. Only the County/Professional shall utilize the color "red" in marking Shop Drawing submittals.
- L. Failure to comply with any of the above may result in the rejection of Shop

Drawings.

1.02 PRODUCT DATA

- A. Submit not less than 6-copies, unless approved by the County/Professional. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to the Work.

1.03 MANUFACTURERS' INSTRUCTIONS

- A. When required in an individual Specification Section, submit manufacturer's printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing, in quantities specified for product data.

1.04 SAMPLES

- A. Submit full range of manufacturers' standard colors, textures and patterns for the County's selection. Submit samples for selection of finishes within 30-days after Award of Contract. All color and finish selections must be submitted by the Contractor in a single submission, properly labeled and identified.
- B. Submit samples to illustrate functional characteristics of the product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work.
- C. Submit the number of samples specified in the respective Specification section, but no less than two (2). After review one (1) will be retained by the County. Reviewed samples that may be used in the Work are indicated in the Specification Section.
- D. Samples shall be delivered to the County as directed. The Contractor shall prepay shipping charges on samples. Materials or equipment for which samples are required shall not be used in the Work until approved by the County/Professional.
- E. Samples shall be of sufficient size 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. Each sample shall have a label indicating:
 - a. Name of Project
 - b. Name of Contractor and Subcontractor
 - c. Material or equipment represented
 - d. Place of origin
 - e. Name of product and brand (if any)
 - f. Location in Project
 - g. Specification title and number
 - h. Submittal number
 - i. Note: Samples of finished materials shall have additional marking that will identify them under the finished schedules.

F. The Contractor shall prepare a transmittal letter, in triplicate (3) for each shipment of samples containing the information required in paragraph herein. The Contractor shall enclose a copy of this letter with the shipment and send a copy of this letter to the County/Professional. 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.

G. Approved samples not destroyed in testing shall be sent to the County or stored at the site of the Work. Approved samples of the hardware in good condition may be incorporated in the Work if requested in writing by the Contractor and approved in writing by the County/Professional. Samples that failed testing or were not approved will be returned to the Contractor at the Contractor's expense, if so requested at time of submission.

1.05 FIELD SAMPLES

A. Provide field samples of finishes as required by individual Specifications sections. Install the sample completely and finished. Acceptable samples in place may be retained in completed Work.

1.06 DRAWINGS, PRODUCT DATA AND CERTIFICATES

A. Each letter of transmittal shall identify each and every item transmitted by title, drawing number, revision number and date.

- B. The County generally will not check dimensions, quantities or schedules, except in cases where the information is lacking in the Specifications.
- C. The following is applicable to submitted drawings, data and certificates:
 - 1. Show relation to adjacent structures or materials.
 - 2. Clearly identify field dimensions.
 - 3. Show required dimensions and clearances.
 - 4. Performance characteristic and capabilities shall accompany original Shop Drawing submittals.
 - 5. Wiring diagrams and controls shall accompany original Shop Drawing submittals.
 - 6. Installation instructions shall accompany original Shop Drawing submittals.
 - 7. Each submittal shall identify applicable Standards, such as ASTM number or Federal Specification number.
 - 8. All information not pertinent shall be removed from the submittal, or shall be crossed out.
- D. When resubmission is required, the County/Professional will return only two (2) marked up copies. A third submission from the same manufacturer will not be accepted.

1.07 SUBSTITUTIONS

- A. Consideration of substitutions shall be in strict accordance with Division 0.
- B. When a particular product is specified or called for, it is intended and shall be understood that the proposal tendered by the Bidder includes those products in his Bid. Substitutions will only be considered in cases where original materials are unavailable or in an instance where substitute can be proven

superior in its planned application

- C. The intent of these specifications is to provide the County with a quality facility without discouraging competitive bidding. For products specified only by reference standards, performance and descriptive methods, without naming manufacturer's products, the Contractor may provide the products of any manufacturer complying with the Contract Documents, subject to the review of product data by the County/Professional as specified herein.
- D. The County/Professional's approval is required for substitutions.
- E. The Contract is based on the materials, equipment and methods described in the Contract Documents.
- F. The County/Professional will consider proposals for substitution of materials equipment and methods only when such proposals are accompanied by full and complete technical data and all other information required by the County/Professional to evaluate the proposed substitution.
- G. Do not substitute materials, equipment or methods unless such substitution has been specifically approved for this Work by the County/Professional in writing. The Contractor must provide a submittal per this Section specifically requesting approval of the substitution. Failure to specifically identify the requested substitution may invalidate approval of a submittal.

1.08 AVAILABILITY OF SPECIFIED ITEMS

- A. Verify prior to bidding that all specified items will be available in time for installation during Construction for orderly and timely progress of the Work.
- B. In the event that specified items will not be available, notify the County/Professional prior to receipt of proposals.

1.09 OPERATING MANUALS

- A. Submit all manuals in accordance with requirements of Divisions 2 through 16 of the Contract Specifications and Section 01700 "Project Closeout."

1.10 WARRANTIES, GUARANTEES AND BONDS

- A. Provide as required by Technical Sections of the Specifications and Sections 01700 "Project Closeout" and Section 01740 "Warranties and Bonds."

1.11 CADD FILES

- A. The Professional's CADD files will be available on a limited basis to qualified firms at the County's prerogative. The procedure for requesting such files is noted elsewhere in these documents and there is a cost associated with handling and reproduction. Recipients are cautioned that these files may not accurately show actual conditions as constructed. Users are responsible to verify actual field conditions.
- B. The Professional's Drawings are to be used only for background information. If the Professional's Drawings are just reproduced and resubmitted (e.g. for ductwork drawings) they will be rejected.
- C. Copies of data furnished by the County/Professional to Contractor or Contractor to County/Professional that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- D. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60-days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- E. When transferring documents in electronic media format, the transferring party makes no representations as to long-term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

1.12 PROGRESS PHOTOGRAPHS

- A. Photographs and digital pictures shall be in color. Provide 1 copy of each digital picture on each of three (3) CDs and provide 1 print of each photograph

in two (2) separate albums.

- B. Photographs shall be from locations to illustrate the condition of Construction and state of progress adequately.
- C. Provide up to 12 digital photographs of views randomly selected by the County, taken prior to any construction and prior to each scheduled Application for Payment.
- D. Deliver electronic images, prints, and negatives to the County.
- E. Each print shall be single weight paper with glossy finish and the overall dimension shall be 7-1/2-inch x 10-inches (19.05 x 25.4 cm). The print shall be clear, sharp and free of distortion after the enlargement from the negative.
- F. Provide loose-leaf albums for each set of photographs to hold prints with a maximum of 50-leaves per binder.
- G. Each print shall be protected by flexible, transparent acetate or plastic sheet protector leaves with metal reinforced holes. Two (2) extra leaves shall be provided in each binder.
- H. Capture and provide digital, ortho-rectified, true-color, aerial photographs of the complete project site prior to start of Construction and at final completion. A final 6-inch or less ground pixel resolution is required. If using traditional photography, the photos will need to be captured at an appropriate scale and scanned at a high enough dpi to yield a final ground pixel size of 6-inches or less. If captured digitally, a final 6-inches or less ground sample distance is required. The final orthorectified photos shall use a projection of NAD 27, State Plane West and all vertical reference shall be NAVD 88, US feet. All orthophoto mosaics shall meet a final accuracy of plus or minus 5-feet.
- I. Provide a total of four (4) true-color, color balanced orthophoto mosaic prints. Three (3) prints each of the pre and post construction (final completion) orthophoto mosaics, for a total of six (6). Each orthophoto mosaic print shall be on double- weight paper with glossy finish and shall have overall dimensions of 36-inches x 58-inches. Two (2) copies of each of the digital orthophoto mosaics shall be supplied in Geotiff format on disk for each time period (pre and post construction). The final color balanced, true-color orthophoto mosaics will be projected in NAD 27, State Plane West and all vertical reference shall be NAVD 88, US feet and shall meet a final accuracy of plus or minus 5-feet.

J. The Contractor shall provide before and after photographs of each portion of the site. The below ground facilities shall include all equipment, walls, floor, piping, supports and entrance. At major locations, photographs shall include before, during, and after prints and all prints shall be placed in binders in ascending date order to show the Work as it progresses.

K. Descriptive Information:

1. Each photograph shall have a permanent title block on the back and shall contain the typed information and arrangement as follows:

- a. ORANGE COUNTY, FLORIDA
- b. (ENTER PROJECT NAME)
- c. BID No. (Enter Bid Number)
- d. CONTRACTOR: (Name of Contractor)
- e. DATE: (When photo was taken)
- f. PHOTO NO.: (Consecutive Numbers)
- g. PHOTO BY: (Firm Name of Photographer)
- h. LOCATION: (Description of Location and View)

2. The Contractor shall provide the Professional with a written description of each photograph. This description shall be included in the binders and a copy shall be submitted with the CDs.

1.13 PROJECT RECORD DOCUMENTS

Project Record Documents shall be submitted in accordance with Section 01720 "Project Record Documents" of these specifications.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 SUBMITTAL PROCEDURES

A. Article 9 of the General Conditions contains additional provisions regarding submittals.

- B. Preliminary Shop Drawing Data: Within 20-days after the Award of the Contract or before the Pre-Construction Meeting, the Contractor shall submit to the County/Professional a complete listing of manufacturers for all items for which Shop Drawings are to be submitted.

- C. Shop Drawing Submittal Schedule: Within 30-days after the Notice to Proceed, the Contractor shall submit to the County/Professional a complete schedule of Shop Drawings submittals with the respective dates for submission, the beginning of manufacture, testing and installation of materials, supplies and equipment, noting those submittals critical to the progress schedule.

- D. Submittal Log: An accurate updated log of submittals will be maintained by the Contractor and subject to review by the County/Professional at each scheduled progress meeting.

- E. 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 County/Professional. This does not constitute a change order until accepted by the County.

- F. Shop Drawing and submittal data shall be reviewed by the County/Professional for each original submittal and first resubmittal; thereafter review time for subsequent resubmittals shall be charged to the Contractor. The Contractor shall reimburse the County for services rendered by the County/Professional at the rate multiplied by the County's Professional multiplier based on the fee schedule provided to the County for this Project. If a County engineer is performing any portion of the review, this fee is based upon the hourly rate of the engineer times the County's multiplier for overhead, benefits, and expenses. The Contractor agrees that the County shall deduct such charges from the Contract Amount by a deductive Change Order.

- G. Contractor Shop Drawing and Sample submittals shall include 5 copies in addition to any other copies that the Contractor wants returned. The County will retain 5 copies of approved submittals.

- H. Identify Project, Project Number, date, dates of previous submittals, Contractor, Sub-Contractors, suppliers with their addresses, pertinent Drawings by sheet and detail number, and Specification Section number, as appropriate. Identify all deviations from the Contract Documents. Provide space for Contractor and Professional review stamps.

- I. Contractor's delivery of Shop Drawings for review shall follow a reasonable sequence, as is necessary to support the dates on the Progress Schedule and avoid an overload of Shop Drawings awaiting review at any one time. Coordinate submittal of related items.
- J. Submit Shop Drawings per the schedule of Shop Drawing submittals, inserted in 1 loose-leaf binder, with tabs and index to the County/Professional. All individual submittal sheets inserted in said binder must be clearly marked and referenced to proper paragraph and subparagraph of specifications. Cross out any items on sheets which constitute information not pertaining to equipment specified. Clearly mark all components that are provided as "optional" by manufacturer. Shop Drawings shall be approved by the Contractor prior to submittal to the County/Professional. Shop Drawings will be reviewed by the County/Professional. After County/Professional approval, reproduce and distribute in accordance with requirements herein.
- K. All submissions of Shop Drawings, brochures and catalog cuts shall be accompanied by a transmittal letter listing the Drawings submitted by number and title.
- L. When engineering calculations and/or professional certification of performance criteria of materials, systems, and/or equipment are required, the County is entitled to rely upon the accuracy and completeness of such calculations and certifications submitted by the Contractor. Calculations, when required, shall be submitted in a neat, clear and in an easy to follow format. Such calculations and/or certifications shall be signed and sealed by a Professional Engineer registered in the State of Florida.
- M. Distribute copies of reviewed submittals to concerned parties. Instruct recipients to promptly report any inability to comply with provisions.
- N. Prior to submission of Shop Drawings and samples, the Contractor shall stamp and sign the submittals. Any submission which, upon examination by the County, shows evidence of not having been thoroughly checked, or is not in compliance with the provisions of this Section will be returned to the Contractor for completion before it will be considered for review.
- O. Notify the County of the need for making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the material or equipment Contractor proposes to supply.
- P. On resubmittals, direct specific attention in writing or on the revised Drawings or sample to revisions other than the corrections required by County on

previous submissions.

- Q. All drawings, schematics, manufacturer's product data, certifications and other drawing submittals required for a system specification shall be submitted at one time as a package to facilitate interface checking.

- R. The County will distribute Shop Drawings as follows for the indicated action taken:

SHOP DRAWING SUBMITTAL DISTRIBUTION

Representative Party	No Exception Taken or Make Correction Noted			Rejected or Revise & Resubmit		
	Submittal Transmittal	Shop Drawing	Review Comment Sheet	Submittal Transmittal	Shop Drawing	Review Comment Sheet
Engineer	2 Copies	File Copy	1 Copy	Original	File Copy	1 Copy
Contractor (see Note 1)	2 Copies	1 Copy Each Submittal	1 Copy	1 Copy	All Copies Except Engineers	1 Copy
County	1 Copy	1 Copy Each Submittal	1 Copy	1 Copy	None	1 Copy
Inspector	2 Copies	1 Copy Each Submittal	1 Copy	1 Copy	None	1 Copy
Project Record Data (see Note 2)	1 Copy	1 Copy Each Submittal	1 Copy	1 Copy	None	1 Copy

NOTES:

1. Contractor shall distribute additional copies to Subcontractors as required.
2. Stored by Contractor to be furnished to County upon closeout.

S. All Shop Drawings shall be accompanied with a transmittal letter providing the following information:

1. Project Title and Contract Number
2. Date
3. Contractor's name and address
4. The number of each Shop Drawing, project data, and sample required
5. Notification of Deviations from Contract Documents
6. Submittal Log Number conforming to specification section numbers
 - a. Submit each specification section separately.
 - b. Identify each Shop Drawing item required under respective specification section.

- c. Identify resubmittal using specification section followed by A (first resubmittal), B (second resubmittal)...etc.

3.02 CONTRACTOR'S REVIEW

- A. Contractor's Responsibility for Coordination: Where the dimension, size, shape, location, capacity or other characteristic affects another item, and where the Contractor selects, fabricates or installs related or adjacent products to be used, the Contractor shall be responsible for coordination of related items. The Contractor shall insure that a proper exchange of information takes place prior to or during preparation of each submittal and that submittals reflect such coordination. The notation "verify" or "coordinate" on the Drawings indicates the necessity for Contractor coordination in the particular instances used.
- B. Contractor's Checking: When checking submittals from Subcontractors and suppliers, the Contractor shall mark all sets, indicating his corrections and comments in blue or green. Copies marked in red may be returned for revision.
- C. The Contractor is responsible to deliver and pick-up all submittals in a timely manner at the County/Professional's designated office. The Contractor is responsible for all related costs and expenses for the transmittal of such submittals.

