



**AGREEMENT BETWEEN BROWARD COUNTY AND WALTERS ZACKRIA ASSOCIATES, PLLC FOR  
CONSULTANT SERVICES FOR PROPERTY APPRAISER AND VALUE ADJUSTMENT BOARD (VAB)  
BUILDING RENOVATION  
(RFP# PNC2119501P1)**

This Agreement ("Agreement") is made and entered by and between Broward County, a political subdivision of the State of Florida ("County"), and WALTERS ZACKRIA ASSOCIATES, PLLC, a Florida corporation ("Consultant") (each a "Party" and collectively referred to as the "Parties").

**RECITALS**

A. County has met the requirements of Section 287.055, Florida Statutes, the Consultants' Competitive Negotiation Act, and has selected Consultant to perform the services hereunder.

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

**ARTICLE 1. DEFINITIONS**

- 1.1 **Board** means the Board of County Commissioners of Broward County, Florida.
- 1.2 **Contract Administrator** means the Director of Broward County Construction Management Division, the Assistant Director of Broward County Construction Management Division, or such other person designated by same in writing. The Contract Administrator is the representative of County concerning the Project.
- 1.3 **Contractor** shall mean the person, firm, corporation, or other entity who enters into an agreement with County to perform the construction work for the Project.
- 1.4 **County Business Enterprise** or **CBE** means an entity certified as meeting the applicable requirements of Section 1-81, Broward County Code of Ordinances.
- 1.5 **Notice to Proceed** means a written authorization to proceed with the Project, phase, or task, issued by the Contract Administrator.
- 1.6 **Project** means renovation of an existing 3-story office building, totaling approximately 74,800 Sq. Ft located approximately at 1801 NW 49 Street Fort Lauderdale, Florida 33309.
- 1.7 **Purchasing Director** means County's Director of Purchasing as appointed by the Broward County Administrator.
- 1.8 **Services** means the work set forth in Exhibit A, Scope of Services, and shall include civil, structural, mechanical, and electrical engineering, architectural services, and other professional

design services as applicable for the Project, and any Optional Services procured under this Agreement.

1.9 **Small Business Enterprise or SBE** means an entity certified as meeting the applicable requirements of Section 1-81, Broward County Code of Ordinances.

1.10 **Subconsultant** means an entity or individual providing services to County through Consultant for all or any portion of the work under this Agreement. The term "Subconsultant" shall include all subcontractors.

## ARTICLE 2. EXHIBITS

<b>Exhibit A</b>	<b>Scope of Services</b>
<b>Exhibit B</b>	<b>Maximum Billing Rates</b>
<b>Exhibit C</b>	<b>Schedule of Subconsultant Participation</b>
<b>Exhibit D</b>	<b>Schedule of CBE Participation and Letters of Intent</b>
<b>Exhibit E</b>	<b>Minimum Insurance Coverages</b>

## ARTICLE 3. SCOPE OF SERVICES

3.1 Consultant shall provide all Services as set forth in Exhibit A, including all necessary, incidental, and related activities required for full and complete performance of this Agreement (the "Scope of Services").

3.2 This Agreement does not delineate every detail and minor work task required to be performed by Consultant to complete the Project. During the course of the performance of the Services included in this Agreement, if Consultant determines that work should be performed to complete the Project and, in Consultant's opinion, that work is outside the level of effort originally anticipated, whether or not the Scope of Services identifies the work items, Consultant shall notify Contract Administrator in writing in a timely manner before proceeding with the work. If Consultant proceeds with such work without notifying the Contract Administrator, the work shall be deemed to be within the original level of effort, whether or not specifically addressed in the Scope of Services. Notice to Contract Administrator does not constitute authorization or approval by County to Consultant to perform the work. Unless there is a dispute as set forth in Section 6.4, any work performed by Consultant outside the originally anticipated level of effort without prior written County approval shall be at no additional cost to County.

3.3 Exhibit A identifies the initial services related to the Project, and additional negotiations may be required for other phases or additional services. County and Consultant may negotiate additional services, compensation, time of performance, and other related matters, including for other phases of the Project. Notwithstanding the foregoing, County shall have the right to terminate negotiations at any time at no cost to County and procure services for other Project phases from any other source.

3.4 County shall assist Consultant by placing at Consultant's disposal all information County has available pertinent to the Project, including previous reports and any other data relative to design or construction of the Project. County shall arrange for access to, and make all provisions for, Consultant to enter upon public and private property as required for Consultant to perform its Services. County shall review any itemized deliverables and documents required to be submitted by Consultant and respond in writing with any comments within the time set forth in Exhibit A. County shall give prompt written notice to Consultant whenever County observes or otherwise becomes aware of any material defect in the work of the Contractor or other material development that affects the scope or timing of Consultant's Services.

#### **ARTICLE 4. TIME FOR PERFORMANCE**

4.1 Consultant shall perform the Services within the time periods specified in Exhibit A. Time periods shall commence from the date of the applicable Notice to Proceed.

4.2 Consultant must receive a Notice to Proceed from the Contract Administrator prior to commencement of Services and any phase of Services under this Agreement. Prior to granting approval for Consultant to proceed to any phase, the Contract Administrator may, at his or her sole option, require Consultant to submit the itemized deliverables and documents identified in Exhibit A for the Contract Administrator's review.

4.3 If the Contract Administrator determines that Consultant is unable to complete Services because of delays resulting from untimely review by County or other governmental agencies having jurisdiction over the Project and such delays are not the fault of Consultant, or because of delays caused by factors outside the control of Consultant, County shall grant a reasonable extension of time for completion of the Services and shall provide reasonable compensation, if appropriate. It shall be the responsibility of Consultant to notify the Contract Administrator in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and whenever a delay has been caused by factors outside of Consultant's control, and to inform the Contract Administrator of all facts and details related to the delay. Consultant must provide such written notice to the Contract Administrator within three (3) business days after the occurrence of the event causing the delay.

4.4 If (a) Contractor fails to substantially complete the Project on or before the substantial completion date specified in its agreement with County, or (b) if Contractor is granted an extension of time beyond said substantial completion date and Consultant's Services are extended beyond the substantial completion date through no fault of Consultant, then Consultant shall be compensated in accordance with Article 5 for all Services rendered by Consultant beyond the substantial completion date.

4.5 Notwithstanding Section 4.4, if Contractor fails to substantially complete the Project on or before the substantial completion date specified in its agreement with County, and the failure to substantially complete is caused in whole or in part by Consultant, then Consultant shall pay to County its proportional share of any claim for damages to Contractor arising out of the delay.

The provisions for the computation of delay costs, damages, or any other amounts, whether direct or indirect, in the agreement between the Contractor and County are incorporated herein. This section shall not affect the indemnification rights or obligations of either Party otherwise set forth in this Agreement.

## ARTICLE 5. COMPENSATION AND METHOD OF PAYMENT

5.1 Amount and Method of Compensation. The amounts set forth in this Article 5 are the total compensation payable to Consultant and constitute a limitation upon County's obligation to compensate Consultant for Services under this Agreement, but do not constitute a limitation of any sort upon Consultant's obligation to perform all Services required under this Agreement.

5.1.1 Maximum Amount Not-To-Exceed Compensation. For Basic Services identified in Exhibit A as payable on a "Maximum Amount Not-To-Exceed" basis, compensation to Consultant shall be based upon the Salary Costs as described in Section 5.2 up to a maximum not-to-exceed amount of \$0.00.

5.1.2 Lump Sum Compensation. For Basic Services identified in Exhibit A as payable on a "Lump Sum" basis, compensation to Consultant shall be not more than a total lump sum of \$1,522,203.44.

5.1.3 Optional Services. County may procure Optional Services up to a maximum not-to-exceed amount of \$350,000.00 pursuant to Article 6. Unused amounts of these Optional Services monies shall be retained by County.

5.1.4 Reimbursable Expenses. County will reimburse authorized Reimbursable Expenses as defined in Section 5.3 up to a maximum not-to-exceed amount of \$10,000.00. Unused amounts of those monies shall be retained by County.

5.1.5 Salary Costs. The maximum billing rates payable by County for each of Consultant's employee categories are shown on Exhibit B and are further described in Section 5.2.

5.1.6 Subconsultant Fees. Consultant shall bill Subconsultant fees using the employee categories for Salary Costs on Exhibit B as defined in Section 5.2 and Reimbursable Expenses defined in Section 5.3. Consultant shall bill Subconsultant fees with no mark-up and within any applicable maximum not to exceed amount.

5.1.7 Phased Payments. Payments for Basic Services shall be paid out pursuant to the Project phasing specified in Exhibit A and shall not exceed the amount set forth below for the applicable phase. The invoiced fee amount for each phase shall be subject to retainage as set forth in Section 5.5. The fee percentages in the following table are rounded up to the nearest two decimal places and are only included for demonstrative purposes.



<b>Project Phase</b>	<b>Fee %</b>	<b>Phase Amount</b>
Predesign Services/Programming Phase	12.57%	\$191,387.27
Schematic Design Phase	12.40%	\$188,697.73
Design Development Phase	11.39%	\$173,343.10
60% Construction Documents Phase	14.54%	\$221,376.62
85% Construction Documents Phase	10.93%	\$166,383.71
100% Construction Documents Phase	7.74%	\$117,780.67
Bidding and Award of Contract	2.92%	\$44,497.24
Administration of the Construction Contract	26.16%	\$398,135.71
Warranty Administration and Post-Occupancy Services	1.35%	\$20,601.39
<b>Total Basic Services Fee</b>	<b>100%</b>	<b>\$1,522,203.44</b>

5.2 **Salary Costs.** The term Salary Costs as used herein shall mean the hourly rate actually paid to all personnel engaged directly on the Project, as adjusted by an overall multiplier that consists of the following: 1) a fringe benefits factor; 2) an overhead factor; and 3) an operating margin. Said Salary Costs are to be used only for time directly attributable to the Project. The fringe benefit and overhead rates shall be Consultant’s most recent and actual rates determined in accordance with Federal Acquisition Regulation (“FAR”) guidelines and audited by an independent Certified Public Accountant. For the purposes of this Agreement, the rates must be audited for fiscal periods of Consultant within eighteen (18) months preceding the execution date of this Agreement. These rates shall remain in effect for the term of this Agreement except as provided for in this Section 5.2 inclusive of the subsections below.

5.2.1 Consultant shall require all of its Subconsultants to comply with the requirements of Section 5.2.

5.2.2 Salary Costs for Consultant and Subconsultants as shown in Exhibit B are the Maximum Billing Rates, which are provisional, subject to audit of actual costs, and if the audit discloses that the actual costs are less than the costs set forth on Exhibit B for Consultant or any Subconsultant, Consultant shall reimburse County based upon the actual costs determined by the audit. County may withhold the amount Consultant is required to reimburse County from any payment due Consultant.

5.2.3 Unless otherwise noted, the Salary Costs stated above are based upon Consultant’s “home office” rates. Should it become appropriate during the course of this Agreement that a “field office” rate be applied, then it is incumbent upon Consultant to submit a supplemental Exhibit B reflective of such rates for approval by Contract Administrator and, upon such County approval, invoice County accordingly.

5.2.4 The total hours payable by County for any “exempt” or “nonexempt” personnel shall not exceed forty (40) hours per employee in any week. If the work requires Consultant’s or Subconsultant’s personnel to work in excess of forty (40) hours per week, any additional hours must be authorized in advance, in writing, by the Contract Administrator. If approved, Salary Costs for additional hours of service provided by

nonexempt (hourly) employees or exempt (salaried) employees shall be invoiced at no more than one and one-half of the employee's hourly rate and in a manner consistent with Consultant's or Subconsultant's applicable certified FAR audit and all other provisions of Section 5.2. If a "Safe Harbor" rate is elected for use by Consultant or Subconsultant, then the additional hours are payable at no more than the employee's regular rate.

5.2.5 Consultant and any of its Subconsultants may alternatively use a "Safe Harbor" combined fringe benefit and overhead rate of 110% in lieu of providing fringe benefit and overhead cost factors certified by an independent Certified Public Accountant in accordance with the FAR guidelines. The Safe Harbor rate, once elected, shall remain in place for the entire term of this Agreement, and be applicable for use as "home" and "field" fringe benefit and overhead rates, if applicable, and shall not be subject to audit under this Agreement. All other provisions of Section 5.2 remain in place.

5.2.6 Notwithstanding the Salary Costs (formula and requirements) set forth in Section 5.2 above, hourly rates regarding VDCO Tech, Inc. have been negotiated with Consultant utilizing a method and factors agreed to by Consultant and the Contract Administrator which do not comply with Section 5.2. The method and factors utilized to determine the hourly rates are set forth on Exhibit B, attached hereto.

5.3 Reimbursable Expenses. For reimbursement of any travel costs, travel-related expenses, or other direct nonsalary expenses directly attributable to this Project permitted under this Agreement, Consultant agrees to adhere to Section 112.061, Florida Statutes, except to the extent otherwise stated herein. County shall not be liable for any such expenses that have not been approved in writing in advance by the Contract Administrator. Reimbursable Subconsultant expenses must also comply with the requirements of this section.

5.4 Method of Billing.

5.4.1 For Maximum Amount Not-To-Exceed Compensation under Section 5.1.1. Consultant shall submit billings that are identified by the specific project number on a monthly basis in a timely manner for all Salary Costs and Reimbursable Expenses attributable to the Project. These billings shall identify the nature of the work performed, the total hours of work performed, and the employee category of the individuals performing same. Billings shall itemize and summarize Reimbursable Expenses by category and identify the personnel incurring the expense and the nature of the work with which such expense was associated. Where prior written approval by Contract Administrator is required for Reimbursable Expenses, a copy of said approval shall accompany the billing for such reimbursable. Billings shall also indicate the cumulative amount of CBE participation to date. The statement shall show a summary of Salary Costs and Reimbursable Expenses with accrual of the total and credits for portions paid previously. External Reimbursable Expenses and Subconsultant fees must be documented by copies of invoices or receipts that describe the nature of the expenses

and contain a project number or other identifier that clearly indicates the expense is identifiable to the Project. Subsequent addition of the identifier to the invoice or receipt by Consultant is not acceptable except for meals and travel expenses. Internal expenses must be documented by appropriate Consultant's cost accounting forms with a summary of charges by category. When requested, Consultant shall provide backup for past and current invoices that records hours and Salary Costs by employee category, Reimbursable Expenses by category, and Subconsultant fees on a task basis, so that total hours and costs by task may be determined.

5.4.2 For Lump Sum Compensation under Section 5.1.2. Consultant shall submit billings that are identified by the specific project number on a monthly basis in a timely manner. These billings shall identify the nature of the work performed, the phase of work, and the estimated percent of work accomplished. Billings for each phase shall not exceed the amounts allocated to said phase. Billings shall also indicate the cumulative amount of CBE participation to date. The statement shall show a summary of fees with accrual of the total and credits for portions paid previously. When requested, Consultant shall provide backup for past and current invoices that record hours, salary costs, and expense costs on a task basis, so that total hours and costs by task may be determined.

## 5.5 Method of Payment.

5.5.1 County shall pay Consultant within thirty (30) days after receipt of Consultant's proper invoice, as defined by County's Prompt Payment Ordinance, minus any applicable retainage or other deductions permitted by this Agreement.

5.5.2 Unless otherwise provided in this section, retainage in the amount of ten percent (10%) of each invoice shall be retained by County until satisfactory completion of the applicable phase. When the Services to be performed on all phases of the Project are fifty percent (50%) complete, upon written request by Consultant and written approval by the Contract Administrator that the Project is progressing in a satisfactory manner, the Contract Administrator, in his or her sole discretion, may authorize the reduction of retainage to five percent (5%) of each invoice for subsequent payments. No amount shall be withheld from payments for Reimbursable Expenses or for Services performed during the construction phase.

5.5.3 Upon Consultant's completion of each phase to the satisfaction of the Contract Administrator, County shall remit to Consultant any amounts withheld as retainage for that phase. Final payment for the Project must be approved by the Purchasing Director.

5.5.4 Payment will be made to Consultant at the following address: 5813 N Andrews Way, Fort Lauderdale, Florida 33309.

5.6 Fiscal Year. The continuation of this Agreement beyond the end of any County fiscal year is subject to both the appropriation and the availability of funds in accordance with Chapter 129, Florida Statutes.

5.7 Consultant shall pay Subconsultants and suppliers providing Services under this Agreement within fifteen (15) days following receipt of payment from County for such subcontracted work or supplies. If Consultant withholds an amount as retainage from a Subconsultant or supplier, Consultant shall release such retainage and pay same within fifteen (15) days following receipt of payment of retained amounts from County. The Contract Administrator may, at its option, increase allowable retainage or withhold progress payments unless and until Consultant demonstrates timely payments of sums due to all Subconsultants and suppliers. Consultant shall include requirements substantially similar to those set forth in this section in its contracts with Subconsultants and suppliers.

**ARTICLE 6. OPTIONAL AND ADDITIONAL SERVICES;  
CHANGES IN SCOPE OF SERVICES**

6.1 County or Consultant may request changes that would increase, decrease, or otherwise modify the Scope of Services to be provided under this Agreement. Unless otherwise expressly permitted herein, such changes must be made in accordance with the provisions of the Broward County Procurement Code and must be contained in a written amendment, executed by the Parties hereto, with the same formality and of equal dignity herewith.

6.2 To the extent any goods or services under this Agreement, or the quantity thereof, are identified as optional ("Optional Services"), County may select the type, amount, and timing of such goods or services pursuant to a work authorization ("Work Authorization") as executed by Consultant and County pursuant to this section. No such selection, when combined with those goods or services required under this Agreement, may result in a payment obligation exceeding the applicable maximum amount stated in Article 5. A Work Authorization for Optional Services shall specify the method of compensation applicable to that Work Authorization and the required completion date for those additional services.

6.3 Notwithstanding anything to the contrary in this Agreement, Work Authorizations for Optional Services shall be executed on behalf of County as follows: (a) the Contract Administrator may execute Work Authorizations for which the total cost to County in the aggregate is less than \$50,000.00; (b) the Purchasing Director may execute Work Authorizations for which the total cost to County in the aggregate is within the Purchasing Director's delegated authority; and (c) any Work Authorization above the Purchasing Director's delegated authority requires express approval by the Board. Subsequent to the full execution of any Work Authorization, the Contract Administrator will issue a Notice to Proceed for those authorized Optional Services. Consultant shall not commence work on any Work Authorization until after receipt of a purchase order and Notice to Proceed.

6.4 If a dispute between the Contract Administrator and Consultant arises over whether any work requested by County is within the scope of contracted Services and such dispute cannot be resolved by the Contract Administrator and Consultant, such dispute shall be promptly presented to the County Administrator or his or her designee for resolution, whose decision shall be in writing and shall be final and binding on the Parties. During the pendency of any dispute, Consultant shall promptly perform the disputed work.

## ARTICLE 7. REPRESENTATIONS AND WARRANTIES

7.1 Representation of Authority. Consultant represents and warrants that this Agreement constitutes the legal, valid, binding, and enforceable obligation of Consultant, and that neither the execution nor performance of this Agreement constitutes a breach of any agreement that Consultant has with any third party or violates any law, rule, regulation, or duty arising in law or equity applicable to Consultant. Consultant further represents and warrants that execution of this Agreement is within Consultant's legal powers, and each individual executing this Agreement on behalf of Consultant is duly authorized by all necessary and appropriate action to do so on behalf of Consultant and does so with full legal authority.

7.2 Claims Against Consultant. Consultant represents and warrants that there is no action or proceeding, at law or in equity, before any court, mediator, arbitrator, governmental, or other board or official, pending or, to the knowledge of Consultant, threatened against or affecting Consultant, the outcome of which may (a) affect the validity or enforceability of this Agreement, (b) materially and adversely affect the authority or ability of Consultant to perform its obligations under this Agreement, or (c) have a material and adverse effect on the consolidated financial condition or results of operations of Consultant or on the ability of Consultant to conduct its business as presently conducted or as proposed or contemplated to be conducted.

7.3 Solicitation Representations. Consultant represents and warrants that all statements and representations made in Consultant's proposal, bid, or other supporting documents submitted to County in connection with the solicitation, negotiation, or award of this Agreement, including during the procurement or evaluation process, were true and correct when made and are true and correct as of the date Consultant executes this Agreement, unless otherwise expressly disclosed in writing by Consultant.

7.4 Contingency Fee. Consultant represents that it has not paid or agreed to pay any person or entity, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement. If this Agreement is subject to Section 287.055, Florida Statutes, the Parties agree and stipulate that the statutory language stated in Section 287.055(6)(a) is deemed included and fully incorporated herein.

7.5 Truth-In-Negotiation Representation. Consultant's compensation under this Agreement is based upon its representations to County, and Consultant certifies that the wage rates, factual unit costs, and other information supplied to substantiate Consultant's compensation, including,

without limitation, in the negotiation of this Agreement, are accurate, complete, and current as of the date Consultant executes this Agreement. Consultant's compensation will be reduced to exclude any significant sums by which the contract price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs.

7.6 Public Entity Crime Act. Consultant represents that it is familiar with the requirements and prohibitions under the Public Entity Crime Act, Section 287.133, Florida Statutes, and represents that its entry into this Agreement will not violate that Act. Consultant further represents that there has been no determination that it committed a "public entity crime" as defined by Section 287.133, Florida Statutes, and that it has not been formally charged with committing an act defined as a "public entity crime" regardless of the amount of money involved or whether Consultant has been placed on the convicted vendor list.

7.7 Discriminatory Vendor and Scrutinized Companies Lists. Consultant represents that it has not been placed on the "discriminatory vendor list" as provided in Section 287.134, Florida Statutes, and that it is not a "scrutinized company" pursuant to Section 215.473, Florida Statutes. Consultant represents and certifies that it is not ineligible to contract with County on any of the grounds stated in Section 287.135, Florida Statutes.

7.8 Warranty of Performance. Consultant represents and warrants that it possesses the knowledge, skill, experience, and financial capability required to perform and provide all required and optional Services under this Agreement, and that each person and entity that will provide Services under this Agreement is duly qualified to perform such services by all appropriate governmental authorities, where required, and is sufficiently experienced and skilled in the area(s) for which such person or entity will render Services. Consultant represents and warrants that the Services under this Agreement shall be performed in a skillful and respectful manner, and that the quality of all such services shall equal or exceed prevailing industry standards for the provision of such services.

7.9 Domestic Partnership Requirement. Unless this Agreement is exempt from the provisions of the Broward County Domestic Partnership Act, Section 16½-157, Broward County Code of Ordinances, Consultant certifies and represents that it will comply with the provisions of Section 16½-157 for the duration of this Agreement. The contract language referenced in Section 16½-157 is deemed incorporated in this Agreement as though fully set forth in this section.

7.10 Breach of Representations. In entering into this Agreement, Consultant acknowledges that County is materially relying on the representations, warranties, and certifications of Consultant stated in this article. County shall be entitled to recover any damages it incurs to the extent any such representation or warranty is untrue. In addition, if any such representation, warranty, or certification is false, County shall have the right, at its sole discretion, to terminate this Agreement without any further liability to Consultant, to deduct from the compensation due Consultant under this Agreement the full amount of any value paid in violation of a representation or warranty, and to recover all sums paid to Consultant under this Agreement.



Furthermore, a false representation may result in debarment from County's procurement activities.

## ARTICLE 8. TERMINATION

8.1 Termination. This Agreement or any Work Authorization issued under this Agreement may be terminated for cause by the aggrieved Party if the Party in breach has not corrected the breach within ten (10) days after receipt of written notice from the aggrieved Party identifying the breach. This Agreement may also be terminated for convenience by the Board. Termination for convenience by the Board shall be effective on the termination date stated in written notice provided by County, which termination date shall be not less than thirty (30) days after the date of such written notice. If this Agreement or any Work Authorization was entered into on behalf of County by someone other than the Board, termination by County may be by action of the County Administrator or County representative (including his or her successor) who entered in this Agreement on behalf of County. This Agreement may also be terminated by the County Administrator upon such notice as the County Administrator deems appropriate under the circumstances if the County Administrator determines that termination is necessary to protect the public health, safety, or welfare. If County erroneously, improperly, or unjustifiably terminates for cause, such termination shall be deemed a termination for convenience and shall be effective thirty (30) days after such notice of termination for cause was provided and Consultant shall be eligible for the compensation provided in Section 8.4 as its sole remedy.

8.2 This Agreement may be terminated for cause by County for reasons including, but not limited to, any of the following:

8.2.1 Consultant's failure to suitably or continuously perform the Services in a manner calculated to meet or accomplish the objectives in this Agreement or Work Authorization, or repeated (whether negligent or intentional) submission for payment of false or incorrect bills or invoices;

8.2.2 By the Contract Administrator or the Director of Office of Economic and Small Business Development ("OESBD") for any fraud, misrepresentation, or material misstatement by Consultant in the award or performance of this Agreement or that otherwise violates any applicable requirement of Section 1-81, Broward County Code of Ordinances; or

8.2.3 By the Director of the OESBD upon the disqualification of Consultant as a CBE or SBE if Consultant's status as a CBE or SBE was a factor in the award of this Agreement and such status was misrepresented by Consultant, or upon the disqualification of one or more of Consultant's CBE or SBE participants by County's Director of the OESBD if any such participant's status as a CBE or SBE firm was a factor in the award of this Agreement and such status was misrepresented by Consultant during the procurement or the performance of this Agreement.

8.3 Notice of termination shall be provided in accordance with the "Notices" section of this Agreement except that notice of termination by the County Administrator to protect the public health, safety, or welfare may be oral notice that shall be promptly confirmed in writing.

8.4 If this Agreement or a Work Authorization issued under this Agreement is terminated for convenience, Consultant shall be paid for any Services properly performed under this Agreement or Work Authorization through the termination date specified in the written notice of termination, subject to any right of County to retain any sums otherwise due and payable. Consultant acknowledges that it has received good, valuable, and sufficient consideration for County's right to terminate this Agreement for convenience in the form of County's obligation to provide advance notice to Consultant of such termination in accordance with Section 8.1.

8.5 If this Agreement or a Work Authorization is terminated, for any reason, any amounts due Consultant shall be withheld by County until Consultant has provided all documents required to be provided to County. In addition to any right of termination stated in this Agreement, County shall be entitled to seek any and all available remedies, whether stated in this Agreement or otherwise available at law or in equity.

#### **ARTICLE 9. INSURANCE**

9.1 For the duration of the Agreement, Consultant shall, at its sole expense, maintain the minimum insurance coverages stated in Exhibit E in accordance with the terms and conditions of this article. Consultant shall maintain insurance coverage against claims relating to any act or omission by Consultant, its agents, representatives, employees, or Subconsultants in connection with this Agreement. County reserves the right at any time to review and adjust the limits and types of coverage required under this article.

9.2 Consultant shall ensure that "Broward County" is listed and endorsed as an additional insured as stated in Exhibit E on all policies required under this article.

9.3 On or before the date this Agreement is fully executed or at least fifteen (15) days prior to commencement of Services, Consultant shall provide County with a copy of all Certificates of Insurance or other documentation sufficient to demonstrate the insurance coverage required in this article. If and to the extent requested by County, Consultant shall provide complete, certified copies of all required insurance policies and all required endorsements within thirty (30) days after County's request.

9.4 Consultant shall ensure that all insurance coverages required by this article shall remain in full force and effect for the duration of this Agreement and until all performance required by Consultant has been completed, as determined by Contract Administrator. Consultant or its insurer shall provide notice to County of any cancellation or modification of any required policy at least thirty (30) days prior to the effective date of cancellation or modification, and at least ten (10) days prior to the effective date of any cancellation due to nonpayment, and shall concurrently provide County with a copy of its updated Certificates of Insurance evidencing

continuation of the required coverage(s). Consultant shall ensure that there is no lapse of coverage at any time during the time period for which coverage is required by this article.

9.5 Consultant shall ensure that all required insurance policies are issued by insurers: (1) assigned an A. M. Best rating of at least "A-" with a Financial Size Category of at least Class VII; (2) authorized to transact insurance in the State of Florida; or (3) a qualified eligible surplus lines insurer pursuant to Section 626.917 or 626.918, Florida Statutes, with approval by County's Risk Management Division.

9.6 If Consultant maintains broader coverage or higher limits than the minimum insurance requirements stated in Exhibit E, County shall be entitled to any such broader coverage and higher limits maintained by Consultant. All required insurance coverages under this article shall provide primary coverage and shall not require contribution from any County insurance, self-insurance or otherwise, which shall be in excess of and shall not contribute to the insurance required and provided by Consultant.

9.7 Consultant shall declare in writing any self-insured retentions or deductibles over the limit(s) prescribed in Exhibit E and submit to County for approval at least fifteen (15) days prior to the date this Agreement is fully executed or commencement of Services. Consultant shall be solely responsible for and shall pay any deductible or self-insured retention applicable to any claim against County. County may, at any time, require Consultant to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. Consultant agrees that any deductible or self-insured retention may be satisfied by either the named insured or County, if so elected by County, and Consultant agrees to obtain same in endorsements to the required policies.

9.8 Unless prohibited by the applicable policy, Consultant waives any right to subrogation that any of Consultant's insurer may acquire against County and agrees to obtain same in an endorsement of Consultant's insurance policies.

9.9 Consultant shall require that each Subconsultant maintains insurance coverage that adequately covers the Services provided by that Subconsultant on substantially the same insurance terms and conditions required of Consultant under this article. Consultant shall ensure that all such Subconsultants comply with these requirements and that "Broward County" is named as an additional insured under the Subconsultants' applicable insurance policies.

9.10 If Consultant or any Subconsultant fails to maintain the insurance required by this Agreement, County may pay any costs of premiums necessary to maintain the required coverage and deduct such costs from any payment otherwise due to Consultant. Consultant shall not permit any Subconsultant to provide Services under this Agreement unless and until the requirements of this article are satisfied. If requested by County, Consultant shall provide, within one (1) business day, evidence of each Subconsultant's compliance with this section

9.11 If any of the policies required under this article provide claims-made coverage: (1) any retroactive date must be prior to the date this Agreement is fully executed; (2) the required coverage must be maintained after termination or expiration of the Agreement for at least the duration stated in Exhibit E, and (3) if coverage is canceled or nonrenewed and is not replaced with another claims-made policy form with a retroactive date prior to the date this Agreement is fully executed, Consultant must obtain and maintain "extended reporting" coverage that applies after termination or expiration of the Agreement for at least the duration stated in Exhibit E.

#### **ARTICLE 10. EQUAL EMPLOYMENT OPPORTUNITY AND CBE/SBE COMPLIANCE**

10.1 No Party may discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, sexual orientation, pregnancy, or gender identity and expression in the performance of this Agreement. Consultant shall include the foregoing or similar language in its contracts with any Subconsultants, except that any project assisted by the U.S. Department of Transportation funds shall comply with the nondiscrimination requirements in 49 C.F.R. Parts 23 and 26.

10.2 Consultant shall comply with all applicable requirements of Section 1-81, Broward County Code of Ordinances, in the award and administration of this Agreement. Failure by Consultant to carry out any of the requirements of this article shall constitute a material breach of this Agreement, which shall permit County to terminate this Agreement or exercise any other remedy provided under this Agreement, the Broward County Code of Ordinances, the Broward County Administrative Code, or under other applicable law, all such remedies being cumulative.

10.3 Consultant will meet the required CBE goal by utilizing the CBE firms listed in Exhibit D (or a CBE firm substituted for a listed firm, if permitted) for Twenty Five and One-Fifth Percent (25.20%) of total Services under this Agreement (the "Commitment").

10.4 In performing the Services, Consultant shall utilize the CBE firms listed in Exhibit D for the scope of work and the percentage of work amounts identified on each Letter of Intent. Promptly upon execution of this Agreement by County, Consultant shall enter into formal contracts with the CBE firms listed in Exhibit D and, upon request, shall provide copies of the contracts to the Contract Administrator and OESBD.

10.5 Each CBE firm utilized by Consultant to meet the CBE goal must be certified by OESBD. Consultant shall inform County immediately when a CBE firm is not able to perform or if Consultant believes the CBE firm should be replaced for any other reason, so that OESBD may review and verify the good faith efforts of Consultant to substitute the CBE firm with another CBE firm. Whenever a CBE firm is terminated for any reason, Consultant shall provide written notice to OESBD and, upon written approval of the Director of OESBD, shall substitute another CBE firm in order to meet the CBE goal, unless otherwise provided in this Agreement or agreed in writing by the Parties. Such substitution shall not be required in the event the termination results from modification of the Scope of Services and no CBE firm is available to perform the modified Scope

of Services; in which event Consultant shall notify County, and OESBD may adjust the CBE goal by written notice to Consultant. Consultant shall not terminate a CBE firm for convenience without County's prior written consent, which consent shall not be unreasonably withheld.

10.6 The Parties stipulate that if Consultant fails to meet the Commitment, the damages to County arising from such failure are not readily ascertainable at the time of contracting. If Consultant fails to meet the Commitment and County determines, in the sole discretion of the OESBD Program Director, that Consultant failed to make Good Faith Efforts (as defined in Section 1-81, Broward County Code of Ordinances) to meet the Commitment, Consultant shall pay County liquidated damages in an amount equal to fifty percent (50%) of the actual dollar amount by which Consultant failed to achieve the Commitment, up to a maximum amount of ten percent (10%) of the total contract amount, excluding costs and reimbursable expenses. An example of this calculation is stated in Section 1-81.7, Broward County Code of Ordinances. As elected by County, such liquidated damages amount shall be either credited against any amounts due from County, or must be paid to County within thirty (30) days after written demand. These liquidated damages shall be County's sole contractual remedy for Consultant's breach of the Commitment, but shall not affect the availability of administrative remedies under Section 1-81. Any failure to meet the Commitment attributable solely to force majeure, changes to the scope of work by County, or inability to substitute a CBE Subconsultant where the OESBD Program Director has determined that such inability is due to no fault of Consultant, shall not be deemed a failure by Consultant to meet the Commitment.

10.7 Consultant acknowledges that the Board, acting through OESBD, may make minor administrative modifications to Section 1-81, Broward County Code of Ordinances, which shall become applicable to this Agreement if the administrative modifications are not unreasonable. Written notice of any such modification shall be provided to Consultant and shall include a deadline for Consultant to notify County in writing if Consultant concludes that the modification exceeds the authority under this section. Failure of Consultant to timely notify County of its conclusion that the modification exceeds such authority shall be deemed acceptance of the modification by Consultant.

10.8 County may modify the required participation of CBE firms under this Agreement in connection with any amendment, extension, modification, change order, or Work Authorization to this Agreement that, by itself or aggregated with previous amendments, extensions, modifications, change orders, or Work Authorizations, increases the initial Agreement price by ten percent (10%) or more. Consultant shall make a good faith effort to include CBE firms in work resulting from any such amendment, extension, modification, change order, or Work Authorization, and shall report such efforts, along with evidence thereof, to OESBD.

10.9 Consultant shall provide written monthly reports to the Contract Administrator attesting to Consultant's compliance with the CBE goal stated in this article. In addition, Consultant shall allow County to engage in onsite reviews to monitor Consultant's progress in achieving and maintaining Consultant's contractual and CBE obligations. The Contract Administrator in

conjunction with OESBD shall perform such review and monitoring, unless otherwise determined by the County Administrator.

