The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 2

List View

General Information | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 1274101
Procurement Type: Central Contract - Fixed Amt
Vendor ID: VS0000044357
Legal Name: M. Arthur Gensler Jr. & Associates, Inc.
Alias/DBA:
Total Bid: $1.00
Response Date: 11/14/2023
Response Time: 9:40
Responded By User ID: GenslerDC
First Name: Nyisha
Last Name: Davis
Email: nyisha_davis@gensler.com
Phone: 7132139467

SO Doc Code: CEOI
SO Dept: 0211
SO Doc ID: GSD2400000002
Published Date: 11/7/23
Close Date: 11/14/23
Close Time: 13:30
Status: Closed
Solicitation Description: EOI: New Consolidated State Laboratory Facility Project
Total of Header Attachments: 2
Total of All Attachments: 2

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder:	1274101
Solicitation Description:	EOI: New Consolidated State Laboratory Facility Project
Proc Type:	Central Contract - Fixed Amt

Solicitation Closes	Solicitation Response	Version
2023-11-14 13:30	SR 0211 ESR11142300000002334	1

VENDOR

VS0000044357
M. Arthur Gensler Jr. & Associates, Inc.

Solicitation Number: CEOI 0211 GSD2400000002

Total Bid: 1 **Response Date:** 2023-11-14 **Response Time:** 09:40:33

Comments:

FOR INFORMATION CONTACT THE BUYER
Melissa Pettrey
(304) 558-0094
melissa.k.pettrey@wv.gov

Vendor
Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	EOI: New Consolidated State Laboratory Facility Project				1.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Commodity Line Comments: Our proposal does not include a contract amount at this time.

Extended Description:

EOI: New Consolidated State Laboratory Facility Project

DRAFT

AIA® Document B101™ – 2017

Standard Form of Agreement Between Owner and Architect

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

BETWEEN the Architect's client identified as the Owner:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

and the Architect:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

for the following Project:
(Name, location and detailed description)

« »
« »
« »

The Owner and Architect agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

TABLE OF ARTICLES

ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth in this Section 1.1.
(For each item in this section, insert the information or a statement such as "not applicable" or "unknown at time of execution.")

§ 1.1.1 The Owner's program for the Project:
(Insert the Owner's program, identify documentation that establishes the Owner's program, or state the manner in which the program will be developed.)

« »

§ 1.1.2 The Project's physical characteristics:
(Identify or describe pertinent information about the Project's physical characteristics, such as size; location; dimensions; geotechnical reports; site boundaries; topographic surveys; traffic and utility studies; availability of public and private utilities and services; legal description of the site, etc.)

« »

§ 1.1.3 The Owner's budget for the Cost of the Work, as defined in Section 6.1:
(Provide total and, if known, a line item breakdown.)

« »

§ 1.1.4 The Owner's anticipated design and construction milestone dates:

.1 Design phase milestone dates, if any:

« »

.2 Construction commencement date:

« »

.3 Substantial Completion date or dates:

« »

.4 Other milestone dates:

« »

§ 1.1.5 The Owner intends the following procurement and delivery method for the Project:
(Identify method such as competitive bid or negotiated contract, as well as any requirements for accelerated or fast-track design and construction, multiple bid packages, or phased construction.)

« »

§ 1.1.6 The Owner's anticipated Sustainable Objective for the Project:
(Identify and describe the Owner's Sustainable Objective for the Project, if any.)

« »

§ 1.1.6.1 If the Owner identifies a Sustainable Objective, the Owner and Architect ~~shall~~ may complete and incorporate AIA Document E204™–2017, Sustainable Projects Exhibit or other similar exhibit, into this Agreement to define the terms, conditions and services related to the Owner's Sustainable Objective. If E204–2017 or other similar exhibit is incorporated into this agreement, the Owner and Architect shall incorporate the completed E204–2017 or other similar exhibit into the agreements with the consultants and contractors performing services or Work in any way associated with the Sustainable Objective.

§ 1.1.7 The Owner identifies the following representative in accordance with Section 5.3:
(List name, address, and other contact information.)

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« »

§ 1.1.8 The persons or entities, in addition to the Owner's representative, who are required to review the Architect's submittals to the Owner are as follows:
(List name, address, and other contact information.)

« »

§ 1.1.9 The Owner shall retain the following consultants and contractors:
(List name, legal status, address, and other contact information.)

.1 Geotechnical Engineer:

« »« »
« »

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« »

.2 Civil Engineer:

« »« »
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« »

.3 Other, if any:
(List any other consultants and contractors retained by the Owner.)

« »

§ 1.1.10 The Architect identifies the following representative in accordance with Section 2.3:
(List name, address, and other contact information.)

« »
« »
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« »

§ 1.1.11 The Architect shall retain the consultants identified in Sections 1.1.11.1 and 1.1.11.2:
(List name, legal status, address, and other contact information.)

§ 1.1.11.1 Consultants retained under Basic Services:

.1 Structural Engineer:

« »« »
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.2 Mechanical Engineer:

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.3 Electrical Engineer:

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§ 1.1.11.2 Consultants retained under Supplemental Services:

« »

§ 1.1.12 Other Initial Information on which the Agreement is based:

« »

§ 1.2 The Owner and Architect may rely on the Initial Information. Both parties, however, recognize that the Initial Information may materially change and, in that event, the Owner and the Architect shall appropriately adjust the Architect's services, schedule for the Architect's services, and the Architect's compensation. The Owner shall adjust the Owner's budget for the Cost of the Work and the Owner's anticipated design and construction milestones, as necessary, to accommodate material changes in the Initial Information.

§ 1.3 The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.3.1 Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, or any other BIM Execution Plan mutually agreed by the parties, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 ARCHITECT'S RESPONSIBILITIES

§ 2.1 The Architect shall provide professional services as set forth in this Agreement. The Architect represents that it is properly licensed in the jurisdiction where the Project is located to provide the services required by this Agreement, or shall cause such services to be performed by appropriately licensed design professionals.

§ 2.2 The Architect shall perform its services consistent with the professional skill and care ordinarily provided by architects practicing in the same or similar locality under the same or similar circumstances ("Standard of Care"). The Architect shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project. Nothing in this Agreement shall be construed to require the Architect to perform beyond the Standard of Care.

§ 2.3 The Architect shall identify a representative authorized to act on behalf of the Architect with respect to the Project.

§ 2.4 Except with the Owner's knowledge and consent, the Architect shall not engage in any activity, or accept any employment, interest or contribution that would reasonably appear to compromise the Architect's professional judgment with respect to this Project.

§ 2.5 The Architect shall maintain the following insurance until termination of this Agreement. If any of the requirements set forth below are in addition to the types and limits the Architect normally maintains, the Owner shall pay the Architect as set forth in Section 11.9.

§ 2.5.1 Commercial General Liability with policy limits of not less than « » ($ « ») for each occurrence and « » ($ « ») in the aggregate for bodily injury and property damage.

§ 2.5.2 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Architect with policy limits of not less than « » ($ « ») per accident for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles, along with any other statutorily required automobile coverage.

§ 2.5.3 The Architect may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella liability insurance policies result in the same or greater coverage as the coverages required under Sections 2.5.1 and 2.5.2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 2.5.4 Workers' Compensation at statutory limits.

§ 2.5.5 Employers' Liability with policy limits not less than « » ($ « ») each accident, « » ($ « ») each employee, and « » ($ « ») policy limit.

§ 2.5.6 Professional Liability covering negligent acts, errors and omissions in the performance of professional services with policy limits of not less than « » ($ « ») per claim and « » ($ « ») in the aggregate.

§ 2.5.7 Additional Insured Obligations. To the fullest extent permitted by law, the Architect shall cause the primary and excess or umbrella polices for Commercial General Liability and Automobile Liability to include the Owner as an additional insured for claims to the extent caused ~~in whole or in part~~ by the Architect's negligent acts or omissions. The additional insured coverage shall be primary and non-contributory to any of the Owner's insurance policies and shall apply to both ongoing and completed operations.

§ 2.5.8 The Architect shall provide certificates of insurance to the Owner that evidence compliance with the requirements in this Section 2.5.

ARTICLE 3 SCOPE OF ARCHITECT'S BASIC SERVICES

§ 3.1 The Architect's Basic Services consist of those described in this Article 3 and include usual and customary structural, mechanical, and electrical engineering services. Services not set forth in this Article 3 are Supplemental or Additional Services.

§ 3.1.1 The Architect shall manage the Architect's services, research applicable design criteria, attend Project meetings, communicate with members of the Project team, and report progress to the Owner.

§ 3.1.2 The Architect shall coordinate its services with those services provided by the Owner and the Owner's consultants. The Architect shall be entitled to rely on, and shall not be responsible for, the accuracy, completeness, and timeliness of, services and information furnished by the Owner and the Owner's consultants. The Architect shall provide prompt written notice to the Owner if the Architect becomes aware of any error, omission, or inconsistency in such services or information.

§ 3.1.3 As soon as practicable after the date of this Agreement, the Architect shall submit for the Owner's approval a schedule for the performance of the Architect's services. The schedule initially shall include anticipated dates for the commencement of construction and for Substantial Completion of the Work as set forth in the Initial Information. The schedule shall include allowances for periods of time required for the Owner's review, for the performance of the Owner's consultants, and for approval of submissions by authorities having jurisdiction over the Project. Once approved by the Owner, time limits established by the schedule shall not, except for reasonable cause, be exceeded by the Architect or Owner. With the Owner's approval, the Architect shall adjust the schedule, if necessary, as the Project proceeds until the commencement of construction.

§ 3.1.4 The Architect shall not be responsible for an Owner's directive or substitution, or for the Owner's acceptance of non-conforming Work, made or given without the Architect's written approval.

§ 3.1.5 The Architect shall contact governmental authorities required to approve the Construction Documents and entities providing utility services to the Project. The Architect shall respond to applicable design requirements imposed by those authorities and entities.

§ 3.1.6 The Architect shall assist the Owner in connection with the Owner's responsibility for filing documents required for the approval of governmental authorities having jurisdiction over the Project.

§ 3.2 Schematic Design Phase Services

§ 3.2.1 The Architect shall review the program and other information furnished by the Owner, and shall review laws, codes, and regulations applicable to the Architect's services.

§ 3.2.2 The Architect shall prepare a preliminary evaluation of the Owner's program, schedule, budget for the Cost of the Work, Project site, the proposed procurement and delivery method, and other Initial Information, each in terms of the other, to ascertain the requirements of the Project. The Architect shall notify the Owner of (1) any inconsistencies discovered in the information, and (2) other information or consulting services that may be reasonably needed for the Project.

§ 3.2.3 The Architect shall present its preliminary evaluation to the Owner and shall discuss with the Owner alternative approaches to design and construction of the Project. The Architect shall reach an understanding with the Owner regarding the requirements of the Project.

§ 3.2.4 Based on the Project requirements agreed upon with the Owner, the Architect shall prepare and present, for the Owner's approval, a preliminary design illustrating the scale and relationship of the Project components.

§ 3.2.5 Based on the Owner's approval of the preliminary design, the Architect shall prepare Schematic Design Documents for the Owner's approval. The Schematic Design Documents shall consist of drawings and other documents including a site plan, if appropriate, and preliminary building plans, sections and elevations; and may include some combination of study models, perspective sketches, or digital representations. Preliminary selections of major building systems and construction materials shall be noted on the drawings or described in writing.

§ 3.2.5.1 The Architect shall consider sustainable design alternatives, such as material choices and building orientation, together with other considerations based on program and aesthetics, in developing a design that is consistent with the Owner's program, schedule and budget for the Cost of the Work. The Owner may obtain more advanced sustainable design services as a Supplemental Service under Section 4.1.1.

§ 3.2.5.2 The Architect shall consider the value of alternative materials, building systems and equipment, together with other considerations based on program and aesthetics, in developing a design for the Project that is consistent with the Owner's program, schedule, and budget for the Cost of the Work.

§ 3.2.6 The Architect shall assist the Owner, and/or any Cost Estimator hired by the Owner, in preparing an estimate of the Cost of the Work in accordance with Section 6.3. ~~The Architect shall submit to the Owner an estimate of the Cost of the Work prepared in accordance with Section 6.3.~~

§ 3.2.7 The Architect shall submit the Schematic Design Documents to the Owner, and request the Owner's approval.

§ 3.3 Design Development Phase Services

§ 3.3.1 Based on the Owner's approval of the Schematic Design Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Design Development Documents for the Owner's approval. The Design Development Documents shall illustrate and describe the development of the approved Schematic Design Documents and shall consist of drawings and other documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and other appropriate elements. The Design Development Documents shall also include outline specifications that identify major materials and systems and establish, in general, their quality levels.

§ 3.3.2 The Architect shall assist the Owner and/or any Cost Estimator hired by the owner, in updating the estimate of the Cost of the Work. ~~The Architect shall update the estimate of the Cost of the Work prepared in accordance with Section 6.3.~~

§ 3.3.3 The Architect shall submit the Design Development Documents to the Owner, advise the Owner of any adjustments to the estimate of the Cost of the Work, and request the Owner's approval.

§ 3.4 Construction Documents Phase Services

§ 3.4.1 Based on the Owner's approval of the Design Development Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Construction Documents for the Owner's approval. The Construction Documents shall illustrate and describe the further development of the approved Design Development Documents and shall consist of Drawings and Specifications setting forth in detail the quality levels and performance criteria of materials and systems and other requirements for the construction of the Work. The Owner and Architect acknowledge that, in order to perform the Work, the Contractor will provide additional information, including Shop Drawings, Product Data, Samples and other similar submittals, which the Architect shall review in accordance with Section 3.6.4.

§ 3.4.2 The Architect shall incorporate the design requirements of governmental authorities having jurisdiction over the Project into the Construction Documents.

§ 3.4.3 During the development of the Construction Documents, the Architect shall assist the Owner in the development and preparation of (1) procurement information that describes the time, place, and conditions of bidding, including bidding or proposal forms; (2) the form of agreement between the Owner and Contractor; and (3) the Conditions of the Contract for Construction (General, Supplementary and other Conditions). The Architect shall also compile a project manual that includes the Conditions of the Contract for Construction and Specifications, and may include bidding requirements and sample forms.

§ 3.4.4 ~~The Architect shall update the estimate for the Cost of the Work prepared in accordance with Section 6.3.~~

~~§ 3.4.5~~ The Architect shall submit the Construction Documents to the Owner, ~~advise the Owner of any adjustments to the estimate of the Cost of the Work, take any action required under Section 6.5,~~ and request the Owner's approval.

§ 3.5 Procurement Phase Services

§ 3.5.1 General

The Architect shall assist the Owner in establishing a list of prospective contractors. Following the Owner's approval of the Construction Documents, the Architect shall assist the Owner in (1) obtaining either competitive bids or negotiated proposals; (2) confirming responsiveness of bids or proposals; (3) determining the successful bid or proposal, if any; and, (4) awarding and preparing contracts for construction.

§ 3.5.2 Competitive Bidding

§ 3.5.2.1 Bidding Documents shall consist of bidding requirements and proposed Contract Documents.

§ 3.5.2.2 The Architect shall assist the Owner in bidding the Project by:

- **.1** facilitating the distribution of Bidding Documents to prospective bidders;
- **.2** organizing and conducting a pre-bid conference for prospective bidders;
- **.3** preparing responses to questions from prospective bidders and providing clarifications and interpretations of the Bidding Documents to the prospective bidders in the form of addenda; and,
- **.4** organizing and conducting the opening of the bids, and subsequently documenting and distributing the bidding results, as directed by the Owner.

§ 3.5.2.3 If the Bidding Documents permit substitutions, upon the Owner's written authorization, the Architect shall, as an Additional Service, consider requests for substitutions and prepare and distribute addenda identifying approved substitutions to all prospective bidders.

§ 3.5.3 Negotiated Proposals

§ 3.5.3.1 Proposal Documents shall consist of proposal requirements and proposed Contract Documents.

§ 3.5.3.2 The Architect shall assist the Owner in obtaining proposals by:

- **.1** facilitating the distribution of Proposal Documents for distribution to prospective contractors and requesting their return upon completion of the negotiation process;
- **.2** organizing and participating in selection interviews with prospective contractors;

.3 preparing responses to questions from prospective contractors and providing clarifications and interpretations of the Proposal Documents to the prospective contractors in the form of addenda; and,

.4 participating in negotiations with prospective contractors, and subsequently preparing a summary report of the negotiation results, as directed by the Owner.

§ 3.5.3.3 If the Proposal Documents permit substitutions, upon the Owner's written authorization, the Architect shall, as an Additional Service, consider requests for substitutions and prepare and distribute addenda identifying approved substitutions to all prospective contractors.

§ 3.6 Construction Phase Services

§ 3.6.1 General

§ 3.6.1.1 The Architect shall provide administration of the Contract between the Owner and the Contractor as set forth below and in AIA Document A201™–2017, General Conditions of the Contract for Construction. If the Owner and Contractor modify AIA Document A201–2017, those modifications shall not affect the Architect's services under this Agreement unless the Owner and the Architect amend this Agreement.

§ 3.6.1.2 The Architect shall advise and consult with the Owner during the Construction Phase Services. The Architect shall have authority to act on behalf of the Owner only to the extent provided in this Agreement. The Architect shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor shall the Architect be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Contractor or of any other persons or entities performing portions of the Work.

§ 3.6.1.3 Subject to Section 4.2 and except as provided in Section 3.6.6.5, the Architect's responsibility to provide Construction Phase Services commences with the award of the Contract for Construction and terminates on the date the Architect issues the final Certificate for Payment.

§ 3.6.2 Evaluations of the Work

§ 3.6.2.1 The Architect shall visit the site at intervals appropriate to the stage of construction, or as otherwise required in Section 4.2.3, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect shall keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work.

§ 3.6.2.2 The Architect has the authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect shall have the authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 3.6.2.3 The Architect shall interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests shall be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 3.6.2.4 Interpretations and decisions of the Architect shall be consistent with the intent of, and reasonably inferable from, the Contract Documents and shall be in writing or in the form of drawings. When making such interpretations and decisions, the Architect shall endeavor to secure faithful performance by both Owner and Contractor, shall not show partiality to either, and shall not be liable for results of interpretations or decisions

rendered in good faith. The Architect's decisions on matters relating to aesthetic effect shall be final if consistent with the intent expressed in the Contract Documents.

§ 3.6.2.5 Unless the Owner and Contractor designate another person to serve as an Initial Decision Maker, as that term is defined in AIA Document A201–2017, the Architect shall render initial decisions on Claims between the Owner and Contractor as provided in the Contract Documents.

§ 3.6.3 Certificates for Payment to Contractor

§ 3.6.3.1 The Architect shall review and certify the amounts due the Contractor and shall issue certificates in such amounts. The Architect's certification for payment shall constitute a representation to the Owner, based on the Architect's evaluation of the Work as provided in Section 3.6.2 and on the data comprising the Contractor's Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to (1) an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, (2) results of subsequent tests and inspections, (3) correction of minor deviations from the Contract Documents prior to completion, and (4) specific qualifications expressed by the Architect.

§ 3.6.3.2 The issuance of a Certificate for Payment shall not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 3.6.3.3 The Architect shall maintain a record of the Applications and Certificates for Payment.

§ 3.6.4 Submittals

§ 3.6.4.1 The Architect shall review the Contractor's submittal schedule and shall not unreasonably delay or withhold approval of the schedule. The Architect's action in reviewing submittals shall be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time, in the Architect's professional judgment, to permit adequate review.

§ 3.6.4.2 The Architect shall review and ~~approve, or~~ take ~~other~~ appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities, and installation or performance of equipment or systems, which are the Contractor's responsibility. The Architect's review shall not constitute approval of safety precautions or construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 3.6.4.3 If the Contract Documents specifically require the Contractor to provide professional design services or certifications by a design professional related to systems, materials, or equipment, the Architect shall specify the appropriate performance and design criteria that such services must satisfy. The Architect shall review and take appropriate action on Shop Drawings and other submittals related to the Work designed or certified by the Contractor's design professional, provided the submittals bear such professional's seal and signature when submitted to the Architect. The Architect's review shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect shall be entitled to rely upon, and shall not be responsible for, the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals.

§ 3.6.4.4 Subject to Section 4.2, the Architect shall review and respond to requests for information about the Contract Documents. The Architect shall set forth, in the Contract Documents, the requirements for requests for information. Requests for information shall include, at a minimum, a detailed written statement that indicates the specific Drawings or Specifications in need of clarification and the nature of the clarification requested. The

Architect's response to such requests shall be made in writing within any time limits agreed upon, or otherwise with reasonable promptness. If appropriate, the Architect shall prepare and issue supplemental Drawings and Specifications in response to the requests for information.

§ 3.6.4.5 The Architect shall maintain a record of submittals and copies of submittals supplied by the Contractor in accordance with the requirements of the Contract Documents.

§ 3.6.5 Changes in the Work

§ 3.6.5.1 The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. Subject to Section 4.2, the Architect shall prepare Change Orders and Construction Change Directives for the Owner's approval and execution in accordance with the Contract Documents.

§ 3.6.5.2 The Architect shall maintain records relative to changes in the Work.

§ 3.6.6 Project Completion

§ 3.6.6.1 The Architect shall:

.1 conduct inspections to determine the date or dates of Substantial Completion and the date of final completion;

.2 issue Certificates of Substantial Completion;

.3 forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract Documents and received from the Contractor; and,

.4 issue a final Certificate for Payment based upon a final inspection indicating that, to the best of the Architect's knowledge, information, and belief, the Work complies with the requirements of the Contract Documents.

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§ 3.6.6.2 The Architect's inspections shall be conducted with the Owner to check conformance of the Work with the requirements of the Contract Documents and to verify the accuracy and completeness of the list submitted by the Contractor of Work to be completed or corrected.

§ 3.6.6.3 When Substantial Completion has been achieved, the Architect shall inform the Owner about the balance of the Contract Sum remaining to be paid the Contractor, including the amount to be retained from the Contract Sum, if any, for final completion or correction of the Work.

§ 3.6.6.4 The Architect shall forward to the Owner the following information received from the Contractor: (1) consent of surety or sureties, if any, to reduction in or partial release of retainage or the making of final payment; (2) affidavits, receipts, releases and waivers of liens, or bonds indemnifying the Owner against liens; and (3) any other documentation required of the Contractor under the Contract Documents.

~~**§ 3.6.6.5** Upon request of the Owner, and prior to the expiration of one year from the date of Substantial Completion, the Architect shall, without additional compensation, conduct a meeting with the Owner to review the facility operations and performance.~~

ARTICLE 4 SUPPLEMENTAL AND ADDITIONAL SERVICES

§ 4.1 Supplemental Services

§ 4.1.1 The services listed below are not included in Basic Services but may be required for the Project. The Architect shall provide the listed Supplemental Services only if specifically designated in the table below as the Architect's responsibility, and the Owner shall compensate the Architect as provided in Section 11.2. Unless otherwise specifically addressed in this Agreement, if neither the Owner nor the Architect is designated, the parties agree that the listed Supplemental Service is not being provided for the Project.