3.03 COUNTY'S / PROFESSIONAL'S REVIEW

- A. Corrections or comments made on Shop Drawings during review do not relieve the Contractor from compliance with the requirements of Drawings and Specifications. This check is only for review of general conformance with the design concept of this Project and general compliance with information given in Contract Documents. Any substitutions or changes shall be properly noted.
- B. No action will be taken on "rough-in" Shop Drawings for plumbing and electrical connections when the items of equipment are not included in the same submittal.
- C. Review Time:
 - 1. On a normal basis, each submittal will be returned to the Contractor within 15 working days of the date it is received. Some submittals may

require additional time.

2. If, for any reason, the above schedule cannot be met, the Contractor will be so informed within a reasonable period and the Schedule of Submittals revised. If the specific submittal affects the critical path, the Contractor shall immediately notify the County/Professional in writing. In the event of separate submittals of individual components of a system, these submittals may be held until all components of the system are submitted, and the Contractor will be so notified.

END OF SECTION

SECTION 01310

PROGRESS

SCHEDULES

PART 1 - GENERAL

1.01 REQUIREMENT

- A. The Contractor will submit precedence method cost loaded Critical Path Method (CPM) Progress Schedules to the County depicting the approach to prosecution and completion of the Work. This requirement includes, but is not limited to the Contractor's approach to Activity cost loading, recovering schedule and managing the effect of changes, substitutions and Delays on Work sequencing.
- B. The Progress Schedule shall show how the Contractor's priorities and sequencing for the Work (or Work remaining) conform to the Contract requirements and the sequences of Work indicated in or required by the Contract Documents; reflect how the Contractor anticipates foreseeable events, site conditions and all other general, local and prevailing conditions that may affect cost, progress, schedule, furnishing and performance of the Work; and show how the Contractor's Means and Methods translate into Activities and logic.
- C. The Progress Schedule will consist of the Initial Submittal, Payment Submittals and Revision Submittals. Upon acceptance by the County, the Initial submittal will become the As-Planned Schedule for the Work. Revision submittals upon acceptance will become the As-Planned Schedule for the Work remaining to be completed as of the submittal date for that Revision.
- D. References to the Critical Path Method (CPM) are to CPM construction industry standards that are consistent with the requirements of this Section.

1.02 GLOSSARY OF TERMS

- A. The following terms, whether or not already defined elsewhere in the Contract Documents, have the following intent and meanings within this Section:

1. Activity Value (Value): That portion of the Contract Price representing an appropriate level of payment for the part of the Work designated by the Activity.
2. As-Planned Schedule: The first, complete Initial Progress Schedule submitted by the Contractor with the intent to depict the entire Work as awarded and accepted by the County or returned as no resubmittal required.
3. Contract Float: Days between the Contractors anticipated date for completion of the Work, or of a specified portion of the Work, if any, and the corresponding Contract Time.
4. CPM Schedule: The Progress Schedule based on the Critical Path Method (CPM) of scheduling. The term Critical Path means any continuous sequence of Activities in the Progress Schedule controlling, because of their sum duration, the Early Date of a pertinent, specified Contract Time.
5. Early/Late Dates: Early/late times of performance, based on CPM calculations, for an Activity in the Progress Schedule. Early Dates will be based on proceeding with all or part of the Work on the date when the corresponding Contract Time commences to run. Late Dates will be based on completing all or part of the Work on the corresponding Contract Time, even if the Contractor plans early completion.
6. Milestones: Key, pre-determined points of progress in the completion of a facility, denoting interim targets in support of the Contract Times. Milestones may pinpoint targets for key excavation and substructure events, significant deliveries, critical path transition from superstructure to piping and electrical rough in and building enclosure. Also, hook-up of mechanical and electrical equipment, availability of power for testing, equipment shakedown, training of County personnel, start-up, Substantial Completion and other events of like import.
7. Official Schedule: The Initial or most recent Revision Submittal accepted by the County or returned as no resubmittal required and the basis for Payment Submittals until another Revision Submittal is submitted and accepted. The accepted Initial Submittal is also the As-Planned Schedule.
8. Payment Submittal: A monthly Progress Schedule update reflecting progress and minor adjustments on the Activities, sequencing and restraints for Work remaining.

9. Total Float: Days by which an activity may slip from its Early Dates without necessarily extending a pertinent Contract Time. Total Float at least equals Contract Float. Total Float may also be calculated and reported in working Days. When an activity is delayed beyond Early Dates by its Total Float it becomes a Critical Path activity and if delayed further will impact a Contract Time.

1.03 QUALITY ASSURANCE

- A. The Contractor may self-perform the Work covered by this Section or employ a Subcontractor, subject to the County's consent. Employment of a scheduling Subcontractor shall not in any way alter or reduce the Contractor's obligations under the Contract Documents.
- B. The Contractor will obtain a written interpretation from the County, if the Contractor believes that the selection of activities, logic ties and/or restraints requires a written interpretation of the Contract Documents. With each submission, the Contractor will point out by specific, written notation, any Progress Schedule feature that may reflect variations from any requirements of the Contract Documents.
- C. It is the Contractor's responsibility to obtain information directly from each Subcontractor and Supplier when scoping their respective Activities, Values, logic ties and restraints.
- D. Neither Acceptance nor Review of any Progress Schedule will relieve the Contractor from the obligation to comply with the Contract Times and any sequence of Work indicated in or required by the Contract Documents and to complete, within the Contract Times, any Work omitted from that Progress Schedule.
- E. Neither Acceptance nor Review of any Progress Schedule will imply approval of any interpretation of or variation from the Contract Documents, unless expressly approved by the County through a written interpretation or by a separate, written notation on the returned Progress Schedule Submittal.

1.04 MILESTONES AND SCHEDULE RECOVERY

- A. The County will select Milestones and Milestone Dates on the basis of the As- Planned Schedule. As the Official Schedule is revised, Milestone Dates will be revised accordingly. Milestone Dates will serve as target dates.

- B. Whenever any Activity slips by 14 or more Days from the Late Date for an activity in the Official Schedule, Milestone Dates selected by the County, or a pertinent Contract Time, the Contractor will deliver a Revision Submittal documenting the Contractor's schedule recovery plan and/or a properly supported request for an extension in the Contract Time. The narrative will identify the Delay and actions taken by the Contractor to recover schedule, whether by adding labor, Subcontractors or construction equipment, activity re-sequencing, expediting of submittals and/or deliveries, overtime or shift Work, and so forth. Activity shortening and overlapping shall be explained as to their basis (and be supported by increases in resources).

- C. Upon evaluation of that Revision Submittal, if the County determines there is sufficient cause, the County may withhold liquidated damages or provide a notice of intent to do so, if schedule is indeed not recovered, and/or may give a notice of default.

1.05 PROGRESS SCHEDULE SOFTWARE

- A. The scheduling software employed by the Contractor to process the Progress Schedule will be the current version of Primavera P6.0®, or Primavera® Contractor 5.0 CPM scheduling software.

- B. If the Contractor intends to use companion schedule reporting, analysis or graphics software tools, the Contractor will furnish to the County descriptive materials and samples describing such software tools.

1.06 NON-PERFORMANCE

- A. The County may refuse to recommend all or any part of any payment, if the Contractor fails, refuses or neglects to provide the required Progress Schedule information on a timely basis. Partial payments without a properly updated Progress Schedule shall be returned to the Contractor as non-conforming.

- B. If justified under the circumstances, the County also may prepare alternate Progress Schedules, as appropriate, and deduct from the Contract Amount all related costs by Change Order and/or take other action commensurate with the breach.

1.07 REPORTS, SCHEDULES AND PLOTS

- A. Schedule Reports will include Activity (ID) code and description, duration, calendar, Early Dates, Late Dates and Total Float. Separate Schedule Reports will tabulate, for each Activity, all preceding and succeeding logic types and lead times, whether CPM Plots displaying logic ties are appended or not.
- B. CPM Schedule Plots will be plotted on a suitable time scale and identify the Contract Times, Critical Paths, phases and work areas on 24-inch x 36-inch or smaller sheets. Activities will be shown on the Early Dates with Total Floats noted by Late Date flags. For Payment and Revision Submittals plot a target comparison based on the current Official Schedule.
- C. The Activity Value report will tabulate Activity code and description and Activity Value, percent complete and earned value as calculated by the scheduling software. Cash flow plots shall be provided showing the monthly and cumulative actual and planned earned values with curves shown for Early and Late Dates in the schedules. For Payment and Revision Schedule submittals, the cash flow curves shall also plot the most current Official Schedule planned earnings curves.
- D. Each submittal shall include listings of all added and deleted activities, logic, constraints, Activity Value changes and update information vs. the previous Progress Schedule submittal. This list may be manually prepared or generated by accessory software that will generate such listings.

1.08 NARRATIVE REQUIREMENTS

- A. The Initial Submittal narrative will describe the Contractor's approach to prosecution of the Work and the basis for determination of activity durations, sequence and logic, including the Contractor's management of the site, e.g., lay down, staging, parking, etc.; Contractor's phasing of the Work; use of crewing and construction equipment; identification of non-work County/Professional's, shifts, weekend Work and multiple calendars applied to activities and an explanation of the basis for restraint dates.
- B. Revision and Payment Submittal narratives will explain any changes to the approach or planning referred to in Paragraph A above on account of any change, delay, schedule recovery, substitution and/or Contractor-initiated revision occurring since the previous submittal.
- C. Each narrative will list the Critical Path Activities and compare Early and Late Dates against Contract Times and Milestone Dates. Narratives shall also recap progress and Days gained or lost vs. the current Official Schedule, and identify delays, their extent and causes.

- D. The Initial Submittal narrative will describe all delays occurring since Contract Award and all pending and anticipated "or equal" and substitution proposals. Payment and Revision Submittal narratives will describe any new delays and shall certify that the Contractor has not been delayed, as of the cut off date, by any acts or omissions of the County, except as otherwise specifically stated.

1.09 ACTIVITY REQUIREMENTS

- A. Separate activities will identify permits, design when included in the Work, construction, Submittal preparation and review (and resubmission and re-review), deliveries (site or storage), testing, start-up, commissioning and Punch List.
- B. Activities will be detailed to the extent required to show the transition of trade Work. Activities will delineate the progression of the Work.
- C. Activities will not combine separate or non-concurrent items of Unit Price or lump sum Work.
- D. Activity durations will equal the Work Days required to sufficiently complete the Work designated by the Activity, (i.e., when finish-to-start successors could start, even if the Activity is not quite 100% complete). Installation Activities will last from 10 to 40 workdays. Submittal review activity durations shall conform to specified timeframes.
- E. Activities will be assigned consistent descriptions and identification codes. Sort codes will group Activities by meaningful schemes.
- F. Activities will be assigned Activity Values as appropriate and needed to reasonably allocate the Contract Amount to the time periods that they will be earned and eligible for payment based on the Progress Schedule and Schedule of Values. Separate pay activities may be used to simplify cost loading of the Progress Schedule. When used, pay activities shall be loaded with the cost of Work that is included, at no cost, in related (generally, concurrent) CPM activities. Pay activities shall not control the rate of progress; however, their start and finish dates shall be consistent with those of their related CPM activities to ensure accurate Early Date and Late Date cash-flow plots.

1.10 FLOAT TOLERANCES AND FLOAT OWNERSHIP

- A. Any Progress Schedule with Early Dates after a Contract Time will yield negative Total and Contract Floats, whether shown/calculated or not. Any Revision Submittal with less than negative 20-days of Float will be returned as "Revise and Resubmit," unless a time extension is requested or the County assesses liquidated damages or gives notice of intent to do so, in the event schedule is not recovered.
- B. Float calculated from the definitions given in this Section supersede any conflicting Float values in any early completion Progress Schedule.
- C. Neither the County nor the Contractor own the Float time, the Project owns the Float time. Neither the County nor the Contractor use of positive Total Float will impact a Contract Completion Date or justify an extension of Contract Time.

1.11 SUBMITTALS

- A. Each Progress Schedule Submittal will consist of a narrative, 5 copies of the required reports and plots and an optical ROM data disk with the Contractor's corresponding schedule and schedule layout files in Primavera ".XER" format.
- B. The County will review Progress Schedule Submittals and return a review copy within 14-days after receipt and the Contractor shall, if required, resubmit within 7-days after return of the review copy.
- C. Requirements for the Initial Submittal:
 - 1. Within 20-days after receipt of Notice to Proceed and prior to commencing Work on the Project, prepare and submit to the County the Initial Submittal of the Progress Schedule for the Work. The Initial Submittal will show the Work as awarded, without delays, Change Orders or substitutions.
 - a. Activity Values will prorate Schedule of Values costs and/or pay items through to Activities. Provide a cross-reference listing with two parts; a part that will list each activity with the respective amounts allocated from each Schedule of Values and Unit Price Item making up the total value of each activity and a second part that will list the Schedule of Values and Unit Price Items with the respective amounts allocated from each activity that make up the total value of each item.

2. After the As-Planned Schedule is established, the County will select Milestones and record the Milestone Early and Late Dates. As the Official Schedule evolves, Milestone Dates will be revised accordingly.
3. If the County refuses to endorse the Initial Submittal (or a resubmission) as "Resubmittal Not Required," the As-Planned Schedule will not be established. In that event, the Contractor will continue to submit Payment and Revision Submittals reflecting progress and the Contractor's approach to remaining Work. The County will rely on the available Payment and Revision Submittals, subject to whatever adjustments it determines appropriate.

D. Requirements for Payment Submittals:

1. Payment Submittals with progress up to the closing date and updated Early Dates and Late Dates for progress and remaining Activities will be due with each Progress Payment. As-built data will consist of actual dates, percent complete, earned payment, changes, Delays and other significant events occurring before the closing date.
2. Activity percent complete and earned value should indicate a level of completion that corresponds to the Application for Progress Payment for the same period. The earned value should be calculated by the scheduling software as Activity Value times percent complete. Explanation should be provided whenever the cumulative earned value of activities in a Payment Submittal is not within 10% of the value of Work completed as represented in the corresponding Application for Progress for Payment.
3. At the Contractor's option, a Payment Submittal may overlay minor adjustments on activities and sequencing for Work remaining. This excludes Activity re-scoping to reflect Delays, changes, schedule recovery or substitutions.

E. Requirements for Revision Submittals:

1. Revision Submittals will be submitted when necessary because of major changes or delays affecting activities, sequencing or restraints for Work remaining and/or to put forth a schedule recovery plan. Revision Submittals may also be required because of Contractor-initiated re-planning, or when Contractor plans to perform Work ahead or out-of-sequence that will require additional testing or inspection personnel, or when requested by the County when Work is performed out-of-sequence

from the current Official Schedule such that the number of Days gained or lost can not be determined or the scheduled dates of completion of the Work in a Payment Submittal are not viewed as reliable.

2. If requesting a time extension, the Revision Submittal should show the impact of the delay after incorporating reasonable mitigation to minimize the impact and illustrate how the number of Days requested time extension was determined. The delay should be determined as the change in the forecast Contract Completion Date(s) resulting solely from delays that entitle the Contractor to a time extension as provided in the General Conditions. Any and all Contractor slippage and delay occurring prior to and concurrent with the delay potentially entitling the Contractor to a time extension shall be incorporated in the Revision and explained such that the concurrent and non- concurrent periods of delay are indicated. If the Contractor does not follow the procedures contained in this Section or, if the Contractor's analysis is not verifiable by an independent, objective evaluation by the County using the electronic files and data furnished by the Contractor, any such extension in Contract Time will not be granted.

