

CONTRACT

BETWEEN

BROWARD COUNTY

through its

BOARD OF COUNTY COMMISSIONERS

of

BROWARD COUNTY, FLORIDA



and

DPR CONSTRUCTION, A GENERAL PARTNERSHIP

Managing General Contractor,

for

BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY

BID/CONTRACT NO.: RFP # PNC2119546P1

**CONSTRUCTION AGREEMENT BETWEEN MANAGING GENERAL CONTRACTOR
AND BROWARD COUNTY, FLORIDA**

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**CONSTRUCTION AGREEMENT BETWEEN MANAGING GENERAL CONTRACTOR
AND BROWARD COUNTY, FLORIDA
FOR:**

Project Title:	BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY
Location:	NW 17TH STREET AND NW 23RD AVENUE FORT LAUDERDALE, FLORIDA (BROWARD FOLIO # 4942-32-22-0012)
RFP Number:	RFP # PNC2119546P1
Contract Number:	
Project Number:	104134

SUMMARY OF TERMS AND CONDITIONS

Managing General Contractor:	DPR Construction, A General Partnership
Contractor Address:	1301 E. Broward Blvd, Suite 300, Fort Lauderdale, FL 33301
Federal Identification No.:	27 - 0853429

Contract Administrator:	Ariadna Musarra, Director/County Architect Construction Management Division
Contract Administrator Address:	115 S. Andrews Ave. A550, Fort Lauderdale, Florida 33301

Consultant:	LEO A DALY COMPANY
Consultant Address:	1400 CENTREPARK BOULEVARD SUITE 500 WEST PALM BEACH, FL 33401

Article	Description	Unit
6	Preconstruction Work: NTP for: Preconstruction Services through initiation of Permitting Process; Exhibit A, Section 3.1 through Section 3.8 NTP for: Bidding through GMP Reconciliation, Exhibit A, Section 3.9	740 Days from NTP [To be determined at time of GMP Reconciliation] Days from NTP
8.2.2	NTP for: Preliminary Activities	45 Days from NTP
8.6	Substantial Completion	700 Days from the Project Initiation Date in NTP
1.9	Final Completion	60 Days from Substantial Completion
8.2	Liquidated Damages for each day after time specified in Notice to Proceed	\$784 per day

8.3.1	Liquidated Damages for each day after time specified for Substantial Completion	\$392 per day
8.3.2	Liquidated Damages for each day after time specified for Final Completion	\$392 per day
	Liquidated Damages for each day after time specified for interim Milestones (or phase): [Milestones 1, 2, 3, etc.: Division 1, Section]	Interim Milestone #1 \$NA per day
		Interim Milestone #2 \$NA per day
		Interim Milestone #3 \$NA per day
9.3.1	Compensable Excusable Delay for each day beyond the Contract Time.	\$NA per day
26.5	The Parties designate the following as the respective places for giving of notice:	For County: Contract Administrator 115 S. Andrews Ave. Rm. A550, Ft. Lauderdale, Florida 33301 Attn: Ariadna Musarra amusarra@broward.org
		For Contractor: DPR Construction, A General Partnership 1301 E. Broward Blvd. Suite 300, Fort Lauderdale, FL 33301 Attn: Ryan Romanchuk, Southeast Regional Leader ryanr@dpr.com
26.7	<input checked="" type="checkbox"/> County Business Enterprise (CBE) commitment <input type="checkbox"/> Disadvantaged Business Enterprise (DBE) goal commitment (check box)	As awarded <u>25</u> %
Exhibit A	LEED Category	Gold Certified

CONSTRUCTION AGREEMENT BETWEEN MANAGING GENERAL CONTRACTOR AND BROWARD COUNTY, FLORIDA

This is a Construction Agreement ("Agreement"), made and entered into by and between Broward County, a political subdivision of the State of Florida ("County") and the Managing General Contractor ("Contractor") identified in the Summary Terms and Conditions (individually a "Party" and collectively referred to as the "Parties").

IN CONSIDERATION of the mutual terms, conditions, promises, covenants, and payments hereinafter set forth, the Parties agree as follows:

ARTICLE 1 - DEFINITIONS

Whenever the following terms, or pronouns in place of them, appear in the Contract Documents, the intent and meaning shall be interpreted as follows:

- 1.1 Change Order: A written document ordering a change in the Guaranteed Maximum Price, Contract Time, or a material change in the Work.
- 1.2 County Business Enterprise or "CBE": A small business located in Broward County, Florida, which meets the criteria and eligibility requirements of Broward County's CBE Program and which is certified by County's Office of Economic and Small Business Development (OESBD).
- 1.3 Consultant: Architect(s) or engineer(s) who has contracted with County, or who is an employee of County, to provide professional services for this Project.
- 1.4 Contract Administrator: The Director or Assistant Director, who is the representative of County concerning the Project. In the administration of this Agreement, as contrasted with matters of policy, all Parties may rely on the instructions or determinations made by the Contract Administrator; provided, however, that such instructions and determinations do not change the Scope of Services.
- 1.5 Contract Documents: This Agreement and its exhibits, attachments and forms, drawings and specifications, approved Shop Drawings and submittals, the Request For Letters of Interest and Contractor's response thereto (as negotiated and accepted by the County), any Addenda to the Contract Documents, the record of the contract award by the Board of County Commissioners, the Performance Bond and Payment Bond, the Notice of Award, the Notice(s) to Proceed, the Purchase Order, and all Amendments, Change Orders and CPEAMS issued after execution of this Agreement are the documents which are collectively referred to as the Contract Documents.

1.6 Contract Price Element Adjustment Memorandum (CPEAM): A document issued by the Contract Administrator to memorialize the reallocation of sums between Contract Price Elements included within the GMP.

1.7 Contract Time: The time between the Project Initiation Date(s) specified in a Notice(s) to Proceed and Final Completion of the Work, or a phase of the Work, including any milestone dates thereof, established in this Agreement, as may be amended by a Change Order.

1.8 Contractor: The person, firm, or corporation with whom Broward County has contracted and who is responsible for the acceptable performance of the Work and for the payment of all legal debts pertaining to the Work. All references in the Contract Documents to third parties under contract or control of Contractor shall be deemed to be a reference to Contractor.

1.9 Final Completion: The date certified by Consultant in the Final Certificate of Payment and as finally determined by the Contract Administrator in its sole discretion upon which all conditions and requirements of any permits and regulatory agencies have been satisfied; all documents required by the Contract Documents have been received by County; all other documents required to be provided by Contractor have been received by County; and to the best of Consultant's knowledge, information and belief, the Work defined herein has been fully completed in accordance with the terms and conditions of the Contract Documents.

1.10 Guaranteed Maximum Price (GMP): The maximum amount County is obligated to pay Contractor for the complete performance of the Work and construction of the Project, which amount shall include, but is not limited to, all profit, overhead, on-site and off-site conditions (known and unknown), and administrative costs. The GMP is made up of the sum of the following Contract Price Elements:

- A. Pre-Construction Services Cost
- B. Direct Construction Cost
- C. General Conditions Cost
- D. Fixed Fee
- E. Owner's Allowance Account

1.11 Notice to Proceed: One or more written notices to Contractor from the Contract Administrator authorizing the commencement of Work or a phase of the Work.

1.12 Pricing Documents: The set of drawings and specifications upon which the Guaranteed Maximum Price is established as enumerated in Exhibit 4.

1.13 Project: The construction project described in the Contract Documents, including the Work described therein.

1.14 Project Initiation Date: The date(s) upon which the Contract Time commences for the Work, or a phase of the Work.

1.15 Project Manager: The designee of the Contract Administrator having day-to-day administrative and managerial responsibility for the Project.

1.16 Resident Project Representative: An authorized representative of Consultant on the Project.

1.17 Subcontractor: A person, firm or corporation having a contract with Contractor to perform services on the Project.

1.18 Substantial Completion: The date, as certified in writing by Consultant and as finally determined in the sole discretion of Contract Administrator, on which the construction of the Work, or a portion thereof, as designated by the Contract Administrator, is at a level of completion in substantial compliance with the Contract Documents such that all conditions of permits and regulatory agencies have been satisfied and the County or its designee, can enjoy use or occupancy and can use or operate it in all respects for its intended purpose. A Certificate of Occupancy (CO) or a Temporary Certificate of Occupancy (TCO) or other alternate municipal/county authorization for limited or conditional occupancy or use by County acceptable to the Contract Administrator must be issued for Substantial Completion to be achieved; however, the date of issuance of a Certificate of Occupancy or the date the Project is available for County's use is not to be determinative of the achievement or date of Substantial Completion.

1.19 Summary of Terms and Conditions: The Attachment that includes the number days for performance of the Work, Liquidated Damage amounts related thereto, and other requirements.

1.20 Surety: The surety company or individual which is bound by the performance bond and payment bond with and for Contractor who is primarily liable, and which surety company or individual is responsible for Contractor's acceptable and timely performance and completion of the Work under this Agreement and for the payment of all debts pertaining thereto in accordance with Section 255.05, Florida Statutes.

1.21 Work: The totality of the obligations, including, but not limited to, preconstruction services, administration, procurement, materials, equipment, labor, construction and other services necessary for Contractor, or its agents, to fulfill Contractor's obligations under this Agreement.

ARTICLE 2 - PRIORITY OF PROVISIONS

2.1 The Contract Documents are intended to include all items necessary for the proper execution and completion of the Work by Contractor. Any labor, services, materials, supplies, equipment or documentation that may reasonably be inferred from the Contract Documents or trade usage from prevailing custom as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to County.

2.2 The Contract Documents are complementary, and wherever possible the provisions of the Contract Documents shall be construed in such manner as to avoid conflicts between provisions of the various Contract Documents.

2.3 Anything shown on the drawings and not mentioned in the specifications or mentioned in the specifications and not shown on the drawings, shall have the same effect as if shown or mentioned respectively in both. In the event of a conflict among the Contract Documents, the latest, most stringent, and more technical requirement(s), including, but not limited to, issues of quantities or cost of the Work, to Contractor shall control, as determined by Consultant.

2.4 The organization of the specifications into divisions and sections and the arrangement of drawings shall not control Contractor in dividing the Work among Subcontractors or in establishing the extent of the Work to be performed by any trade. The organization of the specifications and the arrangement of the drawings are for the convenience of Contractor and are not intended to relieve Contractor from its obligation to conduct a complete study of the Contract Documents for the purpose of directing and coordinating the various Subcontractors and suppliers as to their respective responsibilities.

Reference to standard specifications, manuals, or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of permit issuance.

ARTICLE 3 - THE WORK

Intention of County: It is the intent of County to describe in the Contract Documents a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied by Contractor, whether or not specifically called for by the Contract Documents. When words, which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with that meaning. County shall have no duties other than those duties and obligations expressly set forth within the Contract Documents.

ARTICLE 4 - CONTRACTOR'S RESPONSIBILITIES

4.1 Contractor shall accept full responsibility for the Work against all loss or damage of whatsoever nature sustained until Substantial Completion and shall promptly repair any damage done from any cause whatsoever.

4.2 Contractor shall be responsible for all materials, equipment and supplies pertaining to the Project. In the event any such materials, equipment and supplies are lost, stolen, damaged or destroyed prior to Substantial Completion, Contractor shall replace same without cost to County.

Contractor shall be responsible to protect all materials, equipment and supplies, keeping them free from deterioration, weathering, rusting or other action detrimental to the materials.

4.3 County reserves the right to award other contracts, or perform work with its own forces, in connection with this Project. Contractor shall afford other persons or contractors reasonable opportunity for the introduction and storage of materials and the execution of services under such separate contracts. Contractor shall properly connect and coordinate its Work with the services of any other persons or contractors.

4.4 If any part of Contractor's Work depends for proper execution or results upon the services of any other person or contractor, Contractor shall inspect and promptly report to Consultant any defects in such services that render it unsuitable for such proper execution and results. Contractor's failure to so inspect and report shall constitute an acceptance of the other person's or contractor's services as fit and proper for the reception of Contractor's Work, except as to defects which may develop in other person's contractor's services after the execution of Contractor's Work.

4.5 Contractor shall conduct its operations and take all reasonable steps to coordinate the prosecution of the Work so as to create no interference or impact on any other contractor or County operations on the Project site. Should such interference or impact occur, and Contractor did not take reasonable steps, Contractor shall be liable for the cost of such interference or impact.

4.6 Contractor shall cause all materials and other parts of the Work to be readily available as and when required or needed for or in connection with the construction, furnishing, and equipping of the improvements.

4.7 Contractor shall plan, record, and update, at least monthly through Final Completion, the construction schedule of the Project. The Project Schedule shall indicate the dates for the commencement and completion of the various stages of construction and shall be revised as required by the conditions of the Work. The Project Schedule shall encompass all of the Work of all trades necessary for the construction of the Project and shall be sufficiently complete and comprehensive to enable progress to be monitored through the end of the warranty phase of the Project. The Project Schedule shall incorporate sufficient time for important County milestone events and required coordination points as may have been established in the Project's Preconstruction Services phase.

4.8 Contractor shall be solely responsible for construction means, methods, techniques, sequences and procedures employed in the performance of the Work.

ARTICLE 5 - CONSULTANT'S RESPONSIBILITIES

5.1 Consultant shall monitor the overall quality, progress, and GMP.

5.2 Consultant shall provide on-site review of Work in progress, review of pay requests submitted by Contractor, assistance in the interpretation of the intent of the Contract Documents for the proper execution of the Work, and such other assistance as Contract Administrator may request.

5.3 Consultant shall have no authority, without Contract Administrator's prior written approval, to order or approve any deviation from the Contract Documents, whether or not such deviation affects the GMP or the date of Substantial Completion.

5.4 If at any time Consultant observes or becomes aware of any fault or defect in the Work or of any nonconformance with the Contract Documents, Consultant will promptly notify Contract Administrator and Contractor in writing and will direct that all reasonable steps be taken to correct such fault, defect or nonconformance. Consultant shall have the authority to reject Work that does not, in its opinion, or in the opinion of Contract Administrator, conform to the Contract Documents.

ARTICLE 6 - PRECONSTRUCTION SERVICES

6.1 Preconstruction Services shall consist of the tasks set forth in Exhibit A, attached hereto and made a part hereof. Contractor shall provide all services as set forth in Exhibit A including all necessary, incidental, and related activities and services required by Preconstruction Services and contemplated in Contractor's level of effort.

6.2 The Preconstruction Services do not delineate every detail and minor work task required to be performed by Contractor to complete the Project. If, during the course of the performance of the services included in this Agreement, Contractor determines that work should be performed to complete the Project which in Contractor's opinion, is outside the level of effort originally anticipated, whether or not Preconstruction Services identify the work items, Contractor shall notify Contract Administrator in writing in a timely manner before proceeding with the work. If Contractor proceeds with said work without notifying Contract Administrator, said work shall be deemed to be within the original level of effort, whether or not specifically addressed in Preconstruction Services. Notice to Contract Administrator does not constitute authorization or approval by County to perform the work. Performance of work by Contractor outside the originally anticipated level of effort without prior written approval by the Contract Administrator is at Contractor's sole risk.

6.3 Exhibit A is for the first phase of services related to the Project and additional negotiations will be required for subsequent phases, principal on-site construction operations, or for additional or alternate Preconstruction Services, except as otherwise provided herein. Contract Administrator and Contractor may negotiate additional services, compensation, time of performance, and other related matters for future phases of the Project. If Contract Administrator and Contractor cannot agree, Contract Administrator shall have the right to immediately terminate negotiations at no cost to County and procure services for future Project phases from other source(s).

ARTICLE 7 - CONTRACT PRICE ELEMENTS

7.1 The Contract Price Elements within the GMP are as follows:

7.1.1 Preconstruction Services Cost: The cost of Preconstruction Services, including labor and materials, as identified in Article 6.

7.1.2 Direct Construction Cost: The Direct Construction Cost of the Work, including labor and materials. The estimated Direct Construction Cost shall be as forth in Exhibit 1-E. The actual Direct Construction Cost of the Work shall be reconciled and set forth in Exhibit 1-R after the bidding process as described in Exhibit A.

7.1.3 General Conditions Cost: Ancillary project costs for the provision of administrative requirements, procedural requirements, temporary facilities and controls, performance requirements, and life cycle activities by Contractor for items which are not part of the permanent construction or which do not lend themselves readily to inclusion in one of the separate trade contracts. The General Conditions Cost may include, but are not limited to, those items listed on Exhibit 2-E. The estimated General Conditions Cost shall be as set forth on Exhibit 2-E. The actual General Conditions Cost shall be reconciled and set forth in Exhibit 2-R after the negotiation and bidding process set forth in Exhibit A.

7.1.4 Fixed Fee: The Fixed Fee is the percentage established in the solicitation document. The estimated Fixed Fee shall be based upon the sum of the estimated Direct Construction Cost and estimated General Conditions Cost as set forth on Exhibits 1-E and 2-E respectively. The actual Fixed Fee shall be reconciled to the actual Direct Construction Costs and actual General Conditions Costs as set forth in Exhibit B-R after the bidding process as described in Exhibit A.

7.1.5 Owner's Allowance Account: The Owner's Allowance Account is available at the discretion of Contract Administrator to cover increases to the scope of the Work due to differing site conditions, reconciliation of Direct Construction Cost after bidding, errors and omissions in the Contract Documents, or Owner-requested changes.

ARTICLE 8 - CONTRACT TIME; SUBSTANTIAL COMPLETION; LIQUIDATED DAMAGES

8.1 Contractor shall be directed in writing to commence the Work in the form of a Purchase Order issued by the County and Notice(s) to Proceed issued by Contract Administrator. The Purchase Order and Notice(s) to Proceed will not be issued until after Contractor's submission to County of all required documents and after execution of the Agreement by both Parties.

8.2 Notice(s) to Proceed:

8.2.1 Contract Administrator shall have the authority to issue multiple Notices to Proceed for the Work, or portions thereof. The work identified within a Notice to Proceed shall be commenced within ten (10) days after the effective date set forth in a Notice to Proceed.

8.2.2 Prior to the issuance of a Notice to Proceed for construction of the Work, the Contract Administrator will issue a Notice to Proceed for Preliminary Activities. Contractor shall submit to Contract Administrator and Consultant for approval all of the following items:

8.2.2.1 A Project Schedule in compliance with the requirements of Division 1. Additionally, at the request of Contract Administrator, Contractor shall also provide a cost loaded schedule for review and approval.

8.2.2.2 A preliminary schedule of planned Shop Drawing and submittal submissions.

8.2.2.3 A preliminary Schedule of Values in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

8.2.2.4 Contractor shall meet with all utility owners and secure from them a utility coordination schedule of each utility relocation. County shall not be responsible for the nonperformance or delay by the utility owners.

8.2.2.5 All permits required by authorities having jurisdiction for all portions of the Work, unless otherwise provided by the Contract Documents.

8.2.3 Preconstruction Meeting: After receipt of all items identified above, Project Manager shall schedule a Preconstruction Meeting to discuss procedures for conducting the Work, including but not limited to: designating individuals to receive communications for required submissions, inspections and approvals; procedures for processing Applications for Payment; and to establish a working understanding among the Parties as to the Work.

8.2.4 Notice to Proceed for Construction: After the Preconstruction Meeting, Contractor may begin to perform the balance of the Work on the Project Initiation Date specified in the Notice to Proceed for construction of the Work.

8.3 Time is of the essence throughout this Agreement. The Work, or portions thereof, shall be substantially completed within the time set forth in the Summary of Terms and Conditions.

Liquidated Damages shall be imposed in the amount as set forth in the Summary of Terms and Conditions for the following events:

8.3.1 Upon failure of Contractor to substantially complete the Work, or portions thereof, within the specified period of time, plus approved time extensions. Liquidated damages shall be assessed daily until Substantial Completion.

8.3.2 After Substantial Completion, should Contractor fail to complete the remaining Work within the time specified for Final Completion, Liquidated Damages shall be assessed daily until Final Completion.

The liquidated amounts are not penalties but are Liquidated Damages to County for costs incurred due to Contractor's untimely performance. Liquidated Damages are hereby fixed and agreed upon between the Parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by County as a consequence of such delay, and both Parties desiring to obviate any question of dispute concerning the amount of said damages and the cost and effect of the failure of Contractor to complete the Work, or portions thereof on time. The amounts established for Liquidated Damages for Preconstruction Services, Substantial Completion, Final Completion, and any intermediate Milestones are stipulated by the Parties as fair and reasonable. Such Liquidated Damages shall apply separately to each portion of the Project for which a time for completion is given. Contractor waives any and all challenges and legal defenses to the validity of any Liquidated Damages established in the Contract Documents, including that the Liquidated Damages are void as penalties or are not reasonably related to the actual damages sustained by the County as a result of Contractor's untimely performance.

8.4 Contractor, in addition to being responsible to County for Liquidated Damages for untimely performance, shall reimburse County for all costs incurred by County to repair, restore, or complete the Work, including all costs incurred by County for services provided by Consultant in administering the construction of the Project beyond the completion dates, or beyond an approved extension of time granted to Contractor, whichever date is later. All such costs shall be deducted from the monies otherwise due Contractor for performance of Work under this Agreement by means of unilateral credit Change Orders issued by County.

8.5 Contract Administrator, through Consultant, may direct Contractor to expedite the Work by whatever means Contractor may use, including, without limitation, increasing staffing or working extended hours and overtime to bring the Work back within the progress schedule. If the expediting of Work is required due to reasons within the control or responsibility of Contractor, then any additional costs incurred shall be at the sole responsibility of Contractor. If the expediting of Work is required due to reasons outside the control or responsibility of Contractor, then the additional costs incurred shall be the subject of an appropriate equitable adjustment.

8.6 Substantial Completion Date: When Contractor considers that the Work, or portion thereof designated by Contract Administrator, has reached Substantial Completion, Contractor

shall notify Contract Administrator and Consultant in writing, including a comprehensive list of items to be completed or corrected by Contractor. Consultant shall then promptly make a preliminary inspection of the Work. When Consultant, on the basis of the preliminary inspection, determines that the Work, or designated portion thereof, is substantially complete, Consultant will notify Contract Administrator. Contract Administrator shall then, with Consultant and Contractor, perform Contract Administrator's Substantial Completion Inspection.

8.6.1 If Substantial Completion of the Work, or a portion thereof, has been achieved, Consultant shall prepare a Certificate of Substantial Completion in the form attached hereto as Form 1 for execution. The Certificate of Substantial Completion shall include: 1) the Date of Substantial Completion; 2) the responsibilities of County and Contractor for security, maintenance, utilities, damage to the Work, and insurance; and 3) a Substantial Completion Punch List, including submittals, to satisfy the requirements for Final Completion.

8.6.2 The failure to include any items of corrective Work on the Substantial Completion Punch List does not alter the responsibility of Contractor to complete all of the Work in accordance with the Contract Documents.

8.6.3 Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work, or designated portion thereof, unless otherwise provided in the Contract Documents or Certificate of Substantial Completion.

8.7 Use of Completed Portions: County, at Contract Administrator's sole option, shall have the right to take possession of and use any completed or partially completed portions of the Project. Such possession and use shall not be deemed an acceptance of any of the Work not completed in accordance with the Contract Documents. In the event County takes possession of any completed or partially completed portions of the Project, the following shall occur:

8.7.1 Contract Administrator shall give notice to Contractor in writing at least thirty (30) days prior to County's intended occupancy of a designated area.

8.7.2 Contractor shall complete the designated area to the point of Substantial Completion and request inspection and issuance of a Certificate of Substantial Completion.

8.7.3 Upon Consultant's issuance of a Certificate of Substantial Completion, the applicable warranty(ies) shall commence, and County will assume full responsibility for maintenance, utilities, subsequent damages by the County and the public, and adjustment of insurance coverages for the occupied area unless otherwise agreed in writing.

8.7.4 Contractor shall complete all items noted on the Substantial Completion Punch List and request final inspection and final acceptance of the portion of the Work occupied.

8.7.5 If County finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion thereof, such occupancy or use shall not commence prior to a time mutually agreed upon by County and Contractor. Insurance on the unoccupied or unused portion or portions shall not be canceled or lapsed on account of such partial occupancy or use. Consent of Contractor to such occupancy or use shall not be unreasonably withheld.

ARTICLE 9 - NOTIFICATION OF CHANGE IN CONTRACT TIME OR GMP

9.1 Any claim for a change in the Contract Time or GMP shall be made by written notice delivered by Contractor to Consultant with a copy to Contract Administrator within five (5) days of the commencement of the event giving rise to the claim and stating the general nature of the claim. Notice of the nature and elements of the claim shall be delivered within twenty (20) days after the date of such written notice. Within ten (10) days of the termination of the event giving rise to the claim, notice of the extent of the claim with supporting data shall be delivered unless Consultant allows an additional period of time to ascertain more accurate data in support of the claim. The notice of the extent of the claim shall be accompanied by Contractor's written notarized certification that the adjustment claimed is the entire adjustment to which Contractor has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time or GMP shall be determined by Consultant in accordance with Article 26.4 herein, if Contract Administrator and Contractor cannot otherwise agree. NO CLAIM FOR AN ADJUSTMENT IN THE CONTRACT TIME OR GMP WILL BE VALID IF NOT SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.

9.2 No Damages for Delay: No claim for damages or any claim, other than for an extension of time, shall be made or asserted against County by reason of any delay. Contractor shall not be entitled to an increase in the GMP or payment or compensation of any kind from County for direct, indirect, general conditions, consequential, impact or other costs, expenses or damages, including, but not limited to, costs of acceleration or inefficiency, arising because of delay, disruption, interference or hindrance from any cause whatsoever, whether such delay, disruption, interference or hindrance be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable; provided, however, that this provision shall not preclude recovery of damages by Contractor for hindrances or delays due solely to fraud, bad faith, or active interference on the part of County or Consultant. Otherwise, Contractor shall be entitled only to extensions of the Contract Time as the sole and exclusive remedy for such resulting delay, in accordance with and to the extent specifically provided above.

9.3 Excusable Delay: Delay which extends the completion of the Work and which is caused by circumstances beyond the control of Contractor or its Subcontractors, material persons, suppliers, or vendors is Excusable Delay. Contractor is entitled to a time extension of the Contract Time for each day the Work is delayed due to Excusable Delay. Contractor shall document its claim for any time extensions as provided in Section 9.1 herein. Failure of Contractor to comply with Section 9.1 herein as to any particular event of delay shall be deemed conclusively to

constitute a waiver, abandonment or relinquishment of any and all claims resulting from that particular event of delay. Excusable Delay may be compensable or non-compensable.

9.3.1 Compensable Excusable Delay: Excusable Delay is only compensable when (i) the delay extends the Contract Time, and (ii) is due solely to fraud, bad faith or active interference on the part of County or Consultant. In no event shall Contractor be compensated for interim or non-critical delays which do not extend the Contract Time.

Contractor shall be entitled to direct and indirect costs for Compensable Excusable Delay. Direct costs recoverable by Contractor shall be limited to the actual additional costs allowed pursuant to Article 11.

County and Contractor recognize and agree that the amount of Contractor's precise actual indirect costs for delay in the performance and completion of the Work is impossible to determine as of the date of execution of the Contract Documents, and that proof of the precise amount will be difficult. Therefore, indirect costs recoverable by Contractor shall be liquidated on a daily basis for each day the Contract Time is delayed due to a Compensable Excusable Delay. These liquidated indirect costs shall be paid to compensate Contractor for all indirect costs caused by a Compensable Excusable Delay and shall include, but not be limited to, all profit on indirect costs, home office overhead, acceleration, loss of earnings, loss of productivity, loss of bonding capacity, loss of opportunity and all other indirect costs recoverable shall be the amount set forth in Summary of Terms and Conditions for each day the Contract is delayed due to a Compensable Excusable Delay.

9.3.2 Non-Compensable Excusable Delay: When Excusable Delay is (i) caused by circumstances beyond the control of Contractor, its Subcontractors, material persons, suppliers and vendors; (ii) is caused by circumstances beyond the control of the County; or (iii) is caused jointly or concurrently by Contractor or its Subcontractors, material persons, suppliers or vendors and by the County or Consultant, then Contractor shall be entitled to a time extension equal to the actual number of days delayed on the critical path.

Extensions to the Contract Time for delays caused by the effects of inclement weather shall be submitted as a request for change in Contract Time pursuant to Section 9.1. These time extensions are justified only when rain or other inclement weather conditions or related adverse soil conditions prevent Contractor from productively performing controlling items of Work identified on the accepted schedule or updates resulting in Contractor being unable to work at least fifty (50%) of the normal workday on controlling items of Work identified on the accepted schedule or updates due to adverse weather conditions.

