



AIA[®] Document B104[™] – 2017

Standard Abbreviated Form of Agreement Between Owner and Architect

AGREEMENT made as of the 5TH day of NOVEMBER
in the year 2021
(In words, indicate day, month and year.)

BETWEEN the Architect's client identified as the Owner:

(Name, legal status, address and other information)

TOWN OF WILTON

238 DANBURY ROAD

WILTON, CT 06897

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

and the Architect:

(Name, legal status, address and other information)

CARDINAL ENGINEERING ASSOCIATES, INC.

180 RESEARCH PARKWAY

MERIDEN, CT 06450

for the following Project:

(Name, location and detailed description)

MUSKET RIDGE ROAD CULVERT REPLACEMENT

MUSKET RIDGE ROAD, WILTON, CONNECTICUT

SPECIAL NOTE: Cardinal Engineering Associates, Inc. is a civil engineering firm, not an architectural firm. Accordingly, wherever in this Agreement, the word "Architect" appears, it shall be deleted and replaced with the word "Engineer".

The Owner and Architect agree as follows.

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ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth below:

(State below details of the Project's site and program, Owner's contractors and consultants, Architect's consultants, Owner's budget for the Cost of the Work, and other information relevant to the Project.)

REPLACEMENT OF MUSKET RIDGE ROAD CULVERT

§ 1.2 The Owner and Architect may rely on the Initial Information. Both parties, however, recognize that such information may materially change and, in that event, the Owner and the Architect shall appropriately adjust the schedule, 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, 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.

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civil engineers

ARTICLE 2 ARCHITECT'S RESPONSIBILITIES

§ 2.1 The Architect shall provide the professional services set forth in this Agreement consistent with the professional skill and care ordinarily provided by ~~architects~~ practicing in the same or similar locality under the same or similar circumstances. The Architect shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project.

§ 2.2 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 11.8:

(Identify types and limits of insurance coverage, and other insurance requirements applicable to the Agreement, if any.)

- .1 General Liability
- .2 Automobile Liability
- .3 Workers' Compensation
- .4 Professional Liability

ARTICLE 3 SCOPE OF ARCHITECT'S BASIC SERVICES

engineering, § 3.1 The Architect's Basic Services consist of those described in this Article 3 and include usual and customary civil 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 coordinate its services with those services provided by the Owner and the Owner's consultants. The Architect shall be entitled to rely on (1) the accuracy and completeness of the services and information furnished by the Owner and (2) the Owner's approvals. 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.

§ 3.1.2 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. 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.

§ 3.1.3 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 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.

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§ 3.2.2 The Architect shall discuss with the Owner the Owner's program, schedule, budget for the Cost of the Work, Project site, and alternative approaches to design and construction of the Project. The Architect shall reach an understanding with the Owner regarding the Project requirements.

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

§ 3.2.4 Based on the Project requirements, the Architect shall prepare Design Documents for the Owner's approval consisting of drawings and other documents appropriate for the Project and the Architect shall prepare and submit to the Owner an estimate of the Cost of the Work prepared in accordance with Section 6.3.

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

§ 3.3 Construction Documents Phase Services

§ 3.3.1 Based on the Owner's approval of the Design Documents, the Architect shall prepare for the Owner's approval Construction Documents consisting of Drawings and Specifications setting forth in detail the requirements for the construction of the Work. The Owner and Architect acknowledge that in order to construct 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 3.4.4.

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

§ 3.3.3 The Architect shall submit the Construction Documents to the Owner, update the estimate for the Cost of the Work and 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.

§ 3.3.4 The Architect, following the Owner's approval of the Construction Documents and of the latest estimate of the Cost of the Work, shall assist the Owner in obtaining bids or proposals and awarding and preparing contracts for construction.

§ 3.4 Construction Phase Services

§ 3.4.1 General

§ 3.4.1.1 The Architect shall provide administration of the Contract between the Owner and the Contractor as set forth below and in AIA Document A104™-2017, Standard Abbreviated Form of Agreement Between Owner and Contractor. If the Owner and Contractor modify AIA Document A104-2017, those modifications shall not affect the Architect's services under this Agreement unless the Owner and the Architect amend this Agreement.

§ 3.4.1.2 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.

§ 3.4.1.3 Subject to Section 4.2, 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.

