PROJECT MANUAL

BUILDING Q PLUMBING UPGRADES

GREENWICH HIGH SCHOOL

10 HILLSIDE ROAD

GREENWICH, CT

BID #2251-19

MAY 3, 2019

ISSUED FOR BID

MEP ENGINEER:

LANDMARK FACILITIES GROUP, INC.

252 EAST AVENUE

NORWALK , CT 06855

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GREENWICH PUBLIC SCHOOLS
Purchasing Department
290 Greenwich Ave.
Greenwich, Connecticut 06830
(203) 625-7400
Fax (203) 625-7677
EUGENE H. WATTS
Senior Buyer

May 3, 2019

Dear Sir/ Madam:

You are invited to submit a bid for **Building Q Plumbing Upgrades** at Greenwich High School. This bid will be a lump sum for your work and material in accordance with the plans and specifications contained herein.

Bidders are urged to read all documents carefully and provide all information requested. Bids which are Incomplete, conditional, or contain irregularities of any kind, will be subject to rejection.

Bids must be submitted on the schedule form attached hereto. All unit prices must be filled in. Each bid must be submitted with one (1) original and three (4) copies of the bid. Bidders must submit bids in a clear, concise, and legible manner so as to permit proper evaluation of responsive bids. Faxed bids will not be accepted. The original bid and copies must be placed in a sealed plainly marked envelope bearing the following:

BUILDING Q PLUMBING UPGRADES (Greenwich High School) - BID NUMBER: 2251-19

KEY PROJECT DATES

A. Mandatory pre-bid walk through:

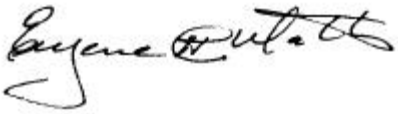
1. Friday March 15, 2019 at 10:30 am. Greenwich High School (Main Entrance).

B. Bid Due Date:

1. Sealed proposals will be received as indicated below, and at that time and place will be publicly opened and read aloud.
2. Date: **May 28, 2019**
3. Time: **11:00 AM local time**
4. Location: **District Offices**
5. Address: GREENWICH PUBLIC SCHOOLS, 290 Greenwich Ave., Greenwich, Connecticut 06830, (203) 625-7411
6.
7. All bidders are invited to attend the opening of bids.

Additional information for bidding is provided in the Instructions to Bidders.

Very truly yours,



Eugene H. Watts

INSTRUCTIONS TO BIDDERS

1.1 The Greenwich Public Schools, Greenwich, CT, invites bid proposals for the following:

A. **Building Q Plumbing Upgrades** for the Greenwich Public Schools at Greenwich High School.

1.2 BACKGROUND:

A. TOWN / DISTRICT: The Town of Greenwich is approximately 30 miles northeast of New York City and has a population of about 60,000 residents. The Greenwich Public Schools enjoy a national reputation for excellence and have strong support from the community. The fifteen public schools have an enrollment of 9,000 students and consists of eleven elementary schools (K-5), the middle schools (6-8), and one comprehensive high school (9-12).

B. MEP ENGINEER: Landmark Facilities Group, Inc. 252 East Avenue, Norwalk CT 06855

1.3 SCHEDULE:

A. Bidding Documents Available:

1. Hard Copies: At 2:00 PM on **May 6, 2019** copies of said Bidding Documents can be purchased from ARC/TRI-STATE, 326 Westport Ave, Norwalk, CT 06854, (tel) 203.866.5600.

B. Mandatory Pre-Bid Walk Through:

1. Monday **May 13, 2019 at 10:00 am**. Greenwich High School (Main Entrance).

C. Bid Due Date:

1. Sealed proposals will be received as indicated below, and at that time and place will be publicly opened and read aloud.
2. Date: **May 28, 2019**
3. Time: **11:00 AM local time**
4. Location: **District Offices**
5. Address: GREENWICH PUBLIC SCHOOLS, 290 Greenwich Ave., Greenwich, Connecticut 06830, (203) 625-7411
6. All bidders and other interested persons are invited to be present at this bid opening(s).

D. QUESTIONS:

1. Questions concerning this bid will be received by email only and directed to:

a. **bid_department@greenwich.k12.ct.us**.

In the subject line you must put BID #2251-19, Building Q Plumbing Upgrades.

2. All questions must be submitted no later than 12:00pm, May 16, 2019.

3. All answers will be provided by written BID ADDENDUM at **www.greenwichschools.org** at noon on May 20, 2019. It is the responsibility of all bidders to verify that they are current with all posted information.
4. Failure to comply with these conditions will result in the bidder waiving his right to dispute the bid specifications and conditions.

1.4 BID SUBMISSION / REQUIREMENTS:

A. Each bid shall be signed and accompanied by a bid security payable to the Town of

Greenwich in the amount of ten (10%) of the bid and shall be in the form of a Bid Bond only as issued in the bid documents. Bid Bonds must use the Greenwich Public Schools Bid Bond

Form (included within the bid documents), issued by a surety company listed on the current U.S. Dept of Treasury's Federal Register and be licensed to underwrite bonds in the State of Connecticut.

B. Each bid shall be accompanied by a completed copy of the CONTRACTOR'S QUALIFICATION STATEMENT included in the bid documents. The Greenwich Public Schools reserves the right to request further information and/or supplemental information with respect to the QUALIFICATION STATEMENT of its sole discretion.

C. Each bidder shall utilize the specified manufacturers. Should the contractor desire to substitute other articles, materials, apparatus, products or process, other than those specified or approved as equal, the contractor shall apply to the engineer, in writing, for approval of such substitution. It should be noted that the bid shall not be based on a substituted article, material, apparatus, product or process. No substitution review shall take place prior to bid.

D. Each form of the bid contains a section for alternates and for unit prices. All alternates prices must be completed with a dollar value. Blanks, "Not Applicable" (N/A), "No Effect", etc in these portions of the BID FORM shall be construed to indicate that the particular alternate shall be performed without increased to the contract price as they relate to the scope of the trade package.