F. Retrospective Delay Analysis.

1. If the County/Professional refuses to endorse any Revision Submittal as "Resubmittal Not Required," the Contractor and County will use the latest Official Schedule when evaluating the effect of Delays on Contract Time and/or Contract Price. The procedure to be used will consist of progressively updating the latest Official Schedule at key closing dates corresponding to starting and finishing dates of the delays and/or dates the delays became critical or dates the Critical Path may have changed for other reasons. For each Progress Schedule iteration, slippage between actual Milestone Dates and Initial Milestone Dates will be correlated to Delays occurring solely in that iteration.
2. For each iteration, revisions in Activities, logic ties and restraints affecting Work after the closing date will be included in that Progress Schedule only if they meet any of the following conditions. First, they are Progress Schedule revisions that the County consented to contemporaneously (i.e., before the closing date) in writing. Second, they reflect comments or objections raised by or on behalf of the County and that were actually confirmed by the as-built progress. Lastly, they represent Contractor's schedule recovery plans or other Progress Schedule revisions that were actually confirmed by the as-built progress.
- 3.

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01370
SCHEDULE OF
VALUES

PART 1 - GENERAL

1.01 DEFINITION

- A. Schedule of Values: Schedule that divides the Contract Amount into pay items, such that the sum of all pay items equals the Contract Amount for the Work, or for any portion of the Work having a separate specified Contract Amount.

1.02 REQUIREMENT

- A. The Schedule of Values established as provided in the General Conditions will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the County. Progress payments on account of Unit Price Work will be based on the number of units completed and shall be prorated by the percent complete on the number of units installed not meeting all requirements of the Contract including testing
- B. No payment will be made for Work performed on a lump sum contract or a lump sum item until the appropriate Schedule of Values is approved by the County.
- C. The equitable value of Work deleted from a lump sum contract or lump sum item shall be determined from the approved Schedule of Values.

1.03 SUBMITTALS

- A. Submit 3 copies of a Preliminary Schedule of Values within 15-days after the recommended award of the Contract.
- B. Submit 3 copies of a proposed final Schedule of Values within 20-days after receipt of Notice to Proceed as per the General Conditions.
- C. Submit the Schedule of Values, typed, on EJCDC 1910-8-E form or Orange

County forms or spreadsheets provided by County. The Contractor's standard form or electronic media printout will be considered for acceptability by the County.

- D. List installed value of each major item of Work and each subcontracted item of Work as a separate line item to serve as a basis for computing values for Progress Payments. Round off values to nearest dollar.
- E. Coordinate listings with the Progress Schedule.
- F. For items on which payments will be requested for stored materials or equipment, list sub-values for cost of stored products with taxes paid and provide corresponding schedule of value item number. Stored materials quantities shall not exceed installed quantities on bid tab or as required by the Contract Documents.
- G. Submit a sub-schedule for each separate stage of Work specified in Section 01010 "Summary of Work."
- H. The sum of values listed shall equal the total Contract Amount for the Work or the Contract Amount for a part of the Work with a separate Contract Amount provided for by the Contract Documents.
- I. When the County requires substantiating information, submit data justifying line item amounts in question.

1.04 PRELIMINARY SCHEDULE OF VALUES

- A. The preliminary schedule of values listing shall include, at a minimum, the proposed value for the following major work;
- B. Mobilization, General Requirements and Demobilization as per the specified percentage of Contract Amount.
- C. The total value of access road construction inclusive of clearing and grubbing, stripping, excavation, fill construction, paving, road removal, site restoration, and all incidental work associated with access roads. This total value shall be broken down into separate values for each access road.
- D. The total value of pipeline construction work inclusive of fabrication,

excavation, pipe installation, pipe structures (air-release valves, blowoff valves, and vents), backfilling, testing, site restoration, and all incidental work associated with pipeline construction. The total value shall be broken down into separate values for each pipeline section.

- E. The total value of reinforced concrete and building construction work by structure and building inclusive of all excavation, dewatering, subgrade preparation, backfill, and incidental work for all new structures. Additionally, this total value shall be broken down into separate values for each new structure constructed as a part of the work. Miscellaneous and minor concrete work may be listed as one item in this breakdown.
- F. The total value of all mechanical work (HVAC and plumbing), including piping, valves, and equipment.
- G. The total value of process piping, valves, and mechanical equipment (such as pumps).
- H. The total value of electrical work.
- I. The total value of instrumentation and control work including fiber-optic cable system.
- J. The total value of all other work not specifically included in the above items.
- K. The Contractor and County Project Manager shall meet and jointly review the preliminary schedule of values and make any adjustments in value allocations if, in the opinion of the Project Manager, these are necessary to establish fair and reasonable allocation of values for the major work components. Front-end loading will not be permitted. The Project Manager may require reallocation of major work components from items in the above listing if, in the opinion of the Project Manager, such reallocation is necessary. This review and any necessary revisions shall be completed within 15 days from the date of the notification of the required reallocation.

1.06 DETAILED SCHEDULE OF VALUES

- A. Base the detailed schedule of values on the accepted preliminary schedule of values for major work components. Because the ultimate requirement is to develop a detailed schedule of values sufficient to determine appropriate monthly progress payment amounts verifiable by cost loaded of Progress Schedule activities, provide sufficient detailed breakdown to meet this

requirement. The County shall be the sole judge of acceptable numbers, details, and description of values established. If, in the opinion of the County, a greater number of schedule of values items than proposed by the Contractor is necessary, the Contractor shall add the additional items so identified by the County as a condition to processing the payment requests.

- B. The minimum detail of breakdown of the major work components is indicated below.
- C. Mobilization/General Requirements/Demobilization. Mobilization/General Requirement/ Demobilization costs on the Schedule of Values shall not exceed 5% of the Contract Amount. All Work included in the Schedule of Value that falls under this heading as described in this paragraph (including such Work by Subcontractors) will be added and checked for compliance with the 5% limitation. Any actual cost in excess of this amount shall be distributed proportionately to Schedule of Values items for direct Work items not covered by this heading. Work under this heading may be detailed on Schedule of Value line items identifying each as to whether it is mobilization or initial costs, maintenance or overhead cost or finalization or demobilization cost. The subdivision of this Work into Schedule of Values line items shall be done to support the payment process that shall be distributed as follows: 50% for the first progress payment, 10% for the final payment following demobilization and restoration, and 40% spread evenly over payments made in between.
- D. Access road and site construction shall be broken down by clearing and grubbing, stripping, excavation, full construction, erosion control, paving, paving removal, site restoration, and any other items determined to be necessary for the establishment of pay and schedule activity items.
- E. Pipeline construction work shall be broken down separately by pipeline segment, which shall not exceed 500-foot-long sections of the pipeline. Each pipeline segment shall be broken down into excavation, pipe fabrication (by wall thickness), pipe installation, pipe structures (air-release valves, blowoff valves, and vents), backfilling, testing, site restoration, and any other items determined to be necessary for the establishment of pay and schedule activity items.
- F. Concrete structures and buildings shall be broken down by structure into excavation, subgrade preparation, and appurtenant prefoundation work; concrete foundation construction; slabs on grade; walls/columns; roof structures and roofing, doors and windows, lifting and other equipment; interior and exterior finishes; miscellaneous metalwork; and backfill.

- G. Mechanical (HVAC and plumbing) Work shall be broken down by building and to identify individual piping and ductwork and equipment installation and equipment testing.
- H. Process piping, valves, and equipment Work shall be broken down by structure into individual piping systems, equipment installation by equipment (including valves, actuators, etc.), name and number, and equipment testing and checkout.
- I. Electrical Work shall be broken down by structure into conduit and raceway installation, cable and wire installation, electrical equipment installation, terminations, and lighting. Yard facilities shall be broken down by duct bank designation and substations.
- J. Instrumentation and control Work shall be broken down by structure and by pull boxes, duct, fiber-optic cable, and installation and testing.
- K. Equipment testing and start-up broken down by process and building.
- L. Other work not specifically included in the above items shall be broken down as necessary for establishment of pay and schedule activity items.
- M. The Contractor and County shall meet and jointly review the detailed schedule of values within 40 days from the date of Notice to Proceed. The value allocations and extent of detail shall be reviewed to determine any necessary adjustments to the values and to determine if sufficient detail has been proposed to provide cost loading of the Progress Schedule activities. Make any adjustments deemed necessary to the value allocation or level of detail, and submit a revised detailed schedule of values within 10 days from the date of the review meeting.

1.07. INCORPORATION OF SCHEDULE OF VALUES INTO CPM PROGRESS SCHEDULE

- A. Following acceptance of the detailed schedule of values, incorporate the values into the cost loading portion of the CPM Progress Schedule. The CPM activities and logic shall have been developed concurrent with development of the detailed schedule of values; however, it may be necessary to adjust the detailed schedule of values to correlate to individual schedule activities. It is anticipated that instances may occur, due to the independent but simultaneous development of the schedule of values and the CPM schedule activities, where interfacing these two documents will

require changes to each document. Schedule activities may need to be added to accommodate the detail of the schedule of values. Schedule of Value items may need to be added to accommodate the detail of the CPM schedule activities. Where such instances arise, the Contractor shall propose changes to the schedule of values and to the CPM schedule activities to satisfy the CPM schedule cost loading requirements.

- B. Cross-Reference Listing - To assist in the correlation of the schedule of values and the CPM schedule, provide a cross-reference listing, furnished in two parts. The first part shall list each scheduled activity with the breakdown of the respective Schedule of Values items making up the total cost of the activity. The second part shall list the Schedule of Values item with the respective scheduled activity or activities that make up the total cost indicated. In the case where a number of schedule activities make up the total cost for a Schedule of Values item, the total cost for each schedule activity should be indicated.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01380

AUDIO – VISUAL DOCUMENTATION

PART 1 - GENERAL

1.01 PURPOSE AND DESCRIPTION OF WORK

- A. The purpose of the audio - visual documentation is to provide the County with regularly documented audio - visual records of the Construction process from the existing conditions through final completion.

1.02 PRE-CONSTRUCTION VIDEO REQUIREMENTS INCLUDED

- A. The Contractor shall employ a professional videographer to take a Pre-Construction video of the entire site including the areas of adjacent properties within 100-feet of the limits of Work and shall be made within 30-days of Work beginning. Special attention shall be made to show the existing paved roads, shoulders, signs, and other existing features.
- B. The Contractor shall submit a quality audio-video recording documenting Pre-Construction field conditions for the entire project. When the Work includes construction of water, wastewater, reuse, or other lines in the vicinity of any street or road, the Contractor shall take digital audio-video recordings of existing conditions along both sides of the street or road. The Pre-Construction video shall be submitted to the County and accepted prior to commencing any Work or using any Contractor laydown areas.
- C. Electronic digital photography shall be used to record and facilitate resolution of on-site issues through the transmission of electronic photographs by e-mail from the site to the Professional's and County's offices.

PART 2 - PRODUCTS

2.01 AUDIO-VIDEO RECORDING

- A. Each audio-video recording shall be saved on appropriate DVD media viewable on standard DVD players or computer.
- B. Each DVD shall contain the following information and arrangement at the

beginning as a title screen:

Orange County, Florida

PROJECT NAME

PROJECT NUMBER

CONTRACTOR: (Name of Contractor)

DATE: (When photo was taken)

VIDEO BY: (Firm Name of Videographer)

LOCATION: (Description of Location(s) and View(s))

- C. Each DVD recording section shall begin with an audio description of the County's name, Contract name and number, Contractor's name, date and location information such as street name, direction of travel, viewing side, etc.
- D. Information appearing on the video recording must be continuous and run simultaneously by computer generated transparent digital information. No editing or overlaying of information at a later date will be acceptable.
- E. Digital information to appear in the upper left corner shall be as follows:
 - 1. Name of Contractor
 - 2. Day, date and time
 - 3. Name of Project & Specification Number
- F. Time must be accurate and continuously displayed on the video record
- G. Written documentation must coincide with the information on the DVD so as to make easy retrieval of locations at a later date.
- H. The video system shall have the capability to transfer individual frames of video electronically into hard copy prints or photographic negatives.
- I. Audio shall be recorded at the same time as the video recording and shall have the same information as on the viewing screen. Special commentary shall be given for unusual conditions of buildings, sidewalks and curbing, foundations, trees and shrubbery, structures, equipment, pavement, etc.
- J. All DVDs and boxes shall bear labels with the following information:
 - 1. DVD Number

2. County's Name
3. Date of Recording
4. Project Name and Number
5. Location and Standing Limit of Video

2.02 CONSTRUCTION PHOTOGRAPHS

- A. The Contractor shall employ a competent photographer to take construction record photographs periodically during the course of the Work.
- B. Prints: Date imprinted 8-inch x 10-inch high resolution glossy single weight color print paper; 5 sets, bound in 3-ring binders to be provided to the County with each respective Application for Payment and distributed by the County as follows:
 1. County (2 sets)
 2. Engineer (1 set)
 3. Contractor (1 set)
 4. Project Record Data (1 set stored by Contractor to be furnished to County upon Closeout)

PART 3 - EXECUTION

3.01 VIDEO VIEWS REQUIRED

- A. Complete coverage shall include all surface features within 100-feet of the Work area to be used by the Contractor and shall be supported by appropriate audio description made simultaneously with video coverage. Such coverage shall include, but not be limited to, all existing driveways, sidewalks, curbs, ditches, roadways, landscaping, trees, culverts, headwalls, and retaining walls, equipment, structures, pavements, manholes, vaults, handrails, etc. located within the work zone. Video coverage shall extend to the maximum height of all structures within this zone.
- B. The video recorder shall take special efforts to point out and provide audio commentary on cracking, breakage, damage, and other defects in existing features.
- C. All video recording shall be done during times of good visibility. No video recording shall be done during periods of visible precipitation, or when more than 10% of the ground area is covered with standing water, unless otherwise authorized by County.

- D. Prior to commencement of audio-video recording, the Contractor shall notify the County in writing within 48-hours of the audio-video recording. The County may provide a designated representative to accompany and observe all video recording operations. Audio-video recording completed without a County Representative present will be unacceptable unless specifically authorized by the County.

3.02 AUDIO-VIDEO REQUIREMENTS

A. Major Locations:

1. The Contractor shall provide color digital video of each major facility and structures and facilities adjacent to the Construction before construction starts.
2. All videos shall be recorded with character generator operating with date, time, and location on screen. During video recording, the Contractor shall narrate video explaining what is being shown. All master videos shall be delivered to the County.
3. The audio and video portions of the recording shall maintain viewer orientation. To this end, overall establishing views of all visible house and business addresses shall be used. In areas where the proposed construction location will not be readily apparent to the video recording viewer, highly visible yellow flags shall be placed, by the Contractor, in such a fashion as to clearly indicate the proposed centerline of Construction. When conventional wheeled vehicles are used as conveyances for the recording system, the vertical distance between the camera lens and the ground shall not exceed 10- feet. The camera shall be firmly mounted such that transport of the camera during the recording process will not cause an unsteady picture.
4. All video recording shall be done during time of good visibility. No video recording shall be done during precipitation, mist or fog. The recording shall only be done when sufficient sunlight is present to properly illuminate the subjects of recording and to produce bright, sharp video recordings of those subjects.
5. The average rate of travel during a particular segment of coverage shall be directly proportional to the number, size and value of the surface features within that construction area's zone of influence. The rate of

speed in the general direction of travel of the vehicle used during taping shall not exceed 44-feet per minute.