§ 3.4.2 Evaluations of the Work

§ 3.4.2.1 The Architect shall visit the site at intervals appropriate to the stage of construction, or as otherwise required in Section 4.2.2, 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.

§ 3.4.2.2 The Architect has the authority to reject Work that does not conform to the Contract Documents and has the authority to require inspection or testing of the Work.

§ 3.4.2.3 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.

§ 3.4.2.4 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.

§ 3.4.2.5 The Architect shall render initial decisions on Claims between the Owner and Contractor as provided in the Contract Documents.

§ 3.4.3 Certificates for Payment to Contractor

§ 3.4.3.1 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 3.4.2 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.

§ 3.4.3.2 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.

§ 3.4.4 Submittals

§ 3.4.4.1 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 any construction means, methods, techniques, sequences or procedures.

§ 3.4.4.2 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 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.

§ 3.4.4.3 The Architect shall review and respond to written requests for information about the Contract Documents. The Architect's response to such requests shall be made in writing within any time limits agreed upon, or otherwise with reasonable promptness.

§ 3.4.5 Changes in the Work

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 4.2.3, the

Architect shall prepare Change Orders and Construction Change Directives for the Owner's approval and execution in accordance with the Contract Documents.

§ 3.4.6 Project Completion

The Architect shall conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion; 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 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.

ARTICLE 4 SUPPLEMENTAL AND ADDITIONAL SERVICES

§ 4.1 Supplemental Services are not included in Basic Services but may be required for the Project. The Architect shall provide the Supplemental Services indicated below, and the Owner shall compensate the Architect as provided in Section 11.2. Supplemental Services may include programming, site evaluation and planning, environmental studies, civil engineering, landscape design, telecommunications/data, security, measured drawings of existing conditions, coordination of separate contractors or independent consultants, detailed cost estimates, on-site project representation beyond requirements of Section 4.2.2, value analysis, interior architectural design, tenant related services, preparation of record drawings, commissioning, sustainable project services, and any other services not otherwise included in this Agreement. *(Identify below the Supplemental Services that the Architect is required to provide and insert a description of each Supplemental Service, if not further described in an exhibit attached to this document.)*

§ 4.2 The Architect may provide Additional Services after execution of this Agreement without invalidating the Agreement. Upon recognizing the need to perform Additional Services, the Architect shall notify the Owner. The Architect shall not provide the Additional Services until the Architect receives the Owner's written authorization. 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.

§ 4.2.1 The Architect shall provide services necessitated by a change in the Initial Information, changes in 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 as an Additional Service

§ 4.2.2 The Architect has included in Basic Services () visits to the site by the Architect during construction. The Architect shall conduct site visits in excess of that amount as an Additional Service.

§ 4.2.3 The Architect shall, as an Additional Service, provide services made necessary by a Contractor's proposed change in the Work. The Architect shall prepare revisions to the Architect's Instruments of Service necessitated by Change Orders and Construction Change Directives as an Additional Service.

§ 4.2.4 If the services covered by this Agreement have not been completed within TWENTY FOUR (24) 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.

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§ 5.3 The Owner shall furnish surveys to describe physical characteristics, legal limitations and utility locations for the site of the Project; a written legal description of the site; and services of geotechnical engineers or other consultants, when the Architect requests such services and demonstrates that they are reasonably required by the scope of the Project.

§ 5.4 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 require that its consultants and contractors maintain insurance, including professional liability insurance, as appropriate to the services or work provided.

§ 5.5 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.

§ 5.6 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.

§ 5.7 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.

§ 5.8 The Owner shall endeavor to communicate with the Contractor through the Architect about matters arising out of or relating to the Contract Documents.

§ 5.9 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.

§ 5.10 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 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 Architect shall be permitted to include contingencies for design, bidding and price escalation; to determine what materials, equipment, component systems and types of construction are to be included in the Contract Documents; to recommend reasonable adjustments in the program and scope of the Project; and to include design alternates as may be necessary to adjust the estimated Cost of the Work to meet the Owner's budget. The Architect's estimate of the Cost of the Work shall be based on current area, volume or similar conceptual estimating techniques. If the Owner requires a 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, as a Supplemental Service.

§ 6.4 If, through no fault of the Architect, construction procurement activities have 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 estimate of the Cost of the Work 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.