(Designate the Architect's Supplemental Services and the Owner's Supplemental Services required for the Project by indicating whether the Architect or Owner shall be responsible for providing the identified Supplemental Service. Insert a description of the Supplemental Services in Section 4.1.2 below or attach the description of services as an exhibit to this Agreement.)

Supplemental Services	Responsibility *(Architect, Owner, or not provided)*
§ 4.1.1.1 Programming	
§ 4.1.1.2 Multiple preliminary designs	
§ 4.1.1.3 Measured drawings	
§ 4.1.1.4 Existing facilities surveys	
§ 4.1.1.5 Site evaluation and planning	
§ 4.1.1.6 Building Information Model management responsibilities	
§ 4.1.1.7 Development of Building Information Models for post construction use	
§ 4.1.1.8 Civil engineering	
§ 4.1.1.9 Landscape design	
§ 4.1.1.10 Architectural interior design	
§ 4.1.1.11 Value analysis	
§ 4.1.1.12 Detailed cost estimating beyond that required in Section 6.3	Owner
§ 4.1.1.13 On-site project representation	
§ 4.1.1.14 Conformed documents for construction	Architect
§ 4.1.1.15 As-designed record drawings	Architect
§ 4.1.1.16 As-constructed record drawings	Contractor
§ 4.1.1.17 Post-occupancy evaluation	
§ 4.1.1.18 Facility support services	
§ 4.1.1.19 Tenant-related services	
§ 4.1.1.20 Architect's coordination of the Owner's consultants	
§ 4.1.1.21 Telecommunications/data design	
§ 4.1.1.22 Security evaluation and planning	
§ 4.1.1.23 Commissioning	
§ 4.1.1.24 Sustainable Project Services pursuant to Section 4.1.3	
§ 4.1.1.25 Fast-track design services	
§ 4.1.1.26 Multiple bid packages	
§ 4.1.1.27 Historic preservation	
§ 4.1.1.28 Furniture, furnishings, and equipment design	
§ 4.1.1.29 Other services provided by specialty Consultants	
§ 4.1.1.30 Other Supplemental Services	
§ 4.1.1.31 Warranty Review	Architect

§ 4.1.2 Description of Supplemental Services

§ 4.1.2.1 A description of each Supplemental Service identified in Section 4.1.1 as the Architect's responsibility is provided below.

(Describe in detail the Architect's Supplemental Services identified in Section 4.1.1 or, if set forth in an exhibit, identify the exhibit. The AIA publishes a number of Standard Form of Architect's Services documents that can be included as an exhibit to describe the Architect's Supplemental Services.)

Additional Services per §4.1.31, Warranty Review: Upon request of the Owner, and prior to the expiration of one year from the date of Substantial Completion, the Architect shall conduct a meeting with the Owner to review the facility operations and performance.« »

§ 4.1.2.2 A description of each Supplemental Service identified in Section 4.1.1 as the Owner's responsibility is provided below.
(Describe in detail the Owner's Supplemental Services identified in Section 4.1.1 or, if set forth in an exhibit, identify the exhibit.)

« »

§ 4.1.3 If the Owner identified a Sustainable Objective in Article 1, the Architect shall provide, as a Supplemental Service, the Sustainability Services required in AIA Document E204™–2017, Sustainable Projects Exhibit or other similar exhibit, attached to this Agreement. The Owner shall compensate the Architect as provided in Section 11.2.

§ 4.2 Architect's Additional Services

The Architect may provide Additional Services after execution of this Agreement without invalidating the Agreement. Except for services required due to the fault of the Architect, any Additional Services provided in accordance with this Section 4.2 shall entitle the Architect to compensation pursuant to Section 11.3 and an appropriate adjustment in the Architect's schedule.

§ 4.2.1 Upon recognizing the need to perform the following Additional Services, the Architect shall notify the Owner with reasonable promptness and explain the facts and circumstances giving rise to the need. The Architect shall not proceed to provide the following Additional Services until the Architect receives the Owner's written authorization:

- **.1** Services necessitated by a change in the Initial Information, previous instructions or approvals given by the Owner, or a material change in the Project including size, quality, complexity, the Owner's schedule or budget for Cost of the Work, or procurement or delivery method;
- **.2** Services necessitated by the enactment or revision of codes, laws, or regulations, including changing or editing previously prepared Instruments of Service;
- **.3** Changing or editing previously prepared Instruments of Service necessitated by official interpretations of applicable codes, laws or regulations that are either (a) contrary to specific interpretations by the applicable authorities having jurisdiction made prior to the issuance of the building permit, or (b) contrary to requirements of the Instruments of Service when those Instruments of Service were prepared in accordance with the applicable standard of care;
- **.4** Services necessitated by decisions of the Owner not rendered in a timely manner or any other failure of performance on the part of the Owner or the Owner's consultants or contractors;
- **.5** Preparing digital models or other design documentation for transmission to the Owner's consultants and contractors, or to other Owner-authorized recipients;
- **.6** Preparation of design and documentation for alternate bid or proposal requests proposed by the Owner;
- **.7** Preparation for, and attendance at, a public presentation, meeting or hearing;
- **.8** Preparation for, and attendance at, a dispute resolution proceeding or legal proceeding, except where the Architect is party thereto;
- **.9** Evaluation of the qualifications of entities providing bids or proposals;
- **.10** Consultation concerning replacement of Work resulting from fire or other cause during construction; or,
- **.11** Assistance to the Initial Decision Maker, if other than the Architect.

§ 4.2.2 To avoid delay in the Construction Phase, the Architect shall provide the following Additional Services, notify the Owner with reasonable promptness, and explain the facts and circumstances giving rise to the need. If, upon receipt of the Architect's notice, the Owner determines that all or parts of the services are not required, the Owner shall give prompt written notice to the Architect of the Owner's determination. The Owner shall compensate the Architect for the services provided prior to the Architect's receipt of the Owner's notice.

- **.1** Reviewing a Contractor's submittal out of sequence from the submittal schedule approved by the Architect;

.2 Responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation;

.3 Preparing Change Orders and Construction Change Directives that require evaluation of Contractor's proposals and supporting data, or the preparation or revision of Instruments of Service;

.4 Evaluating an extensive number of Claims as the Initial Decision Maker; or,

.5 Evaluating substitutions proposed by the Owner or Contractor and making subsequent revisions to Instruments of Service resulting therefrom.

§ 4.2.3 The Architect shall provide Construction Phase Services exceeding the limits set forth below as Additional Services. When the limits below are reached, the Architect shall notify the Owner:

.1 « » (« ») reviews of each Shop Drawing, Product Data item, sample and similar submittals of the Contractor

.2 « » (« ») visits to the site by the Architect during construction

.3 « » (« ») inspections for any portion of the Work to determine whether such portion of the Work is substantially complete in accordance with the requirements of the Contract Documents

.4 « » (« ») inspections for any portion of the Work to determine final completion.

§ 4.2.4 Except for services required under Section 3.6.6.5 and those services that do not exceed the limits set forth in Section 4.2.3, Construction Phase Services provided more than 60 days after (1) the date of Substantial Completion of the Work or (2) the initial date of Substantial Completion identified in the agreement between the Owner and Contractor, whichever is earlier, shall be compensated as Additional Services to the extent the Architect incurs additional cost in providing those Construction Phase Services.

§ 4.2.5 If the services covered by this Agreement have not been completed within « » (« ») months of the date of this Agreement, through no fault of the Architect, extension of the Architect's services beyond that time shall be compensated as Additional Services.

ARTICLE 5 OWNER'S RESPONSIBILITIES

§ 5.1 Unless otherwise provided for under this Agreement, the Owner shall provide information in a timely manner regarding requirements for and limitations on the Project, including a written program, which shall set forth the Owner's objectives; schedule; constraints and criteria, including space requirements and relationships; flexibility; expandability; special equipment; systems; and site requirements.

§ 5.2 The Owner shall establish the Owner's budget for the Project, including (1) the budget for the Cost of the Work as defined in Section 6.1; (2) the Owner's other costs; and, (3) reasonable contingencies related to all of these costs. The Owner shall update the Owner's budget for the Project as necessary throughout the duration of the Project until final completion. If the Owner significantly increases or decreases the Owner's budget for the Cost of the Work, the Owner shall notify the Architect. The Owner and the Architect shall thereafter agree to a corresponding change in the Project's scope and quality.

§ 5.3 The Owner shall identify a representative authorized to act on the Owner's behalf with respect to the Project. The Owner shall render decisions and approve the Architect's submittals in a timely manner in order to avoid unreasonable delay in the orderly and sequential progress of the Architect's services.

§ 5.4 The Owner shall furnish surveys to describe physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. The surveys and legal information shall include, as applicable, grades and lines of streets, alleys, pavements and adjoining property and structures; designated wetlands; adjacent drainage; rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site; locations, dimensions, and other necessary data with respect to existing buildings, other improvements and trees; and information concerning available utility services and lines, both public and private, above and below grade, including inverts and depths. All the information on the survey shall be referenced to a Project benchmark.

§ 5.5 The Owner shall furnish services of geotechnical engineers, which may include test borings, test pits, determinations of soil bearing values, percolation tests, evaluations of hazardous materials, seismic evaluation, ground corrosion tests and resistivity tests, including necessary operations for anticipating subsoil conditions, with written reports and appropriate recommendations.

§ 5.6 The Owner shall provide the Supplemental Services designated as the Owner's responsibility in Section 4.1.1.

§ 5.7 If the Owner identified a Sustainable Objective in Article 1, the Owner shall fulfill its responsibilities as required in AIA Document E204™–2017, Sustainable Projects Exhibit or other similar exhibit, attached to this Agreement.

§ 5.8 The Owner shall coordinate the services of its own consultants with those services provided by the Architect. Upon the Architect's request, the Owner shall furnish copies of the scope of services in the contracts between the Owner and the Owner's consultants. The Owner shall furnish the services of consultants other than those designated as the responsibility of the Architect in this Agreement, or authorize the Architect to furnish them as an Additional Service, when the Architect requests such services and demonstrates that they are reasonably required by the scope of the Project. The Owner shall require that its consultants and contractors maintain insurance, including professional liability insurance, as appropriate to the services or work provided. Architect is entitled to rely upon the accuracy and completeness of the services, information, surveys, and reports provided by Owner, Contractor, or any of their subcontractors or consultants. Architect's coordination of its services with the services of Owner's other consultants will be limited to that necessary for consistency of Architect's documents with those of such consultants.

§ 5.9 The Owner shall furnish tests, inspections and reports required by law or the Contract Documents, such as structural, mechanical, and chemical tests, tests for air and water pollution, and tests for hazardous materials.

§ 5.10 The Owner shall furnish all legal, insurance and accounting services, including auditing services, that may be reasonably necessary at any time for the Project to meet the Owner's needs and interests. Such services shall include auditing services the Owner may require to verify the Contractor's Applications for Payment or to ascertain how or for what purposes the Contractor has used the money paid by or on behalf of the Owner.

§ 5.11 The Owner shall provide prompt written notice to the Architect if the Owner becomes aware of any fault or defect in the Project, including errors, omissions or inconsistencies in the Architect's Instruments of Service.

§ 5.12 The Owner shall include the Architect in all communications with the Contractor that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect.

§ 5.13 Before executing the Contract for Construction, the Owner shall coordinate the Architect's duties and responsibilities set forth in the Contract for Construction with the Architect's services set forth in this Agreement. The Owner shall provide the Architect a copy of the executed agreement between the Owner and Contractor, including the General Conditions of the Contract for Construction.

§ 5.14 The Owner shall provide the Architect access to the Project site prior to commencement of the Work and shall obligate the Contractor to provide the Architect access to the Work wherever it is in preparation or progress.

§ 5.15 Within 15 days after receipt of a written request from the Architect, the Owner shall furnish the requested information as necessary and relevant for the Architect to evaluate, give notice of, or enforce lien rights.

ARTICLE 6 COST OF THE WORK

§ 6.1 For purposes of this Agreement, the Cost of the Work shall be the total cost to the Owner to construct all elements of the Project designed or specified by the Architect and shall include contractors' general conditions costs, overhead and profit. The Cost of the Work also includes the reasonable value of labor, materials, and equipment, donated to, or otherwise furnished by, the Owner. The Cost of the Work does not include the compensation of the Architect; the costs of the land, rights-of-way, financing, or contingencies for changes in the Work; or other costs that are the responsibility of the Owner.

§ 6.2 The Owner's budget for the Cost of the Work is provided in Initial Information, and shall be adjusted throughout the Project as required under Sections 5.2, 6.4 and 6.5. Evaluations of the Owner's budget for the Cost of the Work, and any input provided by the Architect to the Owner, and/or any Cost Estimator hired by the Owner, with respect to ~~and~~ the preliminary estimate of the Cost of the Work and updated estimates of the Cost of the Work, ~~prepared by the Architect,~~ represent the Architect's judgment as a design professional. It is recognized, however, that neither the Architect nor the Owner has control over the cost of labor, materials, or equipment; the Contractor's methods of determining bid prices; or competitive bidding, market, or negotiating conditions. Accordingly, the Architect cannot and does not warrant or represent that bids or negotiated prices will not vary from the Owner's budget for the Cost of the Work, or from any estimate of the Cost of the Work, or evaluation, prepared or agreed to by the Architect.

§ 6.3 In preparing estimates of the Cost of Work, the Owner, and/or any Cost Estimator hired by the Owner, ~~Architect~~ shall ~~be permitted to~~ include contingencies for design, bidding, and price escalation; and the Architect shall assist the Owner in determining ~~to determine~~ what materials, equipment, component systems, and types of construction are to be included in the Contract Documents; ~~to recommend~~making reasonable adjustments in the program and scope of the Project; and ~~to~~ includinge design alternates as may be necessary to adjust the estimated Cost of the Work to meet the Owner's budget. The ~~Architect's~~ Owner's estimate of the Cost of the Work shall be based on current area, volume or similar conceptual estimating techniques. The Architect shall assist in the preparation of these estimates by providing information regarding the design intent as required. If the Owner requires an ~~detailed~~ estimate of the Cost of the Work, the Architect shall provide such an estimate, if identified as the Architect's responsibility in Section 4.1.1, as a Supplemental Service.

§ 6.4 If, through no fault of the Architect, the Procurement Phase has not commenced within 90 days after the Architect submits the Construction Documents to the Owner, the Owner's budget for the Cost of the Work shall be adjusted to reflect changes in the general level of prices in the applicable construction market.

§ 6.5 If at any time the ~~Architect's~~ Owner's estimate of the Cost of the Work materially exceeds the Owner's budget for the Cost of the Work, the Architect shall make appropriate recommendations to the Owner to adjust the Project's size, quality, or budget for the Cost of the Work, and the Owner shall cooperate with the Architect in making such adjustments in the subsequent design phase.

§ 6.6 If the Owner's budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services is exceeded by more than five percent (5%) the lowest bona fide bid or negotiated proposal, the Owner shall

- **.1** give written approval of an increase in the budget for the Cost of the Work;
- **.2** authorize rebidding or renegotiating of the Project within a reasonable time;
- **.3** terminate in accordance with Section 9.5;
- **.4** in consultation with the Architect, revise the Project program, scope, or quality as required to reduce the Cost of the Work; or,
- **.5** implement any other mutually acceptable alternative.

§ 6.7 If the Owner chooses to proceed under Section 6.6.4, the Architect shall modify the Construction Documents as necessary once to comply with the Owner's budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services, or the budget as adjusted under Section 6.6.1. If the Owner requires the Architect to modify the Construction Documents because the lowest bona fide bid or negotiated proposal exceeds the Owner's budget for the Cost of the Work due to errors in the cost estimates provided by or on behalf of the Owner, or due to market conditions the Architect could not reasonably anticipate, the Owner shall compensate the Architect for the modifications as an Additional Service pursuant to Section 11.3; ~~otherwise~~ but, the Architect's services for modifying the Construction Documents to correct the Architect's errors or omissions shall be without additional compensation. In any event, the Architect's modification of the Construction Documents shall be the limit of the Architect's responsibility under this Article 6.

ARTICLE 7 COPYRIGHTS AND LICENSES

§ 7.1 The drawings, specifications, surveys, reports, and other documents, and any computer tapes, disks, models, CAD files, research, analytics, processes, algorithms, or other data, in any medium, prepared by the Architect

(collectively "Instruments of Service") are protected by U.S. copyright laws, and will remain the Architect's property. The Architect and the Owner warrant that in transmitting Instruments of Service, or any other information, the transmitting party is the copyright owner of such information or has permission from the copyright owner to transmit such information for its use on the Project.

§ 7.2 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and shall retain all common law, statutory and other reserved rights, including copyrights. Submission or distribution of Instruments of Service to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the reserved rights of the Architect and the Architect's consultants.

§ 7.3 The Architect grants to the Owner a nonexclusive license to use the Architect's Instruments of Service solely and exclusively for purposes of constructing, using, maintaining, altering and adding to the Project, provided that the Owner substantially performs its obligations under this Agreement, including prompt payment of all undisputed sums due pursuant to Article 9 and Article 11. The Architect shall obtain similar nonexclusive licenses from the Architect's consultants consistent with this Agreement. The license granted under this section permits the Owner to authorize the Contractor, Subcontractors, Sub-subcontractors, and suppliers, as well as the Owner's consultants and separate contractors, to reproduce applicable portions of the Instruments of Service, subject to any protocols established pursuant to Section 1.3, solely and exclusively for use in performing services or construction for the Project. If the Architect rightfully terminates this Agreement for cause as provided in Section 9.4, the license granted in this Section 7.3 shall terminate.

§ 7.3.1 In the event the Owner uses the Instruments of Service without retaining the authors of the Instruments of Service, the Owner releases the Architect and Architect's consultant(s) from all claims and causes of action arising from such uses. The Owner, to the extent permitted by law, further agrees to indemnify and hold harmless the Architect and its consultants from all costs and expenses, including the cost of defense, related to claims and causes of action asserted by any third person or entity to the extent such costs and expenses arise from the Owner's use of the Instruments of Service under this Section 7.3.1. The terms of this Section 7.3.1 shall not apply if the Owner rightfully terminates this Agreement for cause under Section 9.4.

§ 7.4 Except for the licenses granted in this Article 7, no other license or right shall be deemed granted or implied under this Agreement. The Owner shall not assign, delegate, sublicense, pledge or otherwise transfer any license granted herein to another party without the prior written agreement of the Architect. Any unauthorized use of the Instruments of Service shall be at the Owner's sole risk and without liability to the Architect and the Architect's consultants.

§ 7.5 Except as otherwise stated in Section 7.3, the provisions of this Article 7 shall survive the termination of this Agreement.

ARTICLE 8 CLAIMS AND DISPUTES

§ 8.1 General

§ 8.1.1 The Owner and Architect shall commence all claims and causes of action against the other and arising out of or related to this Agreement, whether in contract, tort, or otherwise, in accordance with the requirements of the binding dispute resolution method selected in this Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Architect waive all claims and causes of action not commenced in accordance with this Section 8.1.1.

§ 8.1.2 To the extent damages are covered by property insurance, the Owner and Architect waive all rights against each other and against the contractors, consultants, agents, and employees of the other for damages, except such rights as they may have to the proceeds of such insurance as set forth in AIA Document A201–2017, General Conditions of the Contract for Construction. The Owner or the Architect, as appropriate, shall require of the contractors, consultants, agents, and employees of any of them, similar waivers in favor of the other parties enumerated herein.

§ 8.1.3 The Architect and Owner waive consequential damages for claims, disputes, or other matters in question, arising out of or relating to this Agreement. This mutual waiver is applicable, without limitation, to all consequential

damages due to either party's termination of this Agreement, except as specifically provided in Section 9.7. The parties agree that this mutual waiver includes, but is not limited to, damages incurred by either party for loss of income, lost profit, financing costs, loss of business, or damage to reputation.

§ 8.1.4 Except for the Architect's liability, if any, for damages incurred by the Owner, as a result of a third-party claim concerning the death or bodily injury to any person or the destruction or damage to any property, to the extent caused by the negligent act, error, or omission of the Architect, the Owner agrees that the Architect's total liability arising out of or related to the Project or this Agreement, will not exceed the total compensation received by the Architect pursuant to this Agreement.

§ 8.2 Mediation

§ 8.2.1 Any claim, dispute or other matter in question arising out of or related to this Agreement shall be subject to mediation as a condition precedent to binding dispute resolution. If such matter relates to or is the subject of a lien arising out of the Architect's services, the Architect may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or by binding dispute resolution.

§ 8.2.2 The Owner and Architect shall endeavor to resolve claims, disputes and other matters in question between them by mediation, which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of this Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of a complaint or other appropriate demand for binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration proceeding is stayed pursuant to this section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 8.2.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 8.2.4 If the parties do not resolve a dispute through mediation pursuant to this Section 8.2, the method of binding dispute resolution shall be the following:
(Check the appropriate box.)

[« X »] Arbitration pursuant to Section 8.3 of this Agreement

[« »] Litigation in a court of competent jurisdiction

[« »] Other: *(Specify)*

« »

If the Owner and Architect do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, the dispute will be resolved in a court of competent jurisdiction.

§ 8.3 Arbitration

§ 8.3.1 If the parties have selected arbitration as the method for binding dispute resolution in this Agreement, any claim, dispute or other matter in question arising out of or related to this Agreement subject to, but not resolved by, mediation shall be subject to arbitration, which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of this Agreement. A demand for arbitration shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the arbitration.

§ 8.3.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the claim, dispute or other matter in question would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the claim, dispute or other matter in question.

§ 8.3.2 The foregoing agreement to arbitrate, and other agreements to arbitrate with an additional person or entity duly consented to by parties to this Agreement, shall be specifically enforceable in accordance with applicable law in any court having jurisdiction thereof.

§ 8.3.3 The award rendered by the arbitrator(s) shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 8.3.4 Consolidation or Joinder

§ 8.3.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 8.3.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 8.3.4.3 The Owner and Architect grant to any person or entity made a party to an arbitration conducted under this Section 8.3, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Architect under this Agreement.

§ 8.4 The provisions of this Article 8 shall survive the termination of this Agreement.

ARTICLE 9 TERMINATION OR SUSPENSION

§ 9.1 If the Owner fails to make payments to the Architect in accordance with this Agreement, such failure shall be considered substantial nonperformance and cause for termination or, at the Architect's option, cause for suspension of performance of services under this Agreement. If the Architect elects to suspend services, the Architect shall give seven days' written notice to the Owner before suspending services. In the event of a suspension of services, the Architect shall have no liability to the Owner for delay or damage caused the Owner because of such suspension of services. Before resuming services, the Owner shall pay the Architect all sums due prior to suspension and any expenses incurred in the interruption and resumption of the Architect's services. The Architect's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.2 If the Owner suspends the Project, the Architect shall be compensated for services performed prior to notice of such suspension. When the Project is resumed, the Architect shall be compensated for expenses incurred in the interruption and resumption of the Architect's services. The Architect's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.3 If the Owner suspends the Project for more than 90 cumulative days for reasons other than the fault of the Architect, the Architect may terminate this Agreement by giving not less than seven days' written notice.

§ 9.4 Either party may terminate this Agreement upon not less than seven days' written notice should the other party fail substantially to perform in accordance with the terms of this Agreement through no fault of the party initiating the termination.