3.03 PHOTOGRAPHS

A. A minimum of 3 views (top, upstream, and downstream) each shall generally be taken prior to backfilling pipelines or structures. Photographs shall be provided for:

1. Utility conflicts/relocations
2. Manholes
3. Pump stations
4. Boring and jacking
5. Directional drilling pipe entrance and exit
6. Valve installation
7. Air release valve installation
8. Fire hydrant assembly

B. Photo Identification

1. Name of Project
2. Name of Structure
3. Orientation of View
4. Date & Time of Exposure
5. Film numbered identification of exposure

END OF SECTION

SECTION

01400

QUALITY CONTROL

PART 1 - GENERAL

1.01 SITE INVESTIGATION AND CONTROL

- A. Contractor shall verify all dimensions in the field and check field conditions continuously during construction. Contractor shall be solely responsible for any inaccuracies built into the Work due to Contractor's failure to comply with this requirement.
- B. Contractor shall inspect related and appurtenant Work and report in writing to County any conditions which will prevent proper completion of the Work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair, or replacement caused by unsuitable conditions shall be performed by the Contractor at Contractor's sole cost and expense.

1.02 INSPECTION OF THE WORK

- A. The Work shall be conducted under the general observation of representatives of the County acting on behalf of the County to ensure strict compliance with the requirements of the Contract Documents. Such inspection may include mill, plant, shop, or field inspection, as required. The County shall be permitted access to all parts of the Work, including plants where materials or equipment are manufactured or fabricated. Inspection by the County are in addition to the inspections required of Contractor by his QC Representatives.
- B. The presence of the County, however, shall not relieve the Contractor of the responsibility for the proper execution of the Work in accordance with all requirements of the Contract Documents. Compliance is a duty of the Contractor, and said duty shall not be avoided by any act or omission on the part of the County. Further, no requirement of this Contract may be waived or modified except by change order or formal (written) substitution approval.
- C. All materials and articles furnished by the Contractor shall be subject to rigid inspection, and no materials or articles shall be used in the Work until they have been inspected and accepted by the County. No Work shall be backfilled, buried, cast in concrete, hidden, or otherwise covered until it has been

inspected. Any Work so covered in the absence of inspection shall be subject to uncovering. Where uninspected Work cannot be uncovered, such as in concrete cast over reinforcing steel, all such Work shall be subject to demolition, removal, and reconstruction under proper inspection and no additional payment will be allowed therefore.

- D. The Contractor is responsible for the Quality of his own work and shall designate a qualified individual, to be approved by the County, who will ensure that all work is performed in strict accordance with the Contract Documents. This quality representative shall inspect the work for the Contractor and provide to the County and the Contractor a report outlining all work accomplished, all inspections, and all testing performed for all days when work is performed. The objective of this report is to provide "Objective Evidence of Compliance" by the Contractor with the requirements of the Contract.

1.03 TIME OF INSPECTION AND TESTS

- A. Samples and testing required under these Specifications shall be furnished and prepared in ample time for the completion of the necessary tests and analyses before said articles or materials are to be used. Except as otherwise provided in the Contract Documents, performance of the required tests will be by the Contractor and all costs therefore will be borne by the Contractor at no cost to the County. Whenever the Contractor is ready to backfill, bury, cast in concrete, hide, or otherwise cover any Work under this Contract, the County shall be notified not less than 24-hours in advance to request inspection before beginning any such Work of covering. Failure of the Contractor to notify the County at least 24-hours in advance of any such inspections shall be reasonable cause for the County to order a sufficient delay in the Contractor's schedule to allow time for such inspection, any remedial, or corrective work required, and all costs of such delays, including its impact on other portions of the Work, shall be borne by the Contractor.

1.04 SAMPLING AND TESTING

- A. When not otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered. However, the County reserves the right to use any generally accepted system of inspection which, in the opinion of the County, will ensure the County that the quality of the workmanship is in full accord with the Contract Documents.
- B. Any waiver of any specific testing or other quality assurance measures,

whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial work, shall not be construed as a waiver of any technical or qualitative requirements of the Contract Documents.

- C. Notwithstanding the existence of such waiver, the County shall reserve the right to make independent investigations and tests as specified in the following paragraph and, upon failure of any portion of the Work to meet any of the qualitative requirements of the Contract Documents, shall be reasonable cause for the County to require the removal or correction and reconstruction of any such Work.
- D. In addition to any other inspection or quality assurance provisions that may be specified, the County shall have the right to independently select, test, and analyze, at the expense of the County, additional test specimens of any or all of the materials to be used. Results of such tests and analyses shall be considered along with the tests or analyses made by the Contractor to determine compliance with the applicable specifications for the materials so tested or analyzed provided that wherever any portion of the Work is discovered, as a result of such independent testing or investigation by the County which fails to meet the requirements of the Contract Documents, all costs of such independent inspection and investigation and all costs of removal, correction, reconstruction, or repair of any such Work shall be borne by the Contractor.

1.05 RIGHT OF REJECTION

- A. The County shall have the right at all times and places to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of the Contract Documents, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the Work at the site. If the County or inspector, through an oversight or otherwise, has accepted materials or Work which is defective or which is contrary to the Contract Documents, such material, no matter in what stage or condition of manufacture, delivery, or erection, may be rejected by County.
- B. Contractor shall promptly remove rejected articles or materials from the site of the Work after notification or rejection.
- C. All costs of removal and replacement of rejected articles or materials, as

specified herein, shall be borne by the Contractor.

- D. If the Contractor fails to remove or replace defective work after notification to do so, the County may have the work removed and replaced by others and deduct all costs from the Contractor's pay requests.

1.06 TESTING LABS

- A. All geotechnical testing laboratory services for field testing will be paid by the County. The lab(s) shall function as independent lab(s) and report independently to the County and the Contractor. The test lab(s) may not approve or allow any deviation from the Contract Documents.

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 DESCRIPTION

A. Scope of Work:

1. County will employ and pay for services of an Independent Testing Laboratory to perform Testing specifically indicated on the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.
2. Contractor shall cooperate with the laboratory to facilitate the execution of its required services.
3. Employment of laboratory by County shall in no way relieve Contractor's obligations to perform the Work.

B. Related Requirements Described Elsewhere:

1. Conditions of the Contract.
2. Respective section of Specifications: Certification of products.
3. Each Specification section listed: Laboratory tests required and standards for testing.

1.02 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with County's personnel; provide access to work and manufacturer's operations.
- B. Secure and deliver to the County adequate representational samples of materials proposed to be used and which require testing.

- C. Provide to the County 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. The County 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 indicated in the Contract 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 County shall be allowed on account of such testing and certification.

- E. Contractor shall not have direct contact with laboratory or laboratory personnel. All testing shall be coordinated through County.

- F. 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.

- G. Notify County sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests. When tests or inspections cannot be performed after such notice, reimburse County for laboratory personnel and travel expenses incurred. The following field testing schedule summarizes the responsibilities of various tests that may be required by the Contract Documents.

TEST	NOTES	PAID BY
Soil Compaction	A. Pipe Work: Every 300 ft. at each lift of compaction B. Structures: As a minimum one test per 2000 SF of fill area per lift, or at least 2 tests per structure, per lift. As specified in material specifications sections	County

Low Pressure Air Exfiltration	Each section of gravity sewer pipe between manholes or lift station	Contractor
Hydrostatic Pressure	All segments of pressure piping (24-hour test).	Contractor
Hydrostatic Leakage	All segments of pressure piping (2-hour test).	Contractor
Bacteriological	As required by local and state agencies	County
Asphaltic Concrete Paving	As required by County	County
LBR	Each 600 SY of pavement	County
Concrete	Slump test each delivery, cylinders every 20 CY	County
Asbestos	Environmental testing of materials	County
All Other Testing	As specified in various sections of the Project Manual	As Indicated

- H. 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.
- I. If the test results indicate the material or equipment complies with the Contract Documents, the County shall pay for the cost of the testing laboratory. If the tests and any subsequent retests indicate the materials and equipment fail to meet the requirements of the Contract Documents, the Contractor shall pay for the laboratory costs directly to the County or the total costs shall be deducted from any payments due to the Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01505

MOBILIZATION

PART 1 - GENERAL

1.01 DEFINITION AND SCOPE

- A. Mobilization shall include the obtaining of all permits, insurance, and bonds; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; all as required for the proper performance and completion of the Work. Mobilization shall include, but not be limited to, the following principal items.
1. Move onto the site all Contractor's plant and equipment required for first month operations.
 2. Provide a temporary field office for the Contractor's use.
 3. Install temporary construction power, wiring, and lighting facilities.
 4. Establish fire protection plan and safety program.
 5. Secure construction water supply.
 6. Provide on-site sanitary facilities and potable water facilities as required by agencies having jurisdiction.
 7. Arrange for and erect Contractor's work and storage yard and employee's parking facilities.
 8. Erosion Controls.
 9. Submit all required insurance certificates and bonds.
 10. Obtain all required permits.
 11. Post all OSHA, EPA, Department of Labor, and all other required

notices.

12. Submit a detailed construction schedule acceptable to the Engineer as specified.
13. Submit a schedule of values of the Work. Mobilization and Demobilization shall not be more than 5.0% of the bid amount.
14. Submit a schedule of submittals.
15. Install project sign.

1.02 DEMOBILIZATION

- A. Demobilization is the timely and proper removal of all Contractor owned material, equipment or plant, from the job site and the proper restoration or completion of work necessary to bring the site into full compliance with the Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01516

WASTEWATER AND RECLAIMED WATER SYSTEM BYPASS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Work covered by this section consists of providing all temporary bypassing to perform all operations in connection with the flow of wastewater and reclaimed water around pipe segment(s) or pump stations. The purpose of bypassing is to prevent wastewater and reclaimed water overflows and provide continuous treatment plant operation. The Contractor will maintain wastewater and reclaimed water flow in the construction area in order to prevent backups and/or overflows.

1.02 SUBMITTALS

- A. Prior to implementation of any bypass, the Contractor will submit and receive County acceptance of a bypass plan. The Contractor will submit to the County a comprehensive written plan for approval and acceptance that describes the intended bypass for the maintenance of flows during construction. The Contractor will also provide a sketch showing the location of bypass pumping equipment for each pump station or line segment(s) around which flows are being bypassed. The plan will include proposed tanker(s), pump(s), bypass piping, backup plan and equipment, work schedule, monitoring log for bypass pumping, monitoring plan of the bypass pumping operation, and maintenance of traffic plan. Submit to the County using a Contractor Assistance Request (CAR) form.

PART 2 - PRODUCTS

2.01 GENERAL

- A. The Contractor will provide and maintain adequate equipment, piping, tankers, and other necessary appurtenances in order to maintain continuous and reliable service in all lines as required for construction. The Contractor will have tankers, backup pump(s), piping, and appurtenances ready to deploy immediately.
- B. All piping will be designed to withstand at least twice the maximum system pressure or a minimum of 50 psi for wastewater systems and 150 psi for reclaimed water systems, whichever is greater.

- C. When bypassing a pump station, one (1) back-up pump equal to the primary unit will be provided by the Contractor. Bypass pumps shall have a maximum rating of 55 decibels for sound attenuation.
- D. Bypass pumps shall meet the lift station firm capacity with the following requirements:
 - 1. North Lift Station: 4,400 gpm at 36 ft TDH
 - 2. South Lift Station: 3,000 gpm at 20 ft TDH

PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor shall have all materials, equipment and labor necessary to complete the repair, replacement, or rehabilitation on the job site prior to isolating the gravity main segment, manhole, or pump station. The Contractor will demonstrate that the temporary bypass pumping system is in good working order and is sufficiently sized to successfully handle flows by performing a test run for a period of 24-hours prior to beginning the Work.

3.02 TRAFFIC CONSIDERATIONS

- A. The Contractor shall locate bypass pumping suction and discharge lines so as to not cause undue interference with treatment plant operations, to include the possible temporary trenching of piping at critical intersections and roadways on site.

3.03 BYPASS OPERATION

- A. The Contractor shall submit a bypass plan to the County and the bypass plan must be approved before the bypass is operational to perform the Work. Contractor shall maintain the system flows and no surcharging will be allowed to occur out of the system.
- B. Where Work requires the main or pump station to be taken out service after normal working hours and bypass pumping is being used; the Contractor shall be responsible for monitoring the bypass operation 24-hours per day, 7-days per week. Any electronic monitoring in lieu of on-site monitoring must be detailed in the comprehensive written bypass plan.

- C. The Contractor shall ensure that no damage will be caused to adjacent equipment and processes as a result of bypass operations. The Contractor will complete the Work as quickly as possible and pass all tests and inspections before discontinuing bypassing operations and returning flow to the main or pump station.
- D. During bypassing, no wastewater or reclaimed water will be leaked, dumped, or spilled in or onto, any area.
- E. The Contractor shall immediately notify the County should an overflow occur. The Contractor shall take the necessary action to wash down, clean up and disinfect the spillage area to the satisfaction of the County or other governmental agency.
- F. The Contractor shall cease bypass operations and return flows to the new and/or existing mains and pump stations when directed by the County. When bypass operations are complete, all bypass piping shall be drained into the wastewater system prior to disassembly.

3.04 CONTRACTOR LIABILITY

- A. The Contractor shall be responsible for all required pumping, equipment, piping, and appurtenances to accomplish the bypass and for any and all damage that results directly or indirectly from the bypass pumping equipment, piping and/or appurtenances. The Contractor shall also be liable for all County personnel labor and equipment costs, penalties and fines resulting from sanitary sewer overflows (SSOs). It is the intent of these Specifications to require the Contractor to establish adequate bypass pumping as required regardless of the flow condition.

END OF SECTION

SECTION 01525

CONSTRUCTION AIDS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Scope of Work: Furnish, install and maintain required construction aids, remove on completion of Work.
- B. Related Requirements Described Elsewhere:
 - 1. Summary of Work: Section 01010.
- C. Comply with applicable requirements specified in Sections of Divisions 2 through 16.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.02 CONSTRUCTION AIDS

- A. Provide construction aids and equipment required by personnel and to facilitate execution of the Work: scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other such facilities and equipment such as temporary valves and fittings. Refer to respective Sections for particular requirements for each trade.
- B. When permanent stair framing is in place, provide temporary treads, platforms and railings, for use by construction personnel.

- C. Maintain facilities and equipment in first-class condition.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Consult with the Engineer, review site conditions and factors which affect construction procedures and construction aids, which may be affected by execution of the Work.

3.02 GENERAL

- A. Comply with applicable requirements specified in sections of Divisions 2 through 16.
- B. Relocate construction aids as required by progress of construction, by storage of work requirements and to accommodate legitimate requirements of Owner and other contractors employed at the site.

3.03 REMOVAL

- A. Completely remove temporary materials, equipment and services:
 - 1. When construction needs can be met by use of permanent construction.
 - 2. At completion of work.
- B. Clean and restore areas damaged by installation by use of temporary facilities.
 - 1. Remove foundations and underground installations for construction aids.
 - 2. Grade and grass areas of site affected by temporary installations to required elevations, slopes, ground cover and clean the area.
- C. Restore permanent facilities used for temporary purposes to specified condition or in kind if not specified.

END OF SECTION

SECTION 01560

EROSION AND SEDIMENTATION

CONTROL PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls as necessary to protect the Work and prevent sedimentation from the Contractor's activities from entering water bodies or enter other parts of the County's or other property owners sites outside the Construction limits.
- B. Temporary erosion controls include, but are not limited to; grassing, mulching, netting, watering and reseeded on-site surfaces and soil and borrow area surfaces, and providing interceptor ditches at end of berms and at those locations which will ensure that erosion during Construction will be either eliminated or maintained within acceptable limits as established by the regulatory agencies having jurisdiction.
- C. Temporary sedimentation controls include, but are not limited to; silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the regulatory agencies having jurisdiction.