9.4 Differing Site Conditions: In the event that during the course of the Work Contractor encounters an underground utility that was not shown on the Contract Documents, or subsurface

or concealed conditions at the Project site which differ materially from those shown on the Contract Documents and from those ordinarily encountered and generally recognized as inherent in Work of the character called for in the Contract Documents, Contractor, without disturbing the conditions and before performing any work affected by such conditions, shall, no later than 9:00 am the next business day after their discovery, notify Consultant in writing of the existence of the aforesaid conditions. Consultant and Contract Administrator shall, within two (2) business days after receipt of Contractor's written notice, investigate the site conditions identified by Contractor. No request by Contractor for an equitable adjustment or change to the Contract Time under this provision shall be allowed unless Contractor has given written notice in accordance with the provisions of this Section.

ARTICLE 10 - CHANGES IN THE WORK OR TERMS OF CONTRACT DOCUMENTS

10.1 Without invalidating this Agreement, County reserves and shall have the right, from time to time, to make such increases, decreases or other changes in the Work including, but not limited to, the character and quantity of the Work as may be considered necessary or desirable. Any changes to the scope of this Project must be accomplished by means of appropriate 1) Field Orders or Supplemental Instructions; 2) CPEAMs or 3) Change Orders. Any sums moved between Contract Price Elements included within the GMP must be accomplished by an appropriate CPEAM. The amount of any CPEAM or Change Order shall be determined pursuant to Articles 9 and 10. In no event shall the GMP be modified except by appropriate Change Order or amendment.

10.2 Field Orders and Supplemental Instructions: Contract Administrator and Consultant each has the authority to issue Field Orders or Supplemental Instructions ordering minor changes in the Work, providing the Field Order or Supplemental Instructions involve no change in the Direct Construction Cost or Contract Time.

10.3 Contract Price Element Adjustment Memoranda (CPEAM): Contract Administrator is authorized to issue a CPEAM to reallocate sums between the Contract Price Elements within the GMP. In no event shall the GMP be modified except by Change Order or Amendment. If County changes the Scope of Work, the Fixed Fee shall be adjusted as set forth in Section 10.4. Contractor shall advise Contract Administrator in writing within seven (7) days of receipt of a CPEAM of any objections or claims arising from the CPEAM or same shall be deemed waived. The following specific CPEAMs are contemplated, but additional or different CPEAMs may be issued:

10.3.1 When subcontracts of the Project are bid and have been executed, if the sum of the bids is below the Contractor's estimated Direct Construction Cost, a CPEAM shall be issued by Contract Administrator to move the surplus to the Owner's Allowance Account. If the sum of the subcontracts awarded exceeds the Contractor's estimated Direct Construction Cost, the deficiency may be taken by CPEAM from the Owner's Allowance Account at the sole discretion of Contract Administrator, provided however, the deficiency shall not be cause to increase the GMP.

10.4 Change Orders: Changes in the quantity or character of the Work within the scope of the Project which are not properly the subject of Field Orders or Supplemental Instructions, including all changes resulting in changes in the GMP, or the Contract Time, shall be authorized only by written Change Orders approved and issued in accordance with the provisions of the County's Procurement Code or as otherwise approved by County.

10.4.1 Fees for Change Orders shall be determined as follows:

10.4.1.1 The Fixed Fee shall be adjusted if the County increases or decreases the scope of the Work. Adjustments to the Fixed Fee shall be in the percentage amount established in the solicitation document.

10.4.1.2 Subcontractor's percentage markup for overhead and profit shall be reasonable, but in no event shall the aggregate of the Subcontractor's overhead and profit markups exceed ten percent (10%) of the net change to the Subcontractor's Cost of the Work. In the event Subcontractor is affiliated with Contractor by common ownership or management, or is effectively controlled by Contractor, no markup or Fixed Fee will be allowed on the Subcontractor's Cost of Work. In the event there is more than one level of Subcontractor, such as second and third tier subcontractors, the sum of all of the Subcontractors', including any tiered subcontractors', percentage markups for overhead and profit shall not in the aggregate exceed twenty percent (20%) of the net change to the subcontractor's Cost of the Work.

10.4.1.3 Whenever a change in Subcontractor work is to be based on mutual acceptance of a lump sum, whether the amount is an addition, credit or no change-in-cost, Contractor shall submit an initial cost estimate obtained from the Subcontractor and acceptable to Consultant. The breakdown shall list, for each Subcontractor, the quantities and unit prices for materials, labor, equipment, overhead, profit, and other items of the Cost of the Work.

10.4.2 Contractor shall not start work on any changes requiring an increase in the GMP until a Change Order setting forth the adjustments is approved and issued by the County. Upon receipt of a Change Order, Contractor shall promptly proceed with the work set forth within the document.

10.4.3 On approval of any change increasing the GMP, Contractor shall cause the Performance Bond and Payment Bond to be increased so that each reflects the total GMP as increased.

10.4.4 To avoid delays to the Project and to mitigate damages to the Parties, Change Orders may be issued unilaterally by County. Upon receipt by Contractor of a unilateral Change Order, Contractor shall proceed with the work set forth in the unilateral Change Order.

ARTICLE 11 - PAYMENTS AND COST OF THE WORK

11.1 The term "Cost of the Work" shall mean the sum of all direct costs necessarily and reasonably incurred and paid by Contractor in the performance of the Work. The basis of payment for direct costs shall be Contractor's actual direct costs as established by the Subcontractor bidding process described in Exhibit A. Such costs shall be at rates not higher than those customarily paid in the locality of the Project except with the prior written consent of County. The Cost of the Work shall include only the items as follows:

11.1.1 Contractor's Direct Construction Cost: Contractor's Direct Construction Cost, as generally described on Exhibit 1-E and, subsequently on Exhibit 1-R, attached hereto, to be 100% performed by Subcontractors selected in accordance with Exhibit A. Where the Work is covered by unit prices contained in the Contract Documents or an applicable subcontract, the Cost of the Work shall be determined by application of unit prices to the quantities of items involved. If the subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work shall be determined in the same manner as Contractor's Cost of the Work.

11.1.2 Contractor's Labor Costs: Payroll costs for employees in the direct employ of Contractor in the performance of the Work described in the Contract Documents shall be limited to salaries plus labor burden as set forth in the schedule of job classifications agreed upon by County and Contractor in Exhibit 2-E and, subsequently, Exhibit 2-R. Payroll costs for employees not employed full time on the Work covered by the Agreement shall be apportioned on the basis of the time the employees spent on the Work. Payroll costs shall include salaries and wages plus the labor burden to cover costs including social security contributions, unemployment, excise and payroll taxes, health insurance, sick leave, and vacation and holiday pay.

11.1.3 Materials and Equipment: Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith, adjusted in accordance with Article 12 pertaining to Discounts, Rebates and Refunds; rentals of all construction equipment, machinery and parts, in accordance with rental agreements and the costs of transportation, loading, unloading, installation, dismantling and removal thereof, all in accordance with the terms of said agreements. The rental of any such equipment, machinery and parts shall cease when the use thereof is no longer necessary for the Work.

11.1.4 Miscellaneous costs:

11.1.4.1 The cost, as documented by Contractor's detailed receipts, of telephone, telegrams, postage, photographs, blueprints, office supplies, first aid supplies and related miscellaneous costs reasonably incurred in direct support of the Work at the Project Location.

11.1.4.2 Premiums (net) on bonds and insurance, including Subcontractor bonds, if any, that Contractor is obligated to secure and maintain under the terms of the Contract Documents and such other insurance and bonds as may be required, subject to the written approval of the County. Premiums paid shall be net of trade discounts, volume discounts, dividends and other adjustments. All insurance and bonds shall be provided by companies acceptable to the County. Self-insurance by Contractor or insurance through any affiliates of Contractor shall not be permitted without the County's prior written approval. County's approval shall not be required on Subcontractor bonds, and premiums thereof shall be considered a Cost of the Work.

11.1.4.3 The cost of obtaining and using any utility services required for the Work that are not paid directly by County, including fuel and sanitary services at the Project site.

11.1.4.4 The cost of removal of debris from the site. The Project site, lay-down locations, and staging sites will be kept clear of all debris on a daily basis. All subcontracts shall require Subcontractors to remove all debris daily created by their activities, and Contractor shall exercise its best efforts to enforce such requirements or to affect the removal of the debris of the Subcontractors who fail in this regard, provided, however, Contractor shall not be required to remove debris created by the County's separate contractors except pursuant to Change Order procedures set forth herein.

11.1.4.5 Federal, state, municipal, sales, use and other taxes, as applicable to the Project, all with respect to services performed or materials furnished for the Work, it being understood that none of the foregoing includes federal, state or local income or franchise taxes.

11.1.4.6 All reasonable costs and expenditures necessary for the operation of the Project job site office(s), including cost of field computer equipment and software.

11.1.4.7 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the

performance of the Work, and cost less market value of such items used but not consumed which remain the property of Contractor.

11.2 Exclusions to Cost of The Work: Overhead is defined as any and all other costs, not referenced in Section 11.1, of Contractor and its operation which are not in direct support of the Project. Contractor agrees to furnish and perform, as a part of Contractor's Fee and without reimbursement, said overhead items. The term "Cost of the Work" shall not include any of the following:

11.2.1 Payroll costs and other compensation of Contractor's officers, executives, principals (of partnership and sole proprietorship), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor, whether at the Project site or in its principal or a branch office, for general administration that are not specifically included in the General Conditions. All such costs are to be considered administrative costs covered by Contractor's fee.

11.2.2 Other than those expenses authorized by this Agreement, expenses of Contractor's principal and branch offices.

11.2.3 Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

11.2.4 Other overhead, general expense costs, or charges of any kind.

11.2.5 Entertainment and meal expenses, car allowances (except for vehicle allowances for full-time employees stationed on Project site with advance approval by the Contract Administrator), and charges of a personal nature.

11.2.6 Bonuses, profit-sharing, or other special labor charges.

11.3 Progress Payments: Contractor may make Application for Payment for Work completed during the Project at intervals of not more than once a month. Contractor shall, where the Project involves CBE Subcontractors, make application for payment for Work completed by such Subcontractors during the Project at monthly intervals and shall pay its Subcontractors within ten (10) days following receipt of payment from the County for such subcontracted Work. Contractor's application shall show a complete breakdown of the Project components, the percentages completed and the amount due in proportion to the percentage of the Work completed, based upon the Schedule of Values. General Conditions shall be billed at cost or, at Contract Administrator's option, as a Negotiated Lump Sum payable in proportion to the percentage of the Work completed. Contractor shall submit with each Application for Payment, an updated Project Schedule acceptable to Consultant and Contract Administrator as required by the Division 1 General Requirements, a Certification of Payments to Subcontractors (Form 9 as attached hereto), and either release of liens from Contractor relative to the Work which is the

subject of the Application or consent of the Surety as to such payment. All Applications for Payment shall be accompanied by a completed Statement of Compliance in the form attached hereto as Form 2, a completed Certification of Payments to Subcontractors in the form attached hereto as Form 9, and a Monthly (CBE) Utilization Report form attached hereto as Form 7. Form 9 shall be accompanied by a copy of the notification sent to each Subcontractor listed in item 2 of the Form, explaining the good cause why payment has not been made. Each Application for Payment shall be submitted in triplicate to Consultant for certification and distribution to Contract Administrator.

11.3.1 County may withhold retainage on each progress payment as set forth in Section 255.078, Florida Statutes, as may be amended during this Contract. Any reduction in retainage below the maximum amount set forth in Section 255.078, Florida Statutes, shall be at the sole discretion of the Contract Administrator, as may be recommended by Consultant. Nothing contained herein requires the County to pay or release any amounts that are the subject of a good faith dispute, the subject of a claim brought pursuant to Section 255.05, Florida Statutes, or otherwise the subject of a claim or demand by the County or Contractor. Subsequent to Final Completion and prior to final payment, retainage may be reduced to a nominal amount at the sole discretion of Contract Administrator. Contract Administrator may authorize release of retainage to a particular Subcontractor or trade when the Work of that Subcontractor or trade is satisfactorily completed. Any interest earned on retainage shall accrue solely to the benefit of County.

11.3.2 County may withhold, in whole or in part, payment to such extent as may be necessary to protect itself from loss on account of: defective Work not remedied; claims filed or reasonable evidence indicating probable filing of claims by other parties; failure of Contractor to make payments properly to Subcontractors or for material or labor; damage to another contractor not remedied; Liquidated Damages and costs incurred by County for extended construction administration; failure of Contractor to provide all required documents to County; or other County claims.

11.3.3 The Schedule of Values, prepared in accordance with Division 1 General Requirements, shall expand and detail the items contained in Exhibits 1-R and 2-R attached hereto, and shall list the cost of materials, the cost of labor, the cost of equipment and the cost of Subcontractor work separately for all the portions of the Work delineated. Each monthly application for payment shall be for a sum equal to the total of (i) that portion of Direct Construction Cost equal to the percentage of the Work completed; (ii) actual General Conditions Cost; and (iii) an appropriate amount of Fixed Fee as related to the percentage of Direct Construction Cost and actual General Conditions Cost paid. The calculation of the percentage of the Work completed shall be in accordance with the approved Project Schedule as updated.

11.4 Consultant and Contract Administrator shall review each such Application for Payment and may make such exceptions as Consultant and Contract Administrator reasonably deem necessary or appropriate under the circumstances then existing. In no event, shall the County be

required to make payment for items of Contractor's Application for Payment to which the Consultant or Contract Administrator reasonably take exception.

11.5 Contractor shall remain solely liable for the Work and for any unpaid laborers, material suppliers or Subcontractors in the event it is later discovered that any Work is deficient or that any laborers, material suppliers or Subcontractors did not receive payments.

11.6 Within thirty (30) days after Final Completion, Contractor shall submit a final Application for Payment, which shall set forth all amounts due and remaining unpaid to Contractor. Upon approval of the final Application for Payment, Contract Administrator will issue a Final Certificate of Payment in the form attached hereto as Form 3. Contractor shall deliver to Contract Administrator the Form of Final Receipt in the form as attached hereto as Form 4.

ARTICLE 12 - DISCOUNTS, REBATES, REFUNDS AND TAXES

12.1 All cash discounts obtained on payments made by Contractor shall accrue to the County unless Contractor actually advanced its own funds, prior to receipt of funds from County, to make the payment giving rise to the discount. When Contractor becomes aware that a cash discount may be available to County, Contractor shall, prior to advancing its own funds, notify Consultant and Contract Administrator of such opportunity so County may, at its option, make the required payment to achieve the discount for County.

12.2 All trade discounts, rebates and refunds, including those pertaining to insurance, and all returns from sale of surplus materials and equipment shall accrue to County, and Contractor shall make provisions so that they may be obtained.

12.3 Contractor shall pay all applicable sales, consumer, use and other taxes required by law. Contractor is responsible for reviewing the pertinent state statutes involving state taxes and complying with all requirements.

ARTICLE 13 - SUBCONTRACTS AND PURCHASE ORDERS

13.1 Unless waived in writing by Contract Administrator, Contractor shall obtain competitive pricing through competitive, sealed bidding for One Hundred Percent (100%) of Direct Construction Cost and those biddable elements of the General Conditions for the Work required under this Agreement pursuant to the requirements specified on Exhibit A.

13.2 Contractor's subcontract agreement shall provide that: Subcontractor shall perform its portion of the Work in accordance with all applicable provisions of this Agreement and the Contract Documents; Subcontractor is bound to Contractor to the same extent Contractor is bound to County; and Subcontractor is subject to the terms and conditions of the Agreement, i.e., a "flow-down" provision. Further, the subcontractor agreement shall provide that in the event this Agreement is terminated for any reason, the Subcontractor shall, at County's option, perform its subcontract for County, or for another contractor designated by County, without any

additional or increased cost, provided Subcontractor is paid in accordance with its subcontract. Contractor shall sign and cause each Subcontractor to sign an Assignment of Rights under its subcontract.

13.3 Nothing contained herein shall impose on County an obligation to assume any subcontract or make payment to any Subcontractor, vendor, or supplier to perform pursuant to this section. Further, nothing contained herein, shall create any contractual relationship between County and any Subcontractor, vendor, or supplier.

13.4 All subcontracts shall, so far as practicable, contain unit prices for use in determining the cost of any required changes in the work.

ARTICLE 14 - INSURANCE

14.1 The specific insurance coverage requirements for this project are identified in the Insurance Requirements Form 12 that is a part of the Contract Documents. For purposes of this article, the term "County" shall include Broward County and its members, officials, officers, and employees.

14.2 Contractor shall maintain, at its sole expense and at all times during the term of this Agreement (unless a different time period is otherwise stated herein), at least the minimum limits of insurance coverage designated in the Insurance Form 12 and Contract Documents (inclusive of any amount provided by an umbrella or excess policy) in accordance with the terms and conditions stated in this article. All required insurance shall apply on a primary basis, and shall not require contribution from, any other insurance or self-insurance maintained by County. Any insurance, or self-insurance, maintained by County shall be in excess of, and shall not contribute with, the insurance provided by Contractor.

14.3 Insurers providing the insurance required by this Agreement must either be: (1) authorized by a current certificate of authority issued by the State of Florida to transact insurance in the State of Florida, or (2) except with respect to coverage for the liability imposed by the Florida Workers' Compensation Act, an eligible surplus lines insurer under Florida law. In addition, each such insurer shall have and maintain throughout the period for which coverage is required, a minimum A. M. Best Company Rating of "A-" and a minimum Financial Size Category of "VII."

14.4 Within fifteen (15) days after the full execution of this Agreement or notification of award, whichever is earlier, Contractor shall provide to County satisfactory evidence of the insurance required in this Agreement with the exception of property, builder's risk or installation floater coverage. Upon issuance of the Notice to Proceed for Preliminary Activities, Contractor shall furnish property, builder's risk and installation floater coverage. With respect to the Workers' Compensation/Employer's Liability Insurance, Professional Liability and Business Automobile Liability Insurance, an appropriate Certificate of Insurance identifying the project and signed by an authorized representative of the insurer shall be satisfactory evidence of insurance. With

respect to the Commercial General Liability, an appropriate Certificate of Insurance identifying the project, signed by an authorized representative of the insurer, and copies of the actual additional insured endorsements as issued on the policy(ies) shall be satisfactory evidence of such insurance.

14.5 Coverage is not to cease and is to remain in force until County determines all performance required of Contractor is completed. If any of the insurance coverage will expire prior to the completion of the Services, proof of insurance renewal shall be provided to County prior to the policy's expiration.

14.6 Contractor shall provide County thirty (30) days' advance notice of any cancellation of the policy except in cases of cancellation for non-payment for which County shall be given ten (10) days' advance notice.

14.7 Contractor shall provide, within thirty (30) days after receipt of a written request from County, a copy of the policies providing the coverage required by this Agreement. Contractor may redact provisions of the policies that are not relevant to the insurance required by this Agreement.

14.8 County and Contractor, each for itself and on behalf of its insurers, to the fullest extent permitted by law without voiding the insurance required hereunder, waive all rights against the other party and any of the other party's contractors, subcontractors, agents and employees for damages or loss to the extent covered and paid for by any insurance maintained by the other Party.

14.9 If Contractor uses a Subcontractor, Contractor shall require each Subcontractor to endorse County as "Additional Insured" on the Subcontractor's Commercial General Liability policy.

ARTICLE 15 – INDEMNIFICATION

15.1 Contractor shall indemnify and hold harmless County, its past, present, 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 intentional misconduct of Contractor and persons employed or utilized by Contractor in the performance of this Agreement. Except as specifically provided herein, this Agreement does not require Contractor to indemnify County, its employees, officers, directors, or agents from any liability, damage, loss, claim, action, or proceeding. These indemnifications shall survive the term of this Agreement. In the event that any action or proceeding is brought against County by reason of any such claim or demand, Contractor shall, upon written notice from County, resist and defend such action or proceeding by counsel satisfactory to County.

15.2 The indemnification provided above shall obligate Contractor to defend at its own expense to and through appellate, supplemental or bankruptcy proceeding, or to provide for such defense, at County's option, any and all claims of liability and all suits and actions of every name and description covered by Section 15.1 above that may be brought against County whether performed by Contractor, or persons employed or utilized by Contractor.

ARTICLE 16 - PERFORMANCE AND PAYMENT BOND AND QUALIFICATIONS OF SURETY

16.1 With the issuance of the Notice to Proceed for Preliminary Activities, Contractor shall furnish a Performance Bond and a Payment Bond containing all the provisions of the Performance Bond and Payment Bond attached hereto as Forms 5 and 6. Each Bond shall be maintained in the amount of one hundred percent (100%) of the GMP guaranteeing to County the completion and performance of the Work covered in such Agreement as well as full payment of all suppliers, material providers, laborers, or Subcontractors employed pursuant to this project. Each Bond shall be with a surety company which is qualified pursuant to Section 16.3. Each Bond shall continue in effect for one year after Final Completion and acceptance of the Work with liability equal to one hundred percent (100%) of the GMP, or an additional bond shall be conditioned that Contractor will, upon notification by County, correct any defective or faulty work or materials which appear within one year after Final Completion.

Pursuant to the requirements of Section 255.05, Florida Statutes, Contractor shall ensure that the bond(s) referenced above shall be recorded in the public records of Broward County and provide County with evidence of such recording.

16.2 Alternate Form of Security: In lieu of a Performance Bond and a Payment Bond, Contractor may furnish alternate forms of security which may be in the form of cash, money order, certified check, cashier's check or unconditional letter of credit in Form 00735 attached hereto as Form 8. Such alternate forms of security shall be subject to the approval of County and for same purpose and shall be subject to the same conditions as those applicable above and shall be held by County for one year after Final Completion and acceptance of the Work by County.

16.3 Qualifications of Surety:

16.3.1 Each bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida as surety, having a resident agent in the State of Florida, and having been in business with a record of successful continuous operation for at least five years.

16.3.2 The surety company shall hold a current certificate of authority as acceptable surety on federal bonds in accordance with United States Department of Treasury Circular 570, Current Revisions. If the amount of the Bond exceeds the underwriting limitation set forth in the circular, in order to qualify, the net retention of the surety company shall not exceed the underwriting limitation in the circular, and the excess risks must be protected by coinsurance, reinsurance, or other methods in accordance with Treasury

Circular 297, revised July 1, 1997 (31 C.F.R. Section 223.10, Section 223.111). Further, the surety company shall provide County with evidence satisfactory to County that such excess risk has been protected in an acceptable manner.

16.3.3 The surety company shall hold a current Certificate of Authority with the Florida Office of Insurance Regulation.

16.3.4 The surety company shall have at least the following minimum ratings:

Amount of Bond	Policy Holder's Ratings	Financial Size Category
500,001 to 1,000,000	A,A-	Class I
1,000,001 to 2,000,000	A,A-	Class II
2,000,001 to 5,000,000	A	Class III
5,000,001 to 10,000,000	A	Class IV
10,000,001 to 25,000,000	A	Class V
25,000,001 to 50,000,000	A	Class VI
50,000,001 or more	A	Class VII

ARTICLE 17 - INDEPENDENT CONTRACTOR

In performing its obligations hereunder, Contractor shall be deemed an independent contractor and not an agent or employee of the County. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under this Agreement, unless the Contract Documents give other specific instructions concerning these matters.

ARTICLE 18 - PROJECT RECORDS AND RIGHT TO AUDIT

18.1 Contractor shall preserve all Records (as defined herein) pertinent to this Agreement for the required retention period specified by Florida law or for a minimum period of three (3) years after Final Completion, whichever is longer. If any audit has been initiated and audit findings have not been resolved at the end of the retention period or three (3) years, whichever is longer, the records shall be retained until resolution of the audit findings.

18.2 Records for all contracts, specifically including, but not limited to, lump sum contracts (i.e., fixed-price or stipulated sum contracts), unit price, cost-plus, or time and materials contracts, with or without guaranteed maximum (or not-to-exceed) amounts shall, upon reasonable notice, be open to inspection and subject to audit, scanning, or reproduction during normal business working hours. Such audits may be performed by any County representative or any outside representative engaged by County for the purpose of examining such records. County, or its designee, may conduct such audits or inspections throughout the term of this contract and for a period of three years after Final Completion, or longer if required by law. County's representatives may (without limitation) conduct verifications such as counting

employees at the Construction Site, witnessing the distribution of payroll, verifying information and amounts through interviews and written confirmations with Contractor employees, field and agency labor, Subcontractors, and vendors.

Contractor's "Records" as referred to herein shall include any and all information, materials and data of every kind and character (hard copy, as well as computer readable data if it can be made available), including without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in County's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract Document. Such records shall include written policies and procedures; time sheets; payroll registers; payroll records; cancelled payroll checks; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, negotiation notes, etc.); original bid estimates; estimating work sheets; correspondence; change order files (including documentation covering negotiated settlements); backcharge logs and supporting documentation; invoices and related payment documentation; general ledger, information detailing cash and trade discounts earned, insurance rebates and dividends; and any other Contractor records which may have a bearing on matters of interest to the County in connection with the Contractor's dealings with the County to the extent necessary to adequately permit evaluation and verification of any or all of the following:

- a) Compliance with Contract Documents
- b) Compliance with County's code of ethics
- c) Compliance with Agreement provisions regarding the pricing of change orders
- d) Accuracy of Contractor representations regarding the pricing of invoices
- e) Accuracy of Contractor representations related to claims submitted by the Contractor including Subcontractors, or any of its other payees.

County's authorized representative(s) shall have reasonable access to the Contractor's facilities, shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this Agreement. County, or its designees, shall have the right to audit, review, examine, inspect, analyze, and make copies of all written, electronic or other form of Records, as described herein, in its original or written form, at a location within Broward County, during the term of the Agreement or its required retention period. Contractor agrees to allow the County, or its designees, access to all of its Records, facilities and current or former employees deemed necessary by County. County reserves the right to conduct such audit or review at Contractor's place of business, if necessary, with 72 hours advance notice. Contractor agrees to provide adequate and appropriate work space.

In addition to the normal documentation Contractor typically furnishes to the County, in order to facilitate efficient use of County resources when reviewing or auditing Contractor's billings and related reimbursable cost records, Contractor agrees to furnish (upon request) the following types of information in the specified computer readable file format(s):

Type of Record	File format
Monthly Job Cost Detail	.pdf and Excel
Detailed Job Cost History To Date	.pdf and Excel
Monthly Labor Distribution detail (if not already separately detailed in the Job Cost Detail)	.pdf and Excel
Total Job to date Labor Distribution detail (if not already included in the detailed Job Cost History to date)	.pdf and Excel
Employee Timesheets documenting time worked by all individuals who charge reimbursable time to the project	.pdf
Daily Foreman Reports listing names and hours and tasks of personnel who worked on the project	.pdf
Daily Superintendent Reports	.pdf
Detailed Subcontract Status Reports (showing original subcontract value, approved subcontract change orders, Subcontractor invoices, payment to Subcontractors, etc.	.pdf and Excel
Copies of Executed Subcontracts with all Subcontractors	.pdf
Copies of all executed Change Orders issued to Subcontractors	.pdf
Copies of all documentation supporting all reimbursable job costs (Subcontractor payment applications, vendor invoices, internal cost charges, etc.)	.pdf

18.3 Contractor shall require all payees (examples of payees include subcontractors, material suppliers, insurance carriers, etc.) to comply with the provisions of this article by including the requirements hereof in a written agreement between Contractor and payee. Contractor will ensure that all payees (including those entering into lump sum contracts) have the same right to audit provisions contained in this Agreement.

18.4 Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for County's disallowance and recovery of any payment reliant upon such entry.

18.5 If an audit inspection or examination in accordance with this article discloses overpricing or overcharges to County (of any nature) by the Contractor or the Contractor's Subcontractors in excess of five percent (5%) of the total contract billings reviewed, in addition to making adjustments for the overcharges, the reasonable actual cost of the County's audit shall be reimbursed to the County by the Contractor. Any adjustments or payments which must be made as a result of any such audit or inspection of the Contractor's invoices or records shall be made within a reasonable amount of time (not to exceed 30 days) from presentation of County's findings to Contractor.

ARTICLE 19 - SURVEY

As required by the technical specifications (or, in absence of technical specification requirements prior to submission of the final Application for Payment), Contractor shall furnish final surveys in electronic file, AUTOCAD (latest version) format utilizing CAD Standards as designated by Contract Administrator, in addition to one (1) complete set in Adobe PDF format and two (2) sets of hard copy, showing the exact locations of all structures and underground site utilities installed by Contractor, including all water, sewer, gas, fuel, telephone, security and electric lines and main, and locations of all easements for such utilities then existing. Such surveys shall be prepared, signed, and sealed by a licensed Florida surveyor who shall certify that the Work is installed and erected entirely upon the Project Site and within the building restriction lines, if any, and does not overhang or encroach upon any easement or right-of-way of others.