§ 9.5 The Owner may terminate this Agreement upon not less than seven days' written notice to the Architect for the Owner's convenience and without cause.

§ 9.6 If the Owner terminates this Agreement for its convenience pursuant to Section 9.5, or the Architect terminates this Agreement pursuant to Section 9.3, the Owner shall compensate the Architect for services performed prior to termination, Reimbursable Expenses incurred, and costs attributable to termination, including the costs attributable to the Architect's termination of consultant agreements.

§ 9.7 In addition to any amounts paid under Section 9.6, if the Owner terminates this Agreement for its convenience pursuant to Section 9.5, or the Architect terminates this Agreement pursuant to Section 9.3, the Owner shall pay to the Architect the following fees:
(Set forth below the amount of any termination or licensing fee, or the method for determining any termination or licensing fee.)

.1 Termination Fee:

« »

.2 Licensing Fee if the Owner intends to continue using the Architect's Instruments of Service:

« »

§ 9.8 Except as otherwise expressly provided herein, this Agreement shall terminate one year from the date of Substantial Completion.

§ 9.9 The Owner's rights to use the Architect's Instruments of Service in the event of a termination of this Agreement are set forth in Article 7 and Section 9.7.

ARTICLE 10 MISCELLANEOUS PROVISIONS

§ 10.1 This Agreement shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 8.3.

§ 10.2 Terms in this Agreement shall have the same meaning as those in AIA Document A201–2017, General Conditions of the Contract for Construction.

§ 10.3 The Owner and Architect, respectively, bind themselves, their agents, successors, assigns, and legal representatives to this Agreement. Neither the Owner nor the Architect shall assign this Agreement without the written consent of the other, except that the Owner may assign this Agreement to a lender providing financing for the Project if the lender agrees to assume the Owner's rights and obligations under this Agreement, including any payments due to the Architect by the Owner prior to the assignment.

§ 10.4 If the Owner requests the Architect to execute certificates, the proposed language of such certificates shall be submitted to the Architect for review at least 14 days prior to the requested dates of execution. If the Owner requests the Architect to execute consents reasonably required to facilitate assignment to a lender, the Architect shall execute all such consents that are consistent with this Agreement, provided the proposed consent is submitted to the Architect for review at least 14 days prior to execution. The Architect shall not be required to execute certificates or consents that would require knowledge, services, or responsibilities beyond the scope of this Agreement.

§ 10.5 Nothing contained in this Agreement shall create a contractual relationship with, or a cause of action in favor of, a third party against either the Owner or Architect.

§ 10.6 The Owner acknowledges that the Architect has no expertise in, and is not being retained for the purposes of, investigating, detecting, abating, replacing, remediating, or removing any items, products, or materials containing hazardous substances. ~~Unless otherwise required in this Agreement, T~~the Architect shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials or toxic substances in any form at the Project site.

§ 10.7 The Architect shall have the right to include photographic or artistic representations of the design of the Project among the Architect's promotional and professional materials. The Architect shall be given reasonable access to the completed Project to make such representations. However, the Architect's materials shall not include the Owner's confidential or proprietary information if the Owner has previously advised the Architect in writing of the specific information considered by the Owner to be confidential or proprietary. The Owner shall provide professional credit for the Architect in the Owner's promotional materials for the Project. This Section 10.7 shall survive the termination of this Agreement unless the Owner terminates this Agreement for cause pursuant to Section 9.4.

§ 10.8 If the Architect or Owner receives information specifically designated as "confidential" or "business proprietary," the receiving party shall keep such information strictly confidential and shall not disclose it to any other person except as set forth in Section 10.8.1. This Section 10.8 shall survive the termination of this Agreement. The parties agree that the terms and conditions of this Agreement are considered confidential. Owner understands and agrees that Architect may gather statistical data, analytics, trends, and other aggregated or otherwise de-identified data derived from Architect's services to Owner ("Aggregate Data"), and that Aggregate Data will be stored and processed by Architect for general research purposes. Aggregate Data, as well as any resulting research, know-how, processes, algorithms or other methodology related to the Aggregate Data, shall remain Architect's property and will be considered confidential or business proprietary under this Agreement.

§ 10.8.1 The receiving party may disclose "confidential" or "business proprietary" information after 7 days' notice to the other party, when required by law, arbitrator's order, or court order, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or to the extent such information is reasonably necessary for the receiving party to defend itself in any dispute. The receiving party may also disclose such information to its employees, consultants, or contractors in order to perform services or work solely and exclusively for the Project, provided those employees, consultants and contractors are subject to the restrictions on the disclosure and use of such information as set forth in this Section 10.8.

§ 10.9 The invalidity of any provision of the Agreement shall not invalidate the Agreement or its remaining provisions. If it is determined that any provision of the Agreement violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Agreement shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Agreement.

§ 10.910 Latent Conditions. In the event the Project includes any remodeling, alteration, or rehabilitation work, the Owner acknowledges that certain design and technical decisions will be made on assumptions based on available documents and visual observations of existing conditions.

§ 10.110 Area Measurements and Calculations. Area measurements and calculations provided by the Architect ("Measurements") are for the Owner's reference only, and are not intended to be relied upon by third parties, used in legal documents, or to be the sole basis for calculating rent, tax obligations or other similar purposes. The use and application of Measurements is at the sole discretion of the Owner and the Owner agrees to indemnify the Architect from any claims or damages asserted by third parties arising from or related to the application and use of the Measurements.

§ 10.121 Ethics. The Owner and the Architect acknowledge their responsibilities and commitment to abide by their respective ethical guidelines, to require that their employees, agents, consultants or contractors conduct themselves professionally and respectfully, and to comply with both domestic and international anti-slavery and anti-corruption laws, including but not limited to the United States Foreign Corrupt Practices Act, the United Kingdom Bribery Act and the Modern Slavery Act, and any amendments and related regulations. Either party may terminate this Agreement at any stage of the Project, if it reasonably believes that the other party failed to comply with the provisions of this section, including any non-compliance prior to the effective date of this Agreement. A party exercising its right to terminate under this provision will not be liable for any claims or damages arising out of or related to the termination.

ARTICLE 11 COMPENSATION

§ 11.1 For the Architect's Basic Services described under Article 3, the Owner shall compensate the Architect as follows:

.1 Stipulated Sum
(Insert amount)

« »

.2 Percentage Basis
(Insert percentage value)

« » (« ») % of the Owner's budget for the Cost of the Work, as calculated in accordance with Section 11.6.

.3 Other
(Describe the method of compensation)

« »

§ 11.2 For the Architect's Supplemental Services designated in Section 4.1.1 and for any Sustainability Services required pursuant to Section 4.1.3, the Owner shall compensate the Architect as follows:
(Insert amount of, or basis for, compensation. If necessary, list specific services to which particular methods of compensation apply.)

« »

§ 11.3 For Additional Services that may arise during the course of the Project, including those under Section 4.2, the Owner shall compensate the Architect as follows:
(Insert amount of, or basis for, compensation.)

« »

§ 11.4 Compensation for Supplemental and Additional Services of the Architect's consultants when not included in Section 11.2 or 11.3, shall be the amount invoiced to the Architect plus «»fifteen percent («»15%), or as follows:
(Insert amount of, or basis for computing, Architect's consultants' compensation for Supplemental or Additional Services.)

« »

§ 11.5 When compensation for Basic Services is based on a stipulated sum or a percentage basis, the proportion of compensation for each phase of services shall be as follows:

Schematic Design Phase	« »	percent (	« »	%)
Design Development Phase	« »	percent (	« »	%)
Construction Documents Phase	« »	percent (	« »	%)
Procurement Phase	« »	percent (	« »	%)
Construction Phase	« »	percent (	« »	%)
Total Basic Compensation	one hundred	percent (	100	%)

§ 11.6 When compensation identified in Section 11.1 is on a percentage basis, progress payments for each phase of Basic Services shall be calculated by multiplying the percentages identified in this Article by the Owner's most recent budget for the Cost of the Work. Compensation paid in previous progress payments shall not be adjusted based on subsequent updates to the Owner's budget for the Cost of the Work.

§ 11.6.1 When compensation is on a percentage basis and any portions of the Project are deleted or otherwise not constructed, compensation for those portions of the Project shall be payable to the extent services are performed on those portions. The Architect shall be entitled to compensation in accordance with this Agreement for all services performed whether or not the Construction Phase is commenced.

§ 11.7 The hourly billing rates for services of the Architect and the Architect's consultants are set forth below. The rates shall be adjusted in accordance with the Architect's and Architect's consultants' normal review practices. *(If applicable, attach an exhibit of hourly billing rates or insert them below.)*

« »

Employee or Category	Rate ($0.00)

§ 11.8 Compensation for Reimbursable Expenses

§ 11.8.1 Reimbursable Expenses are in addition to compensation for Basic, Supplemental, and Additional Services and include expenses incurred by the Architect and the Architect's consultants directly related to the Project, as follows:

.1 Transportation and authorized out-of-town travel and subsistence;
.2 Long distance services, dedicated data and communication services, teleconferences, Project web sites, and extranets;
.3 Permitting and other fees required by authorities having jurisdiction over the Project;
.4 Printing, reproductions, plots, and standard form documents;
.5 Postage, handling, and delivery;
.6 Expense of overtime work requiring higher than regular rates, if authorized in advance by the Owner;
.7 Renderings, physical models, mock-ups, professional photography, and presentation materials requested by the Owner or required for the Project;
.8 If required by the Owner, and with the Owner's prior written approval, the Architect's consultants' expenses of professional liability insurance dedicated exclusively to this Project, or the expense of additional insurance coverage or limits in excess of that normally maintained by the Architect's consultants;
.9 All taxes levied on professional services and on reimbursable expenses;
.10 Site office expenses;
.11 Registration fees and any other fees charged by the Certifying Authority or by other entities as necessary to achieve the Sustainable Objective; and,
.12 Other similar Project-related expenditures.

§ 11.8.2 For Reimbursable Expenses the compensation shall be the expenses incurred by the Architect and the Architect's consultants plus «»fifteen percent («»15 %) of the expenses incurred.

§ 11.9 Architect's Insurance. If the types and limits of coverage required in Section 2.5 are in addition to the types and limits the Architect's consultants normally maintains, the Owner shall pay the Architect for the additional costs incurred by the Architect's consultants for the additional coverages as set forth below, or limit the Architect's liability for such consultants' acts or omissions to any amounts actually recovered from the consultant's insurance:. *(Insert the additional coverages the Architect is required to obtain in order to satisfy the requirements set forth in Section 2.5, and for which the Owner shall reimburse the Architect.)*

« »

§ 11.10 Payments to the Architect

§ 11.10.1 Initial Payments

§ 11.10.1.1 An initial payment of « » ($ « ») shall be made upon execution of this Agreement and is the minimum payment under this Agreement. It shall be credited to the Owner's account in the final invoice.

§ 11.10.1.2 If a Sustainability Certification is part of the Sustainable Objective, an initial payment to the Architect of « » ($ « ») shall be made upon execution of this Agreement for registration fees and other fees payable to the Certifying Authority and necessary to achieve the Sustainability Certification. The Architect's payments to the Certifying Authority shall be credited to the Owner's account at the time the expense is incurred.

§ 11.10.2 Progress Payments

§ 11.10.2.1 Unless otherwise agreed, payments for services shall be made monthly in proportion to services performed. Payments are due and payable upon presentation of the Architect's invoice. Amounts unpaid «»thirty («»30) days after the invoice date shall bear interest at the rate entered below, or in the absence thereof at the legal rate prevailing from time to time at the principal place of business of the Architect.
(Insert rate of monthly or annual interest agreed upon.)

«»1.50 % «»monthly

§ 11.10.2.2 The Owner shall not withhold amounts from the Architect's compensation to impose a penalty or liquidated damages on the Architect, or to offset sums requested by or paid to contractors for the cost of changes in the Work, unless the Architect agrees or has been found liable for the amounts in a binding dispute resolution proceeding.

§ 11.10.2.3 Records of Reimbursable Expenses, expenses pertaining to Supplemental and Additional Services, and services performed on the basis of hourly rates shall be available to the Owner at mutually convenient times.

ARTICLE 12 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Agreement are as follows:
(Include other terms and conditions applicable to this Agreement.)

« »

ARTICLE 13 SCOPE OF THE AGREEMENT

§ 13.1 This Agreement represents the entire and integrated agreement between the Owner and the Architect and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both the Owner and Architect. No failure to act by either Party hereto will be deemed to constitute a waiver of such Party's rights or remedies hereunder. If any party of this agreement is declared unenforceable or invalid, the remainder will continue to be valid and enforceable.

§ 13.2 This Agreement is comprised of the following documents identified below:

.1 AIA Document B101™–2017, Standard Form Agreement Between Owner and Architect

.2 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this agreement.)

« »

.3 Exhibits:
(Check the appropriate box for any exhibits incorporated into this Agreement.)

[« »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below or "other similar exhibit" where used [USE GENSLER'S LEED PROPOSAL TEMPLATE TO PREPARE THIS EXHIBIT]:
(Insert the date of the E204-2017 incorporated into this agreement.)

« »

[« »] Other Exhibits incorporated into this Agreement:
(Clearly identify any other exhibits incorporated into this Agreement, including any exhibits and scopes of services identified as exhibits in Section 4.1.2.)

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« »

.4 Other documents:
(List other documents, if any, forming part of the Agreement.)

« »

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*	**ARCHITECT** *(Signature)*
« »« »	« »« »
(Printed name and title)	*(Printed name, title, and license number, if required)*

State of West Virginia

EOI: New Consolidated State Laboratory Facility Project
Solicitation No.: CEOI 0211 GSD2400000002

11/14/2023

Gensler

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Shirley Ryan AbilityLab | Chicago, IL

1 East Pratt Street
Suite 202
Baltimore, Maryland 21202
USA
Tel: +1 410-539-8776

Gensler

November 14, 2023

Melissa Pettrey, Senior Buyer
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Subject: Proposal for Design Services

Dear Melissa and Members of the Selection Committee:

On behalf of our Gensler team, thank you for the opportunity to submit our proposal for Design for The New Consolidated State Laboratory Facility! We are excited at the prospect of partnering with you to create a beautiful, flexible, budget-conscious space that fosters collaboration, enables scientific innovation, and creates an ecosystem of ideas and discovery through consolidation of scientific disciplines in a single location. In addition to our preliminary understanding of your goals and program, we feel exceptionally qualified for your project for the following reasons:

Respected Sciences and Workplace Leaders. Drawing on insights from our lab and workplace focused research and our firm's local and global experience, our expertise of intricate lab planning and design will seek to provide unique and future focused labs within your budget. Folding in our knowledge from diverse practice areas, including sciences, education, workplace, and hospitality, we'll focus on collaborating with each State agency to design a space that attracts and retains the best innovators.

Sciences Front and Center. Our team includes CMTA as our trusted building systems engineering partner who is continuing to provide service to the State of West Virginia while developing a similar laboratory consolidation program for the State of Delaware. The Kentucky Centralized Laboratory Facility, visited by PERD and highlighted in our proposal, was also designed by CMTA, providing our team with unique insight into the potential requirements of a program such as yours. Gensler and CMTA enjoy a long-standing partnership in the design of facilities for the sciences, and we are able to draw on our collective knowledge of local, regional, and global experts to offer the best solutions.

Budget-Conscious Design. Great design can be a competitive advantage, boosting engagement among departments, collaboration, and innovation. In our experience, one of the biggest contributors to a project's success is prioritized spending of budget dollars in the areas that make the greatest impact to the occupants' daily lives and provide safe, forward-thinking environments to support each of your scientific programs. With this in mind, Gensler's process will evaluate the intended user experience against the cost of work to provide each agency with options that fit your budget.

Co-creating a New Consolidated State Laboratory Facility. We are proposing to work closely with you as a team to co-create a new ecosystem for your organization; one that celebrates the important work of each agency, inspires your team, and creates an important new presence for the State of West Virginia. Reimagining the agencies' presence in this new facility is a journey we'll take together.

We pledge our commitment and passion to be your collaborative partner for this project. We have done a preliminary review of the proposed AIA B101-2017 agreement. While there are a few revisions that Gensler would like to discuss, the agreement provides a very reasonable basis for negotiation. Some of the areas that we wish to discuss further include: insurance coverages, a limitation of liability, liquidated damages, and contractor focused terms and warranties. We have provided an attached revised version for your review.

If you have any questions or need any additional information, please do not hesitate to reach out to me directly.

Jim Dechant, AIA
Sciences Technical Director, Southeast Region
Senior Associate

Vaki Mawema, LEED® AP BD+C
Co-Managing Director
Principal

Firm Information

Gensler supports the development of innovative places with a philosophy of value-based design and comprehensive services that allow clients to collaborate with a continuous, dedicated team from planning through construction. We have organized and integrated our services to support clients at every stage in the real estate and facilities cycle, from initial strategy and design through implementation and management.

Gensler's talented staff offer a wealth of specialized knowledge across a wide breadth of design services. We are a research-based design firm because we know that design research gives us insight to generate innovative solutions that directly and indirectly benefit our clients. We were one of the first firms to formally launch an R&D program with an in-house director of research. Today, every Gensler practice area carries out basic and applied research, distinct from project work, on topics and issues of direct benefit to our clients and projects.

Firm Name: M. Arthur Gensler Jr. & Associates, Inc.

Office Location: 1 East Pratt Street
Suite 202
Baltimore, Maryland 21202
Email: Jim_Dechant@gensler.com

Firm Ownership:
Gensler was organized as a Corporation under the laws of the State of California in 1965, with a subsidiary Professional Corporation formed in New York in 1979. The majority of the firm's stock is owned by Gensler's Employee Stock Ownership Plan (ESOP). The Plan was established in 1987 to enable employees of Gensler to be true stakeholders in the success of the firm. The remaining shares are owned by the firm's 321 Principals.

Firm Size:
Gensler is a global architecture, design, and planning firm with 53 locations and over 7,000 professionals. With over 56 years of achievements behind us, we're focused on what's ahead—serving more than 6,000 active clients in virtually every industry.

What makes us unique is the global knowledge, leading research, and culturally diverse perspectives we offer our clients—all a derivative of our global design platform. Our local pulse keeps us real, and our global reach keeps us informed and forward thinking. Our clients range from corporate and high-tech and international biopharma clients to developers to universities and incubators supporting early stage scientific companies.

Every Gensler office has grown organically from strong local roots, but draws on the expertise and resources of our "one-firm firm" ecosystem. We work fluidly around the world, leveraging all our resources to create the best teams, tailored for each client's needs. We bring the same high level of care and innovation to every assignment, no matter how large or small. We are actively engaged in our commitment to the people and communities we serve, using design to solve the world's most complex problems.

Our team brings collective strength as a multidisciplinary consulting, planning, and design firm. Together we develop innovative design solutions and work with you to define and prioritize the best outcome for your project. Gensler combines a global research base represented by subject matter experts with a reputation for innovation and design leadership on sciences, education, technology, mission critical and corporate projects. Using benchmarks and metrics, we test our ideas before putting them into practice, ensuring they are consistent with current industry trends. Our goal is to understand the needs, concerns and issues affecting every aspect of your business. Our Sciences team will work with you to define and prioritize the best outcome for your project, and develop innovative design solutions. .


Coridea

Gensler is a global architecture, design, and strategic planning firm with over 7,000 professionals in 53 locations throughout Asia, Europe, the Middle East, and the Americas.

57
Years in business

100%
Employee Owned

2021
Fast Company's The World's Most Innovative Companies: Gensler was recognized among *Fast Company's* World's Most Innovative Companies 2021 as one of the Top 10 Most Innovative Companies in Architecture.


Jefferson Technology Site

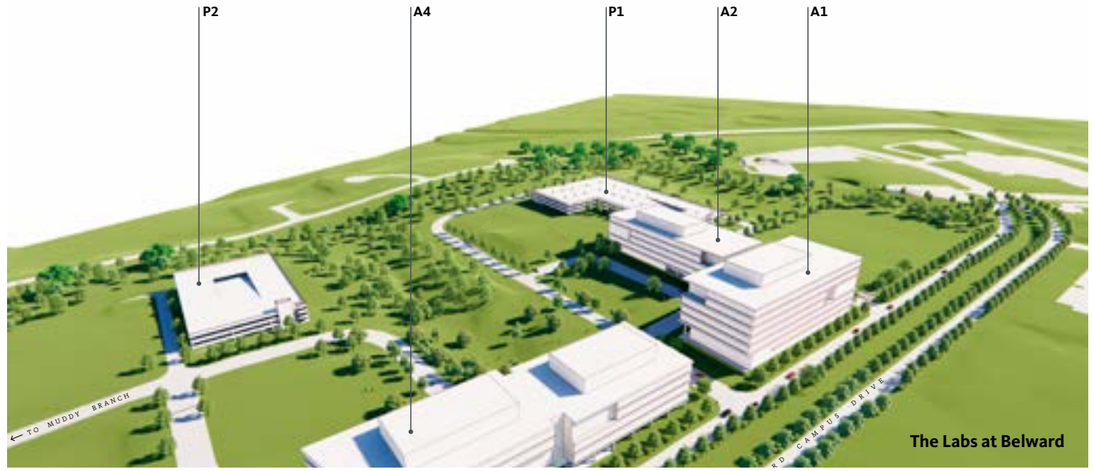
#1 Top 100 Design Firm Giants
– INTERIOR DESIGN MAGAZINE

#1 Top 300 Architecture firms
– ARCHITECTURAL RECORD

IMPACTFUL RESEARCH

Gensler awarded
70 research projects
in 2022

300+
Science Clients



The Labs at Belward

Dedicated Science Practice Area

Gensler's Sciences teams offer a wealth of specialized knowledge across a wide breadth of design services. Our collaborative, research based approach blends the diverse knowledge of these practice areas to explore new possibilities and give our clients a competitive edge through fresh ideas.

Our Sciences practice area is committed to deeply understanding the processes and dynamics of R&D environments—to understand them, identify challenges, and imagine possible solutions based in deeper knowledge.

Our Sciences practice area consists of dedicated architects, laboratory planners, interior designers, consultants and specialists who provide expert full-time services for all phases of strategy, development and building processes.

Gensler also realizes there are many different fields in the sciences industry and that just like every field requires unique needs, so does every client.

Gensler has worked with a variety of science clients in many different fields, some of which are listed here.

300+
Science Clients

4,300+
Science Projects

24 of 25
Top Sciences Companies are Gensler Clients

Sciences Trends

Science organizations will continue to see rapid growth. Collaborations across research disciplines and geographies will lead to more rapid advances. To keep up with the pace of growth, clients are implementing lab and workplace solutions that can flex to meet demand, adapt to technology, and offer enhanced amenities to attract and retain talent.

Genmab U.S. Headquarters, Princeton, NJ

01 Development for science clients will continue to attract attention.

There is tremendous interest in repositioning existing office buildings and expanding research-capable development in and near major science clusters. Industry leaders are thinking beyond the basics of functional, lab-ready space and differentiating their real estate through amenities and services that are dialed into tenant's needs.

02 Science organizations are keeping their supply chain and manufacturing operations close.

As companies advance their innovations to production scale, the traditional hurdles of R&D-focused science clusters like high rents, logistics concerns, and nonindustrial zoning are being outweighed by the desire to maintain consistency and security of production and to promote more collaboration between manufacturing and research teams.