1.02 REQUIREMENTS

- A. The Contractor is responsible for providing effective temporary erosion and sediment control measures during Construction or until final controls become effective.
- B. The Contractor shall be responsible for filing Notice of Intent for Construction Activities with regulatory agencies (SFWMD and FDEP) as required by law, if thresholds are expected to be exceeded.
- C. The areas of unstabilized soil cover shall be minimized at all times to limit erosion and sedimentation.

1.03 SUBMITTALS:

- A. The Contractor shall prepare and submit an Erosion and Sedimentation Control Plan (Stormwater Pollution Prevention Plan) for review and approval by the County and Engineer. The Plan shall be in effect throughout the Construction duration.

PART 2 - PRODUCTS

2.01 EROSION CONTROL

- A. Sod: Bermuda grass, Argentine Bahia grass, Pensacola Bahia grass or St. Augustine. Grassing and Sodding Materials: As specified in Section 981 FDOT Specification for Road & Bridge Construction.
- B. Netting: Polypropylene mesh netting 5/8-inch x 3/4-inch (16 x 19mm) mesh with interwoven curlex fibers as manufactured by American Excelsior Company or equal. Netting: Fabricated of material in conformance with Section 985 FDOT Specification for Road & Bridge Construction.

2.02 SEDIMENTATION CONTROL

- A. Bales: Clean, synthetic hay type. Minimum dimensions of 14-inch by 18-inch by 36-inches at the time of placement.
- B. Netting: Fabricated of material in conformance with Section 985 FDOT Specification for Road & Bridge Construction.
- C. Sediment Control Fencing (Silt Fencing): As manufactured by American Excelsior Company or equal.
- D. Filter stone: Crushed stone conforming to Florida Department of Transportation Specifications.
- E. Concrete block: Hollow, non-load bearing type.
- F. Concrete: Exterior grade not less than 1-inch thick.
- G. Turbidity Barriers: Floating or staked as required.

PART 3 - EXECUTION

3.01 TEMPORARY EROSION CONTROL

- A. See Section 02578 "Solid Sodding."

3.02 SEDIMENTATION CONTROL

- A. Install and maintain silt fences and dams, traps, barriers, and appurtenances as shown on the approved descriptions and working Drawings. Replace deteriorated hay bales and dislodged filter stone. Repair portions of any devices damaged at no additional expense to the County.
- B. Install all sediment control devices in a timely manner to ensure the control of sediment. At sites where exposure to sensitive areas is likely, complete installation of all sediment control devices before starting earthwork.
- C. Use approved temporary erosion control features to correct conditions that develop during Construction that were not foreseen when the Erosion and Sedimentation Control Plan was first approved.

3.03 PERFORMANCE

- A. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results that comply with the requirements of the Regulatory agency having jurisdiction, the County or the Professional, the Contractor shall immediately take whatever steps necessary to correct the deficiency at its own expense to protect the Work and any adjacent property to the site, as well as to prevent contamination of any river, stream, lake, tidal waters, reservoir, canal or other water impoundments.
- B. The side slope areas with unstabilized or unprotected soil cover shall be minimized at all times to limit erosion and sedimentation.
- C. Incorporate permanent erosion control features into the Project at the earliest practical time.

- D. Remove temporary erosion and sedimentation controls when the Work is complete and in accordance with the Erosion and Sedimentation Control Plan (Stormwater Pollution Prevention Plan) and the Notice of Intent for Construction Activities filed with regulatory agencies.

3.04 MAINTENANCE OF EROSION AND CONTROL FEATURES

- A. Provide routine maintenance of permanent and temporary erosion control features, at no expense to the County, until the Project is complete and accepted.

END OF SECTION

SECTION 01590

CONSTRUCTION FIELD OFFICE

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Contractor provision of temporary utilities to include electricity, lighting, internet connectivity, heat, ventilation, telephone service, water, and sanitary facilities.
- B. Contractor provision of temporary controls to include barriers, enclosures and fencing, and water control.
- C. Contractor provision of temporary facilities to include access roads, parking, and temporary buildings.
- D. Contractor provision of field offices for the County.
- E. Restrictions on the use of existing adjacent facilities.

1.02 TEMPORARY ELECTRICITY

- A. Provide and pay for power service required for Construction and testing from local utility source.
- B. Provide temporary electric feeder from existing electrical service at location as directed by utility company. Power consumption will not disrupt the County's need for continuous service. Coordinate with the County before making taps or disturbing existing service.
- C. Provide separate metering and pay for cost of energy used until substantial completion. If electric service is turned over to and paid for by the County prior to substantial completion, reimburse the County for energy used up to substantial completion.
- D. Provide power outlets for Construction operations, with branch wiring and distribution boxes located as required. Provide OSHA approved flexible

power cords as required.

- E Contractor-installed permanent convenience receptacles may be used during Construction.

1.03 TEMPORARY LIGHTING

- A Provide and maintain adequate lighting for Construction operations to achieve a minimum lighting level of one (1) watt/sq ft.
- B Provide and maintain two (2) foot-candle lighting to exterior staging and storage areas after dark for security purposes.
- C Provide and maintain 0.25-watt/sq ft H.I.D. lighting to interior Work areas after dark for security purposes.
- D Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- E Maintain lighting and provide routine repairs.
- F Permanent building lighting may be used during Construction.

1.04 TEMPORARY HEAT AND COOLING

- A Provide and pay for heating and cooling as required to maintain specified conditions for Construction operations or as required for proper conduct of operations included in the Work.
- B Prior to operation of permanent equipment for temporary purposes, verify that installation is approved for operation, equipment is lubricated and temporary filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.
- C Maintain minimum ambient temperature of 50°F and maximum relative humidity of 50% in areas where Construction is closed in and final finishes are to be placed, unless indicated otherwise in specifications.

1.05 TEMPORARY VENTILATION

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.06 TEMPORARY WATER SERVICE

- A. Provide, maintain, and pay for suitable quality water service required for Construction operations. Coordinate with the County if water supply is not separately metered. Pay all costs and expenses associated with such use.
- B. Extend branch piping with outlets located so water is available by hoses with threaded connections.

1.07 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures on-site. Maintain daily in clean and sanitary condition. Adjacent County office building toilet facilities are not to be used by Contractor.

1.08 BARRIERS

- A. Provide barriers to prevent unauthorized entry to Construction areas and to protect existing facilities and adjacent properties from damage from Construction operations.
- B. Provide barricades required by governing authorities for public rights-of-way.
- C. Provide protection for plant life designated to remain. Replace damaged plant life.
- D. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

1.09 FENCING

- A. Unless directed otherwise in other sections of the Contract Documents, provide a 6- foot high fence completely around Construction site; provided with hinged vehicular and pedestrian gates with locks. Fencing will be

galvanized, 2-inch mesh, chain link with solid top rail. Provide line posts and end posts as needed to maintain stretched and uniform fencing with no sags.

- B. Fencing plan will be approved by the County for each phase of the project. Submit fencing layout diagram prior to the Pre-Construction meeting.
- C. Provide visual fabric barrier at least 6-foot high on all fencing separating parking areas from Construction activities. Submit barrier fabric for approval before starting fencing. Barrier fabric will be capable of retaining physical integrity and color during the entire Construction period.

1.10 ACCESS ROADS

- A. Provide and maintain uninterrupted public access to existing buildings. Construction activities will not interfere with access. If Contractor fails to maintain public access after 2 written notices within a 24-hour period, the County reserves the right to correct such situation and back charge the Contractor.
- B. Construct and maintain temporary roads accessing public thoroughfares to serve Construction area.
- C. Extend and relocate access roads as Work progress requires. Provide detours necessary for unimpeded traffic flow.
- D. Provide and maintain access to fire hydrants, free of obstructions.
- E. Designated existing on-site roads may be used for Construction traffic. Repair or restore any damaged areas caused as a result of Construction activity. Such repair will be to a like-new condition.

1.11 PARKING

- A. Provide temporary surface parking areas to accommodate Construction personnel.
- B. Do not allow Construction vehicle parking on existing pavement unless approved by County.

1.12 FIELD OFFICES (FOR UTILITIES DEPARTMENT)

- A. Contractor shall use existing trailer on site for field office.
- B. The field offices will be designated as a "No Smoking Area."
- C. The windows will be arranged for cross ventilation with screens.
- D. Provide air conditioning and heating systems with thermostat control.
- E. Provide electric power for the duration of the Work.
- F. The Contractor will provide the following with the field office, at a minimum:
 - 1. Electric lights (fifty (50) foot-candles at desktop height) and power supply outlets.
 - 2. When available, provide high-speed Internet access to all desks for the duration of the Work.
 - 3. Acceptable toilet facilities with appropriate signage that meet all of the local and State health codes and regulations.
 - 4. Fire extinguisher (Halon type, minimum 4 lb. capacity).
 - 5. Water coolers, bottled water and paper cups.
 - 6. Tables for viewing the Project Drawings.
 - 7. Standard office supplies.
 - 8. Weekly janitorial services.

1.13 SPECIFIC REQUIREMENTS FOR THE FIELD OFFICES

Provide the following for the exclusive use of the County: (Unless otherwise noted, the quantity should be sufficient for the duration of the Work.)

- A. Office Furnishings: The furniture will be delivered and placed as directed by the County.
- B. Desks: Flat top, double pedestal, with one box and one file drawer in each pedestal, 60-inches by 30-inches. Total quantity will be three (3).
- C. Chairs: Three (3) office-type chairs, adjustable heights, on rollers, with armrests.
- D. Conference Table and Chairs: One (1) table (3-feet by 8-feet minimum), scratch and stain resistant and 15 meeting-type chairs.
- E. Drawing Table: Two (2) plywood or standard drawing tables, 3-feet by 6-feet, with all required appurtenances and 2 extended height stools suitable for use at the drawing tables.
- F. Printer: One(1) - All in one color inkjet printer capable of printing, scanning and coping Ledger, Legal and Letter sizes. Standard interfaces shall include Hi-Speed USB 2.0, Wireless (802.11b/g/n), Ethernet. Minimum requirements include: 35 page automatic document feeder, printing 20 color copies per minute at 6000 x 1200 dpi resolution, scan resolution 2400 x 2400 dpi, flat bed document glass size Ledger (11" x 17") with standalone copy features, minimum of 250 sheet input capacity cassettes and 2 additional complete set of ink cartridges. Brother MFC- J6710DW or equal. Printers to be retained by the County. All warranties, maintenance, servicing and sufficient appropriate ink/toner cartridges and paper for the duration of the Work.
- G. One (1) each refrigerator, microwave, coffee machine, and toaster oven.
- H. Provide Internet connection in each of the four offices in the field trailer. The connection shall be at least 5.0 Mbps of download speed or greater. Provide office with a wireless network 802.11 n with minimum of 8 concurrent users in addition to the network requirements. Wireless network shall allow additional portable computers to gain internet access within the office.
- I. File Cabinets, Storage, Bookcases:
 - 1. Three (3) Lateral Files: HON 600 Series, or equal, 42-inch wide, four-drawer.

2. Two (2) steel vertical, hanging mobile plan stands, with approximately 12- hanging clamps. Provide all required clamps, of sufficient length to hold the Contract Drawings.
3. Storage: Two (2) industrial grade steel cabinets, locking handles, 36- inches wide by 18-inches deep by 72-inches high.
4. Bookcases: Three (3) HON metal bookcases, or equal, 34-1/2-inches wide by 12- 5/8-inches deep by 71-inches high, color to be selected by the Engineer.

J. Miscellaneous Field Supplies:

1. One (1) minimum/maximum digital thermometer, with batteries for the duration of the Work.
2. One (1) rain gauge.

1.14 REMOVAL OF TEMPORARY UTILITIES, FACILITIES, AND CONTROLS

- A. Remove all temporary utilities, equipment, facilities, and materials prior to submitting Final Application for Payment.
- B. Remove temporary underground installations to minimum depth of 2-feet and re- grade site.
- C. Clean and repair damage caused by installation or use of temporary Work.
- D. Restore any existing facilities used during Construction to original condition, unless otherwise directed in other sections of Contract Documents. Restore existing landscaping, drainage, paving, etc. to an "as-was" condition, unless otherwise directed in other sections of Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Scope of Work: Material and equipment incorporated into the Work:
 - 1. Manufactured and fabricated products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - c. Two (2) 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.
 - 2. Do not use material or equipment for any purpose other than that for which it is designed or specified.

1.02 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION AND STORAGE REQUIREMENTS

- A. Manufacturer to provide the recommended storage procedure. Store equipment as recommended by the manufacturer.
- B. When Contract Documents require that installation of work shall comply

with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including five copies to the Engineer.

1. Maintain one (1) set of complete instructions at the job site during installation and until completion.
- C. 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.
- D. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.03 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with progress 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.

1.04 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, architectural items, electrical and instrumentation

equipment, and special equipment to be incorporated into this Project. Storage of equipment shall be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including connection of heaters, placing of storage lubricants in equipment, 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.

- B. 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 in a position to prevent accumulations of standing water and to minimize rusting. Beams shall be stored with the webs vertical. Precast concrete beams shall be handled and stored in a manner to prevent accumulations of dirt, standing water, staining, chipping or cracking. 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. 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.

- F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.
- G. Protection After Installation: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove covering when no longer needed.
- H. The Contractor shall be responsible for all material, 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.
- I. Should the Contractor fail to take proper action on storage and handling of equipment supplied under this Contract within seven (7) 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 deduct 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.
- J. No materials stored off-site will be paid for under pay estimates, nor stored materials without written request and affidavit. This request is subject for approval on a case-by-case basis.

1.05 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. Materials shall not be shipped until approved by the Engineer. The intent of this requirement is to avoid unnecessary delivery of unapproved materials and to reduce on-site storage time prior to

installation and/or operation. Under no circumstances shall major equipment or finish products be delivered to the site more than one month prior to installation without written authorization from the Engineer. Materials shipped to the site, or temporarily stored off-site in approved locations, shall be stored in accordance with Paragraph 1.04, herein.

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. 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 the 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 startup, 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.

8. Contractor shall maintain a detailed itemized maintenance schedule and records of all maintenance performed.

1.06 SPARE PARTS

- A. Spare parts for certain equipment provided under Divisions 11: Equipment; 13: Special Construction; 15: Mechanical; and 16: Electrical 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. Contractor shall package in large plastic military grade containers with all information needed labeled on outside of container such as equipment item, manufacturer, specification, facility, etc.

1.07 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 equipment supplied.
- 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 (3) weeks of operation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01610

DELIVERY, STORAGE AND HANDLING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section specifies the general requirements for the delivery, handling, storage and protection for all items required in the construction of the Work.
- B. Deliver, handle and store products in accordance with manufacturer's recommendations and by methods and means that will prevent damage, deterioration, and loss including theft and protect against damage from climatic conditions. Control delivery schedules to minimize long-term storage of products at the site and overcrowding of construction spaces. In particular, provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss. Damaged or defective items, in the opinion of the County, will be replaced at no cost to the County.

1.02 REQUIREMENTS

- A. The Contractor is responsible for all material, equipment and supplies sold and delivered to the County under this Contract until final inspection of the Work and acceptance thereof by the County.
- B. All materials and equipment to be incorporated in the Work will 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.
- C. All materials and equipment, which in the opinion of the County, have become so damaged as to be unfit for the use intended or specified, will be promptly removed from the site of the Work, and the Contractor will receive no compensation for the damaged materials or equipment or for its removal.
- D. In the event any such material, equipment and supplies are lost, stolen, damaged or destroyed prior to final inspection and acceptance, the Contractor will replace same without additional cost to the County.