ARTICLE 20 - OCCUPATIONAL HEALTH AND SAFETY

20.1 In compliance with Chapter 442, Florida Statutes, as amended, any toxic substance listed in Section 38F-41.03, Florida Administrative Code, delivered as a result of this Project must be accompanied by a Material Safety Data Sheet (MSDS) which may be obtained from the manufacturer. The MSDS must include the following information:

20.1.1 The chemical name and the common name of the toxic substance.

20.1.2 The hazards or other risks in the use of the toxic substance, including: (1) the potential for fire, explosion, corrosion, and reaction; (2) the known acute and chronic health effects of risks from exposure, including the medical conditions which are generally recognized as being aggravated by exposure to the toxic substance; and (3) the primary routes of entry and symptoms of overexposure.

20.1.3 The proper precautions, handling practices, necessary personal protective equipment, and other safety precautions in the use of or exposure to the toxic substances, including appropriate emergency treatment in case of overexposure.

20.1.4 The emergency procedure for spills, fire, disposal, and first aid.

20.1.5 A description in lay terms of the known specific potential health risks posed by the toxic substance intended to alert any person reading this information.

20.1.6 The year and month, if available, that the information was compiled and the name, address, and emergency telephone number of the manufacturer responsible for preparing the information.

20.2 Contractor agrees that it shall not knowingly transport to, use, generate, dispose of, or install at the Project site any Hazardous Substance (as defined in Section 20.5), except in

accordance with applicable Environmental Laws. Further, in performing the Work, Contractor shall not knowingly cause any release of hazardous substances into, or contamination of, the environment, including the soil, the atmosphere, any water course or ground water, except in accordance with applicable Environmental Laws.

20.3 In the event Contractor encounters on the Project site any Hazardous Substance, or what Contractor reasonably believes to be a Hazardous Substance, and which is being introduced to the Work, or exists on the Project Location, in violation of any applicable Environmental Laws, Contractor shall immediately stop Work in the area affected and report the condition to the Consultant and Contract Administrator in writing. The Work in the affected area shall not thereafter be resumed except by written authorization of the Consultant and Contract Administrator if in fact a Hazardous Substance has been encountered and has not been rendered harmless.

20.4 Contract Administrator, through Consultant, may direct Contractor by utilization of Owner's Allowance Account funds to remediate or render harmless the Hazardous Substance in accordance with any applicable permits then in existence, but Contractor shall not be required to remediate or render harmless the Hazardous Substance absent such direction or if Contractor cannot obtain the appropriate insurance. If Contractor is not so directed, Contractor shall not be required to resume Work in any area affected by the Hazardous Substance until such time as the Hazardous Substance has been remediated or rendered harmless.

20.5 For purposes of this Agreement, the term "Hazardous Substance" shall mean and include, but shall not be limited to, any element, constituent, chemical, substance, compound or mixture, which are defined in or included under or regulated by any local, state or federal law, rule, ordinance, by-law, or regulation pertaining to environmental regulation, contamination, clean-up or disclosure, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the Resource Conservation and Recovery Act (RCRA), the Toxic Substances Control Act (TSCA), the Clean Water Act (CWA), the Clean Air Act (CAA), and the Marine Protection Research and Sanctuaries Act (MPRSA), the Occupational Safety and Health Act (OSHA), the Superfund Amendments and Reauthorization Act of 1986 (SARA), or other state superlien or environmental clean-up or disclosure statutes including all state and local counterparts of such laws (all such laws, rules and regulations being referred to collectively herein as "Environmental Laws"). It is Contractor's responsibility to comply with this article based on the law in effect at the time its services are rendered and to comply with any amendments to those laws for all services rendered after the effective date of any such amendments.

20.6 Safety and Protection: Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Project. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to: (1) all employees on the Project site and other persons who may be affected thereby; (2) all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the Project site; and (3) other property at the Project site

or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

20.7 Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and utilities when prosecution of the Work may affect them. All damage, injury or loss to any property referred to in Sections 21.6(2) and 21.6(3) above, caused directly or indirectly, in whole or in part, by Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by Contractor. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work achieves Final Completion and acceptance by County.

20.8 Contractor shall designate a responsible member of its organization at the Work site whose duty shall be the prevention of accidents. This person shall be Contractor's Superintendent unless otherwise designated in writing by Contractor to County.

ARTICLE 21 - PERMITS, LICENSES AND IMPACT FEES

21.1 Pursuant to the Public Bid Disclosure Act, EACH LICENSE, PERMIT OR FEE A CONTRACTOR WILL HAVE TO PAY THE COUNTY BEFORE OR DURING CONSTRUCTION OR THE PERCENTAGE METHOD OR UNIT METHOD OF ALL LICENSES, PERMITS AND FEES REQUIRED BY THE COUNTY AND PAYABLE TO THE COUNTY BY VIRTUE OF THIS CONSTRUCTION AS PART OF THE CONTRACT ARE AS FOLLOWS: Occupational Licenses must be in effect as required by Florida Statutes Section 205.065, and must be submitted within fifteen (15) days of execution of this Agreement. Licenses, permits and fees which may be required by the State of Florida, State Agencies or by other local governmental entities are not included in the above.

21.2 Contractor shall secure and County will pay for the master building permit. Except as otherwise provided by the Contract Documents, all trade permits, sub-permits, and licenses required by federal, state or local laws, rules and regulations necessary for the prosecution of the Work undertaken by Contractor pursuant to this Agreement shall be secured and paid for by Contractor. It is Contractor's responsibility to have and maintain appropriate Certificate(s) of Competency, valid for the Work to be performed and valid for the jurisdiction in which the Work is to be performed for all persons working on the Project for whom a Certificate of Competency is required.

21.3 Impact fees levied by any municipality shall be paid by County.

21.4 Contractor shall notify the Contract Administrator in writing of all conflicts between the Contract Documents and any laws, ordinances, rules, regulations and restrictions that come to the attention of Contractor. If Contractor performs any of the Work knowing it to be contrary to any such laws, ordinances, rules, regulations or restrictions and fails to give the Contract

Administrator written notice thereof prior to performance thereof, Contractor shall bear all costs, liabilities and expenses arising therefrom.

21.5 Contractor shall be responsible for obtaining all necessary licenses, building and other permits, and similar authorizations from governmental authorities required or necessary to perform its obligations hereunder, and shall give all notices required by, and otherwise comply with, all applicable laws, ordinances, rules, regulations and restrictions.

ARTICLE 22 - PERSONNEL

22.1 All personnel used or employed by Contractor in the performance of the Work shall be qualified by training and experience to perform their assigned tasks. At the request of the Contract Administrator or the Consultant, Contractor shall not use in the performance of the Work any personnel deemed by the Contract Administrator or the Consultant to be incompetent, careless, unqualified to perform the work assigned to that person him, or otherwise unsatisfactory to the County.

22.2 Contractor shall employ only such labor, and engage Subcontractors that employ only such labor, as will not delay or interfere with the speedy and lawful progress of the Project, and as will be acceptable to and work in harmony with all other workers employed on the Project site or on any other building, structure, or other improvement which Contractor or any other contractor may then be erecting or altering on behalf of the County. Contractor shall not employ any labor that will interfere with labor harmony at the Project site or with the introduction and storage of materials and the execution of Work by other contractors or by subcontractors.

22.3 Contractor shall furnish the Contract Administrator and Consultant on request résumés of Contractor's key personnel involved in the day-to-day Work on the Project.

22.4 Prevailing Wage Rate Ordinance: This Project is not federally funded. If the Agreement is in excess of \$250,000, the following sections shall apply:

22.4.1 The rate of wages and fringe benefit payments for all laborers, mechanics, and apprentices shall not be less than those payments for similar skills in classifications of work in a like construction industry as determined by the Secretary of Labor and as published in the Federal Register. The Prevailing Wage Determination applicable to the Work is attached hereto as Exhibit 3.

22.4.2 All mechanics, laborers, and apprentices, employed or working directly upon the site of the Work shall be paid in accordance with the above referenced wage rates. Contractor shall post notice of these provisions at the site of the Work in a prominent place where it can be easily seen by the workers.

22.4.3 If the Parties cannot agree on the proper classification of a particular class of laborers or mechanics or apprentices to be used, Contract Administrator shall submit the

question, together with its recommendation, to the County Administrator for final determination.

22.4.4 In the event it is found by Contract Administrator that any laborer, mechanic, or apprentice employed by Contractor or any Subcontractor directly on the site of the Work has been or is being paid at a rate of wages less than the rate of wages required by the Broward County Prevailing Wage Ordinance No. 83-72, Contract Administrator may (1) by written notice to Contractor terminate its right to proceed with the Work or such part of Work for which there has been a failure to pay said required wages, and (2) prosecute the Work or portion thereof to completion. Contractor and its sureties shall be liable to County for any excess costs occasioned to County thereby.

22.4.5 Sections 22.4.1 through 22.4.4 above shall apply to this Agreement to the extent that it is (1) a prime contract subject to the ordinance, or (2) a subcontract subject to the ordinance under such prime contract.

22.4.6 Contractor shall maintain payrolls and basic records relating thereto during the course of the Work and shall preserve such records for a period of three (3) years, or required retention period, whichever is longer, thereafter for all laborers, mechanics, and apprentices working at the site of the Work. Such records shall contain: the name and address of each such employee; its current classification; rate of pay (including rates of contributions for, or costs assumed to provide, fringe benefits); daily and weekly number of hours worked; deductions made; and actual wages paid.

22.4.7 Contractor shall submit with each requisition for payment a signed and sworn "Statement of Compliance" attesting to compliance with Broward County Ordinance No. 83-72 as set forth in Form 00922 attached hereto as Form 2.

22.4.8 Contract Administrator may withhold or cause to be withheld from Contractor so much of the payments requisitioned as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, watchpersons, and guards employed by Contractor or any Subcontractor on the Work, the full amount of wages required by the Agreement.

22.4.9 If Contractor or any Subcontractor fails to pay any laborer, mechanic, or apprentice employed or working on the site of the Work all or part of the wages required by the Agreement, Contract Administrator may, after written notice to Contractor, take such action as may be necessary to cause suspension of any further payments or advances until such violations have ceased.

ARTICLE 23 - CONTRACTOR'S REPRESENTATIONS AND WARRANTIES

23.1 Contractor warrants to County that all materials and equipment under this Agreement will be new unless otherwise specified and that all of the Work will be of good quality, free from

faults and defects, and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized by Contract Administrator and Consultant, may be considered defective.

23.2 Contractor shall collect and transmit to the County any and all manufacturer's warranties and manufacturer's guarantees specified in the Contract Documents. The obligation and liability of Contractor or its Surety is limited to the collection and proper transmittal of these warranties and guarantees to Contract Administrator.

23.3 Contractor further represents and warrants:

23.3.1 It is financially solvent, able to pay its debts as they mature, and is possessed of sufficient working capital to perform this Agreement; that it is able to furnish the materials, and services; that it is experienced in and competent to perform the Work contemplated by this Agreement; and it is qualified to do the Work herein and is authorized to do business in the State of Florida.

23.3.2 It holds a license, permit or other special license to perform the services included in this Agreement, as required by law, or employs or works under the general supervision of the holder of such license, permit or special license.

23.3.3 The Work shall be performed in a good and professional manner, free from defects in materials and execution, and that all materials shall be new and approved by or acceptable to the Consultant, except as otherwise expressly provided for in the Contract Documents.

23.3.4 Contractor is a general partnership duly formed, validly existing and in good standing under the laws of the State of Florida. Contractor has the legal authority to carry out the Work and services under the terms of and in accordance with this Agreement. The execution, delivery, and performance of this Agreement by Contractor are within Contractor's powers and have been duly authorized by all necessary action of Contractor. This Agreement is the legal, valid, and binding obligation of Contractor, enforceable against Contractor in accordance with its terms and all applicable requirements. Each individual executing this Agreement on behalf of Contractor has been duly authorized by all necessary and appropriate action to do so on behalf of Contractor and does so with full legal authority.

23.3.5 That all statements and representations made in Contractor's proposal, bid, or other supporting documents submitted to County in connection with the solicitation, negotiation, or award of this Contract, including during the procurement or evaluation process, were true and correct when made and are true and correct as of the date Contractor executes this Contract, unless otherwise expressly disclosed in writing by Contractor.

23.3.6 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 Contractor, threatened against or affecting Contractor, the outcome of which may (a) affect the validity or enforceability of this Contract, (b) materially and adversely affect the authority or ability of Contractor to perform its obligations under this Contract, or (c) have a material and adverse effect on the consolidated financial condition or results of operations of Contractor or on the ability of Contractor to conduct its business as presently conducted or as proposed or contemplated to be conducted.

23.3.7 That it possesses the knowledge, skill, experience, and financial capability required to perform and provide all Work and services and that each person and entity that will provide Services 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 such Services. Contractor represents and warrants that the Services and Work shall be performed in a skillful and respectful manner, and that the quality of all such services and Work shall equal or exceed prevailing industry standards for the provision of such services and Work.

23.4 Contractor's express warranties herein shall be in addition to, and not in lieu of, any other warranties or remedies the County may have under this Agreement and law.

23.5 Breach of Representations. In entering into this Contract, Contractor acknowledges that County is materially relying on the representations, warranties, and certifications of Contractor 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 Contract without any further liability to Contractor, to deduct from any amounts due Contractor under this Contract the full amount of any value paid in violation of a representation or warranty, and to recover all sums paid to Contractor under this Contract. Furthermore, a false representation may result in debarment from County's procurement activities.

ARTICLE 24 - DEFECTIVE WORK

24.1 Consultant and Contract Administrator shall have the authority to reject or disapprove Work which is found to be defective. If required by Consultant or Contract Administrator, Contractor shall promptly either correct all defective Work or remove such defective Work and replace it with non-defective Work. Contractor shall be responsible for all direct, indirect and consequential costs of such removal or corrections including cost of testing laboratories and personnel.

24.2 Should Contractor fail or refuse to remove or correct any defective Work or to make any necessary repairs in accordance with the requirements of the Contract Documents within the time indicated in writing by Consultant or Contract Administrator, County shall have the authority to cause the defective Work to be removed or corrected, or make such repairs as may be

necessary, at Contractor's expense. Any expense incurred by County in making such removals, corrections or repairs, shall be paid for out of any monies due or which may become due to Contractor and deducted from the GMP, or may be charged against the Performance Bond. In the event of failure of Contractor to make all necessary repairs promptly and fully, County may declare a default.

24.3 If, within one (1) year after the date of Final Completion or such longer period of time as may be prescribed by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, Contractor, after receipt of written notice from County, shall promptly correct the defect(s) or non-conformance(s) within the time specified by County without cost to County. Nothing contained herein shall be construed to establish a period of limitation with respect to any other obligation which Contractor might have under the Contract Documents and any claim regarding latent defects.

24.4 Failure by County to reject any defect or non-conformance in the Work shall not in any way prevent later rejection when such defect or non-conformance is discovered, or obligate County to accept or pay for the Work.

24.5 Contractor shall (i) replace any part of the Work that fails to conform with the requirements of this Agreement that appear during progress of the Work on the Project; (ii) remedy any defects in the Work due to faulty materials or workmanship which appear within a period of one (1) year from Final Completion of the Work or portions thereof hereunder or within such longer period of time as may be set forth in the Contract Documents or as may be required by law; and (iii) replace, repair or restore any parts of the Project or furniture, fixtures, equipment or other items placed therein (whether by the County or any other party) that are injured or damaged by any such parts of the Work that do not conform to the requirements of this Agreement or are due to defects in the Work. This article shall not apply to corrective work attributable solely to the acts or omissions of any separate contractor or subcontractor of the County unless Contractor is acting in such capacity or capacities.

24.6 If the County and Contractor deem it inexpedient to require the correction of Work damaged or not performed in accordance with the Contract Documents, an equitable deduction from the GMP shall be made by agreement between Contractor and the County. Until such settlement, the County may withhold such sums as the County deems just and reasonable from moneys, if any, due Contractor. If no monies are held by the County, reimbursement shall be made to the County within thirty (30) days by Contractor.

ARTICLE 25 - COUNTY'S RIGHT TO TERMINATE CONTRACT

25.1 If Contractor fails to begin the Work within ten (10) days after the Project Initiation Date, or fails to perform the Work with sufficient workers and equipment or with sufficient materials to insure the prompt completion of the Work, or performs the Work unsuitably, or causes it to be rejected as defective and unsuitable, or discontinues the prosecution of the Work pursuant to

the accepted schedule, or fails to perform any material term set forth in the Contract Documents, or becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or makes an assignment for the benefit of creditors, or from any other cause whatsoever shall not carry on the Work in an acceptable manner, Contract Administrator may give notice in writing to Contractor and its Surety of such delay, neglect or default, specifying the same. If Contractor, within a period of ten (10) days after such notice, does not proceed in accordance therewith, then County may upon written certificate from Consultant of the fact of such delay, neglect or default and Contractor's failure to comply with such notice, terminate the services of Contractor, exclude Contractor from the Project site and take the prosecution of the Work out of the hands of Contractor, and appropriate or use any or all materials and equipment that are an integral part of the Work on the Project site as may be suitable and acceptable. In such case, Contractor shall not be entitled to receive any further payment until the Project is completed. In addition, County may enter into an agreement for the completion of the Project according to the terms and provisions of the Contract Documents, or use such other methods as in County's sole opinion shall be required for the completion of the Project according to the terms and provisions of the Contract Documents, or use such other methods as in County's sole opinion shall be required for the completion of the Project in an acceptable manner. All damages, costs and charges incurred by County, together with the costs of completing the Project, shall be deducted from any monies due or which may become due to Contractor. In case the damages and expenses so incurred by County shall exceed the unpaid balance, then Contractor shall be liable and shall pay to County the amount of said excess.

25.2 If, after Notice of Termination of Contractor's right to proceed, it is determined for any reason that Contractor was not in default, the rights and obligations of County and Contractor shall be the same as if the notice of termination had been issued pursuant to the Termination for Convenience clause as set forth below.

25.3 Termination for Convenience: This Agreement may be terminated for convenience in writing by County upon ten (10) days written notice to Contractor (delivered by certified mail, return receipt requested) of intent to terminate and the date on which such termination becomes effective. In such case, Contractor shall be paid for all Work executed and expenses incurred prior to termination in addition to termination settlement costs reasonably incurred by Contractor relating to commitments which had become firm prior to the termination. Payment shall include reasonable profit for Work or services performed. No payment shall be made for profit for Work or services that have not been performed. Contractor acknowledges and agrees that it has received good, valuable and sufficient consideration from County, the receipt and adequacy of which is hereby acknowledged by Contractor, for County's right to terminate this Agreement for convenience.

25.4 Upon receipt of Notice of Termination, Contractor shall promptly discontinue all affected Work unless the Notice of Termination directs otherwise and deliver or otherwise make available to County all data, drawings, specifications, reports, estimates, summaries and such other information as may have been required by the Contract Documents whether completed or in process.

25.5 This Agreement may also be terminated by the Board:

25.5.1 Upon the disqualification of Contractor as a CBE by the Director of OESBD if Contractor's status as a CBE was a factor in the award of this Agreement and such status was misrepresented by Contractor;

25.5.2 Upon the disqualification of Contractor by the Director of OESBD due to fraud, misrepresentation, or material misstatement by Contractor in the course of obtaining this Agreement or attempting to meeting the CBE contractual obligations;

25.5.3 Upon the disqualification of one or more of Contractor's CBE participants by the Director of OESBD if any such participant's status as a CBE firm was a factor in the award of this Agreement and such status was misrepresented by Contractor or such participant;

25.5.4 Upon the disqualification of one or more of Contractor's CBE participants by the Director of OESBD if such CBE participant attempted to meet its CBE contractual obligations through fraud, misrepresentation, or material misstatement;

25.5.5 If Contractor is determined by the Director of OESBD to have been knowingly involved in any fraud, misrepresentation, or material misstatement concerning the CBE status of its disqualified CBE participant.

25.6 Notice of Termination shall be provided in accordance with the "NOTICES" section of this Agreement except that notice of termination by the County Administrator, which the County Administrator deems necessary to protect the public health, safety, or welfare may be verbal notice that shall be promptly confirmed in writing in accordance with the "NOTICES" section of this Agreement.

25.7 In the event this Agreement is terminated for any reason, any amounts due Contractor shall be withheld by County until all documents are provided to County as provided herein.

ARTICLE 26 - MISCELLANEOUS

26.1 Public Entity Crime Act: Contractor represents that it is familiar with the requirements and prohibitions of the Public Entity Crime Act, Section 287.133, Florida Statutes, and represents that its entry into this Agreement will not violate that Act.

In addition to the foregoing, Contractor 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 Contractor has been placed on the convicted vendor list. Notwithstanding any provision in this Agreement to the contrary, if any

representation stated in this paragraph is false, County shall have the right to immediately terminate this Agreement and recover all sums paid to Contractor under this Agreement.

26.2 Ownership of Contract Documents: Drawings, specifications, designs, models, photographs, reports, surveys, and other data submitted by Contractor provided in connection with this Agreement are and shall remain the property of the County whether the Project for which they are made is completed or not. All finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by Contractor shall become the property of County and shall be delivered by Contractor to County within seven (7) days of termination of the Agreement by either Party. Any compensation due to Contractor shall be withheld until all documents are received as provided herein.

26.3 Contractor's Representative: Contractor shall advise the County, in writing, of any limitations on the authority of Contractor's representative; otherwise, Contractor's representative shall be considered to have full authority to execute any and all instruments requiring Contractor's signature and to act on behalf of Contractor with respect to all matters arising out of this Agreement.

26.4 Resolution of Disputes: Questions, claims, difficulties and disputes of whatever nature which may arise relative to the technical interpretation of the Contract Documents and fulfillment of this Agreement as to the character, quality, amount and value of any work done and materials furnished, or proposed to be done or furnished under or, by reason of, the Contract Documents which cannot be resolved by mutual agreement of Contract Administrator and Contractor shall be submitted to Consultant for resolution. When either Party has determined that a disputed question, claim, difficulty or dispute is at an impasse that Party shall notify the other Party in writing and submit the question, claim, difficulty or dispute to the Consultant for resolution. The Parties may agree to a proposed resolution at any time without the involvement and determination of the Consultant.

26.4.1 Consultant shall notify Contract Administrator and Contractor in writing of Consultant's decision within twenty-one (21) days from the date of the submission of the question, claim, difficulty or dispute, unless Consultant requires additional time to gather information or allow the Parties to provide additional information. Consultant's estimates and decisions upon all questions, claims, difficulties and disputes shall be final and binding.

26.4.2 All non-technical administrative disputes (such as billing and payment and CBE reporting issues) shall be determined by Contract Administrator.

26.4.3 During the pendency of any dispute and after a determination thereof, Contractor, Consultant, and Contract Administrator shall act in good faith to mitigate any potential damages including utilization of construction schedule changes and alternate means of construction. During the pendency of any dispute arising under this Agreement, other than termination herein, Contractor shall proceed diligently with performance of

this Agreement and the County shall continue to make payments for undisputed amounts in accordance with the Contract Documents.

26.4.4 In the event the determination of a dispute by the Consultant under this article is unacceptable to any of the Parties hereto, the Party objecting to the determination must notify the other Party, the County Administrator or designee, in writing within ten (10) days of receipt of the written determination. The notice must state the basis of the objection and the objecting Party's proposed resolution. If notice is given by Contractor, it must be accompanied by a statement that any Contract Price adjustment claimed is the entire adjustment to which Contractor has reason to believe it is entitled to as a result of the question, claim, difficulty or dispute. Resolution of such dispute shall be made by the County Administrator or designee. The County Administrator's decision shall be final and binding on the Parties subject to judicial review.

26.4.5 For any disputes which remain unresolved, within sixty (60) days after Final Completion of the Work, the Parties shall participate in mediation to address all unresolved disputes. A mediator shall be mutually agreed upon by the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies provided under applicable law. If a Party objecting to a determination, fails to comply in strict accordance with the requirements of this article, said Party specifically waives all of its rights provided hereunder, including its rights and remedies under applicable law.

26.5 Notices: All notices to be given hereunder shall be in writing and may be given by depositing the same in the United States Mail addressed to the Party to be notified, postage prepaid, return receipt requested or by sent by commercial express carrier with acknowledgment of delivery, or by hand delivery, with a simultaneous copy sent via electronic mail, addressed to the Party for whom it is intended at the last place specified. All notices to be given to the Parties hereto shall be sent to or made to the addresses as shown in the Summary of Terms and Conditions. The place for giving notice shall remain the same as set forth herein unless changed in the manner provided in this section.

26.6 EEO Compliance:

26.6.1 No Party to this Agreement 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. Contractor shall include the foregoing or similar language in its contracts with any Subcontractors, except that any project assisted by the U.S. Department of Transportation funds shall comply with the non-discrimination requirements in 49 C.F.R. Parts 23 and 26. Failure by Contractor to carry out any of the requirements of this section shall constitute a material breach of this Agreement, which shall permit the County to terminate this Agreement or to exercise any other remedy provided under this Agreement, or under applicable law, with all of such remedies being cumulative.

26.6.2 Contractor shall affirmatively comply with all applicable provisions of the Americans with Disabilities Act (ADA) in the course of providing any services funded by County, including Titles I and II of the ADA (regarding nondiscrimination on the basis of disability) and all applicable regulations, guidelines, and standards. In addition, Contractor shall take affirmative steps to ensure nondiscrimination in employment against disabled persons.

26.6.3 By execution of this Agreement, Contractor represents that it has not been placed on the discriminatory vendor list as provided in Section 287.134, Florida Statutes. County hereby materially relies on such representation in entering into this Agreement. An untrue representation of the foregoing shall entitle County to terminate this Agreement and recover from Contractor all monies paid by County pursuant to this Agreement, and may result in debarment from County's competitive procurement activities.

26.7 CBE Compliance:

26.7.1 Contractor shall comply with all applicable requirements of the County's CBE Program as established by Broward County Business Opportunity Act of 2012, Section 1-81, Broward County Code of Ordinances (the "Act"), in the award and administration of this Agreement.

26.7.2 Contractor acknowledges that the Board, acting by and through the OESBD, may make minor administrative modifications to the CBE Program which shall become applicable to this Agreement if the administrative modifications are not unreasonable. Written notice of any such modification shall be provided to Contractor and shall include a deadline for Contractor to notify County if Contractor concludes that the modification exceeds the authority of this section of this Agreement. Failure of Contractor to timely notify County of its conclusion that the modification exceeds such authority shall be deemed acceptance of the modification by Contractor.

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

26.7.3 Contractor agrees to meet the CBE participation goal set forth in the Summary of Terms and Conditions by utilizing CBE firms for the Work. Contractor stipulates that each CBE firm utilized to meet the CBE participation goal must be certified by the OESBD. Contractor shall inform County immediately when a CBE firm is not able to perform or if

Contractor believes the CBE firm should be replaced for any other reason, so that the OESBD may review and verify the good faith efforts of Contractor to substitute the CBE firm with another CBE firm. Whenever a CBE firm is terminated for any reason, including cause, Contractor shall provide written notice to the OESBD and shall substitute another CBE firm in order to maintain the level of CBE participation required herein, unless otherwise provided herein or agreed in writing by the Parties. Such substitution shall not be required in the event the termination results from County changing the Scope of Work hereunder and there is no available CBE to perform the new Scope of Work, in which event Contractor shall notify County and the OESBD may adjust the CBE participation goal by written notice to Contractor. Contractor Party may not terminate for convenience a CBE firm without County's prior written consent, which consent shall not be unreasonably withheld.

26.7.4 The CBE goal established for this Agreement applies to the total Project. Project compliance with the CBE Goal stated above shall be established by applying the CBE goal percentages to the sum of the following Contract Price Elements of the Guaranteed Maximum Price that will be established for the Project:

- a) Reconciled Direct Construction Cost
- b) Reconciled General Conditions – Biddable Elements

26.7.5 In performing services for this Project, the Parties hereby incorporate Contractor's Statement of CBE Assurance, Exhibit 5. After the bidding process set forth in Exhibit A, Contractor shall complete the Letter(s) of Intent, Exhibit 6, indicating approved CBE Participation.

Prior to the issuance of a Notice to Proceed for construction by Contract Administrator, Contractor shall enter into written subcontracts with the CBE firms selected to fulfill the CBE participation goal for this Agreement and shall, within ten (10) days, provide copies of the subcontracts to the Contract Administrator and the OESBD.

26.7.6 Contractor shall provide written monthly reports to the Contract Administrator attesting to Contractor's compliance with the CBE participation goals stated in this article. In addition, Contractor shall allow County to engage in on-site reviews to monitor Contractor's progress in achieving and maintaining its contractual and CBE Program obligations. Such review and monitoring shall be by the Contract Administrator in conjunction with the OESBD, unless otherwise determined by the County Administrator. County shall have access, without limitation, to Contractor's books and records, including payroll records, tax returns and records, and books of account, on three (3) business days' notice.