10.10 The presence of a “pay when paid” provision in a Consultant’s contract with a CBE firm shall not preclude County or its representatives from inquiring into allegations of nonpayment or exercising any right stated in Section 5.7.

## ARTICLE 11. MISCELLANEOUS

11.1 Contract Administrator Authority. The Contract Administrator is authorized to coordinate and communicate with Consultant to manage and supervise the performance of this Agreement. Unless expressly stated otherwise in this Agreement or otherwise set forth in an applicable provision of the Broward County Procurement Code, Broward County Code of Ordinances, or Broward County Administrative Code, the Contract Administrator may exercise any ministerial authority under this Agreement in connection with the day-to-day management of this Agreement provided that such instructions and determinations do not change the Scope of Services. The Contract Administrator may designate one or more County employees with authority pertaining to day-to-day Project management or activities. Consultant shall notify Contract Administrator in writing of Consultant’s representative(s) to whom matters involving the Project shall be addressed.

11.2 Rights in Documents and Work. Any and all reports, photographs, surveys, documents, materials, or other work created by Consultant in connection with performing Services shall be owned by County, and Consultant hereby transfers to County all right, title, and interest, including any copyright or other intellectual property rights, in or to the work. Upon termination of this Agreement, any reports, photographs, surveys, and other data and documents prepared by Consultant, whether finished or unfinished, shall become the property of County and shall be delivered by Consultant to the Contract Administrator within seven (7) days after termination of this Agreement. Any compensation due to Consultant may be withheld until all documents are received as provided in this Agreement. Consultant shall ensure that the requirements of this section are included in all agreements with its Subconsultant(s).

11.3 Ownership of Documents. All finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, specifications and reports prepared or provided by Consultant in connection with this Agreement shall be the property of County, whether the Project for which they are made is completed or not, and shall be delivered by Consultant to Contract Administrator within fifteen (15) days after the receipt of the written notice of termination. If applicable, County may withhold any payments then due to Consultant until Consultant complies with the provisions of this section.

11.4 Public Records. To the extent Consultant is acting on behalf of County as stated in Section 119.0701, Florida Statutes, Consultant shall:



11.4.1 Keep and maintain public records required by County to perform the services under this Agreement;

11.4.2 Upon request from County, provide County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by law;

11.4.3 Ensure that public records that are exempt or confidential and exempt from public record requirements are not disclosed except as authorized by law for the duration of this Agreement and following completion or termination of this Agreement if the records are not transferred to County; and

11.4.4 Upon completion or termination of this Agreement, transfer to County, at no cost, all public records in possession of Consultant or keep and maintain public records required by County to perform the services. If Consultant transfers the records to County, Consultant shall destroy any duplicate public records that are exempt or confidential and exempt. If Consultant keeps and maintains the public records, Consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to County upon request in a format that is compatible with the information technology systems of County.

A request for public records regarding this Agreement must be made directly to County, who will be responsible for responding to any such public records requests. Consultant will provide any requested records to County to enable County to respond to the public records request.

Any material submitted to County that Consultant contends constitutes or contains trade secrets or is otherwise exempt from production under Florida public records laws (including Chapter 119, Florida Statutes) ("Trade Secret Materials") must be separately submitted and conspicuously labeled "EXEMPT FROM PUBLIC RECORD PRODUCTION – TRADE SECRET." In addition, Consultant must, simultaneous with the submission of any Trade Secret Materials, provide a sworn affidavit from a person with personal knowledge attesting that the Trade Secret Materials constitute trade secrets under Section 812.081, Florida Statutes, and stating the factual basis for same. If that a third party submits a request to County for records designated by Consultant as Trade Secret Materials, County shall refrain from disclosing the Trade Secret Materials, unless otherwise ordered by a court of competent jurisdiction or authorized in writing by Consultant. Consultant shall indemnify and defend County and its employees and agents from any and all claims, causes of action, losses, fines, penalties, damages, judgments, and liabilities of any kind, including attorneys' fees, litigation expenses, and court costs, relating to the nondisclosure of any Trade Secret Materials in response to a records request by a third party.

## **IF CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS**

**RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (954) 357 6402, LCLARKE@BROWARD.ORG, 115 S. ANDREWS AVE., SUITE A550, FORT LAUDERDALE, FLORIDA 33301.**

**11.5 Audit Rights and Retention of Records.** Consultant shall preserve all Contract Records (as defined below) for a minimum period of three (3) years after expiration or termination of this Agreement or until resolution of any audit findings, whichever is longer. Contract Records shall, upon reasonable notice, be open to County inspection and subject to audit and reproduction during normal business hours. County audits and inspections pursuant to this section may be performed by any County representative (including any outside representative engaged by County). County may conduct audits or inspections at any time during the term of this Agreement and for a period of three (3) years after the expiration or termination of this Agreement (or longer if required by law). County may, without limitation, verify information, payroll distribution, and amounts through interviews, written affirmations, and on-site inspection with Consultant's employees, Subconsultants, vendors, or other labor.

Contract Records include any and all information, materials and data of every kind and character, including, without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, drawings, receipts, vouchers, memoranda, and any and all other documents that pertain to rights, duties, obligations, or performance under this Agreement. Contract Records include hard copy and electronic records, written policies and procedures, time sheets, payroll records and registers, cancelled payroll checks, estimating work sheets, correspondence, invoices and related payment documentation, general ledgers, insurance rebates and dividends, and any other records pertaining to rights, duties, obligations or performance under this Agreement, whether by Consultant or Subconsultants.

County shall have the right to audit, review, examine, inspect, analyze, and make copies of all Contract Records at a location within Broward County. Consultant hereby grants County the right to conduct such audit or review at Consultant's place of business, if deemed appropriate by County, with seventy-two (72) hours' advance notice. Consultant agrees to provide adequate and appropriate work space. Consultant shall provide County with reasonable access to Consultant's facilities, and County shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this Agreement.

Consultant shall, by written contract, require its Subconsultants to agree to the requirements and obligations of this section.

Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for County's disallowance and recovery of any payment upon such entry. If an audit or inspection in accordance with this section discloses overpricing or overcharges to County of any nature by Consultant or its Subconsultants in excess of five percent (5%) of the total contract billings reviewed by County, the reasonable actual cost of County's audit shall be reimbursed to County

by Consultant in addition to making adjustments for the overcharges. Any adjustments or payments due as a result of such audit or inspection shall be made within thirty (30) days after presentation of County's findings to Consultant.

**11.6 Subconsultants.** Consultant shall utilize only the Subconsultants identified in Exhibit C, Schedule of Subconsultants, to provide the Services for this Project. Consultant shall obtain written approval of Contract Administrator prior to changing or modifying the Schedule of Subconsultants, which shall be automatically updated upon such written approval. Consultant shall bind in writing each and every approved Subconsultant to the terms stated in this Agreement, provided that this provision shall not, in and of itself, impose the insurance requirements set forth in Article 9 on Consultant's Subconsultants.

**11.7 Assignment.** Neither this Agreement nor any interest herein shall be assigned, transferred, or encumbered without the written consent of the other Party. Any assignment, transfer, encumbrance, or subcontract in violation of this section shall be void and ineffective, constitute a breach of this Agreement, and permit the non-assigning Party to immediately terminate this Agreement, in addition to any other remedies available to the non-assigning Party at law or in equity.

**11.8 Indemnification of County.** Consultant shall indemnify and hold harmless County and its current, past, and future officers and employees from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness or intentionally wrongful conduct of Consultant or other persons employed or utilized by Consultant in the performance of this Agreement. The provisions of this section shall survive the expiration or earlier termination of this Agreement. To the extent considered necessary by Contract Administrator and County Attorney, any sums due Consultant under this Agreement may be retained by County until all of County's claims subject to this indemnification obligation have been settled or otherwise resolved, and any amount withheld shall not be subject to payment of interest by County.

**11.9 Prior Agreements Superseded.** This document incorporates and includes all prior negotiations, correspondence, conversations, agreements, or understandings applicable to the matters contained herein; and the Parties agree that there are no commitments, agreements, or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, the Parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements whether oral or written.

**11.10 Amendments.** No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

**11.11 Notices.** In order for a notice to a Party to be effective under this Agreement, notice must be sent via U.S. first-class mail, hand delivery, or commercial overnight delivery, each with a contemporaneous copy via e-mail, to the addresses listed below and shall be effective upon

mailing or hand delivery (provided the contemporaneous email is also sent). The addresses for notice shall remain as set forth in this section unless and until changed by providing notice of such change in accordance with the provisions of this section.

FOR COUNTY:

Broward County Construction Management Division  
Attn: Ariadna Musarra, Director/County Architect  
115 South Andrews Avenue, Room A550  
Fort Lauderdale, Florida 33301  
Email address: [amusarra@broward.org](mailto:amusarra@broward.org)

FOR CONSULTANT:

Walters Zackria Associates, PLLC  
Attn: Abbas Zackria, President  
5813 N Andrews Way  
Fort Lauderdale, FL 33309  
Email Address: [Abbas@Wza-Architects.Com](mailto:Abbas@Wza-Architects.Com)

11.12 Interpretation. The titles and headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement. All personal pronouns used in this Agreement shall include the other gender, and the singular shall include the plural, and vice versa, unless the context otherwise requires. Terms such as “herein,” “hereof,” “hereunder,” and “hereinafter” refer to this Agreement as a whole and not to any particular sentence, paragraph, or section where they appear, unless the context otherwise requires. Whenever reference is made to a section or article of this Agreement, such reference is to the section or article as a whole, including all of the subsections of such section, unless the reference is made to a particular subsection or subparagraph of such section or article. Any reference to “days” means calendar days, unless otherwise expressly stated.

11.13 Consultant’s Staff. Consultant will provide the key staff identified in its proposal for Project as long as said key staff are in Consultant’s employment. Consultant will obtain prior written approval of Contract Administrator to change key staff. Consultant shall provide Contract Administrator with such information as necessary to determine the suitability of proposed new key staff. Contract Administrator will be reasonable in evaluating key staff qualifications. If Contract Administrator desires to request removal of any of Consultant’s staff, Contract Administrator shall first meet with Consultant and provide reasonable justification for said removal; upon such reasonable justification, Consultant shall use good faith efforts to remove or reassign the staff at issue.

11.14 Drug-Free Workplace. To the extent required under Section 21.31(a)(2), Broward County Administrative Code, or Section 287.087, Florida Statutes, Consultant certifies that it has a drug-free workplace program and that it will maintain such drug-free workplace program for the duration of this Agreement.

11.15 Independent Contractor. Consultant is an independent contractor under this Agreement, and nothing in this Agreement shall constitute or create a partnership, joint venture, or any other relationship between the Parties. In providing Services under this Agreement, neither Consultant nor its agents shall act as officers, employees, or agents of County, except as authorized by the Contract Administrator for permitting, licensing, or other regulatory requirements. Consultant shall not have the right to bind County to any obligation not expressly undertaken by County under this Agreement.

11.16 Regulatory Capacity. Notwithstanding the fact that County is a political subdivision with certain regulatory authority, County's performance under this Agreement is as a Party to this Agreement and in the capacity as owner of the Project. If County exercises its regulatory authority, the exercise of such authority and the enforcement of any rules, regulation, laws, and ordinances shall have occurred pursuant to County's regulatory authority as a governmental body separate and apart from this Agreement, and shall not be attributable in any manner to County as a Party to this Agreement.

11.17 Sovereign Immunity. Except to the extent sovereign immunity may be deemed to be waived by entering into this Agreement, nothing herein is intended to serve as a waiver of sovereign immunity by County nor shall anything included herein be construed as consent by County to be sued by third parties in any matter arising out of this Agreement. County is a political subdivision as defined in Section 768.28, Florida Statutes, and shall be responsible for the negligent or wrongful acts or omissions of its employees pursuant to Section 768.28, Florida Statutes.

11.18 Third-Party Beneficiaries. Neither Consultant nor County intends to directly or substantially benefit a third party by this Agreement. Therefore, the Parties acknowledge that there are no third-party beneficiaries to this Agreement and that no third party shall be entitled to assert a right or claim against either of them based upon this Agreement.

11.19 Conflicts. Neither Consultant nor its employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with Consultant's loyal and conscientious exercise of judgment and care related to its performance under this Agreement. During the term of this Agreement, none of Consultant's officers or employees shall serve as an expert witness against County in any legal or administrative proceeding in which he, she, or Consultant is not a party, unless compelled by court process. Further, such persons shall not give sworn testimony or issue a report or writing, as an expression of his or her expert opinion that is adverse or prejudicial to the interests of County in connection with any such pending or threatened legal or administrative proceeding unless compelled by court process. The limitations of this section shall not preclude Consultant or any persons in any way from representing themselves, including giving expert testimony in support of such representation, in any action or in any administrative or legal proceeding. If Consultant is permitted pursuant to this Agreement to utilize Subconsultants to perform any Services required by this Agreement, Consultant shall require such Subconsultants, by written contract, to comply with the provisions of this section to the same extent as Consultant.

11.20 Materiality and Waiver of Breach. Each requirement, duty, and obligation set forth in this Agreement was bargained for at arm's-length and is agreed to by the Parties. Each requirement, duty, and obligation set forth in this Agreement is substantial and important to the formation of this Agreement, and each is, therefore, a material term of this Agreement. County's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach of a provision of this Agreement shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Agreement. To be effective, any waiver must be in writing signed by an authorized signatory of the waiving Party.

11.21 Compliance with Laws. Consultant and the Services must comply with all applicable federal, state, and local laws, codes, ordinances, rules, and regulations including, without limitation, American with Disabilities Act, 42 U.S.C. § 12101, Section 504 of the Rehabilitation Act of 1973, and any related federal, state, or local laws, rules, and regulations.

11.22 Severability. If any part of this Agreement is found to be unenforceable by any court of competent jurisdiction, that part shall be deemed severed from this Agreement and the balance of this Agreement shall remain in full force and effect.

11.23 Joint Preparation. This Agreement has been jointly prepared by the Parties and shall not be construed more strictly against either Party.

11.24 Priority of Provisions. If there is a conflict or inconsistency between any term, statement, requirement, or provision of any document or exhibit attached to, referenced by, or incorporated in this Agreement and any provision of Articles 1 through 11 of this Agreement, the provisions contained in Articles 1 through 11 shall prevail and be given effect.

11.25 Law, Jurisdiction, Venue, Waiver of Jury Trial. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claim arising from, related to, or in connection with this Agreement must be litigated in federal court, the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **BY ENTERING INTO THIS AGREEMENT, CONSULTANT AND COUNTY HEREBY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT. IF A PARTY FAILS TO WITHDRAW A REQUEST FOR A JURY TRIAL IN A LAWSUIT ARISING OUT OF THIS AGREEMENT AFTER WRITTEN NOTICE BY THE OTHER PARTY OF VIOLATION OF THIS SECTION, THE PARTY MAKING THE REQUEST FOR JURY TRIAL SHALL BE LIABLE FOR THE REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY IN CONTESTING THE REQUEST FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION.**



**11.26 Reuse of Project.** County may, at its option, reuse (in whole or in part) the resulting end-product or deliverables resulting from Consultant's Services (including, but not limited to, drawings, specifications, other documents, and services as described herein and in Exhibit A); and Consultant agrees to such reuse in accordance with this provision. If the Contract Administrator elects to reuse the services, drawings, specifications, and other documents, in whole or in part, prepared for this Project for other projects on other sites, Consultant will be paid a reuse fee to be negotiated between Consultant and County, subject to approval by the proper awarding authority. Each reuse shall include all Basic Services and modifications to the drawings, specifications, and other documents normally required to adapt the design documents to a new site. This reuse may include preparation of reverse plans, changes to the program, provision for exceptional site conditions, preparation of documents for off-site improvements, provisions for revised solar orientation, provisions for revised vehicular and pedestrian access, and modifications to building elevations, ornament, or other aesthetic features. In all reuse assignments, the design documents shall be revised to comply with building codes and other jurisdictional requirements current at the time of reuse for the new site location. The terms and conditions of this Agreement shall remain in force for each reuse project, unless otherwise agreed by the Parties in writing.

**11.27 Payable Interest.**

**11.27.1 Payment of Interest.** County shall not be liable to pay any interest to Consultant for any reason, whether as prejudgment interest or for any other purpose, and in furtherance thereof Consultant waives, rejects, disclaims, and surrenders any and all entitlement it has or may have to receive interest in connection with a dispute or claim arising from, related to, or in connection with this Agreement. This subsection shall not apply to any claim for interest, including for post-judgment interest, if such application would be contrary to applicable law.

**11.27.2 Rate of Interest.** If the preceding subsection is inapplicable or is determined to be invalid or unenforceable by a court of competent jurisdiction, the annual rate of interest payable by County under this Agreement, whether as prejudgment interest or for any other purpose, shall be, to the full extent permissible under applicable law, one quarter of one percent (0.25%) simple interest (uncompounded).

**11.28 Incorporation by Reference.** Any and all Recital clauses stated above are true and correct and are incorporated in this Agreement by reference. The attached Exhibits are incorporated into and made a part of this Agreement.

**11.29 Counterparts and Multiple Originals.** This Agreement may be executed in multiple originals, and may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

**11.30 Public Art and Design.** To the extent the Project includes artwork as defined by Section 1-88, Broward County Code of Ordinances, Consultant shall cooperate with the artist for the

purpose of properly incorporating the artist's design(s) into the design of the Project. Consultant shall notify the artist in writing of all design meetings and shall provide the artist with a schedule of milestone dates. If requested by County, Consultant shall provide work space for the artist during the preliminary design and design phases. The artist's design as properly incorporated into the design of the Project shall be permitted as part of the master site or facility plan. Consultant's compensation pursuant to this Agreement includes the services to comply with the requirements set forth in this section. Consultant shall ensure that Subconsultants, if any, are informed of Broward County's Public Art and Design Program and any applicable requirement of working with the artist(s).

\_(The remainder of this page is intentionally left blank.)

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement: BROWARD COUNTY, through its BOARD OF COUNTY COMMISSIONERS, signing by and through its Mayor or Vice-Mayor authorized to execute same by Board action on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, and CONSULTANT, signing by and through its \_\_\_\_\_, duly authorized to execute same.

COUNTY

ATTEST:

\_\_\_\_\_  
Broward County Administrator, as  
ex officio Clerk of the Broward County  
Board of County Commissioners

BROWARD COUNTY, by and through  
its Board of County Commissioners

By: \_\_\_\_\_  
\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

Approved as to form by  
Andrew J. Meyers  
Broward County Attorney  
Governmental Center, Suite 423  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301  
Telephone: (954) 357-7600  
Telecopier: (954) 357-7641

By: BENJAMIN D. CREGO  
Benjamin D. Crego (Date)  
Assistant County Attorney

Digitally signed by  
BENJAMIN D. CREGO  
Date: 2020.09.08  
09:03:02 -04'00'

By: MICHAEL KERR  
Michael J. Kerr (Date)  
Deputy County Attorney

Digitally signed by  
MICHAEL KERR  
Date: 2020.09.08  
09:09:43 -04'00'

**AGREEMENT BETWEEN BROWARD COUNTY AND WALTERS ZACKRIA ASSOCIATES, PLLC  
FOR CONSULTANT SERVICES FOR PROPERTY APPRAISER AND VALUE ADJUSTMENT BOARD  
(VAB) BUILDING RENOVATION  
(RFP# PNC2119501P1)**

FOR INDIVIDUAL:

Consultant

WITNESSES:

\_\_\_\_\_  
Signature

By \_\_\_\_\_

\_\_\_\_\_  
Print/Type Name

\_\_\_\_\_  
(Please Type Name)

\_\_\_\_\_  
Signature

\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Print/Type Name

FOR CORPORATION:

Consultant

ATTEST:

Walters Zackria Associates, Pllc  
(Typed Name of Consultant/Firm)

[Signature]  
Witness Oscar Martinez

By [Signature] President  
President/Vice President

[Signature]  
Witness YACINTA RODRIGUEZ

Abbas Zackria President  
(Typed Name and Title)



CORPORATE SEAL

27 day of August, 2020.

**EXHIBIT A - SCOPE OF SERVICES**

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- Exhibit E – Minimum Insurance Coverages

## 1.00 Definitions

**ADA** – Americans with Disabilities Act.

**AHJ** – Authority Having Jurisdiction.

**ASPE** - American Society of Professional Estimators. ASPE defines estimate levels per Project Phase.

**Bid Set** – the Drawings, Project Manual and all other documents used for bidding the Project.

**Charrette** – a short, collaborative meeting during which members of a team quickly generate ideas to explore and share a broad diversity of design concepts.

**Color Board** – a display board which contains the proposed building colored finish sample materials for the interior (for example: floor finish, base, wall finish, ceiling) or exterior sample materials (for example: brick, EIFS, window framing, glass, metal) or other materials deemed necessary to convey the design intent

**Commissioning** - the process of assuring that all systems and components of a [building](#) are designed, installed, tested, operated, and maintained according to the operational requirements of the County, basis of design and construction documents. A commissioning process may be applied not only to [building](#) projects but also to systems [such](#) as HVAC, facade and roofing.

**Construction Set** – all documents including the Drawings and Project Manual which reflects revisions from bidding and permitting that are used for construction.

**Cost Estimate** (also known as Opinion of Probable Construction Cost) - the total estimated cost to construct a project.

**Deliverable** – a tangible product, service or electronic file produced as a result of the Project that is intended to be delivered as contractually required.

**Permit Set** – all documents including the Drawings and Project Manual submitted to the local municipality for a building permit.

**Record Set** - all documents including the Drawings and Project Manual revised to illustrate a compendium of the original drawings, incorporating on-site changes known to the Consultant and information taken from the Contractor's As-Constructed drawings.

## 1.01 Project Description and Program

- 1.01.01 The following paragraphs form a general description of the professional services required for the programming, design and construction of an existing County facility. As such, it is not all inclusive and County does not represent that it is a complete inventory of the professional services necessary to achieve County's goals for the new facility. The following paragraphs represent County's minimum level of performance but do not limit the professional services that may be required during any Project Phase described herein.



### 1.01.02 Project Description

The scope of services shall include: Complete exterior and interior renovation, interior design including new furniture, fixtures and equipment (FF&E) for the existing, County-owned, 3-story office building, totaling approximately 74,800 Sq. Ft. The work also includes improvements identified in the Citrix Building Evaluation Report dated January 23, 2019, including but not limited to re-roofing, window repairs, structural improvements to meet current protection under the High Velocity Hurricane Zones (HVHZ), Florida Building Code requirements Risk Category II (170 MPH), American Disability Act (ADA) compliance and other site, building and building system improvements identified during the programming phase; obtain at a minimum, Leadership in Energy and Environmental Design (LEED), Silver Certification per the U.S. Green Building Council (USGBC).

Project drawings will be developed using Building Information Modeling (BIM) in accordance with Exhibit A – Scope of Work, Attachment 2, BIM and Electronic Media Submittal Requirements, including Construction Operations Building Information Exchange (COBie) data.

Building is located on an approximately 5.96-acre site and will house the Broward County Property Appraiser's Office and the Value Adjustment Board (VAB). Additionally, the remaining building area is anticipated to be used for other County agencies.

(B) The Project Site is located at:

1801 NW 49 Street  
Fort Lauderdale, Florida 33309  
Property Folio ID # 4942 16 15 0010

### 1.02 Deliverables

1.02.01 Consultant shall submit a total of five (5) copies of all deliverable documents required (except where otherwise specified), without additional printing cost or other charges, for approval or use by the Contract Administrator. The Contract Administrator may review submitted documents and provide written review comments to Consultant following each deliverable submission. Consultant shall revise and resubmit five (5) copies of documents (if not initially satisfactory to the Contract Administrator), as required to fulfill the submittal requirements without additional printing cost or other charges, until approved by Contract Administrator. Such resubmittals shall be made within fourteen (14) calendar days from the receipt of review comments.

Upon request of the Contract Administrator, the direct cost of printing copies, in addition to the required deliverables and resubmittals described in the process above, will be compensated as a reimbursable expense.

- 1.02.02 Consultant shall be required to submit the various documents further defined below in both hardcopy and electronic media formats. Requirements for electronic media submittals are contained in the Agreement (Attachment 2 - BIM and Electronic Media Submittal Requirements). Requests for deviations from those electronic media submittal requirements shall be submitted in advance by Consultant in writing for the consideration of the Contract Administrator.
- 1.02.03 Documents, electronic media and other materials submitted to Contract Administrator by Consultant shall be retained by the Contract Administrator except as otherwise noted herein and are subject to the ownership provisions of this Agreement.
- 1.02.04 All deliverables shall be accompanied by a "Project Transmittal Form" as required by County's Construction Management Division. In the absence of a proprietary form issued by County's Construction Management Division, Consultant shall utilize its own office standard transmittal form (or an equivalent document such as that published by the American Institute of Architects). The Project Transmittal Form must accurately delineate the date of the submittal and list each component document of the submittal with its applicable date.
- 1.02.05 Preliminary Architectural Program

The Architectural Program option checked below is applicable to Basic Services under this Agreement:

The following programming documents are available for reference only.

1. Preliminary Programming for the Offices of the Property Appraiser and the Value Adjustment Board.
2. Preliminary Programming for Regional Emergency Services and Communications at Government Center East.
3.  A detailed architectural program is not available from the Contract Administrator and shall be developed by Consultant under Programming of Pre-design Services as further described below.

**2.01 Basic Services**

2.01.01 The services listed below, in addition to those specified by Consultant's agreement with County, are related to the specific Project or other professional services as necessary to meet the needs of Broward County.

2.01.02 The listed services below shall not limit those phases or services that may be requested by the Contract Administrator.

**3.01 Basic Services by Project Phase**

3.01.01 Consultant agrees to:

(A) Provide complete professional architectural, engineering and/or other professional design services set forth in the phases enumerated hereinafter and all necessary personnel, equipment and materials to perform services.

(B) Complete those design services in accordance with the Project schedule (Exhibit A, Attachment 1, Project Schedule);

(C) Complete those services that will deliver a facility (or facilities) within County's established budget for the Project (Exhibit A, Attachment 4, Preliminary Project Budget).

(D) Prepare a schedule of services in compliance with Project Schedule and for approval by County. Such schedule shall show phases including but not limited to Consultant efforts and County (and other municipal/agency) reviews and approvals required to complete the design services. This schedule shall initially be submitted to the Contract Administrator for approval within fourteen (14) days of execution of this agreement.

(E) Participate in the Contract Administrator's programs of Value Engineering and Constructability Reviews throughout Schematic Design Phase, Design Development Phase and Construction Documents Phase.

3.01.02 Consultant shall schedule and attend a bi-weekly Project review and coordination meeting with representatives of the Contract Administrator throughout all phase of the Project. At each of these meetings, Consultant and Contract Administrator shall review the Project's budget, schedule, and scope along with Consultant's development and progress to date on the respective phase of the Project and any special problems related to the continuing progress of the Project. Consultant shall attend bi-weekly meetings during the Construction Phase as required elsewhere in this Agreement. For each Project review meeting, and as may be otherwise appropriate during any Project phase, Consultant shall provide progress sketches and

other documents enough to illustrate progress and the issues at hand for the Contract Administrator's review. Consultant shall not be entitled to claims for delays to the Project Schedule due to Consultant's provision of such documents.

- 3.01.03 Consultant and representatives of each sub-consulting firm shall attend a Design Kick-Off meeting and a Design Debriefing meeting which will be scheduled by the Contract Administrator at the beginning and end of each of the Project phase. The Design Kick-Off meetings will provide a forum for the entire Project team to review Project goals, continuing issues, and review performance expectations for the respective phase of the Project. The Design Debriefing Meeting will provide a forum in which the entire Project team can provide feedback concerning team performance, communications, procedures, quality control and other related issues for the current and future projects.
- 3.01.04 Consultant and its interior designer and/or interior architect shall attend periodic furnishings and equipment coordination meetings as scheduled by the Contract Administrator during the Predesign, Schematic, Design Development and Construction Documents Phase of the Project. These meetings will be scheduled to address and coordinate the layout, selection, specification and documentation of furniture and equipment items for the Project. Members of County's using agencies will attend these meetings to coordinate and communicate their functional requirements and preferences.
- 3.01.05 Consultant, the Contract Administrator and the artist(s) selected by County shall attend periodic coordination meetings throughout the Project as scheduled by the Contract Administrator to address the incorporation of public art into the facility. These meetings will focus on the nature of the proposed artwork, the opportunities for integrating artwork into an efficient, economical building design, coordination of building systems and components with proposed artwork, coordination and documentation of artwork within the construction contract documents, and the artists' involvement and responsibilities during the construction process.
- 3.01.06 Consultant's services shall conform to Contract Administrator's specifications (as they may be made available to Consultant), including but not limited to, Contract Administrator's Design and Materials Standards Manuals, and Contract Administrator's Guidelines and Procedures Manual and Forms for capital projects, provided, however, that in the event of conflict the provisions of this agreement shall govern and Consultant shall remain, as the Architect or Engineer of Record, responsible for the content and accuracy of Consultant's documents generated for this Project.
- 3.01.07 Consultant shall keep Contract Administrator informed of any proposed changes in requirements or in construction materials, systems or equipment as the drawings and specifications are developed. Proposed changes must be reviewed and approved in

writing by Contract Administrator prior to incorporation into the design or construction documents.

- 3.01.08 Consultant shall cooperate with Contract Administrator by participating in, reviewing and commenting on Constructability and Value Engineering studies performed by Contract Administrator, and attending meetings, where the content of design and construction contract documents will be coordinated and reconciled, scheduled during any phase of the Project. In the event Contract Administrator accepts recommendations from Value Engineering and Constructability studies, Consultant shall, upon review and agreement, implement same, including providing revised drawings and specifications or other documents, as a part of Basic Services. If bids or cost estimates indicate the Project is at or below the construction budget, Consultant shall be compensated for implementing Value Engineering and Constructability changes.
- 3.01.09 Consultant shall be required to submit various documents further defined below in both hardcopy and electronic media formats. The parties shall agree to requirements for electronic media submittals consistent with the requirements contained in Exhibit A, Attachment 2 – BIM and Electronic Media Submittal Requirements. Attachment 2 is provided as a template for the Parties and sets forth the expectations of the Parties regarding electronic media submittals. The specific requirements for electronic media submittals shall be further negotiated by the Parties subsequent to the execution of this Agreement. Once the Parties have agreed upon electronic media submittal requirements, requests for deviations from those electronic media submittal requirements shall be submitted in advance by Consultant in writing for the consideration of the Contract Administrator.
- 3.01.10 Documents, electronic media and other materials submitted to Contract Administrator by Consultant shall be retained by the Contract Administrator except as otherwise noted herein and are subject to the ownership provisions of this Agreement.
- 3.01.11 Consultant shall make complete document submittals at the various phases listed below. Incomplete or partial submittals may be requested in advance through the Contract Administrator and may be allowed only when Consultant has received advance approval in writing by the Contract Administrator. Incomplete or partial submittals made without advance approval shall be returned to Consultant unreviewed and unaccepted by the Contract Administrator and subject to any liquidated damages applicable as provided for elsewhere in this Agreement.
- 3.01.12 The Consultant shall pursue Leadership in Energy and Environmental Design (LEED) principles (latest version) established by the United States Green Building Council (USGBC) for achieving a Silver Rating for building and site development in all Projects as part of Basic Services. Professional services required for the achievement of any

additional level of LEED certification through the USGBC may be elected by the Contract Administrator for the Project and will be provided under Optional Services.

3.01.13 The Consultant shall incorporate the WELL Building Standard (WELL) design principles as a guideline. Professional services required for the achievement of any specific level of WELL certification as may be elected by the Contract Administrator for the Project will be provided under Optional Services.

3.01.14 The Consultant shall incorporate resilient design which is the intentional design of buildings and landscapes in order to respond to natural disasters and disturbances such as hurricanes. Specification of impact glass, protection of mechanical equipment, system redundancy, building entrance location and elevation are some of the issues to consider.

**3.02 Predesign Phase:**

3.02.01 Consultant shall confer with representatives of the Contract Administrator to verify and confirm the scope of Predesign services (Programming related services) required for the Project; which shall include:

(A) Establishing a listing of Contract Administrator, Using Agency and other representatives who will be providing information or feedback to Consultant during programming activities. Include in this listing the representative's name, title, organization, address, phone, fax and e-mail address. Consultant shall periodically review, update and distribute this list throughout this and subsequent Project phases.

(B) Establishing and verifying a chain of responsibility for decision making in County's Project and functional organizations for use in later decision making during programming and subsequent design phases.

(C) Determining whether the County will provide a partial program for tenant occupied spaces and obtaining such program(s) for Consultant's use and integration into a single programming document for the entire Project.

(D) Obtaining and mobilizing any facilities Consultant(s) or other specialists to provide technical or functional information necessary to develop the programming documents.

(E) Developing and implementing user surveys, personal and group interviews, focus groups and other information gathering techniques necessary to establish and verify functional and spatial relationships, workflow and other related criteria.

- (F) Obtaining, verifying and further developing the County's preliminary list of building functions and spaces.
- (G) Obtaining, verifying and further developing the County's preliminary list of equipment and furnishings including any special equipment, special furnishings or equipment/furnishings that require custom fabrication or unique installation.
- (H) Obtaining, verifying and further developing the County's preliminary list of "County supplied materials" (including furniture and equipment items), construction or related work to be performed by County, and any salvage items projected to be retained by County.
- (I) Obtaining, verifying and further developing the Contract Administrator's building construction and operating cost estimates.
- (J) Obtaining County's applicable space standards for use on subsequent programming tasks.
- (K) Providing an existing facility conditions report.
- (L) Providing services to make measured drawings of the existing site or facilities.
- (M) Providing a recommendations report describing the extent of work to be accomplished.
- (N) Obtaining County's projected staffing (by position description, title and grade) for use in determining functional space allocations based upon staff assignments and related County space standards where applicable.

**3.02.02 Existing Building and Site Analysis Services:** Consultant shall provide further analysis of the Project site and existing facilities for the improvements envisioned by the County. Expand upon the County provided "Citrix Building Evaluation Report" dated January 23, 2019, obtain the following information and incorporate into a comprehensive report update:

- (A) Copies of any County provided Environmental Reports as required for the Project.
- (B) A Tree survey with an arborist's determination of the tree species, type, size and caliper. Utilize and update the existing, County provided ALTA survey dated December 6, 2018.
- (C) Documentation of on- and off-site utilities, including but not limited to:
  - 1. Water
  - 2. Sanitary Sewer

3. Storm Drainage
4. Power
5. Fire Protection
6. Telecommunications
7. Networking
8. TV/Satellite/Radio Transmission/Reception Systems
9. Security and Alarm
10. Energy Management System (EMS)

(D) Documentation of any existing site structures and improvements.

- a. Locations on Survey
- b. Photographic record

(E) Review any County provided, as-constructed documentation from the prior owner, originating architect or engineer. Acquire and assemble any available municipal/county records, or other record sources.

(F) Supplement the "Citrix Building Evaluation Report" photographic documentation and observations as needed to provide a full understanding of those existing facility conditions necessary to proceed with the Schematic Design Phase.