1.03 DELIVERY

- A. Transport and handle items in accordance with manufacturer's instructions.
- B. The County and the Contractor's project superintendent must be on-site to accept all deliveries shipped directly to the job site. If the project superintendent is not present for a delivery, that delivery may be rejected by the County. If any delivery is rejected due to non-availability of the Contractor's project superintendent, delivery shall be rescheduled at no additional cost to the County.
- C. Schedule delivery to reduce long-term on-site storage prior to installation and/or operation. Under no circumstances will materials or equipment be delivered to the site more than 1-month prior to installation without written authorization from the County.
- D. Coordinate deliveries in order to avoid delay in, or impediment of, the progress of the Work.
- E. Schedule deliveries to the site not more than 1-month prior to scheduled installation without written authorization from the County.
- F. Coordinate delivery with installation to ensure minimum holding time for items that are hazardous, flammable, easily damaged or sensitive to deterioration.
- G. All items delivered to the site will be unloaded and placed in a manner that will not hamper the Contractor's normal construction operation or those of Subcontractors and other Contractors and will not interfere with the flow of necessary traffic.
- H. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible. Maintain packaged materials with seals unbroken and labels intact until time of use.
- I. Immediately on delivery, inspect shipments with the County to ensure compliance with requirements of Contract Documents and accepted submittals, and that products are properly protected and undamaged. If the Contractor does not notify the County regarding the delivery and the County rejects any part of the delivery, there will be no additional cost to the County for the material to be returned. For items furnished by others (i.e. County), perform inspection in the presence of the County. Provide written notification to the County of any problems.

- J. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the County.

1.04 STORAGE AND HANDLING

- A. Provide equipment and personnel to handle products by methods recommended by the manufacturer to prevent soiling or damage to products or packaging, with seals and labels intact and legible.
- B. The Contractor is responsible for securing a location for on-site storage of all material and equipment necessary for completion of the Work. The location and storage layout will be submitted to the County at the Pre-Construction conference.
- C. Manufacturer's storage instructions will be carefully studied by the Contractor and reviewed with the County. These instructions will be carefully followed and a written record of this kept by the Contractor.
- D. All material delivered to the job site will be protected from dirt, dust, dampness, water, and any other condition detrimental to the life of the material from the date of delivery to the time of installation of the material and acceptance by the County.
- E. When required or recommended by the manufacturer, the Contractor will furnish a covered, weather protected storage structure providing a clean, dry, non-corrosive environment for all mechanical equipment valves, architectural items, electrical and instrumentation equipment, and special equipment to be incorporated into this Project.
- F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions and free from damage or deterioration.
- G. Should the Contractor fail to take proper action on storage and handling of equipment supplied under this Contract within 7-days after written notice to do so has been given, the County retains the right to correct all deficiencies noted in previously transmitted written notice and deduct the cost associated with these corrections from the Contract Amount. These costs may be comprised of expenditures for labor, equipment usage, administrative,

clerical, engineering, and any other costs associated with making the necessary corrections.

1.05 SPECIFIC STORAGE AND HANDLING

(Additional specific storage and handling requirements may be found in the specification sections addressing the material requirements.)

- A. All mechanical and electrical equipment and instruments subject to corrosive damage by the atmosphere if stored outdoors (even though covered by canvas) will be stored in a weather tight building to prevent damage. The building may be a temporary structure on the site or elsewhere, but it must be satisfactory to the County. The building will be provided with adequate ventilation to prevent condensation. Maintain temperature and humidity within range required by manufacturer.
1. All equipment will be stored fully lubricated with oil, grease and other lubricants unless otherwise instructed by the manufacturer. Mechanical equipment to be used in the Work, if stored for longer than 90-days, will have the bearings cleaned, flushed and lubricated prior to testing and startup, at no extra cost to the County.
 2. Moving parts will be rotated a minimum of once weekly to ensure proper lubrication and to avoid metal-to-metal "welding." Upon installation of the equipment, the Contractor will start the equipment, at least half load, once weekly for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.
 3. Lubricants will be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. New lubricants will be put into the equipment at the time of acceptance. Prior to acceptance of the equipment, the Contractor will 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 will 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 guaranty the equipment equally in both instances. If such a certification is not given, the equipment will be judged to be defective. It will be removed and replaced at the Contractor's expense.

4. Electric motors provided with heaters will be temporarily wired for continuous heating during storage. Upon installation of the equipment, the Contractor will start the equipment, at least half load, and once weekly for an adequate period of time to insure that the equipment does not deteriorate from lack of use.

- B. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

- C. Cement and lime will be stored under a roof and off the ground and will be kept completely dry at all times.

- D. Brick, block and similar masonry products will be handled and stored in a manner to minimize breakage, chipping, cracking and spilling to a minimum.

- E. Precast Concrete will be handled and stored in a manner to prevent accumulations of dirt, standing water, staining, chipping or cracking.

- F. All structural and miscellaneous steel and reinforcing steel will be stored off the ground or otherwise to prevent accumulations of dirt or grease, and in a position to prevent accumulations of standing water and to minimize rusting. Beams will be stored with the webs vertical.

- G. Metals will be stored dry, all under cover and vented to prevent build-up of humidity, all off ground to provide air circulation.

- H. Lumber will be stacked to provide air circulation. Store materials for which maximum moisture content is specified in an area where moisture content can be maintained.

- I. Gypsum wallboard systems will be stored to protect all metal studs, furring, insulation boards, batts, accessories and gypsum board to prevent any type of damage to these materials. Rusted material components, damp or wet insulation or gypsum boards will not be accepted.

- J. Acoustical materials will be delivered to the job site in unbroken containers labeled and clearly marked. Materials will not be removed from containers until ready to install, but will be stored in dry area with cartons neatly stacked. Before installation, acoustical board will be stored for not less than 24-hours in the Work area at the same temperature and relative humidity.

- K. Linear items will be stored in dry area with spacers to provide ventilation. Stack linear items to prevent warping, complying with manufacturer's instructions.

- L. Paints and other volatile materials will be stored within approved safety containers. No glass jugs will be permitted. Storage areas will be equipped with not less than 2 fire extinguishers (CO2 type) sufficient to discharge a distance of 25-feet when fully charged and have current tags. No other building materials will be stored in this area. Used rags will be removed daily. Clean rags will be stored in metal closed containers.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01650

PUMP STATION START-UP AND TESTING

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Contractor will conduct preliminary testing of pump station facilities, products and equipment. If the preliminary field tests disclose any items furnished under this Contract which do not comply with the requirements of the Contract Documents, the Contractor shall make all changes, adjustments and replacements required prior to Start-up Demonstration and Acceptance Testing.
- B. The Contractor shall arrange qualified instruction by the manufacturer's representative for the County's designated operating and maintenance personnel in operation, adjustment and maintenance of products, equipment and systems.
- C. The Contractor shall furnish all labor, fuel, energy, lubrication, water, and all other materials, equipment, tools and instruments necessary for the Start-up Demonstration and Acceptance Testing unless otherwise specified.
- D. The startup and final check out shall demonstrate and ensure to the County the complete operating pump station system. The Contractor shall provide documentation certifying proper installation, testing and operation of all prescribed equipment and systems.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 PUMP STATION START-UP TESTING AND INSPECTION

- A. The Contractor shall notify the County and the Engineer at least 10 normal working days prior to start-up.
- B. The following shall have been successfully met prior to pump station start-up:
 - 1. A walk through letter of acceptance received

2. All wire checks conducted
 3. Completed Appendix B "Pump Station Start-Up" form
 4. The Contractor shall conduct preliminary testing of equipment prior to start-up testing and make all changes, adjustments and replacements required; and
- C. The intent of the start-up testing is for the Contractor to demonstrate to the County that the Work will function as a complete and operable system under normal as well as emergency operating conditions and the pump station is ready for acceptance.
- D. The Contractor shall furnish all labor, fuel, energy, lubrication, water and all other materials, equipment, tools, and instruments necessary for pump station start-up testing and inspection. All material used shall be listed on the Appendix D "List of Approved Products." All required certification letters, spare parts and supplies shall be provided to the County. Listed below is a partial checklist of requirements to be met.
1. The Contractor shall coordinate startup activities with the County, the manufacturer's representatives and Subcontractors. A factory representative knowledgeable in the mechanical and electrical equipment furnished shall inspect and supervise a start-up of their respective equipment. A minimum of 1 full business day shall be provided for the testing. Additional time may be necessary due to faulty or incomplete Work. Upon satisfactory completion of the equipment testing and inspection, the factory representative(s) shall issue the required manufacturer's warranty certificates.
 2. Initiate start-up of each system in accordance with the operation and maintenance manual. Demonstrate that all of the components of a system are operating under their own controls as designated without overheating or overloading any parts and without objectionable vibration as determined by the County.
 3. Observe the system operation and make adjustments as necessary to optimize the system performance. Coordinate with County for any adjustments desired or operational problems requiring debugging.
 4. All functions of the pump station mechanical and electrical equipment

shall be tested and inspected for operation and workmanship. All equipment shall be properly installed and meet the design performance requirements.

5. The pumps shall be flow tested at the pump station start-up to verify their performance meets the design requirements and the manufacturer's pump curve.
6. Furnish 2 printed copies and 3 electronic copies in Acrobat "pdf" format of the Operation and Maintenance Manual for the pump station to the County.
7. A pump station start-up report shall be completed. See Appendix B "Pump Station Start-Up Report Form."
8. The Contractor shall bear the entire expense of rectifying Work installed.
9. The Contractor shall furnish the County with a written certification signed by the Manufacturer's representative that the equipment has been properly installed and lubricated, is in accurate alignment, is free from undue stress imposed by piping or mounting bolts, and has been operated under full load conditions and that satisfactory operation has been obtained.

E. Re-testing

If the start-up testing does not meet the requirements, the deficiencies shall be corrected and the testing procedure will be rescheduled again.

F. Acceptance

1. The pump station shall be accepted based on the pump station functioning as a complete and operable system under normal as well as emergency operating conditions, the approved construction documents have been met and any deficiencies that were observed and noted have been corrected.
2. The Contractor shall ensure all lubrication and all other materials for operation are replenished.

END OF SECTION

SECTION 01700

PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION

The term "Project Closeout" is defined to include requirements near the end of the Contract Time, in preparation for Substantial Completion acceptance, occupancy by the County, release of retainage, final acceptance, final payment, and similar actions evidencing completion of the Work. Time of closeout is directly related to "Substantial Completion"; therefore, the time of closeout may be either a single period for the entire Work or a series of time periods for individual elements of Work that has been certified as substantially complete at different dates. This time variation, if any, will be applicable to the other provisions of this section.

1.02 SCOPE OF WORK

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Final Cleaning
 - 2. Substantial Completion
 - 3. Final Acceptance

1.03 RELATED WORK

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.
- C. Section 01720 "Project Record Documents"
- D. Section 01740 "Warranties and Bonds"

1.04 PREREQUISITES FOR SUBSTANTIAL COMPLETION.

When the Contractor considers the Work as substantially complete, submit to the County and Engineer a written notice stating so and requesting an inspection to determine the status of completion. The Contractor will attach to the notice a list of items known to be incomplete or yet to be corrected. Complete the following before requesting the County's inspection for certification of substantial completion.

- A. In the progress payment request that coincides with or is the first request following, the date substantial completion is claimed, show 100% completion or list incomplete items, the value of incomplete Work, and reasons for the Work being incomplete. Inspection procedures include supporting documentation for completion as indicated in these Contract Documents.
- B. Submit a statement showing an accounting of changes to the Contract Sum.
- C. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents in accordance with Section 01740 "Warranties and Bonds."
- D. Obtain and submit lien releases enabling the County's full, unrestricted use of the Work and access to services and utilities.
- E. Consult with County before submitting Record Documents in accordance with Section 01720 "Project Record Documents."
- F. Submit Operation and Maintenance Manuals.
- G. Make final changeover of permanent locks. Submit keys and keying schedule.
- H. Deliver tools, spare parts, extra stock, and similar items.
- I. Complete final cleaning requirements necessary for Substantial Completion.

1.05 FINAL CLEANING.

Complete the following cleaning operations prior to Substantial Completion or

Owner occupancy.

- A. Remove from job site all tools, surplus materials, construction equipment, storage sheds, debris, waste and temporary services.

- B. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

- C. Structures:
 - 1. Visually inspect exterior surfaces and remove all traces of soil, waste materials, smudges and other foreign matter.

 - 2. Remove all traces of splashed materials from adjacent surfaces.

 - 3. Ensure exterior surfaces have a uniform degree of cleanliness.

 - 4. Visually inspect interior surfaces and remove all traces of soil, waste materials, smudges and other foreign matter.

 - 5. Remove paint droppings, spots, stains and dirt from finished surfaces.

 - 6. Remove labels that are not permanent labels.

 - 7. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

 - 8. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Leave concrete floors broom clean.

 - 9. Wipe surface of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean light fixtures and lamps.

10. Clean permanent filters of ventilating systems and replace disposable filters if units were operated during construction. Clean ducts, blowers and coils if units were operated without filters during construction.

1.06 OPERATION AND MAINTENANCE MANUALS

- A. The Contractor will submit the proposed format, content and tab structure for all Operating and Maintenance Manuals for the County's review and approval. The tab structure for Operating and Maintenance Manuals will follow specification division format as accepted by the Construction Specification Institute. After the County approves the proposed format, content, and tab structure for the Operating and Maintenance Manuals, the Contractor will create and deliver 5 complete sets.
- B. Operation and Maintenance documentation is required for each piece of mechanical, electrical, communications, instrumentation and controls, pneumatic, hydraulic, conveyance, and special construction. If required by the technical specifications, provide Operation and Maintenance documentation for any other product not listed in the foregoing.
- C. The requirements of this Section are separate, distinct and in addition to product submittal requirements that may be established by other Sections of the Specifications. Owner's manuals, manufacturer's printed instructions, parts lists, test data and other submittals required by other Sections of the Specifications may be included in the Operating and Maintenance Manuals provided that they are approved and are formatted in a manner consistent with the requirements of this Section.
- D. Deliver Operation and Maintenance Manuals directly to the County.
- E. Operating and Maintenance Manual documents must include, but are not limited to, table of contents, approved submittals, manufacturer's operating and maintenance instructions, brochures, Shop Drawings, performance curves and data sheets annotated to indicate equipment actually furnished (e.g. identifying impeller size, model, horsepower, etc), procedures, wiring and control diagrams, records of factory and field tests and device/controller settings and calibration, program lists or data compact discs, maintenance and warranty terms and contact information, spare parts listings, inspection procedures, emergency instructions, and other Operating and Maintenance documentation that may be useful to the County. The material and equipment data required by this Section must include all data necessary for the proper installation, removal, normal operation, emergency operation, startup, shutdown, maintenance, cleaning, adjustment, calibration, lubrication, assembly, disassembly, repair, inspection, trouble-shooting, and warranty

service of the equipment or materials.

- F. The Contractor must bind the Operating and Maintenance Manual documents in heavy-duty, 3-ring vinyl-covered binders including pocket folders for folded sheet information. Mark binder identification on both the front and spine of each binder. Binder information must list the project title, identify separate structures or locations as applicable, identify the general subject matter covered in the manual and must include the words "OPERATING AND MAINTENANCE INSTRUCTIONS".
 - 1. The Contractor must submit the Operating and Maintenance documents on three-hole punched, 8-1/2-inch x 11-inch sheets or on three-hole punched sheets that are foldable in multiples of 8-1/2-inch x 11-inch. The three-hole punched edge will be the left 11-inch edge.
 - 2. The Contractor may request waivers to the size requirement for specific instances. The Contractor's waiver request must be in writing to the County. The Contractor's waiver request must include a justification for seeking the waiver.
- G. The Contractor must provide an electronic version of the complete and final Operating and Maintenance Manuals in original electronic file format on compact disc or DVD. The Contractor must also provide one (1) electronic pdf file of each bound Operating and Maintenance Manual that represents each Manual's content. The electronic pdf file must match the Operating and Maintenance Manual content and organizational structure.