26.7.7 In the event of Contractor's noncompliance with its CBE participation goal (including, without limitation, the unexcused reduction of the CBE firm's participation), the affected CBE firm shall have the right to exercise any remedies as may be available as between the CBE firm and the Contractor.

26.7.8 Nonpayment of a CBE Subcontractor or supplier as required herein shall be a material breach of this Agreement and Contract Administrator may, at its option, increase allowable retainage or withhold progress payments unless and until Contractor demonstrates timely payments of sums due to such Subcontractor or supplier. The presence of a "pay when paid" provision in a Contractor's contract with a CBE firm shall not preclude County or its representatives from inquiring into allegations of nonpayment. The foregoing remedies under this subsection shall not be employed when Contractor demonstrates that failure to pay results from a bona fide dispute with its CBE Subcontractor or supplier.

26.7.9 The Parties stipulate that if Contractor fails to meet the CBE participation goal, the damages to County arising from such failure are not readily ascertainable at the time of contracting. If Contractor fails to meet the CBE participation goal and County determines, in the sole discretion of the OESBD Program Director, that Contractor failed to make Good Faith Efforts (as defined in Section 1-81, Broward County Code of Ordinances) to meet the CBE participation goal, Contractor shall pay County liquidated damages in an amount equal to fifty percent (50%) of the actual dollar amount by which Contractor failed to achieve the CBE participation goal, 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 Contractor's breach of the CBE participation goal, but shall not affect the availability of administrative remedies under Section 1-81. Any failure to meet the CBE participation goal attributable solely to force majeure, changes to the scope of work by County, or inability to substitute a CBE Subcontractor where the OESBD Program Director has determined that such inability is due to no fault of Contractor, shall not be deemed a failure by Contractor to meet the CBE participation goal.

26.8 Workforce Investment Program: Excluding Preconstruction Services or any other services that are not included in the Direct Construction Cost, the remainder of this Agreement constitutes a "Covered Contract" under the Broward Workforce Investment Program, Broward County Administrative Code Section 19.211 ("Workforce Investment Program"), as may be amended. For the Covered Contract portion of this Agreement, Contractor affirms it is aware of the requirements of the Workforce Investment Program and agrees to use good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal as set forth therein, including by (a) publicly advertising any vacancies that are the direct result of this Agreement (whether those vacancies are with Contractor or its Subcontractors) exclusively with CareerSource Broward for at least five (5) business days and using good faith efforts to interview any qualified candidates referred under the Workforce Investment Program, and (b) using good faith efforts to hire Qualifying New Hires, as defined by the Workforce Investment Program, for at least fifty percent (50%) of the vacancies that are the direct result of the Covered Contract

portion of this Agreement. Until at least one year after the conclusion of this Agreement, Contractor shall maintain and make available to County upon request all records documenting Contractor's compliance with the requirements of the Workforce Investment Program and shall submit the required Workforce Investment Reports to the Contract Administrator annually by January 31 and within thirty (30) days after the conclusion of this Agreement. Failure to demonstrate good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal for the Covered Contract portion of this Agreement shall constitute a material breach of this Agreement.

26.9 Hurricane and Disaster Preparedness

26.9.1 Pre-Hurricane and Disaster Provisions: During such periods of time as are designated by the United States Weather Bureau as being a hurricane warning or alert, Contractor, except as specified below, shall take all reasonable precautions necessary to secure the Project site in response to all threatened storm events, regardless of whether the County or Consultant has given notice of same. Compliance with any specific hurricane warning or alert precautions will not constitute additional work. Suspension of the work caused by a threatened or actual storm event, regardless of whether the County has directed such suspension, will entitle Contractor to additional Contract Time as non-compensable, excusable delay, and shall not give rise to a claim for compensable delay. At the discretion of Contract Administrator, Contractor shall be reimbursed actual documented expenses for materials and labor incurred due to hurricane preparations that are outside of the normal daily General Conditions costs.

26.9.2 Post-Hurricane and Disaster Provisions: The County may issue, through its Director of Public Works or Contract Administrator, Construction Change Directives or other enabling documents to mobilize Contractor and its Subcontractors in the aftermath of a hurricane, natural disaster or other emergency for the purposes of damage assessment and providing temporary and permanent repairs to County facilities (or other facilities as may be assigned by County). Contractor shall mobilize upon mutual agreement of specific terms for this work.

26.9.3 In the immediate aftermath of a storm, natural disaster or other emergency, Contractor and Contract Administrator shall establish communications to determine an assessment and recovery plan and to establish a preliminary list of emergency recovery activities that Contractor shall undertake. Contractor and Contract Administrator shall utilize that preliminary list of emergency recovery activities to develop one or more Construction Change Directives for execution by Contract Administrator and Contractor. Upon mutual agreement, Contract Administrator shall issue the executed Construction Change Directives upon receipt of which, Contractor shall immediately undertake the emergency actions described therein.

26.9.4 Contractor shall mobilize personnel, Subcontractors and equipment as necessary to complete the tasks required by a Construction Change Directive for hurricane or other disaster recovery.

County shall issue Purchase Orders and other procurement documents as necessary to support of Construction Change Directives as issued by the Director of Public Works or Contract Administrator.

Contractor shall maintain detailed records of the Work and provide full information required for evaluation and to substantiate costs and time adjustments as may be necessitated by these required changes in the Work.

Contractor shall coordinate invoicing and payment procedures for emergency recovery work with Contract Administrator to ensure expeditious payment and segregation of such payments from those applicable to the non-emergency Work required by this Agreement.

26.10 Third Party Beneficiaries: Neither Contractor nor County intend to directly or substantially benefit a third party by this Agreement. Therefore, the Parties agree that there are no third party beneficiaries to this Agreement and that no third party shall be entitled to assert a claim against either of them based upon this Agreement.

26.11 Conflicts: Neither Contractor nor its employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with Contractor's loyal and conscientious exercise of judgment related to its performance under this Agreement. Contractor agrees that none of its employees shall, during the term of this Agreement, serve as an adverse or hostile witness against County in any legal or administrative proceeding in which he or she is not a party, unless compelled by court process, nor shall such persons give sworn testimony or issue a report or writing, as an expression of his or her opinion, which is adverse or prejudicial to the interests of County in any such pending or threatened legal or administrative proceeding. The limitations of this section shall not preclude such persons from representing themselves in any action or in any administrative or legal proceeding. Contractor agrees to prohibit its Subcontractors, by written contract, from having any conflicts as within the meaning of this section.

26.12 Joint Preparation: Preparation of this Agreement has been a joint effort of County and Contractor and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the Parties than any other.

26.13 Drug Free Workplace: It is a requirement of County that it enter into contracts only with firms that certify the establishment of a drug-free workplace in accordance with Chapter 21.31(a) of the County Procurement Code. Execution of this Agreement by Contractor shall also serve as Contractor's required certification that it has a drug-free workplace in accordance with Chapter 21.31(a) of the County Procurement Code.

26.14 Assignment: Contractor shall not assign this Agreement or subcontract it as a whole without the prior written consent of the County; nor shall Contractor assign any monies due or to become due to it hereunder, without the prior written consent of the County. 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 County to immediately terminate this Agreement, in addition to any other remedies available to County at law or in equity.

26.15 Waiver: No consent or waiver, express or implied, by either Party to this Agreement to or of any breach or default by the other in the performance of any obligations hereunder shall be deemed or construed to be a consent or waiver to or of any other or future breach or default by such Party hereunder, nor deemed to be a modification of this Agreement. Failure on the part of any Party hereto to complain of any act or failure to act of the other Party or to declare the other Party in default hereunder, irrespective of how long such failure continues, shall not constitute a waiver of the rights of such Party hereunder, provided however this section shall not alter or amend the notice provisions set forth in the Agreement. Inspection by, payment by or tentative approval or acceptance by the County, or the failure of the County to perform any inspection hereunder shall not constitute a final acceptance of the Work or any part thereof and shall not release Contractor from any of its obligations hereunder. To be effective, any waiver must be in writing signed by an authorized signatory of the Party granting the waiver.

26.16 Entire Agreement; Severability; Amendments: This Agreement incorporates and includes all prior negotiations, correspondence, conversations, agreements, and 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 the Contract Documents. Accordingly, the Parties agree that no deviation from the terms herein shall be predicated upon any prior representations or agreements, whether oral or written. It is further agreed that no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document in accordance with Article 10. In the event any provision of the Contract Documents shall be found by a court of competent jurisdiction to be invalid or otherwise unenforceable, the remainder of this Agreement shall not be affected thereby and each remaining provision, term, covenant or condition of the Contract Documents shall continue to be effective.

26.17 Counterparts: This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

26.18 Governing Law, Venue and Waiver of Jury Trial: **THIS AGREEMENT SHALL BE INTERPRETED AND CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF FLORIDA. ANY CONTROVERSIES OR LEGAL PROBLEMS ARISING OUT OF THIS AGREEMENT AND ANY ACTION INVOLVING THE ENFORCEMENT OR INTERPRETATION OF ANY RIGHTS HEREUNDER SHALL BE SUBMITTED EXCLUSIVELY TO THE JURISDICTION OF THE STATE COURTS OF THE SEVENTEENTH JUDICIAL CIRCUIT OF BROWARD COUNTY, FLORIDA, THE VENUE SITUS, AND SHALL BE GOVERNED BY THE LAWS OF THE STATE OF FLORIDA.**

BY ENTERING INTO THIS AGREEMENT, CONTRACTOR AND COUNTY HEREBY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO OR ARISING OUT OF THE PROJECT. CONTRACTOR SHALL SPECIFICALLY BIND ALL SUBCONTRACTORS TO THE PROVISIONS OF THIS CONTRACT.

26.19 Truth in Negotiations: Contractor's compensation under this Agreement is based upon representations supplied to County by Contractor, and Contractor certifies that the wage rates, factual unit costs, and other factual information supplied to substantiate Contractor's compensation is accurate, complete and current at the time of contracting. County shall be entitled to recover any damages it incurs to the extent such representation is untrue.

26.20 E-Verify Certification: Where required by Florida Executive Order, Contractor agrees to utilize the U.S. Department of Homeland Security's E-Verify system, <https://e-verify.uscis.gov/emp>, to verify the employment eligibility of: (a) all persons employed during the contract term by Contractor to perform employment duties within Florida; and (b) all persons (including Subcontractors) assigned by Contractor to perform work pursuant to this Agreement with County.

26.21 Scrutinized Vendor certification: This Agreement may be terminated for cause if Contractor is placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List created pursuant to Section 215.473, Florida Statutes, as amended or if Contractor provides a false certification (Form 11) submitted pursuant to Section 287.135, Florida Statutes, as amended.

26.22 Representative of County and Contractor: The Parties recognize that questions in the day-to-day conduct of the Project will arise. The Contract Administrator, upon Contractor's request, shall advise Contractor in writing of one (1) or more County employees to whom all communications pertaining to the day-to-day conduct of the Project shall be addressed. Contractor shall inform the Contract Administrator in writing of Contractor's representative to whom matters involving the conduct of the Project shall be addressed.

26.23 Interpretation: The language of this Agreement has been agreed to by both Parties to express their mutual intent and no rule of strict construction shall be applied against either Party hereto. The headings contained in this Agreement are for reference purposes only and shall not affect in any way 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.

26.24 Domestic Partnership Requirement: Contractor certifies and represents that it will comply with County's Domestic Partnership Act (Section 16½-157 of the Broward County Code of Ordinances, as amended) during the entire term of this Agreement. The failure of Contractor to comply shall be a material breach of this Agreement, entitling County to pursue any and all remedies provided under applicable law including, but not limited to: (1) retaining all monies due or to become due Contractor until Contractor complies; (2) termination of this Agreement; and (3) suspension or debarment of Contractor from doing business with County.

26.25 Regulatory Authority: 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 not in its regulatory capacity. If County exercises its regulatory authority as a governmental body, the exercise of such regulatory authority and the enforcement of any rules, regulations, laws and ordinances shall be deemed to have occurred pursuant to County's 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.

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

- a. Keep and maintain public records required by County to perform the services under this Agreement;
- b. 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;
- c. 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 of this Agreement if the records are not transferred to County; and
- d. Upon completion of this Agreement, transfer to County, at no cost, all public records in possession of Contractor upon termination of this Agreement or keep and maintain public records required by County to perform the services. If Contractor transfers the records to County, Contractor shall destroy any duplicate public records that are exempt or confidential and exempt. If Contractor keeps and maintains public records upon completion of this Agreement, Contractor 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.

The failure of Contractor to comply with the provisions of this section shall constitute a material

breach of this Agreement entitling County to exercise any remedy provided in this Agreement or under applicable law.

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. Contractor will provide any requested records to County to enable County to respond to the public records request.

Any material submitted to County that Contractor contends constitutes or contains trade secrets or is otherwise exempt from production under Florida public records laws (including Florida Statutes Chapter 119) ("Trade Secret Materials") must be separately submitted and conspicuously labeled "EXEMPT FROM PUBLIC RECORD PRODUCT – TRADE SECRET." In addition, Contractor 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 Florida Statutes Section 812.081 and stating the factual basis for same. In the event that a third party submits a request to County for records designated by Contractor 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 Contractor. Contractor 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 non-disclosure of any Trade Secret Materials in response to a records request by a third party.

IF CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF FLORIDA STATUTES CHAPTER 119 TO CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT DHAWKE@BROWARD.ORG, 115 S. ANDREWS AVENUE, SUITE A550, FORT LAUDERDALE, FLORIDA 33301.

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AGREEMENT BETWEEN BROWARD COUNTY AND DPR CONSTRUCTION, A GENERAL PARTNERSHIP, FOR MANAGING GENERAL CONTRACTOR CONSTRUCTION SERVICES FOR BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY IN BROWARD COUNTY, FLORIDA (RFP # PNC2119546P1)

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement on the respective dates under each signature: 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 CONTRACTOR, DPR CONSTRUCTION, A GENERAL PARTNERSHIP, signing by and through its President/Vice President duly authorized to execute same.

COUNTY

ATTEST:

BROWARD COUNTY, through its
BOARD OF COUNTY COMMISSIONERS

County Administrator and
the Ex Officio Clerk of the
Board of County Commissioners

By _____
Mayor

_____ day of _____, 20__

Approved as to form by
Andrew J. Meyers
Broward County Attorney
115 S Andrews Ave, Suite 423
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Facsimile: (954) 357-7641

By **BENJAMIN D. CREGO** Digitally signed by BENJAMIN D. CREGO
Date: 2021.03.02 10:51:29 -05'00'
Benjamin Crego (Date)
Assistant County Attorney

By **MICHAEL KERR** Digitally signed by MICHAEL KERR
Date: 2021.03.02 11:16:17 -05'00'
Michael J. Kerr (Date)
Deputy County Attorney

AGREEMENT BETWEEN BROWARD COUNTY AND DPR CONSTRUCTION, A GENERAL PARTNERSHIP FOR MANAGING GENERAL CONTRACTOR CONSTRUCTION SERVICES FOR BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY IN BROWARD COUNTY, FLORIDA (RFP # PNC2119546P1)

CONTRACTOR

DPR CONSTRUCTION, A GENERAL PARTNERSHIP

ATTEST:

(Secretary)

(Corporate seal)

DocuSigned by:
Ryan Romanchuk SE Regional Leader
By 34CD3DC4D8F34DD...
(Signature & title)

Ryan Romanchuk SE Regional Leader

(Typed name & title, as signed above)

1st day of March, 2021.

Or

Witnesses:

DocuSigned by:
Aric Preisendorf
7203F177EFE6403...

Signature of Witness

Aric Preisendorf

Printed or Typed Name of Witness

DocuSigned by:
Sarah Santangelo
FEA9FAB03AED48F...

Signature of Witness

Sarah Santangelo

Printed or Typed Name of Witness

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EXHIBIT A
SCOPE OF SERVICES
PRECONSTRUCTION SERVICES

1. The Project and Definitions

1.1. Project Description and Program

1.1.1. The following paragraphs and articles form a general description of the professional services required for preconstruction services in support of the new facilities contemplated by County. 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 anticipated minimum level of performance for Contractor but does not limit the professional services that may be required during any project phase described herein.

1.2. Project Description

1.2.1. Refer to the Summary of Terms and Conditions for the Project description and Location.

1.3. Project Definitions

1.3.1. BIM - Building Information Modeling. This is the process of generating and managing a three-dimensional representation file of the project with integral specification data resulting in a Building Information Model that can be linked, networked or exchanged.

1.3.2. CAD / CADD – Computer-Aided Design or Computer-Aided Design and Drafting.

1.3.3. COBie – Construction Operations Building Information Exchange. A data format focused on the delivery of subset non-geometric building information and specifications extracted from the Building Information Model.

1.4. Contract Administrator's Project Data and Documentation

1.4.1. An architectural and engineering program and other related documents will be provided by Contract Administrator to provide Contractor with an overview of the project as developed by County and Contractor. These documents may include (if available to Contract Administrator) site surveys, soil boring/geotechnical reports and other data concerning the site and project.

1.4.2. Contract Administrator shall provide electronic copies of design documentation as necessary for Contractor's Basic Services (such as estimating, scheduling and constructability reviews) to Contractor. Contractor shall provide its own hard

copy documents if such are required for the provision of Contractor's services. Contractor shall be responsible for printing, reproduction and photography for documents required as part of preparing Contractor's deliverables for Basic Services as described in further detail below. Contractor is encouraged to utilize electronic copies of drawings where possible to reduce the need for printed hard copies of documents.

2. Preconstruction Basic Services

2.1. Basic Services

- 2.1.1. The tasks and services listed below in Article 3, Preconstruction Tasks, in addition to those specified in the Agreement, related to the Project and other professional services, as necessary, to meet the needs of County for the Project.
- 2.1.2. The listed tasks and services shall not limit those Project-related tasks, activities or services that may be requested by Contract Administrator.

3. Preconstruction Tasks

3.1. General Requirements

- 3.1.1. Contractor agrees to:
 - 3.1.1.1. Provide complete preconstruction and other professional services set forth below and all necessary personnel, equipment and materials to perform services;
 - 3.1.1.2. Complete those preconstruction services in accordance with a Project schedule to be developed jointly between Contract Administrator, Consultant and Contractor and finalized not later than 20 days following the effective date of the Notice to Proceed with preconstruction services as issued by Contract Administrator. Attachment 1, Preliminary Project Schedule, as attached to this Exhibit A is provided for Contractor's Consultant's and Contract Administrator's use in deriving Contractor's Project Schedule;
 - 3.1.1.3. Complete those preconstruction services in support of delivering a facility (or facilities) within County's established Guaranteed Maximum Price for the Project.
- 3.1.2. Contractor shall attend Project review and coordination meetings with representatives of Contract Administrator and Consultant throughout the Design Phases of the Project. The frequency of such Project review and coordination meetings may vary at Contract Administrator's discretion pending the status and progress of the Project and Contractor's preconstruction services. At each of these meetings, Contractor, Contract Administrator and Consultant

shall review the Project's budget, schedule, and scope along with Contractor's development and progress to date on the respective preconstruction services and any special problems related to the continuing progress of the Project. For each Project meeting and as may be otherwise appropriate during this Project phase, Contractor shall provide schedules, estimates, reports and other documents sufficient to illustrate progress and the issues at hand for Contract Administrator's review. Contractor shall not be entitled to claims for delays to the Project Schedule due to Contractor's failure to provide such documents.

- 3.1.3. Contractor (including representatives of each sub-consulting / subcontracting firm engaged by Contractor to provide preconstruction services pursuant to this Agreement, if any), Consultant and Contract Administrator shall attend a "Preconstruction Services Kick-Off" meeting and a "Preconstruction Debriefing" meeting that will be scheduled by Contract Administrator at the beginning and end of each of the Preconstruction Services. The Preconstruction Kick-Off meeting will provide a forum for the entire Project team to review project goals, continuing project issues, and review performance expectations for the Project. The Preconstruction 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.
- 3.1.4. Contractor shall attend other periodic coordination meetings as scheduled by Contract Administrator or Consultant. These meetings will be scheduled to address and coordinate specific design and planning issues for the Project. Members of County's using agencies and other County offices participating in the Project may attend these meetings to coordinate and communicate their functional requirements and preferences.
- 3.1.5. If public art is a component of the Project, Contractor, Consultant, Contract Administrator and the artist(s) selected by County shall attend periodic coordination meetings throughout the Project as scheduled by 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.
- 3.1.6. Contractor shall coordinate and develop processes with Consultant and Contract Administrator to facilitate County in seeking to obtain the highest certification possible under Leadership in Energy and Environmental Design (LEED) for New Construction and Major Renovations following the U.S. Green Building Council guidelines. Contractor shall attend periodic coordination meetings throughout the Project as scheduled by Consultant and or Contract Administrator to address the implementation of LEED principles, practices and construction.

- 3.1.7. Contractor shall be required to submit various documents further defined below in both hardcopy and electronic media formats. Requirements for electronic media submittals are contained in Attachment 2, Electronic Media Submittal Requirements, below. Requests for deviations from those electronic media submittal requirements shall be submitted in advance by Contractor in writing for the consideration of Contract Administrator.
- 3.1.8. Documents, electronic media and other materials submitted to Contract Administrator by Contractor shall be retained by Contract Administrator except as otherwise noted herein and are subject to the ownership provisions of this Agreement.
- 3.1.9. Contractor shall make complete document submittals as listed or described below. Contractor may request Contract Administrator to allow incomplete or partial submittals with Contractor's demonstration of significant benefit to the Project. Such requests shall be made of Contract Administrator in writing and at least 14 days prior to the applicable submittal deadline. Approval of such requests shall be at the sole discretion of Contract Administrator. Incomplete or partial submittals made without advance approval shall be returned to Contractor un-reviewed and unaccepted by Contract Administrator and subject to any liquidated damages applicable as provided for elsewhere in this Agreement.

3.2. Administrative Requirements

- 3.2.1. Contractor shall confer with representatives of Contract Administrator to verify and confirm the scope of Preconstruction Services, the status of the Project, Consultant's progress with its assigned professional services, the activities of County's using agencies, and other administrative information required for the Project. These shall include:
 - 3.2.1.1. Contractor, Contract Administrator, Consultant and Construction Management Division ("Using Agency") shall coordinate and establish a listing of Contract Administrator, Using Agency and other representatives who will be providing information or feedback to Contractor during the preconstruction process. Contractor shall prepare and distribute list including the Representative's name, title, organization, address, phone, alternative phone numbers (cellular/mobile, job site, etc.), fax and e-mail addresses. Contractor shall periodically review, update and coordinate this list with Contract Administrator, Consultant and Using Agency throughout the preconstruction process.
 - 3.2.1.2. Contractor, Contract Administrator, Consultant and Using Agency shall coordinate, establish and verify a chain of responsibility or decision making in County's Project and functional organizations for use in later

decision making during the preconstruction process and the subsequent construction phase(s).

- 3.2.1.3. Contractor shall obtain and mobilize any Subcontractors/consultants or other specialists to provide technical or functional information as Contract Administrator and Contractor mutually agree to be necessary to render the preconstruction services.
- 3.2.1.4. Contractor shall obtain Contract Administrator's and Consultant's preliminary list of equipment and any special equipment, or equipment that requires custom fabrication or unique installation. Contractor shall advise and assist in Contract Administrator's coordination of that list with requirements for construction to include review of integration of construction requirements into contract documents, project scheduling, project budget, and communication of related issues. When such special equipment is to be provided by County, pricing and specification of those items shall be responsibility of Contract Administrator or Consultant.
- 3.2.1.5. Contractor shall obtain Contract Administrator's preliminary list of "County supplied materials" (including furniture and equipment items), construction or related work to be performed by County (or others), and any salvage items projected to be retained by County. Contractor shall advise and assist in Contract Administrator's coordination of that list with requirements for construction to include review of integration of construction requirements into contract documents, project scheduling, project budget, pricing of Contractor's installation of County supplied materials and communication of related issues. Pricing and specification of any such County supplied materials or work items shall be responsibility of Contract Administrator or Consultant.

3.3. Project Approvals Action Plan

- 3.3.1. Contractor shall confer with Contract Administrator and Consultant to jointly develop a "Project Approvals Action Plan" for obtaining all site plan approvals, development orders, permits, licenses and other approvals from all agencies with jurisdiction over the project.
 - 3.3.1.1. This plan shall verify and further develop preliminary information that may have been developed by either Contract Administrator or Consultant. Contract Administrator or Consultant will make their preliminary documentation available to Contractor. Project Approvals Action Plan shall confirm and include a listing of those regulatory or jurisdictional agencies with authority over the Project, document submittal requirements, application and permit fees, anticipated

review times, duration/expiration periods for any issued approval(s), and the party responsible for making submittal of documents and fees related to any approval, review or licensure.

- 3.3.1.2. Contractor shall include scheduling information derived from the "Project Approvals Action Plan" into Project schedules further described below and shall coordinate with Contract Administrator and Consultant concerning optimum timing for submittals, corrections, reviews and other milestone dates/periods pertinent to the Project approvals process.
- 3.3.1.3. Contractor shall submit (5) copies of the Project Approvals Action Plan to Contract Administrator prior to Consultant's submittal of Design Development.
- 3.3.1.4. Upon discovery of changes to building codes, regulatory agencies and other jurisdictional requirements that impact the project, Contractor shall advise Contract Administrator and Consultant and modify the "Project Approvals Action Plan" on an as needed basis to ensure the project's continued and future compliance with the process for obtaining jurisdictional approvals.

3.4. Project Approvals and Permits

- 3.4.1. With assistance from Contract Administrator and Consultant, Contractor shall coordinate and make applications to obtain permits, approvals and authorizations from jurisdictional agencies with authority over the project.
- 3.4.2. Contractor shall 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.
- 3.4.3. Contractor 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 other concerns generated by those jurisdictional agencies without additional cost to County.

3.5. Scheduling

- 3.5.1. Contractor shall provide a Project Schedule as a part of its Preconstruction Services as outlined below. Project specific deviations or refinements of the requirements presented below may be allowed with advance written authorization of Contract Administrator. Written authorization from Contract Administrator will not be unreasonably withheld.
- 3.5.2. Contractor shall develop a Detailed Project Schedule, utilizing critical path method (CPM) logic sequencing, reflecting the design (or remaining portion

thereof) and construction of all phases of the overall Project, including but not limited to County's occupancy and outfitting of the facility, jurisdictional review periods, permitting process, final inspection, occupancy requirements, ordering and delivery/setup of furniture, fixtures and equipment, and work by other contractors/vendors (including County's own forces and any County procured vendors and contractors) as directed by Contract Administrator.

3.5.3. Contractor shall utilize the completed Detailed Project Schedule, to develop a Project Control Schedule which shall be presented in a bar graph format. The purpose of the Project Control Schedule is to summarize the information contained in the CPM schedule in order to provide the project team with a management tool and an overall Project visual aid to easily determine the schedule and status of the total Project. The information derived from these two schedules is to become part of Contractor's management plan developed by Contractor for the Project.

3.5.4. Storyboarding:

3.5.4.1. Contractor shall facilitate and conduct, with Contract Administrator, storyboarding and other activities delineated within Attachment 3, Preliminary Scheduling Procedure, as attached to this Exhibit A.

3.5.4.2. Storyboarding sessions shall include all pertinent project stakeholders as confirmed by Contractor with Contract Administrator.

3.5.4.3. Within 30 days after the effective date of County' initial Notice to Proceed to Contractor, Contractor shall establish a preliminary storyboarding meeting in order to establish Project schedule goals and objectives.

3.5.4.4. Additional preconstruction phase storyboarding meetings shall be scheduled by Contractor, after consultation with Contract Administrator, and shall be completed not later than prior to the completion of the 100% Construction Documents by Consultant.

3.5.4.5. Contractor shall utilize information derived from these "storyboarding" meetings to incorporate Project team scheduling data (from Contractor and Subcontractors, Contract Administrator, using agencies, County's support agencies, Consultant (and Sub-consultants), Contract Administrator's vendors and suppliers, and jurisdictional agencies) into the required Detailed Project Schedule and Project Control Schedule.

3.5.4.6. Contractor shall photographically document storyboarding results and provide a Microsoft Excel version of the final storyboarding sheets indicating tasks, entities responsible for those tasks and the timeline

for accomplishment of those tasks. A preferred format for the Excel documentation will be made available by Contract Administrator. Contractor shall distribute photographic and Excel-based storyboarding documentation to all storyboarding participants.

- 3.5.5. Contractor shall submit to Contract Administrator a minimum of two (2) hard copies of both the Detailed Project Schedule and the Project Control Schedule with electronic media copies of all schedules, reports, and other documentation making up those schedule documents.
- 3.5.6. Contractor shall update and submit updated Detailed Project Schedule and Project Control Schedule with each pay application during Preconstruction Services and as may be requested by Contract Administrator.