§ 6.6 If the Owner's current budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services is exceeded by 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 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 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 the Architect's services 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 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 sums when 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.

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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 A104–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor. 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 9.6.

§ 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 Mediation, 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. 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.

§ 8.2.3 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.)

- ☐ 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 the Agreement.

§ 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,

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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 In the event of termination not the fault of the Architect, the Architect shall be compensated for services performed prior to termination, Reimbursable Expenses incurred, and all 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.

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 A104–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor.

§ 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 or consents, the proposed language of such certificates or consents shall be submitted to the Architect for review at least 14 days prior to the requested dates of 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 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. However, the Architect's materials shall not include information the Owner has identified in writing as 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 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.

Init.

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)

\$72,000.00

PAGES 8 AND 9

~~\$69,500.00~~ FOR DESIGN PHASE, AS BROKEN DOWN ON ~~PAGE 8~~ OF ENGINEER'S PROPOSAL

- .2 Percentage Basis
(Insert percentage value)

percent (%) 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)

THE STIPULATED SUM DOES NOT INCLUDE THE DIRECT COST ITEMS INDICATED ON
PAGE 9 OF THE ENGINEER'S PROPOSAL.

§ 11.2 For Supplemental Services identified in Section 4.1, 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.)

TO BE DETERMINED BY MUTUAL AGREEMENT UPON COMPLETION OF THE DESIGN PHASE

§ 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.)

TO BE DETERMINED BY MUTUAL AGREEMENT UPON COMPLETION OF THE DESIGN PHASE

§ 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 ZERO percent
(0 %), or as follows:

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

Design Phase	percent (%)
Construction Documents 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, if any, 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
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§ 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 Expense of professional liability insurance dedicated exclusively to this Project or the expense of additional insurance coverage or limits requested by the Owner in excess of that normally maintained by the Architect and the Architect's consultants;
- .9 All taxes levied on professional services and on reimbursable expenses;
- .10 Site office expenses; and
- .11 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 ZERO percent (0 %) of the expenses incurred.

§ 11.9 Payments to the Architect

§ 11.9.1 Initial Payment

An initial payment of
ZERO DOLLARS

(\$ 0.00) 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.

§ 11.9.2 Progress Payments

§ 11.9.2.1 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

(1) 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.)

%

§ 11.9.2.2 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.

§ 11.9.2.3 Records of Reimbursable Expenses, expenses pertaining to 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.

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

- .1 AIA Document B104™-2017, Standard Abbreviated Form of 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:
(Clearly identify any other exhibits incorporated into this Agreement, including any exhibits identified in Section 4.1.)

EXHIBIT A (ENGINEER'S PROPOSAL)

- .4 Other documents:
(List other documents, if any, including additional scopes of service forming part of the Agreement.)

RIDER TO AIA DOCUMENT B104

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

OWNER (Signature)

LYNNE VANDERSLICE, FIRST SELECTWOMAN

(Printed name and title)

ARCHITECT (Signature)

Joseph Cerrada #, PRINCIPAL

(Printed name, title, and license number, if required)

Init.

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RIDER TO
AIA DOCUMENT B104-2017 STANDARD ABBREVIATED FORM OF AGREEMENT
BETWEEN
TOWN OF WILTON (OWNER)
AND
CARDINAL ENGINEERING ASSOCIATES (ENGINEER)
DATED NOVEMBER 5, 2021
PROJECT: MUSKET RIDGE ROAD CULVERT REPLACEMENT

The following provisions are incorporated into the above-referenced Agreement. Except as specifically indicated below, all capitalized words and phrases shall have the meanings ascribed to them in the Agreement.

1. *Section 2.2 is deleted in its entirety and replaced with the following:* The Engineer shall, at its own expense and cost, obtain and keep in force during the entire duration of the Agreement the following insurance coverages covering the Engineer and all of its agents, employees, consultants and other providers of all or part of the Services and shall name the Owner as Additional Insured on a primary and non-contributory basis to the Engineer's Commercial General Liability insurance policy. All insurance coverages shall be purchased from a company or companies with an A.M./Best rating of A-(VII) or better. Minimum limits and requirements are as follows.
 1. Workers' Compensation:
 - a. Statutory Coverage.
 - b. Employer's Liability.
 - c. \$500,000 each accident/\$500,000 disease-policy limit/\$100,000 disease each employee.
 2. Commercial General Liability:
 - a. Including Premises & Operations, Products and Completed Operations, Personal and Advertising Injury, Contractual Liability and Independent Contractors.
 - b. Limits of Liability for Bodily Injury and Building Damage