USF Research Foundation Mixed Use, Tampa, FL

03 Energy usage will drive innovation in lab development.

Science buildings consume between five and 10 times the energy of a normal office building. Given this high rate of energy use, even incremental improvements in performance yield substantial savings. In many regions, the need for innovative climate action has been accelerated as municipalities adopt requirements for net zero energy buildings.

Organon, Jersey City, NJ

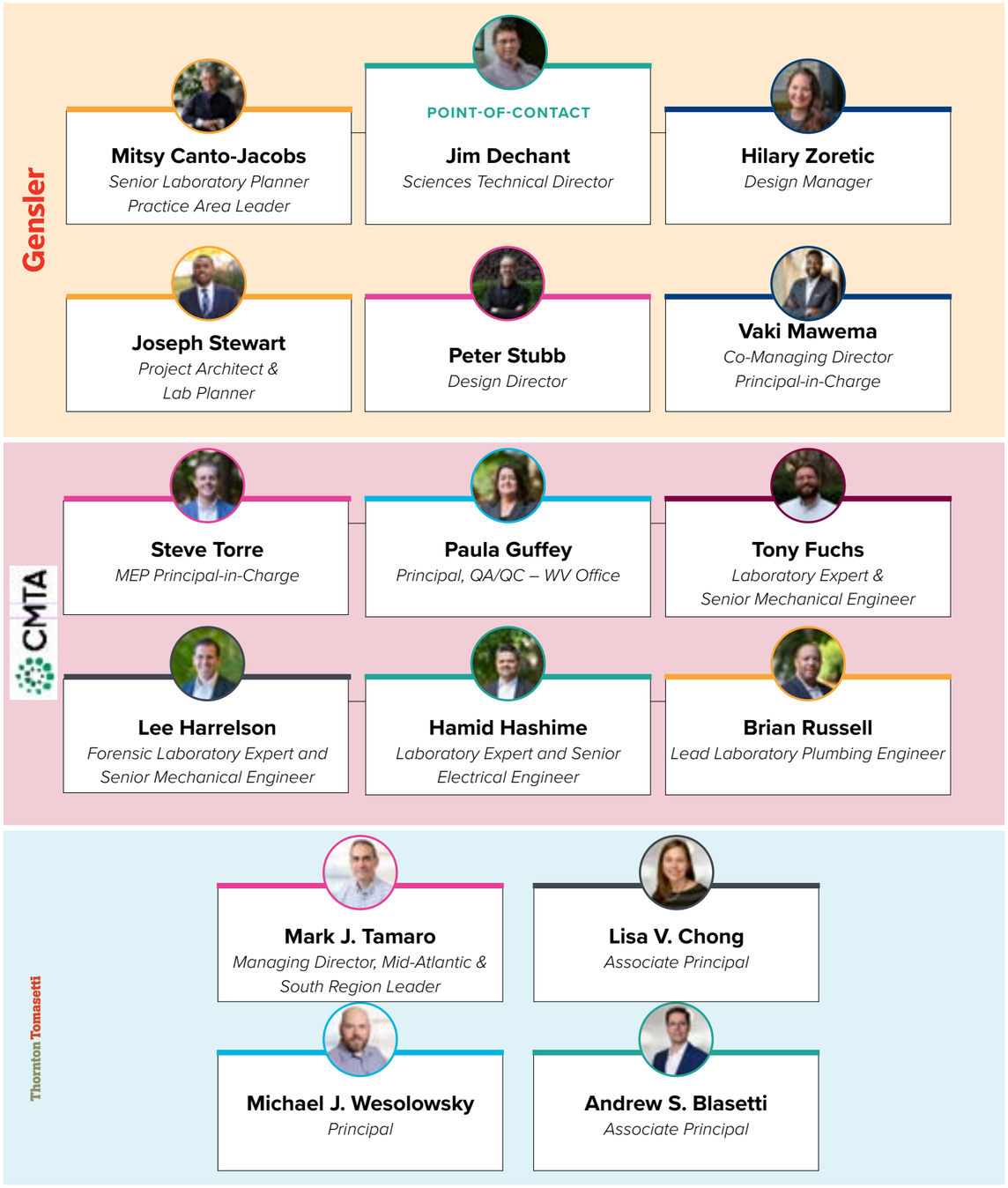
04 Scientists jobs are changing — so will their workplaces.

Changes in how scientists interact with and share data are unlocking new ways of advancing science. The ability of automation to collect more accurate scientific data at greater volume is leading to reductions in laboratory space. At the same time, scientists are interacting with data differently, using computational modeling, machine learning, and advanced collaboration and visualization tools. Cutting-edge science spaces will streamline interactions with data, while also facilitating person-to-person collaborations and connections.

05 Science organizations will keep growing into new markets.

Secondary markets are in growth mode along with neighborhoods at the periphery of major hubs like Boston, London, San Francisco, and Shanghai. Given that vacancy rates are below 5% in major hubs, emerging markets with strong university research presence offer more real estate options, reduced cost of living, and lower rents for earlier stage companies.

Organizational Chart



The team we have proposed for this scope of services has the capacity and ability to fulfill the scope of services and are able to get started right away.

Project Team

Jim Dechant, AIA

Senior Associate

Sciences Technical Director

Jim is client-focused architect whose career has been dedicated to design for the sciences for over two decades.

Jim has extensive experience in the delivery of complex projects serving science + technology, healthcare, corporate, and government clients. Jim has specialized experience in the programming, design and construction documentation of laboratory, manufacturing, and cGMP facilities requiring complex coordination of functional requirements and engineering systems.

23 Years of Experience

Joined Gensler 2020

Background

Bachelor of Architecture, Temple University, Philadelphia, PA
Member, American Institute of Architect
Registered Architect: Pennsylvania

Selected Project Experience	**Size (sq ft)**
Trammell Crow Company	
Belward Campus, Lab/Office, Concept Study, Rockville, MD	360,000
Jefferson Technology Site, Spec Lab/Office, Frederick, MD	210,000
Jefferson Technology Site, Clean Manufacturing, Frederick, MD	140,000
Woods Grove Capital, 6200 Seaforth Lab Renovation, Baltimore, MD	56,000
Quest, TB Lab Renovation, Chantilly, VA	3,500
NIH, Building 5, Lab Renovation, Bethesda, MD	1,500
Confidential Tech Client, Rock Hill, SC	111,450
Innovation Center, R&D Labs, Manufacturing & Warehouse, Office	
Pennsylvania Innovation & Life Science, King of Prussia, PA	950,000
MRP, 3 Parkway Building, Life Sciences Study, Philadelphia, PA	300,000
Pike and Rose, Speculative Life Science Building, Rockville, MD	218,000
Agere Systems, Office/Lab Consolidation, Allentown, PA*	158,000
Alcon Laboratories*	
Advanced Optic Device Center, Huntington, WV	171,000
Manufacturing North Lines 8 & 9, Fort Worth, TX	
North Manufacturing Line 16, Fort Worth, TX	20,000
Precision Device Facility, Sinking Spring, PA	31,500
Burke Medical Research Institute, Molecular Laboratory Renovations, White Plains, NY*	
Commonwealth of Pennsylvania, Laboratory Campus/Centers of Excellence, East Pennsboro Township, PA*	132,000
NASA, Exploration Sciences Building, Greenbelt, MD*	200,000
Sanofi Pasteur, Swiftwater, PA*	
Building 55 Dengue Laboratory Renovation	
Global Clinical Immunology Building	52,000
Laboratory Master Plan	
Research to Launch Facility	73,000
Syngenta Biotechnology, Research Triangle Park, NC*	
Phase 1 Greenhouse	136,000
Site Master Plan	
US Department of Agriculture*	
Animal and Plant Health Inspection Services, Rock Tavern, NY	
Center for Health-Based Plant Genomics, Ithaca, NY	120,000
Grape Genetics Research Laboratory, Geneva, NY	65,000

*Experience Prior to Gensler

Gensler

Hilary Zoretic, AIA, LEED® AP

Design Manager

Hilary is a design manager and architect. She excels at navigating project teams through complex design, schedule, and budget challenges to achieve successful outcomes.

As the design project manager, Hilary is responsible for the day-to-day administration of the project. She monitors the progress of the project against targeted objectives, while coordinating the activities of all team members and consultants to ensure effective communication and the implementation of all technical aspects of the project.

14 Years of Experience
Joined Gensler 2020

Background
Bachelor of Architecture, Pennsylvania State University
Registered Architect: Maryland
USGBC LEED Accredited Professional
Member, American Institute of Architects

Selected Project Experience	**Size (sq ft)**
Johns Hopkins University, Baltimore, MD	
Enabling Projects	N/A
Development and Alumni Relations	36,000
Croft Hall Classroom Renovation*	1,300
Olin Hall Labs Renovation*	4,500
Ames Hall Labs Renovation*	2,300
School of Nursing, Addition*	36,000
School of Nursing, Renovation*	30,000
School of Nursing, Miscellaneous Renovations*	1,500-4,500
MICA, Creative Learning Center, Baltimore, MD	50,000
Edward M. Felegy Elementary School, Hyattsville, MD*	92,000
Dover High School, Dover DE*	315,000
Mt. St. Joseph Athletic Center, Cincinnati, OH*	
Addition	59,000
Renovation	30,000
Harford Community College, Bel Air, MD*	
Nursing and Allied Health Building	55,000
University of Maryland College Park, College Park, MD*	
Chemistry Labs Renovations	18,000
Penn State University, Mont Alto Campus, Mount Alto, PA*	
Allied Health Building	22,000
Baltimore County Center for Maryland Agriculture, Baltimore, MD*	14,500
Baltimore County Eastern Family Resource Center, Baltimore, MD*	81,000
Johns Hopkins Outpatient Center, Baltimore, MD*	
OB/GYN & Dermatology Suites Renovations	27,000
Northwest Hospital OR Renovations, Milford Mill, MD*	6,800
Center for Neighborhoods Offices, Chicago, IL*	9,000
Trammell Crow Company	
Belward Campus, Lab/Office, Concept Study, Rockville, MD	360,000
Jefferson Technology Site, Spec Lab/Office, Frederick, MD	210,000
Jefferson Technology Site, Clean Manufacturing, Frederick, MD	140,000
Confidential Government Project, St. Louis, MO	712,000
Redstone Arsenal, Operational Support Building 1, Huntsville, AL	310,760
RAF Moleworth, Cambridgeshire, UK	300,000

* Experience Prior to Gensler

Gensler

Mitsy Canto-Jacobs, AIA, NCIDQ, LEED® AP, DBIA

Senior Associate

Senior Laboratory Planner / Practice Area Leader

Mitsy is an architect, interior designer, and certified design-build professional (DBIA).

Mitsy enables scientists to work creatively and flexibly in laboratories. She has designed dream-labs used to attract proposals for 5-year contracts and to celebrate excellence in NIH intramural and extramural projects. She has worked on Science and Engineering projects that range in size from 200 sq st (aseptic processing facility) to 3,500,000 sq ft (swing space plan for the NIH Building 10 clinical center expansion).The design brief for projects often starts with a list of staff, no. of benches, functional requirements and science program. She enhances the expressed needs for Day 1 move-in by drawing from global experience and trends for the specific laboratory types. Mitsy has designed R&D sensory labs for animal and human testing, that included tools such as holography, simulators, electron microscopy, nanotechnology, and proprietary product delivery devices.

She has designed and facilitated at workshops as a technical consultant for laboratory buildings. Mitsy is also an expert in the design requirements of the National Institutes of Health, National Cancer Institute, Centers for Disease Control, and the Food and Drug Administration.

40+ Years of Experience
Joined Gensler 2021

Background
Master of Science, Architecture Studies and Master of City Planning; Massachusetts Institute of Technology
Bachelor of Science, Architecture; University of the Philippines
Registered Architect: DC, MD, VA, CO
National Council of Architecture Registration Board (NCARB)

Selected Project Experience	**Size (sq ft)**
Leidos Biomedical Research Inc., National Cancer Institute-Frederick	
Building 539 Rehabilitation and Refurbishment (vivarium & Laboratory Upgrades), Ft. Detrick, MD*	70,000
National Institutes of Health, Bethesda, MD *	
Building 10 Modernization Master Plan & Swing Space	3,500,000
Building 10 B2 Level HVAC Infrastructure Upgrades	50,000
Building 10 NINDS B2 Level Electron Microscope Suite	3,400
Building 10 NCI Aseptic Processing Facility	400
Building 35 NIDDK Electron Microscope Lab	800
Building 35A NINDS Vivarium Renovations	3,000
Building 35A NINDS Mass Spectroscopy Lab	2,000
Kennedy Krieger Institute, Baltimore, MD	
EEG Suite Renovation	380
Strategic Real Estate Optimization Plan	1,000,000
Programming & Space Utilization Study	60,000
NIH, Building 5, Lab Renovation, Bethesda, MD	1,500
Confidential Life Sciences Company	
Lab, Oak Creek, WI	25,000
Lab, Troy, MI	25,000
Workplace Strategy, Burlington, NC	60,000
Space Assessment, Phoenix, AZ	150,000
Woods Grove Capital, 6200 Seaforth Lab Renovation, Baltimore, MD	56,000
Trammell Crow Company	
Belward Campus, Lab/Office, Concept Study, Rockville, MD	360,000
Jefferson Technology Site, Spec Lab/Office, Frederick, MD	210,000
Jefferson Technology Site, Clean Manufacturing, Frederick, MD	140,000
Confidential Sciences Client, Strategic Planning, Arlington, VA	N/A
Pharma Manufacturing Facility Master Plan, Yauco, PR	3,800,000
Boston Properties, 4 Choke Cherry Repositioning, Rockville, MD	200,000
NIH, Consolidation Study at Triad Technology Center, Baltimore, MD	120,000
Confidential Sciences Client, Lab/Office Spec Bldg, Philadelphia, PA	488,600
Confidential Tech Client, Rock Hill, SC	111,450
Innovation Center, R&D Labs, Manufacturing & Warehouse, Office	
Confidential Client, Pharmaceutical Facility FDA Renovations and Building Code Upgrades, Fremont, CA*	30,000

*Experience Prior to Gensler

Peter Stubb, AIA, LEED® AP

Principal

Design Director

Peter is a Design Principal in Gensler's Baltimore office and directs the Commercial Office Building, Mixed-Use, and Planning practices. A multifaceted architect and designer, he has focused on building an interdisciplinary studio where he partners with clients and creative collaborators to deliver thoughtful, award-winning projects. He is passionate about design and exploring methodologies that harness the power of design to positively transform our communities.

Peter's work is idea-based, formed around meaningful concepts that thoughtfully consider context and program. While placemaking and the human experience is at the heart of his work, he consistently pursues a high level of both craft and performance in his buildings. Peter often leads large integrated projects, providing expertise on the design of the base building as well as the interiors. Throughout all of his work, Peter's point of view bridges the shared interest of both building owner and user to create designs that successfully depict both parties' objectives.

39 Years of Experience
Joined Gensler 1999

Background
Master of Architecture, University of Pennsylvania
Bachelor of Architecture, University of Maryland
Registered Architect: District of Columbia
Member, American Institute of Architects (AIA)
USGBC, LEED® Accredited Professional (LEED® AP)
Board of Directors, Baltimore Design School (2017-)

Selected Project Experience	**Size (sq ft)**
Cities + Urban Design	
Confidential Client, Office Building, Allentown, PA	300,000
Rash Field Pavilion, Baltimore, MD	7,000
6950 Columbia Gateway Drive Renovation, Columbia, MD	125,000
The Howard Hughes Corporation	
Medical Office Bldg, Columbia, MD	1,350,000
Two Merriweather Office Bldg, Columbia, MD	135,000
The Buccini Pollin Group	
Lower Hill, Block G1, Pittsburgh, PA	530,000
Brandywine Building Repositioning, Wilmington, DE	900,000
2222 Market Street, Philadelphia, PA	320,000
SEPTA, Broad Street Underground Concourse, Philadelphia, PA	250,000
2700 North Broad Street Repositioning, Philadelphia, PA	550,000
Two Liberty Place Repositioning, Philadelphia, PA	8,000
Amtrak	
Penn Station, Lanvale Expansion, Baltimore, MD	47,500
Penn Station, Headhouse, Baltimore, MD	15,800
Penn Station, Master Plan, Baltimore, MD	N/A
30th Street Station, Retail Concourse, Philadelphia, PA	100,000
Continental Realty Corp., 1424 Clarkview Road, Baltimore, MD	60,000
Station Ridge Building Concept Study, Hanover, MD	90,000
Harbor East, Development Group	
Jackson Wharf, Baltimore, MD	120,000
1104 Fleet Street, Baltimore, MD	484,000
Pennsylvania Innovation and Life Science, King of Prussia, PA	950,000
City Center, Five City Center Complex, Allentown, PA	
Master Plan and Conceptual Design	1 city block
Office Tower	350,000
Eager Park, Baltimore, MD	7 acres
Center\West Mixed-Use Development, Baltimore, MD	3 blocks
Sparrow's Point Marketing Center, Washington, DC	800
Wilmington Gateway, Wilmington, DE	560,000
Lowe Enterprises, Crystal City, VA	250,000

Gensler

Vaki Mawema, LEED® AP BD+C, A-AIA

Principal

Co-Managing Director / Principal-in-Charge

Vaki has built his career developing experiential, branded environments for hospitality, retail, mixed-use, and F&B. Vaki is the co-managing director of the Baltimore office and also co-leads Gensler's Lifestyle design sector for the Southeast regional market.

Within his office and beyond, he has created a design culture that embodies creative passion, thought, care, and rigor. Vaki is a business leader in the industry and community and was named one of *Washington Business Journal's* 2016 40 under 40. His work – from project visioning through schematic design and construction administration – displays a blend of design excellence and technical acumen.

25 Years of Experience
Joined Gensler 2008

Background
Bachelor of Architecture, New School of Architecture and Design
Associate Member, American Institute of Architects
USGBC LEED®-Accredited Professional
Member, *Hospitality Design* magazine's Diversity Action Council
Chair, Urban Land Institute (ULI), National Placemaking Council

Selected Project Experience	**Size (sq ft)**
800 Oak St Bio Pharma, Concept Study, Frederick, MD	1,089,000
Trammell Crow Company	
Belward Campus, Lab/Office, Concept Study, Rockville, MD	360,000
Jefferson Technology Site, Spec Lab/Office, Frederick, MD	210,000
Jefferson Technology Site, Clean Manufacturing, Frederick, MD	140,000
Pharma Manufacturing Facility Master Plan, Yauco, PR	3,800,00
Shakespeare & Webster Mixed Use Development, Chicago, IL	1,300,000
Forest City "The Yards Retail Pavilions," Washington, DC	
Boilermaker Shops	46,000
Lumber Shed Shops	35,000
District Winery	19,200
Potomac Yard Town Center, Alexandria, VA	1,500,000
Gallery Place Retail Repositioning, Washington, DC	70,000
Westfield Montgomery, Bethesda, MD	510,000
Newpark Mall Redevelopment & Master Plan, Newark, CA	572,000
Amtrak 30th Street Station Retail, Philadelphia, PA	100,000
Bryant Street Retail, Washington, DC	225,000
Mantria Place, Sequatchie County, TN	6,000 acres

Gensler

Joseph Stewart

Project Architect / Lab Planner

5 Years of Experience
Joined Gensler 2022

Background
Bachelor of Architecture, Howard University

Selected Project Experience
Kennedy Krieger Institute
- Level 5 Karigo & Ehrlick Lab, Baltimore, MD

Woods Grove Capital
- ChemPacific Explosion Room, Baltimore, MD
- ChemPacific Interior Renovation, Baltimore, MD

Quest Diagnostics COVID Lab Renovation, Chantilly, VA*
- Containment Lab, Hamilton Lab, and ABI 7500 Room*

Aberdeen Proving Ground, Building 3200, Aberdeen, MD
General Dynamics Information Technology (GDIT), San Antonio, TX
L3 Harris, Goleta, CA
*Experience Prior to Gensler

Joseph is a project architect and lab planner in the Gensler Baltimore office.

A strategic thinker and exemplary professional, Joseph is a graduate of Howard University School of Architecture, and has been privileged to work for and with some of the top architecture firms on the east coast.

Joseph has continued to strive for excellence in his career while still maintaining a heart of service. Outside of Joseph's day–to–day responsibilities, he volunteers his time with local schools to teach children about architecture. Joseph is the current membership chair of the Baltimore NOMA chapter. He prides himself on actively participating in recruiting events and mentoring several minority interns and new hires.

Biola University Lim Center for Science, Technology & Health

Steve Torre

PE, LEED AP

Principal in Charge

Profile

Steve joined CMTA's DC office as a Principal in 2020, where he oversees the office's operations and provides high-level project management for various projects. He brings 18 years of diverse experience in the Commercial, Industrial, Healthcare, Government/Federal, Data Center, and Higher Education sectors. Before joining the firm, Steve spent six years in construction management, overseeing a wide variety of construction projects. His experiences on the industry owner/client side have brought an invaluable understanding of the high expectations that our clients have come to demand and extensive expertise in running a project from inception to completion.

Education

Bachelor of Science- Mechanical Engineering, University of Maryland- 2005

Registrations

Licensed Professional Engineer: MD (#39968), VA (#040205844)

Professional Affiliations

ISPE Member

9 Years with firm

18 Years experience

Select Project Examples

State of Delaware Forensics Lab

Wilmington, Delaware

- 120,000- 150,000 SF
- Chemistry, DNA, Toxicology, Medical Examiner's Units

Marshall University School of Medicine Toxicology/Dermatology Lab

Teays Valley, West Virginia

- 15,000 SF Adaptive Reuse, New Construction
- Toxicology Lab, Dermatology Lab, Occupational Health Suite and Medical Office Suite

Confidential Diagnostics Laboratories

Chantilly, Virginia

Laboratory AHU Replacement
- 250,000 SF Facility
- 20+ Diagnostic and Criminology Laboratory Units
- Including BSL2 and BSL3 Lab Spaces

T-Spot Laboratory
- New Tuberculosis lab

Ground Floor Laboratories
- New Flow and Histology Laboratory Units

Novavax

Gaithersburg, Maryland

- AMBR250 Bioreactor Laboratory Project

Shepherd University Byrd Science Center Laboratory Renovation

Shepherdstown, West Virginia

- HVAC Replacement serving research laboratories, 40,000 SF

Paula Guffey

PE

Principal | QA/QC - WV Office

Profile

Paula is a Principal and Electrical Engineer, located in CMTA's West Virginia office. She brings over 38 years of multi-disciplinary electrical and mechanical design experience, working on both new construction and renovation projects. She has significant experience in higher education, governmental, industrial, institutional, pharmaceutical, multi-family, commercial, hazardous, power generation and healthcare facilities.