1.07 SUBSTANTIAL COMPLETION INSPECTION PROCEDURES

- A. Upon receipt of the Contractor's request for inspection, the County will either proceed with inspection or advise the Contractor of incomplete prerequisites.
- B. Following the initial inspection, the County will either prepare the certificate of Substantial Completion, or advise the Contractor of Work which must be performed before the certificate will be issued. The County will repeat the inspection when requested in writing and when assured that the Work has been substantially completed.
- C. Results of the completed inspection will form the initial "punch list" for final acceptance.

1.08 PREREQUISITES FOR FINAL ACCEPTANCE.

Complete the following before requesting the County's final inspection for certification of final acceptance, and final payment. List known exceptions, if any, in the request.

- A. Submit the final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates for insurance for products and completed operations where required.

- B. Submit written certification that:
 - 1. The County's final punch list of itemized Work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.

 - 2. The Contract Documents have been reviewed and Work has been completed in accordance with Contract Documents.

 - 3. Equipment and systems have been tested in the presence of the County and are operational.

 - 4. Work is completed and ready for final inspection.

- C. Submit consent of surety.

- D. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

1.09 FINAL ACCEPTANCE INSPECTION PROCEDURES

- A. The County will re-inspect the Work upon receipt of the Contractor's written notice that the Work, including punch list items resulting from earlier inspections, has been completed, except for those items for which completion has been delayed because of circumstances that are acceptable to the County.

- B. Upon completion of re-inspection, the County will either prepare a certificate of final acceptance or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled, which are required for final

acceptance.

C. If necessary, the re-inspection procedure will be repeated.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01710

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Scope of Work: Execute cleaning, during progress of the Work and at completion of the Work.

1.02 DISPOSAL REQUIREMENTS

- A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the Work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations or personal activities.
- B. Provide on-site containers for the collection of waste materials, debris and

rubbish.

- C. Remove waste materials, debris and rubbish from the site periodically, or as directed by the Owner, and dispose of at legal disposal areas away from the site.

3.02 DUST CONTROL

- A. The Contractor shall employ construction techniques that minimize the production and distribution of dust.
- B. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- C. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.03 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas, to verify that the entire Work is clean.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The purpose of the Project Record Documents is to provide the County with factual information regarding all aspects of the Work, both concealed and visible.

- B. To insure the Work was constructed in conformance with the Contract Drawings, the following survey documents are required to be prepared and certified by a Surveyor as per Spec Section 01050 Surveying and Field Engineering:
 - 1. Asset Attribute Data Form
 - 2. Pipe Deflection Table
 - 3. Gravity Main Data
 - 4. Boundary Survey and Survey Map Report for pump stations and easements with constructed improvements

The Asset Attribute Data and Pipe Deflection Table forms can be found on the County's web site:

<http://www.orangecountyfl.net/WaterGarbageRecycling/UtilitiesCapitalImprovementProgram.aspx>

1.02 DEFINITIONS

- A. Boundary Survey: Boundary survey, map and report certified by a Surveyor shall be provided that meets the requirements of Chapter 5J-17 'Minimum Technical Standards', FAC.

- B. Surveyor: Contractor's Surveyor that is licensed by the State of Florida as a Professional Surveyor and Mapper pursuant to Chapter 472, F.S.

1.03 QUALITY ASSURANCE

- A. Delegate the responsibility for maintenance of the Record Documents to one person on the Contractor's staff as approved by the County.
- B. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of specifications and each sheet of Drawings and other documents where such entry is required to show progress and changes properly.
- C. Make entries within 24-hours after receipt of information has occurred.

1.04 RECORD DOCUMENTS AT SITE

- A. Maintain at the site and always available for County's use one (1) record copy of:
 - 1. Construction Contract, Drawings, Specifications, General Conditions, Supplemental Conditions, Bid Proposal, Instruction to Bidders, Addenda, and all other Contract Documents
 - 2. Change Orders, Verbal Orders, and other modifications to Contract
 - 3. Written instructions by the County as well as correspondence related to Requests for Information (RFIs)
 - 4. Accepted Shop Drawings, Samples, product data, substitution and "or-equal" requests
 - 5. Field test records, inspection certificates, manufacturer certificates and construction photographs
 - 6. Paper copies of the Progressive As-Built Drawings
 - 7. Current Surveyor's tables for the Assets Attribute Data, Pipe Deflection Data, and Gravity Main Data
- B. Maintain the documents in an organized, clean, dry, legible condition and protected from deterioration, loss and damage until completion of the Work, transfer of all record data to the final As-built Drawings for submittal to the County.

- C. Store As-Built Documents and samples in Contractor's office apart from documents used for construction. Do not use As-Built document for construction purposes. Label each document "AS-BUILT" in neat large printed letters. File documents and samples in accordance with CSI/CSC format.
- D. Record information concurrently with construction progress. Do not conceal any Work until required information is recorded.

PART 2 - PRODUCTS

2.01 AS-BUILT SURVEY DRAWINGS

- A. Maintain the electronic As-Built Drawings to accurately record progress of Work and change orders throughout the duration of the Contract.
- B. Date all entries. Enter RFI No., Change Order No., etc. when applicable.
- C. Call attention to the entry by highlighting with a "cloud" drawn around the area affected or other means. In the event of overlapping changes, use different colors for entries of the overlapping changes.
- D. Design call-outs shall have a thin strike line through the design call-out and all As-Built information must be labeled (or abbreviated "AB") and be shown in a bolder text that is completely legible.
- E. Entries shall consist of graphical representations, plan view and profiles, written comments, dimensions, State Plane Coordinates, details and any other information as required to document field and other changes of the actual Work completed. As a minimum, make entries to also record:
 - 1. Depths of various elements of foundation in relation to finish floor datum and State Plane Coordinates and elevations.
 - 2. As-Built Asset Attribute Data tables shall be completed in the Drawings.
 - 3. When electrical boxes, or underground conduits and plumbing are involved as part of the Work, record true elevations and locations, dimensions between boxes.

4. Actually installed pipe or other work materials, class, pressure-rating, diameter, size, specifications, etc. Similar information for other encountered underground utilities, not installed by Contractor, their owner and actual location if different than shown in the Contract Documents.
5. Details, not on original Contract Drawings, as needed to show the actual location of the Work completed in a manner that allows the County to find it in the future.
6. The Contractor shall mark all arrangements of conduits, circuits, piping, ducts and similar items shown schematically on the construction documents and show on the As-Built Drawings the actual horizontal and vertical alignments and locations.
7. Major architectural and structural changes including relocation of doors, windows, etc. Architectural schedule changes according to Contractor's records and Shop Drawings.

2.02 RECORD DOCUMENTS

- A. Three (3) paper copy sets and three (3) digital media sets of the following final Record Documents below.
 1. The following documents shall be signed and sealed by the Surveyor:
 - a. As-built survey drawings as previously described in paragraph 2.01.
 - b. As-built Asset Attribute Data (see Specification Section 01050 "Surveying and Field Engineering," Table 01050-2 for an example)
 - c. Boundary Survey on a 8 1/2"x11" format of fee simple and/or permanent easement sites for pump stations, treatment facilities, etc.. As a minimum the Boundary Survey shall show all above ground and underground structures or equipment, pipe, and conduit. All property or easement corners and the center of wetwell shall be shown with GPS coordinates. The Boundary Survey field work shall be dated after the Work has been completed.
 - d. Boundary Survey on a 8 1/2"x11" format for Work related to constructed pipes within any permanent easements. As a minimum the Boundary Survey shall show the location of the pipe centerline and property corners with GPS coordinates. The Boundary Survey field work shall be dated after the Work has been completed within the easements.

- e. Gravity Main Table (see Specification Section 01050 "Surveying and Field Engineering", Table 01050-4 for an example)
 - f. Pipe Deflection Table (see Specification Section 01050 "Surveying and Field Engineering" Table 01050-3 for an example). An electronic blank table will be supplied by the County.
- 2. Provide an encompassing digital AutoCAD file in the Engineer's current version of AutoCAD and the file shall be saved under in the format dwg. The file includes all the information of the As-Built Survey and any other graphical information in the As-Built Drawings. It shall include the overall Work, utility system layout and associated parcel boundaries and easements. Feature point, line and polygon information for new or altered Work and all accompanying geodetic control and survey data shall be included. The Surveyor's certified As-Built Asset Attribute Data shall be added to the As- Built Drawings.
 - 3. Provide Scanned "As-Built" Drawing sets complete and include the title sheet, plan/profile sheets, cross-sections, and details. Each individual sheet contained in the printed set of the As-Built Drawings shall be included in the electronic drawings, with each sheet being converted into an individual tif (tagged image file). The plan sheets shall be scanned in tif format Group 4 at minimum of 400 dpi resolution to maintain legibility of each drawing. Then, the tif images shall be embedded into a single pdf (Adobe Acrobat) file representing the complete plan set.
 - 4. Provide Scanned Record Documents reflecting changes from the Contract Documents.

PART 3 - EXECUTION

3.01 FINAL RECORD DOCUMENTS SUBMITTAL

- A. Submit the Final Record Documents within 20-days after Substantial Completion.
 - 1. Participate in review meetings as required and make required changes and promptly deliver the Final Record Documents to the County and Engineer.

END OF SECTION

SECTION 01730

PUMP STATION OPERATION AND MAINTENANCE MANUAL

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A Section includes the submittal process for the operation and maintenance manual and the manual shall contain the technical information required for proper installation, operation and maintenance of process, electrical and mechanical equipment and systems.

1.02 SUBMITTAL SCHEDULE

- A Operation and Maintenance Manual Schedule
 - 1. Initial submittal within 60-days after date Shop Drawings are approved.

1.03 PREPARATION OF SUBMITTALS

- A General
 - 1. Materials are provided for County's use, reproduction and distribution as training and reference materials within County's organization.
 - 2. Applicable to hard copy or electronic media.
 - 3. Applicable to materials containing copyright notice as well as those with no copyright notice.
 - 4. Notify manufacturer of this intended use of materials provided under the Contract.
 - 5. Number each Operation and Maintenance Manual transmittal with the original root number of the associated Shop Drawing.
 - 6. Identify resubmittals with the original number plus a suffix letter

starting with "A."

7. Submittal format:
 - a. Interim submittals: Submit two (2) paper copies until manual is approved.
 - b. Final submittals:
 - (1) Within 30-days of receipt of approval, submit one (1) additional paper copy and two (2) electronic copies on Compact Disc (CD- ROM) in Portable Document Format (PDF).
8. Compact discs to be secured in jewel cases.
9. Electronic copies will be reviewed for conformance with the approved paper copy and the electronic copy (PDF) requirements of this Specification.
10. Non-conforming CDs will be returned with comments.
11. Provide final CDs within 30-days of receipt of comments.
12. Paper copy submittals:
 - a. Submit Operation and Maintenance Manuals printed on 8-1/2 inch x 11 inch size heavy first quality paper with standard three-hole punching and bound in appropriately sized three-ring (or post) vinyl view binders with clear overlays front, spine and back.
 - b. Provide binders with titles inserted under clear overlay on front and on spine of each binder.
 - c. As space allows, binder titles shall include, but not necessarily be limited to:
 - (1) Project Name
 - (2) Related Specification Number
 - (3) Equipment Name(s) and
 - (4) Project Equipment Tag Numbers
 - d. Provide a Cover Page for each manual with the following

information:

- (1) Manufacturer(s)
- (2) Date
- (3) Project Owner and Project Name
- (4) Specification Section
- (5) Project Equipment Tag Numbers
- (6) Model Numbers
- (7) Engineer
- (8) Contractor

- e. Provide a Table of Contents or Index for each manual.
- f. Use plastic-coated dividers to tab each section of each manual per the manual's Table of Contents/Index for easy reference.
- g. Provide plastic sheet lifters prior to first page and following last page.
- h. Reduce Drawings or diagrams bound in manuals to an 8-1/2 inch x 11 inch or 11 inch x 17 inch size.
- i. Where reduction is not practical to ensure readability, fold larger Drawings separately and place in vinyl envelopes which are bound into the binder.
- j. Identify vinyl envelopes with Drawing numbers.
- k. Mark each sheet to clearly identify specific products and component parts and data applicable to the installation for the Project.
- l. Delete or cross out information that does not specifically apply to the Project.

B. Electronic copy submittals:

1. Electronic copies of the approved paper copy Operation and Maintenance Manuals are to be produced in Adobe Acrobat's Portable Document Format (PDF) Version {5.0} or higher.
2. Do not password protect and/or lock the PDF document.
3. Drawings or other graphics must be converted to PDF format and made part of the PDF document.
4. Scanning to be used only where actual file conversion is not possible.
5. Rotate pages that must be viewed in landscape to the appropriate

position for easy reading.

6. Images only shall be scanned at a resolution of 300 dpi or greater.
7. Perform Optical Character Recognition (OCR) capture on all images.
8. Achieve OCR with the "original image with hidden text" option.
9. Word searches of the PDF document must operate successfully to demonstrate OCR compliance.
10. Create bookmarks in the navigation frame, for each entry in the Table of Contents/Index.
11. Normally three levels deep (i.e., "Chapter," "Section," "Sub-section").
12. Thumbnails must be generated for each PDF file.
13. Set the opening view for PDF files as follows:
 - a. Initial view: Bookmarks and Page.
 - b. Magnification: Fit in Window.
 - c. Page layout: Single page.
 - d. Set the file to open to the cover page of the manual with bookmarks to the left, and the first bookmark linked to the cover page.
 - e. All PDF documents shall be set with the option "Fast Web View" to open the first pages of the document for the viewer while the rest of the document continues to load.
14. File naming conventions
 - a. File names shall use a "ten dot three" convention (XXXXXX-YY-Z.PDF) where XXXXX is the Specification Section number, YY is the Shop Drawing Root number and Z is an ID number used to designate the associated volume.

Example 1:

Two (2) pumps submitted as separate Shop Drawings under the same Specification Section:
Pump 1 = 11061-01-1.pdf.
Pump 2 = 11061-02-1.pdf.

Example 2:

Control system submitted as one (1) Shop Drawing but separated into two (2) O&M volumes:
Volume 1 = 13440-01-1.pdf.
Volume 2 = 13440-01-2.pdf.

15. As a minimum, include the following labeling on all CD-ROM discs and jewel cases:

- a. Project Name
- b. Equipment Name and Project Tag Number
- c. Project Specification Section
- d. Manufacturer Name
- e. Vendor Name
- f. Binding

- (1) Include labeled CD(s) in labeled jewel case(s).
- (2) Bind jewel cases in standard three-ring binder Jewel Case Page(s), inserted at the front of the Final paper copy submittal.
- (3) Jewel Case Page(s) to have means for securing Jewel Case(s) to prevent loss (e.g., flap and strap).