- i. Each Occurrence \$1,000,000.
 - ii. Aggregate \$2,000,000 (The Aggregate Limit shall apply separately to each Project).
 - c. A Waiver of Subrogation shall be provided.
 - 3. Automobile Insurance:
 - a. Including all owned, hired, borrowed and non-owned vehicles.
 - b. Limit of Liability for Bodily Injury and Building Damage:
 - i. Per Accident \$1,000,000.
 - 4. Umbrella Liability:
 - a. Umbrella or excess liability policy in excess (without restriction or limitation) of those limits and coverages for commercial general liability and automobile insurance described above. Such policy shall contain limits of liability in the amount of \$2,000,000 each occurrence and \$2,000,000 in the aggregate.
 - 5. Errors and Omissions Liability or Professional Services Liability:
 - a. Provide Errors and Omissions Liability or Professional Services Liability Policy for a minimum Limit of Liability \$2,000,000 each occurrence or per claim.
 - b. The Engineer agrees to maintain continuous professional liability coverage for the entire duration of this Project and for seven (7) years beyond substantial completion of the Project. If the Engineer does not maintain continuous coverage, the Engineer shall provide for an Extended Reporting Period in which to report claims for seven (7) years following the conclusion of the Project.
2. *The following is inserted as new **Section 2.3**:* The insurance policies described in Section 2.2 are referred to herein as the “Policies”. Each of the Policies shall be underwritten by an insurance company licensed in the State of Connecticut to underwrite that particular form of insurance. Upon execution of this Agreement and, upon request of the Owner, at every date for renewal of the Policies, the Engineer shall cause a Certificate of Insurance to be issued by an insurance agent licensed in the State of Connecticut. The Commercial General Liability and Automobile Insurance policies shall incorporate a provision requiring written notice to the Owner at least thirty (30) days prior to any cancellation, nonrenewal or reduction in limits of the Policy.
3. *The following is inserted as new **Section 2.4**:* Except to the extent otherwise specifically authorized by the Owner in writing, the Engineer shall ensure that all consultants engaged or employed by the Engineer shall carry and maintain insurance in form and coverage amount consistent with the Policies. With respect to the insurance maintained by the Engineer’s consultants, upon execution of this Agreement and, upon request of the Owner, at every date for renewal of the Policies, the Engineer shall cause a Certificate of Insurance to be issued by an insurance agent licensed in the State of Connecticut. The

certificates will show the Owner as an additional insured. The Commercial General Liability and Automobile Insurance policies shall incorporate a provision requiring written notice to the Owner at least thirty (30) days prior to any cancellation, nonrenewal or reduction in limits of the Policy.

4. *The following is inserted as new **Section 2.5**:* The Engineer shall designate a professional licensed in Connecticut to perform the Basic Services as Engineer's designated representative for the Project. The professional so appointed shall be Owner's primary point of contact with respect to the Project. Engineer's designated representative will not be changed without the Owner's written consent, which consent shall not be unreasonably withheld. If the Engineer engages the services of any consultant with the Owner's approval, the Engineer shall not change or replace the consultant without the Owner's written consent, which consent shall not be unreasonably withheld.
5. *The first two sentences of **Section 3.4.2.1** are deleted in their entirety.*
6. *The following is inserted as new **Section 3.4.7**:* If requested by the Owner, within two (2) months after the date of Substantial Completion, the Engineer shall deliver to the Owner a complete set of As-Built Plans for the Project.
7. ***Section 4.2.2** is deleted in its entirety.*
8. *In the first sentence of **Section 7.3**, the words "renovating" and "repairing" are added to the list of permitted purposes.*
9. ***Section 7.3.1** is deleted in its entirety and replaced with the following:* If the Owner uses the Instruments of Service without retaining the author of the Instruments of Service, the Owner releases the Engineer and the Engineer's consultant(s) from all claims and causes of action arising from such uses except for claims and causes of action based on the Engineer's negligence in preparing the Instruments of Service. The terms of this **Section 7.3.1** shall not apply if the Owner rightfully terminates this Agreement for cause under **Section 9.4**.
10. *The third sentence of **Section 7.4** is deleted in its entirety and replaced with the following:* Any unauthorized use of the Instruments of Service shall be at the Owner's sole risk and without liability to the Engineer and the Engineer's consultants except for claims and causes of action based on the negligence of the Engineer or the Engineer's consultants in preparing the Instruments of Service.
11. *The following is inserted as new **Section 8.1.4**:* To the fullest extent permitted by law, the Engineer shall indemnify and hold harmless the Owner, its elected and appointed officials and employees from and against claims, damages, losses and expenses, including, without limitation, attorneys' fees, expert witness fees and court costs, arising out of or resulting from the performance of the Engineer's services, including, without limitation, the failure to comply with applicable statutes, codes and regulations in the preparation of the Design Documents and Construction Documents, to the extent caused