(G) Preliminary Municipal Research and Coordination including:

1. Preliminary Zoning Requirements
2. Preliminary Building Code Requirements
3. Building Department Process
4. Permitting Requirements
5. Other Agency Coordination

**3.02.03 Existing Building and Site Documentation Services:** Consultant shall provide measure, document, and draw existing building, including laser cloud BIM model for the building exterior.

### **Programming**

**3.02.03** Consultant shall provide an in-depth review and confirmation of the preliminary architectural programs identified in this Scope of Services as Attachment 3. Consultant's services shall culminate in Consultant's submittal of a comprehensive programming document comprised of both electronic and hardcopy formats edited to include the design goals and criteria for both the building and the Project's specific site.

**3.02.04** Consultant shall conduct a series of interviews, facilitated by the Contract Administrator, with the responsible using agency and other building users. Through these interviews, observations and other independent research, Consultant shall



verify space requirements and program goals presented in the preliminary architectural program. Consultant shall refine the preliminary program to reflect the results of that verification and shall provide a finalized, detailed set of goals and requirements for the Project including design objectives, limitations and criteria; spatial and functional relationships; functional responsibilities of personnel; flexibility and expandability; special equipment and systems; and specific criteria related to the Project's specific site location.

3.02.05 Consultant shall develop and submit space requirements and program to establish the following detailed requirements for the Project: design objectives, limitations and criteria; spatial and functional relationships; functional responsibilities of personnel; flexibility and expandability; and special equipment and systems.

3.02.06 Consultant shall develop and submit the program's description of occupancy needs and spatial allocation by coordinating with County Staff (including building user groups and others as necessary) and:

- (A) Establishing criteria for importance of room functions and relationships.
- (B) Creating a Spatial Interaction Matrix (list of departments, divisions or offices or other suitable subdivision that shows their relationship to others).
- (C) Creating room by room spatial interaction diagrams showing all room relationships.
- (D) Identifying numerical ratings of the importance of relationships of each room to other rooms.
- (E) Making link and node diagrams to show departmental and room relationships identified in the interaction matrices.
- (F) Making bubble diagrams indicating spaces with relationships and their importance rankings.
- (G) Manipulating bubble diagrams until link crossovers (plan conflicts) are eliminated.
- (H) Creating horizontal and vertical diagrammatic block plans with relative spatial requirements with identification of all rooms, corridors, and vertical circulation and exit analysis.
- (I) Determine preliminary structural, mechanical, and other engineering systems.

(J) Developing and documenting relative spatial areas for all departments, rooms; mechanical, vertical transportation; service, exit stairs and corridors; and horizontal circulation.

3.02.07 Consultant shall develop and submit space and flow diagrams consisting of diagrammatic studies and pertinent descriptive text for: internal functions; human, vehicular and material flow patterns; site requirements; general space allocations; adjacency and material handling.

3.02.08 Consultant shall develop and submit the program's description of the work by:

(A) Identifying and documenting any "Contract Administrator Preferences" for interior and exterior construction types, space planning, site planning, space functionalities, building systems and assemblies, room types, building envelopes, and maintenance and operational considerations.

(B) Identifying and documenting goals for integrating public art into the Project.

**(End of Programming)**

3.02.09 Consultant shall provide written cost estimates for the Project and budget estimating services based on the programming tasks listed above and consisting of: conversion of programmed requirements to net area requirements; development of initial approximate gross facility areas; evaluation of current construction market conditions; application of unit cost data to gross area; estimates of related costs such as site development, landscaping, utilities, phasing and other services. Additionally, Consultant shall:

(A) Reconcile the architectural program with County's budget, and

(B) Advise the County if budget and program are not compatible.

3.02.10 NOT USED.

3.02.11 Consultant shall submit copies of all deliverables in accordance with Section 1.02.01.

3.02.12 Consultant shall not proceed with the next Phase until the acceptance of all required presentations and reports, reconciliation or correction of all outstanding County review comments, and receipt of a written Notice to Proceed with the next phase.

3.02.13 Consultant shall provide presentations of the Project's Program to County's staff, using agencies or groups, and to County Commissioner as required.

**3.03 Schematic Design Phase:**

3.03.01 Consultant shall confer with representatives of County to verify and confirm the Program (as appropriate to the type of Project), consisting of a detailed listing of all functions and spaces together with the square footage of each assignable space, gross square footage, and a description of the relationships between and among the principal programmatic elements.

3.03.02 NOT USED.

3.03.03 In the event that Consultant believes that the project scope, schedule or budget is not achievable, Consultant shall immediately notify County in writing as to the reasons one or all of them are unreasonable or not achievable immediately upon discovery.

3.03.04 Consultant shall develop and present a minimum of three (3) alternative design solutions to the Contract Administrator to illustrate optional creative responses to the architectural program. The Contract Administrator will convene a schematic design phase review conference at which Consultant shall review with the Contract Administrator (and using agency and other concerned parties) these alternative solutions. Design approaches should address both design and construction of the Project; site use and improvements; preliminary selections of materials, building systems and equipment; and Consultant's recommendations concerning the presented alternatives. The Contract Administrator shall identify a preferred design solution which shall then form the basis of Consultant's continuing work on the Project and the primary content of the Schematic Design Phase Report further described below.

3.03.05 Consultant shall prepare, submit and present for approval by County a Schematic Design Phase Report, comprised of the Schematic Design Phase Documents listed below including an identification of any special requirement(s) affecting the Project:

(A) "Project Transmittal Form" in accordance with Section 1.02.04.

(B) "Space Chart Form" formatted to list all spaces within the Project by room number, room title and net square foot area. The Space Chart Form must also include a listing of the Project's total net square foot area, total gross square foot area, and an efficiency percentage derived from the ratio of total net to total gross square foot areas. Note any deviations from Contract Administrator approved programmatic documents for the Project.

An updated detailed survey performed by a registered licensed surveyor, using state plane coordinates prepare in accordance with the standards specified by the American Land Title Association (ALTA).

(C) Updated county provided ALTA survey with tree survey providing tree locations, tree species, type, size and caliper. The site survey may be an update of informational surveys provided by County but shall be prepared on electronic media and submitted in both hard and electronic media formats conforming to the Contract Administrator's BIM and Electronic Media Submittal Requirements (Attachment 2).

(D) Concept Drawings. These documents shall be schematic drawings responding to the predesign documentation and architectural program requirements illustrating the general scope, scale, and relationship of Project components. All plan drawings to include points of the compass, scale, drawing title, dimensions as appropriate, legends, title block, and other graphic information appropriate to the drawing, (i.e. preliminary building code information on architectural floor plan). Documents shall include as a minimum, the following scaled drawings in addition to other graphic or descriptive materials Consultant may deem necessary to adequately communicate the Project:

1. Site Plan showing:

- a. Flood plain elevation, over-all property and structure dimensions.
- b. Existing site features such as: adjacent highways, roads, on and off-site improvements, fire hydrants, power transmission lines, adjacent land use.
- c. Proposed structures such as: walks and paths, vehicle and bike parking areas, preliminary chiller plant/cooling tower/electrical vault locations, service areas, loading docks, bus and car loading zones, existing buildings and use, location of proposed building(s) and future additions (where applicable), and relocatable or temporary structures.

2. Floor plans showing:

- a. Architectural floor plans including: Field verified existing layout, over-all dimensions, identity of each space, room sizes, proposed door locations, room numbers, occupant loads for gathering spaces, proposed passive design and low energy usage features, outdoor areas, mechanical and electrical rooms, any existing buildings and use, future additions, and phased construction.
- b. Life-safety plan(s) delineating exits, fire walls, travel distance, protected corridors, smoke partitions, room names and numbers, and any other life-safety features relevant to the facility. Indicate those facilities, or portions thereof, that will serve as emergency shelters or which have been designed to incorporate special emergency preparedness features or equipment including a brief notation of those design features and/or equipment.
- c. Accessibility Plan(s) delineating provisions for accessibility/universal design and compliance with the Florida Accessibility Code for Building Construction (most current edition). Include graphics and notations delineating accessible routes, parking, elevators/ramps/lifts, accessible

toilet facilities, and other preliminary building features that will support accessibility.

3. Elevations and Sections of the building to fully illustrate and indicate the mass and character of the facility including:
    - a. Fenestration, openings, walkways, vertical transportation (elevators, escalators, lifts, ramps and stairs).
    - b. Preliminary material selections, and other building features and spatial relationships.
    - c. Heights of proposed structures, floor to floor levels and ceilings.
  4. Landscape Concept Drawings indicating:
    - a. Preliminary design showing proposed landscape upgrade with new planting materials and analyze existing planting.
  5. Preliminary graphics, concept sketches and other supplementary materials suggesting:
    - a. Proposed locations for integrated public art, thematic design treatments for special areas, and/or other spaces which have been programmed for special or thematic design content.
- (E) Preliminary Project Description, formatted to match that specified by the latest edition of the Construction Specifications Institute's "Manual of Practice." The narrative to be comprised of:
1. Preliminary material selections, components, assemblies, and systems (including proposed landscape, civil, structural, mechanical, and electrical design elements, components and systems) to be used in the Project.
  2. Identify and confirm points of service and with Florida Power and Light (FPL), telephone and cable TV provider and other utility services as required by the Project's scope and program and describe preliminary approaches to the provision of applicable utilities to the project.
  3. Value Engineering and Constructability issues specifically raised during this Project phase.
  4. Other concerns or issues related to the project type or approach, (i.e. resiliency, sustainability).
- (F) Mechanical Requirements Specific to Remodeling and Addition Projects:
1. Confirm all new equipment is required based on report.
- (G) Provide recommendation for elimination of all redundant building system such as mechanical, electrical, fire protection, building automation and security systems but not necessarily limited thereto.
- (H) Provide a Building Automation System narrative:

1. Describe the type of proposed system(s). For renovations, remodeling and additions, describe how the proposed system(s) interfaces with the existing system(s).

(I) Electrical requirements specific to remodeling and addition projects provide:

1. Confirm Electrical load analysis for the existing facility for existing and new loads.
2. Survey and confirm the condition of the existing electrical equipment.

(J) Project Schedule: Consultant shall update the initial project schedule of services in compliance with the Project Schedule (Attachment 1 of this Agreement) and for approval by County. Prepare schedule in a bar chart format, or other format as required by County, which may be further developed and updated for submittal during subsequent phases of the Basic Services. Consultant shall not be permitted to deviate from the milestones indicated on the Project Schedule for Consultant's work without specific written authorization from County. Consultant shall notify County in writing of any circumstances which impact Consultant's ability to meet designated milestones in the Project Schedule. Such schedule shall show phases including but not limited to:

1. Consultant efforts and County (and other municipal/agency) reviews and approvals required to complete the design services and other activities.
2. All activities known at this stage of the Project's development for the entire Project.
3. Illustrate all Project activities including any projected or preliminary requirements for hazardous material abatement, work by County, work by separate Contractors, and any other activities that relate to or may impact construction of the Project (including offsite work and related site reviews, permitting, etc.).

(K) NOT USED.

(L) The Statement of Probable Construction Cost: Consultant shall submit to County for review and approval a schematic design phase estimate of probable construction cost prepared by Consultant's cost estimator, itemized by major categories and projected to the expected time of bid. If, in the Contract Administrator's sole opinion, the Project merits a schematic design phase estimate (ASPE Level 2) prepared by an independent cost estimator, then Contract Administrator may authorize Consultant to obtain those independent cost estimating services as an Optional Service.

3.03.06 Consultant shall coordinate with County to determine the municipal, county and other jurisdictional agency (such as the South Florida Water Management District, HRS, etc.) coordination required for the Project

- 3.03.07 Consultant shall submit copies of all deliverables in accordance with Section 1.02.01.
- 3.03.08 Consultant shall provide presentations of the Schematic Design Phase to County's staff and to the Broward County Board of County Commissioners or their designee as required.
- 3.03.09 Consultant shall not proceed with the next Phase until the acceptance of all required presentations and reports, reconciliation or correction of all outstanding County review comments, and receipt of a written Notice to Proceed with the next phase.
- 3.03.10 Consultant shall review County's sustainability goals and define how they will be accomplished with respect to siting, energy use reduction, potable water use reduction, sustainable materials, renewable energy, and protecting indoor environmental quality within a sustainable charrette. Provide daylighting narrative explaining strategy to incorporate natural daylighting into building configuration and design. Summarize inclusion of renewable energy technologies in design. Perform a schematic level energy model of the building envelope to attain the best energy efficiency for the building type and function. Provide a summary of LEED credits being pursued and anticipated point levels to be achieved.
- 3.03.11 Preliminary Mood boards and sketch perspectives to communicate spatial relationships, preliminary finish materials for discussion with County. Provide two (2) copies of preliminary Mood boards.
- 3.03.12 Schematic Design Phase Deliverables (Section reference in parentheses):
- 1) Transmittal Form (3.03.05A)
  - 2) Program Confirmation (3.03.01) which includes Space Chart Form (3.03.05B)
  - 3) Design Solutions (3) with preferred option (3.03.04)
  - 4) Updated Site and Tree Survey (3.03.05C)
  - 5) Schematic Drawings (3.03.05D)
    - A) Site Plan
    - B) Landscape Plan
    - C) Floor Plans
    - D) Existing Conditions Floor Plans
    - E) Elevations
    - F) Sections
    - G) Three-dimensional views
  - 6) Preliminary Project Description (3.03.05E)
  - 7) MEP requirements (including building system automation narrative) (3.03.05F, G, H, I)
  - 8) Project Schedule (3.03.05J)
  - 9) Cost Estimate – Level 2 (3.03.05L)
  - 10) Summary of AHJ Approval (3.03.06)

- 11) LEED Requirements (3.03.10)
- 12) Mood Boards (3.03.11)
- 13) Hard copies as specified in 3.03.07.
- 14) BIM Model, BIM Execution Plan (BIMPxP), model progression schedule and Electronic Media per Attachment 2 – BIM and Electronic Media Submittal Requirements.

**3.04 Design Development Phase:**

3.04.01 After written Notice to Proceed from County and based on the approved Schematic Design Phase Documents and any adjustments authorized by County in the Project Scope or Project Budget, Consultant shall prepare, submit and present for approval by County, Design Development Phase documents, comprised of the following:

(A) "Project Transmittal Form" in accordance with Section 1.02.04

(B) Documents: Including, in addition to Schematic Design Phase requirements, the following:

1. Site Plan.
2. A statement, signed and dated by Consultant or designated Subconsultant, included on the site plan identifying the trees and landscape material to be replaced.
3. Floor plan(s) including, but not be limited to, the following:
  - a. A floor plan drawn at an architectural scale that will allow the entire facility to be shown on one sheet, without break lines and which indicates Project phasing as applicable to the Project.
  - b. Floor plans drawn at 1/8 inch or larger scale showing occupied spaces or special rooms with dimensions, equipment and furnishing layouts, sanitary facilities, stairs, elevators, and identification of accessible areas for the disabled.
  - c. Furniture and equipment plan at an architectural scale that will allow the entire facility (or respective floor of a multi-story building) on a single drawing sheet.
  - d. Large scale plans (at a minimum of ¼ inch scale) for restrooms, kitchens, stairs, and other spaces that require detailed delineation of furniture, fixture and equipment. Provide detailed plans (at a minimum of ½ inch scale) for mechanical rooms, electrical rooms, network rooms, and elevator machine rooms.
  - e. Reflected ceiling plan(s) (corresponding to scale, orientation and layout of building floor plans) indicating light fixture layout, air diffusers and return



grilles, other ceiling mounted mechanical/plumbing system components, ceiling mounted electrical system components, proposed soffits, ceiling height changes, ceiling material changes, access panels, and other principal ceiling design features.

- f. Formatting (using break lines as necessary) allowing the use of standard 24" x 36" drawing sheets. (Larger sheet sizes may be used only with advance written authorization of the Contract Administrator.)
4. Preliminary Room Finish Schedule.
  5. Preliminary Door Schedule.
  6. Life-safety plans to show exit strategy, rated doors, rated walls and partitions, emergency wall openings, ramps, and other life safety equipment applicable to the Project such as working stage protection, range and fume hoods, eye wash, emergency showers, etc.
    - a. Indicate and provide information concerning occupancy type, construction type, building area(s) (in square feet), total building occupancy, fire zone, maximum travel distances allowed/provided, maximum dead-end corridor allowed/provided, minimum exit corridor width allowed/provided.
    - b. By symbol, indicate exits (required/provided) fire extinguishers, exit signs, generator(s) and other life-safety equipment relevant to the facility.
    - c. By symbol, indicate connections and tie-ins to existing equipment if applicable.
  7. Updated Accessibility Plan(s) indicating the further development of the facility's accessible/universal design features and compliance with the ADA.
    - a. For existing facilities where remodeled or renovated spaces are required and where an ADA and code conforming ramp cannot be utilized, document proposed vertical platform lifts or inclined wheelchair lifts and provide the following documents as part of or in addition to the required life safety plans:
    - b. When planning open space office or administrative spaces, submit a floor plan showing the methods used to permanently define the means of egress, such as surface finish or color.
  8. Plumbing fixture locations, fixture schedule and fixture unit calculations.
  9. All exterior building elevations and enough building sections as necessary to fully illustrate and indicate the scale, massing and spatial relationships of the facility.

10. Typical building sections to show dimensions, proposed construction materials, and relationship of finished floors to finished grades.
11. Preliminary Structural Drawings including plans and sections indicating systems, connections and foundations requiring remediation. These drawings may be structural roughs.
12. Mechanical Drawings including floor plans, reflected ceiling plans and diagrams of the facility's air conditioning (HVAC), plumbing and other mechanical building systems required for distribution and disposal of solids, fluids and gases within the facility. Include duct layout, air handling equipment, return air systems, fresh air intakes, air handling equipment, plumbing lines, equipment and fixtures, location of grease trap(s), LP gas tank location, natural gas pipe lay out, and any tie in or connection to existing utilities. Enhance systems description to include a description of proposed HVAC system equipment including the chiller, pumps, AHU's, cooling tower, electric duct heaters, etc. Ductwork may be presented as single line diagrams except for those areas in which ductwork or other air handling equipment is large, within tightly confined or unusually configured spaces, or within proximity to other duct runs and/or equipment.
13. Building Automation System narrative describing the type of proposed system(s). For remodeling and additions, describe how the proposed system(s) interfaces with the existing system(s). Provide a list of primary equipment that will be interfacing with the system(s). Provide a preliminary sequence of operations for occupied, unoccupied and standby modes.
14. Electrical Drawings including reflected ceiling plans, lighting layouts for the outdoors and interior spaces, and a one-line diagram of the electrical distribution showing electrical outlets for all systems in all spaces. Location of all the main components of the electrical system such as transformers, panels, and main switch board, electrical security gates, and emergency generator and fuel storage, location of communications consoles, cable or closed circuit television head-ins, radio antennas, and satellite and short wave dish antennas and equipment, and fire alarm panel. Include principal equipment and rack locations for computer networking systems. Show locations of all primary building mechanical equipment such as chillers, air handler units, etc. and their respective electrical connections.

Landscape and Irrigation Drawings including replacement of existing damaged trees and landscape material and review existing irrigation system and propose repairs.

15. Equipment and Furnishing Schedules: Indicating equipment and furnishing items that will be provided by the Contractor and those that will be provided by County or others.
16. Outline specifications:
  - a. Organized and formatted according to the Specification Section numbering system for outline specifications as established by the Construction Specifications Institute's latest edition of MasterFormat current on the date of execution of the Contract.
  - b. With the exception of Divisions 00 and 01, provide outline specifications or provide detailed notes on drawings giving general description of all finishes, materials, and systems including civil, structural, HVAC, electrical, plumbing, and specialty items, including fire sprinklers, alarm systems, electronic controls and computer networking components.
  - c. Supplement (but do not replace) outline specification sections with "cut-sheets", product information, data, and samples as requested by Contract Administrator or as necessary to communicate Consultant's design intent to the Contract Administrator.
  - d. Provide content edited on a Project specific basis for the Project described in this agreement. Outline specifications reflecting Consultant's other or past projects submitted in an unedited or partially edited form obvious to the Contract Administrator will be returned un-reviewed to Consultant. For any such returned outline specifications, Consultant shall prepare and re-submit at no additional cost to County replacement outline specifications edited to specifically describe the Project described in this agreement.
17. In consultation with County, provide Life Cycle Cost Analysis (LCCA) for predetermined elements of the Project to County for review and approval.
18. Florida Energy Code (FEC). FEC forms, including preliminary calculations for mechanical systems, documenting energy efficiency ratio rating of HVAC equipment, electrical systems, insulation, and building envelope shall be submitted to County for review and approval with the Design Development Phase documents.
19. Consultant shall validate estimate of probable construction cost prepared by the contractor.
20. An updated Project Schedule reflecting development and anticipated schedules for all subsequent Project phases.

21. A letter from Consultant and each of the major technical disciplines and any necessary subconsultants explaining how each previous review comment (as generated by County and/or other reviewing agencies) concerning the Project have been addressed and/or corrected.
  22. A simplified single line Floor plan of the Project; a database format schedule reflecting the room numbers; the name of the room or space; the net square footage of the space and the occupant capacity of the space on electronic media and on a single 24" x 36" sheet conforming to County's standards for graphics and for electronic media submittals. This drawing and database information will be used in preparing facilities management information by County. Consultant shall coordinate with County and utilize County's requirements for room numbers, room name assignments and electronic media (format, layering, etc.) prior to developing final documents for this submittal. Hardcopy graphics shall be suitable for clearly legible half size reductions. Comply with County's requirements for electronic media specified in Attachment 2.
  23. County to provide asbestos testing and clearance letter for the building. Consultant will provide a letter indicating, after coordination with County's Construction Management Division (and other agencies at its direction), the extent of any known or suspected asbestos containing materials or other potentially hazardous materials (PCB's, groundwater contaminants, etc.) which might require mitigation by County prior to or during construction of the Project. Establish and confirm responsibility for removing the asbestos or other hazardous materials in the design development phase documents and coordinate with Project Development Schedule, Statement of Probable Construction Cost and other documentation.
  24. Preliminary Color boards to review the color selections for all finish materials with County.
- 3.04.02 Staff from each of Consultant's major technical disciplines, and subconsultants as necessary shall attend coordination, review and presentation meetings with County to explain the design concept and technical resolution of their respective building or site systems.
- 3.04.03 Consultant shall submit copies of all deliverables in accordance with Section 1.02.01.
- 3.04.04 Consultant shall not proceed with the next Phase until the acceptance of all required presentations and reports, reconciliation or correction of all outstanding County review comments, and receipt of a written Notice to Proceed with the next phase.

- 3.04.05 Consultant shall provide assessment of compliance with ASHRAE 90.1 baseline requirements. Update daylighting strategy to incorporate natural daylighting into building configuration and design. Consider renewable energy technologies in design. Update results of energy model. Conduct integrated design charette meeting with review of sustainable goals. Provide a summary of LEED credits being pursued and anticipated point levels to be achieved with assignment to responsible party.
- 3.04.06 Provide Equipment and Furnishing Drawings: Provide layout elevations, preliminary systems furniture workstation plates and isometric drawings indicating the locations, scale and proposed arrangement of all furniture and equipment items including those that will be provided by the Contractor and those that will be provided by County. Provide a symbols legend and unique identifiers for each piece of furniture or equipment corresponding to those established in the Equipment and Furnishing Schedules described above. Coordinate with County concerning standardized color coding of Equipment and Furnishing drawings necessary to facilitate internal County review and coordination of equipment and furnishings. Ensure that all illustrated furniture items are drawn to manufacturer's dimensions and are not generic templates or blocks which may not accurately reflect the size and configuration of proposed furniture or equipment items.
- 3.04.07 Provide Equipment and Furnishing Schedules: Provide a basis of design for each furniture type. Provide documentation for each furniture item which includes dimensions, selected finishes and furniture features.
- 3.04.08 Design Development Phase Deliverables (Section reference in parentheses):
- (A) Transmittal Form (3.04.01A).
  - (B) Design Development Phase Drawings (3.04.01B)
    - 1. Site Plan
    - 2. Civil Site Plan
    - 3. Landscape Plan with tree survey
    - 4. Floor Plans
      - a. Furniture/Equipment Plans
      - b. Detailed Plans
      - c. Reflected Ceiling Plans
      - d. Life Safety/Accessibility Plans
    - 5. Elevations
    - 6. Sections
    - 7. Structural Drawings
    - 8. Mechanical Drawings (including building automation system narrative)
    - 9. Electrical Drawings
    - 10. Finish/Equipment Plans and Schedules
    - 11. Three-dimensional views
  - (C) Outline Specifications (3.04.01B16)

- (D) Energy Code Forms (3.04.01B18)
- (E) Project Schedule (3.04.01B20)
- (F) Preliminary Color Boards (3.04.01B24)
- (G) Response to Previous Comments (3.04.01B21)
- (H) LEED Requirements (3.04.05)
- (I) Hard copies as specified in 3.04.03.
- (J) BIM Model, BIM Execution Plan (BIMpXP), model progression schedule and electronic media per Attachment 2 – BIM and Electronic Media Submittal Requirements.

**3.05 Construction Documents Phase (60%):**

3.05.01 After written Notice to Proceed from County and based on the approved Design Development Phase documents and any adjustments in the scope or quality of the Project or in the Fixed Limit of Construction Cost authorized by County, Consultant shall prepare for approval by County and in accordance with County's requirements for format and organization, Construction Documents setting forth in detail the requirements for the construction of the Project. Consultant is responsible for the full compliance of the design with all applicable codes.

3.05.02 **60% Construction Documents Phase Submittal:** Consultant shall make a 60% Construction Documents Phase submittal, for approval by County, which shall include a total of five (5) sets of each. Drawings shall be provided as three (3) sets - full size and two (2) half-size sets (typically - 18" X 24"). Submittals shall include the following:

(A) "Project Transmittal Form" in accordance with Section 1.02.04

(B) Updated Florida Energy Code (FEC) compliance forms. Submit five (5) copies signed and sealed by a State of Florida registered design professional.

(C) Drawings:

1. Cover sheet/table of contents including:

- a. Project title.
- b. Sheet index including sheet identification and title.
- c. List of current Broward County Board of County Commissioners.
- d. Location plan.

2. Site Plans and detailing which, in addition to the Design Development Phase requirements, indicate:

- a. Legal description, property lines, location of applicable easement lines, setback lines, other restrictive lines or limits, existing site features or

amenities to remain, limits of Work area, locations of temporary structures, and preliminary identification of staging areas and related Contractor facilities for use during execution of the Work.

- b. Site Demolition plans.
  - c. Parking lot lighting poles location and type.
  - d. Final location for maintenance access holes, handholes, pull boxes.
  - e. Layout of underground distribution systems (normal power emergency power, fire alarm, master clock, intercommunication, computer networking, television, telephone, radio (or other communications systems, antennas, etc.), security, control and spares).
  - f. Details for repairs and modifications of all curbing, typical parking spaces (regular and accessible), accessibility ramps and curb cuts, striping, light fixtures, flagpole and fence foundations, and any other site improvement or condition pertinent to the scope of work.
  - g. Plans and details of new site equipment or furnishings including equipment, accessory structures, signage and kiosks, planters, seating areas and other site furniture, book drops, postal equipment, vehicular and parking equipment, landscape accessories, site and security lighting, art work (and associated footings, supports, lighting and other accessories), security and pedestrian safety devices, traffic control devices, loading dock equipment, dumpster and recycling areas, and other equipment or improvements appropriate and necessary for the Project as determined by County.
3. Life-safety plans updated to show exit strategy, occupant load, path of travel, rated doors, rated walls and partitions, ramps, vertical lifts and other life safety equipment applicable to the Project.
- a. In addition to previous information provide UL, flame spread and/or other classification(s) of proposed finishes, determination that building has fire sprinklers, notations concerning installation of life safety equipment by certified specialty sub-contractors pursuant to Florida Administrative Code Rule 4a-b and section 489.105(n), Florida Statutes and other applicable rules and regulations.
  - b. By symbol, indicate exits (required/provided), fire extinguishers, fire alarm equipment, annunciator panels, smoke vents, master valves and emergency disconnects, emergency exit lighting, emergency power equipment, fire sprinklers, fire valve cabinets, exit signs, smoke and fire dampers, generator(s) and other life-safety equipment relevant to the facility.
  - c. By symbol, indicate connections and tie-ins to existing equipment.
4. Landscape plans and detailing tree replacement for damaged trees and landscape material.

5. Irrigation plans and details, as needed, delineating the entire area of the Project, and addressing necessary connections, alteration, repair or replacement of any existing irrigation systems and irrigation requirements for plant materials provided or retained on site during the Project.
6. Full floor plans including:
  - a. All dimensions and any target notes explaining the extent of Work, wall types, or other component, assembly or directions regarding the Construction.
  - b. Note all chases and delineate all rainwater leaders.
  - c. Show structural tie columns and coordinate with the floor plan.
  - d. Target interior elevations.
  - e. Delineate and note all built-in cabinetry or equipment.
  - f. Identify room numbers (using county standard room number system) and door numbers with all spaces and doors having individual numbers.
7. Demolition Plans: Indicate required demolition activities.
  - a. Provide separate demolition plan(s) and other drawings (elevations, sections, etc.), if the scope of work includes demolition which is too excessive to indicate on the drawings that depict new construction.
  - b. Indicate notes on the extent of the demolition: address dimensions at locations where partial walls are being removed or altered, existing room names and numbers, existing partitions, equipment, plumbing, HVAC or electrical elements.
  - c. Include notes dealing with repair of existing areas as a result of demolition.
  - d. Delineate any modifications to existing buildings involving structural elements within the structural documents rather than on the architectural.
8. Building elevations developed further than at the Design Development Phase and including delineation of building joints (including dimensionally located stucco control joints), material locations, elevation heights, color scheme, special finishes, and other building features.
9. Building and wall sections to establish vertical controls and construction types for the Project. Include clear graphics, and notes on construction assemblies and systems to be used, dimensions, heights. Provide associated detailing to delineate solutions for difficult connections.
10. Reflected ceiling plans indicating ceiling types, heights, light fixture types, mechanical diffuser locations, sprinkler heads if area is sprinklered. Delineate and detail any dropped soffits or joint conditions between different materials.



Ensure coordination with architectural, electrical, mechanical and plumbing disciplines and work of any applicable subconsultants.

11. Roof plans:

- a. Indicates new reroof areas and system including all roof penetrations, drains, scupper, mechanical exhaust fans, any other equipment on the roof, slopes of roof with elevations shown, type of roofing system to be used and expansion joints.
- b. Dimensions to locate the items noted previously, and detail targets shown.

12. Large scale building sections as appropriate to this level of document development and as required to establish vertical controls for the Project. Include clear graphics, and notes on construction assemblies and systems to be used, dimensions, heights. Provide associated detailing to delineate solutions for difficult or unique connections.

13. Interior elevations of all room designs (where those rooms house casework, built-in furniture, variations in material finishes, wall mounted equipment or specialty items, graphics, artworks, plumbing, mechanical or electrical fittings, fixtures or equipment, or other improvement that cannot be shown as a standard detail for several similar rooms) including detail targets referencing cabinetry details, dimensions and heights, notes indicating type of equipment (and whether equipment is in or out of contract), wall materials, finishes, and accessories.

14. Details of casework as necessary to appropriately delineate custom or pre-manufactured casework. Provide appropriate schedules referencing manufacturer's numbers or catalogs, finishes, hardware and other construction characteristics.

15. Details of the following:

- a. Door jamb, head and sill conditions including delineation of required fire ratings for assemblies and components, electrical power requirements and connections to fire alarm, security and other building automation systems within the Project or the existing facility.
- b. Wall and partition types including identification of rated assemblies and product limitations and tolerances relative to those ratings.
- c. Window head, sill and jamb conditions, including necessary window re-gasketing, and anchorage methods shown, in lieu of referencing to manufacturer's standards.
- d. Interior signage to include room and building identification, monument sign, directional signage, wayfinding, directories, emergency exiting and

equipment signs, occupancy and other code mandated signage, and any other items pertinent to the identification of the Project. Coordinate and delineate electrical connections and power requirements.

- e. Interior or exterior expansion control connections and related flashings, cover plates, applied sealants, etc.
- f. Any other specialized items necessary to clearly express the intent of the Project design.

16. Room finish, door and window schedules coordinated with the floor plans.

17. Structural plans, with associated diagrams, schedules, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.

18. Mechanical Drawings:

- a. Provide double line duct work layout and HVAC equipment layout drawings with related diagrams, schedules, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.
- b. Provide a Building Automation System narrative describing the type of system(s). For remodeling and additions, describe how the proposed system(s) interfaces with the existing system(s). Provide a list of equipment that will be interfacing with the system and the control points. Provide a complete schematic and narrative for all sequence of operations modes including occupied, unoccupied and standby modes.
- c. Provide plumbing equipment and fixture layout drawings with related diagrams, schedules, fixture schedules, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.
- d. Provide 1/2-inch scale plans, elevations and sections of the mechanical rooms showing service clearance, room openings, nominal equipment size, ceiling height, duct clearance between bottom of joist and top of ceiling and any ceiling mounted lighting fixtures, electrical equipment or other building assembly or component, etc.

19. Fire Sprinkler Drawings:

- a. Provide piping and sprinkler head layout and equipment layout drawings with related diagrams, schedules, notes, detailing and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.

20. Electrical: Provide drawings for the following systems:

- a. Lighting including circuiting and luminaire identification and switching. Also provide illuminance diagrams for all typical indoor spaces and parking lots.
- b. Convenience outlets and circuiting, special outlets and circuiting, television outlets, and power systems and equipment. Provide riser diagrams for all electrical systems including master clock, intercom, fire alarm, cable television, computer networking/telephone. Also, provide for emergency and normal power distribution. Provide luminaire schedule.
- c. Panel schedule may be in preliminary form, but circuitry must be included.
- d. Applicable installation details.
- e. General legend and list of abbreviations.
- f. Voltage drop computation for all main feeders.
- g. Short circuit analysis
- h. Provide 1/2" scale floor plan and wall elevations for all electrical rooms.
- i. Indicate surge protector for main switchboard and electrical panels.

21. Furniture and Equipment Plans and Furniture and Equipment Schedules indicating "In Contract" and "Not in Contract" furniture and equipment items, loose furniture and systems furniture and their location within the facility.

22. Finish Plans and Schedules indicating limits of finishes, identifying transitions and details of same. Provide elevations where more than one wall finish is to be applied. Include building section and elevation references on these plans.

**(D) Progress specifications:**

1. Provide Project Manual excluding Procurement documents.
2. Provide a Division 00 and 01 based upon the standard documents provided by County and edited by Consultant after consultation with County to establish Project specific requirements.
3. Include progress set of all other Sections in all Divisions or detailed notes on drawings with each section developed to demonstrate to County an understanding of the Project and an appropriate level of developmental progress comparable to that of the drawings.
4. Specification sections shall be organized to follow the Construction Specification Institute's (CSI) latest edition of MasterFormat with each section developed to include CSI's standard 3-part section and page formats with full paragraph numbering.