3.6. Constructability Review

- 3.6.1. Contractor shall review and evaluate design and construction documents at Consultant's Phase II Schematic Design, Phase III Design Development, 50% Construction Documents and 100% Construction Documents phases for clarity, consistency, completeness, coordination and ease of construction in order to achieve the overall objectives of the Project.
- 3.6.2. Contractor's review of the design and construction documents shall include the following activities:
 - 3.6.2.1. Conducting reviews of design and contract documents (drawings and specifications at their respective levels of development by project phase) by preparing a written list with graphic illustrations where applicable of review comments with references to the location of information within the documents (drawing/detail number, spec page, or similar reference). Contractor may, at Contractor's option, prepare a "mark-up" set or partial set of design or contract documents in addition to the list of review comments to facilitate discussions of those comments by Contractor, Consultant and Contract Administrator.
 - 3.6.2.2. Preparing and submitting a written report of review comments, constructability problems and concerns to the Contract Administrator, including:
 - 3.6.2.2.1. Recommendations for improving document coordination, clarity and communication of construction requirements and technical construction information.
 - 3.6.2.2.2. Comments noting constructability issues derived from Contractor's review of design and contract documents

(drawings and specifications at their respective levels of development by Project phase).

- 3.6.2.2.3. Recommendations concerning construction administration, construction sequencing, means and methods, material selection and availability, system integration, field quality control and assurance, alternate construction methods/techniques and other construction related issues.
- 3.6.2.3. Attending workshop meetings with Consultant and Contract Administrator to review proposed changes and recommending the changes that are to be implemented for the Project.
- 3.6.2.4. Verifying and conducting final review of changes to the construction documents.
- 3.6.2.5. BIM Execution Plan. Construction documents will be developed using Building Information Modeling by Consultant to GSA Level of Development 300 and made available to Contractor for use and further development during the course of the Project. Contractor shall develop this model to GSA Level of development 500 in Phase II, with Facilities Management information made available to Construction Operations Building Information Exchange (COBie) Standards. Contractor shall develop and coordinate a BIM Execution Plan, carry out clash detection analysis and complete preliminary virtual design and construction (VDC) activities as part of the Constructability Review.
- 3.6.3. Contractor shall submit to Contract Administrator one (1) unbound original and ten (10) plastic-comb bound hard copies of each constructability review report submittal and electronic media copies of all spreadsheets, reports, and other documentation making up the constructability review documents.

3.7. Cost Estimating

- 3.7.1. Contractor shall provide one estimate for each design Phase as follows:
 - 3.7.1.1. Schematic Design – ASPE Level 2
 - 3.7.1.2. Design Development - ASPE Level 3
 - 3.7.1.3. 50% Construction Documents - ASPE Level 4
 - 3.7.1.4. 100% Construction Documents phase - ASPE Level 4
- 3.7.2. Preparation of Construction Cost Estimates:

- 3.7.2.1. Contractor shall estimate the cost of the major elements and subcomponents of the Project. The purpose of these Construction Cost Estimates is to verify the owner's ability to complete the project within the established estimated GMP. The cost information derived from these estimates shall directly relate to Contractor's recommendations in the Constructability Reviews and (if authorized by Contract Administrator) Value Engineering Report(s) relative to ways to reduce or control costs.
- 3.7.2.2. All estimates shall be structured to indicate County's Guaranteed Maximum Price as comprised of the following price elements:
 - 3.7.2.2.1. Pre-Construction Services Cost
 - 3.7.2.2.2. Estimated Direct Construction Cost
 - 3.7.2.2.3. Estimated General Conditions Cost
 - 3.7.2.2.4. Estimated Fixed Fee
 - 3.7.2.2.5. Owner's Allowance Account
- 3.7.2.3. Estimates shall be organized to provide a level of detail corresponding to the Construction Specification Institute's (CSI) organizational systems:
 - 3.7.2.3.1. Estimating based on preliminary assemblies information shall be organized according to the CSI's Unifomat system of assembly nomenclature.
 - 3.7.2.3.2. Estimates prepared for the Construction Documents phases estimate shall be itemized by major categories and projected to the expected time of bid and shall be prepared per the American Society of Professional Estimators (ASPE Tenth or latest Edition) of Standard Estimating Practice and coordinated with or anticipating Consultant's development of the Project specifications. Estimates shall be provided for all Division's and specification sections pertinent to the Project within CSI's MasterFormat structure.
- 3.7.2.4. The Construction Cost Estimate made at the 100% Construction Documents phase shall be made when the construction documents are "permit ready" with sufficient detail to permit issuance of a building permit and to obtain all required approval of all governmental authorities having jurisdiction over the project. The 100% Construction Documents phase estimate shall be used as the basis for comparing

Subcontractor bids, negotiating the actual GMP for the Project and for monitoring status of the project throughout the construction phase.

- 3.7.2.5. Each cost estimate submittal shall include an analysis of the Project's feasibility in terms of County's project budget and County's full range of anticipated "Project" costs. In this capacity, Contractor shall coordinate with Consultant and Contract Administrator in order to understand, assist in development of and represent those project costs in the submitted cost estimates. Project costs may include administrative costs, costs of Owner provided services/materials, jurisdictional and other fees, estimated costs of special consultants, costs for separate contractors, and other County costs which comprise County's Project budget
- 3.7.3. Contractor shall submit to Contract Administrator one (1) unbound and ten (10) plastic-comb bound hard copies of each estimate submittal and electronic media copies of all spreadsheets, reports, and other documentation making up the estimate documents. It is acknowledged and understood by Contractor that County is obligated to provide its client with a copy of each pricing proposal which must include all estimates, conditions, assumptions, schedules, and other documents utilized to establish each phase of pricing.

3.8. Prequalification and Identification of Subcontractors

- 3.8.1. Contractor shall identify potential subcontractor participants throughout the duration of the Project as necessary. Contractor agrees to participate in subcontractor or CBE workshops, seminars and open-houses as may be scheduled by Contract Administrator from time to time in order to communicate the opportunities presented to subcontractors and CBE's by this Project.
- 3.8.2. Contractor shall coordinate and confirm detailed bidding requirements and procedures with Contract Administrator during the design development stage of the Preconstruction Services.
- 3.8.3. Contractor shall prepare for Contract Administrator's review, the statement of qualifications for all subcontract work for the Project. Contract Administrator shall state any exceptions to the statement of qualifications within fourteen (14) days after receipt. Contractor shall address any exceptions within seven (7) days after receipt. Following Contract Administrator's review and acceptance of Contractor's response to the exceptions, each statement of qualifications shall be posted on County Purchasing Division's website and other recognized local advertising means to solicit potential qualified subcontractor(s), vendor(s), and supplier(s) for the work.
- 3.8.4. Contractor shall prepare and assemble subcontractor(s), vendor(s), and supplier(s) pre-qualification evaluations. These evaluations shall include

sufficient information for Contractor to determine if the subcontractor(s), supplier(s) and vendor(s) have qualifications, capability and capacity in all respects to perform work for the Project.

3.8.5. Not later than Contractor's submittal of the 60% Construction Documents constructability review, Contractor shall submit and present its subcontractor qualification evaluations in the form of an overview presentation and written report to be accepted by Contractor Administrator (prequalification report). The prequalification report shall list all subcontractors being considered, the Scope of Services recommended, the subcontractor's qualifications and past work history, the subcontractor's CBE certification status, and Contractor's recommendation concerning the use of the listed subcontractor. The prequalification report shall include Contractor's CBE Participation Plan as further described below.

3.8.5.1. Contractor shall provide a minimum of three (3) pre-qualified subcontractors for each portion of Work to be bid, unless Contractor can demonstrate to Contract Administrator's satisfaction a verifiable unavailability of suitable Subcontractors and Contractor's good faith effort to obtain the required minimum number of prequalified subcontractors.

3.8.5.2. No portion of the Direct Construction Costs may be performed by a company or other entity, which is 51% or greater owned or controlled by Contractor or a parent entity in common with Contractor, except with Contract Administrator's written approval in advance and at Contract Administrator's sole discretion.

3.8.5.3. Contractor's submittal shall include (1) reproducible and five (5) hard copies of Contractor's prequalification report with electronic media copies of the report and all schedules, lists databases and other documentation referenced or included in the report.

3.8.6. CBE Participation Plan:

3.8.6.1. Contractor's CBE Participation Plan shall identify CBE Subcontractor/ Subconsultant participants for the Project including both those firms utilized during the preconstruction phase and those that will be utilized during the construction phase(s). The CBE Participation Plan shall demonstrate that Contractor has committed to meet or exceed the CBE participation goals established for the Project, or demonstrate through accompanying documentation suitable to Contract Administrator and OESBD that Contractor has made a good faith effort to meet the goal(s).

- 3.8.6.2. The CBE Participation Plan shall 1) provide a positive confirmation of Contractor's commitment to meet or exceed the CBE Participation Goals established for the Project; 2) identify (by legal name, address, phone number and name of principal) each Broward County-certified CBE contemplated to subcontract for work on this Project; 3) indicate the nature of the CBE's contribution to the Project including a general description of the Scope of Services assigned to that CBE firm; and 4) include an original signed acknowledgement from each CBE indicating its intent and availability to serve as a subcontractor for construction services if the construction phase of the Project is awarded to Contractor.
- 3.8.6.3. Contractor shall periodically amend and resubmit its CBE participation plan to provide Bid Tabulation results for the respective CBE's trade discipline or specialty and to establish whether:
 - 3.8.6.3.1. A CBE firm is the most qualified and lowest, responsive and responsible bidder; or
 - 3.8.6.3.2. A CBE firm is identified by Contractor and Contract Administrator as a "Preferred Subcontractor"; or
 - 3.8.6.3.3. A CBE firm participated in the bidding process but did not prevail as the lowest, responsive and responsible bidder.
- 3.8.6.4. Contractor shall identify subcontractors who may qualify for certification under County's CBE program and direct those potential CBE participants to County's OESBD in order for those firms to pursue and obtain their certification.

3.9. Competitive Bidding

- 3.9.1. Contractor shall subcontract work through a competitive bidding process, as further described below, for one hundred percent of the Direct Construction Costs and those biddable elements of the General Conditions required for construction of the Project. Contractor may request in writing a waiver of the competitive bidding process for a particular incidental work items or type of trade. Contract Administrator may, at its sole discretion and based upon adequate and sufficient justification, waive the competitive bidding requirement for that particular incidental work item or type of trade. In the event of Contract Administrator's waiver of bidding, Contractor shall provide evidence of the process used to establish pricing for the subject items of incidental work or type of trade upon Contract Administrator's request.
- 3.9.2. Bidding shall be conducted during the Preconstruction Services Phase and bidding results derived therefrom shall be utilized to establish the Reconciled

Direct Construction Costs and the Reconciled General Conditions Costs. Bid prices established or subcontracts awarded during the Preconstruction Services phase shall be incorporated as line items within the Reconciled Direct Construction Cost or Reconciled General Conditions Costs (Exhibits 1R and 2R respectively) and shall not be modified for escalation or de-escalation.

- 3.9.3. Contractor shall restrict competitive bidding to that list of prequalified subcontractor(s), vendor(s) and supplier(s) eligible listed on Contractor's prequalification report. Prior to the advertisement of the mandatory pre-bid conference for a particular bid solicitation package, Contractor may submit addendums to that prequalification report providing the identification and full documentation of Contractor's prequalification of proposed additional subcontractors.
- 3.9.4. Contractor, with the assistance of Consultant, shall break down the work into subcontract bid solicitation packages designed to maximize both competition and the involvement of County Business Enterprises (CBEs). Contractor shall develop subcontractor, vendor, and supplier interest for each division of the work. Contractor shall obtain bids from a minimum of three (3) subcontractors for each bid solicitation package or provide justification in writing why it is not possible to do so.
- 3.9.5. All bid solicitation packages shall, so far as practicable, contain unit prices and any other feasible formula for use in analyzing bid results and determining the cost of any required changes in the work.
- 3.9.6. Contractor shall provide a preliminary Bidding Schedule indicating the sequencing of bidding respective bid solicitation packages. Contract Administrator may, at its sole discretion, defer bidding of particular bid solicitation packages upon Contractor's substantiation that significant economic or logistical benefit will accrue to County.
- 3.9.7. In conjunction with releasing the preconstruction phase bid solicitation packages to prospective bidders, Contractor shall advertise and conduct mandatory pre-bid conferences for the Project to review the Scope of Services and present the conditions and requirements of the bidding process. Contractor shall notify Contract Administrator and County Purchasing Division staff in writing, of the date, time, and location of each pre-bid conference, no less than fourteen (14) days prior to the scheduled pre-bid conference date. County representatives including the Project Manager and Purchasing Agent will attend all pre-bid conferences.
- 3.9.8. The required bid solicitation packets for the various components of the Project shall require that all bids must be received by 5:00 PM EST by the deadline date and at a location in Broward County given by Contractor. Contractor shall notify Contract Administrator and Purchasing Division staff in writing, no less than

fourteen (14) days prior to the bid opening date, the location, and time for opening of the bids. Contractor shall tabulate the bid results within fourteen (14) days of the date of bid opening. Contractor must present to Contractor Administrator, any determinations of a bid submitted being deemed non-responsive or non-responsible within fourteen (14) days of the date of bid opening with sufficient backup demonstrating this finding. Contract Administrator has the right to reject Contractor's determination of a subcontractor being deemed non-responsive or non-responsible.

- 3.9.9. Contractor shall submit Managing General Contractor's Subcontractor Award Recommendation (as sample of which is attached hereto as Attachment 5) for each of the bid packages for the Direct Construction Costs and the Biddable Elements of the General Conditions costs with supporting documentation including Bid amount, copies of Bid, Bid Forms and Scope comparisons.
- 3.9.10. Contract Administrator, for the limited purpose of achieving the CBE participation goal established for the Project, may designate as the selected subcontractor or supplier, a bidder whose bid exceeds that of the bidder recommended by Contractor and complies with the Contract Documents. The amount by which the bid of the selected subcontractor exceeds the bid of the bidder recommended by Contractor shall be referred to herein as the preferred subcontractor cost differential. Contract Administrator may designate that either the preferred subcontractor cost differential be charged against any surplus amounts within the Owner's Allowance Account or the Guaranteed Maximum Price be increased by the amount of the preferred subcontractor cost differential.
- 3.9.11. When Contract Administrator and Consultant have approved the award of any such subcontract or purchase order, Contractor shall contract solely in its own name and behalf, and not in the name or behalf of County, with the specified subcontractor or supplier. Contractor's subcontract form shall provide: that the Subcontractor shall perform its portion of the Work in accordance with all applicable provisions of this Agreement and the other Contract Documents; that Subcontractor is bound to Contractor to the same extent as Contractor is bound to County. In the event this Agreement is terminated for any reason, that the Subcontractor shall, at County's option, perform its subcontract for County, or for a contractor designated by County, without additional or increased cost, provided the Subcontractor is paid in accordance with its subcontract. Contractor shall sign and cause each Subcontractor to sign an Assignment of Rights under Construction Subcontract. Nothing contained herein shall impose on County an obligation to assume any subcontract or make any payment to any Subcontractor to perform. Nothing contained herein shall create any contractual relationship between County and any Subcontractor. No portion of the Work may be performed by Contractor or its affiliates except with Contract Administrator's approval. Contractor shall enter into subcontracts representing

ninety percent (90%) of the Direct Construction Cost of the Work or more, within 90 (ninety) days of the First Notice to Proceed with construction and provide copies of same to County.

3.9.12. All subcontracts shall, so far as practicable, contain unit prices and any other feasible formula for use in determining the cost of any required changes in the work.

3.10. Project Management Technical Infrastructure.

3.10.1. Contractor shall provide and maintain the technical infrastructure described below throughout the term of this agreement.

3.10.2. Virtual Design and Construction (VDC) and Building Information Modeling (BIM):

3.10.2.1. Contractor shall develop, update, and manage the VDC and BIM process for the entire project (including preconstruction, construction and post-occupancy) as part of its scope of work.

3.10.2.2. As part of preconstruction basic services, Contractor, with Consultant and Contract Administrator, shall develop and apply a set of VDC processes, including utilizing BIM, to optimize project planning and construction execution. Contractor shall develop preconstruction-phase models and perform clash detection analyses to identify design conflicts and constructability issues prior to field installation.

3.10.2.3. The Contractor's VDC process and resulting models shall:

3.10.2.3.1. Establish overall project goals, objectives and needs for VDC deployment on the project.

3.10.2.3.2. Determine how VDC and model uses will assist the project team.

3.10.2.3.3. Establish how VDC will be used and respective Contractor subcontractors, Consultant and Contract Administrator responsibilities.

3.10.2.3.4. Provide a BIM model that is a complete building model containing all building components.

3.10.2.3.5. Design the VDC and BIM Execution Process to expand and define model uses and Project deployment.

3.10.2.3.6. Schedule and conduct project-specific 3D/BIM coordination meeting(s) with the County, Consultant, and each Subcontractor.

3.10.2.4. Contractor, County, Consultant shall mutually develop information exchanges and handoffs including but not limited to:

- 3.10.2.4.1. Determine how models and model data will be compiled, reviewed, and managed
- 3.10.2.4.2. Review with Contract Documents and coordinate Subcontractor's trade or discipline-specific 3D/BIM shop drawings
- 3.10.2.4.3. Management of coordination meetings
- 3.10.2.4.4. Communications with project team
- 3.10.2.4.5. Documentation and communication of all design conflicts, discrepancies, constructability issues, and review items and the respective solutions to each with the project team
- 3.10.2.4.6. Issue action lists with responsible parties and deadlines
- 3.10.2.4.7. Facilitate the decision-making process between Contract Administrator, Consultant and Contractor to resolve all issues discovered in 3D BIM review
- 3.10.2.4.8. Verify coordination assignments are completed
- 3.10.2.4.9. Verify and maintain accurate as-built record documents including 3D / BIM files
- 3.10.2.4.10. Provide Owner with a final complete, coordinated model for future use with as-built conditions. The final model will include tagging features for all major mechanical, electrical, plumbing, and fire protection components that reference the products specific information including but not limited the final approved shop drawings, as- built, and operations and maintenance data.

3.10.2.5. Submit written VDC Project Execution plan for review and approval by Contract Administrator prior to proceeding with the process. Incorporate review comments and recommendations from Contract Administrator into a final Project version that includes as a minimum:

- 3.10.2.5.1. Project Information
- 3.10.2.5.2. Key Project Contacts

- 3.10.2.5.3. Project VDC / BIM Uses
- 3.10.2.5.4. Organizational Roles and Staffing
- 3.10.2.5.5. VDC / BIM Process Design
- 3.10.2.5.6. BIM Information Exchanges
- 3.10.2.5.7. BIM and Facility Data Requirements
- 3.10.2.5.8. Collaboration Procedures
- 3.10.2.5.9. Quality Control
- 3.10.2.5.10. Technological Infrastructure Needs
- 3.10.2.5.11. Model Structure
- 3.10.2.5.12. Project Deliverables

3.10.3. Project Management Collaborative Software

3.10.3.1. Contractor shall provide and manage a construction-related, web-based software system for the information management, records management, reporting, tracking and communication between project team members.

3.10.3.1.1. Software shall have the ability to generate Project Directory, Project Contacts, RFI Logs, Submittal Logs, Budget tracking, Change Logs, and other logs as appropriate.

3.10.3.1.2. Software shall have security features to limit level of access for each user to the various software functions appropriate to their role.

3.10.3.1.3. Software shall protect documents such that changes cannot be made by non-authorized persons and that changes made can be identified and tracked.

3.10.3.1.4. Software shall be available to all project team members as appropriate (Contractor, Subcontractors, County, Project Manager, Consultant and Subconsultants).

3.10.3.1.5. Control of the software and access levels shall remain the responsibility of Contractor approved by Contract Administrator.

- 3.10.3.1.6. Cost of licenses for all users and provision/setup of software for those users is the responsibility of Contractor.
- 3.10.3.2. Basis of design is Prolog Website. Other products such as Buzzsaw, Prolog, Newforma, e-builder or other compatible and specification conforming software may be utilized if requested and approved in advance by Contract Administrator in writing. Software shall include features listed below:
 - 3.10.3.2.1. Access to all Project documents including the BIM Model by the County, Project Manager, Consultant and its Subconsultants, and any other parties deemed appropriate by Contract Administrator.
 - 3.10.3.2.2. Transmittal, review, and records of issue tracking logs, quality control issues, RFIs and submittals shall be electronically transferred through the web-based project management software between the Owner, Owner's Construction Project Manager, Contractor, Consultant and its Subconsultants. Contractor is responsible for providing hard-copy documents to other's Construction Project Manager, and Consultant and its Subconsultants upon request.
 - 3.10.3.2.3. Tracking of document versions.
 - 3.10.3.2.4. Document control, where Consultant's design or construction document issues can be tracked by date or sheet number.
 - 3.10.3.2.5. Method of storing and tracking LEED-related documentation required for submittal to the LEED administrator.
 - 3.10.3.2.6. Remote access independent of location and hardware platform.
- 3.10.3.3. Provided information and deliverables derived from the Project Management Software(s) shall be prepared and delivered in accordance with Exhibit A, Attachment 2 and 2a as applicable and shall remain in the ownership of County.

3.11. Confirmation of Existing Conditions

- 3.11.1. Contract Administrator will provide copies of available surveys, existing conditions reports and programming documents for Contractor's information and use.
- 3.11.2. Contractor shall review the programming documents and existing conditions report(s) provided by Contract Administrator to ascertain the requirements of the Project and shall arrive at a mutual understanding of project requirements between Contractor, Consultant and Contract Administrator.
- 3.11.3. Following review of the existing conditions reports, program, schedule and budget requirements each in terms of the other, Contractor shall provide a preliminary evaluation as part of the initial Constructability Report confirming an understanding of the existing site conditions, visible or invisible and identify those areas which may require additional investigation or testing.
- 3.11.4. Contractor shall expeditiously review all design documentation during their development in the context of the existing conditions and advise the County and Consultant in the Constructability Report as to appropriateness of the design and constructability strategies.

4. Other Preconstruction Services

- 4.1. 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 CPEAM and Notice to Proceed:
 - 4.1.1. Providing technical or other special studies not otherwise specified as a Basic Service.
 - 4.1.2. Providing services relative to future facilities, systems and equipment not intended to be constructed during the construction phase.
 - 4.1.3. Providing investigations and making detailed appraisals and valuations of existing facilities, and surveys or inventories required in connection with construction performed by County or for subsequent construction, temporary facilities or other contingencies required by Contract Administrator.
 - 4.1.4. Preparing to serve or serving as an expert witness in connection with any public hearing, arbitration proceeding or legal proceeding.
 - 4.1.5. Conducting supplemental site surveying, destructive or non-destructive testing or other investigations necessary to document the physical character of the site or existing conditions.
 - 4.1.6. Conducting surveys and abatements of asbestos or other hazardous materials.

- 4.1.7. Conducting supplemental subsurface investigations and obtaining Geotechnical Data related to the site including but not limited to: Geotechnical Report, Soil Boring Report and Soils Analysis.
 - 4.1.8. Identifying and locating utilities and building systems (including but not limited to water supplies, sanitary and storm sewers, communications and providing services to coordinate or conduct tests of those various utility and building systems.
 - 4.1.9. Providing computer and technology support beyond that specified as Basic Services including provision of hardware and software components.
 - 4.1.10. Providing preconstruction services related to major changes in project scope as determined by Contract Administrator.
 - 4.1.11. Any other services not otherwise included in this Agreement or those services not customarily furnished in accordance with generally accepted construction or preconstruction practice related to the project.
- 4.2. Value Engineering
- 4.2.1. This article and Attachment 4 to this Exhibit A (Value Engineering Procedure) lists detailed requirements for Value Engineering (VE) services normally considered to be beyond the scope of Basic Services.
 - 4.2.2. Contractor, as a result of Contractor's Constructability Review or Construction Cost Estimate and in order to control costs, may be authorized pursuant to a CPEAM and Notice to Proceed issued by Contract Administrator to perform Value Engineering (VE) services and submit any resulting Value Engineering proposals to Contract Administrator. Value engineering activities shall be performed concurrently and in conjunction with, and without delay to, Consultant's design activities. The services may include VE evaluation, review and study of design documents (including the structural, architectural, mechanical, electrical and plumbing systems and elements proposed for the building, site and other associated construction) prior to Consultant's completion of the project's schematic design documents, at the end of the Design Development Phase or at such stages as Contract Administrator may direct. VE services may include VE studies of items other than design documents. Contractor shall not share in savings that may result from acceptance and use of VE Proposal's by Contract Administrator.
 - 4.2.3. Scope of VE Services:
 - 4.2.3.1. Contractor shall confer with Consultant and Contract Administrator to confirm the scope of Value Engineering services required for the project as a whole and for those respective project phases for which VE services are required.

- 4.2.3.2. Contractor, Consultant and representatives of Contract Administrator shall prepare an agreed upon plan and procedure for conducting VE services appropriate to the Project's scale, scope, complexity and level of completion. Contract Administrator has provided Attachment 4, Value Engineering Procedure as a resource and guide for the development of the Project's VE plan and procedure. The VE plan and procedure developed for this project may be a customized version of Attachment 3 or an alternative project specific document as prepared and agreed to by Contractor, Consultant and representatives of Contract Administrator.
- 4.2.3.3. Contractor shall provide a copy of the project's VE plan and procedure as an attachment to Contractor's fee proposal for the VE services for Contract Administrator's consideration and approval. Upon approval, Contract Administrator will issue a CPEAM for VE and Notice to Proceed with VE services. Authorization and approval of Contractor's alternative VE plan and procedure (or other deviations from Attachment 4) shall be granted at Contract Administrator's sole discretion.

4.2.4. Value Engineering Team:

- 4.2.4.1. As a part of the VE plan and procedure developed for the project, Contractor shall identify and submit for Contract Administrator's approval a person who shall serve as the VE Team Coordinator (VETC) and shall prepare (with the assistance of Consultant and Contract Administrator) and submit a list of VE team members and their respective resumes representing Contractor, Consultant, Contract Administrator and those design and construction disciplines as may be required to complete the VE study effort. Subsequent changes or substitutions to the approved VE team shall be submitted in writing to Contract Administrator for approval.
- 4.2.4.2. VETC may be one of Contract Administrator's, Consultant's, or Contractor's personnel or a consultant to Contractor. VETC shall be responsible for pre-study preparations, assembly of required study materials, coordination between VE team members, conducting and providing administration of team meetings. The VETC shall produce, audit, reproduce, and sign and distribute the final VE report and each VE Proposal.

End of Exhibit A, Scope of Services

Preconstruction Services Agreement
EXHIBIT A SCOPE OF SERVICES
ATTACHMENT 1: Preliminary Project Schedule

Project No:

Project Title:

Facility Name:

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

	Days
Preconstruction Work	740
Preliminary Activities	45
Substantial Completion	700
Final Completion	60

End of Attachment 1: Preliminary Project Schedule

EXHIBIT A - SCOPE OF WORK
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 requirements shall also apply to County Managing General Contractor Agreements. In the event of a Design-Bid-Build construction delivery procurement, a second, modified BIM Project Execution Plan (BIM PxP) will be required to clarify the contractor's involvement to further develop and complete the project BIM and all related activities.

For projects utilizing BIM delivery, Consultant and Contractor will include 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 and is in line with our life cycle vision. 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, Uniformat 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. 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, Level of Development (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. An Introduction and directions for completion are described on the first page of the document.

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 consistent use and development of BIM across multiple building types and for a wide range of County agencies. Predictable and uniform data will help to ensure a building dataset that will facilitate ongoing building operation and maintenance protocols, and perhaps someday be called upon to provide usable and reliable data to support other SMART City / SMART County initiatives.

Table of Contents - Exhibit A - Scope of Work, Attachment 2:

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 definitions and identifications set forth below apply to this Attachment 2 unless the context, the Agreement, Exhibit A, Scope of Work 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 (sometimes redundantly identified as a BIM model). BIM is not a specific product or technology, instead it's a collection of software applications and processes designed to facilitate coordination and project collaboration through a facilities lifecycle. BIM is a digital representation of physical and functional characteristics of a facility and is used as 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.
- 1.6 **BIM Project Execution Plan (BIM PxP / 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 **CIM / Sub-Surface:** Civil Information Modeling and subsurface utility mapping that relates and is coordinated with the building modeling.
- 1.12 **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.
- 1.13 **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.
- 1.14 **Code Validation:** A process in which code validation software is utilized to check model parameters against specific codes.
- 1.15 **Commissioning:** The process of verifying in new construction that agreed upon building systems achieve the County's project requirements.
- 1.16 **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.