E. Unit prices which do not affect the work all the bidder's trade may be filled in "Not Applicable" or "(N/A)". "Not Applicable" or Blanks in these Bid Forms shall be construed to indicate that the unit price is not applicable as it relates to the scope of the trade package.

F. TAX: No amount shall be added for the Connecticut sales tax or Federal tax. The Greenwich Public School system is exempt from the payment of taxes imposed by the Federal government and/or State of Connecticut. Taxes must not be included in the bid price.

G. PERMIT FEES: Greenwich Public Schools will secure the building permit(s) and upon award of the Contract they will be transferred to the awarded contractor / vendor. No cost should be included in the base bid for the building permit.

H. WAGES: All work shall be done in accordance with applicable State statutes; conditions of Prevailing Wages shall apply. Prevailing Wage Schedule provided herein is for demonstrable purposes only. It is the responsibility of the bidder / vendor to verify actual rates.

I. COLLUSION AMONG BIDDERS:

1. More than one offer from an individual, firm, partnership, corporation, or association under the same or different name will be rejected. Reasonable grounds for believing that a bidder is interested in more than one bid for the work contemplated will cause rejection of all bids in which the bidder is interested. Any or all bidders will be rejected if there is any reason for believing that collusion exists among the bidders.

2. Participants in such collusion may not be considered in the future offers for the same work. Each bidder, by submitting a bid, certifies that it is not part to any collusive action.

3. Each bid shall be accompanied by a completely filled in and properly executed **Non-Collusive Affidavit**, provided.

J. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED: The successful bidder will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or nation origin, except where religion, sex or national original is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor.

The successful bidder agrees to post in a conspicuous place, available to employees and applicants for employment, notices setting forth the provision of this nondiscrimination clause. The successful bidder in all solicitations or advertisements for employment, placed by or on behalf of the contractor, will state that such successful bidder in an EQUAL OPPORTUNITY EMPLOYER.

K. QUALIFICATIONS: No qualifications to the bid are allowed. If bids are qualified, they may be deemed non-responsive and subsequently rejected.

L. No Bidder may withdraw their Bid within 90 days after the actual date of Bid Opening.

M. COPIES: Failure to submit a bid with four copies does not constitute a material defect.

N. BID EVALUATION: A committee composed of various administrators will evaluate bids. The following criteria guidelines will be used in analyzing and evaluating this bid:

1. Conformance to the requirements of this bid, i.e. conformance to Terms, Conditions and Scope of Work.

2. Proven skills and technical competence.

3. Background of the firm.

4. For Vendor firm, identification of all personnel who will have a principal responsibility.

5. The Board of Education may consider proximity of the vendor's service as a factor in determining lowest responsible bid. Companies must be located within 60 miles of the School District in order to submit a bid.

6. The Board of Education shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish the Board of Education with information and data for this purpose as the Board of Education may request. The right is reserved to reject any bid where, on investigation, the evidence or information submitted by such bidders does not satisfy the Board of Education that the bidder is qualified to carry out properly the terms of the Contract.

7. Apparent low bidder agrees to submit the following Supplements to Greenwich Pubic Schools within 48 hours after submission of the Bid for consideration in award of the Contract:

a. Subcontractors; Include the names of all Subcontractors and the portions of the Work they will perform.

b. Cost Breakdown identifying the Bid Price/Sum segmented into portions as requested, broken down per school building. (Schedule of Values)

O. AWARD: The Contract shall be awarded to the lowest responsible and qualified bidder, meaning the bidder whose bid is the lowest of those bidders possessing the skill, ability, and integrity necessary to faithfully perform the work based on objective criteria considering past performance and financial responsibility. In considering past performance, the Greenwich Public Schools shall evaluate the skill, ability, and integrity of bidders in terms of the bidders' fulfillment of contract obligations and all the bidders' experienced or lack of experience with projects of similar size and scope. The Greenwich Public Schools reserves the right to consider as unqualified to do the work required by the bid documents any bidder that does not habitually perform with its own forces the major portion of the work involved in the bid documents. No contract will be awarded to any bidder who is at time of award not qualified under applicable regulations issued by the Secretary of Labor, United States of Department of Labor, or any applicable State and local laws and regulations.

P. REJECTION: after review of all sectors, terms, and conditions, including price, Greenwich Public Schools reserves the right to reject any and all bids, or any part thereof, or waive defects in same.

Q. Any bid may be withdrawn prior to the opening time and date. Any bids received after the specified time and date will not be considered.

1.5 BIDDER QUALIFICATIONS:

A. The Contractor shall hold a current "DAS Contractor Prequalification Certificate" (not a

predetermination letter) from the Department of Administrative Services of the State of Connecticut according to Connecticut General Statutes Section 4a-100, 4b-101, 4b-91,

previously stated as Public Act 03-215 and as amended by Public Act 04-141.

B. Bidders shall submit with their bids a "DAS Contractor Prequalification Certificate" as well as a current "Update (bid) Statement".

C. Questions regarding these requirements should be directed to the State of Connecticut, DAS. Contact information can be found at **www.das.state.ct.us**.

D. Companies must be located within 60 miles of the School District in order to submit a bid.

E. Companies submitting a bid must be in business under the same corporate name for a minimum of five (5) years.

F. Non-Connecticut Contractors: Pursuant to Connecticut General Statutes §12-430(7), as amended by Public Act No. 11-61, Section 66, a non-resident contractor shall comply with the State of Connecticut's bonding requirements.

1.6 CONTRACT:

A. SINGLE PRIME CONTRACT will be let for:

1. General Construction

2. Bid awards must be approved by the Greenwich Public Schools. All contractors shall be required to execute the Greenwich Public Schools standard form of Contract and accompanying Payment & Performance Bonds without exception.