- (E) Updated Project Schedule, formatted as a preliminary construction schedule reflecting continued Project development and illustrating anticipated schedules for all subsequent Project phase including permitting and submittal coordination with all agencies having jurisdiction on the Project, Project phasing, site mobilization, temporary facilities, general construction sequencing, anticipated substantial completion dates, County occupancy, and all other significant Project events. Format updated schedule as a Bar Chart (Gantt Chart) type schedule with milestones.
- (F) Color boards, (minimum 2 for County), illustrating the selection of colors, finishes, textures and aesthetic qualities for all finish materials for final review and approval by County and to establish a final palette of material selections for development of subsequent specifications, schedules and other requirements for incorporation into the contract documents.
- (G) A letter from Consultant and each of the major technical disciplines and any necessary Subconsultants or explaining how each previous comment concerning the Project have been addressed and/or corrected.
- (H) Confirm Contractor's Updated Statement of Probable Construction Cost
- (I) An overall keying strategy diagram and proposed schedule based on County requirements.

- 3.05.03 Consultant shall make all changes to the documents as required by the County's review of the documents and resolve all questions of constructability, code compliance, compliance with County standards, or other issues raised by County during its review of the documents. County will retain the documents submitted at this phase.
- 3.05.04 Consultant shall not proceed with the completion of 85% Construction Documents Phase until the acceptance of all required presentations and reports, County approval of all required submittals, and receipt of a written Notice to Proceed with the next phase.
- 3.05.05 Consultant shall provide updated assessment of compliance with ASHRAE 90.1 baseline requirements. Update daylighting strategy to incorporate natural daylighting into building configuration and design. Incorporate renewable energy technologies. Update results of energy model. Submit project's commissioning report by independent commissioning agent. Provide an updated summary of LEED credits being pursued and anticipated point levels to be achieved with assignment to responsible party.
- 3.05.06 Construction Documents Phase (60%) Deliverables (Section reference in parentheses):
- (A) Transmittal Form (3.05.02A).
  - (B) Construction Document Drawings (3.05.02C)
    - 1. Title Sheet
    - 2. Site Demolition Plan
    - 3. Life-safety plans
    - 4. Landscape Plan
    - 5. Irrigation Plan
    - 6. Full Floor Plans
    - 7. Demolition Plans
    - 8. Elevations
    - 9. Wall Sections
    - 10. Reflected Ceiling Plans
    - 11. Roof Plans
    - 12. Sections
    - 13. Interior Elevations
    - 14. Detailed Plans
    - 15. Building Details
    - 16. Room finish, door and window schedules
    - 17. Structural Drawings
    - 18. Mechanical Drawings
    - 19. Fire Sprinkler Drawings
    - 20. Electrical Drawings

- 21. Furniture, Fixtures and Equipment Plans and Schedules
- 22. Finish Plans and Schedules
- 23. Three-dimensional views
- (C) Project Manual (3.05.02D)
- (D) Energy Code Forms (3.05.02B)
- (E) Project Schedule (3.05.02E)
- (F) Color Boards (3.05.02F)
- (G) Response to Previous Comments (3.05.02G)
- (H) LEED Requirements (3.05.05)
- (I) Hard copies as specified in 3.05.02.
- (J) BIM Model (LOD 300), BIM Execution Plan (BIMPxP), model progression schedule and electronic media per Attachment 2 – BIM and Electronic Media Submittal Requirements.

**3.06 Construction Documents Phase (85%):**

- 3.06.01 Upon 85% completion of the Construction Documents Phase, Consultant shall submit to County a total of five (5) Drawing submittals, which shall be provided as three (3) sets - full size and two (2) half-size sets (typically - 18" X 24"). Submittals shall include check sets of the Drawings, Specifications, reports, programs, a final up-dated Project Development Schedule, and such other documents as reasonably required by County. The construction documents shall conform to County's requirements, all mandatory requirements cited by County's Construction Management Division (or its designated reviewers). Consultant shall, through the Construction Management Division, coordinate Project specific requirements with other participating County review agencies (OESBD, Risk Management Division, County Attorney, etc.) and others listed below or having jurisdiction or special interest in the Project.
- 3.06.02 All documents for this phase shall be provided in both hard copy and in electronic media.

(A) "Project Transmittal Form" in accordance with Section 1.02.04

(B) Drawings: The drawings shall include the following:

1. Site plans including, but not limited to, area location map, legal description of property, demolition, excavation, utilities, finish grading, landscaping, mechanical, electrical, civil/structural, and architectural site plans.
2. Plans and details including, but not limited to:
  - a. Title sheet utilizing County's Construction Management Division's standard cover sheet format including a table of contents and statement of compliance by the architect and engineer of record.

- b. Abbreviations and Symbols: Each discipline shall have a list of abbreviations, schedule of material indications, and schedule of notations and symbols at the beginning of their section of the plans. (Alternatively, Consultant may provide a complete, fully coordinated set of abbreviations, material indications, notations and symbols for the entire Project following the cover sheet.)
- c. Information Available to Bidders: Drawing sheets such as surveys, “as-constructed” drawings, and other graphic material provided and clearly marked as “Information Available to Bidders” shall be provided within the drawing set after coordination with County's Construction Management Division.
- d. Architectural sheets including floor plans with room numbers (using county standard room number system), door, window and finish schedules, roof plans, elevations, sections, and details.
- e. Interior signage to include room and building identification, monument sign, directional signage, wayfinding, directories, emergency exiting and equipment signs, occupancy and other code mandated signage, and any other items pertinent to the identification of the Project. Coordinate and delineate electrical connections and power requirements.
- f. Structural sheets including floor plans; roof plans; structural plans; sections; details; beam and column wall connections.
- g. Mechanical sheets including floor plans; elevations, sections; details; riser and other diagrams; kitchen exhaust hoods; and, equipment, fan, fixture and other necessary schedules and drawing information with an indication that the mechanical/electrical systems from the Design Development Phase FEC/LCCA analysis have been incorporated into the documents.
- h. Fire sprinkler sheets including reflected ceiling plans, sections, details, riser and other diagrams, fixture equipment and other necessary schedules and drawing information.
- i. Electrical sheets including floor plans; sections; elevations; details; riser and other diagrams; fixture, panel and other schedules; and other drawing information with an indication that the mechanical/electrical systems from the Design Development Phase FEC/LCCA analysis have been incorporated into the documents.
- j. Landscape Architecture, Interior Design, and other subconsultant prepared sheets including plans, sections, elevations, details, diagram, schedules and other drawing information necessary to communicate the complete and integrated scope of work related to that discipline.

(C) Project Manual. Consultant shall review and coordinate with County regarding the preparation of the following:

1. Any supplemental information required from Consultant to assist in County's completion of Division 00 procurement and contracting requirements with

respect to the foregoing documents and regarding any other agreements necessary for construction of the Project. Include documents made necessary by the Bidding Method chosen by County. However, in no case will Consultant amend or delete items from these documents without prior written approval from County.

2. A specific set of Division 01 specifications based upon guide documents provided by County (or, in the absence of County guide specification documents, from Consultant's own specifications as previously coordinated with County), including all schedules, lists and inventories as required to complete County's guide documents including Contractor's Submittal schedules, warranty schedules, salvage schedules, etc.
3. Specification sections for remaining Divisions or detailed notes on drawings organized and formatted.
4. Approved alternate bid items, if required and authorized by County, to bring the Project within the Fixed Limit of Construction Cost (FLCC) which would permit County in its sole discretion to accept or reject portions of the construction of the Project.

(D) Confirm Contractor's Updated Statement of Probable Construction Cost

(E) A letter from Consultant and each of the major technical disciplines and any necessary subconsultants explaining how each previous review comment (as generated by County and/or other reviewing agencies) concerning the Project have been addressed and/or corrected.

(F) A proposed overall keying organizational diagram and proposed schedule based on County requirements.

3.06.03 If the Latest Statement of Probable Construction Cost exceeds the Fixed Limit of Construction Cost for construction, Consultant shall review the materials, equipment, component systems and types of construction included in the Contract Documents and may recommend changes in such items and/or reasonable adjustments in the scope of the Project (to be made at no additional cost to County).

3.06.04 If, in the Contract Administrator's sole opinion, the Project merits a construction documents phase estimate prepared by an independent cost estimator, the Contract Administrator may authorize Consultant to obtain those independent cost estimating services as an Optional Service expense. If an estimate or cost analysis was required by the Contract Administrator for a previous phase of the Project, Consultant shall



utilize the previously established independent cost estimator, or a replacement acceptable to the Contract Administrator

3.06.05 Consultant shall make all required changes or additions and resolve all questions on the documents. The Check Set shall be returned to County. Upon final approval by County, Consultant shall furnish record copy, signed and sealed by the Florida registered design professionals responsible for their preparation, of all Drawings, Specifications and other documents required during this project phase to County without additional charge.

3.06.06 Consultant shall provide the original documents or reproducible copies as may be required for submittal to any and all governmental authorities. Permit, review and similar fees shall be paid by County.

(A) Consultant or its licensed subconsultants shall provide services to apply for all jurisdictional approvals.

(B) Consultant shall attend and provide representation at all review meetings, workshops, hearings and Commission/Council meetings concerning the Project as conducted by other jurisdictional agencies. Consultant shall submit documents, attend meetings and provide other support as necessary to fully participate in any submittals, resubmittals, review meetings, presentations or negotiations required to obtain jurisdictional approval for the Project.

(C) Any changes to the Project drawings or Project Manual or other supporting document made necessary by jurisdictional reviews shall be made by Consultant at no additional cost to County. Consultant shall be compensated for any revisions to the contract documents made necessary by such jurisdictional reviews if the requisite compliance requirement or interpretation was not available to Consultant in written form prior to the review.

(D) County will notify Consultant when permits shall be transferred to the responsibility of the Contactor for the Project.

3.06.07 Staff from each of Consultant's major technical disciplines and subconsultants as necessary shall attend coordination, review and presentation meetings with County to explain the development of the design concept and technical resolution of their respective building or site systems.

3.06.08 The Contract Administrator's review and approval of the drawings, specifications, calculations and other construction documents shall not relieve Consultant of any responsibility for their accuracy, adequacy and completeness.

3.06.09 Provide updated equipment and furnishing plans and equipment and furnishing schedules. Indicate "In Contract" and "Not in Contract" furniture and equipment items, loose furniture and systems furniture.

(A) Systems Furniture: Provide systems furniture workstation template drawings including a Panel Plan (showing panel widths, heights and finishes), a Component Plan and Isometric (indicating all components to be provided within the Project with a written description of each component by size, type and quantity and with an isometric drawing of workstations) and an Electrical Panel Plan (indicating electrical outlets, locations of system power entry, computer data and telephone receptacles).

(B) Loose Furniture and Equipment: Provide updated furniture floor plans indicating loose furniture and equipment items with symbols, legends, notes and indicators required for earlier submittals. Supplement with drawing notations concerning installation.

(C) Loose furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information
4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture.
8. Installation General Notes

(D) Systems furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information
4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture.
8. Installation General Notes

- (E) Two (2) updated color boards illustrating furniture selections and the selection of colors, finishes, textures and aesthetic qualities of all finish materials for final review and approval by County and to establish a final palette of material selections for development of subsequent specifications, schedules and other requirements for incorporation into the Contract Documents.
- (F) Finish Plans indicating limits of finishes, identifying transitions and details of same. Provide elevations where more than one wall finish is to be applied to a vertical surface. Include building section and elevation references, room names and numbers. Provide Finish Schedules and Legends for floors, walls and ceilings, at a minimum; identifying materials and their associated finish. Provide or identify where to find specification for colors and finishes of all trim, doors, baseboards, etc.

3.06.10 Construction Documents Phase (85%) Deliverables (Section reference in parentheses):

- (A) Transmittal Form (3.06.02A).
- (B) Construction Document Drawings (3.06.02B) which are signed and sealed
  1. Title Sheet
  2. Site Demolition Plan
  3. Civil Site Plan
  4. Landscape Plan
  5. Irrigation Plan
  6. Full Floor Plans
    - a. Demolition Plans
    - b. Furniture/Equipment Plan
    - c. Detailed Plans
    - d. Reflected Ceiling Plans
    - e. Life Safety/Accessibility Plans/Code Analysis
    - f. Roof Plans
  7. Exterior Elevations
  8. Interior Elevations
  9. Building Sections
  10. Wall Sections
  11. Building Details
  12. Interior Signage
  13. Structural Drawings
  14. Mechanical Drawings
  15. Plumbing Drawings
  16. Fire Sprinkler Drawings
  17. Electrical and Low Voltage Drawings
  18. Furniture, Fixtures and Equipment Plans and Schedules
  19. Finish Plans, (Elevations if needed) and Schedules

- 20. Three-dimensional views
- (C) Project Manual (3.06.02C)
- (D) Project Schedule (3.05.02E)
- (E) Color Boards (3.06.10C)
- (F) Response to Previous Comments (3.06.02E)
- (G) LEED Requirements (3.05.05)
- (H) Hard copies as specified in 3.06.01.
- (I) BIM Model, BIM Execution Plan (BIMPxP), model progression schedule and electronic media per Attachment 2 – BIM and Electronic Media Submittal Requirements.

**3.07 Construction Documents Phase (100%):**

3.07.01 Upon 100% completion of the Construction Documents Phase, Consultant shall submit to County a total of five (5) copies, (3) - full size, (2) – half-size (typically 18" X 24") of check sets of the Drawings, Specifications, reports, programs, a final up-dated Project Development Schedule, and such other documents as reasonably required by County. The 100% construction documents phase shall conform to County's requirements, all mandatory requirements cited by County's Construction Management Division (or its designated reviewers). Consultant shall, through the Construction Management Division, coordinate Project specific requirements with other participating County review agencies (Office of Economic and Small Business Development OESBD, Risk Management Division, County Attorney, etc.) and others listed below or having jurisdiction or special interest in the Project.

3.07.02 All documents for this phase shall be provided in both hard copy and in electronic media. County will approve 100% Construction Documents Phase documents prior to submittal for permitting or bidding. 100% Construction Documents contract documents shall be included with the 100% Construction Documents Phase submittal:

(A) "Project Transmittal Form" in accordance with Section 1.02.04

(B) General Requirements:

1. Bid Set. This submittal is the official construction document set and shall be the bid documents.
2. Signed and Sealed/Statements of Compliance: Only complete documents, properly signed and sealed by Consultant and respective subconsultants, will be accepted for review; in addition, these documents shall contain a statement of compliance by the architect or engineer of record that "To the best of my knowledge these drawings and the Project Manual are complete, and comply with the current edition of the Florida Building Code.

3. When requested by County, engineering calculations for mechanical, electrical, and structural systems shall be submitted separately from drawings and the Project Manual.
  4. Changes to the Contract Documents may be made by addenda or resubmittal of documents graphically indicating the changes. Addenda shall be signed and sealed by the design professionals and submitted to the Contract Administrator in duplicate as they occur during the bidding process. Documents resubmitted shall bear the appropriate signatures and seals.
- (C) Drawings: The drawings shall include, in addition to the document requirements specified above, the following:
1. Site plans including, but not limited to, area location map, legal description of property, demolition, excavation, utilities, finish grading, landscaping, mechanical, electrical, civil/structural, and architectural site plans.
  2. Plans and details including, but not limited to:
    - a. Title sheet utilizing County's Construction Management Division's standard cover sheet format including a table of contents and statement of compliance by the architect and engineer of record.
    - b. Abbreviations and Symbols: Each discipline shall have a list of abbreviations, schedule of material indications, and schedule of notations and symbols at the beginning of their section of the plans. (Alternatively, Consultant may provide a complete, fully coordinated set of abbreviations, material indications, notations and symbols for the entire Project following the cover sheet.)
    - c. Information Available to Bidders: Drawing sheets such as surveys, "as-constructed" drawings, and other graphic material provided and clearly marked as "Information Available to Bidders" shall be provided within the drawing set after coordination with County's Construction Management Division.
    - d. Architectural sheets including floor plans with room numbers (using county standard room number system), door, window and finish schedules, roof plans, interior and exterior elevations, multiple building, wall and assembly sections, details and all appropriate cross-references.
    - e. Interior signage to include room and building identification, monument sign, directional signage, wayfinding, directories, emergency exiting and equipment signs, occupancy and other code mandated signage, and any other items pertinent to the identification of the Project. Coordinate and delineate electrical connections and power requirements.

- f. Civil/Structural sheets including calculations, design assumptions, paving, drainage, foundation plans, floor plans, roof plans, structural plans, sections, details, pipe, culvert, beam and column schedules.
- g. Mechanical sheets including floor plans; elevations, sections; details; riser and other diagrams; kitchen exhaust hoods; and, equipment, fan, fixture and other necessary schedules and drawing information with an indication that the mechanical/electrical systems from the 85% Construction Documents Phase FEC/LCCA analysis have been incorporated into the documents.
- h. Fire sprinkler sheets including reflected ceiling plans, sections, details, riser and other diagrams, fixture equipment and other necessary schedules and drawing information.
- i. Electrical sheets including floor plans; sections; elevations; details; riser and other diagrams; fixture, panel and other schedules; and other drawing information with an indication that the mechanical/electrical systems from the 85% Construction Documents Phase FEC/LCCA analysis have been incorporated into the documents.
- j. Landscape Architecture, Interior Design, and other subconsultant prepared sheets including plans, sections, elevations, details, diagram, schedules and other drawing information necessary to communicate the complete and integrated scope of work related to that discipline.
- k. A construction site utilization plan to delineate the order of the construction and delineating staging and storage areas, maintenance of traffic, temporary buildings or structures, temporary utilities, other temporary constructions, construction access (including parking and delivery locations), haul routes, site barriers, traffic control devices, and other area designations and protective measures to control and separate staff and the public from construction activities and traffic.

(D) Project Manual. Consultant shall review and coordinate with County regarding the preparation of the following:

- 1. Any supplemental information required from Consultant to assist in County's completion of Division 00 procurement and contracting requirements with respect to the foregoing documents and regarding any other agreements necessary for construction of the Project. Include documents made necessary by the Bidding Method chosen by County. However, in no case will Consultant amend or delete items from these documents without prior written approval from County.
- 2. A Project specific set of Division 01 specifications based upon guide documents provided by County (or, in the absence of County guide specification documents, from Consultant's own specifications as previously coordinated with County), including all schedules, lists and inventories as required to

complete County's guide documents including Contractor's Submittal schedules, warranty schedules, salvage schedules, etc.

3. Final specification sections for remaining Divisions or detailed notes on drawings organized and formatted as required for the set of 50% progress specifications.
4. Approved alternate bid items, if required and authorized by County, to bring the Project within the Fixed Limit of Construction Cost (FLCC) which would permit County in its sole discretion to accept or reject portions of the construction of the Project.

(E) A letter from Consultant and each of the major technical disciplines and any necessary subconsultants explaining how each previous review comment (as generated by County and/or other reviewing agencies) concerning the Project have been addressed and/or corrected.

(F) A final keying organizational diagram and keying schedule based on county requirements.

3.07.03 If the Latest Statement of Probable Construction Cost exceeds the Fixed Limit of Construction Cost for construction, Consultant shall review the materials, equipment, component systems and types of construction included in the Contract Documents and may recommend changes in such items and/or reasonable adjustments in the scope of the Project (to be made at no additional cost to County).

3.07.04 If, in the Contract Administrator's sole opinion, the Project merits a construction documents phase estimate prepared by an independent cost estimator, then Contract Administrator may authorize Consultant to obtain those independent cost estimating services as an Optional Service expense. If an estimate or cost analysis was required by the Contract Administrator for a previous phase of the Project, Consultant shall utilize the previously established independent cost estimator, or a replacement acceptable to the Contract Administrator

3.07.05 Consultant shall make all required changes or additions and resolve all questions on the documents. The 100% complete Check Set shall be returned to County. Upon final approval by County, Consultant shall furnish to County without additional charge, three (3) record copies, signed and sealed by the Florida registered design professionals responsible for their preparation, of all Drawings, Specifications and other documents required during this Project.

3.07.06 Consultant shall, with County's assistance, file the required documents for approval by governmental authorities having jurisdiction over the Project (including Broward County and municipalities and their constituent departments, the South Florida Water Management District, and other state, local or federal agency with jurisdictional authority over some aspect of the Project) and obtain certifications of "permit

approval" by reviewing authorities prior to the commencement of Bidding and Award of Contract and early enough to ensure that the eventual contractor is not delayed by permit processing by Broward County, a municipality or other jurisdictional agency.

Consultant shall provide the original documents or reproducible copies as may be required for submittal to any and all governmental authorities. Permit, review and similar fees shall be paid by County.

(A) Consultant or its licensed subconsultants shall provide services to apply for all jurisdictional approvals.

(B) Consultant shall attend and provide representation at all review meetings, workshops, hearings and Commission/Council meetings concerning the Project as conducted by other jurisdictional agencies. Consultant shall submit documents, attend meetings and provide other support as necessary to fully participate in any submittals, resubmittals, review meetings, presentations or negotiations required to obtain jurisdictional approval for the Project.

(C) Any changes to the Project drawings or Project Manual or other supporting document made necessary by jurisdictional reviews shall be made by Consultant at no additional cost to County. Consultant shall be compensated for any revisions to the contract documents made necessary by such jurisdictional reviews if the requisite compliance requirement or interpretation was not available to Consultant in written form prior to the review.

(D) County will notify Consultant when permits will be transferred to the responsibility of the Contactor for the Project.

3.07.07 Staff from each of Consultant's major technical disciplines and subconsultants as necessary shall attend coordination, review and presentation meetings with County to explain the development of the design concept and technical resolution of their respective building or site systems for both the Construction Documents Phase (85%) and Construction Documents Phase (100%) Submittals.

3.07.08 The Contract Administrator's review and approval of the drawings, specifications, calculations and other construction documents shall not relieve Consultant of any responsibility for their accuracy, adequacy and completeness.

3.07.09 County's review and approval of the drawings, specifications, calculations and other construction documents shall not relieve Consultant of any responsibility for their accuracy, adequacy and completeness.



3.07.10 Provide updated equipment and furnishing drawings and equipment and furnishing schedules. Indicate "In Contract" and "Not in Contract" furniture and equipment items, loose furniture and systems furniture.

(A) Systems Furniture: Provide systems furniture workstation template drawings including a Panel Plan (showing panel widths, heights and finishes), a Component Plan and Isometric (indicating all components to be provided within the Project with a written description of each component by size, type and quantity and with an isometric drawing of workstations) and an Electrical Panel Plan (indicating electrical outlets, locations of system power entry, computer data and telephone receptacles).

(B) Loose Furniture and Equipment: Provide updated furniture floor plans indicating loose furniture and equipment items with symbols, legends, notes and indicators required for earlier submittals. Supplement with drawing notations concerning installation.

(C) Final Color boards illustrating furniture selections and the selection of colors, finishes, textures and aesthetic qualities of all finish materials for final review and approval by County and to establish a final palette of material selections for development of subsequent specifications, schedules and other requirements for incorporation into the Contract Documents.

(D) Loose furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information
4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture.
8. Installation General Notes

(E) Systems furniture detailed specifications and descriptive data coordinated through County's Purchasing Division (via the Contract Administrator) in enough detail to allow procurement through the Purchasing Division:

1. Manufacturer's Information
2. Vendor State and Local Contract Listings
3. Vendor Information

4. Quantities
5. Item numbers keying specifications to Furniture Floor Plans
6. Manufacturer's Model Numbers
7. Description, size, finishes and other information required to order furniture
8. Installation General Notes

(F) Finish Plans indicating limits of all finishes, identifying transitions and details of same. Provide elevations where more than one wall finish is to be applied to a vertical surface. Include building section and elevation references, ceiling heights if above 9' above finish floor, room names and numbers. Provide Finish Schedules and Legends for floors, walls and ceilings, at a minimum; identifying materials and their associated finish. Provide or identify where to find specification for colors and finishes of all trim, doors, baseboards, etc.

**3.07.11 Construction Documents Phase (100%) Deliverables (Section reference in parenthesis):**

(A) Transmittal Form (3.07.02A).

(B) Construction Document Drawings (3.07.02C) which are signed and sealed

1. Title Sheet
2. Site Demolition Plan
3. Civil Site Plan
4. Landscape Plan
5. Irrigation Plan
6. Geotechnical Report
7. Full Floor Plans
  - a. Demolition Plans
  - b. Furniture/Equipment Plan
  - c. Detailed Plans
  - d. Reflected Ceiling Plans
  - e. Life Safety/Accessibility Plans/Code Analysis
  - f. Roof Plans
  - g. Construction site utilization plan
8. Exterior Elevations
9. Interior Elevations
10. Building Sections
11. Wall Sections
12. Building Details
13. Interior Signage
14. Structural Drawings
15. Mechanical Drawings
16. Fire Sprinkler Drawings
17. Electrical Drawings

- 18. Furniture, Fixtures and Equipment Plans and Schedules
- 19. Finish Plans, (Elevations if needed) and Schedules
- 20. Three-dimensional views
- (C) Engineering Calculations (3.07.02B3)
- (D) Project Manual (3.07.02D)
- (E) Energy Code Forms (3.05.02B)
- (F) Project Schedule (3.05.02E)
- (G) Color Boards (3.07.10H)
- (H) Response to Previous Comments (3.07.02F)
- (I) LEED Requirements (3.05.05)
- (J) Hard copies as specified in 3.07.01.
- (K) BIM Model, BIM Execution Plan (BIMPxP), model progression schedule and electronic media per Attachment 2 – BIM and Electronic Media Requirements.

### **3.08 Bidding and Award of Contract**

- 3.08.01 Bid Documents Approvals and Printing:** Upon obtaining all necessary approvals of the Construction Documents, approval by County of the latest Statement of Probable Construction Cost, and a specific Notice to Proceed with the Bidding and Award phase of the Project, Consultant shall assist County in obtaining bids and awarding construction contracts. Bidding and award of the construction contract with a Negotiated Agreement as further detailed below.

#### **Construction Award: Negotiated Agreement**

- 3.08.02** Consultant shall assist County in conducting negotiations with a Managing General Contractor (Construction Manager) or other similar entity to establish a Guaranteed Maximum Price and other contractual issues related to the establishment of a construction contract with the Managing General Contractor.
- 3.08.03** Consultant will incorporate County's Standard Form Construction Documents (as provided by County for alternative construction delivery) for this into the Project Manual and shall make final modifications to the Project Manual to reflect results of County's negotiations with the Managing General Contractor. County will coordinate any deviations from the Standard Form Construction Documents in advance with Consultant and County's Office of the County Attorney.
- 3.08.04** Consultant shall assist County and the Contractor in obtaining permits, approvals and authorizations from jurisdictional agencies with authority over the Project. Consultant shall, as requested by County, meet on an as-needed basis with jurisdictional agencies in order to clarify or explain submitted documents and to ascertain the scope and intent of review comments made by those jurisdictional agencies. Consultant shall provide graphic and written documents as necessary to facilitate these jurisdictional reviews, including issuing revised drawings and

specifications in response to review comments and/or other concerns generated by those jurisdictional agencies without additional cost to County.

- 3.08.05 Consultant shall assist County's review of the Managing General Contractor's bidding activities and make recommendations concerning the conduct and result of that bidding. These activities shall include investigating the qualifications of bidders and provision of a written recommendation for bid award. Consultant shall review and, upon request of County, prepare Contract Price Element Adjustment Memoranda made necessary by the Contractor's bidding activities, changes requested by County, and/or other circumstances affecting the Project's guaranteed maximum price structure.
- 3.08.06 Consultant shall provide to County's Contract Administrator two (2) reproducible copies of the finalized construction contract documents, including all drawings and specifications. County will be responsible for printing the documents and distributing them to the Managing General Contractor. County reserves the right to instruct Consultant to print the construction contract documents (including drawings and specifications) and distribute them to the Managing General Contractor, either through its open agreements with printing firms or as a reimbursable service through Consultant.
- 3.08.07 Consultant shall render interpretations and clarifications of the drawings and specifications in a written format, supplemented by appropriate graphics, acceptable to County.
- 3.08.08 Consultant shall attend coordination meetings, negotiation meetings, pre-bid conferences and bid openings as scheduled by County and the Managing General Contractor.
- 3.08.09 Consultant shall prepare addenda, if any are required, for County to issue to the Managing General Contractor. No addenda shall be issued without County's approval and if dimensional changes or extensive graphic changes are required the full drawing sheets shall be revised, signed, sealed, and issued as addendum drawings as directed by County. Extensive modifications to specification section(s) shall be prepared as replacements of the entire specification section(s).
- 3.08.10 Consultant shall advise and consult with County in awarding and assisting in the preparation of any agreements necessary for the construction of the Project, including, without limitation, that form of agreement between County and Contractor.
- 3.08.11 If the Guaranteed Maximum Price exceeds County's funds available for the Project, the Contract Administrator will either: (A) approve the increase in Project cost and award a contract or, (B) reject the negotiations with the Managing General Contractor

and initiate negotiations with alternatively selected firms within a reasonable time with no change in the Project, (C) direct Consultant to revise the Project scope or quality, or both, as approved by the Contract Administrator, and reinstate negotiations with the Managing General Contractor, or (D) suspend or abandon the Project.

- 3.08.12 Under Article 3.08.11(C) above, Consultant shall, without additional compensation, modify the Construction Documents as necessary to bring the Guaranteed Maximum Price within County's available funds for the Project. County may recognize exceptional construction market cost fluctuations before exercising the option provided in Article 3.08.11(C) above. County agrees to discuss this issue with Consultant prior to exercising this option.
- 3.08.13 If an estimate or cost analysis was required by County for this phase, Consultant shall utilize Consultant's cost estimator, or a replacement acceptable to County, to analyze bids and to assist in the preparation of any modified documents that may be required to ensure successful negotiations with the Managing General Contractor.

#### **End of Construction Award**

#### **3.09 Administration of the Construction Contract:**

- 3.09.01 Construction phase will begin with the award of the Construction Contract and will end when the Contractor's final Payment Certificate is approved by County. During this period, Consultant shall provide Administration of the Construction Contract as set forth in the construction contract documents (hereafter referred to and defined as the "Contract Documents") between County and the Contractor.
- 3.09.02 Consultant, as the representative of the County during Construction, shall advise and consult with County and shall have authority to act on behalf of County within the limits established by this Agreement and the Contract Documents. Consultant shall contemporaneously provide County with copies of all communications between Consultant and Contractor and others concerning matters material to the cost, time, sequence, scope, performance or requirements of the Project.
- 3.09.03 Consultant and Consultant's respective Sub-consultants shall attend all key construction events as necessary to ascertain the progress of the Project and to determine in general if the Work is proceeding in accordance with the Contract Documents and the Project Schedule. A minimum of at least one site visit per week will be required by Consultant. Subconsultants will be required to visit the site at least once a week when their respective portion of the work is in progress.

(A) Consultant shall visit the site at least once per week from the time construction begins until substantial completion on an ongoing periodic basis to become

familiar with the progress and quality of the Work and to determine if the Work is proceeding in accordance with the Contract Documents and Project Schedule.

- (B) Consultant shall coordinate the timing of these visits with County's Representative to permit joint observations of the progress of the Work and discussions about Project issues. Based on on-site observations, Consultant shall keep County informed of the progress and quality of the Work. Consultant shall promptly submit to County a detailed written report of the results of each visit to the site, and copies of all field reports and notes of meetings with contractor, subcontractors of any tier or suppliers.
- (C) Consultant shall, based upon its on-site visits, promptly report to County any defects and deficiencies in the Work coming to the attention of Consultant and shall endeavor to guard County against defects and deficiencies in the Work. This obligation is not reduced or limited by the fact that others, such as County's staff, are also observing the work on behalf of County. Consultant shall make on-site observations utilizing the same personnel over the course of the Work and shall, if requested by County, replace personnel whom County has found to be incompetent or unacceptable.
- (D) Consultant shall not have control over, or charge of, nor be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work.

3.09.04 Consultant shall always have access to the Work wherever it is in preparation or progress. Consultant and the subconsultants shall review and advise County as to whether the Contractor is making timely, accurate, and complete notations on the "Project Record Documents" and maintaining various other administrative records as required by the Contract Documents. In addition, County may at its discretion require Consultant and all subconsultants to regularly submit additional written materials or forms to County relating to or regarding the Project or its progress.

3.09.05 Consultant shall assist County in determining the amounts owing to Contractor based on observations at the site and on evaluations of Contractor's Applications for Payment and shall certify Certificates for Payment in such amounts as provided in the Contract Documents and in such form as County may request. The certification of a Certificate for Payment shall constitute a representation by Consultant to County, based on Consultant's observations at the site and on the data comprising Contractor's Application for Payment, that the Work has progressed to the point indicated; that the quality of the Work is in substantial accordance with the Contract Documents (subject to an evaluation of the Work for substantial conformance with the Contract Documents upon substantial completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any

specific qualifications stated in the Certificate for Payment); and that Contractor is entitled to payment in the amount certified. However, the certification of a Certificate for Payment shall not be a representation that Consultant has made any examination, other than information which has come to Consultant's attention, to ascertain how and for what purpose Contractor has used the moneys paid by County.

3.09.06 Requests for Information (RFIs): Consultant shall interpret submitted requests and provide recommendations and/or instructions concerning the requirements of the Contract Documents by the written request of either the County or Contractor. Consultant's response to such requests shall be made within fourteen (14) days or within any prior time limits agreed upon by the County. Consultant shall render written advisory decisions on all claims, disputes and other matters in question between County and Contractor relating to the execution or progress of the Work or the interpretation of the Contract Documents. RFI's are not intended to replace routine communications, a submittal, a safety plan or schedule, transmittal, or a documentation method.

If insufficient information is provided to allow the Consultant to offer a recommendation or instructions, Consultant shall request Contractor to provide the additional information required in a timely manner.

3.09.07 All interpretations and advisory decisions of Consultant shall be consistent with the intent of, and reasonably inferable from, the Contract Documents and shall be in writing or in the form of drawings. In the capacity of interpreter, Consultant shall endeavor to secure faithful performance by both County and Contractor and shall not show partiality to either.

3.09.08 Consultant shall have authority to recommend rejection of Work which does not conform to the Contract Documents. Consultant shall not have authority to stop the Work without approval of County. Whenever, in Consultant's reasonable opinion, it is necessary or advisable for the implementation of the intent of the Contract Documents, Consultant may recommend special inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work can then be fabricated, installed or completed, but Consultant shall take such action only after consultation with County. Consultant's monitoring of such additional special testing or inspections is a part of the Basic Services. County shall furnish all such tests inspections and reports that are required by law or by the Contract Documents or that it has previously approved in writing, without waiving its right to reimbursement from Contractor. However, neither this authority of Consultant nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty of responsibility of Consultant to Contractor or other third parties performing portions of the Work.

**3.09.09 Contractor Submittals:** Consultant shall promptly review and take other appropriate action upon Contractor's submittals such as shop drawings, product data and samples, but only for conformance with the design concept of the Contract Documents. Such action shall be taken within fourteen (14) days of receipt by Consultant unless County and Consultant otherwise mutually agree.

(A) Consultant's review shall not constitute review or approval of safety precautions or of construction means, methods, techniques, sequences or procedures. Consultant shall maintain a log of all submittals made and shall compare the submittals with Contractor's progress schedule. Consultant shall not approve changes to the contract or substitutions through the regular submittal process but will utilize those respective methods specified in the Contract Documents.