- 1.17 **Constructability / PEER Review:** Constructability can be defined as a review of the building model along with drawings, specifications to determine feasibility to assembly the project in the manner documented. The review includes, but does not limit, evaluating and identifying efficiencies, assemblies, systems and obstacles to construction.
- 1.18 **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.
- 1.19 **Coordination BIM:** A model prepared for the physical coordination of systems between disciplines, involving Clash Detection reports, Constructability reviews, virtual and/or personal coordination meetings with architects, engineers, consultants, construction manager(s) and sub-contractors.
- 1.20 **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.
- 1.21 **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.
- 1.22 **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, costs and schedules.
- 1.23 **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.
- 1.24 **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.
- 1.25 **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.
- 1.26 **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.
- 1.27 **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.
- 1.28 **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.

- 1.29 **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.
- 1.30 **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.
- 1.31 **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.
- 1.32 **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.
- 1.33 **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 co-ordination, 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.
- 1.34 **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>
- 1.35 **Information Manager:** The BIM Protocol refers to and provides for the appointment of an 'Information Manager' by the employer. 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. This is expected to form part of a wider set of duties under an existing appointment and is likely to be performed either by the Design Lead or the Project Lead.
- 1.36 **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 many aspects of IPD that are allowed by law.

- 1.37 **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.
- 1.38 **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.
- 1.39 **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.
- 1.40 **LOD:** Level Of Development Specification for Building Information Models. See Section 3 – BIM/CADD Standards of Care and the current edition (2019 or later), of the BIMForum LOD Specification for additional information. <http://BIMForum.org/lod>
- 1.41 **Maintenance & Repair Information:** A function to allow the collection and storage of maintenance and repair information about objects brought into a BIM.
- 1.42 **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.
- 1.43 **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.
- 1.44 **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. Most recent release date May 16, 2012. OmniClass uses MasterFormat and UniFormat as the basis of its Tables wherever possible. <http://www.omniclass.org/about>
- 1.45 **Owner Approval:** A business process which takes advantage of information stored in a BIM to help validate progress as well as observing that the Owner’s intent for the facility is being honored both conceptually and contractually.
- 1.46 **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.
- 1.47 **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.
- 1.48 **PxP:** Abbreviated form of (BIM PxP). See definition for BIM Project Execution Plan.
- 1.49 **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.
- 1.50 **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.
- 1.51 **Record BIMs:** The updated BIMs generated by the Architecture/Engineering Team of record that includes the Contractors' As-Constructed BIMs.
- 1.52 **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.
- 1.53 **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).
- 1.54 **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.
- 1.55 **Space Management:** A process in which BIM is utilized to effectively allocate, manage, and track space types, workspaces, occupancy and resources within physical assets.
- 1.56 **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.
- 1.57 **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.
- 1.58 **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.

- 1.59 **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.
- 1.60 **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.
- 1.61 **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.
- 1.62 **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 (CAVE) and/or through stereoscopic goggles and other specialized gear.
- 1.63 **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 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 (.dxf) 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 - Default
 - 2. Envelope (Curtainwall, Precast, Other) - Default
 - 3. Masonry - Gray
- b. Civil & Site Improvement Model
 - 1. TBD
- c. Structural Models
 - 1. Steel – Rust
 - 2. Concrete - Gray
 - 3. Masonry - Gray
- d. MEP/FP Models
 - 1. Mechanical Ductwork Supply - Magenta
 - 2. Mechanical Ductwork Return - Plum
 - 3. Mechanical Ductwork Exhaust – Medium Orchid
 - 4. Mechanical Piping Supply – Hot Pink
 - 5. Mechanical Piping Return- Violet
 - 6. Electrical Conduit - Orange
 - 7. Cable Tray- Yellow
 - 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 uses and information systems.
- b. No deviations from the Contract Administrator's established BIM/CADD standards will be permitted unless prior written approval of such deviation has been received from the Contract Administrator.
- c. County or its Owner's Designated Representative 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. County or its Owner's Designated Representative also reserves the right to review, accept or reject Facility Data deliverables when required by contractual agreements. To ensure successful integration into County's computer aided facility management 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 BIM/CADD file is placed on the delivery electronic digital media, the following procedures shall be performed:

- a. Detach all BIM's from the Central File.
- b. Ensure the proper and updated completion of all information on the 'Start Screen' page for all Revit models.
- c. Scrub and remove all unused or alternative versions, elements and objects from the model.
- d. Ensure that drawing sheets, viewports, paper-space, line weights, fonts, and other drawing components are correctly configured for Contract Administrator's viewing and plotting.
- e. Make sure all reference files are attached using a "relative" path setting and without device or directory specifications.
- f. "Transmit a Model" function should be used in Revit or 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.
- g. 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 to the Contract Administrator with the delivery media.
- h. 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 to the Contract Administrator as a part of the electronic digital deliverables.
- i. 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.
- j. 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.
- k. Include any standard sheets (i.e., abbreviation sheets, standard symbol sheets, or other listing) necessary for a complete project.
- h. 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 Submittal:

2.7.1 Document any fonts, tables, or other similar customized drawing element developed by Consultant or not provided among the Contract Administrator-furnished materials. The contractor shall obtain Contract Administrator approval before using anything other than the Contract Administrator's standard fonts, line-types, tables, blocks, or other drawing elements available from the Contract Administrator.

2.8 Submittals / Deliverables:

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

2.8.2 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.

2.8.3 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.

2.9 Ownership:

2.9.1 County has ownership and all rights to all finished or unfinished Digital Deliverables developed for this Project. Any Digital Deliverables generated under any County design and construction Contract, 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.

2.9.2 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.

2.9.3 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.

2.9.4 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.

2.9.5 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.

2.10 Contract Administrator-Furnished Materials to the Construction Contractor:

2.10.1 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.

2.11 Other Digital Information:

2.11.1 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.

2.11.2 Consultant shall facilitate and participate in this digital exchange of information by conforming to the standards expressed above and as further described in attachments and Exhibit A Scope of Works.

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/loa>), 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)

- b. **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.
- c. **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 1-1/2" 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.
 2. Elevator Equipment. All necessary equipment and control systems, including necessary intelligence to produce accurate plans, sections and elevations depicting these design elements.
- 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 1-1/2" Ø) 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., security, mass notification, public address, 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, 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, relevant existing and proposed support utility lines and equipment with necessary intelligence to produce accurate plans, details and schedules.
 6. 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. All fire protection piping shall be modeled.

- i. **Security**. Both facilities require a level of security to ensure record and evidence integrity. 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 systems (BDA)** – Antennas, trunk lines, branch line, control boxes, repeaters, emergency or redundant power sources, primary interface components, & home run room.
- 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 (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 (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.

- I. **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:
 1. **Terrain (DTM).** All relevant site conditions and proposed grading, including necessary intelligence to produce accurate Project site topographical plans and cross sections.
 2. **Drainage.** All existing and new drainage piping, including upgrades thereto, including necessary intelligence to produce accurate plans and profiles for the Project site.
 3. **Storm Water and Sanitary Sewers.** All existing and new sewer structures and piping, including upgrades thereto, with necessary connections to mains or other distribution points as appropriate, including necessary intelligence to produce accurate plans and profiles.
 4. **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.
 5. **Roads and Parking.** All necessary roadways, parking lots, and parking structures, including necessary intelligence to produce accurate plans, profiles and cross-sections.
 - m. **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. Provide Non-geometric information may also be attached to modeled elements. Facilities Management information 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 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.

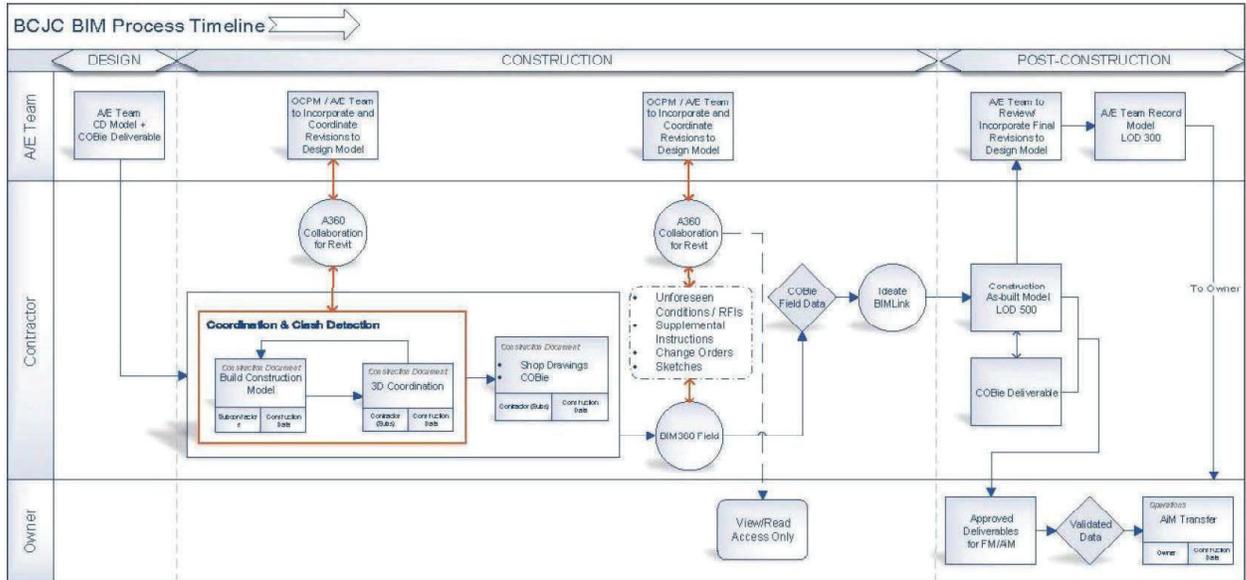
3.6.4 The design & construction teams shall submit a written BIM PxP subject to review and written approval by County prior to proceeding with the process. The BIM PxP will outline all methods and procedures for collaboration between the design and construction teams as well as coordination of VDC/BIM efforts of the subcontractors. The Contract Administrator, Design Team and all sub-consultants 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

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 Use Agent Responsibility Matrix**

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 should be explained by the Consultant in the BIM PxP, Section F. Roles, responsibilities and timing are to be documented.

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
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

BIM Use	County Intent
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 Design 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 “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. Cost estimating – Level 1 thru 4
- e. Construction Schedule & Duration
- f. 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 Design 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 Construction 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 a Federated, 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 Federated 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 Federated 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 heavy 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
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).	
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.	

BIM Compliance Checklist	
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.	

3.13 Responsibilities Related to the Final Record BIM

3.13.1 Design Team Responsibilities

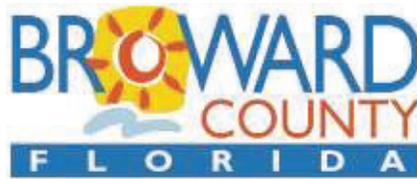
- a. The Design Team will update the Architectural and Structural Design Models as changes occur throughout the construction phase, incorporating all updates and/or revisions to the models as necessary to reflect design changes initiated by Architectural Supplemental Instructions (ASI), Request for Information (RFI), Conformed Documents, 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 Construction 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

Insert Project Name Here in Black Font

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 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.*

BIM PROJECT EXECUTION PLAN

FOR

Insert Project Name Here in Black font

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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 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

1. Client Name: Broward County Construction Management Division
2. Project Name:
3. Project Location and Address:
4. Contract Type / Delivery Method: Managing General Contractor (MGC)
5. Brief Project Description: Refer to Exhibit A, Scope of Work
6. Additional Project Information: none
7. Project Identification Numbers: *Please complete table below*

Team Member	Project Number
Broward County Construction Management Division	
Architect	
MEP Engineers	
Structural 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			
50% CD's			
County Review & Comments			
Design Team Review & Resubmit			
__% 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	Existing Conditions Model		Per BIM PxP	Native & IFC (2x3) files

MGC Agreement
MEO-BSO Crime Laboratory Combined Facility & RFP # PNC2119546P1

(09/25/2019)

Exhibit A, Attachment 2
BIM and Electronic Media
Submittal Requirements

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Development	Design & Analysis Models - Updated BIM PxP Coordination Reports BIM Compliance Checklist			Native & IFC Native & PDF 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	Federated 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:

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.

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

Titles	Roles in Design	Roles in Construction
Broward County Construction Management Division	<ul style="list-style-type: none"> BIM Oversight and Compliance Reviews 	<ul style="list-style-type: none"> BIM Oversight and Compliance Reviews
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						
Design4Maintenance 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

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

A 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 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 be used as required 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

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
	WATER COOLER	23-31 31 00
ELECT Model	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
	VARIABLE FREQUENCY DRIVE	23-35 17 15
	VARIABLE SPEED DRIVE	23-35 17 00
MECH Model	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
	PERIMETER GATE	23-11 25 15
CONSULTANT	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	

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.

Section J: Collaboration Procedures

Collaboration Strategy:

Provide a brief, general description of how the project team will collaborate. Include items such as 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.
Design4Maintenance		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			On-site	General Guidelines for model laying, area, trade sequencing and reserved zones.
Design4Maintenance			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			
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	
Removal of Unused Design Options	
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	
Resolve duplicate elements	

Section K.2 - Document Revisions

Revisions to documents will be tracked as follows:

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

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 MEPPF	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

PHASE	DISCIPLINE	TOLERANCE
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
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

MGC Agreement
MEO-BSO Crime Laboratory Combined Facility & RFP # PNC2119546P1

Exhibit A, Attachment 2
BIM and Electronic Media
Submittal Requirements

- 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				
Clash Detection				
Energy Analysis				

Cost Analysis				

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	

FILE NAMES (Construction Models)	
Steel Model	
Mechanical Model	
Plumbing Model	
Electrical Model	
Construction Model	
Coordination 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.

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	Core	Elevators, Stairs
Arch	Interior-B	Basement Interior Fit-out
Arch	Interior-1	1 st floor Interior Fit-out

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.

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Approvals:

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

DISCIPLINE	NAME	SIGNATURE	DATE
Broward County Construction Management Division			
Architect			
Mechanical Engineer			
Electrical Engineer			
Plumbing Engineer			
Fire Protection Engineer			
Structural Engineer			
Civil Engineer			
Surveyor			
Geotech/ Soil borings			
BIM Consultant			
Construction Manager			
Construction Consultants			
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.

Model Progression Schedule/Agent Responsible Matrix
(“Model Element Table” Tab - Partial Example)

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

Fundamental LOD Definitions		
LOD 100 - Massing / Planning Level		
<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>BIMForum Interpretation: 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>		
LOD 200 - Generic Design Level		
<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>BIMForum interpretation: 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>		
LOD 300 - Design Coordination Level		
<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>BIMForum interpretation: 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>		
LOD 350 - Construction Coordination Level		
<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>BIMForum interpretation: 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>		
LOD 400 - Fabrication Level		
<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>BIMForum interpretation: 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

Preconstruction Services Agreement
EXHIBIT A SCOPE OF SERVICES
ATTACHMENT 3: Preliminary Scheduling Procedure

Preparing a Schedule for Your Project or Task

Most projects involve many people doing many different tasks at different times. These tasks form a complex web of interdependencies—with each task crucial to the overall success of the project. Organizing these tasks, and the people assigned to perform them is a daunting challenge.

A technique used often in the development of project schedules is called “Storyboarding”. This technique can be used during the design phase, construction phase or at any other time during the project's life when a schedule is needed. It is most useful as a preliminary activity in the development of complex Critical Path Method (CPM) schedules.

Storyboarding is a simplistic solution to a complex problem; that is, how to identify all the tasks that must be accomplished to meet project objectives. In most cases the end objectives are well defined; however, the plan to achieve those objectives remains vague and spread across various responsibilities. The “storyboard” attempts to identify all the tasks needed to obtain these objectives along with the interrelationships between these tasks. When developing schedules, and in particular a 'storyboard' generated schedule, two major points must be followed:

- 1) The tasks must be well defined. Tasks with definable end results is a requirement.
- 2) The same tasks must have some level of accountability assigned to them. For each definable task, a person or organization must take ownership to the task.

The key to any successful schedule development is cooperation. By viewing this process as a team function and stressing ownership in its development, a successful end product will result.

The contents of the sections which follow should serve as a guide to anyone wishing to create a "storyboard" for their own projects or tasks.

Setting up - Pre-Storyboard Meeting:

If the storyboard is to be created for the first time on the project, it is very important that a meeting be held prior to the actual storyboarding meeting. At this meeting all the participants will have the storyboard process explained to them. Each participant will be given 3" x 5" colored index cards (See Fig. A). The color will vary with each participant, for example, the Owner will receive red cards, Consultant green, Contractor white, etc. (using a typical construction project scenario). The participants should include everyone who has anything to do with the project. Each card should have a specific activity, the time to complete the activity, the number of people

required to complete it (manpower), what the preceding number must be before this one can start, and what activities following will be; in other words, the predecessor and successor to this activity.

The reason for requesting resources is to allow resource analysis; that is, we want to make sure that the participants are staffing the project properly. Resource allocation to the activities is important, however, should the cards not include the required resources to perform that task, proceed with the storyboarding. Don't distract the process of developing the schedule for the lack of resource definition. Remember, the main objective is to develop a logical schedule, using definable and "monitorable" tasks that have a level of accountability assigned to each task.

(It is important however, to point out to the participants who fail to assign resources that many task schedules fail due to inadequate or improper assignment of resources.)

The card should be laid out as shown in Figure A.

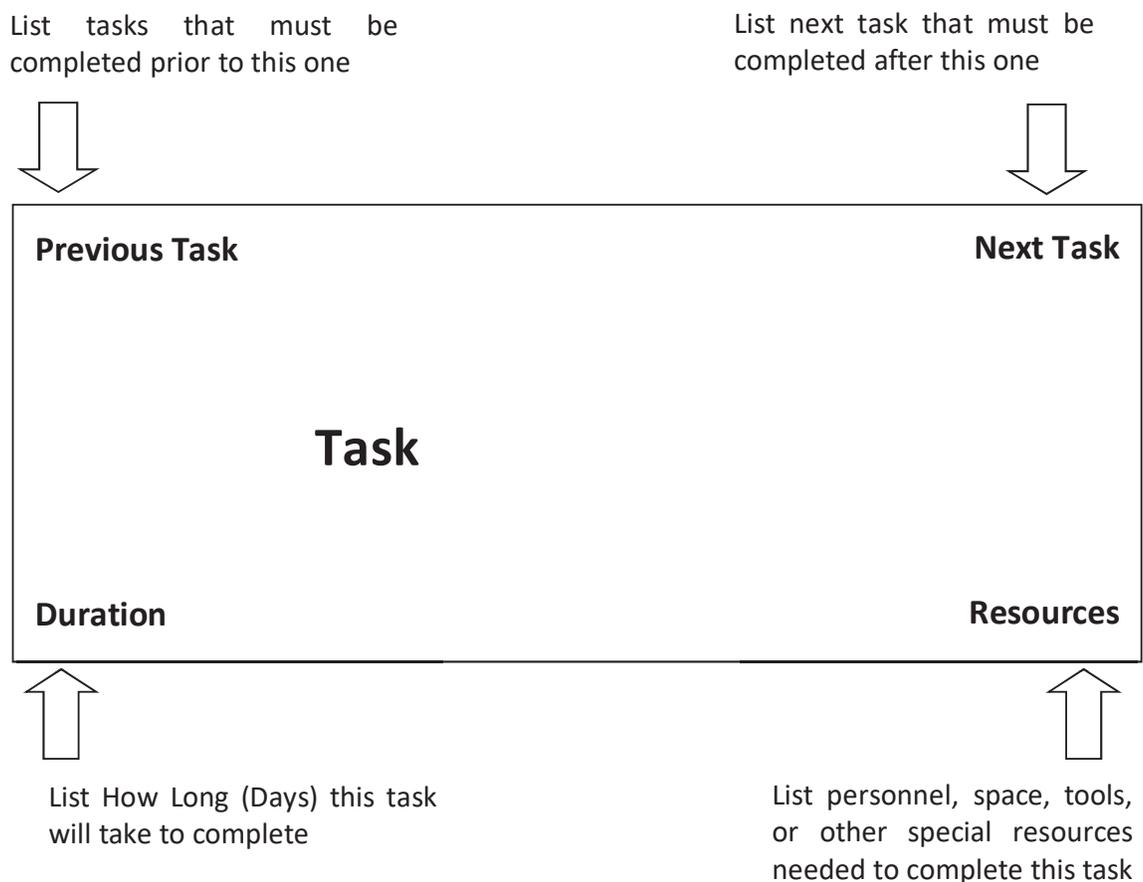


Figure A: Task Card Layout

Note that if this is the second or third time for a storyboarding session, you would just have to advise the participants that a new storyboarding meeting will occur and prepare for it like they did on the first one. Make sure to set the date for the storyboarding so that everyone involved can be present.

If this is a construction storyboard, you must try not to get into so much detail in one sitting as to stop the meeting with insignificant information. The best way is the simplest way.

Calendar Preparation:

One of the first steps for the storyboarding is defining the total length of time this particular portion of work will be scheduled. One technique is to lay out on plain brown wrapping paper a calendar (as shown in Figure B) with each month approximately 36 inches in length. Depending on the amount of detail and size of the project, you can either use one or two widths of paper.

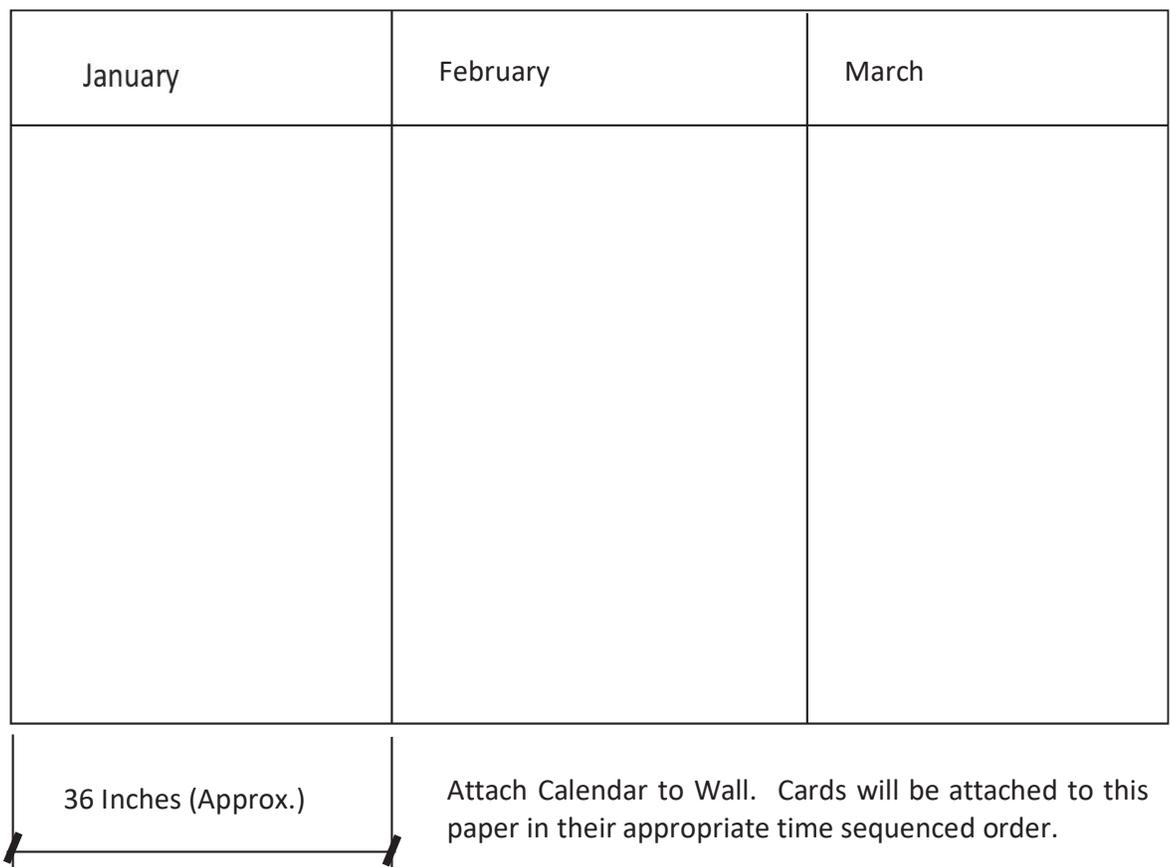


Figure B: Calendar Layout

Keep in mind when preparing this calendar that it will be attached to a wall in order to allow all

participants to attach their activity cards to this paper. Another item to remember is that you must carry this back to your office so you do not want to make it so wide as to make it impossible to carry.

The Storyboard - Who Starts It?

After taping or thumbtacking the calendar to the wall and after a brief explanation of what the storyboard is, you are ready to start. It is important that there be one person who runs the show, usually the Scheduler or Project Manager. This person will answer questions and try to solve any problems that might occur during the storyboarding meeting.

It is imperative that the person who takes charge of the proceeding should have knowledge of the project being scheduled. Not having adequate knowledge of the project will eventually show up in the dialogue that results during the development of the schedule.

One way to start the storyboard is for Contractor, Consultant or Contract Administrator (or other primary project task holder) to put their cards on the calendar. This will force the other participants to speak up to protect their own interest. The key here is to invite the participants up to the calendar to lay out their portion of the work.

Another method is to put on the calendar specific milestones. For instance, in the case of office construction, when does the Owner need occupancy, etc. Once these milestones are established, the other participants can step up to the calendar and fill in with their activity cards the work that has to be done to meet these milestones. You will find that once somebody has started the storyboard, the other members usually pitch in and want to get up and start doing their part to make the storyboard successful.

Continue putting cards on the wall until all participants have none left to put up. We are now ready for the review process.

Review Process (Storyboard Meeting):

Once all the cards have been placed on the wall, take a break. While participants are taking a break, the Scheduler and the project manager will review by themselves the results of the storyboard. This time should be used to review what has been developed and which areas need elaboration or clarification. Upon returning from the break, the Scheduler will advise the participants as to any additional activities or any errors that might have occurred. Each participant should then present before the entire team the cards they have put on the wall. Participants should outline to the team what they have written down on their cards and how they see their portion of the work as taking place.

If there are any changes to the storyboard, now is the time to make them. Advise the participants that it is their schedule, one that they will have to live with so it is in their best interest to watch closely how others are doing work that might have some impact on work that they have to do.

The Scheduler or the project manager will set the date of the next meeting where the storyboard, which will be in the form of a time phased network, will be reviewed and agreed to. The participants will be given an opportunity to 'buy in' to the schedule, stressing that it is a team process. At this time we also want to broad brush the total project before all the participants to keep them reminded of the end objective, or any other major milestones.

Time Phase Network Preparation:

The next step is for the scheduler to develop the network from the storyboard. The method usually employed is time scale networks. The reasons for time scale are:

1. Always shows the flow of the activities in a logical manner.
2. Shows quickly the critical path.
3. Shows overlap of activities and density of activities at any given period of time.

Review Process (After the Storyboard):

At the next meeting, the Scheduler and Project Manager in charge of the project will review with all the participants the schedule that was developed from the storyboard. Any adjustments to the schedule by the participants should be brought up now or the schedule will be understood to be accepted by all members. Once all the members agree to the schedule, we can then formally issue the project schedule.

We can only stress that all participants should take ownership of their portion of the schedule. Only then do we find that cooperation to meet the objective is fully achieved.

Summary:

Keep in mind that as the project progresses, the participants and the amount of detail changes. Therefore, the storyboard can be done at any phase of the schedule. The basic philosophy that we want to adhere to is a forward movement in our project planning; identifying key elements with a 90 to 120 day horizon in the future (and looking towards the end of the project). Getting **more** detail as the detail becomes available. The reason the storyboard works is because the input is provided from the people that are actually going to do the work. We, as the Schedulers and Project Managers, act as a medium to show and advise the project team on how we plan to meet the project objectives. We do not attempt to develop the schedule without the teams' input. We know from experience what should be on the cards at the storyboard and it is up to us to advise the people who are participating in the storyboarding that we do know what the activities should be.

End of Exhibit A – Attachment 3: Preliminary Scheduling Procedure

Preconstruction Services Agreement
EXHIBIT A SCOPE OF SERVICES
ATTACHMENT 4: Value Engineering Procedure

I. General Requirements:

A. Overview

1. Consultant, as a result of Contractor's Constructability Review or Construction Cost Estimate and in order to control costs, shall perform Value Engineering (VE) services and submit any resulting Value Engineering proposals to Contract Administrator.

2. Value engineering activities shall be performed concurrently and in conjunction with, and without delay to, Consultant's design activities. The services shall include VE evaluation, review and study of design documents (including the structural, architectural, mechanical, electrical and plumbing systems and elements proposed for the building, site and other associated construction) prior to Consultant's completion of the project's schematic design documents, at the end of the Design Development Phase and at such stages as Contract Administrator may direct.