Education

B.S., Electrical Engineering, West Virginia University, 1991

Registrations

Licensed Professional Engineer: WV (# 014357), VA (#0402036691), MD (#24418)

12 Years with firm

38 Years experience

Select Project Examples

Marshall University School of Medicine

Teays Valley, West Virginia

Toxicology/Dermatology Lab
- 15,000 SF Adaptive Reuse, New Construction
- Toxicology Lab, Dermatology Lab, Occupational Health Suite and Medical Office Suite

Confidential Diagnostics Laboratories

Chantilly, Virginia

Laboratory AHU Replacement
- 250,000 SF Facility
- 20+ Diagnostic and Criminology Laboratory Units
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Novavax

Gaithersburg, Maryland

- AMBR250 Bioreactor Laboratory Project

Shepherd University Byrd Science Center Laboratory Renovation

Shepherdstown, West Virginia

- HVAC Replacement serving research laboratories, 40,000 SF

Drug Enforcement Administration (DEA) Clandestine Lab

Quantico, Virginia

- 10,000 SF Expansion of Forensic Lab
- Diagnostic and Criminology Lab for Training
- Adaptive Reuse
- Remained Operational During Expansion
- Secure Space, TEMPEST

Tony Fuchs

PE, LEED AP

Laboratory Expert & Senior Mechanical Engineer

Mr. Fuchs is a Mechanical Engineer at CMTA with over 10 years of experience in the consulting engineering field. He is responsible for managing, supervising and performing design of the engineering components of major architectural and engineering projects. He has been crucially involved in several of CMTA's largest and most innovative sustainable design projects. His expertise is in commercial, industrial, community, life sciences and community projects.

Education

Bachelor of Science, Mechanical Engineering, Virginia Tech, 2010

Registrations

Licensed Professional Engineer (PE): VA (#0402054307), MD (#47267)

Professional Affiliations

ISPE Chesapeake Bay Area Chapter Member and Emerging Leader

4 Years with firm

14 Years experience

Select Project Examples

State of Delaware Forensics Lab
Wilmington, Delaware
- 120,000- 150,000 SF
- Chemistry, DNA, Toxicology, Medical Examiner's Units

Marshall University School of Medicine Toxicology/Dermatology Lab
Teays Valley, West Virginia
- 15,000 SF Adaptive Reuse, New Construction
- Toxicology Lab, Dermatology Lab, Occupational Health Suite and Medical Office Suite

Confidential Diagnostics Laboratories
Chantilly, Virginia

Laboratory AHU Replacement
- 250,000 SF Facility
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- Including BSL2 and BSL3 Lab Spaces

T-Spot Laboratory
- New Tuberculosis lab

Ground Floor Laboratories
- New Flow and Histology Laboratory Units

Novavax
Gaithersburg, Maryland
- AMBR250 Bioreactor Laboratory Project

Shepherd University Byrd Science Center Laboratory Renovation
Shepherdstown, West Virginia
- HVAC Replacement serving research laboratories, 40,000 SF

Lee Harrelson

PE, LEED AP

Forensic Laboratory Expert & Senior Mechanical Engineer

Profile

Lee is a Principal and Senior Mechanical Engineer at CMTA. He is responsible for managing, supervising and performing design of the engineering components of major architectural and engineering projects. His exceptional dedication to client service and quality control, coupled with his sustainable design expertise have helped him to lead major government and private sector modernization projects.

Education

- M.S., Engineering Management, George Washington University, 2010
- Bachelor of Mechanical Engineering, University of Virginia, 2002

Registrations

Licensed Professional Engineer (PE): VA (#0402044567), CA (#33583)

17 Years with firm

21 Years experience

Select Project Examples

US Customs and Border Protection
Ashburn, Virginia
- 444,000 SF Facility with Forensics labs and Wet labs

Haleon (Formerly GlaxoSmithKline)
Richmond, Virginia

Becomix Lab
- MEP Renovation
- Becomix equipment addition

Chapstick Equipment Replacement
- Chapstick equipment & assembly relocation

Nitrosamine Lab
- Renovation
- Single-rom nitrosamine lab

Stability Chambers Retrofit
- Expansion
- 6 additional chambers

National Institutes of Health
Bethesda, Maryland
- Building 8 Diabetes & Digestive & Kidney Diseases
- Building 10 complex Mark O. Hatfield Clinical Research Center and Warren Grant Magnuson Clinical Center
- Building 49 Silvio O. Conte Building
- National Heart Lung and Blood Institute
- Building 50 Louis Stokes Laboratory Autoclave
- Building 11 Reverse Osmosis Plant
- US Drug Enforcement Agency Drug Analysis Lab

AstraZeneca Global Headquarters
Gaithersburg, Maryland
- CHP Consolidation
- 1,400,000 SF
- Cost: $7,500,000
- 5.0 MW CHP System
- Electrical Consolidation
- Reverse Osmosis Plant
- High Purity Water Pretreatment
- Water for Injection (WFI)

Hamid Hashime

PE

Laboratory Expert & Senior Electrical Engineer

Profile

Hamid is an Electrical Engineer at CMTA. He has over 10 years of experience in the consulting engineering field with both new construction and renovation projects.

His experience includes planning and designing power distribution, lighting, communications, fire alarm and security systems for educational, commercial and government facilities. Hamid's effective ability to coordinate electrical design with other disciplines and the client consistently supports the construction phase and the delivery of project goals. Conversant with NEC, NFPA, IECC, IBC, and ANSI standards, Hamid is a key team player with high integrity, technically competent and driven to produce high quality design. He has also supervised designers and CAD operators.

Education

B.S., Electrical Engineering, University of Virginia, 2008

Registrations

Licensed Professional Engineer: VA, MD, DC

15 Years with firm

15 Years experience

Select Project Examples

State of Delaware Forensics Lab
Wilmington, Delaware
- 120,000- 150,000 SF
- Chemistry, DNA, Toxicology, Medical Examiner's Units

Marshall University School of Medicine Toxicology/Dermatology Lab
Teays Valley, West Virginia
- 15,000 SF Adaptive Reuse, New Construction
- Toxicology Lab, Dermatology Lab, Occupational Health Suite and Medical Office Suite

Confidential Diagnostics Laboratories
Chantilly, Virginia

Laboratory AHU Replacement
- 250,000 SF Facility
- 20+ Diagnostic and Criminology Laboratory Units
- Including BSL2 and BSL3 Lab Spaces

T-Spot Laboratory
- New Tuberculosis lab

Ground Floor Laboratories
- New Flow and Histology Laboratory Units

Novavax
Gaithersburg, Maryland
- AMBR250 Bioreactor Laboratory Project

Shepherd University Byrd Science Center Laboratory Renovation
Shepherdstown, West Virginia
- HVAC Replacement serving research laboratories, 40,000 SF

US Customs and Border Protection
Ashburn, Virginia
- 444,000 SF Facility with Forensics labs and Wet labs

Brian Russell

Lead Laboratory Plumbing Engineer

Profile

Brian s a seasoned Plumbing designer with over 30 years of experience. His background in plumbing and fire protection design along with his involvement with Combined Heat and Power (CHP) projects, allows him to make effective technical decisions and provide informed design services.

Education

Certificate, Architectural and Engineering Design and Drafting Technology, Maryland Drafting Institute, 1985

17 Years with firm

38 Years experience

Select Project Examples

State of Delaware Forensics Lab
Wilmington, Delaware
- 120,000- 150,000 SF
- Chemistry, DNA, Toxicology, Medical Examiner's Units

Marshall University School of Medicine Toxicology/Dermatology Lab
Teays Valley, West Virginia
- 15,000 SF Adaptive Reuse, New Construction
- Toxicology Lab, Dermatology Lab, Occupational Health Suite and Medical Office Suite

Confidential Diagnostics Laboratories
Chantilly, Virginia

Laboratory AHU Replacement
- 250,000 SF Facility
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- Including BSL2 and BSL3 Lab Spaces

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- New Flow and Histology Laboratory Units

Novavax
Gaithersburg, Maryland
- AMBR250 Bioreactor Laboratory Project

US Customs and Border Protection
Ashburn, Virginia
- 444,000 SF Facility with Forensics labs and Wet labs

National Institutes of Health
Bethesda, Maryland
- Building 8 Diabetes & Digestive & Kidney Diseases
- Building 10 complex Mark O. Hatfield Clinical Research Center and Warren Grant Magnuson Clinical Center
- Building 49 Silvio O. Conte Building
- National Heart Lung and Blood Institute
- Building 50 Louis Stokes Laboratory Autoclave
- Building 11 Reverse Osmosis Plant
- US Drug Enforcement Agency Drug analysis Lab

MARK J. TAMARO, P.E., LEED AP

Managing Director, Mid-Atlantic & South Region Leader

Project role

Primary Principal in Charge

Summary

Mark Tamaro has more than 30 years of experience in the design of new structures and the investigation and renovation of existing buildings. He has performed all phases of design of a variety of steel, concrete and timber-framed buildings. His experience includes federal design-build projects, many of which involved implementation of antiterrorism / force protection measures. Mark manages Thornton Tomasetti's Mid Atlantic-south region, including the Washington, D.C. office.

Education

- M.S., Civil Engineering, 1992, Lehigh University
- B.S., Civil Engineering, 1990, Lehigh University

Registrations

- Licensed Professional Engineer in DC, MA, MD, MI, NC, NJ, PA, VA
- National Council of Examiners for Engineering and Surveying (NCEES)
- LEED AP

Professional activities

- Member, DC Construction Codes Coordination Board, Structural Technical Advisory Group, 2009-2015
- Member, American Society of Civil Engineers (ASCE)
- Member, American Institute of Steel Construction (AISC)
- Structural Specialist, FEMA Urban Search and Rescue, Maryland Task Force One, 1997-2016
- Member, Task Force Response to 9/11/01 attack on Pentagon Building
- Juror, Steel Tube Institute HSS Design and Engineering Competition, 2000-2001

Select project experience

University of Pittsburgh, Immune Transplant and Therapy Center (ITTC), Pittsburgh, PA. Structural design of a cancer and biomedical research complex. The project will adapt the existing Ford Building to house 200,000 square feet of research space and construct a new building with 150,000 square feet of laboratory space and parking for 230 cars.

Southeast Poultry Research Laboratory (SEPRL) Complex, Athens, GA. Full-service design and construction administration services for a 255,000-square-foot multi-building laboratory campus–three major buildings plus ancillary structure for United States Department of Agriculture (USDA)–in Athens, Georgia. This project is being executed through a Design Build joint venture with M.A. Mortenson Construction Company.

Howard University Lot 3, Phase 3, Washington DC. Structural engineering for a new 206,000-square-foot life science laboratory building. The project comprises a six-story above-grade structure over two stories of below-grade parking. In order to meet the stringent vibration criteria required for lab occupancies, the above-grade portion of the structure consists of one-way concrete slabs supported on reinforced concrete beams, while the below-grade portion of the structure consists of flat-slab concrete construction.

University of Virginia, Ivy Mountain Musculoskeletal Center, Charlottesville, VA. Structural engineering for a new 194,000-square-foot state-of-the-art, comprehensive center for orthopedic care. The program for the new building will feature the full spectrum of orthopedic services, including sports medicine, joint replacement, orthopedic trauma, hand, foot and ankle, spine and physical medicine and rehabilitation. The program includes a range of clinical support functions including prosthetics & orthotics, advanced diagnostics & imaging, patient education & research, physical therapy with both outdoor and indoor rehabilitation spaces, and a patient pharmacy.

Princeton University TIGER, Princeton, NJ. Structural design for a 27,000-square-foot combined facility to house a new central utility plant and athletics operations for the East Campus. The project scope included structural engineering for the design of the steel moment framed system to achieve large span column free zones to house the state of the art thermal energy plant. The project is targeting LEED Platinum certification.

Thornton Tomasetti

LISA V. CHONG, P.E., LEED AP BD+C

Associate Principal

Project role

Principal in Charge

Summary

Lisa Chong has extensive experience designing structures for diverse project types, including mission critical, life science, sports, and commercial, both new design and renovations of existing structures. As a principal and project manager, Lisa oversees and executes structural analysis and design on a variety of project type and complexities. Her expertise is in large-scale, fast-track projects, with stringent technical requirements such as progressive collapse, blast mitigation, and vibration.

Education

- M.S., Civil Engineering, 2010, The George Washington University
- B.S.E., Civil Engineering, 2006, Duke University

Registrations

- Licensed Professional Engineer in MD, VA, DC
- LEED AP

Professional activities

- Member, American Institute of Steel Construction (AISC)
- Member, American Society of Civil Engineers (ASCE)
- Mentor, ACE Mentor Program, Washington, DC Chapter, 2008-present
- Member, Thornton Tomasetti Green Building Team, 2008-present
- President, American Society of Civil Engineers (ASCE), Duke University Student Chapter, 2005-2006
- Treasurer, American Society of Civil Engineers (ASCE), Duke University Student Chapter, 2004-2005

Select project experience

University of Pittsburgh, The Assembly, Pittsburgh, PA. Structural design of a cancer and biomedical research complex. The project will adapt the existing Ford Building to house 200,000 square feet of research space and construct a new building with 150,000 square feet of laboratory space and parking for 230 cars.

U.S. Food and Drug Administration, Winchester Engineering and Analytical Center, Winchester, MA. Structural engineering, acoustic, noise and vibration control and blast design services under a design-build contract of the U.S. Food and Drug Administration's new Winchester Engineering and Analytical Center (WEAC).

National Institute of Standards and Technology Building 245, Radiation Physics Laboratory Modernization, Gaithersburg, MD. Structural engineering and protective design services for two new independent additions followed by a full building renovation to an existing laboratory research and administrative building; concrete flat slab structure, vibration mitigation, underpinning of adjacent existing foundations, blast resistant enclosure, radiation shielding requirements. The project was designed to achieve LEED Silver certification.

John's Hopkins Applied Physics Lab, Building 28, Laurel, MD. Structural and acoustical/vibration peer review services for a 418,000-square-foot laboratory. The space was designed to be versatile, with the ability to accommodate a variety of flexible engineering labs that can support a range of computing hardware and software development, as well as integration and prototyping projects.

Inova Franconia-Springfield Campus, Springfield, VA. Structural and acoustical/vibration engineering services for a new community hospital campus. The 425,000-square-foot hospital will encompass multiple procedural rooms, private rooms, an emergency room and a diagnostic imaging department. The accompanying 140,000-square-foot ambulatory surgery and outpatient center will have physician offices and procedural rooms, as well as a 42,000-square-foot central utilities plant. A 200,000-square-foot basement parking level is planned below the hospital podium and plaza spaces.

Christiana Care Health Services, Women's and Infants' Services Building, Wilmington, DE. Structural engineering services for a new 400,000-square-foot, eight-story labor and pediatric care facility adjacent to an existing hospital. Work included creation of a temporary service tunnel and entrance to the existing facility, construction of the new building and remodeling of the connection points. Vibration and settlement controls were implemented during construction to allow continuous operation of the facility.

Thornton Tomasetti

MICHAEL J. WESOLOWSKY, PH.D., P.ENG.

Principal

Project role

Vibration Lead

Summary

A senior member of Thornton Tomasetti's acoustics, noise and vibration control engineering team, Dr. Wesolowsky has more than 20 years of experience in analysis, project management and design. Mike specializes in acoustics, noise and vibration studies for architectural, mechanical and structural design, dynamic data acquisition and analysis, and vibration control research and development. Mike joined Thornton Tomasetti in 2017 through its acquisition of Swallow Acoustic Consultants.

Education

- Ph.D., Structural Dynamics, 2007, McMaster University
- M.A.Sc., Structural Dynamics, 2001, McMaster University
- B.Eng.Soc., Civil Engineering and Society (History minor),1999, McMaster University

Registrations

- Licensed Professional Engineer in Ontario, Prince Edward Island

Professional activities

- Member, Association of Professional Engineers of Ontario
- Member, American Society of Civil Engineers
- Member, Canadian Society of Civil Engineers
- Member, Acoustical Society of America
- Member, Canadian Acoustical Association
- Member, Society for Experimental Mechanics

Select project experience

Howard University Lot 3, Phase 3, Washington DC. Structural engineering for a new 206,000-square-foot life science laboratory building. The project comprises a six-story above-grade structure over two stories of below-grade parking. In order to meet the stringent vibration criteria required for lab occupancies, the above-grade portion of the structure consists of one-way concrete slabs supported on reinforced concrete beams, while the below-grade portion of the structure consists of flat-slab concrete construction.

Western University, Interdisciplinary Research Building, Phase I, London, ON. Acoustic and noise consulting services for a 120,000-square-foot building housing dry laboratories, teaching and research space. Scope included acoustics and noise control designs for classrooms, labs, seminar and board rooms.

NASA Aerospace Communications Facility, Glenn Research Campus, Cleveland, OH. Structural engineering, vibration control consulting and protective design services for a two-story, 55,000-square-foot research and laboratory building. The scope includes vibration testing of the existing site and an isolated floor slab design to meet the stringent vibration requirements for the Quantum Optical Lab.

Dalhousie University, Sexton Campus Building C, Halifax, NS. Acoustics, noise and vibration control consulting for extensive renovations. The Powder Processing and Manufacturing & Materials Labs located on the 1st Floor of C-Building and the Advanced materials Labs located in the Basement of C1 contain equipment that generate significant amounts of sound and / or vibration during the course of their normal operations. The team consulted on solutions to concerns about the impact on adjacent spaces as well as transmission to floors above, which contain teaching spaces.

University of Ottawa, Advanced Research Complex [ARC], Ottawa, ON. Acoustical consulting services for a research facility comprising the Centre for Advanced Photonics and Geo-Science laboratories, which houses an accelerator mass spectrometer. The scope includes floor vibration testing of the laboratory areas to determine suitability of the space, proof of performance testing for the electron microscope, mechanical equipment noise and vibration control and room acoustics.

Thornton Tomasetti

ANDREW S. BLASETTI, P.E.

Associate Principal

Project role

QA/QC

Summary

Since joining Thornton Tomasetti in 2006, Andrew Blasetti has designed numerous buildings of varying types including commercial, education and residential projects. His expertise in structural design allows him to serve as the office Technical Coordinator. He is responsible for all aspects of design and management on large-scale, complex projects. He served as the project lead on the Comcast Technology Center which is currently the tallest building in Philadelphia and the tallest building in the U.S. outside of New York and Chicago.

Education

- M.S., Civil Engineering, Emphasis in Structures, 2006, Villanova University
- B.S, Civil Engineering, 2004, Villanova University

Registrations

- Licensed Professional Engineer in PA

Select project experience

3201 Cuthbert, Philadelphia, PA. Structural design of a 12-story laboratory high-rise consisting of 600,000 square feet of life science laboratories and supporting office space, with one story of below grade parking. The building structure includes steel framing and braced frames, with concrete slabs on metal deck. Floors were designed for stringent vibration criteria. The roof features an expansive canopy structure. Challenges include designing for a 22ft grade change across the site.

3801 Chestnut, Philadelphia, PA. Structural design of a 14-story laboratory high-rise consisting of 367,000 square feet of laboratories and supporting office space, with one story of below grade parking. Lab spaces are intended for research and life science usage. The building structure includes steel framing and braced frames, with concrete slabs on metal deck. Floors were designed for stringent vibration criteria.

Children's Hospital of Philadelphia, University City Inpatient Expansion, Philadelphia, PA. Structural and vibration engineering services for a new 24-story, 1,512,500-square-foot bed tower constructed above a seven-story plinth that includes diagnostic and treatment facilities. Below grade parking comprising 250,000 square feet will be constructed under an open green space. Enabling projects include the demolition of the existing Wood Building, realignment of the pedestrian bridge that crosses Civic Center Boulevard and rerouting of utilities.

Smilow Center for Translational Research, Philadelphia, PA. Structural design of a 531,000-square-foot research tower constructed above a four-story cancer treatment facility. The new tower provides two floors for vivariums and five floors for interdisciplinary research laboratories. The fast-track project meets industry-standard vibration criteria and is seeking a LEED Silver rating.

Florida Polytechnic University, Innovation, Science and Technology Building, Lakeland, FL. Structural design of a new 160,000-square-foot, two-story academic facility with interdisciplinary classrooms, laboratories, offices and meeting rooms. The building features a prominent glass and steel cupola with a movable louver system, and a steel-framed pergola that provides shade for the terraces and arcades.

Comcast Technology Center, Philadelphia, PA. Structural design of a 59-story, 1,121-foot tower with 1.5 million square feet of space comprising office, hotel, retail and public concourse. Significant features include an asymmetrical split structural core, three-story atriums, two-story amenity spaces and a glass-enclosed hotel lobby located at the top of the building.

2222 Market, Philadelphia, PA. Structural engineering, façade engineering and acoustic/vibration services for a 19-story, 300,000-square-foot office space with a ground floor lobby and retail space, roof and terrace amenities and a below-grade parking garage. The structural design incorporates dramatic multi-level cantilevers and the façade features unitized glass curtainwall and a long spanning glazed atrium façade at the ground floor lobby. Project scope included environmental noise control, mechanical noise and vibration design and room acoustics of all common areas.

Riverwalk, Philadelphia, PA. Structural engineering services for two mixed-use towers on the Schuylkill River. The towers, consisting of 28 stories and 32 stories, respectively, will feature a total of 600 residential units with ground floor retail and rooftop amenities.

Thornton Tomasetti

Gensler

Genmab
U.S. Headquarters

Princeton, NJ

At the new US headquarters for global biotech Genmab, the lab will be at the center of the work culture. The Copenhagen, Denmark based biotechnology company specializes in the creation and development of differentiated antibody therapeutics for the treatment of cancer.

The growing U.S. headquarters, is relocating to a new location in Princeton, NJ and is also establishing an on-site research lab. The selected site requires the conversion of 1990's suburban office building into an integrated workplace, celebrating the science by putting the laboratories on display. The biotech labs are strategically located on the window wall to provide a daylit work environment. They are split on two floors to stack infrastructure and also allows integration of the scientists with the business for greater collaboration.

The new workplace is designed to feature a centralized work cafe coined the "hygge" a Danish word, meaning coziness and comfortable conviviality, which is a defining characteristic of Danish culture. Intentionally creating informal gathering space adjacent to labs with great coffee and data visualization dashboards, creates a shared sense of purpose among employees. Floor to ceiling glass walls bring daylight through the lab into the work café and an open stair connects colleagues between the two floors.

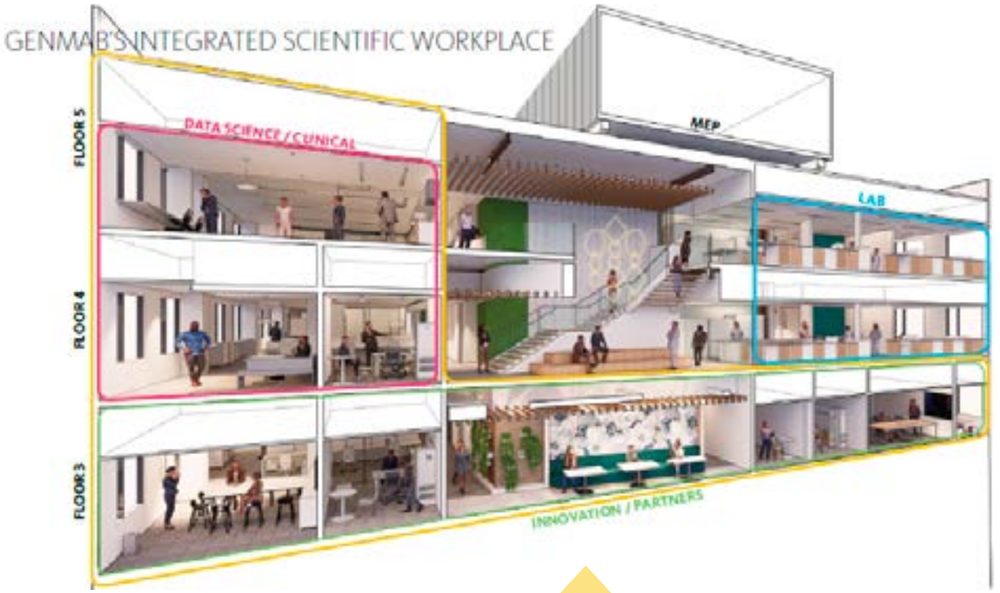
The workplace consists of 20% internally located closed offices with glass fronts for visibility and access to daylight for all. A work hotel located adjacent to reception supports mobile workers and visitors from Denmark. Cozy nooks and booths provide a rich variety of focus and collaborative space away from the desk.