(B) Should Consultant have to reject submittals of shop drawings, product data, samples or other required Contractor submittal due to Contractor's non-compliance more than two (2) times, then Consultant shall be due additional services for each subsequent review. Fees for such additional services shall be negotiated by Contract Administrator as Optional Services with Consultant according to Article 6 of the Agreement and for an hourly rate not to exceed the average hourly rate for all personnel specified in this Agreement's Exhibit B, Maximum Billing Rates.

**3.09.10** Consultant shall coordinate with and assist County concerning Contract Modifications including the development, review, recommendation for approval, and processing of Contract Price Element Adjustment Memoranda ("CPEAM"), Change Orders and Amendments to the construction contract including County's or other jurisdictional authority's required review of such Contract Modifications for Code Compliance. Consultant shall:

(A) Meet with County prior to the preparation of CPEAM, change order items or Amendments to ensure that proposed changes comply with applicable codes.

(B) Reconcile Consultant's analysis of proposed Change Order amounts with an analysis provided by Consultant's cost estimator and provide County with a recommendation concerning the respective cost studies.

(C) Submit written and graphic information documenting proposed changes for formal review by County and municipal or other jurisdictional agencies for code compliance and any necessary permitting.

(D) Consultant shall review and indicate concurrence through signing CPEAM forms, change orders and Amendments for County's authorization in accordance with the Contract Documents, shall have authority to order minor changes in the Work not involving an adjustment in the contract sum or an extension of the contract time



and which are not inconsistent with the intent of the Contract Documents. Such minor changes shall be affected by written order issued through County. The Basic Services shall include providing recommendations concerning proposed change orders and minor changes, and the preparation and processing of change orders and construction change directives.

(E) Consultant shall process, prepare and issue request for proposals and other contract modification documents in a timely manner and not allow the period required for evaluation, preparation or to issue such documents to exceed twenty-one (21) days. Consultant shall provide written notification to County concerning those modification documents requiring more than twenty-one (21) days processing time with an attached explanation of the circumstances requiring longer processing time.

(F) All final decisions with respect to substitutions, change orders, and other contract modifications shall be at the sole determination of County.

3.09.11 Consultant shall conduct thorough site observations, make recommendations and otherwise assist County in determining the dates of substantial completion and final completion, shall review, approve and forward to County for County's review, written warranties and related documents required by the Contract Documents and assembled by Contractor, and shall certify a final Certificate for Payment. At substantial completion, Consultant shall prepare a punch list of observed items requiring correction, completion or replacement by Contractor. Consultant shall administer the Contractor's submittal of various closeout submittals including warranty documents, complete versions of final, approved shop drawings and other submittals organized by specification section, operations and maintenance materials, extra materials, and other closeout submittals as required by the Contract Documents. Provide electronic versions of these materials. Consultant and the subconsultants shall verify and confirm the Contractor's successful demonstration of equipment and systems and the training of County's personnel as required by the Contract Documents. Consultant shall inspect the Project upon final completion to determine compliance with the Contract Documents and, upon so determining, prepare and execute the required forms and other documents indicating that the Work is completed in compliance with the Contract Documents and ready for use by the County.

3.09.12 Consultant shall review, approve and/or certify Contractor's submittal of as-constructed survey documentation, (including Computer Aided Design (CAD) and/or other hardcopy or electronic media documents) as may be required by jurisdictional agencies with authority over the Project.

3.9.13 Consultant shall within sixty (60) days of final completion provide the Contract Administrator with prints and electronic media copies of the original drawings, which

Consultant has revised to conditions based on information furnished by the Contractor (redlined prints and other "as-constructed" information) as Project Record Documents (Record Set). The Contractor's original marked drawings shall be submitted to the Contract Administrator with the updated prints and electronic media files prepared by Consultant. These prints and electronic media copies shall become the property of County. Submittal of these documents to the Contract Administrator is a condition of final payment to Consultant. Electronic media shall comply with negotiated electronic media submittal requirements premised on Attachment 2, BIM and Electronic Media Submittal Requirements.

3.09.14 Consultant shall assist the Contract Administrator in coordinating and supervising vendor delivery and set-up of those "not-in-contract" furniture and equipment items.

**3.10 Warranty Administration Services:**

3.10.01 For one year following substantial completion of the Project, Consultant shall assist County, without additional compensation, in securing correction of defects, and with Subconsultants who contributed to the design of the Project, shall in the sixth and eleventh months make inspections of the Project with County and report any observed discrepancies to County and Contractor.

3.10.02 Walkthroughs and Evaluations will be scheduled by County's Construction Management Division at the sixth and eleventh month. During these Walkthrough and Evaluation, Consultant shall:

(A) Assist County in reviewing the built Project on site;

(B) Participate in review of all stakeholder's and County's identifications of deficiencies.

(C) Generate written commentary in the form of a Warranty Evaluation Report that presents findings and recommendations including the issues identified during the walkthrough by presenting their professional perceptions, and concerns, and offering any suggestions for improvements as well as any quality concerns that affect the Project's intended use, functions or operations. This report should be generated and submitted to the Contract Administrator within one week of the walkthrough.

3.10.03 Provide Warranty Administration and support for furniture, fixtures and equipment for a minimum one-year post-installation period (starting from date of installation, inspection and final acceptance by the Contract Administrator) and extending through any extended or special warranty periods associated with individual furniture, fixture or equipment items.

**4.01 Optional Services:**

Optional Services indicated with a checked box (☒) are incorporated into this Agreement as a BASIC SERVICE.

4.01.01 The services listed below are normally considered to be beyond the scope of Basic Services as defined in this Agreement, and if authorized in advance by an appropriate written authorization, will be compensated for as provided under Article 5:

- (A) Providing financial feasibility, or other special studies.
- (B) Master planning or providing services relative to future facilities, systems and equipment which are not intended to be constructed as during the construction phase.
- (C) Providing investigations and making detailed appraisals and valuations of existing facilities, and surveys or inventories required in connection with construction performed by County.
- (D) Providing any additional or special professional services as may be required for the Project not within this Agreement.
- (E) Providing the services of one or more full-time on-site representative during construction; including the services of a Special Threshold Inspector.
- (F) Providing extended assistance beyond that provided under Basic Services for the initial start-up, testing, adjusting and balancing of any equipment or system; extended training of County's personnel in operation and maintenance of equipment and systems, and consultation during such training; and preparation of operating and maintenance manuals, other than those provided by the Contractor, subcontractor, or equipment manufacturer.
- (G) Providing consultation concerning replacement of any Work damaged or built inconsistent with the Contract Documents, providing the cause is found by the Contract Administrator to be other than by fault of Consultant.
- (H) Providing consultation concerning replacement of any Work damaged by fire or other cause during construction and furnishing services as may be required in connection with the replacement of such Work.
- (I) Providing services made necessary by the default of the Contractor, or any major unanticipated defects or deficiencies in the Work of the Contractor or any other entity engaged with the construction of the Work.

- (J) Preparing change orders and related documents required by changes (whether increases or decreases) in the scope of the Project as requested by the Contract Administrator for unforeseen conditions and Contract Administrator requested changes only and not for any changes due to the error or omission of Consultant.
- (K) Providing revisions in drawings, specifications or other documents required by the enactment or revision of codes, laws or regulations subsequent to the preparation of such documents.
- (L) Preparing to serve or serving as an expert witness in connection with any public hearing, arbitration proceeding or legal proceeding.
- (M) Participation in the Contract Administrator's program of Building Commissioning.
- (N) Participation in the Contract Administrator's program of Partnering.
- (O) Review of extensive claims by the Contractor or others relating to the Project. However, there shall be no additional charges to County from Consultant in the event the claims are not extensive or in the event the claims are determined by the Contract Administrator to be based upon the failure of Consultant or Subconsultant to properly perform its services or to comply with the provisions of this Agreement.
- (P) Renderings: Providing additional artistic renderings, perspectives, sketches or other artistic representations of proposed facilities, improvements or other graphic materials as required by the Contract Administrator. Services shall include submittal of several simple studies of proposed perspective drawings indicating suggestions for view angles and general composition of a rendering.
- (Q) Professional Color Photography: Consultant shall facilitate the County's selection of a professional architectural photographer. Consultant shall arrange for and participate in the County's: review of photographer's past work, interview(s) with prospective photographers and photographer's tour of subject facilities. Consultant shall assist photographer on day(s) of on-site photography and shall assist the County in selecting photographs for printing. Number of photographs, media and photographer's compensation shall be subject to negotiations conducted with the photographer by Consultant and County.
- (R) Providing cost estimating scheduling services. Such estimate shall consist of a fully detailed estimate of probable construction cost projected to the expected time of bid (or other award of construction services) and containing enough detail to provide information necessary to evaluate compliance with the Contract Administrator's Project. Format estimate and provide detail matching the

organizational structure of the Construction Specification Institute's (CSI) latest edition of MasterFormat to organize the estimate.

- (S) Provide scheduling services to include Critical Path Method (CPM) schedules or other scheduling formats pursuant to the detail and complexity required by the Contract Administrator.
- (T) Provide physical modeling of proposed facilities, building assemblies or other assemblies or other spaces/facilities pursuant to the Project needs of the Contract Administrator.
- (U) Provide supervision of the delivery, installation and testing of furniture, fixtures and equipment items. Provide inventory control and shipping verification to County.
- (V) Any other services not otherwise included in this Agreement and not customarily furnished in accordance with generally accepted architectural practice related directly to design, construction or Project administration.
- (W) Technology design services – phone data, CCTV, security, access control, cable TV, etc.

**Professional Services Agreement  
EXHIBIT A, SCOPE OF SERVICES  
ATTACHMENT 1:  
Project Schedule**

Project No: 105001  
Project Title: Property Appraiser and Value Adjustment Board (VAB) Building Renovation  
Facility Name:

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The required project schedule milestones for this project are presented below. Items marked undetermined require additional development and submittal of the Consultant's Project Development Schedule as required by the Professional Services Agreement for this Project.

PHASE	DATE REQUIRED OR ESTIMATED TIME PERIOD (CALENDAR DAYS)	
<b>Pre-Design (Programming)</b>		
Consultant's Document Preparation and Submittal	60 Days	<input type="checkbox"/> Undetermined
County Review	17 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined
<b>Schematic Design Phase:</b>		
Consultant's Document Preparation and Submittal	60 Days	<input type="checkbox"/> Undetermined
County Review	14 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined
<b>Design Development Phase:</b>		
Consultant's Document Preparation and Submittal	60 Days	<input type="checkbox"/> Undetermined
County Review	21 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined
<b>60% Construction Documents Phase</b>		
Consultant's Document Preparation and Submittal	90 Days	<input type="checkbox"/> Undetermined
County Review	14 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined

**85% Construction Documents Phase**

Consultant's Document Preparation and Submittal	60 Days	<input type="checkbox"/> Undetermined
County Review	21 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined

**100% Construction Documents Phase**

Consultant's Document Preparation and Submittal	45 Days	<input type="checkbox"/> Undetermined
County Review	14 Days	<input type="checkbox"/> Undetermined
Consultant's Document Correction and Re-Submittal	14 Days	<input type="checkbox"/> Undetermined

**Bidding and Award of Contract**

Bid Opening Date:	0 Days	<input checked="" type="checkbox"/> Undetermined
or		
Board Approval of MGC Agreement	0 Days	<input checked="" type="checkbox"/> Undetermined

**Administration of the Construction Contract**

Substantial Completion Date:	300 Days	<input type="checkbox"/> Undetermined
Final Completion Date:	45 Days	<input type="checkbox"/> Undetermined
Warranty:	365 Days	<input type="checkbox"/> Undetermined

**Professional Services Agreement**  
**EXHIBIT A, SCOPE OF SERVICES**  
**ATTACHMENT 2:**  
**BIM and Electronic Media Submittal Requirements**

**Introduction**

The Contract Administrator will be utilizing electronic media as the principal way it develops, communicates and archives information concerning its various construction programs for the County. To that end, County's standard Professional Services Agreements for Consultant services and Construction Agreements for construction services require submittal of documents produced on electronic media. The County requires Building Information Modeling (BIM) based design, documentation and construction deliverables, scaled to the County's needs, especially for all major projects, including all new construction. These BIM processes are achieved through collaborative efforts of the Consultant and the Contractor and generally conclude with the completion of the Consultant's Design Model and a Contractor's As-Constructed Model as outlined in the Scope of Work and in the BIM Project Execution Plan (BIM PxP).

For projects utilizing BIM delivery, Consultant and Contractor will provide native BIM format and Industry Foundation Class (IFC) electronic BIM deliverables in addition to all other electronic copies of hardcopy submissions and other files that support the intent of the project at all project milestones. Data interoperability is important to the County. Design Authoring software shall be used throughout the project lifecycle and shall be parametric. It is also important that nationally defined standards and protocols be used when developing BIM's so that data may be normalized for multiple uses, now and in the future. Most current versions of standards such as the National BIM Standards, BIMForum LOD Specification Part 1 and Commentary, OmniClass, Unifomat and MasterFormat, should be used whenever possible.

The Consultant will derive any two-dimensional (2D) deliverables from the Building Information Model. Further, it is the intent of the County to require open-standard facility management data as a project deliverable at all milestones. An important goal for the Construction Management Division is to not only enhance the value of all team efforts to efficiently design and construct lean, new and renovated construction projects using BIM, but also to assist in achieving a dependable use and development of BIM across multiple building types and for a wide range of County agencies.

Predictable, reliable, and uniform data will help to ensure a building dataset that will facilitate ongoing building operation and maintenance protocols. Project Consultant shall initiate and jointly develop BIM and Construction Operations Building Information Exchange (COBie) information to be completed by the Contractors throughout their corresponding phases of the project.

Definitions and Identifications for BIM terms used in this Attachment, requirements for electronic media, the BIM/CADD Standard of Care, LOD, COBie and other requirements are presented in Sections 1, 2 and 3 of this Attachment 2. The detailed BIM PxP Template is provided in Section 4



and is required to be developed at project initiation to provide a master information and data management plan and assignment of roles and responsibilities for model creation and data integration. Wherever possible, the BIM PxP will be developed through a collaborative approach involving all Project Consultants, Contractors and applicable County staff. A small sample of the Model Progression Schedule/Agent Responsible Matrix Template (MPS) is provided in Section 5 and will be made available in its native Excel format upon request. The County template includes minimum LODs but will be adapted if needed for the Project. An Introduction and directions for completion are described on the first page of the document.

#### **Table of Contents - Attachment 2:**

**Introduction**

**Section 1 - Definitions and Identifications**

**Section 2 - Electronic Media**

**Section 3 - BIM/ CADD Standard of Care, Level of Development (LOD), COBie**

**Section 4 - BIM Execution Plan (BIM PxP) *(Template to be completed)***

**Section 5 - Model Progression Schedule/  
Agent Responsible Matrix (MPS) *(Template to be completed)***

### **Section 1 Definitions and Identifications**

The following BIM oriented definitions and identifications in this Section apply to this Attachment 2 unless the context, the Agreement in which the word or phrase is used, requires a different definition. In the event of a conflict, the Contract Administrator will determine its final resolution:

- 1.1 **3D Coordination & Conflict Analysis:** A process in which clash detection software is utilized during the coordination process to determine field conflicts by comparing 3D models of building systems. The goal of clash detection is to eliminate the major system conflicts prior to installation.
- 1.2 **As-Constructed BIMs:** Multiple Construction BIMs, delivered and validated by the Contractor before closing-up spaces and reviewed by the Consultants that represent the final As-Constructed building and components, including embedded data as required by the Contract Documents.
- 1.3 **Asset Management:** A process in which an organized management system will efficiently aid in the maintenance and operation of a facility and its assets. Asset Management utilizes the data contained in a record model to determine cost implications of changing or upgrading building assets, segregate costs of assets for financial tax purposes, and maintain a current comprehensive database that can produce the value of a company's assets.
- 1.4 **Augmented Reality Simulation (AR):** A Model Use where 3D models - combined with other technologies - allow users to experience virtual objects superimposed on top of physical objects or places, thus allowing images from the physical and virtual worlds to

- appear as one. AR is typically experienced through hand-held screens, wearables, holograms and projections.
- 1.5 **BIM:** Building Information Modeling as such term is defined by the US National Building Information Model Standard Project Committee. BIM is not a specific product or technology, instead it is a collection of software applications and processes designed to facilitate coordination and project collaboration through a facilities lifecycle. BIM is a process for developing design, construction and operations and maintenance documentation by virtually constructing a building, bridge or other form of infrastructure – before anything is built. As used herein, the BIM may also refer to a specific model derived from the BIM process (sometimes redundantly identified as a BIM model). References to Building Information Model, BIM, or the Model, include the primary design model or models and all linked, related, affiliated or subsidiary models developed for design, analysis, estimating, detailing, fabrication, construction, operation or maintenance of the project, or any portion or element of the project.
- 1.6 **BIM Project Execution Plan (BIM PxP or PxP):** A document that defines the appropriate uses for Building Information Modeling on a project (e.g., design authoring, design review and 3D coordination), along with a detailed design and documentation process for executing BIM throughout a facility’s lifecycle, team contacts, team responsibilities, team roles, definitions, delivery methods / formats, LOD matrix, work flow and process maps are among other information outlined in the BIM PxP.
- 1.7 **Building Maintenance Scheduling:** A process in which the functionality of the building structure (walls, floors, roof, etc.) and equipment serving the building (mechanical, electrical, plumbing, etc.) are maintained over the operational life of a facility.
- 1.8 **BIM2Field:** See definition for Digital Layout.
- 1.9 **CAD/CADD:** Computer Aided Design/Computer Aided Design and Drafting. Interchangeably used terms interpreted as 2D, (Two Dimensional) representations in electronic format. CAD represents all pre-BIM digital tools and their 2D/3D deliverables.
- 1.10 **CAD/BIM Manager:** The System Administrator and/or person responsible for leading the BIM implementation processes within an organization and supporting it in developing/delivering new BIM services and model-based efficiencies. Also responsible for the management of all CAD and BIM data and processes.
- 1.11 **CAFM – Computer Aided Facility Management:** A software platform that streamlines facilities management and maintenance. CAFM software spans space and workplace management, asset management, project management, building operations, preventive maintenance, and more. These systems leverage facilities data and drawings into performance metrics and planning tools to optimize the process of managing facilities.
- 1.12 **CIM - Sub-Surface:** Civil Information Modeling and subsurface utility mapping that relates and is coordinated with the building modeling.
- 1.13 **Clash Detection - Clash Rendition:** A process in which clash detection software is used during the coordination process to determine field conflicts by comparing 3D models of building systems prepared by different disciplines, Rendition or the visual representation of the native-format model file is be used specifically for spatial

- coordination processes. The key benefit is to eliminate major system conflicts prior to installation, reducing errors, and hence costs, prior to commencement of construction.
- 1.14 **CMMS:** Computerized Maintenance Management System. A software system that provides maintenance managers a detailed look into the maintenance of a facility and keeps track of work costs and orders, machine history, labor records and critical equipment and can generate preventive maintenance work orders.
- 1.15 **COBie:** Construction Operations Building Information Exchange specifications as administered through the buildingSMART alliance, National Institute of Building Sciences, Washington, DC. [http://www.nibs.org/?page=bsa\\_cobie](http://www.nibs.org/?page=bsa_cobie).
- 1.16 **Code Validation:** A process in which code validation software is utilized to check model parameters against specific codes.
- 1.17 **Commissioning:** The process of verifying in new construction that agreed upon building systems achieve the County's project requirements.
- 1.18 **Compatible Data:** Data that can be accessed directly by the target BIM or CADD system upon delivery to the County, without further translation or post-processing of the electronic digital data files. It is the responsibility of Consultant to ensure this minimum level of compatibility.
- 1.19 **Constructability - PEER Review:** Constructability can be defined as a review of the building model along with drawings, specifications to determine feasibility to assemble the project in the manner documented. The review includes, but does not limit, evaluating and identifying efficiencies, assemblies, systems and obstacles to construction.
- 1.20 **Construction System Design:** A process in which 3D System Design Software is utilized to design and analyze the construction of a complex building system (e.g. form work, glazing, tiebacks, etc.) in order to improve planning.
- 1.21 **Cost Analysis:** A process in which a BIM can offer a preliminary analysis of the costs of constructing a Project during the design process and provide cost benefit effects of additions and modifications with potential to save time and avoid budget overruns. The accumulation, examination, and manipulation of cost data for comparisons and projections.
- 1.22 **Cost Estimation:** A process in which a BIM is used to develop accurate quantity take-offs for the purpose of creating or validating cost estimates.
- 1.23 **Design Authoring:** A process in which 3D software is used to develop a BIM based on criteria that is important to the translation of the building's design. Design authoring tools are a first step towards BIM, connecting the 3D model with a database of properties, quantities, means and methods and schedules.
- 1.24 **Design for Maintenance:** An evaluation process where each object selected during design for inclusion in a BIM are evaluated for maintenance issues, such as recommended, or code required clearances to perform routine maintenance activates to include complete replacement of the object or any of its components.
- 1.25 **Design Model:** is an object-based 3D model generated by the Design Team (individually or as a group) for the purposes of design analysis, Clash Detection and documentation.



- 1.26 **Design Reviews:** A process in which a 3D model is used to showcase the proposed design to the stakeholders and to help evaluate whether it has met deliverable requirements.
- 1.27 **Digital Fabrication:** A process that utilizes machine technology to prefabricate objects directly from a 3D Model. The Model is spooled into appropriate sections and input into fabrication equipment for production of system assemblies.
- 1.28 **Digital Layout - BIM2Field:** A process that allows information in a BIM to be transferred to digital layout tools for layout in conformance to the model. This information can be used to validate (QA/QC) the physical facility against the model.
- 1.29 **Disaster Planning - EM Preparation:** A process in which emergency responders would have access to critical building information in the form of model and information system. The BIM would provide critical building information to the responders, that would improve the efficiency of the response and, more importantly, minimize the safety risks. The dynamic building information would be provided by a building automation system (BAS), while the static building information, such as floor plans and equipment schematics, would reside in a BIM model. These two systems would be integrated via a wireless connection and emergency responders would be linked to an overall system. The BIM coupled with the BAS would be able to clearly display where the emergency was located within the building, possible routes to the area, and any other harmful locations within the building.
- 1.30 **Electrical Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective electrical system based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.31 **Energy Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective facility energy plan based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.32 **Existing Conditions Modeling:** A process in which a project team develops a parametric 3D model of the existing conditions for a site, facilities on a site, or a specific area within a facility. This model can be developed in multiple ways depending on what is desired and what is most efficient. Once the model is constructed, it can be queried for information, whether it be for new construction or a modernization project.
- 1.33 **Facility Data Exchange:** A process where a facility data schema is developed to ensure information is supplied to the BIM in electronic form so that it can be easily exchanged between the BIM and the organizations selected tool. The capability should include textural as well as graphic entities.
- 1.34 **Federated BIM:** A BIM model which links (does not merge) several single-discipline models together. Federated Models do not merge the properties of individual models into a single database. A federated model is useful for design coordination, clash avoidance and clash detection, approvals processes, design development, estimating and so on, but the individual models do not interact, they have clear authorship and

- remain separate. This means that the liabilities of the originators of the separate models are not changed by their incorporation into the federated model.
- 1.35 **IFC:** Industry Foundation Classes, open sharable standards for building information as defined by the buildingSMART alliance, National Institute of building Sciences, Washington, DC. <http://www.buildingSmart.org/compliance/certified-software>
- 1.36 **Information Manager:** The BIM Protocol refers to and provides for the appointment of 'Information Manager' by the Consultants, Contractors or County. This is the project manager, or BIM Manager who is responsible for managing the processes of information exchange on projects, using BIM procedures and methods.
- 1.37 **Integrated Project Delivery\* (IPD):** The owner's goal who's primary motive is to bring the teams together early on in the project. A full implementation of BIM also requires the project teams to collaborate from the inception stage and formulate model sharing and ownership contract documents. \*NOTE: True IPD employs various constructs, many of which the County is precluded from using by state law. (such as the use of multi-party contracts, and profit sharing). The County's integrated delivery approach leverages aspects of IPD that are allowed by law.
- 1.38 **Laser Scanning and Point Cloud Integration:** A process where the application is the controlled steering of laser beams followed by a distance measurement at every pointing direction. This is used to rapidly capture shapes of objects, buildings and landscapes. The point cloud generated is then interpreted by software to create a BIM of the existing conditions.
- 1.39 **Life Cycle Assessment -** Life-cycle assessment (LCA, also known as life-cycle analysis) is a cradle-to-grave environmental impact assessment for built assets, in terms of materials and energy. The energy and materials used, along with waste and pollutants produced as a consequence of a product or activity, are quantified over the whole life cycle; the result representing the environmental load of that asset. ISO 14040 defines LCA methodology.
- 1.40 **Lighting Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective lighting method based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.41 **LOD:** Level Of Development Specification for Building Information Models. See Section 3 – BIM/CADD Standards of Care and the current edition of the BIMForum LOD Specification for additional information. <http://BIMForum.org/lod>
- 1.42 **Maintenance & Repair Information:** A function to allow the collection and storage of maintenance and repair information about objects brought into a BIM.
- 1.43 **Mechanical Analysis:** A process in which intelligent modeling software uses the BIM model to determine the most effective mechanical system design based on engineering and design specifications. These analysis tools and performance simulations can significantly improve the design of the facility and its energy consumption during its lifecycle in the future.
- 1.44 **Model Progression Schedule/Agent Responsible Matrix (MPS):** A worksheet that is a guide for the project team to define model creation scope of work, minimum model



- level of development and responsible agent. The LOD will aid in determining the level of involvement of the project stakeholders from planning through facility turnover. This worksheet is intended to guide the project team in achieving project goals, accommodate required BIM uses, meet schedule requirements for the project and identify the responsible agents at differing phases of the project.
- 1.45 **OmniClass:** OmniClass Construction Classification System (OCCS), is a means of organizing and retrieving information specifically designed for the construction industry. This agreement incorporates Table 23 establishing National Standards for the classification of construction products. OmniClass uses MasterFormat and UniFormat as the basis of its Tables wherever possible. <http://www.omniclass.org/about>
- 1.46 **Owner (County) Approval:** A business process which takes advantage of information stored in a BIM to help validate progress as well as observing that the County's intent for the facility is being honored both conceptually and contractually.
- 1.47 **Phase Planning - 4D Modeling:** A process in which a 4D model (3D models with the added dimension of time) is utilized to effectively plan the phased occupancy in a renovation, retrofit, addition, allow construction scheduling or to show the construction sequence and space requirements on a building site.
- 1.48 **Programming:** A process in which a spatial program is utilized to efficiently and accurately assess design performance in regard to spatial requirements. Use of the BIM model allows the project team to critically analyze space and understand the complexity of space standards and regulations for discussion with the County and other stakeholders.
- 1.49 **PxP:** Abbreviated form of (BIM PxP). See definition for BIM Project Execution Plan.
- 1.50 **RAW Image Format:** A camera raw image file contains minimally processed data from the image sensor of either a digital camera, a motion picture film scanner, or other image scanner. Raw files are named so because they are not yet processed and therefore are not ready to be printed or edited with a bitmap graphics editor.
- 1.51 **Quality Assurance/Quality Control - QA/QC:** QA/QC as a BIM Use refers to ensuring that the BIMs follow County requirements and all components of the approved BIM Execution Plan, and that the BIMs accurately represent the building geometry and data to meet the purposes for which they are developed.
- 1.52 **Quantity Take Off (QTO):** A model use representing how 3D models are used to calculate the quantity of Furniture, Fixtures and Equipment or building material to create a detailed measurement of materials and labor needed to complete a construction project. Estimators review drawings, specifications and BIMs to find these quantities.
- 1.53 **Record BIMs:** The updated BIMs generated by the Architecture/Engineering Team of record that includes the Contractors' As-Constructed BIMs.
- 1.54 **Security - Key Management:** A process to identify and evaluate the security zones in the facility using BIM. The process includes identifying the door keys required for openings through the security perimeters established to ensure that the level of security defined is maintained.
- 1.55 **Site Analysis:** A process in which BIM/GIS tools are used to evaluate properties in a given area to determine the most optimal site location for a future project. The site data

collected is used to first select the site and then the position the building based on engineering criteria (e.g. solar path, utility availability, hazardous material).

- 1.56 **Site Utilization Planning:** A process in which a 4D model is used to graphically represent both permanent and temporary facilities on site, with the construction activity schedule. Additional information incorporated into the model can include labor resources, materials and associated deliveries, and equipment location.
- 1.57 **Space Management:** A process in which BIM is utilized to effectively allocate, manage, and track space types, workspaces, occupancy and resources within physical spaces.
- 1.58 **Specification Production:** A data based three-part specification system linked to the objects selected in a BIM which responds to any changes or alternatives items added or subtracted from the model.
- 1.59 **Structural Analysis:** A process in which analytical modeling software utilizes the BIM design authoring model to determine the behavior of a given structural system. Based on this analysis further development and refinement of the structural design takes place to create effective, efficient, and constructible structural systems.
- 1.60 **Sustainability & LEED Evaluation:** A BIM process in which a project is evaluated based on LEED or other sustainability criteria. This can refer to materials, performance, or a process. Sustainability evaluations can be applied across all four phases of a construction project, Planning, Design, Construction, and Operation. Sustainability evaluation is most effective when it is done in planning and design stages and then applied in construction and operations phase.
- 1.61 **Tolerance:** Acceptable dimension or variation from precise material, fabrication, or assembled condition as a unit of measure to be specified allowable variations in strength, stability, dimension, the mix of a material, the performance of a system, temperature ranges and so on.
- 1.62 **Total Cost of Ownership / Service Life:** A financial estimate intended to help buyers and owners determine all direct and indirect costs of a product or system.
- 1.63 **Virtual Design and Construction (VDC):** The management of integrated multi-disciplinary performance models of design-construction projects, the work processes and organization of the teams to support business objectives.
- 1.64 **Virtual Reality Simulation (VR):** A Model Use where 3D models are part of an Immersive Environment where users experience simulated places, objects and processes. As opposed to Augmented Reality Simulation, VR may require full 'immersion' within multi-projection rooms and/or through stereoscopic goggles and other specialized gear.
- 1.65 **Visualization:** Any technique for creating images, diagrams, or animations to communicate information. BIM can be used as a tool to show visual clarity of simple and complex systems and data to help understand project scope, design options, constructability, coordination and for QA/ QC.

## Section 2 Electronic Media

### 2.1 General Requirements:

2.1.1 All Work, including drawings, land surveying work, maps, details or other drawing information to be provided in electronic media by Consultant shall be accomplished and developed using Computer-Aided Design and Drafting (CADD), or Building Information Modeling (BIM), or a coordinated combination of both as determined by the Contract Administrator and may also include other software and procedures conforming to the following criteria.

### 2.2 BIM and CAD/CADD Graphic Formats:

2.2.1 Provide all CAD/CADD data in Autodesk, Inc.'s AutoCAD release 2019 or higher for Windows in native .dwg electronic digital format. CAD/CADD data required for Contract submittals shall be provided in native .dwg format. Provide copies of all drawing sheets or other CAD/CADD and/or PDF format produced documents intended for hardcopy plotting or printing in plot (.plt) and drawing web format (.dwf) versions of all sheets/documents.

2.2.2 Provide all BIM models and data in Autodesk Revit 2019 or higher. Provide all BIM and data in any of the following software formats:

- a. Autodesk, Inc. Revit 2019 or higher.
- b. Alternative compatible BIM software formats that conform to the requirements of Section 2.2 of this Attachment if accepted in writing by the County's Contract Administrator.

2.2.3 BIM data required for Contract submittals shall be provided in their native (.rvt typical) format as well as .ifc format in conformance with IFC (Industry Foundation Classes) IFC2x4 or higher, as established by the buildingSMART International Alliance for Interoperability. Use of BIM vendor's or systems that incorporate the International Alliance for Interoperability IFC standard above are acknowledged but their use must be approved in writing in advance by the County's Contract Administrator and otherwise comply with this Attachment.

2.2.4 Building Positioning to be accomplished for the intended project site by using "Auto – by Shared Coordinates" process or similar. Obtain State Plane Coordinates from Project survey information and utilize this same positioning process for all BIM files.

2.2.5 CAD/CADD data required for Contract submittals shall be provided in native .dwg format or be contained within the structure of the BIM data required in Section 2.2.2.

- a. Ensure that all digital files and data (e.g., constructs, elements, base files, prototype drawings, reference files and images, blocks, attribute links, pen settings and all other files external to the drawing itself) are Compatible Data with



the Contract Administrator's target BIM and/or CADD system (i.e., BIM and CADD software, platform, database software), and adhere to the standards and requirements specified herein.

2.2.6 Target platform: A personal computer with Windows 10 operating system that meets or exceeds the minimum manufacturer's requirements to operate the version of software utilized for the project.

2.2.7 Any non-graphical database delivered with prepared drawings must be provided in relational database format compatible with Microsoft Access 2016 or higher, or other compatible SQL format database. All database tables must conform to the structure and field-naming guidance provided upon request by the Contract Administrator.

- a. Maintain all linkages of non-graphical data with graphic elements, relationships between database tables, and report formats.

2.2.8 CAD/CADD Standards:

- a. Standard plotted drawing size: 24-inch x 36-inch sheets (Arch D-sized sheet)
- b. Coordinate with the Contract Administrator concerning the standard file naming protocol to be utilized.
- c. Drawing Set Organization and Sheet Identification per the United States National CAD Standard - V5. Provide dots in lieu of dashes at all uses.

2.2.9 CAD/CADD Layering:

- a. Conform to the guidelines defined by the American Institute of Architect's (AIA) standard document, U.S. National CAD standards version 5 (V5). "CAD Layer Guidelines", 2nd edition or later.
- b. Provide an explanatory list of which layers are used at which drawing and an explanatory list of all layers which do not conform to the standard AIA CAD Layer Guidelines including any user definable fields permitted by the guidelines.
- c. Layering: The Contract Administrator may, from time to time, supplement the AIA CAD Layer Guidelines with the Contract Administrator's specific requirements for Facilities or Construction Management and other related information. Obtain latest Contract Administrator specific layering from Contract Administrator prior to production of documents and incorporate into drawings.

2.2.10 Attribute Definitions:

- a. Obtain latest guidance from the Contract Administrator concerning attribute definition, database linking and other information embedding requirements prior to production of documents.