B. LENGTH: This bid is for awarding the contract to cover the period beginning July 2, 2019. Once this Bid is awarded, successful bidder must make arrangements to meet with Greenwich Public Schools as required.

C. OPTION TO EXTEND: All work associated with the project shall be completed on or before August 23, 2019. The Board of Education may, at their option and with the approval of the vendor, extend the period of the Contract to December 14, 2019. If the Board of Education intends to extend the contract period, the vendor shall be notified in writing by the purchasing department at least fourteen (14) calendar days prior to the expiration of the original contract.

D. AWARD OF CONTRACT: The contract will be awarded by the Board of Education to a qualified firm or person at compensation determined to be fair and reasonable considering budgetary limitations, scope, complexity, and the nature of goods and/or services.

1. If there is a conflict between the Contract Agreement and the General Conditions, the Contract Agreement shall prevail.

2. The successful bidder will produce for the Greenwich Public Schools review a current financial statement, which will remain strictly confidential.

E. The contractor shall simultaneously with the signing of the Contract, furnish the Town the executed Performance, Maintenance, and Payment Bond of a surety company authorized to do business the State of Connecticut, and acceptable to the Town, in the sum of all the full amount of the Contract Obligation in the form provided by the Town. The Performance Bond will not be required where the total estimated cost of labor and materials under the contract with respect to which such general bid is submitted is less than one hundred thousand dollars ($100,000). Once a contract exceeds $100,000 the bidder will be responsible for obtaining and paying for all bonds required by Greenwich Public Schools.

F. FEE PAYMENTS: The Greenwich Public Schools reserves the right to provide payment in accordance with completion of services based on the Project Schedule.

G. BACKGROUND CHECK: The bidder is required to do Employee Background Checks as imposed by Section 2 of Public Act 16-67, which amended Conn. Gen, Stat, 10-222c.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 PROVISIONS:

A. Consumption or use of alcohol and / or drugs is prohibited on school property. Any individual with alcohol or drugs will be removed from said property and will not be allowed to work on the project. Smoking is prohibited in all school buildings and on school grounds.

B. Greenwich Public Schools reserves the right to reject any proposed subcontractor for reasonable cause.

BID FORM

The undersigned hereby proposes to furnish all labor, materials, devices, appliances, supplies, equipment, services and other facilities necessary to complete all of the work of the above referenced Contract, as required by, and in accordance with, the provisions of the Instructions to Bidders, the Conditions of the Contract, the Drawings and Specifications, all as prepared by Landmark Facilities Group, Inc. dated May 3, 2019; and that, if this Proposal is accepted, the Undersigned agrees to enter into an Agreement with the Owner to perform this work for the sum(s) as follows:

SUBMITTED BY: _____

Bidder's Full Name _____

Address _____

_____
City, State, Zip

1.1 **BASE BID VALUE:**

A. **BASE BID:** The Base Bid Proposal for all work required by the Contract Document for the Building Q Plumbing Ugrades Project at **GREENWICH HIGH SCHOOL** and Related Work is as follows:

_____ ($)DOLLARS

1.2 **ALTERNATE VALUES:**

The values of Alternates to the Base Bid amount are identified below.

1. Alternate #1_____ _____.
2. Alternate #2_____ _____.
3. Alternate #3_____ _____.
4. Alternate #4_____ _____.
5. Alternate #5_____ _____.
6. Alternate #6_____ _____.

1.3 **ACCEPTANCE**:

A. If this bid is accepted by Greenwich Public Schools within the time period stated above, we will:

1. Execute the Agreement within seven days of receipt of Notice of Award.
2. Furnish the required bonds within seven days of receipt of Notice of Award.

B. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to Greenwich Public Schools by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

1.4 **CONTRACT TIME:**

A. The Undersigned agrees in the Base Bid to complete the work as per the Milestone Schedule

provided in the Specifications.

1.5 **ADDENDA**:

A. The following Addenda have been received. The modifications to the Bid Document noted below have been considered and all cost are included in the Bid Sum.

1. Addendum#_____ Date_____.
2. Addendum#_____ Date_____.
3. Addendum#_____ Date_____.
4. Addendum#_____ Date_____.
5. Addendum#_____ Date_____.

1.6 **BIDDER'S FURTHER AFFIRMATION AND DECLARATION**

A. The above name bidder and should this bid be a joint bid each party thereto, further affirm and declares;

1. That said bidder is of lawful age and the only one interested in this bid; and that no other person, firm or corporation, except those herein above names has any interest in this bid or in the contract proposed to be entered into.

2. That said bidder is not in arrears to the Greenwich Public School upon debt or contract, and is not a defaulter, as surety or otherwise upon any obligation to the Greenwich Public Schools.

3. That no member of the Greenwich Public Schools or any officer or employee of the Greenwich Public School or person whose salary is payable in whole or in part from the School District treasury, or the spouse of any foregoing is or shall be or become interested, directly or indirectly, as a contracting party, partner, stockholder, surety or otherwise, in this bid, or in the performance of the Contract, or in the supplies, materials or equipment and work or labor to which it relates, or in any portion of the profits thereof.

4. That he/she has carefully examined the site of the work and that, from his / her own investigations, he/ she has satisfied him/ herself as to the nature and location of the work, and character, quality and quantity of material, and all difficulties likely to be encountered, the kind and extent of equipment and other facilities needed for the performance of the work, the general and local conditions, and all other items which may, in any way, effect the work or its performance.

5. That if a corporation, this bid or proposal containing the Non-Collusive Binding Certification and the foregoing Affirmation and Declaration has been authorized by the Board of Directors of such Corporation, which authorization includes the signing and submission of this bid or proposal and the inclusion therein of the said Certificate of Non-Collusion and Affirmation and Declaration as the Act and Dees of the Corporation.

BID FORM SIGNATURE(S)

_____
Signature Corporate Seal

Company Name:_____

was hereunto affixed in the presence of:

_____

Subscribed and sworn before me this day of _____ 2019

Notary Public:_____

My Commission Expire:_____

CONTRACTOR'S QUALIFICATION STATEMENT

With the submittal of the Bid Proposal Form (Section 00 0400), the bidder shall attach this Contractor's Qualification Statement and shall answer the Questions herein. Failure to answer these questions in full may be cause for rejection of the bidder's proposal. **If more space is needed, please attach other sheets with reference to subject paragraph**.

The Board of Education reserves the right to consider, but not limited to, the financial responsibility, experience and reputation in the construction industry, as well as the specific qualifications listed below and elsewhere in this document in considering bids and awarding the contract. The Board of Education reserves the right to waive any informalities if, at its discretion the interest of the Greenwich Public Schools will be better served.

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

SUBMITTED TO: Greenwich Public Schools

ADDRESS: 290 Greenwich Avenue, Greenwich, CT 06830

SUBMITTED BY: Corporation

NAME Partnership

ADDRESS: Individual

PRINCIPAL OFFICE Other

NAME OF PROJECT: Building Q Plumbing Upgrades – Greenwich High School

TYPE OF WORK (file separate for each Classification of Work)

_____General Construction _____HVAC

_____Plumbing _____Electrical

_____Other _____Fire Alarm

1.1 ORGANIZATION

A. How many years has your organization been in business as a Contractor?

B. How many years has your organization been in business under its present business name?
1. Under what other or former names has your organization operated?

C. What is the firm's bonding range?
1. Single
2. Aggregate

D. If your organization is a corporation, answer the following:
1. Date of Incorporation:
2. State of Incorporation:

3. President's name:
4. Vice-president's name(s):

5. Secretary's name:
6. Treasurer's name:

E. If your organization is a partnership, answer the following:
1. Date of organization:
2. Type of partnership (if applicable):
3. Name(s) of general partner(s):

F. If your organization is individually owned, answer the following:
1. Date of organization:
2. Name of owner:

G. If the form of your organization is individually owned, answer the following:
1. If the form of your organization is other than those listed above, describe it and name the principals:

1.2 OWNERSHIP, MANAGEMENT, AFFILIATION

A. Identify each person who is or has been within the past five years, an owner of 5.0% or more of the firm's shares, one of the five largest shareholders, a director, an officer, a partner or the proprietor, or a managerial employee.

First Name	MI	Last Name	DOB	% Owned	Director Y or N	Officer Y or N	Title	Partner Y or N

B. Joint Ventures: Provide information for all firms involved. Fill in name, % owned, office held; indicate by Y or N whether director, officer, partner and title.

First Name	MI	Last Name	DOB	% Owned	Director Y or N	Officer Y or N	Title	Partner Y or N

C. Identify any other firms in which now or in the past five years, the firm or any of the individuals listed in questions 1.2.A and 1.2.B above, either owned or owns 5.0% or more of the shares of or was or is one of the five largest shareholders, a director, an officer, a partner or a proprietor of said other firm. _____Yes, list below _____No

D Has the firm or any firm listed in response to questions above defaulted or been terminated and its surety called upon to complete, any contract awarded within the past five years ( ) Yes, (

Federal ID No.	% Owned	Firm/Company Name: Position	Company Address

) No. If yes, give date(s), agency(ies)/owner(s), project(s), contract numbers, and describe including the result:

E. List below any projects performed by the bidder in the past five (5) years on which any of the following events occurred:

F.
1. Were any extension of time requested by the contractor, and were such requests granted?
2. Was litigation and/or arbitration commenced by either the Owner or the bidder as a result of the work of the project performed by the bidder?
3. Were any liens filed on the project by subcontractors or material suppliers of the bidder?
4. Did the bidder make any claims for extra work on the project, and did said claim result in a change order?

Project	Type of Event	Name/Address of Owner	Name & Phone # of Contact Person at Owner

G. For all contracts within the past five years: (a) List all liens or claims over $25,000 filed against the firm and remaining undischarged or unsatisfied for more than 90 days; and (b) list and describe all liquidated damages assessed.

1.3 FINANCIAL INFORMATION

A. Provide a copy of the firm's most recent annual financial statement.

1.4 OTHER INFORMATION

A. Within the past five years has the firm, any affiliate, any predecessor company or entity or any person identified in questions number 1.1 through 1.2 above been the subject of any of the following: (Respond to each question and describe in detail the circumstances of each affirmative answer: (Attach additional pages if necessary).

1. A judgment of conviction for any business-related conduct constituting a crime under state or federal law. No _____ Yes _____
2. A criminal investigation or indictment for any business-related conduct constituting a crime under state or federal law? No _____ Yes _____
3. An order of protection filed against an officer or employee prohibiting access to jobsite(s) or prohibiting contact with any staff of any owner? No _____ Yes _____
4. A grant of immunity for any business-related conduct constituting a crime under state and federal law? No _____ Yes _____
5. A federal or state suspension or debarment? No _____ Yes _____
6. A rejection of any bid for lack of qualifications, responsibility or because of the submission or an informal, non-responsive or incomplete bid? No _____ Yes _____
7. A rejection of any proposed subcontract for lack of qualifications, responsibility or because of the submission or an informal, non-responsive or incomplete bid? No _____ Yes _____
8. A denial or revocation of prequalication? No _____ Yes _____
9. A voluntary exclusion from bidding/contracting agreement? No _____ Yes _____
10. Any administrative proceeding or civil action seeking specific performance or restitution in connection with any public works contract except any disputed work proceeding? No _____ Yes _____
11. An OSHA Citation and Notification of Penalty containing a violation classified as serious? No _____ Yes _____
12. An OSHA Citation or Notification of Penalty containing a a violation classified as willful? No _____ Yes _____
13. A prevailing wage or supplement payment violation? No _____ Yes _____
14. A State Labor Law violation deemed willful? No _____ Yes _____
15. Any other federal or state Citations, Notices, violation orders, pending administrative hearings or proceedings or determinations of a violation of any labor law or regulation? No _____ Yes _____
16. Any criminal investigation, felony indictment or conviction concerning formation of or any business association with, an allegedly false or fraudulent women's, minority or disadvantaged business enterprise? No _____ Yes _____
17. Any denial, decertification, revocation or forfeiture of Women's Business Enterprise, Minority Business Enterprise or Disadvantaged Business Enterprise status? No _____ Yes _____
18. Rejection of a low bid on a State contract for failure to meet statutory affirmative action M/WBE requirements? No _____ Yes _____
19. A consent order with the NYS Department of Environmental Conservation or a federal, state or local government enforcement determination involving a violation of federal or state environmental laws? No _____ Yes _____
20. Any bankruptcy proceeding? No _____ Yes _____
21. Any suspension or revocation of any business or professional license? No _____ Yes _____
22. Any citations, notices, violation orders, pending administrative hearings or proceedings or determinations for violation of: No _____ Yes _____

No_____Yes_____ _____ _____
Federal, state or local health laws, rules or regulations? _____ _____
Federal, state or local environmental laws, rules and regulations? No Yes

Unemployment insurance or workers compensation coverage
or claim requirements? No _____ Yes _____
ERISA (Employee Retirement Income Security Act)? No _____ Yes _____
Federal, state or local human rights laws? No _____ Yes _____
Federal or state security laws? No _____ Yes _____

23. Withdrawal or an agreement to withdraw a bid submitted to a public owner or a request by a public owner to withdraw a bid? No _____ Yes _____
24. During the five year period preceding the submission of this bid, has the bidder been named as a part in any lawsuit in an action involving a claim for personal injury or wrongful death arising from the performance of work related to any project in which it has been engaged? If the answer to the question is yes, list all such lawsuits, the index number associated with said lawsuit and the status of the lawsuit at the time of the submission of this bid. No _____ Yes _____
25. During the five year period preceding the submission of this bid, has the bidder been the subject of proceedings before the Department of Labor for alleged violations of the Labor Law as it related to the payment of prevailing wages and/or supplemental payment requriements? If the answer to the question is yes, list each such instance of the commencement of a Department of Labor proceeding, for which project such proceeding was commenced, and the status of the proceeding at the time of the submission of this bid. No _____ Yes _____
26. During the five year period preceding the submission of this bid, has the bidder been the subject of proceedings involving allegations that it violated the Worker's Compensation Law including but not limited to the failure to provide proof of worker's compensation or disability coverage and/or any lapses thereof? If the answer to the question is yes, list such instsance of violation and the status of the claimed violation at the time of disposition of this bid. No _____ Yes _____
27. Has the bidder, its officers, directors, owner and/or managerial employees been convicted of a crime of been the subject of a criminal indictment during the five years preceding the submission of this bid? If the answer to the question is yes, list the name of the individual convicted or indicted, the charge against the individual and the date of disposition of the charge. No _____ Yes _____
28. During the five year period preceding the submission of this bid, has the bidder been charged with and/or found guilty of any violations of federal, state or municipal environmental and/or health laws, codes, rules and/or regulations? If the answer to the question is yes, list the nature of the charge against the bidder, the date of the charge, and the status of the charge at the time of the submission of this bid. No _____ Yes _____
29. Has the bidder ever defaulted or had its surety called upon to complete any contract awarded within the past five years? If the answer to the question is yes, list the projects, the dates and the nature of the termination (convenience, suspension, for cause). No _____ Yes _____
30. Has any officer or partner of the bidder's organization ever defaulted or had its surety called upon to complete any contract awarded within the past five years or been an office or partner of some other organization that has been terminated from a project by an owner? If yes, state: No _____ Yes _____

Name of Individual	Name of Organization	Reason(s)

C. LICENSING

1. List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration of license numbers, if applicable.

2. List jurisdictions in which your organization's partnership or trade name is filed:

3. Has any director, officer, owner or managerial employee had any professional license suspended or revoked? If the answer is yes, list the name of the individual, the professional license he/she formally had, whether the license was revoked or suspended and the date of the revocation or suspension.

No_____ Yes_____

1.5 EXPERIENCE

A. List the categories of work that your organization will perform with its own forces:

1. Claims and Suits. (If the answer of any of the questions below is yes, please attach details.)

a. Have you or has any director, officer, owner or managerial employee ever failed to complete any work awarded to them? If yes, list the project(s) the date(s) and the reason(s) for the failure to complete. No _____ Yes _____

b. Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers? No _____ Yes _____

c. Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years? No _____ Yes _____

d. Within the past five years, has any officer or principal of your organization ever been an officer or a principal of another organization when it failed to complete a construction contract? If the answer is yes, please attach details. No _____ Yes _____

.

B. On a separate sheet, list **all** similar construction projects your organization has in progress or completed, giving the name of project, owner, engineer, contract amount, percent complete and scheduled completion date.

1. State total worth of work in progress and under contract:

C. On a separate sheet, list **all** projects, not listed above, that your organization has completed or in progress in the past five years, giving the name of the project, owner, engineer, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

1. State average annual amount of construction work performed during the past five years:

D. On a separate sheet, list the construction experience and present commitment of the key individuals of your organization.

1.6 REFERENCES

A. Trade reference:

B. Bank references:

C. Surety:

1. Name of present bonding company:

2. Name and address of agent:
3. Name or previous bonding company:

1.7 CERTIFICATION

A. The undersigned recognizes that this questionnaire is submitted for the purpose of the Greenwich Public Schools (Owner) to award a contract or approve a subcontract; acknowledges that the Owner may in its discretion, by means which it may choose, determine the truth and accuracy of all statements made herein; acknowledge that intentional submission of false or misleading information may constitute a felony, or a misdemeanor, and may also be punishable by a fine or imprisonment; and states that the information submitted in this questionnaire and any attached pages is true, accurate and complete.

B. Dated at this day of _____

_____
Name of Organization:

_____
By:

_____
Title:

SWORN AND SUBSCRIBED TO BEFORE ME, A NOTARY PUBLIC, IN AND FOR

THE COUNTY OF _____ AND THE STATE OF _____

THIS _____ DAY OF _____, 2019

_____ MY COMMISSION EXPIRES_____
NOTARY PUBLIC

NON-COLLUSION AFFIDAVIT

GREENWICHPUBLIC SCHOOLS
290 GREENWICH AVE

GREENWICH, CONNECTICUT

State of _____:

County of _____:s.s.

I state that I am the_____ of _____
(TITLE) (NAME OF MY FIRM)

and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

(1) The price(s) and amount of this bid have been arrived at independently and without consultation communication or agreement with any other contractor, bidder/proposer or potential bidder/proposer.

(2) Neither the price(s) nor the amount of this bid/rfp, and neither the approximate price(s) nor approximate amount of this bid/rfp, have been disclosed to any other firm or person who is a bidder/proposer or potential bidder/proposer, and they will not be disclosed before bid/rfp opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding/proposing on this contract, or to submit a bid/proposal higher than this bid/rfp, or to submit any intentionally high or noncompetitive bid/rfp or other form of complementary bid/rfp.

(4) I fully understand that more than one offer from an individual, firm partnership; corporation or association under the same or different name will be rejected. Reasonable grounds for believing that a bidder/proposer is interested in more than one bid/rfp for the work contemplated may cause rejection of all bids/rfps in which the bidder/proposer is interested. Any or all bidders/proposers will be rejected if there is any reason for believing that collusion exists among the bidders/proposers. Participants in such collusion may not be considered in the future offers for the same work. Each bidder/proposer by submitting a bid/proposal certifies that it is not a part to any collusive action.

(5) The bid/rfp of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid/proposal.

(6) _____its affiliates, subsidiaries, officers,
(NAME OF MY FIRM)

directors and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by State or Federal law in any

jurisdiction, involving conspiracy or collusion with respect to bidding/proposing on any public contract, except as follows:

I state that _____ understands and acknowledges that
(NAME OF MY FIRM)

the above representations are material and important, and will be relied on by Greenwich Public Schools in awarding the bid/proposal for which this is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from Greenwich Public Schools of the true facts relating to the submission of bids/proposals for this contract.

(7) I agree to furnish and deliver all services on the date and time agreed on by
_____ and the Greenwich Board of Education at
(NAME OF MY FIRM)

The time the purchase order is placed. Furthermore, there will not be any cancellations to the Board of Education. If a bidder/proposer submits a bid/proposer on any item he/she will be responsible for delivering that item at the bid/proposal cost, in accordance with the attached above specifications, which were submitted with this bid/proposal and upon which the bid/proposal was made.

(8) In submitting this bid/proposal, the undersigned declares that this is made without any connection with any persons making another bid/proposal on the same contract; that the bid/proposal is in all respects fair and without collusion, fraud or mental reservation; and that no official of the Town, or any person in the employ of the Town, is directly or indirectly interested in said bid/proposal or in the supplies or work to which it relates, or in any portion of the profits thereof.

(9) In submitting this bid, the undersigned further declares that it has not, and will not, induce or attempt to induce any Town of Greenwich employee or officer to violate the Greenwich Code of Ethics in connection with its offer to provide goods or services under, or otherwise in the performance of such contract.

(10) The undersigned further understands that the above declarations are material representations to the Town of Greenwich made as a condition to the acceptance of the bid/proposal. If found to be false, the Town of Greenwich retains the right to reject said bid/proposal and rescind any resultant contract and/or purchase order and notify the undersigned accordingly, thereby declaring as void said bid/proposal and contract or purchase order.

(11) The Greenwich Code of Ethics can be found at www.greenwichct.org. Code of Ethics stated as follows:

(2) DEFINITION. (1)Indirect interest, without limiting its generality, shall mean and include the interest of any subcontractor in any prime contract with the Town and the interest of any person or his immediate family in any corporation, firm or partnership which as a direct or indirect interest in any transaction with the Town. (2) Substantial financial interest shall mean any financial interest, direct or indirect, which is more than nominal and which is not common to the interest of other citizens of the Town. (3) Town Officer shall mean and include any official, commission, committee, legislative body or other agency of the Town. (4) Transaction shall mean and include the offer,

sale or furnishing of any real or personal property, material, supplies otherwise, for the use and benefit of the Town for a valuable consideration, excepting the services of any person as a Town Officer.

(3) GIFTS AND FAVORS. No Town Officer or his immediate family shall accept any valuable gift, things, favor, loan or promise which might tend to influence the performance or nonperformance of his official duties.

(4) IMPROPER INFLUENCE. No Town Officer having a substantial financial interest in any transaction with the Town or in any action to be taken by the Town shall use is office to exert his influence or to vote on such transaction or action.

VENDOR INFORMATION. (Please print the following)

_____
VENDOR NAME

_____
ADDRESS

_____
TELEPHONE FAX #

_____
E-MAIL WEB SITE

_____
AUTHORIZED SIGNATURE TITLE

(12) By signing this bid/proposal the bidder/proposer understands and agrees to the attached terms, conditions, and specifications, including Collusion among Bidders/Proposers Employment Discrimination by the Contractor Prohibited.

_____
SIGNATURE

SWORN AND SUBSCRIBED TO BEFORE ME, A NOTARY PUBLIC, IN AND FOR THE COUNTY OF

_____ AND THE STATE OF

_____THIS _____

DAY OF _____, 20_____

_____ MY COMMISSION EXPIRES_____
NOTARY PUBLIC

Minimum Rates and Classifications for Building Construction

ID# : B 25725

Connecticut Department of Labor
Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: Project Town: Greenwich

State#: FAP#:

Project: Building Q Plumbing Upgrades At Greenwich High School

CLASSIFICATION	Hourly Rate	Benefits
1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings	38.25	27.96
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters.**See Laborers Group 7**		
1c) Asbestos Worker/Heat and Frost Insulator	40.21	29.30

As of: **Thursday, February 28, 2019**

Project: Building Q Plumbing Upgrades At Greenwich High School

2) Boilermaker	38.34	26.01
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	34.72	33.58 + a
3b) Tile Setter	34.90	25.87
3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
3d) Tile, Marble & Terrazzo Finishers	26.70	21.75
3e) Plasterer	33.48	32.06

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Project: Building Q Plumbing Upgrades At Greenwich High School

------LABORERS------

4) Group 1: Laborers (common or general), acetylene burners, concrete specialists, wrecking laborers, fire watchers.	30.05	20.10
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofer/mixer/nozzleman (Person running mixer and spraying fireproof only).	30.30	20.10
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	30.55	20.10
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is $26.80.	30.55	20.10
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	30.55	20.10

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4e) Group 6: Blasters, nuclear and toxic waste removal.	31.80	20.10
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	31.05	20.10
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	28.38	20.10
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	27.86	20.10
4i) Group 10: Traffic Control Signalman	16.00	20.10
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	32.60	25.34

Project: Building Q Plumbing Upgrades At Greenwich High School

5a) Millwrights	33.14	25.74
6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	34.50	29.64
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	53.37	33.705+a+b
-----LINE CONSTRUCTION----		
Groundman	26.50	6.5% + 9.00
Linemen/Cable Splicer	48.19	6.5% + 22.00

As of: **Thursday, February 28, 2019**

8) Glazier (Trade License required: FG-1,2)	37.18	21.05 + a
9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	35.47	35.14 + a
----OPERATORS----		
Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over), work boat 26 ft. and over and Tunnel Boring Machines. (Trade License Required)	39.55	24.30 + a
Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver ($3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	39.23	24.30 + a
Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar);Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	38.49	24.30 + a

Project: Building Q Plumbing Upgrades At Greenwich High School

Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	38.10	24.30 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	37.51	24.30 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	37.51	24.30 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	37.20	24.30 + a
Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	36.86	24.30 + a
Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	36.46	24.30 + a

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Project: Building Q Plumbing Upgrades At Greenwich High School

Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	36.03	24.30 + a
Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	33.99	24.30 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	33.99	24.30 + a
Group 12: Wellpoint operator.	33.93	24.30 + a
Group 13: Compressor battery operator.	33.35	24.30 + a
Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	32.21	24.30 + a

As of: **Thursday, February 28, 2019**

Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	31.80	24.30 + a
Group 16: Maintenance Engineer/Oiler.	31.15	24.30 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	35.46	24.30 + a
Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	33.04	24.30 + a
------PAINTERS (Including Drywall Finishing)------		
10a) Brush and Roller	33.62	21.05

Project: Building Q Plumbing Upgrades At Greenwich High School

10b) Taping Only/Drywall Finishing	34.37	21.05
10c) Paperhanger and Red Label	34.12	21.05
10e) Blast and Spray	36.62	21.05
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	42.62	31.21
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
Roofer: Cole Tar Pitch	41.50	17.00 + a

As of: **Thursday, February 28, 2019**

Roofer: Slate, Tile, Composition, Shingles, Singly Ply and Damp/Waterproofing	40.00	17.00 + a
15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	43.70	42.40
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	42.62	31.21
------TRUCK DRIVERS------		
17a) 2 Axle	29.13	23.33 + a
17b) 3 Axle, 2 Axle Ready Mix	29.23	23.33 + a

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Project: Building Q Plumbing Upgrades At Greenwich High School

17c) 3 Axle Ready Mix	29.28	23.33 + a
17d) 4 Axle, Heavy Duty Trailer up to 40 tons	29.33	23.33 + a
17e) 4 Axle Ready Mix	29.38	23.33 + a
17f) Heavy Duty Trailer (40 Tons and Over)	29.58	23.33 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	29.38	23.33 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	43.92	15.84 + a

As of: **Thursday, February 28, 2019**

19) Theatrical Stage Journeyman	25.76	7.34

Project: Building Q Plumbing Upgrades At Greenwich High School

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional $1.25 per hour for truck drivers.*

***Note: Hazardous waste premium $3.00 per hour over classified rate*

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra $4.00 premium in addition to the hourly wage rate and benefit contributions:

1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)

2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - $1.50 extra
Crane with 200 ft. boom (including jib) - $2.50 extra
Crane with 250 ft. boom (including jib) - $5.00 extra
Crane with 300 ft. boom (including jib) - $7.00 extra
Crane with 400 ft. boom (including jib) - $10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyperson instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

As of: **Thursday, February 28, 2019**

Project: Building Q Plumbing Upgrades At Greenwich High School

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

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

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: **Thursday, February 28, 2019**

REFERENCES

List at least five (5) references for similar projects in size, scope, and complexity, within Connecticut and / or New York.

THIS PAGE MUST BE COMPLETED AND SUBMITTED WITH YOUR BID.

1) Client_____

Project Address_____

Approximate $ Value _____ Date: Started _____ Completed _____

Contact: Name _____Telephone # _____

2) Client_____

Project Address_____

Approximate $ Value _____ Date: Started _____ Completed _____

Contact: Name _____Telephone # _____

3) Client_____

Project Address_____

Approximate $ Value _____ Date: Started _____ Completed _____

Contact: Name _____Telephone # _____

4) Client_____

Project Address_____

Approximate $ Value _____ Date: Started _____ Completed _____

Contact: Name _____Telephone # _____

5) Client_____

Project Address_____

Approximate $ Value _____ Date: Started _____ Completed _____

Contact: Name _____Telephone # _____

FORM OF BID BOND

TOWN OF GREENWICH, CONNECTICUT
BID BOND

_____
Date Bond Executed

_____
Principal

_____
Surety

_____
Penal Sum of Bond (express in words and figures) Date of Bid

_____

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the Town of Greenwich, Connecticut, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents, THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal has submitted the accompanying bid, dated as shown above for _____.
(name of bid)