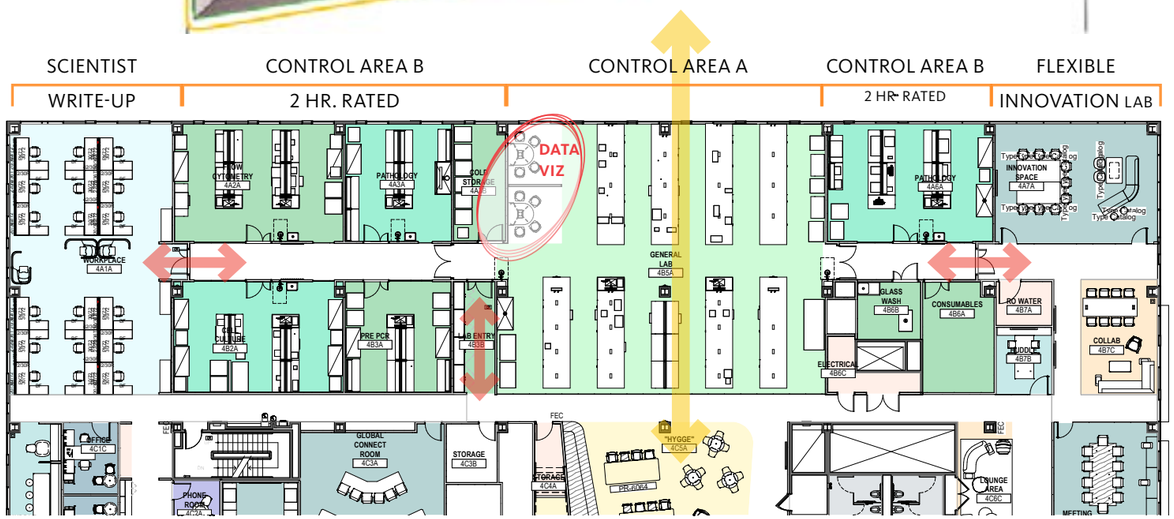
110,000 sq ft
(30% lab, 70% non-technical workplace)

Estimated Completion
2020

Services Provided
Visioning
Programming
Testfits
Lab Planning
Interior Design
FF&E Services

Targeting LEED Certification





Gensler

Jefferson Tech Park
Lab & Admin Campus

Frederick, MD

Gensler is the architect for the 500,000-square-foot life science campus in Frederick.

The campus will include two 100,000-square-foot laboratory, research, and biodiscovery buildings, connected by a 10,000-square-foot amenity hub, and two 145,000-square-foot clean-room production buildings. At completion, Jefferson Tech Park will deliver the Frederick market a much-needed life science ecosystem that will foster innovation, collaboration, and discovery. This best-in-class campus will include R&D laboratory space capable of meeting the full spectrum of Bio Safety Levels (BSL) categorical designations, along with Good Manufacturing Practice (GMP) clean-room production space. The campus will feature a comprehensive offering of on-campus amenities intended to create a one-of-a-kind user experience, enjoyed by employees, their families, and visitors. Jefferson Tech Park will be the premier biodiscovery campus in Frederick, promoting integrated research and biomanufacturing in one dynamic setting.

500,000 sq ft

Estimated Completion
2023

Services Provided
Architectural Design
Interior Architectural Design
Lab Design

Goal/Objectives: 1, 2, 3 & 5

Gensler

Biola University

Lim Center For Science, Technology & Health

La Mirada, CA

This new addition to campus provides state-of-the-art educational space for Biola's growing science, engineering, computer science and health programs, while extending the university's identity as a place of research and learning.

This creatively planned, state-of-the-art facility leverages limited physical and financial resources to house multiple undergraduate programs under one roof.

With the goal of successfully combining a varied set of users into a single 92,000 SF science building, the Gensler team partnered with university leadership to conduct an extensive and meticulous programming phase to ensure the right mix was achieved and the goals and aspirations of each user group would be met. Through the active engagement of the users and a high-performance focused design, a unique synergy was achieved, creating new learning opportunities and encouraging cross-disciplinary interaction and exchange of ideas. Breakout areas, hallways and conference rooms emulate the desirable amenities found in co-working spaces. Students in healthcare trajectories mingle with computer science majors, engineers and those in biological research, and the physical sciences. Since the opening of the facility, students report the synergy is palpable and the open collaboration spaces have taken on a life of their own, engaging students even from outside of the resident programs.

92,000 sq ft
Wet Lab: 20,000 sq ft

Completed
February 2018

Services Provided
Architectural Design
Interior Architectural Design
Lab Design

Goal/Objectives: 1 & 5

Gensler

3151 Market Street
Life Sciences Building

Philadelphia, PA

In seeking to create a hub for life sciences adjacent to Philadelphia's 30th Street Station, Gensler designed a new, eco-friendly building that will allow future tenants to innovate and thrive.

Located in an area of Philadelphia with a rich history, the goal of this project was to create a building that would become a gateway between University City and Center City in a way that responds to the surrounding neighborhood. The site itself was seen as a tabula rasa, for which a new building could be built, all while paying homage to the well-known history of this currently fragmented neighborhood.

With a life sciences tenants in mind for this speculative building, the developer planned to take advantage of the site's adjacency to Drexel University and the University of Pennsylvania as a way to potentially create academic and private partnerships.

The building itself builds off of the parti as a gateway between campus and city, and in full alignment with the Schuylkill Yards master plan. Situated at the convergence of two diagonal green pathways, the greenery extends up the building facade and onto porches, which pay homage to the iconic style of West Philadelphia's homes. The porches on every other floor create stacked outdoor spaces that provide access to fresh air and emphasize health and wellness aspects of the building.

The interiors offer a robust opportunity for creativity and innovation to occur. With rectilinear sides, a 45-foot core to window planning depth, no columns, and perimeter windows with views of the city, the design of each floor plate makes it an attractive space for potential life sciences and laboratory tenants. The lab-ready space also features 15' floor to floor heights.

When completed in 2023, this new building will continue to the vibrant street life around Philadelphia, especially with the addition of a future park located just east of the site. As a bridge between two universities and a gateway into the city of Philadelphia, any life sciences client would find this building as a highly viable solution for their needs and goals.

495,000 sq ft

Estimated Completion
2023

Services Provided
Core and Shell Design

Gensler

The Labs at Belward
Sciences Campus Renewal

Shady Grove, MD

Gensler is the Master Planner and Architect of The Labs at Belward, a planned 1.6 million-square-foot life sciences campus at the Belward Campus of Johns Hopkins University in Shady Grove.

Supporting Trammell Crow Company, the 21-acre campus is a first of it's kind innovation ecosystem within a campus environment. Seeking to create a life sciences campus with a collegiate setting feel, Gensler's design will enable world-class life science users to have flexibility for future growth and expansion.

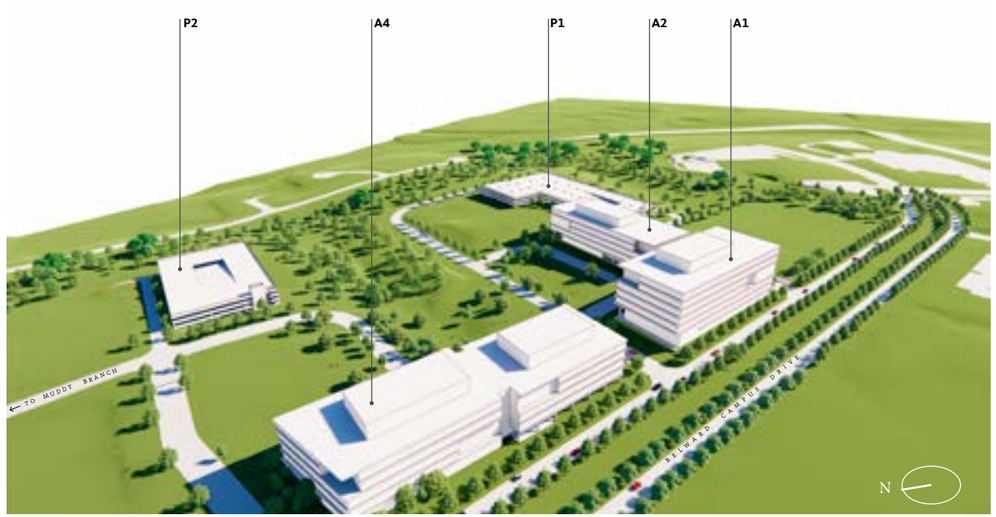
The first phase of the project is currently in design, and will consist of 757,000 square feet of lab and office research space across three buildings.

The Labs at Belward will be built to support BSL Category-2 laboratory functions and will include 18-foot deck-to-deck ceiling heights on both the basement and ground floors, with 16-foot heights on all other floors.

757,000 sq ft

Completion 2025 (Phase I)

Services Provided
Master Planning
Architectural Design
Test Fits



Illustrative View: Looking West down Belward Campus Drive

Illustrative View: Looking East down Belward Campus Drive

Illustrative View: Looking Southeast towards Belward Campus Drive

Illustrative View: Looking Southwest towards Belward Campus Drive

Gensler

Rutgers University
Bartlett Hall

New Brunswick, NJ

Like many institutions today, Rutgers University has struggled to carve out new laboratory research space within its existing aging stock of buildings.

Located on the Cook campus, Bartlett Hall dates from 1922 and was part of the original land grant College of Agriculture.

Over the years, agricultural science at Rutgers has evolved to include an increasing quantity of research in physiology and physiochemistry. As with any College of Agriculture, there is a value in locating this kind of advanced wet lab science proximate to other more traditional research space such as the livestock farm. In seeking to expand their complement of wet lab research space, Rutgers sought to renovate existing under utilized space in the attic of Bartlett Hall.

The sloped roof of the existing structure limited the total quantity of space available for use. The result was a compact suite of open and enclosed laboratory spaces developed around research in hormone impact on neurological development and animal physiology. The lead researcher would conduct a series of experiments associated with neurological stress and the impact a variety of hormonal environmental agents such as bisphenol-A would have on the nervous system. In addition to a PCR analytic suite, the project also included an extensive tissue storage facility.

2,278 sq ft

Completed 2012

Services Provided
Interior Architectural Design

Lab Plan

Lab Building of the Future Concept

"The future for the industry is to blend a science lab with the collaborative elements of tech workplaces, which are masterful at creating synergies between people." — *Dialogue Blog by Chad Yoshinobu, "The New Hybrid Sciences Office Will Blend Tech Workplace, Hospitality, Brand Design, and Storytelling"*

This concept of the next generation of lab buildings prioritizes flexibility, well-being, and climate readiness. Mass timber framing and natural ventilation result in a building that uses 30% less energy, reduces up to 75% less construction waste, and saves up to 80% less carbon than a conventional lab building.

Laboratory Design

CMTA Project Experience

About Us

CMTA is a multi-specialty firm that focuses on building systems engineering – designing cost-effective, energy-efficient, high-performance buildings. We function as a trusted partner and guide for the owner and design team bringing energy reduction, decarbonization, and health and wellness goals to fruition. As CMTA strives to improve the built environment, we also invent products, set national goals, and work to transform the market to improve results for everyone. We define our innovative approach to engineering as **— Building Science Leadership.**

We are Data Driven, and Results Proven. Over the last 20 years, we have collected utility data on our projects, allowing us to continually improve our approach. This database means we design from verified information and not engineering theories, as well as understand how to make these buildings a reality without extra first costs.

Consulting Services

- MEP & Civil Engineering
- Zero Energy/Carbon Engineering
- Renewable Energy & Sustainability Engineering
- LEED & WELL Building Certification Consulting
- Energy Modeling
- Commissioning Services
- Technology/Security Infrastructure Design
- Performance Contracting
- Construction Administration
- Energy as a Service (EaaS)

750+
Employees

35
Offices Nationwide

195+
Professional Engineers

121
LEED APs

20
WELL APs

21
Commissioning Agents

Knowledge of Locality

CMTA has performed MEP, performance contracting, technology and commissioning services for more than 240 projects across the state of West Virginia. This has included more than $100M of work in Kanawha County, including a large energy savings performance contract for Kanawha County Schools, as well as work for the Charleston Federal Building renovations.

With direct project experience in West Virginia stemming back to 2004, our national firm is well versed in the locality and related jurisdictions. With 11 engineers in Charleston, and more than 45 located regionally, we can easily provide exceptional on-site responsiveness for your project.

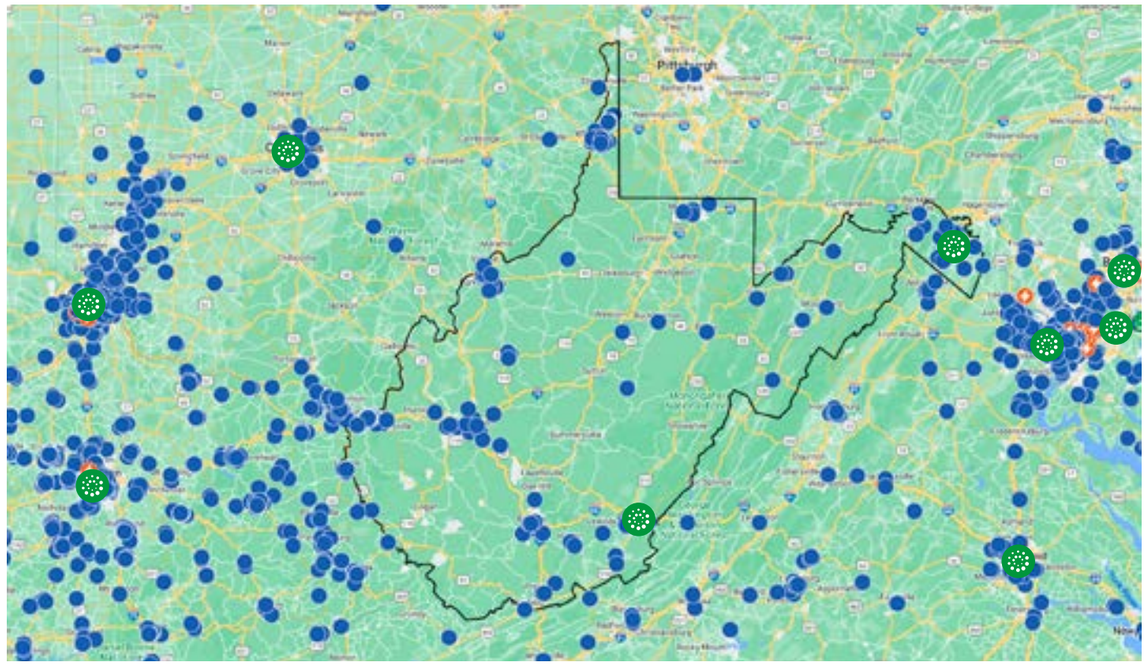
11
Local Engineers in Charleston

45
Regional Engineers (WV, VA)

$100M+
Work in Kanawha County

220+
Projects in West Virginia

CMTA Regional Projects and Offices



Complex Lab Design

When it comes to laboratories, we understand the importance of designing a space that supports state-of-the-art equipment and technology while fostering innovation and focusing on life safety. Due to the intricacies of these spaces, especially for forensics and diagnostic types, we also encourage input from the owner and work directly with equipment suppliers to design systems specific to the owner's needs.

Our team brings decades of experience designing laboratory spaces for commercial, higher education, government agencies, and healthcare clients. Examples of our clientele include the National Institutes of Health, MedImmune, and the Kentucky State Central Forensics Laboratory. Our team also has project experience with animal care and treatment facilities, many accredited by USDA.

Select Experience

Quest Diagnostics, VA
Shepard University Byrd Science Center, WV
Flow TB CSSS and Histology Labs Central Plant Upgrades, VA
Customs and Border Protection, Forensics Lab, VA
Piedmont Virginia CC Advanced Technical Training Center Forensics Lab, VA
State of Delaware Forensics Lab, DE
Franklin County Forensic Science Center, OH
FBI Forensics Laboratory | Louisville, KY
Kentucky Organ Donor Association, KY
Kentucky State Central Forensics Lab, KY
Kentucky State Medical Examiner's Office, KY
Boston Scientific, Various Projects, MN
University of Kentucky Medical Research Building II, KY
Massachusetts Eye and Ear, MA
Harvard Medical School Eaton-Peabody Research Laboratories, MA
NKU Health Innovation Center, KY
Rapid Reaction Research Lab, Wright Patterson AFB, OH
Medimmune/Astra Zeneca Lab Projects, MD
Tufts University Gross Anatomy Lab, BioMed Research, MA
Confidential Client Advanced Tissue Lab, OH
Pikeville Medical Center Central Lab and Research Center, KY

400+
Laboratory Projects

Including Diagnostic, Forensic, Biomedical, Pharmaceutical, and other similar non-manufacturing laboratory spaces

$4B
Construction Value

Includes similar Commercial, Government, Health Science, and Research Laboratory Facilities

State of Delaware Forensics Lab

State of Delaware | Wilmington, DE

CMTA is providing MEP design services for the new Delaware Division of Forensic Science (DFS) facility. The new 120,000+ SF facility will be a partial adaptive reuse and expansion of the existing 80,000 SF Emily P. Bissell Hospital, and will include relocation of the following State's Forensic Units:

Chemistry Unit – Two separate laboratory units, one focused on qualitative analysis on non-biological evidence related to chemical compounds with microscopy and Gas-Chromatography-Mass Spectrometry (GC-MS) testing, and the other on fire debris evidence processing.

DNA Unit – Laboratories focused on DNA testing of biological material, including the Casework and Combined DNA Index Systems (CODIS) utilizing Polymerase Chain Reaction (PCR) technology.

Toxicology Unit – Laboratories focused on biological specimen analysis for presence or absence of volatiles and drugs, utilizing GC-MS, Liquid Chromatography-Mass Spectrometry (LC-MS) and Headspace Gas Chromatography with Flame Ionization Detection (GC-FID).

Medical Examiner's Autopsy Suite – Autopsy Rooms, X-Ray Rooms, Cold Refrigeration, and a fully enclosed/secure sally port.

The program will also include offices, conferencing space, and other accessory spaces necessary for the operation of these programs. The State of Delaware is also potentially incorporating several other programs into the facility including a ballistics laboratory, high-tech crime lab, as well as administrative offices for the Delaware State Police Department.

CMTA's scope included the design of brand new Mechanical, Electrical and Plumbing systems for the new facility, specifically focused on maximizing the operation, resiliency, and energy efficiency.

Project at a Glance
Estimated Completion: 2027
Size: 120,000-150,000 SF
Project Type: Adaptive Reuse and New Construction
Delivery Method: Design-Bid-Build

Toxicology/Dermatology Lab Building

Marshall University School of Medicine | Teays Valley, West Virginia

CMTA is providing MEP design services for the new Toxicology/Dermatology Lab and exam facility. The new 15,000+ SF facility will be an adaptive reuse and expansion of the existing Strayer Building housing the following laboratory units:

Toxicology Unit – Laboratories focused on biological specimen analysis for presence or absence of volatiles and drugs, utilizing GC-MS, Liquid Chromatography-Mass

Medical Office Suite- A flexible medical office suite is being designed to accommodate multiple health care specialties. This suite will include exam rooms, nurses station, offices, restrooms, waiting and reception.

Dermatology Suite and Lab- Approximately 3,400 SF of the facility is dedicated to dermatology exam rooms, nurses station, clean/dirty rooms and a Dermatology & Pathology Lab Space.

Occupational Health Suite - A portion of the facility will be utilized to accommodate employment specimen collection & testing.

The program will also include offices, conferencing space, galley space, and other accessory spaces necessary for the operation of these programs.

CMTA's scope included the design of brand new Mechanical, Electrical and Plumbing systems for the new facility, specifically focused on maximizing the operation, resiliency, and energy efficiency.

Project at a Glance
Estimated Completion: 2025
Size: 15,000 SF
Project Type: Adaptive Reuse and New Construction
Delivery Method: Design-Bid-Build

US Customs and Border Protection Quantum Park

Department of Homeland Security | Ashburn, Virginia

CMTA provided MEP, Information Technology, Audio Visual, and Security Design for the US Customs and Border Protection (CBP). Due to the recent increased attention that has been placed on the security of the US border, CBP has been faced with massive and rapid expansion. This project was executed to consolidate numerous business units to improve operational and spatial efficiency in a secure location.

The project includes approximately 390,000 SF of office space for the agency as well as over 50,000 SF of specialty spaces including a **forensic lab**, wet lab, radio lab, emergency operations center, secure facilities, and IT spaces. The building is 100% backed up by standby power generation and mission critical HVAC systems and is designed to a high level of security including both physical security countermeasures as well as state of the art electronic security systems.

Site security improvements include a new perimeter K-rated fence with secure access checkpoints, electronic video surveillance, site lighting design, and relocation of the loading dock for the portion of the building that is not government controlled to minimize traffic through the secure perimeter.

In addition to the interior fit-out of the space, to meet these demanding requirements CMTA designed upgrades to the central plant systems, provided all new HVAC systems and completed the shell design for a portion of the building that was previously only built to cold dark shell condition. The building includes a number of energy efficient technologies including all LED lighting with daylight harvesting, high efficiency four pipe VAV HVAC systems and an advanced DDC building automation controls platform.

Project at a Glance
Completion: 2021
Size: 444,000 SF
Project Type: New Construction
Delivery Method: Design-Bid-Build

NIH Rockledge Center

National Institutes of Health | Bethesda, Maryland

National Institutes of Health (NIH) sought to consolidate several locations in suburban Maryland into a pair of adjacent 10-story buildings in Bethesda. The General Services Administration (GSA) negotiated three leases to relocate, allowing the agency to reduce its footprint by nearly 155,000 square feet in multiple locations across Maryland. The new facilities were altered and underwent interior renovations to accommodate the various NIH tenants, including teh DEA Drug analysis Lab, Clinical Research Centers, etc.

CMTA provided MEP engineering for the phased, occupied renovation of the property including replacement of all MEP systems, addition of a new cafeteria and conference center, and comprehensive site security upgrades. Synthesizing sometimes conflicting technical requirements from the 15 different federal sub-agencies and delivering a cohesive building design was key to the project's success.