2.2.11 Federated Models: The following colors shall be utilized for all federated models including Design, Construction, Coordination, As-Constructed, and Record Models:

- a. Architectural Models
  - 1. Architectural - White
  - 2. Envelope (Curtainwall, Precast, Other) - Default
  - 3. Masonry - Gray
  
- b. Civil & Site Improvement Model
  - 1. TBD
  
- c. Structural Models
  - 1. Steel – Maroon
  - 2. Concrete - Gray
  - 3. Masonry - Gray
  
- d. MEP/FP Models
  - 1. Mechanical Ductwork Supply - Blue
  - 2. Mechanical Ductwork Return - Magenta
  - 3. Mechanical Ductwork Exhaust – Medium Orchid
  - 4. Mechanical Piping Supply – Gold
  - 5. Mechanical Piping Return- Violet
  - 6. Electrical Conduit – Light Yellow
  - 7. Cable Tray- Dark Orange
  - 8. Electrical Lighting – Light Golden Rod Yellow
  - 9. Plumbing Domestic Water - Lime
  - 10. Plumbing Storm / Roof Drain – Dark Green
  - 11. Plumbing Waste / Vent - Olive
  - 12. Medical Gas – Light Green
  - 13. Fire Protection - Red
  - 14. Fire Alarm – Golden Rod
  - 15. Data/IT / Controls - Aqua
  - 16. Pneumatic Tubing – Dark Slate Gray
  
- e. Miscellaneous Models
  - 1. Framing – Sandy Brown
  - 2. Equipment Models (by Equip. Planners) – Burly Wood
  - 3. Clearances - Dark Red

**2.2.12 Deviations from Standards:**

- a. Submit a written request for approval of any deviations from the Contract Administrator's established electronic media standards. Pre-coordinate the development, use and submittal of 3-D modeling, Building Information Models (BIM), photo-realistic renderings, animations, presentations and other visualization/information tools utilized during the design and construction process to ensure compatibility of submittal with County's intended use and information systems.

- b. No deviations from the County's established BIM/CADD standards will be permitted unless prior written approval of such deviation has been received from the Contract Administrator.
- c. Contract Administrator reserves the right to review, accept or reject AutoCAD files, BIMs and other Digital Deliverables. If the Digital Deliverables do not comply with the provisions of the agreement between County and the External Project Team member, the External Project Team member will be required to correct the work at no additional cost to County or delay to the Project Schedule.
- d. Contract Administrator also reserves the right to review, accept or reject Facility Data deliverables when required by contractual agreements. To ensure successful integration into County's CAFM software, milestone reviews may be conducted by County to export or link BIM data into these designated programs to ensure compatibility and capability. During the development of the BIM PxP, the required BIM outputs allowing for this integration will be determined. If the Facility Data integration with the computer aided facility management software fails because of the BIMs non-compliance with the provisions of the agreement between County and the External Project Team member, or the data imported does not accurately reflect the current state of the Project, the External Project Team member will be required to correct the work at no additional cost to the owner or delay to the Project Schedule.

2.3 Non-BIM/CADD Graphic Format:

2.3.1 Provide digital photography files and other miscellaneous graphics in High Resolution JPEG, PDF in 600 dots per inch (dpi) or higher resolution or PNG format. Provide RAW files when available.

2.4 Non-Graphic Format:

2.4.1 Provide word processing files in Microsoft Word 2016 or higher compatible file formats including all fonts, typefaces, bitmap and vector graphics and other information necessary for remote printing.

2.4.2 Provide spreadsheet files in Microsoft Excel 2016 or higher for windows compatible file formats including all fonts, typefaces, bitmap and vector graphics and other information necessary for remote printing.

2.4.3 Provide database files in relational database format compatible with Microsoft Access 2016 or higher, PDF or other compatible SQL format database including all tables, form and report formats, fonts, typefaces, bitmap and vector graphics and other information necessary for remote printing. Ensure integrity of relational database structure.

2.5 Delivery Media and Format:

2.5.1 Submit copies of all BIM/CADD data and other electronic files developed under this contract on electronic digital media as required for project phase submittals to 400 dots per inch (dpi) resolution.

2.5.2 Provide electronic digital data and files on labeled ISO-9660 CD-ROM., DVD's, Flash drives or other acceptable alternatives if approved by the Contract Administrator. Each device or disc shall contain identifying County project information in their disk name.

2.5.3 The electronic digital media shall be in the format which can be read and processed by the Contract Administrator's target CADD or BIM system. See also Section 2.2.

2.5.4 The external label or archival case for each electronic digital media shall contain, as a minimum, the following information:

- a. The Project Number, Project Title and date.
- b. The Facility Name
- c. The format and version of operating system software.
- d. The name and version of utility software used for preparation (e.g., compression/decompression) and copying files to the media.
- e. A list of the filenames, (a separate sheet will be accepted).

2.5.5 Before a CADD file is placed on the delivery electronic digital media, the following procedures shall be performed:

- a. Ensure that drawing sheets, viewports, paper-space, line weights, fonts, and other drawing components are correctly configured for Contract Administrator's viewing and plotting.
- b. Make sure all reference files are attached using a "relative" path setting and without device or directory specifications.
- c. Transmit function should be used in AutoCAD to assemble files for submittal. For each 2D drawing, provide one bound file containing drawing sheet with associated XREFs and one un-bound file containing the associated XREFs.
- d. Compress and reduce all design files using PKZIP, WINZIP or other compatible file compression/decompression software approved by the Contract Administrator. If the file compression/decompression software is different from that specified above, then an electronic digital media copy of the file compression/decompression software shall be purchased for the Contract Administrator and provided with the delivery media.
- e. Include all files, both graphic and non-graphic, required for the project (i.e., color tables, pen tables, font libraries, block libraries, user command files, plot files, and other elements of drawing definition). All blocks not provided as Contract Administrator-furnished materials must be provided as a part of the electronic

digital deliverables.

- f. Make sure that all support files such as those listed above are in the same directory and that references to those files do not include device or directory specifications.
- g. Document any fonts, tables, or other similar customized drawing element developed by Consultant or not provided among Contract Administrator-furnished materials. Contractor shall obtain Contract Administrator approval before using anything other than Contract Administrator's standard fonts, line types, tables, blocks, or other drawing elements available from Contract Administrator.
- h. Include any standard sheets (i.e., abbreviation sheets, standard symbol sheets, or other listing) necessary for a complete project.
- i. Check completed files are free of any known viruses or unrequired attachments.

## 2.6 Drawing Development Documentation:

2.6.1 Provide the following information for each finished drawing in the nonplot layer X\*\*\*\*-NPLT:

- a. How the data were input (e.g., keyed in, downloaded from a survey total station instrument (include name and model), and other identification data).
- b. Brief drawing development history (e.g., date started, modification date(s) with brief description of item(s) modified, author's name, and other identifying data.).
- c. The names of the reference, blocks, symbols, details, tables, and schedule files required for the finished drawing.
- d. Layer assignments and lock settings.
- e. Text fonts, line styles/types used, and pen settings.

## 2.7 Submittals / Deliverables:

2.7.1 Submit as Project Record Documents specified above and as required for project phase submittals and project record documents.

2.7.2 Submit electronic media with a transmittal letter containing, as a minimum, the following information:

- a. The information included on the external label of each media unit (e.g., CD, DVD, flash drive, etc.), along with the total number being delivered, and a list of the names and issue dates of all files on the media.
- b. Brief instructions for transferring the files from the media.
- c. Confirm that all delivery media is free of known computer viruses. A statement including the name(s) and release date(s) of the virus-scanning software used to analyze the delivery media, the date the virus-scan was performed, and the operator's name shall also be included with the certification. The release or version date of the virus-scanning software shall be the current version that has detected the latest known viruses at the time of delivery of the digital media.
- d. The following "Plot File Development and Project Documentation Information"

as an enclosure or attachment to the transmittal letter provided with each electronic digital media submittal:

1. List of all new figures, symbols, tables, schedules, details, and other blocks created for the project, which were not provided to Consultant with the Contract Administrator-furnished materials, and any associated properties.
2. List of all database files associated with each drawing, as well as a description and documentation of the database format and schema design.
3. Recommended modifications which will be necessary to make the data available for GIS use.

2.7.3 Prime Contractors are responsible for ensuring that the Digital Deliverables prepared by their Subcontractors or Subconsultants comply with the standards and policies outlined in this document.

## 2.8 Ownership:

2.8.1 County has ownership and all rights to all finished or unfinished digital deliverables developed for this Project. Any digital deliverables generated under any County Consulting or Construction Agreements or Contracts, including those generated by the External Project Team Members' Subcontractors or Subconsultants, shall become the property of County. County will have unlimited use of the digital deliverables produced for the Project. County acknowledges that the digital deliverables are an instrument of service of the external project team member and that the author of the digital deliverable does not represent or guarantee that the digital deliverable will be useful to County for any purposes beyond those uses that they were authored.

2.8.2 County will have unlimited rights under the Agreement of which this document is a part to all information and materials developed under these and other contractual requirements and furnished to the Contract Administrator and documentation thereof, reports, and listings, and all other items pertaining to the work and services pursuant to this agreement including any copyright.

2.8.3 Unlimited rights under this contract are rights to use, duplicate, or disclose text, data, drawings, and information, in whole or in part in any manner and for any purpose whatsoever without compensation to or approval from author except where otherwise limited within the Contract.

2.8.4 The Contract Administrator will at all reasonable times have the right to inspect the work and will have access to and the right to make copies of the above-mentioned items.

2.8.5 All text, electronic digital files, data, and other products generated under this contract shall become the property of County except where otherwise limited within the Contract.

**2.9 Contract Administrator-Furnished Materials to the Construction Contractor:**

2.9.1 The Contract Administrator and Consultant may make various electronic information available to the Contractor during the Pre-Construction and Construction phases of the Project. To this end, Consultant shall make the following information available to the Contractor in electronic format:

- a. Work-files: Selected work product files, copies of BIM and/or CAD files, reports, spreadsheets, databases, specifications, drawings and other documentation of Consultant's work in progress may be provided to the Contractor, Managing General Contractor, or other County consultant on an as required basis. Consultant shall cooperate and facilitate the secure exchange of these electronic media documents.
- b. Where electronic media submittals of final site surveys are required: Provide electronic copies of any existing site survey data already on electronic media conforming to Section 2.2 of this Attachment.
- c. Where Electronic Project Record Documents are required, Consultant will provide the Contractor one set of contract drawings in an electronic file format conforming to Section 2.2 of this Attachment, to be used for as-constructed drawing markups at the Contractor's option. Make electronic file drawings available on media in conformance with Section 2.5 of this Attachment.

**2.10 Other Digital Information:**

2.10.1 A variety of digital information may be generated by participants in the design process including the Contract Administrator, Consultant, Subconsultants, Contractor, subcontractors, the Contract Administrator's commissioning authority, local jurisdictional authorities and other project team members.

2.10.2 Consultant shall facilitate and participate in this digital exchange of information by conforming to the standards expressed above and as further described in Attachments.

**Section 3 BIM/CADD Standards of Care**

**3.1 General Provisions:**

3.1.1 The Model(s) shall be developed to include the systems described below as they would be built, the processes of installing them, and to reflect final As-Constructed construction conditions. The deliverable 3D Model at all phases shall be developed to include as many of the systems described below as are necessary and appropriate to the design/construction stage. The BIM shall be provided in an editable form and from its inception shall include automatic model positioning using a common reference point (Point of Origin), based on "Florida State Plane Coordinates" derived from the project survey.

3.1.2 The Model shall be developed using Building Information Modeling (“BIM”) supplemented with Computer Aided Drafting and Design (“CADD”) content as necessary to produce a complete set of Construction Documents.

3.1.3 Provide all Building Information Modeling (BIM) for Space Management and Program Validation in conformance to the General Service Administration’s (GSA) “Building Information Modeling Guide 02 -Spatial Program Validation,” dated May 21, 2015 or later. Provide space identification, charts and information in conformance with this Guide.

3.1.4 The parties shall utilize the appropriate Levels of Development (LOD) described below in completing the Model, which establishes the required LOD for each Model Element at each phase of the Project.

3.1.5 The following Level of Development (LOD) descriptions are summaries of Level Of Development Specification for Building Information Models as developed by BIMForum. (<http://bimforum.org/lod>), current edition (2017 or later). **Each subsequent LOD builds on the previous level and includes all the characteristics of previous levels.** See also “Section 5 BIM Model Progression Schedule” for examples and graphic descriptions of Levels of Development. The following list is a simplified summary of the adopted Levels of Development:

- **LOD 100** elements are not geometric presentations. They may be symbols or other generic representations of information that can be derived from other model elements. Any information derived from LOD 100 elements must be considered approximate.
- **LOD 200** elements are represented graphically but are generic placeholders, e.g., volume, quantity, location, or orientation. Any information derived from LOD 200 elements must be considered approximate.
- **LOD 300** elements are graphically represented as specific systems, objects, or assemblies from which quantity, shape, size, location, and orientation can be measured directly, without having to refer to non-modeled information such as notes or dimension callouts.
- **LOD 350** elements are enhanced beyond LOD 300 by the addition of information regarding interfaces with other building systems. For example, an LOD 350 masonry wall element would include jamb conditions, bond beams, grouted cells, dowel locations, and joints – information that enables the model user to coordinate the wall element with other systems in the structure.
- **LOD 400** elements are modeled at sufficient detail and accuracy for fabrication of the represented component.

NOTE - County and the LOD Specification do not address **LOD 500** since that LOD relates to field verification and is not an indication of progression to a higher level of geometry



or information.

3.1.6 The parties shall utilize the appropriate Levels of Development (LOD) described below in completing the Model, which establishes the required LOD for each Model Element at each phase of the Project. LODs and Model Definition: There is no such thing as an “LOD ### model.” As previously noted, project models at any stage of delivery will invariably contain elements and assemblies at various levels of development. As an example, it is not logical to require an “LOD 200 model” at the completion of the schematic design phase. Instead, the “100% SD Model” will contain modeled elements at LOD 100 as well as various other levels of development. Consultants will be required to submit a LOD Model Progression as part of the Project Execution Plan.

### 3.2 **Level of Development (LOD) – Expanded Descriptions**

#### 3.2.1 **LOD 100:** (Predesign preferred) and Schematic Design (Basic Services)

- a. **Model Content Requirements:** Overall building massing indicative of area, height, volume, location, and orientation may be modeled in three dimensions or represented by other data.
- b. **Potential Uses:**
  1. **Analysis:** The Model may be analyzed based on volume, all spaces, area, solar orientation and configuration by application of generalized performance criteria assigned to the representative Model Elements.
  2. **Cost Estimating:** The Model may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, etc.), as opposed to components.
  3. **Schedule:** The Model may be used for project phasing and overall duration.

#### 3.2.2 **LOD 200:** Design Development (Basic Service)

- ii. **Model Content Requirements:** Model Elements are modeled as generalized systems or assemblies with approximate quantities, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements. Partitions and simple furniture models shall be included at this phase.
- iii. **Potential Uses:**
  1. **Analysis.** The Model may be analyzed for performance of selected systems and orientation by application of generalized performance criteria assigned to the representative Model Elements.
  2. **Cost Estimating.** The Model may be used to develop cost estimates based on the approximate data provided and conceptual estimating techniques (e.g., volume and quantity of elements or type of system selected).
  3. **Schedule.** The Model may be used to show ordered, time-scaled appearance of major elements and selected systems.

#### 3.2.3 **LOD 300:** Construction Documents (Basic Service)

- a. **Model Content Requirements:** Model Elements are modeled as specific assemblies accurate in terms of quantity, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements.
  - b. **Facility Management information:** Consultant will be required to input all new products installed under the scope of work for this project in conformance with an agreed upon list in OmniClass Table 23 format per Table 1 herein. County and Consultant to meet to refine the scope of the COBie information following issuance of the Schematic Phase NTP.
  - c. **Potential Uses:**  
Suitable for the generation of traditional construction documents and shop drawings.
    1. **Analysis.** The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.
    2. **Cost Estimating.** The Model may be used to develop cost estimates based on the specific data provided and industry estimating techniques.
    3. **Schedule.** The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.
    4. **Clash Detection.** The Model may be used to identify architectural and engineering conflicts for primary systems and elements. Areas of study include HVAC ductwork and equipment, structural elements, above ground plumbing and drainage piping, fire sprinklers and risers.
- 3.2.4 **LOD 350:** Construction (Contractor to provide this LOD as part of its Scope of Work, using the Consultants model unless County elects Consultant to provide as Optional Service)
- a. **Model Content Requirements:** Model Elements are modeled as constructed assemblies, actual and accurate in terms of size, shape, location, quantity, and orientation. Clearances and access requirements to be included in model elements where applicable, (e.g. VAV access, HVAC access panels, equipment door swings, maintenance panel access, etc.). Non-geometric information may also be attached to modeled elements.
  - b. **Facilities Management information:** Consultant to provide complete BIM model(s) to Contractor for its use containing Construction Operations Building Information Exchange (COBIE) standards in conformance with Table 1 herein.
  - c. **Potential Uses:**
    1. **Clash Detection.** The model may be used to coordinate the configuration, installation and positioning of all building elements.
    2. **Facility Management.** The Model may be utilized for maintaining, altering, and adding to the Project. Update and confirm As-Constructed COBie data and Space Management information.
    3. **Analysis.** The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the

representative Model Elements.

4. **Cost Estimating.** The Model may be used to develop cost estimates due to change in project scope based on the specific data provided and estimating techniques.
5. **Schedule.** The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

**3.2.5 Detailed BIM Delivery Breakdown for LOD 300 and 350:**

- a. **Architectural/Interior Design.** The Architectural systems Model may vary in level of detail for individual building elements, but at a minimum the model must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Additional minimum Model requirements include:
  1. **Spaces.** The Model shall include spaces defining actual net square footage, net volume and holding data to develop the room finish schedule including room names and numbers. Include program information to verify design space against programmed space, using this information to validate area quantities.
  2. **Walls and Curtain Walls.** Each wall shall be depicted to the exact height, length, width, materiality and ratings (thermal, acoustic, fire) to properly reflect wall types. The Model shall include all walls, both interior and exterior, and the necessary intelligence to produce accurate plans, sections and elevations depicting these design elements.
  3. **Doors, Windows and Louvers.** Doors, windows and louvers shall be depicted to represent their actual size, type and location. Doors and windows shall be modeled with the necessary intelligence to produce accurate window and door schedules.
  4. **Roof.** The Model shall include the roof configuration, drainage system, penetrations, specialties, and the necessary intelligence to produce accurate plans, building sections and wall sections where roof design elements are depicted.
  5. **Floors.** The floor slab(s) shall be developed in the Structural Model and then referenced by the Architectural Model.
  6. **Ceilings.** All heights and other dimensions of ceilings, including soffits, ceiling materials, or other special conditions shall be depicted in the Model with the necessary intelligence to produce accurate plans, building sections and wall sections where ceiling design elements are depicted.
  7. **Vertical Circulation.** All continuous vertical components (i.e., non-structural shafts, architectural stairs, ramps, conveying systems, handrails and guardrails) shall be accurately depicted and shall include the necessary intelligence to produce accurate plans, elevations and sections in which such design elements are referenced.
  8. **Architectural Specialties.** All architectural specialties (i.e., toilet room accessories, toilet partitions, grab bars, lockers, and display cases) and

millwork (i.e., cabinetry and counters) shall be accurately depicted with the necessary intelligence to produce accurate plans, elevations, sections and schedules in which such design elements are referenced.

9. **Signage.** The Model shall include all signage and the necessary intelligence to produce accurate plans and schedules.
  10. **Schedules.** Provide door, window, hardware sets using Builders Hardware Manufacturers Association (BHMA) designations, flooring, wall finish, and signage schedules from the Model, indicating the type, materials and finishes used in the design.
- b. **Furniture.** The furniture Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing and have necessary intelligence to produce accurate plans. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Representation of furniture elements is to be 3D. 3D Examples of furniture include, but are not limited to, desks, furniture systems, seating, tables, and office storage. Additional minimum Model requirements include:
1. **Furniture Coordination.** Furniture that makes use of electrical, data or other features shall include the necessary intelligence to produce coordinated documents and data. Models shall be sufficient to enable their use to demonstrate complete furniture mounted electrical and data installation locations.
- c. **Equipment.** The Model may vary in level of detail for individual elements. Equipment shall be depicted to meet layout and clearance requirements with the necessary intelligence to produce accurate plans and schedules, indicating the configuration, materials, finishes, mechanical, electrical requirements and all other related utilities. Examples of equipment include but are not limited to copiers, printers, refrigerators, ice machines, microwaves, and equipment specifically related to the operations and functions of the facility.
1. **Schedules.** Provide furniture and equipment schedules from the model indicating the materials, finishes, mechanical, and electrical requirements.
- d. **Structural.** The structural systems Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Additional minimum Model requirements include:
1. **Foundations.** All necessary foundation and/or footing elements, with necessary intelligence to produce accurate plans and elevations.
  2. **Floor Slabs.** Structural floor slabs shall be depicted with all necessary recesses,

- curbs, pads, closure pours, and major penetrations accurately depicted. Major penetrations shall include A/C duct chases and pipes larger than 6" dia. only.
3. **Structural Steel.** All steel columns, primary and secondary framing members, and steel bracing for the roof and floor systems (including decks), including all necessary intelligence to produce accurate structural steel framing plans, related building/wall sections, and schedules.
  4. **Cast-in-Place Concrete.** All walls, columns, beams, including necessary intelligence to produce accurate plans and building/wall sections, depicting cast-in-place concrete elements.
  5. **Precast/Tilt-up/CMU.** All walls, columns, beams, including necessary intelligence to produce accurate plans and building/wall sections, depicting such elements.
  6. **Expansion Joints.** Joints shall be accurately depicted.
  7. **Stairs.** All framing members for stair systems, including necessary intelligence to produce accurate plans and building/wall sections depicting stair design elements.
  8. **Shafts and Pits.** All shafts and pits, including necessary intelligence to produce accurate plans and building/wall sections depicting these design elements.
  9. **Openings and Penetrations.** All major openings and penetrations.
- e. **Mechanical.** The mechanical systems Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Small diameter (less than 3/4" NPS) field-routed piping is not required to be depicted in the Model. Additional minimum Model requirements include:
1. **HVAC.** All necessary heating, ventilating, air-conditioning and specialty equipment, including air distribution for supply, return, ventilation and exhaust ducts, control systems, chillers, registers, diffusers, grills, and hydronic baseboards with necessary intelligence to produce accurate plans, elevations, building/wall sections and schedules.
  2. **Mechanical Piping.** All necessary piping and fixture layouts, and related equipment, including necessary intelligence to produce accurate plans, elevations, building/wall sections, and schedules.
  3. **Equipment Clearances.** All Mechanical equipment clearances shall be modeled for use in interference management and maintenance access requirements.
- f. **Plumbing.** All necessary plumbing piping and fixture layouts, floor and area drains, and related equipment, including necessary intelligence to produce accurate plans, elevations, building/wall sections, riser diagrams, and schedules. Piping shall include slope requirements.
1. **Equipment Clearances.** All equipment clearances shall be modeled for use in interference management and maintenance access

requirements.

- g. **Electrical/Telecommunications/Data**. The electrical and telecommunications systems Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Small diameter (less than 1"  $\varnothing$ ) field-routed conduit is not required to be depicted in the Model unless banks of 3 or more conduits are run on racks. Additional *minimum* Model requirements include:
1. **Interior Electrical Power and Lighting**. All necessary interior electrical components (i.e., lighting, receptacles, special and general-purpose power receptacles, lighting fixtures, panel boards, cable trays and control systems), including necessary intelligence to produce accurate plans, details and schedules. Lighting and power built into furniture/equipment shall be modeled. Whips servicing lighting fixtures are required to be modeled.
  2. **Special Electrical**. All necessary special electrical components (i.e., mass notification, nurse call and other special electrical occupancy sensors, and control systems), including necessary intelligence to produce accurate plans, details and schedules.
  3. **Grounding**. All necessary grounding components (i.e., lightning protection systems, static grounding systems, communications grounding systems, cadweld locations and bonding), including necessary intelligence to produce accurate plans, details and schedules.
  4. **Telecommunications/Data**. All existing and new telecommunications service controls and connections, both above ground and underground, with necessary intelligence to produce accurate plans, details and schedules. Cable tray routing shall be modeled without detail of cable contents.
  5. **Exterior Building Lighting**. All necessary exterior lighting including all lighting fixtures, mounting details, relevant existing and proposed support utility lines and equipment with necessary intelligence to produce accurate plans, details and schedules.
  6. **Exterior Electrical Equipment**. All new transformers, pads, disconnects, site power receptacles, photocells, with necessary intelligence to produce accurate plans and details.
  7. **Photovoltaic Panel Systems**. Panels, transformers, inverters, fuses, switches, disconnects, communication panels and all underground conduit 1-1/2" or larger in diameter, with necessary intelligence to produce accurate plans and details.
  8. **Electric Car Charging Stations**. All new charging stations and conduit to point of power connection, including devices and disconnects, with necessary intelligence to produce accurate plans and details.
  9. **Equipment Clearances**. All electrical equipment clearances shall be modeled for use in interference management and maintenance access requirements.

- h. **Fire Protection.** The fire protection system Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. All fire protection piping should be modeled. Additional minimum Model requirements include:
1. **Fire Alarms.** Fire alarm/mass notification devices and detection systems, audible and visual, shall be indicated with necessary intelligence to produce accurate plans depicting them.
  2. **Fire Protection System.** All relevant fire protection components (i.e., branch piping, sprinkler heads, fittings, drains, pumps, tanks, sensors, control panels) with necessary intelligence to produce accurate plans, elevations, building/wall sections, riser diagrams, and schedules, including necessary intelligence to produce accurate plans, details and schedules.
  3. **Exterior Fire Protection elements.** All fire hydrants, fire department connections, valves and fire line piping shall be indicated with necessary intelligence to produce accurate plans depicting them on drawings.
- i. **Security.** The security system Model may vary in level of detail for individual elements, but at a minimum must include all devices and components that would be included on a quarter inch (1/4" = 1'-0") scaled drawing. Where applicable and as required for construction documents, the model, or host platform will include additional scales as required to show necessary details. Additional minimum Model requirements include, but not limited to:
1. **Closed Circuit Television (CCTV).** Security cameras, devices, components, and detection systems shall be indicated with necessary intelligence to produce accurate plans depicting them on drawings.
  2. **Emergency Notification systems.** All relevant security protection components (i.e. panic buttons, card readers, door controls, monitoring stations, security computer room, room/ corridor sensors, audible/visible annunciators, and security control panels) with necessary intelligence to produce accurate plans depicting the system(s).
  3. **Burglar alarm systems.** Building security including motion detectors, glass-break sensors, audible devices, and other intrusion detection devices as well control system for above shall be indicated on plans.
  4. **Public address system.** Speakers, zone control reflected on plan.
  5. **Low-voltage systems.** Various systems for communication, or customer services including Wi-Fi, FIBS/BIDS boards, phone chargers, lighting, Public Art, induction systems, wayfinding, solar PV, wind, and other systems.
  6. **Bi-Directional Antenna system (BDA).** – Antennas, trunk lines, branch line, control boxes, repeaters, emergency or redundant power sources, primary interface components, & home run room.
  7. **Distributed Antenna system (DAS).** Antennas, splitters, feeders, nodes,

- headend and other distribution system and signal source equipment.
8. Public Address system (PA). Speakers, amplifiers, microphone locations and backbone.
- j. Conveying Systems. The conveying systems models should indicate primary equipment, all necessary plumbing piping, electrical panels, fixture layouts and other related equipment, that would appear on a quarter inch ( $\frac{1}{4}'' = 1'-0''$ ) scaled drawing. Clearly indicate equipment clearances.
1. Elevator Equipment. All necessary equipment and control systems, including necessary intelligence to produce accurate plans, sections and elevations depicting these design elements. Provide indicators and call buttons.
  2. Escalator and other Conveyance Equipment. All relevant components of the escalator/conveyance system including accurate modeling of stair tread, size and placement. Indicate areas where 6'-8" clear headroom exists below the finished escalator if applicable.
- k. Landscape. The Landscape Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a quarter inch ( $\frac{1}{4}'' = 1'-0''$ ) scaled drawing and have necessary intelligence to produce accurate plans. Representation of Landscape elements is to be diagrammatic. Examples of landscape material include but are not limited to trees and shrubs.
1. Irrigation system. Primary components, including pumps, wells, control valves, timers and main and secondary piping, (1-1/4" in size and above).
  2. Site Elements. Benches, Bike Racks, Postal Equipment and Trash Receptacles.
- l. Civil. The Civil Model may vary in level of detail for individual elements, but at a minimum must include all features that would be included on a one inch ( $1'' = 100'$  to  $1'' = 20'$ ) scaled drawing. Additional *minimum* Model requirements include:
- m. Terrain (DTM). All relevant site conditions and proposed grading, including necessary intelligence to produce accurate Project site topographical plans and cross sections.
- n. Drainage. All existing and new drainage piping and structures including upgrades thereto, including necessary intelligence to produce accurate plans and profiles for the Project site.
- o. Cisterns. All new above or below ground water storage structures, pumps, filters, treatment equipment, backflow preventers, rainwater leaders, overflow piping, automatic and manual shutoffs or valves and supply piping to the rainwater's intended use.
- p. Storm Water and Sanitary Sewers. All existing and new sewer structures and piping, cleanouts including upgrades thereto, with necessary connections to mains or other distribution points as appropriate, including necessary intelligence to produce accurate plans and profiles.



- q. **Potable Water.** All new water piping to the building, meters, backflow preventers, valves, distribution and access boxes, including interconnection to cistern makeup water connections.
- r. **Utilities.** All necessary new utilities connections from the Project building(s) to the existing or newly created utilities, and all existing above ground and underground utility conduits, including necessary intelligence to produce accurate plans and site-sections.
- s. **Roads and Parking.** All necessary roadways, parking lots, and parking structures, light poles, including necessary intelligence to produce accurate plans, profiles and cross-sections.
- t. **Sidewalks and Paths.** All concrete, paver, asphalt, rubber, synthetic turf or other permanent material used for activity areas, pedestrian walkways and bicycle paths.
- u. **Potential Uses:**
  - a. Suitable for the generation of traditional construction documents and shop drawings.
  - b. **Analysis.** The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.
  - c. **Cost Estimating.** The Model may be used to develop cost estimates based on the specific data provided and conceptual estimating techniques.
  - d. **Schedule.** The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

3.2.6 **LOD 400: BIM for Fabrication. (Optional Service).**

- a. **Model Content Requirements.** Model Elements are modeled as specific assemblies that are accurate in terms of size, shape, location, quantity, and orientation with complete fabrication, assembly, and detailing information. Non-geometric information may also be attached to Model Elements.
- b. **Potential Uses:**
  - 1. **Construction.** Model Elements are virtual representations of the proposed element and are suitable for construction.
  - 2. **Analysis.** The Model may be analyzed for performance of approved selected systems based on specific Model Elements.
  - 3. **Cost Estimating.** Costs are based on the actual cost of specific elements at buyout.
  - 4. **Schedule.** The Model may be used to show ordered, time-scaled appearance of detailed specific elements and systems including construction means and methods.

3.3 **BIM for Facility Management**

3.3.1 BIMs shall be provided by Contractor or Managing General Contractor (MGC).

Contractor or MGC shall submit an As Constructed BIM to the A/E Consultant demonstrating the successful extraction and validation of COBie in Excel format for building operations, maintenance and management.

**3.4 As-Constructed Model Content Requirements**

- a. Model Content Requirements. Contractor shall model Elements as constructed assemblies, actual and accurate in terms of size, shape, location, quantity, and orientation. Non-geometric information may also be attached to modeled elements. Facilities Management/CAFM data completed with all requested information developed to County required Construction Operations Building Information Exchange (COBIE) standards. A model that accurately depicts rooms, names, uses, final room numbering, sizes and identifiers for on-going space management of the completed facility.
- b. Potential Uses:
  - 1. Facility & Construction Management. The Model may be utilized for maintaining, altering, and adding to the Project and generating reports.
  - 2. Project Record Documents. As-Constructed data accurately portrayed in the BIM model for future reference and reuse.

**3.5 COBie Data**

- a. **Within 30 days from the issuance of the Notice To Proceed (NTP) for Schematic Design**, the County and Consultant shall finalize and select items from the following OmniClass 23 table to establish the basis of COBie elements that need maintenance, to be tracked and delivered in the completed model.

23-11	Products
23-13	Structural and Exterior Enclosure Products
23-15	Interior and Finish Products
23-17	Openings, Passages, and Protection Products
23-21	Furnishings, Fixtures and Equipment Products
23-23	Conveying Systems and Material Handling Products
23-27	General Facility Services Products
23-29	Facility and Occupant Protection Products
23-31	Plumbing Specific Products and Equipment
23-33	HVAC Specific Products and Equipment
23-35	Electrical and Lighting Specific Products and Equipment
23-37	Information and Communication Specific Products and Equipment

Table 1.0 – Selected Excerpt from OmniClass Table 23

**3.6 BIM Project Execution Plan (BIM PxP or PxP)**

3.6.1 The BIM PxP template is included in this Attachment 2, as “Section 4 - Project Execution Plan (BIM PxP). The Consultants BIM PxP Coordinator for the Project has the responsibility of documenting the Project Execution Plan (PxP), gathering the required

information from the External Project Team, scheduling and leading the PxP meetings and establishing and implementing protocols for revisions and sharing the PxP

3.6.2 The development of the PxP is a collaborative effort by all members of the Project team and will be reviewed and updated in meetings specifically scheduled for this purpose. All members of the Project team are required to submit initial information for their scope to the designated PxP Coordinator within 15 calendar days of commencing work. At a minimum PxP meetings shall be conducted at the end of each project phase and a revised PxP shall be issued to County and the External Project Team. A record PxP shall be provided to the owner at handover including all updated requirements.

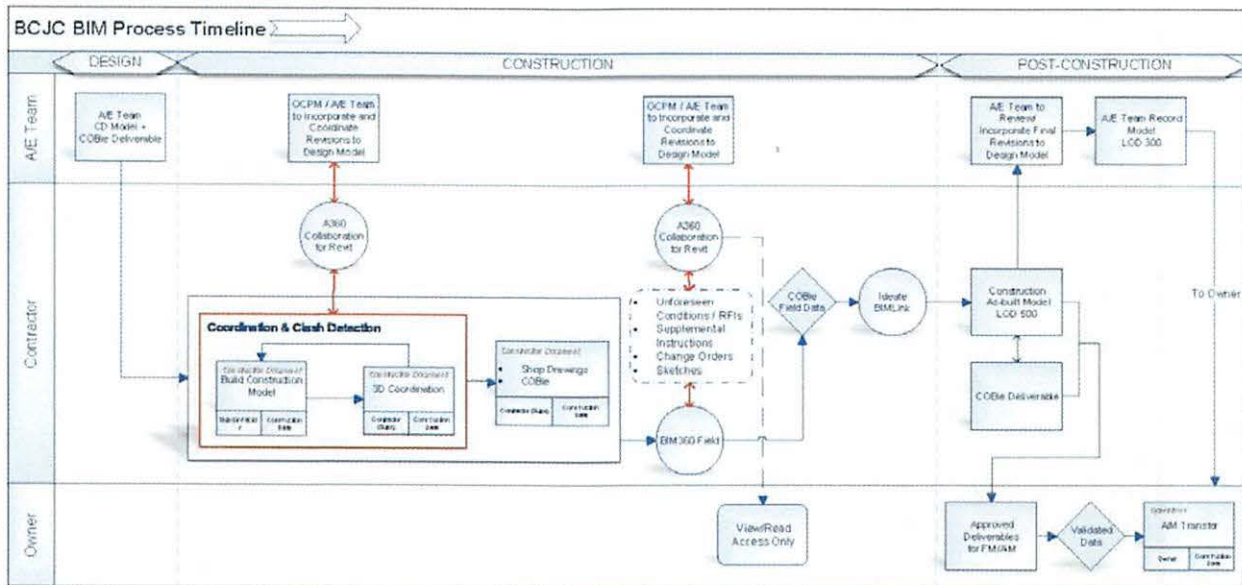
3.6.3 The PxP is subject to review and approval by County at each project phase.