in whole or in part by negligent acts or omissions of the Engineer, a consultant hired or retained by the Engineer or anyone directly or indirectly employed by them.

12. *The following is inserted at the end of Section 11.8.2:* Except for the items indicated under the heading DIRECT COST ITEMS on Page 9 of the Engineer's Proposal (the "Direct Cost Items"), the total of Reimbursable Expenses shall not exceed \$500.00 without the prior written approval of the Owner. For the avoidance of doubt, the Direct Cost Items will be in addition to (not included in) the Stipulated Sum indicated in **Section 11.1.1**.
13. *The third sentence of Section 11.9.2.1 is deleted in its entirety and replaced with the following:* Amounts unpaid thirty (30) days after presentation to the Owner's Finance Department with all required approvals shall bear interest at the Prime Rate, as published in the Wall Street Journal.
14. *The following is inserted as Section 12.1: Counterparts and Electronic Signatures.* This Agreement and the Rider may be executed in one or more counterparts, each of which will be deemed to be an original and all of which, when taken together, will be deemed to constitute one and the same agreement. The exchange of copies of the Agreement and Rider and of signature pages by facsimile transmission, Portable Document Format (i.e., PDF), or by other electronic means shall constitute effective execution and delivery of the Agreement and Rider as to the parties and may be used in lieu of the original Agreement and Rider for all purposes.
15. *The following is inserted as new Section 13.3:* The documents listed in **Section 13.2** (the "**Component Documents**") are complimentary, and what is required by one shall be as binding as if required by all; performance by Engineer shall be required only to the extent consistent with the Component Documents and reasonably inferable from them as being necessary to produce the indicated results. In the event of conflicts or discrepancies among the Component Documents, interpretations will be based on the following priorities:
 1. Rider to AIA Document B104.
 2. Agreement.
 3. Exhibit A (Engineer's Proposal).

{This space intentionally left blank. The next page is the signature page.}

OWNER
TOWN OF WILTON

(Signature)

(Printed Name and Title)

ENGINEER
CARDINAL ENGINEERING ASSOCIATES, INC.


(Signature)


(Printed Name and Title)

{Signature page to Rider to AIA Document B104}

**EXHIBIT A TO AIA DOCUMENT B104
BETWEEN TOWN OF NEW CANAAN (OWNER) AND
CARDINAL ENGINEERING ASSOCIATES, INC.
{THIS EXHIBIT CONSISTS OF NINE PAGES}**

PROPOSAL

**ENGINEERING SERVICES FOR
REPLACEMENT OF MUSKET RIDGE ROAD CULVERT
WILTON, CONNECTICUT**

January 5, 2021

SCOPE OF SERVICES

PROJECT UNDERSTANDING AND APPROACH

This project consists of the replacement of Musket Ridge Road Culvert. The assumed structure type is a precast concrete box culvert. The existing roadway will be reconstructed for a length of approximately 50-linear feet on either side of the structures as required. Construction of this project will be funded under the State Local Bridge Program. Design will be in accordance with the Town of Wilton and Connecticut Department of Transportation design standards. It is assumed that the roadway at the bridge location will be closed during construction and traffic will be detoured.

DESCRIPTION OF SERVICES

PHASE I PRELIMINARY DESIGN PHASE

Task 1. Survey and Base Mapping

Cardinal Engineering will provide a topographic survey of the area 150' north and south of the culvert along Musket Ridge Road and 50' each side of the roadway pavement. The tree line, pavement, guide rail, culvert, channel and pertinent features will be located. Horizontal and vertical datum will be NAVD88. Street line and property lines will be obtained from the Assessor's maps. The plans will be plotted at a scale of 1"=20' horizontal and 1"=2' vertical.