3. VE services may include VE studies of items other than design documents.

4. Consultant shall be paid as the agreement specifies for this effort, but shall not share in savings that may result from acceptance and use of VE Proposal's by County.

B. Definitions:

1. "Life Cycle Cost," (LCC) as used in this article, is the sum of all costs over the useful life of a building, system or product. It includes the cost of design, construction, acquisition, operation, maintenance and salvage (resale) value, if any.

2. "Value Engineering" (VE), as used in this article, means an organized effort to analyze the functions of systems, equipment, facilities, services and supplies for the purpose of achieving the essential functions at the lowest life cycle cost consistent with required performance, reliability, quality and safety.

3. "Value Engineering Proposal", as used in this article, means, in connection with Contractor's agreement, a change proposal developed by Contractor and its VE team.

C. Value Engineering Team

1. Not later than twenty (20) days after receipt of the Notice To Proceed with Preconstruction Services from Contract Administrator, Contractor shall identify and submit for Contract Administrator's approval a person who shall serve as the VE Team Coordinator and a

list of VE team members and their respective resumes representing the design and construction disciplines required to complete the VE study effort. Subsequent changes or substitutions to the approved VE team shall be submitted in writing to Contract Administrator for approval.

2. The VE Team Coordinator (VETC) may be one of Contractor's personnel or a Consultant to Contractor and shall be responsible for pre-study preparations, assembly of required study materials, coordination of team members, conducting and providing administration of team meetings. The VETC shall produce, audit, reproduce, and sign and distribute the final VE report and each VE Proposal.

II. Contractor's Preparation for VE Workshop(s):

A. Coordination Meeting. A coordination meeting between Contract Administrator, Consultant, Contractor and Value Engineering Team Coordinator (VETC).

1. The VETC shall conduct this meeting prior to each VE Workshop. The meeting is intended to promote a common level of understanding about the objectives and constraints of the VE workshop, establish a productive working environment, confirm the schedule of events, and coordinate the handling of material.

2. Items discussed during the meeting shall include the availability and format of technical and cost data, agenda of the VE workshop, processing of the VE recommendations, plus the date, location, and other logistical arrangements for the VE workshop.

B. Accumulation of the project's technical and cost data.

1. Contract Administrator will assist in supplying project data to the VETC at least two weeks before the VE workshop to allow sufficient time for review and development of the VE study models. The technical data consist of the functional space program, engineering reports, design calculations and all current drawings and specifications. The cost data shall consist of any project cost estimates, project budgets, and any special cost studies that may have been produced by Contract Administrator, Consultant or Contractor.

2. Material required for the Concept (Schematic Design) Workshop: The purpose of the Concept Workshop at the schematic design stage is to establish basic design approaches such as building massing, functional relationships, space allocations and schematic layouts. In addition, basic building systems concepts should be established as well as any special requirements including environmental, safety and historic preservation. Contract Administrator, assisted by Consultant and Contractor, will endeavor to provide the following materials to the VETC in preparation for this workshop:

- a. Initial phasing/scheduling plans
- b. Functional space program
- c. Gross and occupiable area analysis

- d. Drawings including block layouts, building siting, preliminary elevations and sections
- e. Narrative descriptions of major building systems and basis of design
- f. Renderings, perspectives and model photographs
- g. Special studies, statistical reviews and calculations
- h. Boring logs, soil reports or preliminary analysis
- i. Preliminary narrative specifications
- j. Cost estimate and cost studies
- k. Utility rate guidelines
- l. Planned building operating profile
- m. Utilities available to site

3. Material Required for the Design Development Phase Workshop: The purpose of Design Development Workshop is to establish final layouts and appearance of the facility and to determine major building system selections. Most special requirements should be finalized or under study and approaching completion. Contract Administrator, assisted by Consultant and Contractor, will endeavor to provide the following materials to the VETC in preparation for this workshop:

- a. Drawings including architectural, civil/site, structural, mechanical and electrical
- b. Preliminary specifications
- c. Preliminary phasing/scheduling plans
- d. Design calculations
- e. Boring logs and soil reports
- f. Gross and occupiable areas analysis
- g. Utility rates
- h. Energy studies
- i. Life cycle cost studies
- j. Building operating profile
- k. Construction cost estimate
- l. Construction market survey

C. Providing logistical arrangements for the VE workshop.

1. Once the VE team(s) selection is finalized, the VETC shall distribute or otherwise make available selected technical and cost data to each team member for a brief review prior to the workshop. The pre-workshop review should typically allow for 2 to 4 hours per team member. This review is intended to briefly familiarize the participant with the Project.

2. The VETC shall coordinate with Contract Administrator to select and reserve a space for the workshop meeting. The VE workshop shall be located at a site within a County-owned facility or other facility with prior approval of Contract Administrator. Prior to a VE Workshop, the VETC shall visit the meeting location with a representative of Contract Administrator to ensure the adequacy of the meeting space.

3. The VETC shall ensure that VE team members have visited the Project site prior to a scheduled VE Workshop.

4. The VETC shall arrange for a laptop or other computer with appropriate software and peripherals that may be required during the VE workshop. VETC may inquire as to Contract Administrator's ability to provide limited computer support.

5. Flip charts, markers, and easels shall be provided by the VETC.

D. Preparation of initial cost, energy, and life cycle models.

1. Cost Model: The VE Cost Model is a study tool presenting both estimated and target construction costs distributed by subsystem or functional area. Target costs shall be determined during the VE workshop and shall represent the VE team's estimate of the least cost to perform the function of each subsystem or functional area. Large differences between estimated costs and target costs shall be identified as areas with potential for cost savings or value improvement.

2. Energy Model: The VETC shall assemble an energy model for the VE team to use in a similar manner as the cost models. Energy models shall present displays of energy consumption for the facility subsystem or functional area and shall typically express energy in units of KWH per year. Target energy consumption estimates shall be assigned to each subsystem or functional area by the VE team during the VE workshop and represent the least possible energy consumption for each subsystem or functional area based on historical energy data and the VE team's experience. The energy model is not intended to provide a precise projection of energy demand or cost. The energy model's primary purpose is the rapid identification of energy intensive areas that offer a high potential for energy reductions and cost savings. Large differences between estimated energy costs and target energy costs shall be identified as areas with potential for cost savings or value improvement.

3. Life Cycle Cost Model: The VETC shall assemble a life cycle cost (LCC) model to illustrate the total cost of ownership of the new facility. The LCC model shall provide a complete cost picture and shall serve as a baseline for the VE team's determinations of the cost impacts of VE recommendations. The interest or discount rate used to prepare LCC models should be an appropriate value established by Contract Administrator, Contractor, and the VETC.

E. Distribution of the technical and cost data to VE team members.

III. The VE Workshop

A. The VE workshops are the major activity during the VE study and shall be conducted by the VE Team to achieve the following goals:

1. To provide an organized team approach that allows the VE team to analyze a project by quickly identifying high cost to worth areas and selecting alternatives which minimize costs while maximizing quality.

2. To encourage the VE team to think in a creative manner, i.e., to look beyond the use of common or standard approaches.

3. To emphasize total ownership costs (life cycle costs) for a facility, rather than just initial capital costs.

4. To leads the VE team to develop a concise understanding of the purposes and functions of the facility.

B. The systematic methodology used by the VE team to accomplish the VE workshop shall be defined as the VE Job Plan and shall consist of the following five distinct phases:

1. **Information Phase:** During the Information Phase, the VETC and VE team shall solicit comments on the technical and cost data to develop an overall understanding of the project's functions and requirements. The Information Phase shall consist (as a minimum) of the following activities:

a. **Oral Presentation:** The VETC shall facilitate an oral presentation by Contract Administrator, using agency, Consultant and Contractor on the first morning of the workshop to provide the VE team with an understanding and appreciation of the factors that have influenced the Project's design. This oral presentation shall serve to open the lines of communication between the VE team members, Contract Administrator, and Contractor. The oral presentation should include:

i. Contractor's rationale for the project's development, including the assumptions used to establish the building program, design criteria and to select the project's materials and systems.

ii. Contractor's description of the rationale, evolution, constraints and alternatives, for the major design components.

iii. Contractor's description of the difficulties encountered during the design of the Project.

b. **Function Analysis:**

i. The "function analysis approach" shall be used to arrive at the basic purpose of building systems and sub-systems and to assist the VE team in determining the least costs to perform primary functions and peripheral or support functions while identifying costs which can be reduced or eliminated without affecting the performance or reliability of the facility. The function analysis shall be completed as follows:

- a. Identify the study area(s).
- b. Identify the basic verb/noun function of the study area.
- c. List the component parts of the study area.
- d. List the verb/noun function of each component and subcomponent.
- e. Identify whether each function is basic, secondary, or a required secondary function.
- f. Identify the estimated construction cost of each function.
- g. Speculate on the worth or the least cost to accomplish the function.

ii. The VE Team shall analyze the function of building systems and sub-systems by creation of two-word noun-verb descriptions of those functions. The VE team shall identify and analyze both basic functions (the specific task or work it must perform), secondary function(s) (functions that may be desired but are not actually required to perform the specific task or Work) and required secondary functions (functions are absolutely necessary to accomplish the specific task or Work, although they do not exactly perform the basic function) for selected building systems and sub-systems.

iii. For each selected building system and sub-system, the VE Team shall ask and document answers to the following questions in relation to the functions of an item/area:

- a. What is its purpose?
- b. What does it do?
- c. What is the cost?
- d. What is it worth?
- e. What alternative would accomplish the same function?
- f. What would that alternative cost?

iv. The function analysis shall identify functional areas sequentially and hierarchically as functions vary according to the selected area (from the total facility to the building elements, systems and sub-systems).

v. The function analysis shall establish an estimate of the worth of each subsystem or component for comparison with its estimated cost. Since worth is an indication of the value of performing a specific function, extreme accuracy in estimating the worth is not critical. Worth shall be used as a mechanism to identify areas of high potential savings and value improvement. Subsystems performing secondary functions have no worth because they are not directly related to the basic function.

vi. The VE team shall make a comparison of the cost-to-worth ratios for the total facility and its subsystems. These cost-to-worth ratios are obtained by dividing the estimated cost of the system or subsystems by the total worth for the basic functions or the system or sub-system. High cost-to-worth ratios suggest areas of large potential cost savings and identify systems or sub-systems that would be selected for further study by the VE team. Similarly, low cost-to-worth ratios indicate areas where further study efforts

would probably not be justified due to diminished potential for cost savings. Cost-to-worth ratios greater than two usually indicate areas with the potential for substantial cost savings and value improvement and shall be considered for further study.

vii. Fast Diagramming: The VE Team shall provide graphics indicating the logical relationship of the functions of an item, subsystem, or facility in the form of FAST (Function Analysis System Technique) Diagram(s). The FAST diagram shall be a block diagram based on answers to the questions of "Why?" and "How?" for the item under study.

2. Speculation/Creative Phase

a. The VETC shall conduct a group interaction process that the VE team will use to identify alternative ideas for accomplishing the function of systems or subsystems associated with specific study areas. This phase involves an open discussion without any restrictions on the imagination or inventive thinking of individual team members. All analysis, evaluation, or judgment of the ideas generated is delayed until the Evaluation/Analytical Phase.

b. The VETC shall record and list ideas by system, subsystem, and component to facilitate effective organization of the study. The objective of the Speculative/Creative Phase is to generate a completely free interplay of ideas between team members to create an extensive list of alternative ideas for later evaluation. The VETC shall facilitate the discussion and ensure the deferral of any critical judgments or comments that might inhibit any of the team members.

c. The VETC shall encourage and solicit the active participation of all VE team members in the creative development of ideas. The VETC is responsible for maintaining a climate for the free exchange of ideas by directing the team members away from discussion or arguments about relative merits of individual ideas.

3. Evaluation/Analytical Phase:

a. During the Evaluation/Analytical Phase, the ideas developed in the Speculative/Creative Phase shall be examined to assess which have the best opportunity for implementation, cost savings, and value improvement. The VE team shall evaluate the feasibility of each idea by identifying and documenting its advantages and disadvantages. The ideas shall then be rated on a scale of one to ten. A ten represents either the best technical idea or the one with the greatest potential for cost savings and value improvement.

b. In ranking ideas, the VE team should consider the following:

- i. Are the aesthetic, performance, quality and reliability requirements met or exceeded?
- ii. Will excessive redesign or project delay be created?
- iii. Is there improvement in operation and maintenance?
- iv. Will life cycle cost savings be achieved?

- v. Does the idea have a reasonable chance of acceptance and implementation?
- c. The VE Team shall provide more detailed investigations of the highest rated ideas in the Development/Recommendation Phase.

4. **Development/Recommendation Phase:**

a. The VE Team shall develop the best ideas from the Evaluation/Analytical Phase into workable VE Proposals. The VE team shall research and develop preliminary designs and life cycle cost comparisons for the original designs and the proposed alternative ideas. The VE Team shall coordinate and consult with outside experts, vendors, and reference sources to obtain additional evaluation information before developing the VE Proposals.

b. The development of an idea into a proposal shall include the following steps:

- i. Description of the original design and the alternative idea.
- ii. Sketch of the original design and the alternative idea.
- iii. Discussion of the advantages and disadvantages of the alternative idea including its impact on life cycle costs and other key facility issues.
- iv. Preparation of a cost estimate and a life cycle cost analysis if necessary, for the original design and the alternative idea.
- v. Recommendation of preferred approach.

c. The VE team shall convey the concept of each VE Proposal in a clear and concise manner to avoid its rejection due to a lack of understanding by Contractor or Contract Administrator. While preparing VE Proposals, the VE team shall work with Contractor to understand and reflect Contractor's perspective for design, value, reliability, cost effectiveness and implementation.

d. Each alternative idea shall be presented as a single independent VE Proposal and recommendation. Each VE Proposal shall be consecutively and uniquely numbered. Multiple ideas shall not be grouped together into a proposal unless there is a technical advantage to doing so.

e. VE Proposal preparation. As a minimum, Contractor shall include the following information in each VE Proposal:

- i. A description of the difference between the existing and proposed design, the comparative advantages and disadvantages of each, a justification when an item's function is being altered, the effect of the change on system or facility performance.
- ii. A list and analysis of design criteria or specifications that must be changed if the VE Proposal is accepted.

- iii. A separate detailed estimate of the impact on project cost of each VE Proposal, if accepted and implemented by the Government.
- iv. A description and estimate of costs the Government may incur implementing the VE Proposal, such as design change cost and test and evaluation cost.
- v. A prediction of any effects the proposed change may have on life cycle cost.
- vi. The effect of the VE Proposal will have on the design or construction schedules.

5. Report Phase

a. The Report Phase shall consist of both an oral and written presentation of the results from the VE study.

b. Oral Presentation: The VE Team shall present VE Proposals in an oral presentation on the last day of the VE workshop. The oral presentation should be a relaxed and informal meeting which lasts approximately one to three hours. The presentation shall provide an opportunity for Contract Administrator and Contractor to discuss the VE Proposals with the VE team. To facilitate the oral presentation, the VETC shall:

- i. Provide a summary of the VE Proposals to Contract Administrator, Contractor and VE team members during the oral presentation so they can commence their review and analysis prior to the receipt of the VE report.
- ii. Initiate the presentation with an overview of the VE study and a summary of the VE Proposals including the potential cost savings.
- iii. Describe the major factors which influenced the VE study.
- iv. Moderate a brief description of each VE Proposal.
- v. Facilitate questions and answers concerning the VE study.

c. VE Report: The VETC shall prepare a written report which summarizes the results of the entire VE study and submit ten (10) copies of that report to Contract Administrator not later than fourteen (14) days following the Oral Presentation concluding the VE Workshop. The VE Report will be used by Contract Administrator and Contractor in their review and evaluation of the VE Proposals. The VE Report shall contain at least the following information:

- i. Cover Sheet
- ii. Signature Page and Acknowledgments
- iii. Executive summary
- iv. Project name and general description and summary functional space program
- v. Scope of the VE study
- vi. Names of Contract Administrator and its staff representatives, Contractor and its representatives, Contractor and its representatives, and other VE team members and their related responsibilities
- vii. Location and date of the workshop
- viii. List of the data provided by the A-E
- ix. Project objectives and constraints

- x. All cost, energy, and life cycle models, and worksheets from the Job Plan phases
- xi. Summary of VE Proposals and cost savings
- xii. Specific VE Proposals with supporting documentation
- xiii. Appendix with additional information that the VETC may find appropriate.

IV. Post-Workshop Activity

A. The post-workshop VE activity will include a thorough review and evaluation of each VE recommendation presented in the VE report by Contractor. Contractor and Contract Administrator shall determine which VE items are to be pursued further after which Contractor shall prepare the VE Implementation Summary Acceptance Report.

B. Contract Administrator and Contractor will evaluate each VE Proposal on the basis of technical, operational, and life cycle cost savings considerations and may consult with the VETC to clarify any questionable items that arise during their review of the VE Proposals. The VETC shall answer questions posed and shall provide clarifying information that may be requested by either Contract Administrator or Contractor.

C. Contractor will make recommendations to Contract Administrator concerning acceptance or rejection of VE Proposals. Contract Administrator, at its sole discretion, may accept or reject any VE Proposal in whole or in part.

D. VE Implementation Summary Acceptance Report:

1. Once all the VE Proposals have been reviewed, this report is prepared by VETC to summarize the results of the action taken on each of the VE Proposals. The VE implementation summary report and the VE report serve as the complete documentation for the VE study. Separate sets of reports must be prepared for each VE study conducted on the Project.

2. The VE Implementation Summary Acceptance Report shall include:

- a. A brief description of the Project, the scope of the VE efforts, and the timing of the study.
- b. A summary list of the accepted and rejected VE Proposals. Identification numbers from the original VE report should be carried forward.
- c. An implementation schedule (prepared by the VETC in collaboration with Contractor) for incorporating the accepted proposals into the design.
- d. An analysis (prepared by the VETC in collaboration with Contractor) of the value improvement effect of VE Proposals. This can be done in a summary form or by individual proposal(s).

V. VE Worksheets and Forms: Sample VE Worksheets and Forms for use during the VE Workshop will be available upon request from Contract Administrator.

End of Exhibit A – Attachment 4: Value Engineering Procedure

**Preconstruction Services Agreement
EXHIBIT A SCOPE OF SERVICES
ATTACHMENT 5: Subcontractor Award Recommendation**

BROWARD COUNTY
FLORIDA
Broward County Commission
Construction Management Division
115 South Andrews Avenue, Room A550
Fort Lauderdale, FL 33301
Phone: (954) 357-6419
Fax: (954) 357-6411

Document 01000a: MGC Subcontractor Award Recommendation

To: Contract Administrator (Through Project Consultant)
Recommendation No.: _____ Date: _____

Project No.: _____
Project Title: _____
Facility Name: _____

Scope of Work:

Subcontractors/Vendors:					
Base Bid					
Scope of Work Adjustments:					
1.					
2.					
3.					
Alternates:					
1.					
2.					
3.					
Total Bid:					
CBE Certification:	<input type="checkbox"/> Certified CBE				
Notes:					

MGC's Recommendation:

Recommended Subcontractor/Vendor: _____
Contract Amount: \$ _____
Budget: \$ _____
Difference: \$ _____

Submitted By:
Signature: _____
Printed Name: _____
MGC Firm Name: _____

Consultant's Recommendation
We have reviewed the MGC's Subcontractor/Vendor Recommendation and
 Concur
 Do Not Concur (Attach Explanation)

Signature: _____
Printed Name: _____
Firm Name: _____

Contract Administrator's Approval
I have reviewed the bidding recommendations and
 Approve Disapprove
 Select the following Preferred Subcontractor

Firm Name: _____
Contract Amount: \$ _____
Budget Difference: \$ _____
Signature: _____
Contract Administrator

**Exhibit B-E
Estimated GMP**

The following amounts reflect the Estimated Contract Price Elements and Approved GMP:

Contract Price Element	Estimated Value
A. Pre-construction Services	\$ 957,190
B. Estimated Direct Construction Cost	\$125,100,000
C. Estimated General Conditions Cost	\$ 18,765,000
D. Estimated Fixed Fee (3.5%)	\$ 5,035,275
E. Estimated Owner's Allowance Account	\$ 6,255,000
Total GMP	\$ 156,112,465

**Exhibit B-R
Reconciled GMP**

The following amounts reflect the Reconciled Contract Price Elements and GMP Amounts, following the bidding process in Exhibit A:

Contract Price Element	Reconciled Value
A. Pre-Construction Services	\$
B. Reconciled Direct Construction Cost	\$
C. Reconciled General Conditions Cost	\$
D. Reconciled Fixed Fee (3.5%)	\$
E. Reconciled Owner's Allowance Account	\$
Total GMP	\$ Amount approved by the Board

Exhibit 1-E: Estimated Direct Construction Cost

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY »

Project Number: «104134 »

#	DESCRIPTION	ESTIMATED VALUE
1	Estimated Direct Construction Costs	\$ 125,100,000
2		\$
3		\$
4		\$
5		\$
6		\$
7		\$
8		\$
9		\$
10		\$
11		\$
12		\$
13		\$
14		\$
15		\$
16		\$
17		\$
18		\$
19		\$
20		\$
21		\$
22		\$
23		\$
24		\$
25		\$
26		\$
27		\$
28		\$
29		\$
30		\$
31		\$
32		\$
33		\$
34		\$
35		\$
TOTAL ESTIMATED DIRECT CONSTRUCTION COST		\$ 125,100,000

Exhibit 1-R: Reconciled Direct Construction Cost

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY »

Project Number: «104134 »

#	DESCRIPTION	RECONCILED VALUE
1		\$
2		\$
3		\$
4		\$
5		\$
6		\$
7		\$
8		\$
9		\$
10		\$
11		\$
12		\$
13		\$
14		\$
15		\$
16		\$
17		\$
18		\$
19		\$
20		\$
21		\$
22		\$
23		\$
24		\$
25		\$
26		\$
27		\$
28		\$
29		\$
30		\$
31		\$
32		\$
33		\$
34		\$
35		\$
TOTAL RECONCILED DIRECT CONSTRUCTION COST		\$

Exhibit 2-E: Estimated General Conditions

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY »

Project Number:	DESCRIPTION	ESTIMATED VALUE
1	Estimated General Conditions (includes costs for printing, Additional travel expenses, document control, BIM special, other allowances.)	\$14,386,500
2		\$
3		\$
4		\$
5		\$
6		\$
7		\$
8		\$
9		\$
10		\$
11		\$
12		\$
13		\$
14		\$
15		\$
16		\$
17		\$
18		\$
19		\$
20		\$
21		\$
22		\$
23		\$
24		\$
25		\$
26		\$
27		\$
28		\$
29		\$
30		\$
31		\$
	SUB TOTAL ESTIMATED GENERAL CONDITIONS	\$14,386,500
32	Insurance & Bond (3.5%)	\$ 4,378,500
	ESTIMATED GENERAL CONDITIONS TOTAL	\$18,765,000

Exhibit 2-R: Reconciled General Conditions

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY »

Project Number: «104134 »

#	DESCRIPTION	RECONCILED VALUE
1		\$
2		\$
3		\$
4		\$
5		\$
6		\$
7		\$
8		\$
9		\$
10		\$
11		\$
12		\$
13		\$
14		\$
15		\$
16		\$
17		\$
18		\$
19		\$
20		\$
21		\$
22		\$
23		\$
24		\$
25		\$
26		\$
27		\$
28		\$
29		\$
30		\$
31		\$
32		\$
	SUB TOTAL RECONCILED GENERAL CONDITIONS	\$
33	Insurance & Bond	\$
	RECONCILED GENERAL CONDITIONS TOTAL	\$

Exhibit 3: Prevailing Wage Determination

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB
COMBINED FACILITY »

Project Number: « 104134 »

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"General Decision Number: FL20190197 10/25/2019

Superseded General Decision Number: FL20180241

State: Florida

Construction Type: Building

County: Broward County in Florida.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the

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Federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/01/2019
2	03/15/2019
3	10/25/2019

ASBE0060-001 03/02/2016

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 34.58	12.57

CARP1809-001 06/01/2015

	Rates	Fringes
CARPENTER (Includes Acoustical Ceiling Installation, Drywall Finishing/Taping, Drywall Hanging, Form Work, Metal Stud Installation).....	\$ 25.95	8.65

CARP1809-002 08/01/2016

	Rates	Fringes
CARPENTER: PILEDRIVERMAN.....	\$ 25.20	10.36

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ELEC0728-008 03/01/2019

	Rates	Fringes
ELECTRICIAN (Including Low Voltage Wiring).....	\$ 32.63	12.23

ELEV0071-002 01/01/2019

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 44.45	33.705

FOOTNOTE:

A: Employer contributes 8% basic hourly rate for 5 years or more of service or 6% basic hourly rate for 6 months to 5 years of service as Vacation Pay Credit; Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Veteran's Day; Thanksgiving Day; plus the Friday after Thanksgiving; and Christmas Day.

ENGI0487-019 07/01/2016

	Rates	Fringes
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 23.75	9.20

ENGI0487-020 05/01/2016

	Rates	Fringes
OPERATOR: Concrete Pump.....	\$ 26.04	9.23

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ENGI0487-021 07/01/2016

	Rates	Fringes
OPERATOR: Crane		
All Cranes 160 Ton		
Capacity and Over.....	\$ 33.05	9.20
All Cranes Over 15 Ton		
Capacity.....	\$ 32.05	9.20
OPERATOR: Forklift.....	\$ 23.25	9.20
OPERATOR: Mechanic.....	\$ 32.05	9.20
OPERATOR: Oiler.....	\$ 23.50	9.20

* IRON0272-001 10/01/2019

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 25.49	11.99

* IRON0402-001 01/01/2019

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 23.69	12.70

PLUM0719-002 03/01/2019

	Rates	Fringes
PLUMBER.....	\$ 29.00	12.15

PAID HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day providing the employee works the scheduled work day preceding and after the holiday.

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PLUM0725-001 07/16/2018

	Rates	Fringes
PIPEFITTER (Includes HVAC Pipe, Unit and Temperature Controls Installations).....	\$ 35.63	14.15

SFFL0821-004 01/01/2019

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 28.38	19.44

SHEE0032-001 12/01/2013

	Rates	Fringes
SHEET METAL WORKER, Includes HVAC Duct Installation.....	\$ 23.50	12.18

SUFL2014-005 08/16/2016

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 13.06	0.70
IRONWORKER, REINFORCING.....	\$ 17.72	0.00
LABORER: Common or General, Including Cement Mason Tending...	\$ 12.79	0.00
LABORER: Pipelayer.....	\$ 13.56	1.34
OPERATOR: Bulldozer.....	\$ 15.40	1.90

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OPERATOR: Grader/Blade.....	\$ 18.97	0.00
OPERATOR: Loader.....	\$ 16.00	2.82
OPERATOR: Roller.....	\$ 14.43	4.78
PAINTER: Brush, Roller and Spray.....	\$ 16.00	3.48
ROOFER.....	\$ 19.98	4.77
TILE SETTER.....	\$ 18.01	0.00
TRUCK DRIVER: Dump Truck.....	\$ 13.22	2.12
TRUCK DRIVER: Lowboy Truck.....	\$ 14.24	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====
Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic

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OPERATOR: Grader/Blade.....	\$ 18.97	0.00
OPERATOR: Loader.....	\$ 16.00	2.82
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violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

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A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

<https://beta.sam.gov/wage-determination/FL20190197/3/document>

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2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"

<https://beta.sam.gov/wage-determination/FL20190197/3/document>

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Exhibit 4: List of Pricing Documents

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB
COMBINED FACILITY »

Project Number: «104134 »

The following is an enumeration of the drawings and specifications that form the basis of the
GMP:

SPECIFICATION INDEX

Division 1 – General Requirements

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

Division 2 – Sitework

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

Division 3 – Concrete

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

Division 4 – Masonry

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

Division 5 – Metals

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

Division 6 – Wood and Plastics

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

Division 7 – Thermal and Moisture Protection

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 8 – Windows and Doors

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 9 – Finishes

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 10 – Specialties

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 11 – Equipment

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 12 – Furnishings

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 13 – Special Construction

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 14 – Conveyances

Section XXXXX Section Title
Section XXXXX Section Title
Section XXXXX Section Title

Division 15 -- Mechanical

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

Division 16 – Electrical

Section XXXXX	Section Title
Section XXXXX	Section Title
Section XXXXX	Section Title

DRAWING INDEX

Project Name: « BROWARD COUNTY’S MEDICAL EXAMINER’S OFFICE AND BSO’S CRIME LAB
COMBINED FACILITY»

Project Number: «104134»

Drawing Number	Drawing Title
GENERAL	
G-001	Cover Sheet and Drawing Index
G-002	Survey
G-003	Life-Safety Plan
CIVIL	
C-1	Civil Sheet Title
C-2	Civil Sheet Title
C-3	Civil Sheet Title
LANDSCAPE	
L-1	Landscape Sheet Title
L-2	Landscape Sheet Title
IR-1	Irrigation Sheet Title
IR-2	Irrigation Sheet Title
ARCHITECTURAL	
A-1	Architectural Sheet Title
A-2	Architectural Sheet Title
A-3	Architectural Sheet Title
INTERIOR DESIGN	
ID-1	Interior Design Sheet Title
ID-2	Interior Design Sheet Title
ID-3	Interior Design Sheet Title

Drawing Number	Drawing Title
STRUCTURAL	
S-1	Structural Sheet Title
S-2	Structural Sheet Title
S-3	Structural Sheet Title
MECHANICAL	
M-1	Mechanical Sheet Title
M-2	Mechanical Sheet Title
M-3	Mechanical Sheet Title
ELECTRICAL	
E-1	Electrical Sheet Title
E-2	Electrical Sheet Title
E-3	Electrical Sheet Title
PLUMBING	
P-1	Plumbing Sheet Title
P-2	Plumbing Sheet Title
P-3	Plumbing Sheet Title
FIRE PROTECTION	
FP-1	Fire Protection Sheet Title
FP-2	Fire Protection Sheet Title
FP-3	Fire Protection Sheet Title

Exhibit 5: Statement of CBE Assurance

(Company Letterhead)

CONTRACTOR ASSURANCE STATEMENT

PROJECT DESCRIPTION

I, _____, (Authorized Official/Agent) on behalf of the
_____ (Contractor) hereby agree to comply with the County Business Enterprise
(CBE) requirements of the RFP between Broward County and (your company) for
_____ Project.