3.6.4 The design & construction teams shall submit a written BIM PxP using the attached template, subject to review and written approval by County prior to proceeding with the process. The BIM PxP will outline all methods and procedures for collaboration between the design and construction teams as well as coordination of VDC/BIM efforts of the subcontractors. The Contract Administrator, Consultant, Contractor and all sub-consultants and subcontractors engaged in the BIM process will sign agreement to adhere to the BIM Project Execution Plan.

3.6.5 The BIM Project Execution Plan shall include as a minimum:

- a. Project Information
- b. Key Project Contacts
- c. Project VDC / BIM Uses
- d. Organizational Roles and Staffing
- e. VDC / BIM Process for preconstruction, construction and handover
- f. BIM Information Exchanges
- g. BIM and Facility Data Requirements
- h. Collaboration and coordination procedures
- i. Quality Control
- j. Technological Infrastructure Needs
- k. A Model Progression Schedule identifying LODs and Authors for each category of model (built) element.
- l. Clash detection approach
- m. Cost estimating level
- n. BIM Deliverables
- o. Signature approval page

3.6.6 A BIM Process Flow Chart provides a graphic visualization of the processes and approval points to be used during the life of the project. The County encourages the development of this chart as an effective practice and communication tool. An example BIM Flow Chart is provided below:



3.6.7 To promote efficiency and continuity, the 2D construction documents must be extracted directly from the Design Model and both the BIMs and the 2D Deliverables will be integral parts of the contract documents. Two dimensional (2D) details, enlargements, General Notes, externally generated Schedules, and specifications will take precedence over the Design Models.

### 3.7 BIM Uses

3.7.1 County has identified the Required, Preferred and Optional BIM uses as it relates to this project. The County acknowledges that Design and Construction Consultants will work together to achieve these Uses. Implementation of these uses and timing are to be documented and explained by the Consultant in the BIM PxP, Section E. Roles and Responsibilities.

3.7.2 The County's typical BIM Uses for New Construction Projects are as follows:

County Typical BIM Use - New Construction	
BIM Use	County Intent
3D Coordination / Conflict Analysis	Required
As Constructed Model	Required
Asset Management	Required
CIM / Subsurface	Required
Constructability/Peer Review	Required
Design 4 Maintenance (D4M)	Required

BIM Use	County Intent
Design Authoring	Required
Design Reviews	Required
Existing Conditions Modeling	Required
Facility Data Exchange	Required
Owner Approvals	Required
QA/QC	Required
Record Modeling	Required
Site Utilization Planning	Required
Spatial Analysis	Required
Visualization	Required
Commissioning	Preferred
Cost Estimation	Preferred
Energy / Mechanical Analysis	Preferred
Programming	Preferred
Program / Code Validation	Preferred
Quantity Take-Off	Preferred
Site Analysis	Preferred
Space Management / Tracking	Preferred
Structural Analysis	Preferred
Sustainability / LEED	Preferred
Total Cost Of Ownership	Preferred
BIM2field - Digital Layout	Optional
Building Maintenance Scheduling	Optional
Building System Analysis	Optional
Code Analysis	Optional
Construction System Design	Optional
Digital Fabrication	Optional
Disaster Planning	Optional
Electrical Analysis	Optional
Field and Material Tracking	Optional
Laser Scanning	Optional
Lighting Analysis	Optional
Pay Applications	Optional
Phase Planning 4D	Optional
Security / Key Management	Optional
Specification Production	Optional

### **3.8 3D Coordination and Conflict Analysis**

3.8.1 The Design Team shall use BIM to employ a managed approach to advanced collaborative reviews, including automated element collision detection using software such as Autodesk Navisworks and model checkers such as Solibri by Nemetschek. By coordinating BIM data during the design phases, this can reduce the number of potential major conflicts that might arise during the construction phase.

3.8.2 This approach is not meant to replace the traditional quality control process, or the early airspace zone MEP strategy approach used by the project team and participating consultants but will enhance the ability of the project team to visualize the design and detect interferences between discipline components.

#### **3.8.3 Consultant Team Coordination**

- a. The Design Team shall produce a design in which all MEP/FP systems fit within the intended spaces provided, including necessary and required clearances, egress zones, and access zones. To help achieve this goal, the Design Team shall have a formal 3D spatial analysis and clash resolution process that forms the backbone of the QA/QC process. The spatial analysis and clash resolution process shall include regularly scheduled clash review meetings and the use of software tools to analyze and resolve clashes.
- b. County does not expect a completely “clash-free” design, however County expects a design that has been spatially analyzed and validated such that all systems are constructible within the space designed.
- c. Clash reports will be required at project milestone deliverables for both Design and Construction.
- d. Utilities coordination & invert elevations

#### **3.8.4 Contractor Team Coordination**

- a. Contractor shall carry out clash detection analysis and complete preliminary virtual design and construction (VDC) activities as part of the Constructability Reviews.
- b. Weekly, the CM shall conduct coordination meetings with each Contractor, Subcontractor, PM, County and Consultant Team as needed.
- c. The CM shall prepare clash detection reports and distribute minutes/ reports to all attendees.

### **3.9 Model Content Requirements**

3.9.1 A Model Progression Schedule/Agent Responsibility Matrix (MPS) shall be used as a tool to help Model Contributors throughout the Design, Construction and Operation phases understand what should be included in the BIMs when at each project milestone.

- a. The Construction Models should reflect the exact geometric properties of the materials and/or systems being submitted. These models should reflect the exact material properties and performance data.

- b. It is the responsibility of the Design and Construction Team to use the MPS as part of the BIM PxP or JBIM PxP to establish how they progressively reach the County's expectations.
- c. See also Section 4 - BIM Project Execution Plan and Section 5 - Model Progression Schedule/Agent Responsibility Matrix templates for additional required information.

### **3.10 Shop Drawings, Sleeve Drawings and Fabrication**

3.10.1 Shop Drawings shall be produced directly from the construction BIMs. No parallel 2D process will be accepted

- a. Sleeve Drawings -Sleeve drawings for cast-in-place or precast systems shall be produced after BIM Coordination is completed for the area of construction requiring the sleeve drawings.
- b. Fabrication & Preassembly -Whenever possible the Cont Team shall use the Construction BIMs to fabricate or preassemble their systems.

### **3.11 BIM in the field for Installation**

3.11.1 The Contractor shall take measures to assure that what is being installed at the field is what was agreed upon on the Coordinated Federated Construction BIM. Any deviations must be documented as updates to the BIMs and the party responsible for resulting conflicts will be liable for costs associated with such deviations.

### **3.12 Submittals**

3.12.1 Upon Substantial Completion, BIM files shall be submitted to County, and shall be cleaned of extraneous "scrap" or "working space", stories, abandoned designs, object creation and testing places, and other content which is typically produced in or during BIM construction coordination.

- a. The Contractor shall be responsible for providing the County an As-Constructed Model that includes all building systems. The Model shall be coordinated and "clash free" except as noted.
- b. Contractor shall provide a native file of the final As-Constructed Model for building systems used in the multi-discipline coordination process (version as agreed in BIM PxP)
- c. Contractor shall identify native file formats used in the final As-Constructed Model for building systems for the multi-discipline coordination process (version as agreed in BIM PxP)
- d. Contractor shall provide IFC files (ISO 16739) of As-Constructed models (version as agreed in BIM PxP)
- e. Contractor shall provide COBie / data compliant file containing room and product data information (version as agreed in BIM PxP)



3.12.2 County will not accept BIM files that have become un-useable, or too memory or C.P.U. intensive for normal use. Proper care shall be taken to strip all BIMs of any and all miscellaneous files that are not directly part of the BIMs. The BIM Compliance Checklist, shown below, is required to be submitted with each BIM Deliverable as part of the QA/QC process and to show compliance.

BIM Compliance Checklist	
Description	Y / N
Detach all BIM's from the Central File.	
Ensure the proper and updated completion of all information on the 'Start Screen' page for all Revit models.	
Scrub and remove all unused or alternative versions, elements and objects from the model.	
Ensure that drawing sheets, viewports, paper-space, line weights, fonts, and other drawing components are correctly configured for Contract Administrator's viewing and plotting.	
Make sure all reference files are attached using a "relative" path setting and without device or directory specifications.	
"Transmit a Model" function should be used in Revit to assemble files for submittal.	
Compress and reduce all design files using PKZIP, WINZIP or other compatible file compression/decompression software approved by the Contract Administrator.	
Include all files, both graphic and non-graphic, required for the project (i.e., color tables, pen tables, font libraries, block libraries, user command files, plot files, and other elements of drawing definition).	
Ensure that all support files such as those listed above are in the same directory and that references to those files do not include device or directory specifications.	
Model content is representative of their discipline developments according to the MPS.	
Model file name and folder structure conforms to County Standards.	
All annotations and title blocks are per the County standards.	
All floor plans types have been created for each floor or mezzanine in the project model.	
All schedules are populated with all the required data for the project.	
The model is correctly assembled as per visual inspection.	
The color code for Federated BIMs conforms to County Standards.	
All the model contents are correctly placed per their element categorization in the correct work set and conform to standards.	
All non-transmittal linked-in files (CAD/Revit) have been removed from the model.	
All non-required views / legends / schedules / sheets / images have been removed from the model.	
Unwanted Design Options have been removed from the model (applicable for Contract Document Phase through Project completion and handover).	



BIM Compliance Checklist	
All unnecessary groups have been removed from the model. All groups used to model the building have been ungrouped and purged from the deliverables to reduce the file size of the model.	
As a last step, the model has been purged (repeat the process three times -- materials are only removed after the parent object has been removed). This will reduce the file size.	
3D Solids Check – No wireframe or lines are accepted. Surface modeling shall be reserved for Topography modeling only. Other use of surface modeling shall require prior approval by County.	
Errors or Warnings - check that there are not any generated within the BIM Authoring software. It is the Design & Construction Teams’ responsibility to ensure BIM quality and data integrity.	
Model Elements are not duplicated. i.e. Columns in both Architectural and Structural models.	
Objects are correctly defined under the proper Revit Family Category and sub-category.	
Check completed files are free of any known viruses or unrequired attachments.	

**3.13 Responsibilities Related to the Final Record BIM**

**3.13.1 Design Team Responsibilities**

- a. The Design Team will update the Architectural and Structural Design Models as changes occur throughout the construction phase, incorporating all updates and/or revisions to the models as necessary to reflect design changes initiated by Architect’s Supplemental Instructions (ASI), Request for Information (RFI), Conformed Documents, Construction Change Directives, Owner Changes, coordination with existing conditions or other changes to the work.

**3.13.2 Construction Team Responsibilities**

- a. During the construction phase, and while the work is still visible, the Construction Team will maintain “red-line” As-Constructed drawings or demonstrate regular updates to the BIM models during the progress of the work.
- b. In preparation for Substantial Completion, the Contractor Team will:
  - 1. Make all necessary final updates and/or revisions to the models to reflect the As-Constructed information to the tolerance specified in the Standard or agreed upon in the BIM PxP. It is the responsibility of each subcontractor to keep accurate “red-line” markups and records from the field in order to produce accurate As-Constructed models and drawings.
  - 2. Final updates to material/equipment data and properties where installations differ from the “basis of design” included in the Design Team Models.
  - 3. Incorporation or linking of certain close-out documents to the Federated Model (as agreed in BIM PXP).
- c. All model updates by the Construction Team shall be complete one (1) week prior to Final Completion at which time all the required close out BIM deliverables shall be transmitted to the Consultant for review and to be incorporated with the

updated Design Models to create the Record Model deliverable. (as agreed in BIM PXP).

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Section 4 BIM Execution Plan



**BIM PROJECT EXECUTION PLAN  
(BIM PxP)  
FOR  
Property Appraiser and Value Adjustment Board (VAB)  
Building Renovation  
DEVELOPED BY  
Broward County - Construction Management Division  
(County)**

*This template is a required tool that is provided to assist in the development of a BIM Project Execution Plan (BIM PxP) as required by Contract.*

*Consultants and Contractors are required to "Track" changes when editing this document so BROWARD COUNTY - CONSTRUCTION MANAGEMENT DIVISION (County) can review and accept any additions and modifications as part of the review process.*







## Introduction

This template exists to document the decisions made by the Design and Construction Teams working through the BIM process. To successfully implement BIM on both the project and organizational levels, Broward County Construction Management Division has developed this BIM Project Execution Plan (BIM PxP) to improve accuracy and consistency of BIM deliverables. This plan will delineate roles and responsibilities while detailing BIM scope of information to be shared that is relevant to the BIM project process. The document is intended to cover both model creation and data integration.

## Instructions

### Submission Schedule

The Design and Construction Teams are required to submit a completed BIM PxP within 30 days of their contract execution. This plan shall identify the entire project team including consulting engineers, specialty consultants and contractors. The BIM PxP should be considered a living document and maintained and updated throughout the project.

*Please note: Instructions and examples to assist with the completion of this guide are displayed in italicized blue font. The text can and should be modified to suit the needs of the organization filling out the template. If modified, the format of the text should be changed to match the rest of the document (non- italicized and in black, 12-point, Calibri font typical) and “tracked changes” shall be submitted in electronic form for Broward County Construction Management Division review and approval.*

*The overall section headings of this template shall remain, but the BIM PxP Coordinator may propose any other changes or additions to this template including expansion of the content of the sections and additional sections and attachments. Changes & additions shall be agreed to by the project team and submitted to Broward County Construction Management Division for approval.*

This BIM PxP document is based on the National BIM Standard-United States™ Version 3 and the Pennsylvania State University BIM Project Execution Plan Version 2.0 and customized for Broward County Construction Management Division.



## Section A: BIM Project Execution Plan Overview

The Broward County Construction Management Division requires the use of Building Information Modeling (BIM) as a tool in the planning, design, construction and operation of our facilities worldwide. A well-executed BIM project facilitates the collaboration and communication between the owner, the design team and the construction team in order to best meet the project's goals.

The purpose of this process change is to ensure maximum benefit from our assets by improving the building's design and construction, reduce the total cost and time of delivery and improve operations and management after handover. BIM allows for a more complete, efficient, iterative design and construction process. The clearest benefits are the enhanced visualization of the project at all stages of development, the creation of higher quality design and construction deliverables and the reduction of construction coordination conflicts in the field. At the end of construction, the Building Information Models serve as rich databases of digital data captured during design and construction about the building's assets. This single centralized source of information is invaluable to the Facilities Department for the on-going operations and management of the building to ensure our facilities are sustainable and resilient.

To successfully implement Building Information Modeling (BIM) on a project, the project team has developed this detailed template BIM Project Execution Plan.

### *INSERT ADDITIONAL INFORMATION HERE IF APPLICABLE.*

*With the help of the project team, develop a brief mission statement here that will give an overview of BIM objectives that are specific to this project. This can be developed at a collaborative brainstorming session at the first BIM PxP meeting. Extensive additional information can be included as an attachment to this document.*

## Section B: Project Information

This section defines basic project reference information and determined project milestones

Client Name: Broward County Construction Management Division

Project Name:

Project Location and Address:

Contract Type / Delivery Method: Managing General Contractor (MGC)

Brief Project Description:

Additional Project Information: none

Project Identification Numbers: *Please complete table below*

Team Member	Project Number
Broward County Construction Management Division	
Architect of Record	
MEP Engineers	
Structural Engineer	
Landscape Architect	
Civil Engineer	
Contractor	

## Section C: Delivery Strategy

Delivery and Contracting Strategy for the project:

*This section is useful primarily when design delivery methods are being utilized that involve early collaboration of the design and construction teams (IPD, Design Assist, etc.). List the Project Delivery strategy for the project below (Design-Bid-Build, CM at Risk, IPD, Design Assist, etc.).*

*Please note what additional measures need to be taken to successfully use BIM with the selected delivery method and contract type?*



**Section C.1 - Project Schedule / Phases / Milestones:**

In coordination with the project schedule, include BIM milestones, pre-design activities, major design reviews, stakeholder reviews and any other major events which occur during the project lifecycle.

Project Phase / Milestone	Estimated Start Date	Estimated Completion Date	Project Stakeholders Involved
Notice to Proceed			
BIM PxP Kick-off			
Programming			
County Review & Comments			
Design Team Review & Resubmit			
Schematic Design			
County Review & Comments			
Design Team Review & Resubmit			
Design Development			
County Review & Comments			
Design Team Review & Resubmit			
60% CD's			
County Review & Comments			
Design Team Review & Resubmit			
85% CD's			
County Review & Comments			
Design Team Review & Resubmit			
100% CD's			
County Review & Comments			

Project Phase / Milestone	Estimated Start Date	Estimated Completion Date	Project Stakeholders Involved
Design Team Review & Resubmit			
Award / Permit			
Pre-Construction			
Project Coordination Kickoff			
Underground Coordination			
Site Coordination			
Building Exterior Coordination			
Building Interior Coordination (First Floor)			
Building Roof Coordination			
Coordination Sign-Off			

## Section C.2 - Project Deliverables

*In this section, please check off the BIM Deliverables from Consultant and Contractor on the appropriate tables below that are relevant for this project. Note any and all deviations to these required deliverables below.*

Schedule of Deliverables to Broward County Construction Management Division				
CONSULTING ARCHITECTURE AND ENGINEERING TEAM				
Phase	Deliverable	Include Y/N	Due	File Type
Contract Award	BIM PxP		30 days of ATP	Native & PDF
Programming / Feasibility Models	Massing models & Narrative Space & Program Validation Report		Per BIM PxP	Native & IFC & PDF Native & PDF
Planning	Design Models -		Per BIM PxP	Native & IFC (2x3) files
Schematic Design	Design Models -		Per BIM PxP	Native & IFC (2x3) files
Design Development	Existing Conditions Model Design & Analysis Models - Updated BIM PxP		Per BIM PxP	Native & IFC (2x3) files Native & IFC Native & PDF

	Coordination Reports BIM Compliance Checklist			PDF PDF
Construction Documents	Design & Analysis Models 2D documents & Clash Report Updated BIM PxP Coordination Reports BIM Compliance Checklist COBie Data Set - Del 1		Per BIM PxP	Native & IFC (2x3) files PDF Native & PDF PDF PDF COBie2 2.40
Permitting / Conformance	Design Model 2D Documents		Per BIM PxP	Native files PDF
Construction - Approved Submittals	COBie Data Set - Del 2		Per BIM PxP	Native & IFC (2x3) files
Construction - Close-Out Close-Out Close-Out Close-Out Close-Out Close-Out	COBie Data Set - Del 3 COBie Data Set – Final Record Floor Plans Record BIMs Federated Record BIM Coordination Report Record Model Instruction Rpt. Final BIM PxP		Per BIM PxP	COBie2 2.40 COBie2 2.40 DWG Native & IFC (2x3) Native Native & PDF Native & PDF Native & PDF

Schedule of Deliverables to Broward County Construction Management Division				
CONSTRUCTION TEAM				
Phase	Deliverable	Include Y/N	Due	File Type
Contract Award	BIM PxP		Within 30 days	Native & PDF
Pre-Construction	Coordination BIMs BIM Compliance Checklist		Per BIM PxP	
Project Close out	COBie Data Set – Del 3 As-Constructed BIMs BIM Compliance Checklist Coordination Report Federated As-Constructed BIM Final BIM PxP		Per BIM PxP	COBie2 2.40 Native & IFC (2x3) PDF PDF .NWD Native & PDF



**Section D: Key Project Contacts**

ROLE	CONTACT NAME	ORGANIZATION	EMAIL	PHONE
Owner PM		Broward County CMD		
Owners BIM Manager		Broward County CMD		
BIM PxP Coordinator				
Design Professional's Principal in Charge				
Design Professional's Project Manager				
Design Professional's BIM Manager				
Design Professional's BIM Project Lead				
Consultant's Principal in Charge				
Consultant's Project Manager				
Consultant's BIM Manager				
Consultant's BIM Project Lead (per discipline)				
Contractors PM				
Contractors BIM Manager				
Others				

## Section E: Organizational Roles / Staffing

*This section should be filled in at the choice of the BIM PxP Coordinator and extended team*

### **BIM Roles and Responsibilities:**

1. Broward County Construction Management Division (CMD): Broward County's Construction Management Division is responsible for BIM, CAD support, coordination and integration. It is also their responsibility to ensure design and construction document/model compliance with Broward County Construction Management Division Standards while maintaining and facilitating access to record drawings and models.

2.

*Describe BIM roles and responsibilities such as BIM Managers, Project Managers, Draftspersons, etc.*

3.

4.

Titles	Roles in Design	Roles in Construction
Broward County Construction Management Division	<ul style="list-style-type: none"> <li>• BIM Oversight and Compliance Reviews</li> </ul>	<ul style="list-style-type: none"> <li>• BIM Oversight and Compliance Reviews</li> </ul>
Project Manager		
Model Manager		
BIM Coordinator		
Modeler		
COBie Coordinator		

## Section F: BIM Uses

Broward County Construction Management Division has developed a BIM Use/Consultant Responsible Matrix for use in the planning and procurement of BIM projects. This matrix defines Broward County Construction Management Division's priorities for the application of BIM Uses, the responsibilities of the External Team Members, and the phases to which the BIM Uses apply. BIM Uses should only be employed if they offer significant benefit to the Project without compromising cost or schedule.

*Insert additional information as needed for this specific project. Items in RED are minimal required by Broward County Construction Management Division.*

BIM Use	Consultant Responsible for Implementation	Required Proposed	Plan Design Construct Operate			
			P	D	C	O
Visualization	A & C.	Required	X	X	X	X
Programming						
Site Analysis						
Design Authoring	A, Trades	Required	X	X	X	
Design Reviews	A	Required	X	X		
3D Coordination	A & C.	Required	X	X	X	
Constructability Review	C	Required	X	X		
Structural Analysis						
Lighting Analysis						
Energy Analysis						
Mechanical Analysis						
Other Eng. Analysis						
Sustainability Evaluation						
Design 4 Maintenance Review	A & C.	Required		X	X	
3D Coordination and Conflict Analysis	A & C.	Required	X	X	X	
Facility Data Exchange	A & C.	Required		X	X	X
Quality Assurance / Quality Control						
Owner Approvals	A	Required	X	X		
Code Validation						
Commissioning						
Site Utilization Planning	A or C.	Required		X	X	
Construction System Design						
Digital Fabrication						
3D Control and Planning						
4D Phase Planning						
5D Cost Estimation						
Quantity Take Off						
BIM2Field						
Laser Scanning						
Point Cloud integration						
Security Key Management						



Building Maintenance Scheduling					
Record Modeling	A	Required	X		
Way finding					
Virtual / Mixed Reality					
As-Constructed Modeling	C	Required		X	
Building System Analysis					
Asset Management	A & C	Required	X	X	X
Space Management / Tracking	A	Required	X	X	X
Disaster Planning					
Existing Conditions Model					

### **Section G: BIM Process Design**

*In an attachment, define the BIM Process and Workflows that the External Project Team will be implementing on this project as it relates to the BIM Uses that have been selected and contracted for this project. Define a detailed plan for implementing each BIM Use, define the specific exchanges of information and/or BIMs for each activity, the party responsible for each activity, and when in the schedule of the project it should occur. Process maps like those in the Penn State BIM Execution Plan may be included but are optional.*

### **Section H: Model Progression Schedule / LOD**

*The template Model Progression Schedule/Agent Responsibility Matrix (MPS) template defining minimum requirements for model handover will be provided by the Project Manager and examples are included and referenced in Section 5 of this Attachment 2. The LOD levels and tolerances in the Handover section of the sample MPS define Broward County Construction Management Division’s requirements for the Existing Conditions, As-Constructed and Record BIMs. The External Project Team is to complete and submit a project specific MPS attachment for this project for all project phases as applicable. The columns pertaining to Existing Conditions, As-Constructed Modeling and Record Modeling along with requirements for tolerances and allowable deviations are to be included in the MPS.*

*The Model Element Rows in Broward County Construction Management Division’s template MPS are high level. The rows in the final project MPS may have a higher level of granularity to address the needs of the project and the best practices of the External Project Team.*

*The executed MPS shall be attached to this BIM PxP.*

## Section I: BIM and Facility Data Requirements

At a minimum and not limited to, Broward County Construction Management Division will require COBie data sets for all components on the Equipment List per the Construction Documents that require any of the following:

- ✓ Scheduled preventative maintenance i.e. Mechanical, Electrical,
- ✓ Routine maintenance/inspections: i.e. Plumbing
- ✓ Regulatory inspections i.e. life safety related: fire extinguisher, fire dampers, backflow preventers

The list to the right shows a sample Preliminary Asset Type List for Broward County Construction Management Division Projects. This list should be used and further detailed in the BIM PxP Template. The "Products" section of the MPS should track a full list of project items and should be attached to this schedule.

Shown In	BCAD Preliminary Asset Type List	OmniClass- Products Classification - Table 23
ARCH Model	AUTOMATIC EXTERNAL DEFIBULATOR (AED)	23-25 21 13
	BAGGAGE HANDLING CONVEYOR	23-23 17 15
	ELEVATOR	23-23 11 11
	ESCALATOR	23-23 11 13
	FIRE DOOR	23-17 11 32
	ICE MACHINE	23-21 21 29
	MOVING WALKWAY	23-23 15 11
	SLIDING DOOR	23-17 11 23
	TICKET COUNTER	23-21 19 15
ELECT Model	WATER COOLER	23-31 31 00
	FIELD CONTROL PANEL	23-35 31 15
	GENERATOR	23-35 11 15
	LINE CONTROL PANEL	23-35 31 15
	MOTOR CONTROL CENTER	23-35 31 23
	MOTOR CONTROL PANEL	23-35 31 15
MECH Model	VARIABLE FREQUENCY DRIVE	23-35 17 15
	VARIABLE SPEED DRIVE	23-35 17 00
	AC UNIT	23-33 39 11
	AIR HANDLER	23-33 25 00
	CHILLER	23-33 21 00
	CONDENSER WATER PUMP	23-27 17 00
	CONDENSING UNIT	23-33 43 00
	COOLING TOWER	23-33 23 00
	EXHAUST FAN	23-33 31 19
	FAN COIL UNITS	23-33 33 11
	FAN POWERED BOX	23-33 41 11
	FAN TERMINAL BOX	23-33 41 11
	FAN VARIABLE VOLUME BOX	23-33 41 11
	OUTSIDE AIR HANDLER UNIT	23-33 25 13
	PACKAGE AIR CONDITIONING UNIT	23-33 39 17
	PRIMARY CHILLED WATER PUMP	23-27 17 00
	ROOF TOP UNIT	23-33 25 17
SECONDARY CHILLED WATER PUMP	23-27 17 00	
SPLIT SYS CONDENSING UNIT	23-33 43 00	
SUPPLY FAN	23-33 31 19	
VARIABLE AIR VOLUME BOX	23-33 41 17	
PLUM Model	AIR COMPRESSOR	23-27 21 00
	CHEMICAL STATION	23-27 55 31
	ELECTRIC HOT WATER BOILER	23-33 11 22
	HEAT EXCHANGER	23-27 23 00
	HEAT PUMPS	23-33 17 00
	HOT WATER PUMP REHEAT	23-27 17 00
	SUMP PUMP	23-27 17 00
	TRASH PUMP	23-27 17 00
	WATER CIRCULATING PUMP	23-27 17 00
These assets types may be found in consultant 3D CAD models with limited information embedded. The information required on these asset types would be manual entered into the COBie deliverable worksheets.		
CIVIL	AIR FIELD LIGHTING RUNWAY	N/A
	AIRFIELD BEACON	N/A
	CRASH GATE	23-11 25 15
	CRASH PERIMETER GATE	23-11 25 15
	ENGINEERED MATERIAL ARRESTING SYSTEM - EMAS	N/A
	PEDESTRIAN GATE	23-11 25 15
CONSULTANT	PERIMETER GATE	23-11 25 15
	ABOVE GROUND STORAGE TANK	23-27 29 19
	BAG MEASUREMENT EQUIPMENT	23-23 17 15
	BAGGAGE DIMENSIONER	23-23 17 15
	BAGGAGE HANDLING CAROUSEL	23-23 17 15
	DIESEL FUEL STORAGE TANK	23-27 29 19
	HIGH SPEED DIVERTER	23-23 17 15
	JETWAY	23-23 15 15
	OVER SIZE BAG DOOR	23-23 17 15
SCALE	N/A	



## Section J: Collaboration Procedures

### Collaboration Strategy:

*Provide a brief, general description of how and where the project team will collaborate. Include items such as environmental and equipment requirements, projection capabilities, room size, communication methods, document management and transfer, and record storage, etc.*

FILE LOCATION	FILE STRUCTURE/ NAME	FILE TYPE	PASSWORD PROTECT	FILE OWNER	UPDATED
Collaboration SITE: SITE	Root Project Folder	FOLDER	YES	PT Project Mgr.	ONCE
Provide Further Information on Structure of Collaboration Site	Root Project Folder	FOLDER	YES	PMG Project Mgr.	ONCE
Provide Further Information on Structure of Collaboration Site	TBD	RVT	YES	PMG Project Mgr.	WEEKLY

### Section J.1 - BIM Meeting Procedures:

*There will be several types of collaboration and model review meetings needed for the project, including general progress meetings, design coordination meetings, etc. The following table includes, but is not limited to, some of the types of potential meetings necessary for the project, meeting host(s), required attendees, and required technology. Broward County Construction Management Division understands that these meetings may be in-person, virtual and/ or a combination of both. The following table describes the schedule for coordination meetings, clash detection meetings, and model walkthroughs. Items marked in Red will be REQUIRED.*

The meetings listed below reflect typical Broward County Construction Management Division expectations for a project and should be customized for the needs of a project.

MEETING TYPE	DESIGN INTENT MODELS			
	STAGE	FREQUENCY	LOCATION	COMMENTS / PARTICIPANTS
Design Phase BIM Kick-off		1X within 15 days of start of project	On-site	General discussion to make sure all parties are aligned on BIM Requirements
BIM Project Execution Plan Presentation		1X within 30 days of start of project	On-site	BIM PxP Coordinator presents completed BIM PxP to entire team for final sign-off

Design Authoring Coordination Meetings		Weekly	In-Cloud	Coordination and Federation of Design Team Models.
Design Presentations/ Model Walk-throughs		As Needed	On-site	BIM presentations to Project Team for approval and reviews. Geared towards Owner and User Groups.
Design Maintenance		DD / CD Phases 1X	On-site	BIMs to review equipment maintainability and "soft clash" for clearances.
Data Meeting		DD / CD Phases 1X	In-Cloud / On-site	Review BIMs for data compliance and test import.
Model Handover Meeting		1X	On-site	Meeting to discuss and test interoperability and file exchange.
Design Close-out		2X	On-site	Meeting to finalize Record BIMs and As-Constructed BIMs for close-out.
Construction Phase BIM Kick-off Meeting	STAGE	FREQUENCY	LOCATION	COMMENTS / PARTICIPANTS
Clash / Cord Meetings		Weekly	On-site	General Guidelines for model laying, area, trade sequencing and reserved zones.
Design Maintenance			In-Cloud / On-site	
Contractor Handover/ Close-out			On-site	BIMs to review equipment maintainability and "soft clash" for clearances.
Contractor Handover/ Close-out			TBD	Meeting to finalize Record BIMs and As-Constructed BIMs for close-out.

## Section J.2 - Model Delivery Schedule of Information Exchange for Submission and Approval:

*Document the information exchanges and file transfers that will occur on the project. Modify the DISCIPLINE column to match the way that content is segregated into different models on a project.*

DISCIPLINE	FILE TYPE	UPLOAD FREQUENCY	DOWNLOAD FREQUENCY
Architectural (Exterior)			
Architectural (Interior)			
Specialty Equipment			



Furniture			
Structural			
Mechanical			
Electrical			
Plumbing			
Fire Protection			
Civil			
Landscape			

**Section J.3 - Electronic Communication Procedures:**

*The following document management issues should be resolved, and a procedure should be defined for each: Permissions / access, File Locations, FTP Site Location(s), File Transfer Protocol, File / Folder Maintenance, etc.*

**Section K: Quality Control**

**Overall Strategy for Quality Control:**

*Describe the strategy to control the quality of the model.*

**Quality Control Checks:** The following checks should be performed to assure quality:

CHECKS	DEFINITION	RESPONSIBLE PARTY	SOFTWARE PROGRAM(S)	FREQUENCY
VISUAL CHECK	Ensure there are no unintended model components and that the design intent has been followed	A/E/C	REVIT / NAVIS	Ongoing
INTERFERENCE CHECK	Detect problems in the model where two building components are clashing including soft and hard	A/E/C	NAVIS	Bi-weekly
STANDARDS CHECK	Ensure that the BIM and County Standards have been followed (fonts, dimensions, line styles, family naming, shared coordinates, etc.)	A/E/C	REVIT / DATA NORMALIZATION	Weekly

MODEL INTEGRITY CHECKS	Describe the QC validation process used to ensure that the Project Facility Data set has no undefined, incorrectly defined or duplicated elements and the reporting process on non-compliant elements and corrective action plans	A/E/C	REVIT	Ongoing
DATA CONTENT CHECK	Conform to County BIM Requirements	A/E/C	DATA NORMALIZATION / MAXIMO	Weekly then monthly
ERROR / WARNING CHECK	Conform to County BIM Requirements	A/E/C	REVIT	Weekly

### Section K.1 - Model Maintenance

*The following table describes the recommended process for model maintenance. Each discipline shall be responsible for the maintenance of their models. Broward County Construction Management Division requires that all the below be conducted before submitting model at the completion of each phase of the development of the project. All the below except for removing unused design options shall be conducted before uploading models for exchange with other team members.*

PROCESS	FREQUENCY (MINIMUM)
Auditing Central Files	
Compacting	
Verify that elements are on correct Worksets	
Removal of Unused Design Options and accept the Primary option (following archival of previous version.)	
Correcting Warning Messages where applicable	On-going (Warnings that have significance shall be resolved. Warnings shall be kept to a reasonable number. An export of warnings in the model shall accompany major milestone deliverables.)
Purging unused objects	
Purging DWG links/imports	
Deletion of unused Sheets & Views	
Purge duplicate elements	

## Section K.2 - Document Revisions

Revisions to documents will be tracked as follows:

DESCRIPTION	DESIGN/ RECORD	AS-CONSTRUCTED MODEL	DESCRIPTION
<b>RFI's</b>			
Revit Model			
Navisworks			
<b>CCD's</b>			
<b>ASI's</b>			
<b>CO's</b>			

## Section K.3 - Model Accuracy and Tolerances:

*Models should include all appropriate dimensioning as needed for design intent, analysis, and construction.*

PHASE	DISCIPLINE	TOLERANCE
EXISTING CONDITIONS MODEL	CIVIL (UNDERGROUND)	ACCURATE TO +/- (6") OF ACTUAL SIZE ACCURATE TO +/- (12") OF ACTUAL LOCATION
EXISTING CONDITIONS MODEL (ACCESSIBLE ITEMS)	ARCHITECTURAL STRUCTURAL MEPFP	ACCURATE TO +/- (1/8") OF DESIGN INTENT SIZE ACCURATE TO +/- (2") OF DESIGN INTENT LOCATION
DESIGN DOCUMENT MODELS	CIVIL ARCHITECTURAL STRUCTURAL MEP FP	ACCURATE TO +/- (1/8") OF DESIGN INTENT SIZE ACCURATE TO +/- (2") OF DESIGN INTENT LOCATION
SHOP DRAWINGS MODELS	CIVIL, INTERIORS ENVELOPE STRUCTURAL MEPFP	ACCURATE TO +/- (1/16") OF ACTUAL SIZE ACCURATE TO +/- (1") OF ACTUAL LOCATION
AS-CONSTRUCTED MODELS	INTERIORS NOT RELATED TO CODE	ACCURATE TO +/- (1/8") OF ACTUAL SIZE ACCURATE TO +/- (2") OF ACTUAL LOCATION
AS-CONSTRUCTED MODELS	INTERIORS RELATED TO CODE	ACCURATE TO +/- (1/8") OF ACTUAL SIZE ACCURATE TO +/- (1/4") OF ACTUAL LOCATION



PHASE	DISCIPLINE	TOLERANCE
AS-CONSTRUCTED MODELS	CIVIL, INTERIORS ENVELOPE STRUCTURAL MEP FP	ACCURATE TO +/- (1/16") OF ACTUAL SIZE ACCURATE TO +/- (1") OF ACTUAL LOCATION

### Section K.4 - BIM Folder Structure for Deliverables:

The following folder structure is the standard folder structure for BIM-related files that will be used on Broward County Construction Management Division projects. No deviations from this folder structure will be permitted without a Proposed Variance Request. However, if desired, each project team may add subfolders where necessary, as defined in the BIM PxP and approved by Broward County Construction Management Division.