CMTA worked with the buildings' owners to help define the detailed scope of work scope necessary to meet GSA's lease obligations. This process included performing a detailed existing MEP systems condition assessment and LEED Gap analysis.

Attention to sustainable design principles was important both for the comfort and well-being of NIH staff and the conservation of resources and government funds. Goals focused on energy conservation, intelligent building control systems, resource and waste management, use of environmentally responsible materials with recycled content, low emission VOCs, durability, and local availability. Incorporating natural light deep into the space (along with LED light fixtures) was an important strategy for both energy savings and encouraging a productive work environment.

Project at a Glance
Size: 500,000 Square Feet
Cost: $90,000,000
Completed: 2020
Awards / Certifications: LEED Gold

Forensic Science Center

Board of County Commissioners for Franklin County | Columbus, Ohio

CMTA teamed to develop the 23-acre site master plan for the two facilities and the space programming for the Forensic Science Center for Franklin, Ohio. Programming included an existing equipment inventory and evaluation of what new equipment and technology needed to be included to allow for growth for the next 50 years.

Specifically, CMTA provided services for the study including a new ~49,000 square foot Forensic Science Center. The study covered potential mechanical, electrical, plumbing and fire protection systems for the facility as well as electrical site utilities, site lighting and telecommunication systems.

Emergency back-up power would be present to cover:

- Autopsy and lab suites including rooms, freezers, equipment, lighting, etc.
- Toxicology refrigerators and freezers
- General and lab computers
- 2 LC/MS/MC instruments

HVAC systems would consider three options:

- Packaged Rooftop VAV Units with Hot Water Reheat
- Indoor VAV SHUs with Hot Water Reheat
- Geothermal Heat Pump Units with 100% Outside Air Units with Energy Recovery

Project at a Glance
Size: 49,000 Square Feet
Cost: $200,000,000
Completed: 2017
Project Type: Master Plan / Study

Additional Relevant Information:

- Forensic lab study
- Autopsy labs
- State facility

State Medical Examiner's Office Relocation

Commonwealth of Kentucky | Louisville, Kentucky

The State Medical Examiner's Office relocated to the Bingham Building on Central State Hospital's Main Campus in Louisville. This project involved the renovation of the Bingham Building for code compliance and to accommodate the functions of the Medical Examiner's Office. The first floor was the main area of renovation with a large portion being completely renovated into the new examination spaces.

The new **forensic lab** has a 3-table autopsy room, a single table decomposition autopsy room and a histology lab. There is a large (30+ bodies) walk-in cooler and a 10 body freezer including all support spaces. The mechanical systems consist of a 100% outdoor air roof-top unit with total energy recovery, ducted to VAV boxes for the lab space. The unit "turns" the air over in the space an average of 40 times per hour to aid in reduction of odors throughout the lab. A high-efficiency boiler provided the heating hot water for the space and is piped to the heating coils at the VAV boxes.

The existing building electrical service remained with only new sub-panels added for the renovation area. High-efficiency LED lighting was used throughout.

Project at a Glance
Completion: 2021
Size: 18,500 SF
Cost: $2,500,000
Project Type: New Construction
Delivery Method: Design-Bid-Build

Ogden College Hall

Western Kentucky University | Bowling Green, Kentucky

This project involved the design and construction of a new science building on Western Kentucky University's campus. The new building was made possible by the demolition of the Thompson Complex North Wing and minor renovation to the Thompson Complex Center Wing. These two buildings as well as Snell Hall and the Hardin Planetarium are part of WKU's Ogden College of Science and Engineering.

The four-floor, 82,000 square-foot facility features more than 30 labs for biology, chemistry, physics and astronomy along with student advising offices, a 300-seat auditorium and the office suite for the Ogden College of Science and Engineering.

The HVAC system is central steam and building centrifugal chillers with two air handling units serving lab spaces and two serving the office area and auditorium. Ogden College Hall contains 104 fume hoods for both teaching and research laboratories. Energy savings strategies for the project include reduced fume sash positions, auto sash closers, demand control ventilation, seasonal condensing boiler used for first stage heating and variable primary pumping. Electrical savings features include LED lighting throughout the building and the use of vacancy sensors. Energy savings strategies are projected to save the university $150,000 annually in utilities.

Through WELL design and operation initiatives the building continues to exceed air and light quality goals. Ogden College Hall is a ground breaking facility proving that exceptional laboratory and learning space can be more energy efficient, safer, and healthier with minimal extra cost. It's a building that will positively impact the STEM research and study at WKU.

Project at a Glance
Completion: 2018
Size: 82,000 SF
Cost: $40,000,000
Project Type: Addition/Renovation
Delivery Method: DB
Awards / Certifications:

- LEED Gold
- WELL Gold

Charlestown Navy Yard 149 Lab Facility

Partners Healthcare, Massachusetts General Hospital | Boston, Massachusetts

This wet lab facility in Charlestown is considered the country's largest laboratory facilities, consisting of over 1,000,000 SF of labs and support spaces.

The mechanical and electrical Infrastructure for the labs was installed in the late 1970s and early 1980s, and was in poor condition. The system consisted of over 300 small rooftop exhaust fans and over a dozen indoor central station air handlers. The system was maxed out, unreliable, inefficient and required extensive repair. The owner- Partners Healthcare- also wanted to expand lab space in the building but air handling, chiller plants and normal power systems all lacked spare capacity.

Project at a Glance
Size: 1,000,000 Square Feet
Cost: $20,000,000
Completed: Infrastructure Upgrades 2014; Boiler Replacement 2021; Retro Commissioning 2021

Medical Research Building II

University of Kentucky | Lexington, Kentucky

The University of Kentucky's Medical Research Building 2 is a state-of-the-art, 306,000 SF facility for researchers in the biomedical (medicine, pharmacy, nursing, health sciences), psychology (animal researchers), agriculture (animal researchers), Arts and Sciences (biology, chemistry) and engineering (imagers, computational) fields. CMTA was responsible for the lighting, plumbing, laboratory gas, fire suppression, and central plant expansion design.

This research building provides the University with a modern laboratory and vivarium facility for the study of health disparities in the Commonwealth of Kentucky. The laboratory's spaces are flexible and open, allowing users to adjust and modify the space to fit their needs.

- Vivarium totaling 12,800 gross square feet
- 8,000 gross square feet imaging space
- 96 benches of biomedical wet lab space
- Flexible lab/offices
- Central lobby forum space and café
- 100-seat auditorium
- Space for imaging equipment on the lower level
- Computational dry lab space
- Shelled space for future fit-up

Project at a Glance
Size: 306,000 Square Feet
Cost: $265,000,000
Completed: 2018

R&D Center Renovations

MITRE Corporation

MITRE operates federally funded research and development centers (FFRDCs) supporting various U.S. government agencies, such as the Department of Defense, in the aviation, defense, healthcare, homeland security, and cybersecurity fields, among others.

CMTA has provided MEP/FP services to MITRE Corp for more than 20 years. This has included campus wide infrastructure upgrades, energy conservation upgrades, new construction and renovation projects. As part of this partnership, CMTA has renovated or designed new facilities for more that 50,000 SF of laboratory space including BSL3 labs.

Some relevant projects are listed below.

- Advanced Manufacturing Lab, including rapid prototyping space
- BSL2 Lab Schematic Study Evaluation
- Collaborative Systems Lab Relocation
- HP Laser Lab
- Aquatic Maritime Systems Engineering Lab
- Data Center and UPS Design
- Innovation Center
- Electric Power Generator Plant
- SCIF Space
- BioNet Lab Renovation
- Health Center
- Sonar Tank

Project at a Glance
Advanced Manufacturing Lab
Secure Space (SCIF)
More than 75 projects in the last 20 years

Gross Anatomy Lab Renovation

Tufts University | Boston, Massachusetts

The newly renovated Michael J. Anatomy Lab is nearly twice the size of the original lab space. The new laboratory increased the initial square feet per student from sixteen to thirty. The lab utilizes integrative technology and interactive learning with traditional anatomy dissection to prepare medical students for success.

CMTA designed a new supply and exhaust air handling system, electrical power infrastructure system, and carefully-provided MEP/FP fit-up design so 20 air changes can be maintained in the lab. This ensures user safety without undesirable air noise. This GA project also required extensive building HVAC infrastructure system upgrade, of which is one of CMTA's specialties.

The system maintains appropriate temperature and relative humidity levels for preservation of cadaver specimens, regardless of outdoor conditions. Since the BRPH was fully occupied, careful planning and design was required during construction of the new lab.

New infrastructure systems met the stringent air change, temperature, and relative humidity requirements of the lab included a new 40,000 CFM roof-mounted air handler, new exhaust systems, new air risers, heat recovery systems, electrical infrastructure, and extension of other building utilities.

Project at a Glance
Size: 25,000 Square Feet
Cost: $15,000,000
Completed: 2017
Project Type: Addition/Renovation

Confidential Lab Client

Virginia

Laboratory AHU Replacement

CMTA worked with a confidential lab client and CBRE to design replacements for 3 central Air Handling Units. These custom units collectively supply approximately 170,000 of 100% OA to over 100,000 SF of Laboratory spaces within the facility, which operate 24/7/365 and require specific temperature and humidity control, UV disinfection, and integration into the building's glycol energy recovery system. In addition to keeping the building fully operational throughout, the project was further complicated by the constrained retrofit nature of the installations in the sub-grade Central Plant, which required consideration for a phased delivery and construction process, as well as a temporary AHU located outside the building but connected to the internal Central Plant's chilled and hot water services.

During the feasibility phase, CMTA performed a thorough analysis of the buildings' previous, current, and future intended uses to ensure the new equipment provided a long term solution that met the client's quickly expanding operational goals while maintaining focus on increasing the overall energy performance of the facility, reducing operational costs, and ensuring the continued safety and health of the employees.
Cost: $4,000,000
Completed: Est. 2023

T-Spot Laboratory

CMTA worked with a confidential lab client, CBRE, and Gensler to design a new Tuberculosis Laboratory. This project involved multiple complexities in transitioning traditional office/conferencing space into a full compliant and operational laboratory. This included providing new electrical service with generator and UPS backup power delivery, a new AHU and integrated exhaust system with glycol heat recovery loop, and expansion of the building's laboratory gas and water services into the new area of work. The project was further complicated by the adjacency to the main Atrium Lobby and Cafeteria areas of the building which required heavy attention to aesthetic detail.
Cost: $1,000,000
Completed: August 2022

Ground Floor Laboratories

CMTA is currently working alongside CBRE, and Ware Malcomb to relocate three major laboratories. This scope includes renovating approximately 12,000 SF of existing office space into new BSL-2 Laboratories, including their Molecular Oncology, Histology Pathology, and Flow departments, as well as new administrative support spaces for those Laboratories. This project involves multiple complexities in transitioning traditional office/conferencing space into a fully compliant and operational Laboratory.
Cost: $3,500,000
Completed: Est. November 2023

Wake Forest Biotech Place

Wexford Science + Technology | Winston-Salem, North Carolina

Renovation and reuse project of the historic 5-story RJ Reynolds Tobacco Company Building 91 in downtown Winston Salem, NC. Project consisted of two connected buildings, sized at a nominal 268,523 gross square feet, which were demolished to the basic building structures and refitted with new mechanical, plumbing and electrical systems.

The new Wake Forest Biotech Place is a 242,000 SF state-of-the-art research/lab facility containing wet labs, classroom space, a conference center, offices and a business accelerator. The largest tenant for this facility is Wake Forest Baptist Medical Center with spaces for the Departments of Physiology, Pharmacology, Biomedical Engineering, Immunology and Microbiology, and the Childress Institute for Pediatric Trauma.

The buildings were stripped to the basic building structure on the interior and refitted with new mechanical, HVAC and electrical systems, fire protection and vertical transportation systems to bring them up to current commercial code standards. Commissioning was provided from the Design Development Phase through the Warranty Phase to fulfill the requirements of Fundamental and Enhanced Commissioning, as described in LEED 2009 for Core & Shell, Energy & Atmosphere Prerequisite 1.

Project at a Glance
Size: 242,000 Square Feet
Cost: $100,000,000
Biomedical Engineering
Immunology and Microbiology

Health Innovation Center

Northern Kentucky University | Highland Heights, Kentucky

Northern Kentucky University embarked on an ambitious addition/renovation project at Founders Hall, creating NKU's second largest academic building totaling 210,000 square feet with a 108,000 square foot addition. This new $97,000,000 building creates a truly interdisciplinary education opportunity which will be used to help train future healthcare professionals in and around the region.

NKU wanted to pursue energy conservation aggressively. The existing building was connected to the campus central chilled water and steam utilities; however, the design team implemented a hybrid approach utilizing both campus utilities as well as a new geothermal well field which would serve a portion of the existing building. This hybrid approach used water source heat pumps in the classrooms, chilled beams in the laboratory spaces and traditional VAV air handling units in the Vivarium. The result was a building designed with an EUI of 68, which utilizes 50% less energy than the baseline code requirements.

Project at a Glance
Completion: 2017
Size: 210,000 SF
Cost: $97,000,000
Project Type: Addition/Renovation

Sugihara Science Hall

North Dakota State University | Fargo, North Dakota

CMTA provided mechanical engineering design services for the new laboratory intensive Sugihara Hall at North Dakota State University. Centered at the heart of campus, the four-story science hall incorporates ample-sized research labs, teaching labs, graduate student workspaces, classrooms, and a variety of student support and study spaces. Skyway connections were incorporated to connect the science hall to Hultz Hall, Ladd Hall, and the Memorial Union.

The new facility combines advanced laboratory and research spaces with multiple campus departments to integrate academic interests and encourage innovations with research opportunities. The laboratory building includes 82 fume hoods, a new chemical storage room, a glass blowing lab, laser research labs, and a new rock sample processing space.

The heating, ventilation, and air conditioning (HVAC) system was designed to meet the specific requirements of the laboratory environment, while minimizing long-term energy cost and consumption. An energy recovery runaround loop is utilized to transfer waste energy between the exhaust air to the incoming outdoor air. The energy recovery system helps reduce energy consumption by pre-conditioning the incoming air and reduces the load on the central heating and cooling systems.

Project at a Glance
Completion: 2022
Size: 105,000 SF
Cost: $51,000,000
Project Type: New Facility

School of Medicine & Health Sciences

University of North Dakota | Grand Forks, North Dakota

The University of North Dakota School of Medicine and Health Sciences, the state's only medical school, decided to replace its aging facility to increase enrollment, attract distinguished faculty and staff, provide more collaboration among departments, and retain graduates.

The new School of Medicine and Health Sciences accommodates students and staff from all eight school departments in medical, health, and basic sciences. In the past, the departments were housed in separate campus locations due to a lack of space. The new facility allows for collaboration among students and staff in different fields, helping students learn about areas outside of their specialization.

The main floor includes an auditorium, gathering spaces, a cafeteria, and a highly detailed simulation center designed for public access. Every space, including the anatomy classroom, is designed with access to sunlight, which is highly unusual in medical education.

Project at a Glance
Completion: 2016
Size: 321,000 SF
Cost: $124,000,000
Project Type: New Facility
Delivery Method: CMAR
Awards / Certifications:

- LAIA North Dakota Merit Award, 2017
- American School & University Outstanding Design Award, 2018

Veterinary Diagnostics Lab

North Dakota State University | Fargo, North Dakota

The modern, highly efficient North Dakota State University Veterinary Diagnostics Lab was designed to provide the university and surrounding areas with the resources to support veterinary science research and advancement. The new facility offers expanded laboratory and office space, and features significant layout enhancements for safety and efficiency.

CMTA provided mechanical and fire protection engineering services for the new laboratory facility. CMTA also designed a geothermal system for heating and cooling to aid in energy and carbon reduction and lower operating costs.

The lab contains top-of-the-line technology and equipment and provides testing and diagnostic services for veterinarians, animal owners and producers, and the public health sector. The facility offers toxicology, bacteriology, virology, molecular diagnostic, clinical and anatomic pathology, parasitology, and serology testing services.

The lab also contains a 2-ton capacity crane and incinerator to aid the staff in moving and disposing of large specimens. The laboratory is fully accredited by the American Association of Veterinary Laboratory Diagnosticians.

The building features several environmental design features. The building is organized on an east-west linear basis to provide abundant tempered daylighting into the laboratory spaces on the north side of the building. The project also employs a geothermal well field for heating and cooling. The lab also contains a Biosafety Level 3 room suitable for work with infectious agents.

Project at a Glance

Completion: 2017
Size: 24,000 SF
Cost: $18,000,000
Project Type: New Construction
Awards / Certifications:

- 2022 ASHRAE Technology Award 1st Place Region VI, New Building Commercial

Biosquare Labs Energy Reduction

Boston Medical Center | Boston, Massachusetts

Constructed in 1998, this laboratory building is 182,000 sq ft and includes 8 stories with a basement and penthouse. The building houses the BUMC School of Dental Medicine for classrooms and research and also houses 2 BSL-3 labs. The upper levels contain open lab areas with associated office and conference spaces. Additionally, the core areas include tissue culture, animal procedures, cold rooms, autoclaves as well as equipment rooms.

The typical lab is supplied with 12+ air changes of supply air and the hoods are constant volume with bypass. CMTA worked with BMC, BU Medical Center and the local utility company to develop energy savings strategies because the existing EUI was measured at 486 kbtu/sf/yr with an annual utility cost of ~$2,550,000.

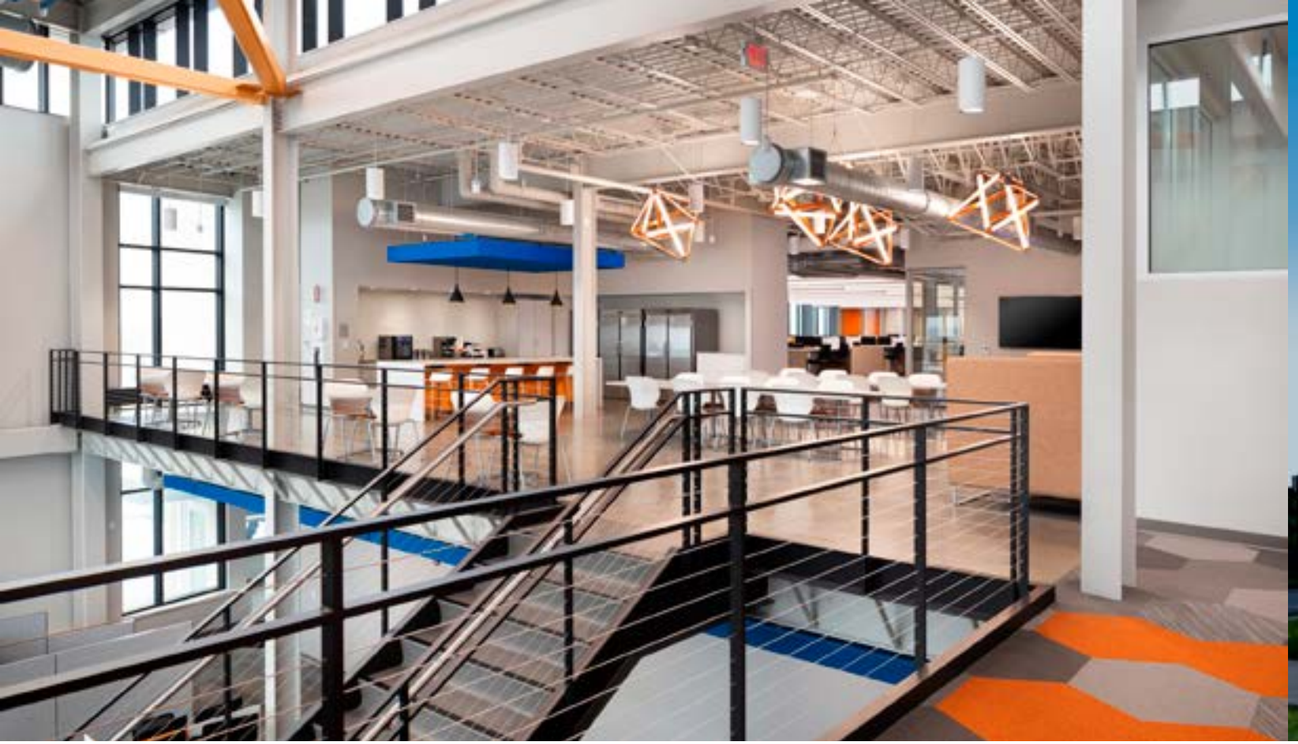
The study included reviewing many energy conservation measures where multiple energy reduction items were identified. After discussion with BMC, BUMC and the utility companies, it was decided to proceed with development of two major ECM concepts:

- ECM-1: Reduce lab supply air changes (ACH) and implement thermostat setback during unoccupied hours
- ECM-2: Convert constant volume (CV) terminal boxes to variable air volume (VAV), reduce unoccupied ACH and implement thermostat setback in offices associated with laboratories during unoccupied hours

With ECM 1 & 2 implemented, the building EUI reduced down to 434 kbtu/sf/yr – a 11% reduction. Additionally, there was an annual utility cost savings of ~$360,000 – a 15% reduction in cost.

11%
Energy Use Reduction

15%
Utility Cost Savings



Aldevron Campus Expansion

Fargo, North Dakota

Aldevron is a company of forward-thinking, thought-leading, and innovative individuals working together to advance biological sciences worldwide. It's the kind of company with a mission, vision, and values that resonate with us.

Our team was part of Aldevron's first 70,000 square-foot office building design in Fargo. The current building, completed in 2018, is used for the production of DNA and protein products, while the expansion includes three new buildings. The first new building contains a 20,000 SF warehouse and distribution center. Given the nature of the space, temperature and humidity control are present at floor and mid-height, and are validated continuously per GMP standards.

The second building is an administration building, and the third is an industry-leading research and development center with technological operations and a training center.

The new facilities will support the company's growth and accommodate more than 1,000 employees.

Project at a Glance
Completion: 2021
Size: 189,000 SF
Project Type: Addition & Renovation

New Office, R&D Center, QC Lab

Zeochem LLC | Louisville, Kentucky

Zeochem is a Swiss company that was founded more than 200 years ago and has manufacturing plants across Europe and Asia. Its products are used and applied by several industries, such as food and beverage, chemical, pharmaceuticals adn biopharmaceuticals, among several others.

The global chemical company, which already has an operation and manufacturing plant in Louisville, needed additional space to support growth in the molecular sieve market. As respiratory diseases increase worldwide, the demand for medical oxygen and thus for lithium molecular sieves is rising.

CMTA served as the MEP engineer for the resulting one-story, 15,000 SF office building, which houses offices, meeting rooms, a state-of-the-art R&D center and QC laboratory.

High efficacy LED lighting was utilized on the project to minimize energy consumption. Multi-zone dimming controls were employed in the laboratory space for ultimate user flexibility. Power requirements were closely coordinated with new and existing equipment to be used. The electrical infrastructure was designed to permit flexibility of future lab processes and equipment. This was achieved by providing receptacles of varying voltage and amperages. Surface mounted raceways integrated within the lab millwork also allow efficient changes of power and/or data systems in the future.

Continued

New Office, R&D Center, QC Lab
Zeochem LLC | Louisville, Kentucky

The HVAC system is comprised of a 100% Outdoor Air Unit and Hazardous Exhaust in the Lab. Packaged RTUs serve the office area.