Task 2. Design

Preliminary design will culminate in the submittal of a 30% design package consisting of 1" = 20' scale preliminary roadway design drawing and 1" = 20' scale structure design

drawings, outlining the layout and general conditions for the preferred roadway alignment and proposed structure. The 30% design package will be submitted to the Town and DOT in accordance with the requirements of the State Local Bridge Program. The 30% plans will also be submitted to the utility companies to verify that all existing utilities have been properly depicted on the plans and any conflicts or required relocations have been identified. It is assumed that any required utility relocations will be performed by the respective utility companies.

A. Hydrology

The drainage area to the Musket Ridge Road Bridge is 1.1 square miles. The 2- to 500-year design discharges will be computed using the NRCS TR-55 method. Cardinal will verify that the TR-55 method applies to this project and the precipitation data from NOAA's Atlas 14 will be used, as recommended by ConnDOT Engineering Bulletin EB-2015-2.

The January 2, 1992 Flood Insurance Study for the Town of Wilton shows that the project area is located in a FEMA Zone AE (Special Flood Hazard Areas subject to inundation by the 1% annual chance flood – no base flood elevations determined). There are no flow computations shown in the Flood Insurance Study for the Musket Ridge Brook. A summary report presenting the results of the hydrologic analysis will be submitted to the Town. Any written comments will be included in the final Hydrology and Hydraulic Report.

B. Hydraulics

There is no detailed hydraulic study of the Musket Ridge Brook. Cardinal Engineering will design the proposed structure using the HY-8 computer model based on the surveyed culvert, roadway, upstream and downstream cross sections. The design flow is the 100-year discharge and the check flow is the 500-year flood.

A hydraulic analysis of the existing and proposed conditions will be necessary for this project. There is no FEMA hydraulic model for this bridge. Cardinal will use the surveyed cross sections and the existing bridge to build the Existing Conditions model. The proposed bridge will be introduced in the hydraulic model to verify that it meets the DOT and FEMA conditions.

A brief hydraulic report summarizing the analysis and recommendations will be prepared.

C. Roadway Design

The roadway will be reconstructed within the limits necessary to construct the new bridge. No roadway drainage improvements are included in the proposed scope nor are any anticipated in the design. The roadway to match the existing.

Prepare plan and profile of the proposed horizontal and vertical alignment, including centerline geometry, pavement transitions, guide railing and cut and fill lines will be developed. A typical roadway section and a preliminary estimate of the construction quantities and cost will be developed for the roadway.

D. Structure Design

The bridge width, face of curb to face of curb, shall match the existing roadway width or shall be as determined by the Town of Wilton and provided to Cardinal Engineering Associates.

The preliminary design of the bridge replacement will include the preparation of the 30 percent structural plans. The designer will coordinate the design activities with the Town of Wilton. Standard Connecticut Department of Transportation Details and Town of Wilton Standard Details will be incorporated if applicable.

The structural design of the proposed box culvert assumes the use of precast elements for the substructure such as cutoff walls, return walls and wingwall footings in order to minimize the construction duration.

The structural plans will show the proposed geometric layout, bridge cross-section, bridge elevation and proposed grading. It is assumed that standard construction methods and procedures will be sufficient and no unusual foundation designs will be required. Included with the preliminary design submission will be a preliminary construction cost estimate.

E. Public Information Meeting

Cardinal Engineering will prepare visual aids and will make a presentation of the project at one meeting which will address the proposed construction of Musket Ridge culvert replacement. At the meeting, details of the proposed improvements and the expected project schedule will be described. Any comments or suggestions, which result from this meeting, will be evaluated and considered throughout the completion of all design phases.

PHASE 2 ENVIRONMENTAL PERMITTING

It is assumed that the following regulatory approvals will be required:

A. Local Inland Wetland Permit

Cardinal Engineering will retain the services of a certified soil scientist to delineate State and Federal wetland boundaries which will be field located, plotted and used during the design phase. It is anticipated that wetland functions and values evaluations will be required for an ACOE PCN (Pre-Construction Notification) permit. The costs of the wetlands

delineation and evaluation are included as a direct cost in this proposal.

When the plans are approximately 60% complete, Cardinal Engineering Associates will prepare the permit and provide one set of plans for the Town of Wilton to submit the application to the Inland Wetland Commission. Cardinal will attend one IWC meeting. Any concerns brought up by the Commission will be addressed and incorporated into the design as necessary.

B. U.S. ACOE Pre-construction Notification (PCN) Application

It is assumed that this project will require a PCN Application (Category II) due to the size of the drainage area and the assumed structure type being a concrete box culvert with natural infill bottom. It is also assumed that the project will be presented at the monthly DOT-DEEP-ACOE Managers' Meeting in order to qualify for the PCN Permit.

C. CTDEEP 401 Water Quality Certificate

In conjunction with Item B above Cardinal Engineering will coordinate the proposed design with CTDEEP and prepare an application for a CTDEEP 401 Water Quality Certificate. Fisheries, as necessary. This scope assumes no special design considerations will be required.

An Environmental Review Request form and supporting documents will be submitted to the DOT. Also, the State Historic Preservation Office (SHPO) and the two Tribal Historic Preservation Offices in Connecticut (THPO) will be contacted.

PHASE 3 FINAL DESIGN

After approval of the Preliminary Design Submittal, Cardinal Engineering will begin the Final Design. The two copies of the final plans, specifications and cost estimates will be provided for review by the Town.

A. ROADWAY

The final design phase of the roadway design will include incorporation of any review comments and further development of the plans, specifications and details. The coordinated geometry for the horizontal layout will be calculated. The design of the guide railing, erosion control devices, pavement structure, and signing will be completed. Cross sections along the proposed roadway at 50-foot intervals and at critical locations will be developed. Final construction cost and quantity estimates for the project will be developed. It is assumed that the roadway geometry is adequate.

B. STRUCTURE

The final design phase of the structure design will proceed upon approval of the 30 percent plans. During this phase, a complete set of plans, specifications, and estimate will be developed. Formal design submissions will include the following.

- a. Completion of the design of major structural components.
- b. Coordination with the highway design in finalizing roadway vertical geometry, drainage requirements and right-of-way impacts to adjacent properties.

C. WATER HANDLING

Cardinal will provide information in the plans and specifications including construction staging plans showing the proposed use of water handling devices, such as cofferdams, in the project area which will be necessary for the construction of the proposed improvements.

D. MAINTENANCE AND PROTECTION OF TRAFFIC

A maintenance and protection of traffic plan will be developed for the bridge replacement. This plan will be based on staged construction to maintain one-way alternating traffic during construction. The plan will include a layout plan and all the required barricades and signage in accordance with the MUTCD.

E. UTILITIES COORDINATION

Project information will be distributed to all utility companies affected by the proposed activities, if applicable. A meeting with the utility companies will be held at the beginning of the Final Design to ensure that all existing utilities within the project area and any utility relocations required as a result of the proposed improvements have been identified. A report of meeting will be prepared. Utility test pits, if required, and the design of temporary utility support or utility relocations shall be provided by the utility companies. The utility relocation plans and specifications, prepared by the respective utility company, will be reviewed and inserted into the final construction plans for informational purposes.

F. MEETINGS

Attend two (2) meetings with town staff during design.

PHASE 4 FINAL DESIGN SUBMISSION

Cardinal Engineering will prepare bid documents for the project that will include:

Information to Bidders, Forms, Bid Proposal Forms, General Conditions and Technical Specifications. The technical specifications will consist of the CTDOT Standard Form 817 and required Special Provisions. Two copies of final plans and bid documents will be provided to the Town at the completion of the Final Design.

Incorporate all review comments and submit two copies of the Final Design Submittal (Plans, Contract Document, Specifications, and Estimate) to the Town. An electronic copy will be provided to a printing company for contractors to directly purchase the Contract Documents.

Perform a load rating of the culvert which is required by Connecticut DOT as part of the supplemental application. This effort is only required if the Town receives state funding. If the Town of Wilton constructs this project with 100% Town funds then load rating is optional.

Cardinal will assist the Town in preparing the supplemental funding application and will prepare the final design package (final plans, final cost estimate, specifications, bid documents, hydraulic analyses and reports) and submit one copy to CTDOT along with a supplemental funding application including municipal certifications.