#### Project Documents for Design BIMs

- Design BIM Execution Plan (Owner, AE)
- Design BIM Analysis Reports (Owner, AE)
- Coordination Logs and Reports
- Design Model Deliverables (Public)
  - Models Used to Produce Schematic Design
  - Models Used to Produce Design Development
  - Models Used to Produce Construction Documents
  - Models Used to Produce Agency Submittals
  - Models for Permitting/ Conformance
  - Models for Construction Manager
- COBie Data Deliverables
- BIM Project Close-out
  - Record Floor Plans
  - Record BIMs
  - Federated Record BIM
  - COBie Data Final Deliverable
- Other

#### Project Documents for Construction BIMs

- Owner BIM Execution Plan (Owner, CM, BIM Subs)
- Construction BIM Analysis Reports (Owner, GC)
- Coordination Logs and Reports
- Coordination Models
- Trade Models
  - Models Used to Produce Final Shop Drawings
  - Models Used to Produce 4D

- Schedule Data Used to Produce 4D
  - Models Used to Produce 5D
    - Model Quantities Used to Produce 5D
- COBie Data Deliverables
- BIM Project Close-Out
  - As-Constructed Models
  - Federated As-Constructed Models
  - Record Models
  - Federated Record Models
  - COBie Data Final Deliverable
- Other

## Section L: Technological Infrastructure Needs

### 1. Software:

Broward County Construction Management Division uses Autodesk Revit for projects. Use of other IFC Compatible software than what is listed in the Broward County Construction Management Division BIM Standard requires approval by Broward County Construction Management Division.

*List software used to deliver BIM. List any add-on software that is required to open, read or manipulate files as well. Indicate the 2D export deliverable file format for each software. The lines listed below are a sample and shall be modified for a project.*

BIM USE	DISCIPLINE(S)	SOFTWARE	VERSION / BUILD	2D FILE FORMAT DELIVERABLE
Authoring				
Authoring				
Authoring				
Authoring				
Authoring				
Clash Detection				
Energy Analysis				
Cost Analysis				
Design Coordination				
COBie				
Collaboration				
Trades				

## Section M: Model Structure

### Section M.1 - File Naming Structure:

*Determine and list the structure for model file names. Design Team CAD File names shall be listed in the Drawing List with Authoring Company and File Names attachment.*

FILE NAMES (Design Intent Models)	
Architectural Model	
Civil Model	
Mechanical Model	
Plumbing Model	
Electrical Model	
Structural Model	
Energy Model	
Coordination Model	
Equipment	

FILE NAMES (Construction Models)	
Steel Model	
Mechanical Model	
Plumbing Model	
Electrical Model	
Construction Model	
Coordination Model	
Fire Protection Model	
Security Model	
Site Utilities Model	

### Section M.2 - Model Structure:

*Describe how the Model is separated, e.g., by building, by floors, by zone, by areas, and/or discipline. Indicate the connections and hierarchy of linked files, including CAD files. Broward County Construction Management Division requires that all paths in Revit files be relative and that files be overlaid instead of attached unless the project team makes a strong case for alternate strategies.*

#### 1. DESIGN PHASE MODEL STRUCTURE:



## 2. CONSTRUCTION PHASE MODEL STRUCTURE:

### Section M.3 - Measurement and Coordinate Systems:

Broward County Construction Management Division requires use of State Plane Coordinates to place the Building on its site to act as the Site origin Point and to provide for future GIS integration. See Section 2.2.4 of this Attachment 2. Broward County Construction Management Division will also provide 2D and 3D AutoCAD blocks and a 3D generic model family to be placed at the origin of ALL Design Intent BIMs, Construction BIMs and CAD files to confirm that files are aligned.

All Revit files shall have their project base point at the Revit project startup location. All CAD and Revit files that are to be linked to the Revit file using the "Origin to Origin" option. All plan-based CAD files shall use the Broward County Construction Management Division Site Origin Point as well as their 0,0 WCS origin. The 0 level in the "Z" coordinate shall match the survey datum of "0" used by the Civil Engineer in their surveys. This will ensure that all files for all buildings across the Broward County Construction Management Division campus will align to a single origin and that Revit level tags will report the true elevations of the floors.

Civil AutoCAD 2D and Civil 3D files will need to be modified prior to linking because they use an origin point that is different than the Broward County Construction Management Division Site Origin Point. It is typically outside the distance allowed by Revit. Broward County Construction Management Division's CAD-BIM Manager can provide instructions on this.

Units shall be Imperial units. Civil 2D AutoCAD or Civil 3D files may be set with 1 unit equals 1 foot. Revit files will be set with 1 unit equals 1 foot. All other AutoCAD files including Revit exports shall be set with 1 unit equals 1 inch.

### Section M.4 - Worksets:

Each discipline shall be responsible for the naming of the worksets within their files. The only required worksets are LinkCAD-Description and LinkBIM-Description. Any linked CAD files or BIM files shall be placed on these worksets so that Revit files can be opened without loading these worksets for ease of upgrading the files.

List Worksets used by discipline below:

DISCIPLINE	WORKSET	DESCRIPTION
Arch, M, E, P, Struct	LinkCAD-All	Workset for all CAD links
M, E, P, Struct	LinkBIM-Arch	Workset for Architectural Revit file
Arch, E, P, Struct	LinkBIM-Mech	Workset for Mechanical Revit file
Arch, M, P, Struct	LinkBIM-Elec	Workset for Electrical Revit file
Arch, M, E, Struct	LinkBIM-Plumb	Workset for Plumbing Revit file
Arch, M, E, P	LinkBIM-Struct	Workset for Structural Revit file
Arch, M, E, P, Struct	Levels and Grids	Levels, Grids
Arch	Shell	Building Shell
Arch Existing	Shell	Building Shell Existing
Arch	Core	Elevators, Stairs
Arch	Interior-B	Basement Interior Fit-out
Arch	Interior-1	1 <sup>st</sup> floor Interior Fit-out
Equipment		
Civil Utilities		

### Section M.5 - Color Coding:

Federated models shall adhere to Exhibit "A" – Scope of Work Attachment 2, Section 2.2.12. If approved by the Contract Administrator, a modified color coding may be revised to follow the agreed upon trade colors listed below:

*(insert any modified, Contract Administrator approved, color coding selections for this project below)*

- a. Architecture: White
- b. Structural Steel: Maroon
- c. Concrete and Masonry: Gray
- d. HVAC Equipment: Gold
- e. HVAC Supply Duct/Diffuser: Blue
- f. HVAC Return Duct/Diffuser: Magenta
- g. HVAC Exhaust Ventilation Ductwork: Medium Orchid
- h. HVAC Piping Supply: Gold
- i. HVAC Piping Return: Violet
- j. Electrical Equipment: Dark Yellow
- k. Electrical Conduits: Light Yellow

- l. Communication Conduit: Light Blue
- m. Electrical Cable Tray: Dark Orange
- n. Electrical Lighting: Light Golden Rod Yellow
- o. Plumbing Domestic Water: Lime
- p. Plumbing Sewer Waste / Vent: Olive
- q. Plumbing Storm/Roof Drain: Dark Green
- r. Fire Protection: Red
- s. Fire Alarm: Golden Rod
- t. Pneumatic Tube: Dark Slate Gray
- u. Equipment: Burly Wood
- v. Specialty Gas: Light Green
- w. Steel: Rust
- x. Security Systems: Orange

### Section N: Attachments

1. *List any project specific BIM PxP Attachments here*
- 2.

(REMAINDER OF PAGE IS INTENTIONALLY LEFT BLANK)

**Approvals:**

By signing below, this BIM Project Execution Plan is adopted and agreed upon between the signed companies.

DISCIPLINE	NAME	SIGNATURE	DATE
BC Construction Management Division			
Architect			
Mechanical Engineer			
Electrical Engineer			
Plumbing Engineer			
Fire Protection Engineer			
Structural Engineer			
Landscape Architect			
Interior Designer			
Civil Engineer			
Surveyor			
BIM Consultant			
Contractor			
Construction Consultant			
Other			

**End of Section 4 BIM Execution Plan**



**Section 5 BIM Model Progression Schedule/Agent Responsible Matrix (MPS)**  
(Example of "Overview" Tab)

The MPS will be distributed by the Project Manager in an electronic format for use



## **Model Progression Schedule (MPS)**

### **Agent Responsible Matrix (ARM)**

#### **Overview and Intent of this Document.**

Broward County Public Works Department and the Construction Management Division have created this Model Progression Schedule (MPS) and Agent Responsible Matrix (ARM) for use in the planning and procurement of BIM projects. This Matrix is based upon BIMForum's 2017 LOD (Level of Development) Specification and serves as a reference document. The BIMForum Specification reference enables practitioners to specify and articulate with a high level of clarity the content and reliability of BIMs at various stages in the design and construction process.

The County has prescribed minimum LOD's that are required at project milestones, but does not dictate workflow to achieve these requirements leaving the completion of the Model Progressions to the users in consultation with the County and project team.

This matrix defines Broward County's priorities for the development of project BIMs, the responsibilities of the External Team Members, and the phases to which the BIMs will be delivered and the LOD expected. The "Model Element Table" Tab includes the BIM Elements that are to be defined and the "LOD Definitions" tab includes example Level of Development definitions. This chart will be included in RFP's that require BIM and is a tool to be used for contract negotiation upon project award.

#### **Instructions for completing this Document.**

- 1 This MPS/ ARM will be included in the RFP for all BIM Projects. Upon Contract award, your team shall complete the MPS as part of the contract negotiation process, and be prepared to discuss "hand-off" & coordination of the BIM's.
- 2 Click on the "Model Element Table" Tab below to complete the MPS as is applicable to your project.
- 3 Insert the Level of Development (LOD) and the Agent Responsible and contracted to deliver that element.
- 4
- 5 Once agreed upon, this document will become a contract document and will be attached to the teams BIMPxP.  
When completing the MPS, Please check the box on the top of the MPS to show the stage of the MPS submittal i.e. RFP, Proposed, Approved as described below:
  - RFP:** Required for this Project by Broward County, the initial stage of review.
  - Proposed:** The Design or Construction Professional changes the status to "Proposed" for all elements that are to be included in the project models.
  - Approved:** The Model Elements and Progression Schedule that is contracted by the Design Consultants and Contractors to be included in their Team's scope of work.






**Please Note:**

**Questions, suggestions or concerns with completing this document during the RFP selection process should be directed to the BC-PurchasingAgent listed on the RFP. The Broward County Project Manager will serve as the primary contact and address all discussions or concerns during negotiations and subsequent Project Phases.**





## BIMForum Level of Development (LOD) Definitions ("LOD Definitions" Tab - Example)

<b>Fundamental LOD Definitions</b>	
<p><b>LOD 100 - Massing / Planning Level</b></p> <p>The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e. cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements.</p> <p><b>BIMForum Interpretation:</b> LOD 100 elements are not geometric representations. Examples are information attached to other model elements or symbols showing the existence of a component but not its shape, size, or precise location. Any information derived from LOD 100 elements must be considered approximate.</p>	
<p><b>LOD 200 - Generic Design Level</b></p> <p>The Model Element is graphically represented within the Model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.</p> <p><b>BIMForum Interpretation:</b> At this LOD elements are generic placeholders. They may be recognizable as the components they represent, or they may be volumes for space reservation. Any information derived from LOD 200 elements must be considered</p>	
<p><b>LOD 300 - Design Coordination Level</b></p> <p>The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.</p> <p><b>BIMForum Interpretation:</b> The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modeled information such as notes or dimension call-outs. The project origin is defined and the element is located accurately with respect to the project origin.</p>	
<p><b>LOD 350 - Construction Coordination Level</b></p> <p>The Model Element is graphically represented within the Model as a specific system, object, or assembly in terms of quantity, size, shape, location, orientation, and interfaces with other building systems. Non-graphic information may also be attached to the Model Element.</p> <p><b>BIMForum Interpretation:</b> Parts necessary for coordination of the element with nearby or attached elements are modeled. These parts will include such items as supports and connections. The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modeled information such as notes or dimension call-outs.</p>	
<p><b>LOD 400 - Fabrication Level</b></p> <p>The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic information may also be attached to the Model Element.</p> <p><b>BIMForum Interpretation:</b> An LOD 400 element is modeled at sufficient detail and accuracy for fabrication of the represented component. The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modeled information such as notes or dimension call-outs.</p>	

\* Definition from the "Level of Development Specification Part 1. November 2017 BIMFORUM.

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**End of Attachment 2: BIM and Electronic Media Submittal Requirements**

**Professional Services Agreement  
EXHIBIT A, SCOPE OF SERVICES  
ATTACHMENT 3:**

**Architectural Program**

RFP No.: PNC2119501P1  
Project Title: Property Appraiser and Value Adjustment Board (VAB) Building Renovation

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A detailed architectural program is not available from the Contract Administrator and shall be developed by Consultant in the Predesign Phase.

The following preliminary programming documents are available from the County for Consultants reference only on the Project:

1. Preliminary Programming for the Offices of the Property Appraiser and the Value Adjustment Board, dated: October 16, 2017.
2. Preliminary Programming for Regional Emergency Services and Communications at Government Center East, dated: January 31, 2019.



**Professional Services Agreement  
EXHIBIT A, SCOPE OF SERVICES  
ATTACHMENT 4:**

**Preliminary Project Budget**

RFP No.: PNC2119501P1  
Project Title: Property Appraiser and Value Adjustment Board (VAB) Building Renovation

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The estimated construction budget is estimated as follows:

Direct Construction Costs	\$12,780,250
Contractor's General Conditions	\$1,917,038
<u>Contractors Fixed Fee</u>	<u>\$808,351</u>
Sub-Total (Managing General Contractor's Costs)	\$15,505,638
Preconstruction Services	\$ TBD
Owner's Allowance	\$ TBD
<b>TOTAL ESTIMATED GMP</b>	<b>\$ TBD</b>

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: Walters Zackria Associates, PLLC

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$108.23		2.31		\$250.01
Project Manager 1	\$78.83		2.31		\$182.10
Project Manager 2	\$58.56		2.31		\$135.27
BIM Manager	\$58.56		2.31		\$135.27
Drafter	\$45.05		2.31		\$104.07
Administrative Assistant	\$33.78		2.31		\$78.03

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (100%)

FRINGE = HOURLY RATE X FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING  
MARGIN) / HOURLY RATE

2.31

**Notes:**

Consultant has elected to use "Safe Harbor"

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: Dave Bodker Landscape Architecture/Planning, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal/Landscape Architect (Registered)	\$64.94		2.31		\$150.01
Project Manager	\$33.65		2.31		\$77.73
Draftsperson	\$33.65		2.31		\$77.73
Administrative	\$22.00		2.31		\$50.82

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (100%)  
 FRINGE = HOURLY RATE X FRINGE (10%)  
 OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

2.31

**Notes:**  
 Consultant has elected to use "Safe Harbor"

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building Renovation  
 Consultant/  
 Subconsultant Name: Delta G Consulting Engineers, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$108.23		2.31		\$250.01
Project Manager	\$60.29		2.31		\$139.27
Senior Engineer	\$67.86		2.31		\$156.76
Senior Designer	\$45.79		2.31		\$105.77
Revit/CAD Specialist	\$42.62		2.31		\$98.45
Drafter	\$32.64		2.31		\$75.40
Project Accountant	\$30.29		2.31		\$69.97

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (100%)  
 FRINGE = HOURLY RATE X FRINGE (10%)  
 OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

2.31

**Notes:**  
 Consultant has elected to use "Safe Harbor"

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: Florida Engineering and Testing, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$62.50		2.31		\$144.38
Professional Engineer	\$45.00		2.31		\$103.95
Engineer Inspector (EI)	\$25.00		2.31		\$57.75
Field/Lab Supervisor	\$29.00		2.31		\$66.99
Engineering Technician	\$21.00		2.31		\$48.51
Driller	\$30.00		2.31		\$69.30
Administrative	\$22.50		2.31		\$51.98

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (100%)

FRINGE = HOURLY RATE X FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING  
MARGIN) / HOURLY RATE

2.31

**Notes:**

Consultant has elected to use "Safe Harbor"

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: Spinnaker Group

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$87.65		2.31		\$202.47
LEED Project Manager	\$50.92		2.31		\$117.63
VP of Commissioning	\$52.49		2.31		\$121.25
Commissioning Agent	\$40.44		2.31		\$93.42
Energy Modeler	\$40.44		2.31		\$93.42
Administrative	\$34.75		2.31		\$80.27

Multiplier of 2.31 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (100%)

FRINGE = HOURLY RATE X FRINGE (10%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING  
MARGIN) / HOURLY RATE

2.31

**Notes:**

Consultant has elected to use "Safe Harbor"

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: Stoner and Associates, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal Land Surveyor	\$48.08		2.52		\$121.16
Sr. Professional Land Surveyor	\$39.90		2.52		\$100.55
Professional Land Surveyor	\$37.98		2.52		\$95.71
Field Crew Supervisor	\$27.89		2.52		\$70.28
Survey/CAD Technician	\$23.00		2.52		\$57.96
Survey Crew (3 Person)	\$62.50		2.52		\$157.50
Administrative	\$28.85		2.52		\$72.70

Multiplier of 2.52 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD ( 99.33%)

FRINGE = HOURLY RATE X FRINGE ( 30.06%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (10%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

2.52



**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: Thompson and Associates, Inc., Civil Engineering

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$80.00		2.99		\$239.20
Sr. Project Manager	\$75.00		2.99		\$224.25
Senior Engineer	\$70.00		2.99		\$209.30
Engineer	\$55.00		2.99		\$164.45
Engineering Technician	\$35.00		2.99		\$104.65
CAD Designer	\$25.00		2.99		\$74.75
Resident Project Representative	\$35.00		2.99		\$104.65
Administrative Assistant	\$25.00		2.99		\$74.75

Multiplier of 2.99 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (136.50%)  
 FRINGE = HOURLY RATE X FRINGE (37.14%)  
 OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (9.25%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING MARGIN) / HOURLY RATE

2.99

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: Thornton Tomasetti, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Vice President	\$80.53		2.99		\$240.78
Associate	\$50.48		2.99		\$150.94
Senior Project Engineer	\$42.31		2.99		\$126.51
Project Engineer	\$37.02		2.99		\$110.69
Senior Engineer	\$32.69		2.99		\$97.74
Engineer	\$30.05		2.99		\$89.85
Senior Site Inspector	\$38.56		2.99		\$115.29
Building Information Modeler	\$31.37		2.99		\$93.80

Multiplier of 2.99 is calculated as follows:

OVERHEAD = HOURLY RATE X OVERHEAD (114.01%)

FRINGE = HOURLY RATE X FRINGE (85.12%)

OPERATING MARGIN = (HOURLY RATE + OVERHEAD + FRINGE) X OPERATING MARGIN (0%)

MULTIPLIER = (HOURLY RATE + OVERHEAD + FRINGE + OPERATING  
MARGIN) / HOURLY RATE

2.99

**EXHIBIT B  
MAXIMUM BILLING RATES**

RFP No: PNC2119501P1  
 Project Title: Property Appraiser and Value Adjustment Board (VAB) Building  
 Renovation  
 Consultant/  
 Subconsultant Name: VDCO Tech, Inc.

TITLE	MAXIMUM HOURLY RATE (\$/HR)	X	MULTIPLIER	=	MAXIMUM BILLING RATE (\$/HR)
Principal	N/A		N/A		\$150.00
Programmer	N/A		N/A		\$150.00
Project Manager	N/A		N/A		\$140.00
Construction Manager	N/A		N/A		\$140.00
COBie Manager	N/A		N/A		\$140.00
COBie Coordinator	N/A		N/A		\$121.00
Data Coordinator	N/A		N/A		\$121.00
Laser Scanning Coordinator	N/A		N/A		\$115.00
BIM Manager	N/A		N/A		\$115.00
LEED Accredited Professional	N/A		N/A		\$115.00
BIM Trainer	N/A		N/A		\$110.00
BIM Coordinator	N/A		N/A		\$100.00
Sr. BIM Modeler	N/A		N/A		\$90.00
BIM Modeler	N/A		N/A		\$65.00
Administrator	N/A		N/A		\$40.00

\*Rates for all positions negotiated in accordance with Section 5.2.6

**EXHIBIT C**  
**SCHEDULE OF SUBCONSULTANT PARTICIPATION**

RFP No.: RFP No. PNC2119501P1  
Project Title: Property Appraiser and Value Adjustment Board (VAB) Building Renovation

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<b>No.</b>	<b>Firm Name</b>	<b>Discipline</b>
1.	Thornton Tomasetti	Structural Engineering Consultant
2.	Delta G. Consulting Engineers, Inc.	MEP and Fire Protection Engineering Consultant
3.	Thompson & Associates, Inc.	Civil Engineering
4.	VDCO Tech, Inc.	BIM Consultant, Virtual Design & Const. (VDC) COBie Management
5.	The Spinnaker Group	LEED Consultant
6.	Dave Bodker Landscape Architecture/Planning, Inc.	Landscape and Irrigation Consultant
7.	Florida Engineering & Testing, Inc.	Geotechnical Engineering
8.	Stoner & Associates, Inc.	Surveyor Engineering

**EXHIBIT D  
SCHEDULE OF CBE PARTICIPATION AND LETTERS OF INTENT**

RFP No.: RFP No. PNC2119501P1  
Project Title: Property Appraiser and Value Adjustment Board (VAB) Building Renovation

<b>CBE/FIRM</b>	<b>CBE Category</b>	<b>Description</b>	<b>% of Basic Services Fees</b>
Delta G Consulting Engineers, Inc.	CBE	MEP and Fire Protection	15.00%
Thompson & Associates, Inc.	CBE	Civil Engineering	5.00%
VDCO Tech, Inc.	CBE	BIM Consultant, Virtual Design & Const. (VDC) COBie Management	5.00%
Stoner & Associates, Inc.	CBE	Surveyor Engineering	.10%
Florida Engineering & Testing, Inc.	CBE	Geotechnical Engineering	.10%
<b>Total CBE Participation</b>			<b>25.20%</b>

Broward County Board of  
County Commissioners

PNC2119501P1



**LETTER OF INTENT**  
BETWEEN BIDDER/OFFEROR AND  
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2119501P1

Project Title: Consultant Services for Property Appraiser's and VAB Building Renovation

Bidder/Offeror Name: Walters Zackria Associates, PLLC

Address: 5813 N Andrews Way City: Fort Lauderdale State: FL Zip: 33309

Authorized Representative: Abbas Zackria Phone: 954-522-4123

CBE Firm/Supplier Name: Delta G Engineering

Address: 707 NE 3rd. Avenue, Suite 200 City: Fort Lauderdale State: FL Zip: 33304

Authorized Representative: George SanJuan, PE Phone: 954-527-1112

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

**Work to be performed by CBE Firm**

Description	NAICS <sup>1</sup>	CBE Contract Amount <sup>2</sup>	CBE Percentage of Total Project Value
MEP, FP Engineering Design and Permitting	541330		15.00 %
			%
			%

**AFFIRMATION:** I hereby affirm that the information above is true and correct.

**CBE Firm/Supplier Authorized Representative**

Signature: George SanJuan, P.E. 46100 Digitally signed by George SanJuan, P.E. 46100 Date: 2019.12.19 09:42:32 -0500 Title: President Date: 12/10/2019

**Bidder/Offeror Authorized Representative**

Signature:  Title: President Date: 12/10/2019

<sup>1</sup> Visit [Census.gov](http://Census.gov) and select **NAICS** to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

<sup>2</sup> To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

*In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.*

Rev.: June 2018

Compliance Form No. 004

Broward County Board of  
County Commissioners

PNC2119501P1



**LETTER OF INTENT**  
BETWEEN BIDDER/OFFEROR AND  
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2119501P1

Project Title: Consultant Services for Property Appraiser's and VAB Building Renovation

Bidder/Offeror Name: Walters Zackria Associates, PLLC

Address: 5813 N Andrews Way City: Fort Lauderdale State: FL Zip: 33309

Authorized Representative: Abbas Zackria Phone: 954-522-4123

CBE Firm/Supplier Name: Thompson & Associates, Inc.

Address: 412 S.E. 18th Street City: Fort Lauderdale State: FL Zip: 33316

Authorized Representative: Darren L. Badore Phone: 954-761-1073

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

**Work to be performed by CBE Firm**

Description	NAICS <sup>1</sup>	CBE Contract Amount <sup>2</sup>	CBE Percentage of Total Project Value
Civil Engineering	541330		5.00 %
			%
			%

**AFFIRMATION:** I hereby affirm that the information above is true and correct.

**CBE Firm/Supplier Authorized Representative**

Signature: [Signature] Title: Vice President Date: 12/04/2019

**Bidder/Offeror Authorized Representative**

Signature: [Signature] Title: President Date: 12/10/2019

<sup>1</sup> Visit [Census.gov](http://Census.gov) and select **NAICS** to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

<sup>2</sup> To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

*In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.*

Rev.: June 2018

Compliance Form No. 004



Broward County Board of  
County Commissioners

PNC2119501P1



**LETTER OF INTENT**  
BETWEEN BIDDER/OFFEROR AND  
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2119501P1

Project Title: Consultant Services for Property Appraiser's and VAB Building Renovation

Bidder/Offeror Name: Walters Zackria Associates, PLLC

Address: 5813 N Andrews Way City: Fort Lauderdale State: FL Zip: 33309

Authorized Representative: Abbas Zackria Phone: 954-522-4123

CBE Firm/Supplier Name: VDCO Tech, Inc.

Address: 648 Cascade Falls Drive City: Weston State: FL Zip: 33327

Authorized Representative: Cindy W. Baldwin, President Phone: 954-256-8326

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

**Work to be performed by CBE Firm**

Description	NAICS <sup>1</sup>	CBE Contract Amount <sup>2</sup>	CBE Percentage of Total Project Value
BIM / VDC Services	541340		5.00 %
			%
			%

**AFFIRMATION:** I hereby affirm that the information above is true and correct.

**CBE Firm/Supplier Authorized Representative**

Signature: Cindy Baldwin Title: President Date: 12/12/2019

**Bidder/Offeror Authorized Representative**

Signature: ABZ Title: President Date: 12/13/19

<sup>1</sup> Visit [Census.gov](http://Census.gov) and select **NAICS** to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

<sup>2</sup> To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

*In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.*

Rev.: June 2018

Compliance Form No. 004

Broward County Board of  
County Commissioners

PNC2119501P1



**LETTER OF INTENT**  
BETWEEN BIDDER/OFFEROR AND  
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2119501P1

Project Title: Consultant Services for Property Appraiser's and VAB Building Renovation

Bidder/Offeror Name: Walters Zackria Associates, PLLC

Address: 5813 N Andrews Way City: Fort Lauderdale State: FL Zip: 33309

Authorized Representative: Abbas Zackria Phone: 954-522-4123

CBE Firm/Supplier Name: Stoner & Associates, Inc.

Address: 4341 SW 62 Avenue City: Davie State: FL Zip: 33314

Authorized Representative: James D. Stoner, PSM Phone: 954-585-0997

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

**Work to be performed by CBE Firm**

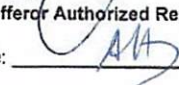
Description	NAICS <sup>1</sup>	CBE Contract Amount <sup>2</sup>	CBE Percentage of Total Project Value
Land Surveyor	541370		0.10 %
			%
			%

**AFFIRMATION:** I hereby affirm that the information above is true and correct.

**CBE Firm/Supplier Authorized Representative**

Signature:  Title: President Date: 12/05/2019

**Bidder/Offeror Authorized Representative**

Signature:  Title: President Date: 12/13/19

<sup>1</sup> Visit [Census.gov](http://Census.gov) and select **NAICS** to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

<sup>2</sup> To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

*In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.*

Rev.: June 2018

Compliance Form No. 004

Broward County Board of  
County Commissioners

PNC2119501P1



**LETTER OF INTENT**  
BETWEEN BIDDER/OFFEROR AND  
COUNTY BUSINESS ENTERPRISE (CBE) FIRM/SUPPLIER

This form is to be completed and signed for each CBE firm. If the PRIME is a CBE firm, please indicate the percentage performing with your own forces.

Solicitation No.: PNC2119501P1

Project Title: Consultant Services for Property Appraiser's and VAB Building Renovation

Bidder/Offeror Name: Walters Zackria Associates, PLLC

Address: 5813 N Andrews Way City: Fort Lauderdale State: FL Zip: 33309

Authorized Representative: Abbas Zackria Phone: 954-522-4123

CBE Firm/Supplier Name: Florida Engineering & Testing, Inc.

Address: 250 S.W. 13th Avenue City: Pompano Beach State: FL Zip: 33069

Authorized Representative: Christine Chang Phone: 954-781-6889

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

**Work to be performed by CBE Firm**

Description	NAICS <sup>1</sup>	CBE Contract Amount <sup>2</sup>	CBE Percentage of Total Project Value
Geotechnical Engineering	541380		0.10 %
			%
			%

**AFFIRMATION:** I hereby affirm that the information above is true and correct.

**CBE Firm/Supplier Authorized Representative**

Signature: [Signature] Title: V.P. Date: 12/11/19

**Bidder/Offeror Authorized Representative**

Signature: [Signature] Title: President Date: 12/13/19

<sup>1</sup> Visit [Census.gov](http://Census.gov) and select **NAICS** to search and identify the correct codes. Match type of work with NAICS code as closely as possible.

<sup>2</sup> To be provided only when the solicitation requires that bidder/offeror include a dollar amount in its bid/offer.

*In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.*

Rev.: June 2018

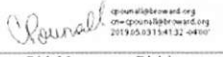
Compliance Form No. 004



## EXHIBIT E MINIMUM INSURANCE COVERAGES

### INSURANCE REQUIREMENTS

Project: Comprehensive Architectural and Engineering Consulting Services for the Property Appraiser Renovation Project  
Agency: Construction Management Division

TYPE OF INSURANCE	ADDL INSD	SUBR WVD	MINIMUM LIABILITY LIMITS		
				Each Occurrence	Aggregate
<b>GENERAL LIABILITY - Broad form</b> <input checked="" type="checkbox"/> Commercial General Liability <input checked="" type="checkbox"/> Premises- Operations <input type="checkbox"/> XCU- Explosion/Collapse/Underground <input checked="" type="checkbox"/> Products/Completed Operations Hazard <input checked="" type="checkbox"/> Contractual Insurance <input checked="" type="checkbox"/> Broad Form Property Damage <input checked="" type="checkbox"/> Independent Contractors <input checked="" type="checkbox"/> Personal Injury Per Occurrence or Claims-Made: <input checked="" type="checkbox"/> Per Occurrence <input type="checkbox"/> Claims-Made Gen'l Aggregate Limit Applies per: <input type="checkbox"/> Project <input type="checkbox"/> Policy <input type="checkbox"/> Loc. <input type="checkbox"/> Other _____	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bodily Injury Property Damage Combined Bodily Injury and Property Damage Personal Injury Products & Completed Operations	\$1,000,000     	\$2,000,000     
<b>AUTO LIABILITY</b> <input checked="" type="checkbox"/> Comprehensive Form <input checked="" type="checkbox"/> Owned <input checked="" type="checkbox"/> Hired <input checked="" type="checkbox"/> Non-owned <input checked="" type="checkbox"/> Any Auto, If applicable <i>Note: May be waived if no driving will be done in performance of services/project.</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bodily Injury (each person) Bodily Injury (each accident) Property Damage Combined Bodily Injury and Property Damage	\$1,000,000    	
<input type="checkbox"/> <b>EXCESS LIABILITY / UMBRELLA</b> Per Occurrence or Claims-Made: <input checked="" type="checkbox"/> Per Occurrence <input type="checkbox"/> Claims-Made <i>Note: May be used to supplement minimum liability coverage requirements.</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<input checked="" type="checkbox"/> <b>WORKER'S COMPENSATION</b> <i>Note: U.S. Longshoremen &amp; Harbor Workers' Act &amp; Jones Act is required for any activities on or about navigable water.</i>	N/A	<input checked="" type="checkbox"/>	Each Accident	STATUTORY LIMITS	
<input checked="" type="checkbox"/> <b>EMPLOYER'S LIABILITY</b>			Each Accident	\$1,000,000	
<input type="checkbox"/> <b>LIQUOR LIABILITY</b> <i>*May be waived if no alcoholic beverages served from Concession stand.</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Each Accident		
<input checked="" type="checkbox"/> <b>PROFESSIONAL LIABILITY (ERRORS AND OMISSIONS)</b> All engineering, surveying and design, testing professionals.	N/A	<input checked="" type="checkbox"/>	If claims-made form: Extended Reporting Period of: *Maximum Deductible:	\$2,000,000  3 years  \$100,000	
<input type="checkbox"/> Installation floater is required if Builder's Risk or Property are not carried. <i>Note: Coverage must be "All Risk", Completed Value.</i>			*Maximum Deductible (Wind and/or Flood): **Maximum Deductible:		Completed Value
<b>Description of Operations:</b> "Broward County" shall be listed as Certificate Holder and endorsed as an additional insured for liability, except as to Professional Liability. County shall be provided 30 days written notice of cancellation, 10 days' notice of cancellation for non-payment. Contractors insurance shall provide primary coverage and shall not require contribution from the County, self-insurance or otherwise. Any self-insured retention (SIR) higher than the amount permitted in this Agreement must be declared to and approved by County and may require proof of financial ability to meet losses. Contractor is responsible for all coverage deductibles unless otherwise specified in the agreement.					
<b>CERTIFICATE HOLDER:</b>  Broward County 115 South Andrews Avenue Fort Lauderdale, Florida 33301			 Risk Management Division		