1.04 EQUIPMENT AND SYSTEMS

A. Submission of Operation and Maintenance Manuals for equipment and systems is applicable but not necessarily limited to:

1. Major equipment
2. Equipment powered by electrical, pneumatic or hydraulic systems
3. Specialized equipment and systems including instrumentation and control systems and system components for HVAC process system control

4. Valves and water control gates
5. Equipment function, normal operating characteristics, limiting operations
6. Assembly, disassembly, installation, alignment, adjustment, and checking instructions
7. Operating instructions for start-up, normal operation, control, shutdown, and emergency conditions
8. Lubrication and maintenance instructions
9. Troubleshooting guide
10. Parts lists
 - a. Comprehensive parts and parts price lists.
 - b. List of spare parts provided as specified in the associated Specification Section.
11. Outline, cross-section, and assembly Drawings; engineering data; and electrical diagrams, including elementary diagrams, wiring diagrams, connection diagrams, word description of wiring diagrams and interconnection diagrams.
12. Test data and performance curves.
13. As-constructed fabrication or layout Drawings and wiring diagrams.
14. Instrumentation or tag numbers assigned to the equipment by the Contract Documents are to be used to identify equipment and system components.
15. Additional information as specified in the associated equipment or system Specification Section.

1.05 COUNTY/PROFESSIONAL'S REVIEW ACTION

- A. County/Professional will review and indicate one of the following review actions:
 - 1. ACCEPTABLE
 - 2. REVISE AND RESUBMIT

- B. Acceptable paper copy submittals will be retained with the transmittal form returned with a request for one (1) additional paper copy and two (2) electronic copies on CD-ROM.

- C. Deficient submittals (paper copy and/or electronic copy) will be returned along with the transmittal form which will be marked to indicate deficient areas.

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.

1.02 RELATED WORK

- A. Refer to Conditions of Contract for the general requirements relating to warranties and bonds.
- B. General closeout requirements are included in Section 01700 "Project Closeout."
- C. Specific requirements for warranties for the Work and products and installations that are specified to be warranted are included in the individual Sections of Division 2 through 16.

1.03 DEFINITIONS

- A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the County.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the County.

1.04 SUBMITTALS

- A. Submit written warranties to the County prior to requesting a Substantial Completion Inspection as outlined in Section 01700 "Project Closeout." If the Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or

a designated portion of the Work, submit written warranties upon request of the County.

- B. When a designated portion of the Work is completed and occupied or used by the County, by separate agreement with the Contractor during the construction period,

submit properly executed warranties to the County within 15-days of completion of that designated portion of the Work.

- C. When a special warranty is required to be executed by the Contractor, or the Contractor and a Subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the County for approval prior to final execution.

- D. Refer to individual Sections of Divisions 2 through 16 for specific content requirements, and particular requirements for submittal of special warranties.

- E. Prior to Substantial Completion Inspection, submit to the County two (2) copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, Subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

- 1. Bind warranties and bonds in heavy-duty, commercial quality, durable 3- ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents and sized to receive 8-1/2-inch by 11-inch three-hole punched paper.

- 2. Table of Contents will be neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification Section in which specified and the name of the product or work item.

- 3. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address and telephone number of the installer, supplier and manufacturer.

4. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the project title or name and the name, address and telephone number of the Contractor.
5. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

1.05 WARRANTY REQUIREMENT

- A. The Contractor will warrant all equipment in the Contractor's one-year warranty period even though certificates of warranty may not be required. For all major pieces of equipment, the Contractor shall submit a warranty from the equipment manufacturer. "Major" equipment is defined as a device having a 5 HP or larger motor or which lists for more than \$1,000.00.
- B. In the event that an equipment manufacturer or supplier is unwilling to provide a one-year warranty commencing at Substantial Completion, the Contractor will obtain from the manufacturer a warranty of sufficient length commencing at the time of equipment delivery to the job site, such that the warranty will extend to at least 1-year past substantial completion.
- C. If an individual specification section requires a particular warranty more stringent than that required by this Section or the General Conditions, the more stringent requirements will govern for the applicable portion of the Work.
- D. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- E. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty will be equal to the original warranty with an equitable adjustment for depreciation.
- F. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the County has benefited from use of the Work through a portion of its

anticipated useful service life.

- G. County's Recourse: Written warranties made to the County are in addition to implied warranties, and will not limit the duties, obligations, rights and remedies otherwise available under the law, nor will warranty periods be interpreted as limitations on time in which the County can enforce such other duties, obligations, rights, or remedies.
- H. Rejection of Warranties: The County reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- I. The County reserves the right to refuse to accept Work for the project where a special warranty, certification, or similar commitment is required on such work or part of the Work, until evidence is presented that entities required to counter-sign such commitments are willing to do so.
- J. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and Subcontractors required to countersign special warranties with the Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

2.01 DELIVERABLES

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and Subcontractors, and bind into a commercial quality standard 3-ring binder; submit 5 copies of the warranties and bonds to the County for review.
 - 1. The warranties and bonds shall include:
 - a. Equipment or product description
 - b. Manufacturer's name, principal, address and telephone number
 - c. Contractor, name of responsible principal, address and telephone number
 - d. Local supplier's or representatives name and address
 - e. Scope of warranty or bond
 - f. Proper procedure in case of failure

- g. Instances which might affect the validity of warranty or bond
- h. Date of beginning of warranty, bond or service and maintenance contract
- i. Duration of warranty, bond or service maintenance contract

B. Warranties

1. Furnish an extended warranty for the work certified by the manufacturer for specified materials and equipment. The manufacturer warrants the materials and equipment to be free from defects and to perform per the original specifications for 1-year from the date of acceptance. During the warranty period, any defects which affect the materials, media or equipment shall be repaired at the Contractor's expense in a manner acceptable to the County.
2. Furnish an extended warranty for all equipment certified by the manufacturer for specified material properties for a particular job. The manufacturer warrants the equipment to perform per the original specifications for 5-years (non-prorated) from the date of acceptance. During the warranty period, any defects which affect the equipment performance shall be repaired including all parts and labor at the Contractor's expense in a manner acceptable to the County.
3. Furnish an extended warranty for all odor control media certified by the manufacturer for specified material properties for a particular job. The manufacturer warrants the media to perform per the original specifications for 10-years (non-prorated) from the date of acceptance. During the warranty period, any defects which affect the media's performance shall be corrected including replacement of the media, all parts and labor at the Contractor's expense in a manner acceptable to the County.

END OF SECTION

SECTION 01800

MISCELLANEOUS WORK AND CLEANUP

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

1. This Section includes operations which cannot be specified in detail as separate items but can be sufficiently described as to the kind and extent to work involved. The Contractor shall furnish all labor, materials, equipment and incidentals to complete the work under this Section.
2. The work of this Section includes, but is not limited to, the following:
 - a. Cleaning up.
 - b. Incidental work.

PART 2 - PRODUCTS

2.01 MATERIALS

- ###### **A.**
- Materials required for this Section shall be of the same quality as materials that are to be restored. Where possible, the Contractor shall reuse existing materials that are removed and then replaced.

PART 3 - EXECUTION

3.01 CLEAN UP

- ###### **A.**
- The Contractor shall remove all construction material, buildings, equipment and other debris remaining on the job as the result of construction operations and shall render the site of the work in a neat and orderly condition. All suitable excess excavated material shall remain on site.

3.02 INCIDENTAL WORK

- A. Do all incidental work not otherwise specified, but obviously necessary for the proper completion of the contract as specified and as shown on the Drawings.

END OF SECTION

EXHIBIT G

Minimum Insurance Coverages

(Four attached pages)

The District shall require and ensure that each of its consultants and contractors (“Contractor”) maintain insurance until the completion of their work under any contract associated with the completion of the Consolidated Program contemplated by this Interlocal Agreement. Failure of the District to ensure that its Contractors maintain insurance coverage as listed below shall not relieve the District of any contractual responsibility, obligation or liability.

All Contractors hired by the District shall maintain on a primary basis and at their sole expense, at all times throughout the duration of their work on this project the following types of insurance coverage with limits and on forms (including endorsements) as described herein. These requirements, as well as the County’s review or acceptance of insurance maintained by the Contractor is not intended to and shall not in any manner limit or qualify the liabilities assumed by the District under this Interlocal Agreement. The Contractor shall maintain any coverage required by federal and state workers’ compensation or financial responsibility laws including but not limited to Chapter 324 and 440, *Florida Statutes*, as may be amended from time to time. Insurance carriers providing coverage shall be authorized and/or eligible to do business in the State of Florida and shall possess a current A.M. Best’s Financial Strength Rating of A- Class VIII.

The minimum types and amounts of insurance inclusive of any amount provided by an umbrella or excess policy, shall be as indicated herein.

When a self-insured retention or deductible exceeds \$100,000 the County reserves the right to request a copy of the Contractor’s most recent annual report or audited financial statement. For policies written on a “Claims-Made” basis the Contractor agrees to maintain a retroactive date prior to or equal to the effective date of this Interlocal Agreement. In the event the policy is canceled, non-renewed, switched to occurrence form, or any other event which triggers the right to purchase a Supplemental Extended Reporting Period (SERP) during the life of this Interlocal Agreement the Contractor agrees to purchase the SERP with a minimum reporting period of not less than two (2) years. Purchase of the SERP shall not relieve the Contractor of the obligation to provide replacement coverage.

The Contractor shall be responsible for all risk of loss whether insured or not until final completion and acceptance of the Consolidated Program by the County pursuant to the terms of this Interlocal Agreement. The Contractor agrees to be fully and solely responsible for any costs or expenses resulting from a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the application of said deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. The County has the right to request that the Contractor procure and maintain a surety bond for any deductible amounts that exceed any amount stated herein in such amount and on such form that are acceptable to the County.

The County reserves the right, but not the responsibility to periodically review any and all policies of insurance and to reasonably adjust the limits and/or types of coverage required herein, from time to time throughout the term of this Interlocal Agreement. In such event, the County will provide the Contractor written notice of such adjustments and the Contractor shall comply within thirty (30) Days of receipt thereof. Any request for an exception to these insurance requirements must be submitted in writing to the County for approval.

The Contractor agrees to specifically include the County as an additional insured on the Commercial General Liability policy with a CG 20 37 – Additional Insured - Owners, Lessees or

Contractors-Completed Operations or CG 20 10 – Additional Insured-Owners, Lessees or Contractors-Scheduled Person or Organization Endorsement, or their equivalent. The Contractor shall also specifically include the County as an Additional Insured on any Commercial Umbrella or Excess policies unless the County is automatically defined under the policy as an Additional Protected Person. Additionally, the Contractor agrees to specifically include the County as an Additional Insured under the Design-Build Contractor’s Pollution Liability coverage (when applicable). The name of the organization identified in each Additional Insured endorsement’s schedule shall read Orange County, Florida.

The Contractor agrees to provide a Waiver of Subrogation in favor of the County, the District, the Contractor, and sub-contractors for each required policy providing coverage during the life of this Interlocal Agreement. When required by the insurer, or should a policy condition not permit an endorsement, the Contractor agrees to notify the insurer and request that the policy(ies) be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or an equivalent endorsement. This Waiver of Subrogation requirement shall not apply to any policy, which includes a condition that specifically prohibits such an endorsement or voids coverage should the Contractor enter into such an agreement on a pre-loss basis.

Before execution of this Interlocal Agreement by the County and the start of any work and for the duration of this Interlocal Agreement, the Contractor shall provide the County with current certificates of insurance evidencing all required coverage. The certificates shall clearly indicate that the Contractor has obtained insurance of the type, amount and classification as required for strict compliance with this insurance section. No material change or cancellation of the insurance shall be effective without thirty (30) Days prior written notice to the County. Certificates shall specifically reference the project title and contract number. The certificate holder shall read:

**Orange County, FL
C/O Risk Management Division
109 E. Church Street, Suite 200
Orlando, Florida 32801**

Prior to commencement of any work performed by sub-contractors (if any), the Contractor shall obtain certificates of insurance evidencing coverage from each of its sub-contractors and shall furnish within five (5) business Days, copies of said certificates upon request by the County. In addition to the certificate(s) of insurance, the Contractor shall also provide a blanket or specific additional insured endorsement and all waivers of subrogation or transfer of rights of recovery endorsements for each policy.

Failure of the County to demand such certificate or other evidence of full compliance with these insurance requirements or failure of the County to identify a deficiency from evidence provided will not be construed as a waiver of the Contractor’s obligation to maintain such insurance.

Workers' Compensation

The Contractor shall maintain coverage for its employees with statutory workers' compensation limits, and no less than the limits indicated in the Schedule of Limits (see below) for Employers' Liability. Said coverage shall include a waiver of subrogation in favor of the County. The County will not accept elective exemptions. Any Contractor using an employee leasing company shall complete the County's Leased Employee Affidavit.

- Schedule of Limits for Employer's Liability
 - Contract Amount Up to \$10 Million: Statutory/\$500,000
 - Contract Amount Over \$10 Million: Statutory/\$1,000,000
- Required Endorsements
 - Waiver of Subrogation – WC 00 03 13 or its equivalent

Commercial General Liability

The Contractor shall maintain coverage issued on ISO form CG 00 01 or its equivalent, with a limit of liability of not less than the limits indicated in the Schedule of Limits (see below). The Contractor further agrees coverage shall not contain any endorsement(s) excluding or limiting product/completed operations, independent Contractors, contractual liability, or separation of insureds. The General Aggregate limit shall either apply separately to this Agreement or shall be at least twice the required occurrence limit.

All Contractors with a contract amount greater than \$20,000,000 shall be written on a Designated Premises or Projects basis. Commercial umbrella and excess coverage shall include liability coverage for damage to the Contractor's completed work equivalent to that provided under ISO Form CG 00 01 04 13.

- Schedule of Limits for Commercial General Liability
 - Contract Amount Up to \$10 Million: \$1,000,000
 - Contract Amount Over \$10 Million: \$5,000,000
- Required Endorsements
 - Additional Insured – CG 20 10 04 13 and CG 20 37 04 13 or its equivalent
 - Waiver of Subrogation – CG 24 04 05 09 or its equivalent

Note: If blanket endorsements are being submitted please include the entire endorsement. The policy number to which the endorsement applies shall be indicated directly on the endorsement.

Business Automobile Liability

The Contractor shall maintain coverage for all owned; non-owned and hired vehicles issued on ISO form CA 00 01 or its equivalent, with limits of not less than the limits indicated in the Schedule of Limits (see below). In the event the Contractor does not own automobiles, the Contractor shall maintain coverage for hired and non-owned auto liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

- **Schedule of Limits for Commercial General Liability**
 - Contract Amount Up to \$10 Million: \$1,000,000
 - Contract Amount Over \$10 Million: \$5,000,000

Builders' Risk

The Contractor shall maintain builders' risk insurance providing coverage to equally protect the interests of the County, the Contractor, and sub-contractors of any tier. Coverage shall be written on a completed value form in an amount at least equal to 100% of the estimated completed value of the project plus any subsequent modifications of that sum.

The coverage shall be written on an "all-risk" basis and shall, at a minimum cover the perils insured under the ISO CP 10 30 Special Causes of Loss Form and shall include property in transit and property stored on or off premises, which shall become part of the project. The Contractor agrees not to maintain a wind or flood sub-limit less than 25% of the estimated completed value of the project. The Contractor agrees any flat deductible(s) shall not exceed \$25,000, and any wind percentage deductible (when applicable) shall not exceed five percent (5%). The coverage shall not be subject to automatic termination of coverage in the event the project/building is occupied in whole or in part, or put to its intended use, or partially accepted by the County. If such restriction exists, the Contractor shall request that the carrier endorse the policy to amend the automatic termination clause to only terminate coverage if the policy expires, is cancelled, the County's interest in the project ceases, or the project is accepted and insured by the County.

Design-Build Contractor's Pollution Liability

The Design-Build Contractor agrees to maintain Contractor's Pollution Liability with a limit of not less than \$1,000,000 per occurrence on a per-project basis.