1. Affirm that your company will comply with the County's non-discrimination policy by providing a non-discrimination Statement and;
2. Acknowledge the CBE percentage goal established on the project and;
3. Agree to engage in good faith effort solicitation of approved Broward County Small Business Development Program firms to achieve the project goals as indicated in the RFP document.

Authorized Agent of Contractor

Printed Name & Title

Telephone Number/Fax Number

Date: _____

Exhibit 6: Letter of Intent (CBE)

Project Name: BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB
COMBINED FACILITY »

Project Number: «104134 »

LETTER OF INTENT

To Utilize a County Business Enterprise (CBE) Subcontractor/Subconsultant From (Name of Proposer/Bidder): _____

Firm Address: _____

Project Description: _____

In response to Broward County's RLI/Bid No. _____, the undersigned hereby agree to utilize the CBE firm listed below, if awarded the contract. The undersigned further certify that the firm has been contacted and properly apprised of the projected work assignment(s) upon execution of the contract with Broward County.

Name of CBE Firm: _____

Address of CBE Firm: _____

Expiration of CBE Certification: _____ Projected CBE Work Assignment (description of work assignment): _____

Projected Percentage of Prime's Contract Fees to be Awarded to CBE (Percentage %): _____

(Signature of Owner or Authorized Rep. **Prime**)

(Date)

Print Name (owner or authorized Rep. **Prime**): _____

Subscribed and sworn to before me this _____ day of _____ 20_____.

Notary's Signature _____

Notary Seal: _____

(ACKNOWLEDGEMENT BY THE PROPOSED CBE FIRM)

The undersigned intends to perform work in connection with the above Contract as (check one) ___ an individual ___ a partnership ___ a corporation ___ a joint venture. The undersigned agrees with the prime contractor's/consultant's proposal and further certifies that all information provided herein is true and correct.

(Signature of Owner or Authorized Rep. **CBE**)

(Date)

Print Name (owner or authorized Rep. **CBE**): _____

Subscribed and sworn to before me this _____ day of _____ 20_____.

Notary's Signature: _____

Notary Seal: _____

Exhibit 7 - ADDITIONAL SECURITY REQUIREMENTS

NOT USED

Form 1: CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT:	Consultant:	«LEO A DALY »
BROWARD COUNTY'S MEDICAL	BID/	
EXAMINER'S OFFICE AND	CONTRACT	
BSO'S CRIME LAB COMBINED	NUMBER:	
FACILITY		
«Project_Address_1»		
«Project_Address_2»		
Project	«104134 »	
Number:		
	CONTRACTOR:	«Firm_Name_for_Contract_Merge»
DATE OF	NOTICE TO	
ISSUANCE:	PROCEED DATE:	
TO (County):	Director,	CONTRACT FOR
	Construction	
	Management	
	Div.	

PROJECT OR DESIGNATED PORTION SHALL INCLUDE:

The Work performed under this Agreement has been reviewed and found to be substantially complete and all documents required to be submitted by Contractor under the Contract Documents have been received and accepted. The Date of Substantial Completion of the Project or portion thereof designated above is hereby established as _____ which is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

DATE OF SUBSTANTIAL COMPLETION

The date, as certified in writing by Consultant and as finally determined in the sole discretion of Contract Administrator, on which the construction of the Work, or a portion thereof, as designated by the Contract Administrator, is at a level of completion in substantial compliance with the Contract Documents such that all conditions of permits and regulatory agencies have been satisfied and the County or its designee, can enjoy use or occupancy and can use or operate it in all respects for its intended purpose. A Certificate of Occupancy (CO) or a Temporary Certificate of Occupancy (TCO) or other alternate municipal/county authorization for limited or conditional occupancy or use by County acceptable to the Contract Administrator must be issued for Substantial Completion to be achieved; however, the date of issuance of a Certificate of Occupancy or the date the Project is available for County's use is not to be determinative of the achievement or date of Substantial Completion.

A list of items to be completed or corrected, prepared by Consultant, is attached hereto as the Substantial Completion Punchlist. The failure to include any items on the Substantial Completion Punchlist such list does not alter the responsibility of Contractor to complete all work in accordance with the Contract Documents.

«LEO A DALY » _____
Consultant BY DATE

In accordance with the Summary of Terms and Conditions, Contractor will complete or correct the work on the list of items attached hereto within the specified number of days from the Date of Substantial Completion.

«Firm_Name_for_Contract_Merge» _____
CONTRACTOR BY DATE

County, through its Contract Administrator, accepts the Work or portion thereof designated by County as substantially complete and will assume full possession thereof at _____ (time) on _____ (date).

BROWARD COUNTY BOARD _____
OF COUNTY COMMISSIONERS By Contract Administrator DATE

The responsibilities of County and Contractor for security, maintenance, heat, utilities, damage to the work and insurance shall be as follows:

Form 2: Form 00922: STATEMENT OF COMPLIANCE
(PREVAILING WAGE RATE ORDINANCE NO. 83-72)

Contract No. _____

Project Title: « BROWARD COUNTY'S MEDICAL
EXAMINER'S OFFICE AND BSO'S
CRIME LAB COMBINED FACILITY
»

Project No.: «104134 »

The undersigned Contractor hereby swears under penalty of perjury that, during the period covered by the application for payment to which this statement is attached, all mechanics, laborers, and apprentices, employed or working on the site of the Project, have been paid in accordance with Broward County Ordinance No. 83-72 as amended from time to time.

Dated _____, 20____,

«Firm_Name_for_Contract_Merge»
Contractor

By _____
(Signature)

By _____
(Name and Title)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ___ day of _____, 20____, by _____ as _____ of _____, known to me to be the person described herein, or who produced _____ as identification, and who did/did not take an oath.

NOTARY PUBLIC:

(Signature)

SEAL

(Print Name)

My commission expires: _____

Form 3: FINAL CERTIFICATE OF PAYMENT:

PROJECT:
(name, address)

Consultant:

BID/CONTRACT NUMBER:

TO (County):

CONTRACTOR:

CONTRACT FOR:

NOTICE TO PROCEED DATE:

DATE OF ISSUANCE:

All conditions or requirements of any permits or regulatory agencies have been satisfied. The documents required pursuant to the terms and conditions of this Agreement, and the final bill of materials, if required, have been received and accepted. The Work required by the Contract Documents has been reviewed and the undersigned certifies that the Work, including minor corrective work, has been completed in accordance with the provision of the Contract Documents and is accepted under the terms and conditions thereof.

Consultant BY DATE

County, through its Contract Administrator, accepts the work as fully complete and will assume full possession thereof at _____ on _____.
(time) (date)

BROWARD COUNTY BOARD OF COUNTY COMMISSIONERS _____
By Contract Administrator DATE

Form 4: FORM OF FINAL RECEIPT:

[The following form will be used to show receipt of final payment for this Agreement.]

FINAL RECEIPT FOR CONTRACT NO. _____

Received this _____ day of _____, 20____, from Broward County, the sum of _____ Dollars (\$_____) as full and final payment to Contractor for all work and materials for the Project described as:

This sum includes full and final payment for all extra work and material and all incidentals.

Contractor hereby indemnifies and releases Broward County from all liens and claims whatsoever arising out of the Agreement and Project.

Contractor hereby certifies that all persons doing work upon or furnishing materials or supplies for the Project have been paid in full. In lieu of this certification regarding payment for work, materials and supplies, Contractor may submit a consent of surety to final payment in a form satisfactory to County.

Contractor further certifies that all taxes imposed by Chapter 212, Florida Statutes (Sales and Use Tax Act), as amended, have been paid and discharged.

[If incorporated sign below.]

CONTRACTOR

ATTEST:

CONTRACTOR NAME

Corporate Secretary or other person
authorized to attest

By: _____
Authorized Signor

(CORPORATE SEAL OR NOTARY)

Print Name and Title

_____ day of _____, 20__

[If not incorporated sign below.]

CONTRACTOR

WITNESSES:

(Name)

By _____

Date: _____

Form 5: FORM OF PERFORMANCE BOND

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB COMBINED FACILITY »

Project Number: «104134 »

BY THIS BOND, We _____, as Principal, hereinafter called CONTRACTOR, located at:

Business Address: _____

Phone: _____

and _____, as Surety, under the assigned Bond Number _____, are bound to the Board of County Commissioners of Broward County, Florida, as Obligee, hereinafter called COUNTY, in the amount of _____ Dollars (\$ _____) for the payment whereof CONTRACTOR and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, CONTRACTOR has by written agreement entered into a Contract, Bid/Contract No.: _____, awarded the _____ day of _____, 20____, with COUNTY which Contract Documents are by reference incorporated herein and made a part hereof, and specifically include provision for liquidated damages, and other damages identified, and for the purposes of this Bond are hereafter referred to as the "Contract";

THE CONDITION OF THIS BOND is that if CONTRACTOR:

- 1) Performs the Contract between CONTRACTOR and COUNTY for construction of _____, the Contract being made a part of this Bond by reference, at the times and in the manner prescribed in the Contract; and

- 2) Pays COUNTY all losses, liquidated damages, expenses, costs and attorney's fees including appellate proceedings, that COUNTY sustains as a result of default by CONTRACTOR under the Contract; and
- 3) Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract; then THIS BOND IS VOID, OTHERWISE IT REMAINS IN FULL FORCE AND EFFECT.

Whenever CONTRACTOR shall be, and declared by COUNTY to be, in default under the Contract, COUNTY having performed COUNTY obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- a) Complete the Project in accordance with the terms and conditions of the Contract Documents; or
- b) Obtain a bid or bids for completing the Project in accordance with the terms and conditions of the Contract Documents, and upon determination by Surety of the lowest responsible Bidder, or, if COUNTY elects, upon determination by COUNTY and Surety jointly of the lowest responsible Bidder, arrange for a contract between such Bidder and COUNTY, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by COUNTY to CONTRACTOR under the Contract and any amendments thereto, less the amount properly paid by COUNTY to CONTRACTOR.

No right of action shall accrue on this bond to or for the use of any person or corporation other than COUNTY named herein.

The Surety hereby waives notice of and agrees that any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect Surety's obligation under this Bond.

Signed and sealed this _____ day of _____, 20_____.

ATTEST:

Secretary

(CORPORATE SEAL)

(Name of Corporation)

By _____
(Signature and Title)

(Type Name and Title Signed Above)

IN THE PRESENCE OF:

INSURANCE COMPANY:

By _____
Agent and Attorney-in-Fact

Address: _____
(Street)

(City/State/Zip Code)

Telephone No.: _____

Form 6: FORM OF PAYMENT BOND

Project Name: « BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB
COMBINED FACILITY »

Project Number: «104134 »

KNOW ALL BY THESE PRESENTS:

That we _____, as Principal, hereinafter called Contractor, and _____, as Surety, are bound to the Board of County Commissioners of Broward County, Florida, as Obligee, hereinafter called County, in the amount of _____ Dollars (\$_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, Contractor has by written agreement entered into a Contract, Bid/Contract No.: _____, awarded the _____ day of _____, 20____, with County for _____ in accordance with the Contract Documents prepared by _____ which Contract Documents are by reference made a part hereof, and for the purposes of this Bond are hereafter referred to as the "Contract";

THE CONDITION OF THIS BOND is that if Contractor:

1. Pays County all losses, damages, expenses, costs and attorney's fees including appellate proceedings, that County sustains because of default by Contractor under the Contract; and
2. Promptly makes payments to all claimants as defined by Florida Statute 225.05(1) for all labor, materials and supplies used directly or indirectly by Contractor in the performance of the Contract;

THEN CONTRACTOR'S OBLIGATION SHALL BE VOID; OTHERWISE, IT SHALL REMAIN IN FULL FORCE AND EFFECT SUBJECT, HOWEVER, TO THE FOLLOWING CONDITIONS:

- 2.1. A claimant, except a laborer, who is not in privity with Contractor and who has not received payment for its labor, materials, or supplies shall, within forty-five (45) days after beginning to furnish labor, materials, or supplies for the prosecution of the work, furnish to the Contractor a notice that he intends to look to the bond for protection.
- 2.2. A claimant who is not in privity with the Contractor and who has not received payment for its labor, materials, or supplies shall, within ninety (90) days after performance of the labor or after complete delivery of the materials or supplies, deliver to the Contractor and to the Surety, written notice of the performance of the labor or delivery of the materials or supplies and of the nonpayment.
- 2.3. No action for the labor, materials, or supplies may be instituted against the Contractor or the Surety unless the notices stated under the preceding conditions (2.1) and (2.2) have been given.
- 2.4. Any action under this Bond must be instituted in accordance with the Notice and Time Limitations provisions prescribed in Section 255.05(2), Florida Statutes.

The Surety hereby waives notice of and agrees that any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect the Surety's obligation under this Bond.

Signed and sealed this ____ day of _____, 20____.

ATTEST:

(Name of Corporation)

Secretary

By _____
(Signature and Title)

(CORPORATE SEAL)

(Type Name and Title signed above)

IN THE PRESENCE OF:

INSURANCE COMPANY:

By _____
Agent and Attorney-in-Fact

Address: _____
(Street)

(City/State/Zip Code)

Telephone No.: _____

**Form 8: Form 00735. PERFORMANCE AND PAYMENT GUARANTY FORM
UNCONDITIONAL LETTER OF CREDIT:**

Beneficiary: _____ Date of Issue: _____

Broward County through its Broward County Issuing Bank's No. _____

in United States Funds Applicant: _____

Board of County Commissioners

County Administrator Amount: _____

Governmental Center

115 South Andrews Avenue Expiry: _____

Fort Lauderdale, FL 33301

Bid/Contract Number: _____

We hereby authorize you to draw on _____ (Bank, Issuer name)

at _____ (Branch address) by order of and for the account of _____

_____ (Contractor, Applicant, Customer) up to an aggregate amount, in

United States Funds, of _____ available by your drafts at sight, accompanied by:

A signed statement from the County Administrator of Broward County or the Administrator's authorized representative that the drawing is due to default in performance of certain obligations on the part of _____ agreed upon by (contractor, applicant, customer) and between Broward County and _____ (Contractor, Applicant, Customer) pursuant to the Bid/Contract No. _____ for _____ (Name of Project) and Section 255.05, Florida Statutes.

Drafts must be drawn and negotiated not later than _____ (Expiration date)

Drafts must bear the clause: "Drawn under Letter of Credit No. _____ of _____ dated _____.

This Letter of Credit shall be renewed for successive periods of one (1) year each unless we provide the Broward County Administrator with written notice of our intent to terminate the credit herein extended, which notice must be provided at least thirty (30) days prior to the expiration date of the original term hereof or any renewed one (1) year term. Notification to

Broward County that this Letter of Credit will expire prior to performance of the Contractor's obligations will be deemed a default.

This Letter of Credit sets forth in full the terms of our undertaking, and such undertaking shall not in any way be modified, or amplified by reference to any documents, instrument, or agreement referred to herein or to which this Letter of Credit is referred or this Letter of Credit relates, and any such reference shall not be deemed to incorporate herein by reference any document, instrument, or agreement.

We hereby agree with the drawers, endorsers, and bona fide holders of all drafts drawn under and in compliance with the terms of this credit that such drafts will be duly honored upon presentation to the drawee.

Obligations under this Letter of Credit shall be released one (1) year after the final completion of the Project by the

(contractor, applicant, customer)

This Credit is subject to the "Uniform Customs and Practice for Documentary Credits," International Chamber of Commerce (1984 revision), Publication No. 400 and to the provisions of Florida law. If a conflict between the Uniform Customs and Practice for Documentary Credits and Florida law should arise, Florida law shall prevail. If a conflict between the law of another state or country and Florida law should arise, Florida law shall prevail.

Authorized Signature

Form 9: Form 00924. CERTIFICATION OF PAYMENTS TO SUBCONTRACTORS

Bid/Contract No. _____

Project Title: BROWARD COUNTY'S MEDICAL EXAMINER'S OFFICE AND BSO'S CRIME LAB
COMBINED FACILITY

The undersigned Contractor hereby swears under penalty of perjury that:

- Contractor has paid all subcontractors all undisputed contract obligations for labor, services, or materials provided on this project in accordance with this Agreement, except as provided in paragraph 2 below.
- The following subcontractors have not been paid because of disputed contractual obligations; a copy of the notification sent to each, explaining the good cause why payment has not been made, is attached to this form:

Subcontractor or supplier's name and address	Date of disputed invoice	Amount in dispute

Dated _____, 20__

Contractor

By _____
(Signature)

By _____
(Name and Title)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ___ day of _____, 20__, by _____ as _____ of _____, known to me to be the person described herein, or who produced _____ as identification, and who did/did not take an oath.

NOTARY PUBLIC:

(Signature)

SEAL

(Print Name)

My commission expires: _____

Form 10: EMPLOYMENT ELIGIBILITY VERIFICATION PROGRAM CONTRACTOR CERTIFICATION

On January 4, 2011, Governor Scott issued Executive Order 11-02 which requires Broward County as a party to any State funded contracts to participate in the Employment Eligibility Verification Program (“E-Verify Program”) administered by the U.S. Department of Homeland Security (“DHS”). The E-Verify Program can be found at <http://www.uscis.gov/e-verify>.

The County has entered into a “Memorandum of Understanding” with DHS governing the E-Verify Program. As a result of the adopting the terms and conditions of the “Memorandum of Understanding” with DHS and Execute Order 11-02, any Contractor performing work pursuant to the State funded contract issued by the County is required to use the E-Verify Program to confirm employment eligibility of its current and prospective employees. The undersigned contractor hereby certifies that it will enroll and participate in the E-Verify Program, in accordance with the terms and conditions governing the use of the program by:

- (1) Verifying the employment eligibility of all persons employed during the contract term by the contractor to perform the work under this contract.
- (2) Enrolling in the E-Verify Program within thirty (30) days of the effective date of this contract by obtaining a copy of the “Edit Company Profile” page and make such record available to Broward County within seven days of request from the County.
- (3) Requiring all persons, including subcontractors, assigned by the Contractor to perform work under this contract to enroll and participate in the E-Verify Program within ninety (90) days of the effective date of this contract or within ninety (90) days of the effective date of the contract between the Contractor and the subcontractor, whichever is later. The Contractor shall obtain from the subcontractor a copy of the “Edit Company Profile” screen indicating enrollment in the E-Verify Program and make such record available to the County within seven days from the County’s request.
- (4) Displaying the notices supplied by DHS in a prominent place that is clearly visible to prospective employees and all employees who are to be verified through the system.
- (5) Initiate E-Verify verification procedures for new employees within 3 business days after the actual work start date of each new hire and thereafter shall respond appropriately to any additional requests from DHS or Social Security Administration (SSA).
- (6) Maintain records of its participation and compliance with the provisions of the E-Verify Program and make such records available to the County within seven days of County’s request.

[Continued on next page]

(Contractor's Signature)

(Print Vendor Name)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ___ day of _____, 20___, by _____ as _____ of _____, known to me to be the person described herein, or who produced _____ as identification, and who did/did not take an oath.

NOTARY PUBLIC:

(Signature)

SEAL

(Print Name)

My commission expires:_____

Form 11: SCRUTINIZED COMPANIES LIST CERTIFICATION

This certification form should be completed and submitted with your proposal but must be completed and submitted prior to award.

The vendor, by virtue of the signature below, certifies that:

- a. The vendor, owners, or principals are aware of the requirements of Section 287.135, Florida Statutes, regarding companies on the Scrutinized Companies with Activities in Sudan List or on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
- b. The vendor, owners, or principals, are eligible to participate in this solicitation and not listed on either the Scrutinized Companies with Activities in Sudan List or on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
- c. If awarded the contract, the vendor, owners, or principals will immediately notify the County in writing if any of its principals are placed on the Scrutinized Companies with Activities in Sudan List or on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

(Authorized Signature)

(Print Name and Title)

(Name of Firm)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____, 20____, by _____ as _____ of _____, known to me to be the person described herein, or who produced _____ as identification, and who did/did not take an oath.

NOTARY PUBLIC:

(Signature)

SEAL

(Print Name)

My commission expires: _____

Form 12: INSURANCE REQUIREMENTS

This exhibit establishes minimum insurance requirements and memorializes the Parties' agreed upon plans with respect to insurance to be purchased prior to commencement of the Construction work.

1. Commercial General Liability Insurance. Contractor shall maintain commercial general liability insurance under the ISO CG 00 01 04 13 policy form, or its equivalent, with minimum limits of not less than those set forth below. Such policy shall afford additional insured status to County. Policy shall include 10 years Completed Operations coverage from substantial completion.

\$2 Million per Occurrence/\$4 Million Aggregate

2. Excess Liability Insurance. Contractor shall maintain excess liability insurance with minimum limits not less than those set forth below. Such policy shall afford additional insured status to County.

\$50,000,000 each occurrence/\$50,000,000 Products and Completed Operations
Aggregate.

3. Business Automobile Liability Insurance. Contractor shall maintain automobile liability insurance with minimum limits of not less than those set forth below. Such insurance shall cover damages because of bodily injury or property damages caused by an accident and resulting from the ownership, maintenance or use of any auto, including owned, hired, and non-owned autos.

\$1 Million Combined Single Limit Bodily Injury and Property Damage

4. Statutory Workers' Compensation and Employer's Liability Insurance. Contractor shall maintain statutory workers' compensation and employer's liability insurance with minimum limits of not less than those set forth below. Where applicable, United States Longshore and Harbor Workers ("USL&H") insurance is required for any activities on or about navigable waters.

In the event that Contractor provides all or a portion of the Workers' Compensation/Employer's Liability insurance required herein via a professional employer organization ("PEO") or employee leasing company, any such Workers' Compensation/Employer's Liability insurance provided will only be deemed acceptable solely for the purposes of insuring Contractor's enrolled employees. In addition, and notwithstanding the foregoing, in order to adequately protect the County against injuries to uninsured employees of Subcontractors and non-enrolled employees of Contractor, Contractor must still procure, maintain, and furnish the County with evidence of a stand-alone separate Workers' Compensation/Employer's Liability insurance policy issued with Contractor as the named insured, and complying with all requirements for Contractor

provided Workers' Compensation contained in the Agreement. It is permissible for Contractor to exclude payroll of leased employees from such separate Workers' Compensation/Employer's Liability insurance policy.

Workers' Compensation	Statutory
Employers' Liability	\$1 Million Bodily Injury by Accident/ Bodily Injury by Disease Each Employee/ Bodily Injury by Disease Policy Limit

5. Contractors Pollution Liability Insurance. Contractor shall maintain pollution liability insurance with minimum limits not less than those set forth below. Such insurance shall include clean-up costs and provide coverage to Contractor for liability resulting from pollution or other environmental impairment arising out of, or in connection with, work performed under this agreement, or which arises out of, or in connection with this Agreement, including coverage for clean-up of pollution conditions and third-party bodily injury and property damage arising from pollution conditions. Such insurance shall also include Transportation Coverage and Non-Owned Disposal Sites coverage. Should policy provide coverage on a claims-made basis, the coverage shall be in force and effect to respond to all claims reported within at least three years following the period for which coverage is required. County shall be included as an additional insured. Contractor shall be responsible for all deductibles in the event of a claim.

\$25,000,000 per pollution condition/\$25,000,000 Aggregate Limit for all Pollution Conditions

6. Builder's Risk Insurance. Contractor shall maintain Builders Risk insurance with minimum limits not less than those set forth below. Builder's risk policies must be reviewed and approved in writing by County and prior to Contractor's purchase of such policies, which approval shall not be unreasonably withheld or delayed. Any builder's risk policy shall list County as a named insured and as a loss payee and shall include subcontractors of every tier as insureds.

Coverage shall be "all risk" in the amount of the building value. With respect to coverage for the peril of wind, the policy shall not be subject to any sublimit which is less than Fifty Million Dollars (\$50,000,000) per occurrence. Maximum deductible not to exceed \$10,000. Maximum deductible for the perils of Wind and/or Flood not to exceed 5% of completed value.

- a. County has the option to elect to purchase the Builders Risk insurance. If County so elects, County shall be responsible for purchasing "all-risk" or "special cause of loss" builder's risk insurance policies to cover damage to Project on a completed value basis, subject to the terms and conditions of such policies. Any builder's risk policies

may be reviewed and approved in writing by Contractor and prior to County's purchase of such policies, which approval shall not be unreasonably withheld or delayed. Any builder's risk policy shall list Contractor as a named insured and shall include subcontractors of every tier as insureds.

- b. If County purchases the Builders Risk coverage, then County shall be responsible for payment of all deductibles under the builder's risk policies. Except, in the event an occurrence covered under a builder's risk policy is caused by, or due to the fault of, Contractor, or a subcontractor ("Contractor Occurrence"), then Contractor's total limit of deductible responsibility for each Contractor Occurrence shall be as follows: \$50,000 limit for a Contractor Occurrence caused by, or due to the fault of, Contractor or a subcontractor.
 - c. Any builder's risk policies purchased by County or Contractor pursuant to this Exhibit shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery or subrogation against any insureds thereunder, including County, Contractor and any of Contractor's consultants, affiliates, officers, directors, members, partners, employees, agents, or subcontractors. County and Contractor waive all rights against each other and the respective consultants, affiliates, officers, directors, members, partners, employees, agents, and/or subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire, or other perils or causes of loss, to the extent such losses or damages are covered by the proceeds of builder's risk insurance required by this Exhibit.
7. Owner Controlled Insurance Program (OCIP). County has the option to purchase and implement an Owner Controlled Insurance Program ("OCIP") with the types and minimum limits of insurance set forth below.
- Commercial General Liability Insurance. County shall maintain commercial general liability insurance under the ISO CG 00 01 04 13 policy form, or its equivalent, with minimum limits of not less than those set forth below. Such policy shall afford additional insured status to Contractor. Policy shall include 10 years Completed Operations coverage from substantial completion.

\$2 Million per Occurrence/\$4 Million Aggregate

Excess Liability Insurance. County shall maintain excess liability insurance with minimum limits not less than those set forth below. Such policy shall afford additional insured status to Contractor.

\$50,000,000 each occurrence/\$50,000,000 Products and Completed Operations Aggregate.

Statutory Workers' Compensation and Employer's Liability Insurance. Contractor shall maintain statutory workers' compensation and employer's liability insurance with minimum limits of not less than those set forth below.

Workers' Compensation	Statutory
Employers' Liability	\$1 Million Bodily Injury by Accident/ Bodily Injury by Disease Each Employee/ Bodily Injury by Disease Policy Limit

Contractor shall be named insureds on all OCIP policies. Subcontractors shall be enrolled in the OCIP unless otherwise excluded.

8. General Insurance Requirements.

- a. All liability policies and Builder's Risk policies of Contractor and subcontractors shall include waivers of subrogation in favor of County.
- b. Commercial General Liability, Auto and Excess policies of Contractor shall afford additional insured status to County on a primary and non-contributory basis.
- c. Contractor and subcontractors shall be scheduled as insureds on any builder's risk policies purchased by County.

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