The laboratory area contains a host of lab gases, medical-grade compressed air, vacuum pump, acid waste, fume hoods, and ovens. To ease future flexibility for the ever-changing needs of the research lab, underground sleeves were strategically placed. This allowed for new utilities to be reworked or added, keeping the sight line of the lab very clean and open.

In regards to ventilation requirements, the lab airflow was designed for eight air changes. The lab was designed for 68 degrees at 45% RH. For improved air quality, Merv 14 filters were installed, especially due to the close proximity to manufacturing plants.

In addition, CMTA designed the security systems, with integraton to the adjacent manufacturing facility. Security was very important to Zeochem. Access controls for the site and CCTV were included.

Project at a Glance
Completion: 2022
Size: 16,000 SF
Cost: $4,055,000
Project Type: New Construction
Delivery Method: CMAR

Reference:
Jackie Rust-Schmidt, Director of Plant Operations
502-634-7680 | jackie.rust-schmidt@zeochem.com

Gensler + CMTA

A LEGENCE Company

The Gensler + CMTA team is a proven team designing and implementing some of the most cost effective and low energy using High Performance educational projects nationally. This team is redefining true High Performance design and construction through collaborative and effective techniques for implementing buildings which perform as designed and cost effectively minimize operationally expenses.

The Gensler + CMTA team utilized these techniques to lower operational energy usage on the new Northeast Community Resource Center. The project focused on many areas of Building Sciences to achieve drastic energy reduction and true performance targeting 25-30 EUI.

$1.1B+

CMTA and Gensler have partnered on projects worth over $1.1B in Construction Costs

Frameworks @ Block 10, Houston, Texas

Houston Advanced Research Center

Houston Advanced Research Center | The Woodlands, Texas

Located in The Woodlands Texas, The Houston Advanced Research Center, known as HARC, is a 501 (c) (3) Research Hub that provides independent analysis related to energy, air and water for people seeking scientific answers. In 2014, HARC decided to proceed with design of a new head-quarters building that would support their sustainability mission. The resulting facility far exceeded the owner's expectations.

The energy efficient design featured a geothermal HVAC system, and extremely efficient building envelope and lighting systems. The buildings energy model suggested the facility would use 50% less energy than a standard building and with an actual EUI of 16 ktbu/sf-yr, actual operations have matched modeled. The result is a building that is operating at Zero Energy status.

Project at a Glance
Size: 20,000 Square Feet
Cost: $6,020,835
Completed: 2017
Awards / Certifications:

- NBI Zero Energy Certified
- LEED Platinum Certified

88.2kW
Solar power system sized to meet Zero Energy goal

Expertise + Building Science Leadership = Results | *CMTA.com*

CMTA

Gensler

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A LEGENCE Company

Western Kentucky University College of Business, New Facility, Bowling Green, Kentucky
USACE Louisville National Air and Space Intelligence Center (NASIC)- IPC III, Wright Patterson Air Force Base, Dayton, Ohio
Smithsonian Pennsy Center, Washington, DC
University of North Carolina at Charlotte Multiple Renovation Projects, Advance Planning, Charlotte, North Carolina
US LEC - Morrocroft, Charlotte, North Carolina
West Community Resource Center, Charlotte, North Carolina
Charlotte Douglas International Airport Center Renovations, Charlotte, North Carolina
Toyota CSRM Lab Expansion, Houston, Texas
Corvallis Toyota, Corvallis, Oregon
Tejas Toyota Renovation & Addition, Houston, Texas
The Woodlands United Methodist Church Main Campus Renovations, The Woodlands, Texas
Ethicon Town Square, Blue Ash, Ohio
Mars Arcadia, McLean, Virginia
Southwestern Energy Corporate Campus, Houston, Texas
Guilford County Schools, New Foust Elementary Magnet School, Greensboro, North Carolina
Intel Federal Secure Facility, Chandler, Arizona and Fairfax, Virginia; Boxborough Secure Data Center Analysis, Boxborough, Massachusetts
Western Kentucky University, Master Plan; College of Business, Bowling Green, Kentucky
Hughes Network Systems Lobby Renovation, Germantown, Maryland
Leidos Renovation, Indianapolis, Indiana
Quest Diagnostics AHU Replacement Project, T Spot Lab; AHU Replacement Project- Conference Center, Chantilly, Virginia
Eastern Kentucky University Alumni Coliseum Renovation, Richmond, Kentucky

Prepared for

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November 9, 2023

On the cover: National Institute of Standards and Technology, Building 245 Radiation Physics Laboratory Rehabilitation

REQUEST FOR EXPRESSION OF INTEREST

New Consolidated State Laboratory Facility Project

Charleston, WV

Thornton Tomasetti

STRUCTURAL ENGINEERING SOLUTIONS

National Institute of Standards and Technology, Building 245 Radiation Physics Laboratory Rehabilitation, Phase II, Gaithersburg, MD

As structural engineers, we collaborate with architects, owners and builders to achieve elegant structural solutions to meet the rigorous demands of the most technically challenging projects. We provide a complete range of structural design services for clients worldwide on projects of all sizes and complexity – from designing some of the world's tallest buildings and longest spans, to engineering the most ambitious yet small-scale structures; from new buildings to expansions and renovations of every type. Whether in steel, concrete, timber or a hybrid, we design structural systems to realize your ambitions.

CAPABILITIES

Structural design

Structural alteration and renovation

Structural exploratory studies

Structural optimization

Advanced structural analysis

New design

Designing structural frames for new buildings is a key focus of our practice. We work collaboratively with architects, mechanical engineers, and contractors to propose, study, and develop structural framing system alternatives for each project. Our integrated approach to developing the optimal structure considers not only material quantities and embodied carbon, but also the project's economic, functional, and aesthetic requirements.nts.

Leaders in low carbon design

Our research and development efforts have produced a number of important breakthroughs in the field of embodied carbon. We are drivers of the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE)'s SE 2050 Commitment, which follows the Structural Engineers 2050 Challenge. The challenge was co-initiated by Thornton Tomasetti and issued in 2019 by the Carbon Leadership Forum to eliminate embodied carbon in projects by 2050.

Advanced tools & technology

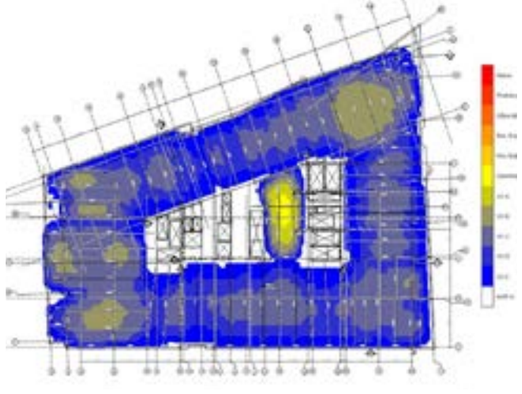
Combining the latest technologies with proprietary tools designed by our in-house R&D incubator, our engineers excel in optimizing structural system designs in order to meet architectural and cost objectives and to simultaneously simplify construction. We enable the design team to explore and evaluate design considerations at the earliest stages through interoperability and data visualization tools that deliver rapid iterations. We incorporate this knowledge to optimize complex and award-winning projects throughout the world.

Laboratory expertise

Thornton Tomasetti has designed free-standing laboratories as well as buildings that contain laboratories – for commercial clients as well as pharmaceutical companies, industrial corporations, universities, and public and government agencies. This varied experience provides us with a deep understanding of the issues faced in the design of laboratories, as well as a broader approach to addressing them, making us well-equipped to assist you. The depth of our portfolio shows that our engineers and specialists design in accordance with complex regulations with strict ventilation requirements, vibration control, and radiation shielding. We coordinate flexible infrastructure, utility and communication connections to accommodate upgrades and future expansions in a cost-effective manner. We design facilities that accommodate the latest technologies in coordination with specialized consultants to minimize plenum space while maintaining an efficient structure. We develop solutions to overcome difficult site constraints and the disruption of services in adjacent buildings.

Thornton Tomasetti

ACOUSTICS, NOISE AND VIBRATION SOLUTIONS



Confidential project, “heat map” vibration diagram to predict footfall-induced vibrations within the structure.

Since 1980, our team has helped clients to maximize occupant safety and comfort in structures new and old and to tune listening spaces for optimal acoustics. At Thornton Tomasetti, we invent unique methods – combining tried-and-true approaches with innovative technology – to customize solutions for projects of every type. With experience in healthcare, education, performing arts, worship spaces, institutional facilities, hospitality, cultural centers, residential developments, office buildings, industrial developments, sporting venues, bridges, we have the expertise to solve your most challenging acoustic, noise and vibration problems.

Architectural acoustics, noise and vibration

Thornton Tomasetti provides analysis and design to control and balance the competing needs of acoustic, noise and vibration functions for new buildings and renovations. These include interior room acoustic design, noise control between rooms, mechanical equipment noise and vibration control, and duct-borne noise analysis. We also offer advanced techniques for footfall-induced vibration prediction that use finite-element modeling to generate multimodal time-history predictions.

Vibration testing, monitoring and control

Vibration can be caused by many sources in and around a building: transportation systems such as rail, subways and busy roads; HVAC machinery; human activity; and wind. To assess the likelihood and severity of vibrational issues, our engineers measure and analyze the structural vibration characteristics of anything from a small piece of rotating machinery to an entire building.

Tuned mass dampers

Tuned mass dampers (TMDs) are used to reduce vibration in a variety of structures: floors, long-span structures, bridges and tall towers. Each requires a different approach. We provide analysis and design for all types of TMDs and have extensive experience in the design of traditional solid and liquid dampers.

Lab Design Considerations

Lab spaces have very specific structural performance demands and spatial requirements. Our team brings a strong understanding of these requirements acquired through our deep experience designing and renovating research buildings and healthcare facilities across the country. Space planning of labs starts with the lab programming / equipment needs, functionality, and vibration acceptance levels, which then inform the column grid spacing. Standard Vibration Criteria (VC) curves are typically used to specify acceptable levels of vibration. These curves are intended to provide frequency-dependent sensitivities for a wide range of equipment and are used extensively in lab design for healthcare and research facilities. Depending on whether the floors are programmed for computer labs (minimal vibration criteria) to electron microscope use (stringent criteria), there are industry-standard vibration criteria curves for each. Our structural engineering team can optimize for both vibration performance and column grid spacing while balancing the cost of the structure in order to design an efficient system.

Thornton Tomasetti

RESILIENCE SOLUTIONS

We live in a world that is full of opportunity, yet is also uncertain, complex and constantly changing. Our cities, infrastructure and organizations need to continually adapt to reflect the changes, shocks and stresses within wider society if they are to meet current needs and also be prepared for the future. The speed of change is accelerating — driven by rapid advances in knowledge and technology, ever greater interconnectivity, and factors such as urbanization, population growth, climate change and globalization.

We help our clients prepare, endure, adapt and thrive in a disruptive and changing world by applying engineering and science expertise to our four-step approach.

Here’s how.

Cities, communities, facilities and organizations often face chronic stresses and shocks that impact their ability to function and thrive. Their capacity to prepare, adapt, respond and bounce back affects their current and future success. Our team of engineers, architects, scientists, and emergency management and risk specialists take an interdisciplinary approach to resilience. Our expert analysis and solutions help you make decisions about physical improvements, adaptation, mitigation and resilience strategies to support your success in an often uncertain future. We take a four-stage approach that diagnoses vulnerabilities, strategizes solutions, implements physical and operational risk reduction measures, and monitors the dynamic nature of clients’ challenges for improvements.

Our Resilient Design services take a holistic approach to enhancing resilience, from geotechnical considerations to building systems, structures and façades.

Our Resilience Advisory services cover a range of assessments and studies, as well as development of strategies, to help you prepare, adapt, endure and thrive in the long term.

CAPABILITIES

Resilience advisory

- Multi-hazard risk assessment
- Resilience assessment
- Resilience strategy development
- Resilience audit and investment appraisal
- Risk and resilience data management
- Risk and resilience management
- TVRA, security design and consulting
- Community resilience initiatives
- FEMA hazard mitigation grant proposal preparation
- Probable maximum loss (PML) studies
- Emergency preparedness plans

Resilient design

- Seismic performance-based design
- Flood mitigation design
- Climate change mitigation and adaptation
- Wind studies and building envelope design
- Performance-based fire engineering
- Protective design and security
- Green infrastructure
- Water reuse consulting
- Passive house design
- Slope and foundation stability
- System reliability engineering
- Flood barrier field testing

Thornton Tomasetti

SUSTAINABILITY SOLUTIONS

Our sustainability practice actively pursues innovation in our approach to energy, materials, water and health. When we see an opportunity to optimize a building through better information and visualization, we create new tools in collaboration with our CORE studio. Our unique access to a diverse suite of internal practices allows us to reach beyond the typical sustainability consultant's toolbox and to reimagine sustainable design to better realize the goals of our clients. With more than 25 years in the green building industry, we continue to expand the boundaries of sustainable design.

Our passion for working with owners, designers and occupants to create efficient, high-performance, climate- responsive buildings and communities is reflected in the value we bring. We offer a comprehensive selection of sustainability services led by a multidisciplinary, LEED-accredited staff. We embrace sustainable-driven strategies to meet comfort targets and create healthy environments that prioritize passive over mechanical systems with an eye toward life cycle-driven solutions that support the project budget and goals. For clients at the forefront of sustainability, we consult on achieving Passive House Certification, Net Zero Energy Buildings, Living Building Challenge design, Embodied Carbon Optimization and BECx Commissioning.

A smart and collaborative approach

We work with architects and building owners at the inception of every project to help create a sustainability vision–and then we turn it into a reality. Our specialists evaluate buildings holistically to determine the relative environmental pros and cons of particular design decisions as well as associated economic parameters. We collaborate on the design, construction and operation of sustainable buildings to provide innovative solutions that greatly reduce operational costs and contribute to more resilient buildings. We combine creative thinking with time-tested MEP knowledge to help clients prioritize architectural solutions for performance, creating opportunities to right size, if not eliminate, MEP systems that result in efficient and highly effective solutions for comfort, reliability and optimized design.

400+

SUSTAINABLE PROJECTS

Bigelow Laboratory for Ocean Sciences

CAPABILITIES

Building analytics

Comfort analysis

Daylight analysis

Schematic energy analysis

Advanced energy modeling

Parametric daylight & energy analysis

Façade thermal & hygrothermal analysis

Renewable energy potential life-cycle analysis

Embodied carbon

Water balancing

Project certification

Passive House

Living Building Challenge, Core & Petal Certification

Net Zero & Positive Carbon

LEED

WELL

GreenPoint Rating

BREEAM

SITES

Fitwel

Thornton Tomasetti

NIST, BUILDING 245, RADIATION PHYSICS LABORATORY MODERNIZATION

Gaithersburg, Maryland

National Institute of Standards and Technology, Building 245, also known as the Radiation Physics Building, hosts research vital to our nation's healthcare, environmental monitoring, radiation protection, and industrial processing.

Here's how

We provided structural, protective design, and vibration engineering services in support of Building 245's modernization project to support another 50 years of useful life of the building. The additions and renovation incorporated physical security and blast resistant design in accordance with an ISC Facility Security Level (FSL) III. Because the site was designed around underground radiation waste storage tanks, radiation shielding requirements were incorporated into the project via conventional cast in place up to 48 inches thick, high-density concrete block and lead lining.

Result

The new addition houses several cleanroom spaces with air handling equipment. These laboratory spaces meet specific air containment criteria and humidity requirements based on their classification. This building provides space for scientists and researchers to continue serving diverse business, agriculture and security interests while incorporating upcoming technologies.

Owner
National Institute of Standards and Technology

Client / Architect
ZGF Architects

General contractor
Hensel Phelps

Completion date
December 2023 (expected)

Cost
N/A

Total area
268,500 sf

Certification
LEED Silver

Services
Structural engineering, protective design & security, vibration control

Awards
Excellence in Engineering, Design-Build Institute of America Mid-Atlantic, 2021

Excellence in Safety Award of Merit, Engineering News Record Mid-Atlantic, 2021

Thornton Tomasetti

UNIVERSITY OF PITTSBURGH, THE ASSEMBLY

Pittsburgh, Pennsylvania

In 1915, this Ford Model T assembly plant was at the cutting edge of industry. Now it's been transformed into the Assembly, an eight-story epicenter for life-science research and innovation on campus. Its 14.5-foot floor-to-floor height and thick floor slabs make it ideal for laboratory use.

Here's how
Thornton Tomasetti provided structural design of a new research laboratory complex on the University of Pittsburgh's campus. The center focuses on cancer and biomedical research. The project adapts the existing Ford Building and Crane Shed, which date from the early 20th century, to house 350,000 square feet of state-of-the-art research and mechanical support space. It also involves construction of a new addition on the south half of the site, consisting of approximately 350,000 square feet of laboratory and amenity space such as retail, atrium, loading dock, and an auditorium, as well as parking for 230 cars.

Result
The laboratories serve scientists pushing the boundaries of cancer research and immunology from the UPMC Hillman Cancer Center, Department of Immunology, and Institute for Precision Medicine. Collaborative spaces are designed to promote bold and innovative research in the biomedical sector.

With laboratories, offices, a 250-seat auditorium, and retail and dining, the 525,000 square-foot center serves both researchers and the members of the community.

Owner
Wexford Science and Technology, University of Pittsburgh

Client / Architect
ZGF Architects

General contractor
Turner Construction

Completion date
2022

Construction cost
$330 m

Total area
700,000 sf

Services
Structural engineering


COURTESY ZGF ARCHITECTS LLP

Thornton Tomasetti

U.S. FOOD AND DRUG ADMINISTRATION, WINCHESTER ENGINEERING AND ANALYTICAL CENTER

Winchester, Massachusetts

Thornton Tomasetti provided structural engineering, acoustic, noise and vibration control and blast design services under a design-build contract for the U.S. Food and Drug Administration's new Winchester Engineering and Analytical Center (WEAC). WEAC is the the nation's leading federal laboratory for medical device and readioanalytical testing.

WEAC performs analysis of medical devices, radiation-emitting products testing, radionuclides research, and microbiology analyses. The Director's Office houses administrative and support services to oversee the testing and safety of the laboratories. The Analytical Branch provides testing of potentially radioactive / contaminated samples. The Engineering Branch provides testing of medical devices and products. The project also includes general support facilities. Testing and analytical work in the existing facility was ongoing during the construction of the adjacent new WEAC facility.

The structure is a robust one that meets all mission requirements for loading, vibration control, radiation shielding, and physical security. The steel structural system is a modular grid, which is both structurally efficient and spatially flexible, allowing lab layouts to change over time as FDA tasks and needs evolve. Building columns bear on shallow spread footings and are isolated from slab on grade, which bears on the structural fill material. This system is both economical and well-suited to vibration isolation. For this reason, the mass spectrometer room is located on grade, and is structurally separated from high-vibration spaces.

The building houses a wide variety of vibration-sensitive equipment as well as noise and vibration-inducing equipment. Thornton Tomasetti provided vibration control services to ensure the performance of equipment such as a mass spectrometer and microscopes, while mitigating vibrations from equipment such as mills, fatigue testers and shaker tables. We also provided noise control services to ensure that the noise-sensitive spaces, including the hearing aid lab, offices and conference rooms, meet the recommended background noise levels and to control the noise from the fatigue lab, loading dock and mechanical spaces.

Our specialists worked with the design team and FDA to develop and finalize project-specific security criteria and design basis threats, using the Department of Homeland Security Interagency Security Committee Policies, Standards, and Best Practices, in conjunction with heightened security requirements identified in the RFP as a starting point. The security criteria was established early in the design process in order to allow for flexibility in design options to minimize costs and impacts on the planned program. We then worked with the design team to develop a building and site design that meets the established security criteria.

Owner/Client
US Army Corp of Engineers, New England District

Architect
ZGF Architects LLP

Contractor
Whiting -Turner Contracting Company

Delivery method
Design-build

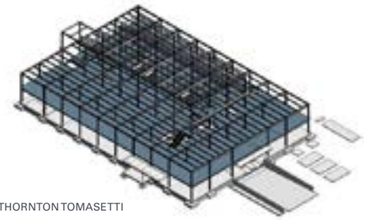
Completion date
Dec 2022

Total area
71,000 sf

Construction cost
$55 million

Services
Structural engineering, blast design, acoustic, noise and vibration control


THORNTON TOMASETTI


THORNTON TOMASETTI


THORNTON TOMASETTI

Thornton Tomasetti

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: GSD2400000002

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

- ☑ Addendum No. 1
- ☐ Addendum No. 2
- ☐ Addendum No. 3
- ☐ Addendum No. 4
- ☐ Addendum No. 5
- ☐ Addendum No. 6
- ☐ Addendum No. 7
- ☐ Addendum No. 8
- ☐ Addendum No. 9
- ☐ Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Gensler
Company

Authorized Signature

11/14/2023
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

Revised 11/1/2022

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder:	1274101	Reason for Modification:
Doc Description:	EOI: New Consolidated State Laboratory Facility Project	Addendum No.1
Proc Type:	Central Contract - Fixed Amt	

Date Issued	Solicitation Closes	Solicitation No	Version
2023-11-07	2023-11-14 13:30	CEOI 0211 GSD2400000002	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code: VS0000044357
Vendor Name : Gensler
Address :
Street : 1 East Pratt Street, Suite 202
City : Baltimore
State : Maryland **Country :** USA **Zip :** 21202
Principal Contact : Jim Dechant
Vendor Contact Phone: +1 (410) 230-3046 **Extension:**

FOR INFORMATION CONTACT THE BUYER
Melissa Pettrey
(304) 558-0094
melissa.k.pettrey@wv.gov

Vendor Signature X **FEIN#** **DATE** 11.14.2023

All offers subject to all terms and conditions contained in this solicitation

Date Printed: Nov 7, 2023 **Page:** 1 FORM ID: WV-PRC-CEOI-002 2020/05

ADDITIONAL INFORMATION

Addendum No. 1 is issued to publish and distribute the attached information to the vendor community.
****

CEOI
Expression of Interest

The Acquisitions and Contract Administration Section of the Purchasing Division ("Purchasing Division") is soliciting Expression(s) of Interest ("EOI" or "Bids") for WV Department of Administration, General Services Division ("Agency"), from qualified firms to provide architectural/engineering services ("Vendors") for
the full design and construction administration services to construct a new Consolidated State Laboratory Facility to co-locate six (6) State of West Virginia agencies' laboratory facilities into a single, newly constructed building per the bid requirements, specifications and terms and conditions as attached herein.

INVOICE TO	SHIP TO
DEPARTMENT OF ADMINISTRATION GENERAL SERVICES DIVISION 103 MICHIGAN AVENUE CHARLESTON WV 25305 US	STATE OF WEST VIRGINIA JOBSITE - SEE SPECIFICATIONS No City WV 99999 US

Line	Comm Ln Desc	Qty	Unit Issue
1	EOI: New Consolidated State Laboratory Facility Project		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description:
EOI: New Consolidated State Laboratory Facility Project

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Vendor question deadline by 3:00 PM	2023-11-01

	Document Phase	Document Description	Page 3
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions