

ENGINEERED  
SOLUTIONS



LAND  
STRUCTURES  
WATER

July 8, 2014

Mr. Jim Giuliano  
Senior Project Manager  
East Hampton Town Hall  
20 East High Street  
East Hampton, CT 06424

54940000 - 5340 - 93766

**RE: Independent Structural Engineering Review for East Hampton High School  
Additions & Renovations; State Project: #042-0041 EA/RR  
DTC Proposal No. 14 228 000**

Dear Mr. Giuliano:

Please find attached our proposed contract for the East Hampton High School Additions & Renovations.

On behalf of all of us at DTC, I look forward to the opportunity to support the Town of East Hampton with this contract.

Sincerely,

A. Graham Curtis, PE, LEED® AP  
Chief Operating Officer

**Diversified Technology Consultants, Inc.**

Encl: Terms & Conditions / RFP

*Information contained in this document is proprietary and confidential and may not be disseminated to any party other than the intended recipient without the written consent of Diversified Technology Consultants.*

2321 WHITNEY AVENUE SUITE 301 HAMDEN CT 06518

203 239 4200 PH 203 234 7376 FAX

Mr. Jim Giuliano  
July 8, 2014  
Page 2 of 2

## SCOPE OF WORK

The scope of work shall be in accordance with the attached RFP dated June 9, 2014.

## FEE

DTC's fee for the Independent Structural Engineering Review for East Hampton High School Additions & Renovations is Four Thousand Five Hundred Dollars (\$4,500).

The enclosed Terms & Conditions are part and parcel to this agreement.

We have enclosed two original proposals. We ask that a representative authorized to execute this proposal indicate authorization for DTC to proceed with the work as described by signing below and returning one original proposal to our office.

***The above proposal is offered and accepted and DTC is authorized to proceed.***

For *DIVERSIFIED TECHNOLOGY CONSULTANTS, INC.*



A. Graham Curtis, PE, LEED® AP  
Chief Operating Officer

Date: July 8, 2014

For *TOWN OF EAST HAMPTON*



Date: 7/11/14

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203 239 4200 Ph 203 234 7376 Fax

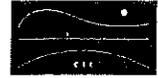
# DIVERSIFIED TECHNOLOGY CONSULTANTS, INC. (DTC)

## STANDARD TERMS AND CONDITIONS

FOR

**JANUARY 1, 2014 TO DECEMBER 31, 2014**

**Proposal for.: East Hampton HS**



### Terms and Conditions

#### 1. Billing and Payment Terms

As services are performed, invoices will be submitted monthly by the Consultant to the CLIENT, and are payable on receipt.

#### 2. Hourly Rate Fees for Professional Services

Hourly rate fees for professional services, when applicable, are based on the time worked on the project by company personnel in accordance with the attached Schedule A.

In the event of any increase of costs due to the granting of wage increases and/or other employee benefits to field or office employees due to the terms of any labor agreement, or rise in the cost of living, during the lifetime of this agreement, such percentage increase shall be applied to all remaining compensations as of each January 1<sup>st</sup>. This shall apply to any taxes, including but not limited to, sales tax, value added taxes and excise or gross receipts taxes that maybe imposed upon service provided.

#### 3. Payments to the Consultant

Payments to the Consultant shall not be withheld, postponed or made contingent on the construction, completion or success of the project or upon receipt by the CLIENT of offsetting reimbursement or credit from other parties who may have caused Additional Services or expenses. No withholdings, deductions or offsets shall be made from the Consultant's compensation for any reason unless the Consultant has been found to be legally liable for such amounts

#### 4. Reimbursable Expenses

The items of direct non-salary expenses will be billed as per the attached Schedule B, if applicable.

#### 5. Invoices

Invoices will be submitted once a month for services performed during the previous month unless alternate payment schedules are agreed upon in writing. Payment will be due upon receipt of the invoice. Interest will be added to accounts in arrears at the rate of one (1.0) percent per month (12% per annum) or the maximum rate allowed by law, whichever is less, of the outstanding balance. In the event of termination for overdue payments, reimbursement for all court costs & reasonable attorneys' fees shall be provided. Final Payment for contracted services is due upon delivery of

the final work deliverable(s). The CLIENT herewith acknowledges DTC's right to withhold delivery of the final product(s) until final payment is rendered.

#### 6. Suspension of Services

If the CLIENT fails to make payments when due or otherwise, it is considered a breach of this Agreement. The Consultant may suspend performance of services upon 10 calendar days notice to the CLIENT. The Consultant shall have no liability whatsoever to the CLIENT for any costs or damages as a result of such suspension caused by any breach of this Agreement by the CLIENT. Upon payment in full by the CLIENT, the Consultant shall resume services under this Agreement, and the time schedule and compensation shall be equitably adjusted to compensate for the period of suspension plus any other reasonable time and expense necessary for the Consultant to resume performance.

#### 7. Termination of Services

If the CLIENT fails to make payment to the Consultant in accordance with the payment terms herein, this shall constitute a material breach of this Agreement and shall be cause for termination of this Agreement by the Consultant.

#### 8. Ownership of Documents

Ownership of Instruments of Service - The CLIENT acknowledges the Consultant's construction documents, including electronic files, as the work papers of the Consultant and the Consultant's instruments of professional service. Nevertheless, the final construction documents prepared under this Agreement shall become the property of the CLIENT upon completion of the services and payment in full of all monies due to the Consultant. The CLIENT shall not reuse or make any modification to the construction documents without the prior written authorization of the Consultant. The CLIENT agrees, to the fullest extent permitted by law, to defend, indemnify and hold harmless Consultant, its Officers, Directors, Employees and Sub-consultants (collectively, Consultant) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of the construction documents by the CLIENT or any person or entity that acquires or obtains the construction documents from or

**DIVERSIFIED TECHNOLOGY CONSULTANTS, INC. (DTC)**

**STANDARD TERMS AND CONDITIONS**

For



**JANUARY 1, 2014 TO DECEMBER 31, 2014**

through the CLIENT without the written authorization of the Consultant.

All reports, field data notes, laboratory test data, calculations, estimates, electronic files and other documents including, but not limited to, plans and specifications which we prepare as instruments of service shall remain the property of the Consultant. The CLIENT agrees that all instruments of service and other work furnished, which are not paid for, will be returned upon demand and will not be used for any purpose whatsoever.

Under no circumstances shall the transfer of ownership of the Consultant's drawings, specifications, electronic files or other instruments of service be deemed a sale by the Consultant, and the Consultant makes no warranties, either express or implied, of merchantability and fitness for any particular purpose, nor shall such transfer be construed or regarded as any waiver or other relinquishment of the Consultant's copyrights in any of the foregoing, full ownership of which shall remain with the Consultant, absent the Consultant's express prior written consent.

**9. Standard of Care**

In performing professional services, the Consultant will use that degree of care and skill ordinarily exercised, under similar circumstances by members of the profession practicing in the same or similar locality.

**10. Warranty of Authority to Sign**

The person signing this contract warrants he has authority to sign as, or on behalf of, the CLIENT. If such person does not have such authority, he agrees that he is personally liable for all breaches of this contract and that in any action against him for breach of such warranty, a reasonable attorney's fee shall be included in any judgment rendered.

**11. Amendment or Modification**

These STANDARD TERMS AND CONDITIONS, SCHEDULE A, SCHEDULE B, and other Attachments, when referenced in the Letter of Proposal, shall together with the Letter of Proposal constitute the entire understanding between the parties and may not be amended or modified except by instrument in writing signed by both parties.

**12. Changed Conditions**

The Client shall rely on the Design Professional's judgment as to the continued adequacy of this agreement in light of occurrences or discoveries that

were not originally contemplated by or known to the Design Professional. Should the Design Professional call for contract renegotiation, the Design Professional shall identify the changed conditions necessitating renegotiations and the Design Professional and the Client shall promptly and in good faith enter into renegotiation of this Agreement. If terms cannot be agreed to, the parties agree that either party has the absolute right to terminate this Agreement.

~~13. Limitation of Liability~~

~~For any damage or costs resulting from error, omission, or other professional negligence in the performance of our services, the liability of DTC to all claimants will be limited to an aggregate sum not to exceed the LoL or our fee for professional services as computed from the <sup>2</sup>nd paragraph of this Agreement, whichever is less.~~

~~DTC shall not be liable for damages resulting from the actions or in-actions of governmental agencies, governmental relations and non-governmental entities~~

**14. Dispute Resolution**

In the event of a dispute arising out of or relating to this Agreement or the services to be rendered hereunder, the CLIENT and DTC agree to attempt to resolve such disputes in the following manner:

First, the parties agree to attempt to resolve such disputes through direct negotiations between the appropriate representatives of each party.

Second, if such negotiations are not fully successful, the parties agree to attempt to resolve any remaining dispute by formal nonbinding mediation conducted in accordance with rules and procedures to be agreed upon by the parties.

The CLIENT and Consultant further agree to include a similar mediation provision in all Agreements with independent Contractors and Consultants retained for the Project and to require all independent Contractors and Consultants also to include a similar mediation provision in all Agreements with their Sub-contractors, Sub-consultants, Suppliers and Fabricators, thereby providing for mediation as the primary method for dispute resolution between the parties to all those Agreements.

Should all previous attempts to resolve disputed matters remain unresolved the parties agree to resolve same by submitting the matter to arbitration.

**END OF STANDARD TERMS AND CONDITIONS**



## REQUEST FOR PROPOSAL

for

Independent Structural Engineering Review  
for  
East Hampton High School Additions & Renovations

State Project: #042-0041 EA/RR

Issue date: June 9, 2014

Written Proposals Due: June 20, 2014, at 3:00 p.m.

QUESTIONS: Contact Jim Giuliano, Senior Project Manager, in writing by email at [jgiuliano@crec.org](mailto:jgiuliano@crec.org)  
No questions will be accepted after June 17, 2014 12:00 p.m.

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Independent Structural Engineering Review in the  
State of Connecticut

## I. INVITATION TO BID

The Capitol Region Education Council (CREC) on behalf of the East Hampton High School Building Committee is seeking to engage a Structural Engineering firm to perform an Independent Structural Engineering Review (ISER) for the East Hampton High School Additions & Renovations project located at 15 North Maple Street, East Hampton, Connecticut 06424

Proposals should be addressed to Jim Giuliano, Senior Project Manager, and delivered to:

East Hampton Town Hall  
20 East High Street  
East Hampton, CT 06424

**All proposals shall be delivered by: June 20, 2014, 11:00 a.m.**

## II. PROJECT DESCRIPTION - SCOPE OF SERVICE

The East Hampton High School additions and renovations project consists of 3 additions totaling approximately 28,121 square feet of single story load bearing masonry and structural steel framed areas and renovation as new to approximately 93,000 square feet of existing building. **The ISER review will be limited to the new gymnasium addition.** The architect and structural engineer is The SLAM Collaborative, 80 Glastonbury Boulevard, Glastonbury, CT

The design is in the construction documents phase with ISER review to begin June 30, 2014.

The construction budget is estimated at \$41,026,580

The documents may be made available in either CAD or REVIT format one copy of which will be provided to the successful respondent.

The ISER will be performed pursuant to CGS Section 29-276b and Section 106.1.5.1 of the CSBC, the successful respondent will provide an independent structural engineering review of the structural plans and design specifications of the proposed structure to determine compliance with the requirements of the CSBC. The review services shall be performed in accordance with the document entitled "Recommended Guidelines for Performing an Independent Structural Engineering Review in the State of Connecticut, Document SEC/CT 301-08 Approved and issued by the SEC Board of Directors 2008/07/08 Prepared by the

SEC/CT Threshold Review Committee, a copy of which is included in this RFP as Attachment A.

### III. WRITTEN PROPOSAL

**The written proposal is due June 20, 2014 11:00 AM.** Firms are required to submit three (2) copies of their proposal to the East Hampton Town Hall, 20 East High Street, East Hampton, CT 06424. Proposals are to be clearly identified with the title; **East Hampton High School Renovations & Additions Project 042-0041 EA/RR**  
**Attention: Jim Giuliano**

The proposal must be organized with the following sections:

**Company Information** – Please provide the following information:

- Name of Company and parent company if any.
- Address of principle office and office from which the project will be managed.
- Name, address and telephone number of the principle contact person to receive notifications and to reply to inquiries from CREC.
- Date established
- Legal form of ownership. If a corporation, where incorporated.

**Years of Service** – How many years have you been engaged in services you provide under your present name?

**Relevant Experience** – In this section provide descriptions of three similar projects for which you have provided ISER services. The description of each project should include pertinent information such as the project type and size.

**Experience of Key Personnel** – Provide a list of key personnel to be assigned to the project and a description of the work they will perform. Resumes of key personnel who will be directly involved with the project must be included and shall include at a minimum:

- Current job title, responsibilities, and type of work performed
- Educational background, academic degrees, and professional associations.
- Experience on projects similar to that described in this RFP.

**References** – List (3) three client references for projects similar to this project, include for each client:

- Name of Organization
- Amount of contract

- Date services provided (start and finish)
- Services your firm provided or are providing
- Owner (contact person), telephone number and address

#### **IV. SELECTION**

Selection will be made after an evaluation of the apparent low bidder's proposal on the basis of cost, and the proven ability of the respondent to meet the requirements of the RFP.

Neither CREC, The Town of East Hampton nor any of their respective officers, directors, employees or authorized agents shall be liable for any claims or damages resulting from the selection, non-selection or rejection of any proposal submitted in response to this RFP.

The Town of East Hampton reserves the right to accept and/or reject any or all proposals submitted for consideration to serve the best interests of the Town.

## V. INSURANCE REQUIREMENTS

	<b>Independent Contractor (Major projects or engagements)</b>
<b>Commercial General Liability</b>	<p>\$1,000,000 per occurrence/                  \$2,000,000 aggregate bodily injury/property damage                  The CGL policy must include coverage for:</p> <ul style="list-style-type: none"> <li>• Liability from premises and operations.</li> <li>• Liability from products or completed operations.</li> <li>• Liability from actions of independent contractors.</li> <li>• Liability assumed by contract.</li> </ul>
<b>Conditions</b>	<p><b>The Town of East Hampton must be named as “additional insured” on contractor’s CGL policy</b>                  with form CG 20 10 or CG 20 33, <i>and</i> CG 20 37.                  The Aggregate limit must apply per job.                  Products/completed operations must be carried for 2 years after completion of job/acceptance by owner.</p>
<b>Automobile Liability</b>	\$1,000,000 per accident for bodily injury/property damage, including hired & non-owned vehicles
<b>Workers' Compensation</b>	Statutory
<b>Employers Liability</b>	\$1,000,000 each accident
<b>Umbrella Liability</b>	\$5,000,000 Each occurrence \$5,000,000 Annual Aggregate

# **Recommended Guidelines for Performing an Independent Structural Engineering Review in the State of Connecticut®**

Document SEC/CT-301-08

*Approved and Issued by the SEC Board of Directors 2008/07/08*

Prepared by the SEC/CT Threshold Review Committee

Thomas A. DiBlasi, PE, SECB, Chairman  
Thomas Bronson, PE  
Patrick Conlon, PE  
Nic Cuoco, PE, SECB  
Whitney McNulty, PE, SECB  
Rohit Pradhan, PE, SECB  
Leonard Rozovsky, PE, SECB



**STRUCTURAL ENGINEERS COALITION**  
*a Coalition of the American Council of Engineering Companies of Connecticut*



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*of Connecticut*

**STRUCTURAL ENGINEERS COALITION**

**Recommended Guidelines for Performing an Independent  
Structural Engineering Review in the State of Connecticut**

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*of Connecticut*

## STRUCTURAL ENGINEERS COALITION

### Recommended Guidelines for Performing an Independent Structural Engineering Review in the State of Connecticut

#### I. Preface

A. These guidelines were prepared by the Threshold Review Committee of the Structural Engineers Coalition of American Council of Engineering Companies of Connecticut. It is the intent of the Structural Engineers Coalition that these guidelines will be used by:

- Independent Structural Engineering Consultants when identifying the breadth and depth of the structural review that is to be undertaken
- Structural Engineers of Record when identifying items they need to provide to the Independent Structural Engineering Consultant
- Building Owners when preparing Requests for Qualifications
- Building Officials when evaluating reports received from Independent Structural Engineering Consultants

These guidelines are not intended as a substitute for professional services or to establish any professional or legal standard. Users of these guidelines should consult with the appropriate professionals regarding the subjects discussed herein.

#### II. Background

A. The requirements for an Independent Structural Engineering Review (ISER) were adopted by the Connecticut legislature under Connecticut Public Act 88-359 in 1988. This legislation was enacted in response to the collapse of the L'Amiance Plaza apartment complex in 1987 which resulted in the loss of 28 lives. This was the third major structural failure in the State of Connecticut in ten years, the other two being the Hartford Civic Center and the Mianus River Bridge. It was recognized that most building departments do not have the resources of plan reviewers who have the ability to assess the adequacy of the structural engineering design for complex building structures. While not all of the above-cited structural failures were directly attributable to structural design flaws, the legislation was intended to provide greater quality assurance for the structural design for structures which exceeded certain limits, hereafter referred to as "Threshold Limits". Revisions to the legislation were incorporated in Connecticut Public Act 89-255, and several additional minor revisions were included in subsequent Public Acts. The need for an ISER is also identified within the Connecticut Supplement to the State Building Code (see excerpt in Appendix "B").



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III. Objectives

- A. The primary objective of the ISER as stated in the Connecticut General Statutes (see excerpt in Appendix "A") is to "assure the stability and integrity of the primary structural support systems".
- B. An ISER is intended to provide an increased level of confidence regarding the predicted performance and safety of the project as documented by the design. This increased level of confidence shall be applicable to the following areas:
  1. Adequacy of the design criteria.
  2. Adequacy of the design and the design approach.
  3. Adequacy of structural design documentation.
- C. An ISER is an independent and objective technical review of the design of the project, by a structural engineering consultant experienced in the design of similar projects to the one being reviewed.
- D. An ISER is intended to encompass an actual review of the design using independently generated calculations. It is not intended to be simply a review of the calculations generated by the Structural Engineer of Record (SER).
- E. The ISER is intended to establish whether or not the building or structure conforms to the minimum structural design standards established by the Building Code. Providing that the design conforms to this criteria, it is irrelevant if the Independent Structural Engineering Consultant (ISEC) would have approached the design in a different fashion than the SER.
  1. If higher design standards are cited in the structural construction documents (e.g. higher design loads), then the ISER shall verify that the design conforms to the cited criteria.
- F. An ISER is not intended to encompass a review of secondary structural elements or cladding, although such a review may be performed as an Additional Service if so desired by the Owner.
- G. An ISER is not intended to encompass a review of mechanical or electrical equipment, ducts, conveyors, etc. Review of the primary structure used to support these items, when not an integral part of the equipment or a premanufactured item such as a curb, is part of the ISER.
- H. An ISER is not intended to replace or supplement the coordination functions between the SER, the architect and the other design disciplines. Should the ISEC



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detect any design coordination issues during the ISER, the ISEC may notify the applicable design discipline(s) as a courtesy.

- I. An ISER is not intended to assess constructability issues. Should the ISEC detect any potential constructability issues during the ISER, the ISEC may notify the SER as a courtesy.
- J. An ISER is not a value engineering study.

IV. Definitions

- A. **Primary Structural Support System:** The completed combination of elements which serve to support the building or structure's self-weight, the applicable live loads which are based on the occupancy and use of the spaces, the environmental loads such as wind and snow, plus the seismic loading.
- B. **Secondary Structural Elements:** Structural elements that are structurally significant for the function they serve but do not contribute to the strength or stability of the overall structure. Examples may include but not be limited to: stairs, equipment supports, ceiling supports, non-load bearing partitions; railings; elevator rails and hoist beams; and retaining walls independent of the primary building.
- C. **Cladding:** The load-resisting parts of a structure that enclose or partially enclose a building or other structure. Examples may include but not be limited to: curtainwall systems; masonry veneers; non load-bearing metal stud or concrete masonry back-up; non load-bearing architectural precast concrete panels. Non load-bearing walls which function as shearwalls would be considered to be part of the Primary Structural Support System.

V. Threshold Limits

- A. The Threshold Limits as defined by Connecticut Public Act 89-255 and the Building Code are as follows:
  1. Any building or addition having four stories
  2. Any building, addition or structure sixty (60) feet in height
  3. Any building, addition or structure with a clear span of 150 feet.
  4. Any building or addition containing 150,000 square feet of total gross floor area.
  5. Any building or addition with an occupant load of 1,000 persons.
  6. A building or addition in Use Group I (Institutional) with 150 beds or persons.
  7. A building or addition in Use Group R-1 (Residential - Hotels./Motels) which is a single structure and contains 200 rooms.



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8. A building or addition in Use Group R-2 (Residential – Multifamily) which is a single structure and contains 100 dwelling units.
  9. A building or addition in Use Group S (Storage) with 250,000 square feet of total gross floor area; this takes precedence over Threshold Limit No. 4.
  10. A parking structure (Use Group S – Storage) with 1,000 cars.
- B. Any proposed structure or addition which exceeds one or more of the Threshold Limits is subject to an ISER.
1. A structure which equals but does not exceed any of the Threshold Limits is not subject to an ISER. For instance, a four-story structure is not subject to an ISER unless it exceeds one of the other Threshold Limits; a five-story structure is subject to an ISER.
  2. Any building which is constructed using the lift-slab method of construction is subject to an ISER, regardless of its size.
- C. The following conditions have been interpreted as follows by the Office of the State Building Inspector:
1. If a vertical addition is added to the top of an existing building resulting a structure with five or more stories, the addition and the existing supporting structure are subject to an ISER.
  2. If a one-story (or more) vertical addition is added to the top of an existing building with five or more stories, the addition and the existing supporting structure are subject to an ISER.
  3. If a vertical addition is added to an existing non-threshold building and the building height including the addition exceeds 60 feet, the addition and the existing supporting structure are subject to an ISER.
  4. If a vertical addition is added to an existing building with a height in excess of 60 feet, the addition and the existing supporting structure are subject to an ISER.
  5. If a horizontal addition in itself does not exceed any of the threshold limits, the addition is not subject to an ISER regardless of the size or occupancy load of the combination of the new and existing structures.
  6. Under no circumstances would a horizontal addition necessitate an ISER of the existing building.
  7. The areas of the new and existing structures are not additive when applying threshold limits.
  8. The occupancy loads of the new and existing structures are not additive when applying threshold limits.



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9. When firewalls are utilized to create separate buildings within a single structure, the threshold limits are to be based on the full structure, not the separate buildings.
10. Threshold limits do not apply to repair, renovation or change of occupancy.
11. Building height is determined based on the average height of the highest roof of a building structure. The building height could be determined based on the height of an elevator override, a penthouse, a cupola or a similar building feature.
12. Architectural embellishments are not considered in the determination of building height. A spire is an example of an architectural embellishment.
13. If an accessory structure is added to the top of a building and the combined height of the building and the accessory structure exceeds 60 feet, then the building and the accessory structure are subject to an ISER. A cellular telephone tower is an example of an accessory structure.
14. Free-standing structures independent of the primary building or structure which do not exceed the Threshold Limits are not subject to an ISER. If the free-standing structure exceeds any of the Threshold Limits, it too would be subject to an ISER.

**VI. Engineering Qualifications**

- A. The Independent Structural Engineering Consultant (ISEC) shall be a Professional Engineer registered in the State of Connecticut. Alternatively, the ISEC may be a partnership or a registered engineering corporation employing a structural engineer registered in the State of Connecticut who will manage the ISER.
- B. The ISEC shall be actively engaged in the practice of structural engineering and shall have experience with the design of buildings/structures and structural systems comparable in size and complexity to those under consideration.
- C. The Structural Engineer of Record (SER) should be consulted in the selection of the ISEC. The ISEC should be able to cooperate with the SER and others involved, and should be able to conduct the review in an unbiased and constructive manner.
- D. The ISEC shall be engaged by the Owner and shall be completely independent of the design team and the contractors and suppliers who will be involved with the construction of the structure.
  1. The ISEC shall not perform an ISER on any project in which any portion of the design is the responsibility of others within the ISEC's firm, regardless of the design discipline.



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**VII. Sequence of Review**

In order to expedite the review and to reconcile differences of opinion, open and ongoing communication between the ISEC and the SER is encouraged throughout the sequence of the ISER. In order to minimize impact on construction cost, it is highly recommended that the applicable design reviews be completed prior to bidding the structural construction contracts.

- A. **Preliminary Review:** A review at the completion of the Design Development Phase is recommended, particularly for large and complex projects. If discrepancies are detected relative to the basic design assumptions, they are more readily resolved at this earlier stage than they would be at the completion of the Construction Documents Phase.
- B. **Foundation Review:** If the project schedule dictates, the Owner may desire to obtain a Foundation Permit prior to the completion of the superstructure design documents. This will require the ISEC to utilize incomplete documents for the basis of the foundation evaluation. Any special conditions or contingencies relating to a Foundation Review must be clearly identified to the Building Official; any assumptions must be confirmed during the Primary Design Review. The Building Official is not obligated to furnish this form of Partial Building Permit.
- C. **Primary Design Review:** The primary review for the project is conducted at which time the Construction Documents are at or near completion.
- D. **Construction Phase Review:** This would be limited to the review of contractor-designed elements which are part of the Primary Structural Support System. It would also include the review of changes to the Primary Structural Support System.

**VIII. Scope and Methodology of Review**

- A. **Preliminary Review (Optional Phase)**
  - 1. Review design criteria to verify compliance with the Building Code.
  - 2. Assess assumptions made by the SER.
- B. **Foundation Review (Optional Phase for Early Foundation Permit)**
  - 1. If Preliminary Review was not performed, then perform those tasks identified under Preliminary Review. If Preliminary Review was performed, confirm that design criteria and assumptions have not changed.



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2. Establish foundation loads via independent analysis. Alternatively, obtain foundation loads from SER contingent upon subsequent verification. Obtain soil design parameters from geotechnical engineering report.
3. Perform independent analyses of representative foundation elements including spread footings, pile caps, foundation walls, grade beams, piles, etc. Review of a minimum of 25% of foundation elements is recommended, depending on the relative nature or complexity of the project. Depending on the results of the independent analysis, the ISEC may find it necessary to increase the percentage of elements reviewed to determine compliance with the State Building Code.
4. Review specification sections pertaining to foundation system including earthwork, piles, concrete work, etc.
5. Review performance criteria for contractor-designed components such as mini-piles, tie-down anchors, etc.

**C. Primary Design Review**

1. If Foundation Review and Preliminary Review were not performed, then perform those tasks identified under Preliminary Review. If Foundation Review was not performed but Preliminary Review was performed, confirm that design criteria and assumptions identified in Preliminary Review have not changed.
2. Review load paths for gravity and lateral loads to confirm that loads are distributed through the height of the structure to the foundation in a rational fashion.
3. Perform independent analyses of the gravity force and lateral force-resisting systems. Perform independent analyses of representative components of the Primary Structural Support System including slabs, beams, columns, braces, diaphragms, etc. Review of a minimum of 25% of framing components is recommended, depending on the relative nature or complexity of the project. Depending on the results of the independent analysis, the ISEC may find it necessary to increase the percentage of elements reviewed to determine compliance with the State Building Code.
  - a. Check building drift and separation under seismic loading conditions.
  - b. Check frame element deflections under the applicable gravity loading conditions.



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4. If Foundation Review was not performed, then perform independent analyses of representative foundation elements including spread footings, pile caps, foundation walls, grade beams, piles, etc. Review a minimum of 25% of foundation elements is recommended, depending on the relative nature or complexity of the project. Depending on the results of the independent analysis, the ISEC may find it necessary to increase the percentage of elements reviewed to determine compliance with the State Building Code. If Foundation Review was performed and was based on loads furnished by the SER, confirm that loads on which Foundation Review was based coincide with those established in the independent analysis.
5. Review structural framing connections which are part of the Primary Structural Support System including shear connections, braced frame connections, moment-resisting connections, timber framing connections, etc. When connections are not detailed on the design drawings, verify adequacy of the cited connection design loads/procedures.
6. Perform general review of design to evaluate presence of any conditions which might precipitate conditions of instability or structural overstress. Examples would include unbraced beams or columns; composite beams where openings compromise the composite action; excessive unshored deck spans; conditions which induce out-of-plane loads into framing components, etc.
7. Review specification sections pertaining to Primary Structural Support System.
8. Review performance criteria for contractor-designed components such as precast concrete elements, shear connections, braced frame connections, moment-resisting connections, cold-formed metal framing components (primary framing components, not cladding), pre-engineered metal building systems, wood trusses, etc.

**D. Construction Phase Review**

1. Review structural calculations and design drawings for contractor-designed components which are part of the Primary Structural Support System. Perform independent analyses as required to supplement contractor's engineering calculations.
  - a. Review by ISEC shall not commence until design of contractor-designed components has been reviewed and approved by SER.
  - b. Review of contractor's design drawings shall not be construed as a comprehensive shop drawing review. Comprehensive shop drawing review is the responsibility of the SER.



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2. Review any changes to the design of the Primary Structural Support System.
  - a. The ISEC shall review sketches and/or revised drawings prepared by the SER which document the changes.
  - b. If sketches and/or revised drawings are not available, the ISEC shall review shop drawings to ascertain the adequacy of the design. Such review shall commence only after the shop drawings have been reviewed and approved by the SER.

**IX. Minimum Report Requirements**

- A. The following items shall be included in the final ISER report:
  1. List of the documents on which the review was based (include structural drawing numbers with revision dates)
  2. Building Code on which the ISER was based
  3. Basis of the review (e.g. SEC/CT Guidelines)
  4. Outstanding items / unresolved issues
  5. Items to be subsequently reviewed (e.g. Contractor-designed items)
  6. Exclusions/limitations (e.g. ISER was limited to primary structural support systems)
- B. The final ISER report shall be addressed to the Building Official having jurisdiction. Copies of the report shall be distributed to the Owner/Owner's representative and the SER.
- C. Prior to the issuance of the final ISER report, the ISEC is encouraged to exchange review comments with the SER in order to reconcile as many issues as possible.

**X. Design Conflict Resolution**

- A. During the generation of his/her independent calculations, the ISEC may find that some of the primary structural support systems are not in conformance with the Building Code, and this information is then brought to the attention of the SER. Should the SER disagree with the ISEC's findings, the SER shall furnish the ISEC with the SER's applicable structural calculations (including computer analyses) which substantiate the adequacy of the portion of the structural design in question.
  1. After review of the SER's structural calculations, if the issue in question has not been reconciled, then the ISEC shall furnish the SER with the ISEC's applicable independent structural calculations (including computer analyses) for the SER's assessment.



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- B. In the event that a dispute between the SER and the ISEC cannot be resolved, the parties are encouraged to engage the services of a neutral structural engineering consultant to assist in the resolution of the dispute. The office of the American Council of Engineering Companies of Connecticut maintains a list of structural engineering consultants who offer ISER dispute resolution services.

XI. Suggested Items to be Included in a Request for Proposal

- A. It is recommended that the following items be submitted to a potential ISEC when requesting a proposal for an ISER:
1. Set of current structural drawings
  2. Current architectural plans, sections and elevations
  3. Structural systems design narrative
  4. General building narrative (number of stories, gross building area, estimated construction cost, unique features, etc.)
  5. Reference of the SEC/CT Guidelines as the basis for the ISER
  6. Design schedule
  7. Special phasing (e.g. will a Foundation Permit be sought in advance of the full Building Permit?)
  8. Professional Services Agreement to be utilized (the use of CASE Document 5, *An Agreement for Structural Project Peer Review Services*, is recommended)
- B. An ISER is an important professional service. As such, the qualifications of the ISEC should be strongly considered when selecting an ISEC. For more information on procuring professional services, contact the Connecticut QBS Council at [www.ctqbs.org](http://www.ctqbs.org).

XII. Information to be Furnished to the ISEC

- A. Items to be Furnished by the Owner or the Owner's Designated Representative:
1. Complete set of drawings (structural, architectural, mechanical, electrical, plumbing, site)
  2. Structural specifications
  3. Geotechnical engineering report
  4. Structural design criteria summary (e.g. design basis and structural systems narrative)
  5. Special design criteria (wind tunnel test reports; snow load reports; etc.)
  6. Major equipment loads
  7. Existing building drawings/data if impacted by or impacting the threshold structure



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B. Items to be Furnished by the SER:

1. Drawings/calculations for contractor-designed components
2. Drawings/sketches pertaining to structural design revisions

XIII. Disclaimer

- A. The provisions stated herein are a guideline developed by SEC/CT as a basis for ascertaining the adequacy of the design of the primary structural systems. Specific procedures cited herein are not a requirement set forth by Connecticut State Building Code or the Connecticut General Statutes. These guidelines are not intended as a substitute for professional services or to establish any professional or legal standard. Users of these guidelines should consult with the appropriate professionals regarding the subjects discussed herein
- B. These guidelines are a minimum, and it is the responsibility of the ISEC to review the structural design to the extent necessary to ensure the stability and integrity of the primary structural support systems.
- C. An ISER often results in revisions to the original structural design and construction documents. In order to minimize impact on construction cost, it is highly recommended that the Primary Design Review of the ISER (and the Foundation Review, if applicable) be completed prior to bidding the structural construction contracts. Some of these changes may result in increased construction costs. Neither the ISEC nor the SER shall be responsible for such additional costs.



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References

American Consulting Engineers Council / American Society of Civil Engineers, *Project Peer Review Guidelines*, ACEC/ASCE: Washington, DC, 1990.

Bell, Glenn R. and Roberge, Conrad P., *Regulated Structural Peer Review*, Civil Engineering Practice, 1994.

Coalition of American Structural Engineers (CASE) Document 5-1993, *An Agreement Between Owner and Structural Engineer for Project Peer Review Services*, ACEC/CASE: Washington, DC, 1993.

Coalition of American Structural Engineers, *National Practice Guidelines for the Structural Engineer of Record*, ACEC/CASE: Washington, DC, 1989.

Commonwealth of Massachusetts, *Massachusetts State Building Code 780 CMR* (6<sup>th</sup> edition), Massachusetts, 1997.

Connecticut Engineers in Private Practice -- Structural Engineers Coalition, *Guideline for Review by an Independent Structural Engineering Consultant: Basic Services*, Hamden, Connecticut: CEPP/SEC, 1989.

Structural Engineers Association of California, *Recommended Guidelines for the Practice of Engineering in California*, California: SEAOC.

Zallen, Rubin M., *Proposal for Structural Design Peer Review*, ASCE Journal of Performance of Constructed Facilities (Vol.4, No. 4), Washington, DC: 1990.



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**Appendix "A" – Excerpt from Connecticut General Statutes**

General Statutes of Connecticut (revised to January 1, 2007)

Title 29: Public Safety and State Police

Chapter 541: Building, Fire and Demolition Codes  
Fire Marshals and Fire Hazards  
Safety of Public and Other Structures

**Sec. 29-276b. "Threshold limit" defined. Requirements when structure or addition will exceed threshold limit. Standards for facilities which perform testing of construction materials.** (a) For the purposes of this section, the term "threshold limit" shall apply to any structure or addition thereto (1) having four stories, (2) sixty feet in height, (3) with a clear span of one hundred fifty feet in width, (4) containing one hundred fifty thousand square feet of total gross floor area, or (5) with an occupancy of one thousand persons.

(b) The following use groups shall have the following additional threshold limits:

Use Group	Threshold Limit
I-Institutional I-1 Residential care I-2 Incapacitated care I-3 Restrained, jails and asylums	150 beds or persons
R-Residential R-1 Residentail-hotel/motel R-2 Residential-multifamily	Single structure with 200 rooms Single structure with 100 dwelling units
S-Storage S-1 Moderate hazard S-2 Low hazard	Parking structures with 1,000 cars 250,000 square feet 250,000 square feet

(c) If a proposed structure or addition will exceed the threshold limit as provided in this section, the building official of the municipality in which the structure or addition will be located shall require that an independent structural engineering consultant review the structural plans and specifications of the structure or addition to be constructed to determine their compliance with the requirements of the State Building Code to the extent necessary to assure the stability and integrity of the primary structural support systems of such structure or addition. Any modifications of approved structural plans or



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design specifications shall require shop drawings to the extent necessary to determine compliance with the requirements of the State Building Code and shall be reviewed by such consultant. Any fees relative to such review requirements shall be paid by the owner of the proposed building project. The building official may prequalify independent structural engineering consultants to perform the reviews required under this subsection. In the case of such a project, each general contractor and major subcontractor shall keep and maintain a daily construction log in a manner prescribed by the State Building Inspector. The building official shall, upon request, have access at all reasonable times to such log. If a structure or addition exceeds the threshold limit, the architect of record, professional engineer of record responsible for the design of the structure or addition and general contractor involved in such project shall sign a statement of professional opinion affirming that the completed construction is in substantial compliance with the approved plans and design specifications. If fabricated structural load-bearing members and assemblies are used in such construction, the professional engineer licensed in accordance with chapter 391 responsible for the design of such members or assemblies shall sign a statement of professional opinion affirming that the completed fabrication is in substantial compliance with the approved design specifications.

(d) The building official of the municipality in which the structure or addition will be located shall satisfy himself that each architect, professional engineer, general contractor and major subcontractor involved in the project holds a license to engage in the work or occupation for which the appropriate building permit has been issued. If fabricated structural load-bearing members or assemblies will be used in such construction, the building official shall satisfy himself that each professional engineer responsible for the design of such members or assemblies holds a license issued in accordance with the provisions of chapter 391.



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**Appendix "B" – Excerpt from Connecticut State Building Code**

**STATE BUILDING CODE**  
**2005 CONNECTICUT SUPPLEMENT**  
(effective December 31, 2005)

(Add) **106.1.5 Threshold limits.** For the purposes of this section, the term "threshold limit" shall apply to any proposed structure or addition thereto: (1) having four stories; (2) 60 feet in height; (3) with a clear span of 150 feet in width; (4) containing 150,000 square feet of total gross floor area; or (5) with an occupancy of 1,000 persons. The following use groups shall have the following additional threshold limits:

<u>Use Group</u>	<u>Threshold Limit</u>
I Institutional	150 beds or persons
R-1 Residential - hotels or motels	Single structure with 200 rooms
R-2 Residential - multi-family	Single structure with 100 dwelling units
S Storage	250,000 square feet or parking structures with 1,000 cars

Threshold limits shall not apply to alterations, repairs or change of occupancy to any existing building.

(Add) **106.1.5.1 Requirements for proposed structures or additions that exceed the threshold limits.** Pursuant to section 29-276b of the Connecticut General Statutes, if a proposed structure or addition to an existing structure will exceed the threshold limit set forth in Section 106.1.5 of this code, the building official of the municipality in which the structure or addition will be located shall require that an independent structural engineering consultant review the structural plans and design specifications of the structure or addition to be constructed to determine compliance with the requirements of this code to the extent necessary to assure the stability and integrity of the primary structural support systems of such structure or addition. Any modifications of approved structural plans or design specifications shall require shop drawings to the extent necessary to determine compliance with the requirements of this code and shall be reviewed by such consultant. Any fees relative to such review requirements shall be paid by the owner of the proposed building project.



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If a structure or addition exceeds the threshold limit, the architect of record, professional engineer of record responsible for the design of the structure or addition and the general contractor shall sign a statement of professional opinion affirming that the completed construction is in substantial compliance with the approved plans and design specifications. If fabricated structural load-bearing members or assemblies are used in the construction, the professional engineer responsible for the design of such members or assemblies shall sign a statement of professional opinion affirming that the completed fabrication is in substantial compliance with the approved design specifications.

The building official of the municipality in which the structure or addition will be located shall satisfy himself that each architect, professional engineer, including each professional engineer responsible for the design of fabricated structural load-bearing members or assemblies, general contractor and major subcontractor involved in the project holds a license to engage in the work or occupation for which the appropriate building permit has been issued.

**(Add) 106.1.6 Lift slab construction.** Pursuant to subsection (b) of section 29-276a of the Connecticut General Statutes, any building designed to be constructed utilizing the lift-slab method of construction shall be classified as exceeding the "threshold limit" and shall be subject to the provisions of Sections 106.1.5.1 and 106.1.6.1.

**team dtc**

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**Independent Structural  
Engineering Review for  
East Hampton High School  
Additions & Renovations**

**State Project #042-0041 EA/RR**

Submitted to:

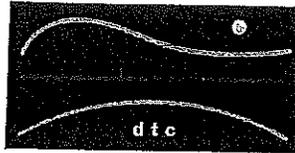
MR. JIM GIULIANO  
SENIOR PROJECT MANAGER  
EAST HAMPTON TOWN HALL  
20 EAST HIGH STREET  
EAST HAMPTON, CT  
062424

JUNE 20, 2014



**Diversified Technology Consultants**  
Hamden, CT      Andover, MA

ENGINEERED  
SOLUTIONS



LAND  
STRUCTURES  
WATER

June 20, 2014

Mr. Jim Giuliano  
Senior Project Manager  
East Hampton Town Hall  
20 East High Street  
East Hampton, CT 06424

**RE: Independent Structural Engineering Review for East Hampton High School  
Additions & Renovations; State Project: #042-0041 EA/RR**

Dear Mr. Giuliano,

The accompanying proposal has been assembled to demonstrate Diversified Technology Consultants' qualifications in meeting the Town's requirements for Independent Structural Engineering Review for East Hampton High School Additions and Renovations.

DTC has been providing creative engineering solutions to the State of Connecticut and its municipalities for more than thirty-four years. We have served on third party structural engineering review contracts and pride ourselves with the fact that we provide efficient engineering design services on time and on budget.

DTC has several recent third party structural engineering review assignments including: Guilford High School; University High School in Hartford; Dr. James Naylor K-8 Elementary School in Hartford, MidState Medical Center in Meriden and Academy of Information Technology and Engineering High School in Stamford.

Highlighted further in this proposal are the advantages that DTC offers in a partnered approach with the Town of Guilford, including:

- **Extensive third party structural engineering review experience to allow us to efficiently expedite the project for the Town of East Hampton**
- **DTC is well-versed in exceeding expectations on projects**
- **Current workload and staff assignments allows DTC to make this statement of commitment to your program**

On behalf of all of us at DTC, I look forward to your favorable review of the accompanying materials as well as the opportunity to support the Town of East Hampton with this contract.

Sincerely,

DIVERSIFIED TECHNOLOGY CONSULTANTS

  
A. Graham Curtis, PE, LEED® AP  
Chief Operating Officer

*Information contained in this document is proprietary and confidential and may not be disseminated to any party other than the intended recipient without the written consent of Diversified Technology Consultants.*

2321 WHITNEY AVENUE SUITE 301 HAMDEN CT 06518

203 239 4200 PH 203 234 7376 FAX



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- IV. REFERENCES**
- V. FEE & INSURANCE CERTIFICATE**



I



## COMPANY INFORMATION

- **NAME OF COMPANY** – Diversified Technology Consultants, Inc.
- **ADDRESS OF PRINCIPLE OFFICE AND OFFICE FROM WHICH THE PROJECT WILL BE MANAGED** – 2321 Whitney Avenue, Suite 301, Hamden, CT 06518
- **NAME, ADDRESS AND TELEPHONE NUMBER OF THE PRINCIPLE CONTACT** – Graham Curtis, PE, LEED AP, 2321 Whitney Avenue, Suite 301, Hamden, CT 06518. Phone - (203) 239-4200.
- **DATE ESTABLISHED** – NOVEMBER 15, 1979
- **LEGAL FORM OF OWNERSHIP. IF CORPORATION, WHERE INCORPORATED.** – Corporation. Incorporated in Connecticut.

## YEARS OF SERVICE

DTC has been engaged in services for thirty-four (34) years.





# Guilford High School

Guilford, CT

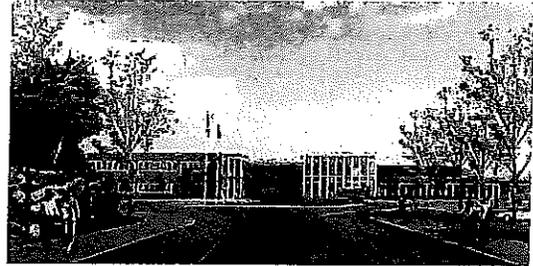


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**Project Scope** Structural Peer Review for the new Guilford High School  
**DTC Role** Sub consultant  
**Project Cost** \$90 Million  
**Owner/Client** Town of Guilford

## Project Overview

DTC provided a Structural Peer Review service for the Town of Guilford to review the structural plans and specifications for the new 213,000 SF high school located in Guilford, CT. The project consists of a new three-story steel framed structure including a new 100 ft. span gymnasium, new 1,000 seat auditorium along with numerous classrooms, office space and music rooms.





## **RELEVANT EXPERIENCE**

The following is a list of similar projects for which DTC has provided ISER services.

### **FAIRCHILD WHEELER MULTI-MAGNET SCHOOL, BRIDGEPORT, CT**

- a. Approximate Size of Project (S.F.) – 270,000 sq. ft.
- b. Type of Construction (New or Renovation) - New

### **GREENWICH HIGH SCHOOL, GREENWICH, CT**

- a. Approximate Size of Project (S.F.) – 450,000 sq. ft. Total (100,000 sq. ft. New)
- b. Type of Construction (New or Renovation) - New

### **PLAINFIELD HIGH SCHOOL, PLAINFIELD, CT**

- a. Approximate Size of Project (S.F.) -170,000 sq. ft.
- b. Type of Construction (New or Renovation) - New

### **SUFFIELD HIGH SCHOOL AND REGIONAL AGRI-SCIENCE CENTER, SUFFIELD, CT**

- a. Approximate Size of Project (S.F.) – 190,000 sq. ft.
- b. Type of Construction (New or Renovation) - Renovation

### **BARNUM ELEMENTARY SCHOOL, BRIDGEPORT, CT**

- a. Approximate Size of Project (S.F.) -165,000 sq. ft.
- b. Type of Construction (New or Renovation) - New

### **THOMAS EDISON MAGNET MIDDLE SCHOOL, MERIDEN, CT**

- a. Approximate Size of Project (S.F.) – 180,000 sq. ft.
- b. Type of Construction (New or Renovation) - New

### **RENOVATIONS FOR ELEVEN SCHOOLS, WALLINGFORD, CT**

- a. Approximate Size of Project (S.F.) – 200,000 Total (50,000 sq. ft. New)
- b. Type of Construction (New or Renovation) - Renovation

Project sheets with more information on these relevant projects are on the following pages.



# University High School Peer Review

Hartford, CT



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**Project Scope** Structural Peer Review  
**DTC Role** Prime Consultant  
**Project Cost** \$40,000,000  
**Owner/Client** John Mena (860) 509-3737

## Project Overview

DTC provided the structural threshold limit peer review for the project for the Academy of Information Technology and Engineering High School in Stamford, CT.

The objective of this review was to determine if the structural plans and specifications for the above referenced project were in compliance with the structural requirements of the applicable building code or codes. This review was limited in scope and was conducted to the extent necessary to render an opinion regarding the stability and integrity of the primary structural system of the project.

DTC reviewed a representative number of all types of structural assemblies (moment connections, framed connections, bracing connections, etc.)

DTC also reviewed the type of connection for capability with design intent (slip critical connections, connections with slotted holes, Type 1 "rigid frame" construction, Type 2 "simple framing" construction, etc)

DTC reviewed a representative number of connections for review of approximately 25% structural members and assemblies. The firm also reviewed geotechnical report confirmation of type of proposed foundation elements. DTC also reviewed a representative number of foundation elements reviewed for approximately 25% for load capacity. The firm also reviewed documents for architectural and other engineering disciplines for potential special load or framing requirements. The project also required the review of specifications for implementation of design materials.

DTC provided a written report of the finding to the owner. In order to limit the extent of the written report, the Peer Reviewer is encouraged to have fairly frequent contact with the Structural Engineering of Record (SER) to exchange points of view and suggest normal changes.

DTC met with the Building Department Official once to review findings and also met with the Structural Engineer of Record.

# Academy of Information Technology & Engineering High School

Stamford, CT



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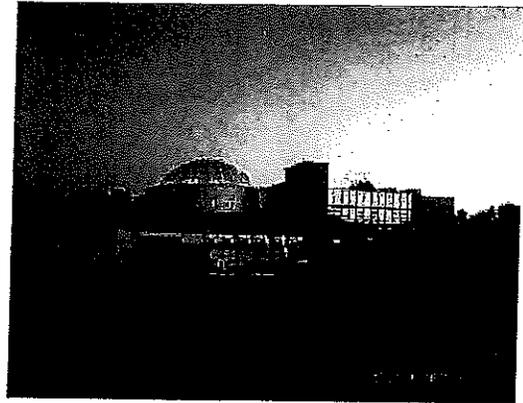
**Project Scope** Structural Peer Review  
**DTC Role** Prime Consultant  
**Project Cost** \$45,000,000  
**Owner/Client** Joseph Fuller, (914) 592-4444

## Project Overview

DTC provided the structural threshold limit peer review for the project for the Academy of Information Technology and Engineering High School in Stamford, CT.

The objective of this review was to determine if the structural plans and specifications for the above referenced project were in compliance with the structural requirements of the applicable building code or codes. This review was limited in scope and was conducted to the extent necessary to render an opinion regarding the stability and integrity of the primary structural system of the project.

The project included a large central atrium space. Located on the Rippowam campus, the school's 120,000 sq. ft. facility houses 700 students, including a 350 seat cafeteria, amphitheater, atrium and fiberglass domed media center. The design is centered around the atrium, a naturally-lit 3 story tall space housing a grand staircase, connected to the school's cafeteria, media center, teacher's lounge, offices, and classrooms. Windowed exterior walls let in sunlight, heating the building in an attempt to reduce heating costs and improve student morale.



# Dr. James H. Naylor K-8 Elementary School Peer Review

Hartford, CT



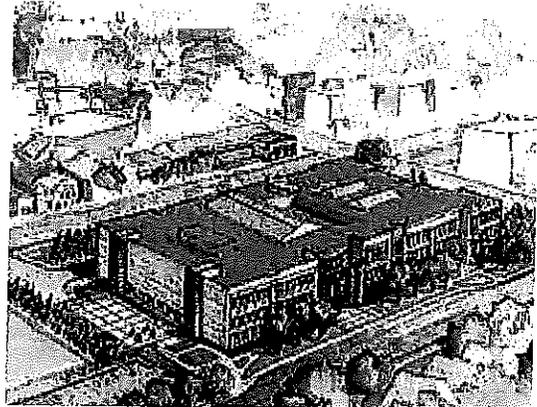
**Project Scope** Structural Peer Review  
**DTC Role** Prime Consultant  
**Project Cost** \$30,000,000  
**Owner/Client** John Mena (860) 509-3737

## Project Overview

DTC provided the structural threshold limit peer review for the project for the Dr. James H. Naylor K-8 Elementary School in Hartford, CT.

The objective of this review was to determine if the structural plans and specifications for the above referenced project were in compliance with the structural requirements of the applicable building code or codes. This review was limited in scope and was conducted to the extent necessary to render an opinion regarding the stability and integrity of the primary structural system of the project.

The design consisted of a 45,000 sq. ft., seismically isolated, three-story steel frame addition to the existing school. The addition houses a cafeteria, second floor gymnasium, and three-story atrium, as well as classrooms and offices. This was a \$30 million restoration and addition to the existing building, requiring structural design/development.



# III



**Frank J. Costello, Jr., PE**  
**Manager, Structural Engineering**

**REGISTRATION**

Professional Engineer, Connecticut, No. 13915, 1985; Massachusetts, No. 45721, 2003; Vermont, No. 018-0008791, 2006

**EDUCATION**

BS, Civil Engineering, University of New Haven, 1980

**BACKGROUND**

Mr. Costello has more than 33 years of structural engineering experience from project design and analysis to project management. He has been managing the structural department at DTC and has designed steel, concrete and wood buildings; prepared specifications and contract documents for construction; been responsible for all aspects of structural design; and performed analysis of existing structures. Mr. Costello has extensive experience performing Structural Engineering for various schools and adhering to all federal, state and local guidelines.

**SIMILAR PROJECT EXPERIENCE**

**Guilford High School Peer Review, Guilford, Connecticut**

Project Manager. DTC provided a Structural Peer Review service for the Town of Guilford to review the structural plans and specifications for the new 213,000 SF high school located in Guilford, CT. The project consists of a new three-story steel framed structure including a new 100 ft. span gymnasium, new 1,000 seat auditorium along with numerous classrooms, office space and music rooms.

**University High School of Science and Engineering, Hartford, Connecticut**

Project Manager for threshold limit structural review for the high school.

**MidState Medical Center Emergency Room Expansion, Second Third Party Review of Structural Design, Meriden, Connecticut**

The objective of this review was to determine if the structural plans and specifications for the project were in compliance with the structural requirements of the applicable building code or codes. This review was limited in scope and was conducted to the extent necessary to render an opinion regarding the stability and integrity of the primary structural system of the project.

**Naylor Elementary School, Hartford, Connecticut**

Project Manager for threshold limit structural review for the elementary school.

**Pathways to Technology Magnet School, Hartford, Connecticut**

Project Manager for threshold limit structural review for the magnet school.

**New Public Safety Complex, Greenwich, Connecticut**

Structural Manager. DTC provided design analysis, as well as construction documents for a 172 vehicle, 72,560 sq. ft., four story precast concrete parking structure and adjacent 65,400 sq. ft., five story steel framed police headquarters and detention facility located in the Greenwich Avenue Historic District of Greenwich, CT. The project entailed shop drawing review and construction special inspection services.

**Barnum Elementary School, Bridgeport, Connecticut**

Structural Manager. DTC performed complete engineering and environmental services for the construction of a new Pre-K through eighth grade elementary school. Services included: site layout and vehicular circulation; landscaping and site lighting; extension and/or relocation of site utilities such as: water distribution, sanitary sewer system, storm sewer system and electric/communication/cable television/gas; permitting; environmental investigations, remedial designs as well as remedial oversight; structural design, HVAC and fire protection design.

**Fairchild Wheeler Multi-Magnet High School, Bridgeport, Connecticut**

Structural Manager. The City of Bridgeport School Building Committee selected DTC to provide engineering services for the planning, design and construction administration of the new Multi-Magnet High School. The new school is a 9th to 12th grade inter-district high school. The capacity of the school is 1500 students housed in 3 - 500 student learning communities with a central core building totaling 270,000 sq. ft.



**Robert L. Orton, PE**  
**Structural Engineer**

## **REGISTRATION**

Professional Engineer, Connecticut, No. 17813  
Professional Engineer, Colorado

## **EDUCATION**

B.S., Civil Engineering, Colorado State University, 1981

## **BACKGROUND**

Mr. Orton has over 29 years of structural engineering experience and excellence encompassing structural design, contract document preparation, project management, construction administration and quality assurance. He has extensive knowledge in production, scheduling, data analysis and problem solving. Mr. Orton has designed steel, concrete, masonry and wood buildings; prepared specification for construction; been responsible for all aspects of structural design; and performed analysis of existing structures. Mr. Orton is proficient in the use of numerous engineering and business related software.

## **PROJECT EXPERIENCE**

### **Greenwich High School, Greenwich, Connecticut**

Project Manager. DTC is providing landscape architectural, civil and structural engineering services to facilitate an addition to the existing Greenwich High School. The addition will house a new state of the art performing arts theater for school and community use. As part of the project the existing theater space will be converted into other school program areas. DTC's design team will study the existing parking and provide a zero net loss of parking once the project is completed. The project also entails utilization of alternative drainage and paving techniques in order to control storm water runoff. Other services included for this project consist of building structural engineering, site layout, revised vehicular circulation, site lighting, landscaping, extension or relocation of site utilities and local and state permitting.

### **Glenville Elementary School, Greenwich, Connecticut**

Structural Project Manager. DTC provided structural engineering for the \$15 million renovation of the one story Glenville Elementary School in Greenwich, CT. The renovate "as new" project of the 64,800 sq. ft. elementary school originally constructed in 1973 included demolition of various areas of the original school structure and construction of a new additions to expand the exterior perimeter wall footage.

### **Fairchild Wheeler Multi-Magnet High School, Bridgeport, Connecticut**

Structural Engineer. The City of Bridgeport School Building Committee selected DTC to provide engineering services for the planning, design and construction administration of the new Multi-Magnet High School. The new Multi-Magnet High School is be a 9th to 12th grade inter-district high school. The capacity of the school is 1500 students housed in 3 - 500 student learning communities with a central core building totaling 270,000 sq. ft.

### **H.H. Ellis Regional Vocational Technical High School, Danielson, Connecticut**

Structural Engineer. DTC provided site/civil and MEP services for the additions and major renovation to the H.H. Ellis RVTS. Antiquated mechanical, electrical and plumbing systems are in design and will be replaced in both the existing facility and the additions. Parking, pedestrian and vehicular separation and circulation are being addressed by our civil engineering department.

### **Barnum Elementary School, Bridgeport, Connecticut**

Structural Engineer. DTC performed complete engineering services for the construction of a new Pre-K through eighth grade elementary school. Services included: site layout and vehicular circulation; landscaping and site lighting; extension and/or relocation of site utilities such as: water distribution, sanitary sewer system, storm sewer system and electric/ communication/ cable television/ gas; permitting; environmental analysis; structural design and HVAC and fire protection design. Project included threshold limit structural review.

### **Southern Connecticut State University New Student Center, New Haven, Connecticut**

DTC provided structural and site design services for the new \$22 million Michael J. Adanti Student Center at Southern Connecticut State University. Due to the site constraints, location and geometry, the building was required to have two relatively rectangular portions with a curved face connecting the 2 sections. The site topography required that part of the structure be located below grade while another was to be supported on structural fill. The new 125,000 sq. ft. center contains a 900-seat





## REFERENCES

Diversified Technology Consultants takes special pride in the quality of our design documentation, the skill of our management team and the dedication of our entire staff. You are invited to contact any of the clients with which we have been associated regarding our integrity, thoroughness and approach for the good of the client. The following references are for projects similar to this project that DTC provided independent structural engineering review services.

### **STRUCTURAL PEER REVIEW, GUILFORD HIGH SCHOOL, GUILFORD, CT**

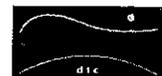
- **Name of Organization** – Town of Guilford
- **Amount of Contract** - \$90 million
- **Date Services Provided (start and finish)** Start 2013 Finish 2014
- **Owner (contact person), telephone number and address**  
Cliff Gurnham, Phone - (203) 458-0002, Facilities Department  
701 New England Road, Guilford, CT 06437

### **DR. JAMES H. NAYLOR K8 ELEMENTARY SCHOOL PEER REVIEW, HARTFORD, CT UNIVERSITY HIGH SCHOOL PEER REVIEW, HARTFORD, CT**

- **Name of Organization** – Diggs Construction
- **Amount of contract** - \$30,000,000
- **Date Services Provided (start and finish)** Start 2008 Finish 2010
- **Owner (contact person), telephone number and address**  
John Mena, (860) 509-3737, Construction Services  
111 Charter Oak Avenue, Hartford, CT 06106

### **ACADEMY OF INFORMATION TECHNOLOGY AND ENGINEERING HIGH SCHOOL, STAMFORD, CT**

- **Name of Organization** – City of Stamford, CT
- **Amount of contract** - \$45,000,000
- **Date Services Provided (start and finish)** Start 2008 Finish 2010
- **Owner (contact person), telephone number and address**  
Joseph Fuller, (914) 592-4444, Fuller and D'Angelo, P.C. Architects & Planners  
45 Knollwood Road, Elmsford, NY 10523



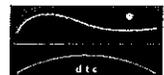
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## **FEE**

DTC has determined the following fee for the Independent Structural Engineering Review for East Hampton High School Additions & Renovations, State Project #042-0041 EA/RR.

\$4,500 – Four Thousand and Five Hundred Dollars.





DIVETEC-01

BMICHAUD

# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/6/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Camilleri & Clarke Associates an Affiliate of Smith Brothers 68 National Drive, Suite 2 Glastonbury, CT 06033	<b>CONTACT NAME:</b> Dorothy Overton <b>PHONE (A/C, No, Ext):</b> (860) 652-3235 <b>FAX (A/C, No):</b> (860) 652-3236 <b>E-MAIL ADDRESS:</b> doverton@camillericlarke.com	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
<b>INSURED</b>  Diversified Technology Consultants, Inc. 2321 Whitney Avenue Hamden, CT 06518	<b>INSURER A:</b> Sentinel Insurance Company <b>NAIC #</b> 11000	
	<b>INSURER B:</b> Hartford Ins Group - DBC <b>00914</b>	
	<b>INSURER C:</b> XL Design Professionals	
	<b>INSURER D:</b>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

**COVERAGES****CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY		02SBAA0538	01/01/2014	01/01/2015	EACH OCCURRENCE	\$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY					DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR					MED EXP (Any one person)	\$ 10,000
	<input checked="" type="checkbox"/> Valuable Papers					PERSONAL & ADV INJURY	\$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:					GENERAL AGGREGATE	\$ 2,000,000
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC					PRODUCTS - COMP/OP AGG	\$ 2,000,000
						Valuable Papers	\$
A	AUTOMOBILE LIABILITY		02UECZJ6419	01/01/2014	01/01/2015	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input type="checkbox"/> ANY AUTO					BODILY INJURY (Per person)	\$
	<input checked="" type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS					BODILY INJURY (Per accident)	\$
	<input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS					PROPERTY DAMAGE (PER ACCIDENT)	\$
							\$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR		02SBAA0538	01/01/2014	01/01/2015	EACH OCCURRENCE	\$ 5,000,000
	<input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE					AGGREGATE	\$ 5,000,000
	<input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000						\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		02WECCL6883	01/01/2014	01/01/2015	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N				E.L. EACH ACCIDENT	\$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below	N/A				E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
						E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
C	Professional Liab		DPR9712715	01/01/2014	01/01/2015	Each Claim	3,000,000
C			DPR9712715	01/01/2014	01/01/2015	Aggregate	5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

FOR PROFESSIONAL LIABILITY COVERAGE, THE AGGREGATE LIMIT IS THE TOTAL INSURANCE AVAILABLE FOR CLAIMS PRESENTED WITHIN THE POLICY PERIOD FOR ALL OPERATIONS OF THE INSURED. THIS LIMIT WILL BE REDUCED BY PAYMENTS OF CLAIMS AND EXPENSES. THIS INSURANCE IS NOT FOR A SPECIFIC PROJECT.

**CERTIFICATE HOLDER****CANCELLATION**

For Proposal Only

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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