PHASE 5 CONSTRUCTION PHASE

TASK 1 BIDDING AND AWARD SERVICES

Provide the Town with assistance throughout the bidding period, including answering contractor questions and issuing any required addenda. Cardinal will attend the pre-bid meeting, the bid opening, review and tabulate all bids received, review contractor qualifications, and make a recommendation of the lowest qualified bidder to the Town.

TASK 2 SHOP DRAWING REVIEW:

Review shop drawings and working drawings submitted by the contractor. It is assumed that a maximum of two reviews will be required for each submission.

TASK 3 CONSTRUCTION CONTRACT ADMINISTRATION

Upon the award of the construction contract pursuant to this Agreement, Cardinal Engineering Associates, Inc. shall provide the following Construction Contract Administration Services:

1. Furnish consultation and advice during construction. This shall include, but not be limited to, the following:

- Conduct preconstruction conference.
 - Analysis and review of job problems.
 - Preparation of change orders.
2. Direction of the field engineering and inspection work.
 3. Check and approve or reject of shop and working drawings prepared by the construction contractor.
 4. Advise on special engineering construction problems that may arise during construction.
 5. Review of progress schedules and review, approval or rejection of Applications for Progress Payments made by the construction contractor. All progress payments to the contractor during the course of the job shall be certified for payment by Cardinal Engineering Associates.
 6. Make final inspection and prepare a written report that the completed work is acceptable and in substantial conformance with the requirements of the construction contract.

TASK 4 PROJECT REPRESENTATIVE SERVICES

Upon the award of any construction contract pursuant to this Agreement, Cardinal Engineering Associates shall provide a Resident Project Representative on a Part-Time Basis. Project Representative Services shall include the following:

1. On-site observation of the work during critical stages of construction as a basis for determining that the project is proceeding in accordance with the contract documents.
2. Carry out field inspections as required and review the field layout of all construction to assure proper location in accordance with construction contract plans and specifications.
3. Direction of field tests performed by outside testing companies. Testing will be included in the construction contract.
4. Obtain data and maintain records necessary to check contractor's requisitions for payment.
5. Prepare daily inspection reports for the days that the inspector is at the site.
6. Prepare as-built plans.
7. Carry out field inspections as required and review the field layout of all construction to assure proper location in accordance with construction contract plans and specifications.

The Inspector shall coordinate the inspection schedule with the Contractor to provide inspection services at specific critical phases of the project as agreed to with the Town of Wilton but are assumed to include:

1. Completion of all sedimentation and erosion control devices prior to the removal of the existing superstructure.
2. Completion of the water handling and construction of cofferdam after the removal of the existing superstructure.
3. Inspection of subgrade prior to installation of bridge foundation.
4. Setting the precast concrete foundation elements.
5. Setting the precast concrete box culverts.
6. Inspection of backfill and subbase material.
7. Setting roadway layout and grades.
8. Placement of riprap and other stream improvements as required.
9. Final Inspection of bridge and approach roadway including any required guiderail.

COMPENSATION

The following is a breakdown of the fee estimate:

PHASE 1 PRELIMINARY DESIGN

For all services under this Section, the Lump Sum Fee	\$ 32,500.00
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PHASE 2 ENVIRONMENTAL PERMITTING

For all services under this Section, the Lump Sum Fee of	\$ 9,000.00
----------------------------------------------------------	-------------

PHASE 3 FINAL DESIGN

For all services under this Section, the Lump Sum Fee of	\$ 20,000.00
----------------------------------------------------------	--------------

PHASE 4 FINAL DESIGN SUBMISSION

For all services under this Section, the Lump Sum Fee of	\$ 10,500.00
Deduct for Load Rating	(\$ 5,500.00)

PHASE 5 CONSTRUCTION

For all services under this Section, the Lump Sum Fee of	TBD
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TOTAL DESIGN FEE:

\$ 72,000.00*

*With load Rating

DIRECT COST ITEMS (ESTIMATES)

▪ Printing	\$ 1,000.00
▪ Wetlands Identification / Reporting	\$ 2,500.00
▪ Geotechnical (Drilling and Report)	\$ 5,500.00

Assumptions:

1. It is assumed that the culvert will be replaced with a precast concrete box culvert.
2. It is assumed that easements are not required.
3. It is assumed that this bridge is eligible for an ACOE PCN permit.