_____

NOW THEREFORE, if the principal shall not withdraw said bid within the period specified therein after the opening of the same, or if no period be specified, within sixty (60) days after said opening, and shall within the period specified therefor, or if no period specified, within ten (10) days after the prescribed forms are presented to him for signature, execute such further contractual documents, if any, as may be required by the term of the Bid as accepted, and give bonds with good and sufficient surety or sureties as may be required, for the faithful performance and proper fulfillment of the resulting contract, and for the protection of all person supplying labor and material in the prosecution of the work provided for in such contract or in the event of the withdrawal of said bid within the period specified, or the failure to enter into such contract and give such bonds within the time specified, if the principal shall pay the Town of Greenwich, Connecticut, the difference between the amount specified in said bid and the amount for which said Town may procure the required work, supplies, and services, if the latter amount be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF the above bounden parties have executed this instrument under their several seals on the date indicated above. The name and corporate seal (if applicable) of each corporate party being hereto affixed:

Name of Partnership

_____ (SEAL)

Business Address

_____

Partner- (Hereunto Duly Authorized)

IN THE PRESENCE OF:

WITNESS INDIVIDUAL PRINCIPAL

1._____AS TO_____ (SEAL)

2._____AS TO_____ (SEAL)

3._____AS TO_____ (SEAL)

4._____AS TO_____ (SEAL)

_____

CORPORATE/ LLC PRINCIPAL

_____

BUSINESS ADDRESS AFFIX
CORPORATE
SEAL

_____

WITNESS

_____

BY- (HEREUNTO DULY AUTHORIZED)

_____

TITLE

_____

CORPORATE/ LLC PRINCIPAL

_____

BUSINESS ADDRESS AFFIX
CORPORATE
SEAL

_____

WITNESS

_____

BY- (HEREUNTO DULY AUTHORIZED)

_____

TITLE

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ of the corporation named as principal in the within bond; that _____, who signed said bond on behalf of the principal, was then _____ of the corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing body.

_____
(Corporate Seal)

PERFORMANCE, MAINTENANCE AND PAYMENT BOND

BOND NO. _____ CONTRACT NO. _____

KNOW ALL MEN BY THESE PRESENTS. That we _____

_____, as Principal, and _____

a corporation organized under the laws of the State of_____ and authorized to do business in the State of Connecticut as Surety, for holden and firmly bound jointly and severally unto the Town of Greenwich, Connecticut, herein referred to as the Town, the territorial corporation located in the County of Fairfield, in the penal sum of

_____ Dollars ($_____),

to be paid to it or its certain attorney, successors or assigns, to which payment well and truly to be made, we the said Obligors do bind ourselves, and each of us, our heirs, executors, administrators, and successors firmly by these presents.

IN WITNESS WHEREOF we have hereunto set for cause to be set our respective hands, names and seals this

_____ day of _____, 20___

The condition of this obligation is such, that whereas the above named Principal has entered into a certain written contract with the Town of Greenwich, Connecticut, dated the

_____ day of _____, 20___

NOW, THEREFORE, if the said Principal shall well and faithfully perform said contract according to its provisions, and fully indemnify and save harmless the Town from all costs and damages which the Town may suffer by reason of failure so to do, and shall pay for all equipment, appurtenances, materials and labor furnished, used or employed in the execution of said contract, and shall indemnify and save harmless the Town from all suits or claims of any nature or description against the Town by reason of any injuries or damages sustained by any person or persons on account of any act or omission of said Principal, his servants or agents, or his subcontractors in the construction of the work or in guarding the work, or on account of the use of faulty or improper materials, or by reason of claims under the Workmen's Compensation Laws or other laws by any employee of the Principal or his subcontractors, or by reason of the use of patented material, machinery, device, equipment, process, method of construction or design in any way involved in the work, and shall indemnify the Town against such defective workmanship, material and equipment as may be discovered within one (1) year after completion and final acceptance of the work, and shall make good in such defective workmanship and material as may be discovered within said period of one (1) year, then the obligation shall be void, otherwise to remain in full force and effect.

The Surety hereby stipulates and agrees that any modifications, omissions or additions in or to the terms of the aforesaid contract, or in or to the plans or specifications therefor, or any extension of time, shall in no wise affect the obligation of the Surety under this bond, the surety hereby waiving any and all right to any notice of any such modifications, omissions, changes, additions or extensions.

Contractor Name:_____ By:_____

Surety Name:_____ By:_____

INSURANCE PROCEDURE

PLEASE NOTE:

THIS PAGE MUST BE RETURNED WITH YOUR BID/RFP. FAILURE TO DO SO MAY RESULT IN YOUR BID/RFP BEING REJECTED.

Please take the insurance requirements of the Contract to your agent/broker immediately upon receipt of the bid documents to determine your existing coverage and any costs for new or additional coverage required for the work noted in this Request for BID/RFP. Any BID/RFP with deficient insurance requirements will be rejected.

STATEMENT OF VENDOR:

I have read the insurance requirements for this work and have taken the documentation to my insurance agent/broker. The BID/RFP cost reflects any additional costs relating to insurance requirements for this work.

_____ _____

Signature Date

Insurance Requirement Sheet

Insurance Requirements: Before starting and until final completion and acceptance of the work called for in the Contract and expiration of the guarantee period provided for in the Contract, the Contractor and its subcontractors, if any, shall procure and maintain insurance of the types and amounts checked in paragraphs A through F below for all Contract operations.

☒ **A. General Liability, with minimum coverages for combined bodily injury and property damage liability of $2,000,000 general aggregate, $1,000,000 per occurrence including:**

- ☒ **1. Commercial General Liability.**
- ☒ **2. Town as additional insured.**
- ☐ **3. Owners and Contractors Protective Liability(separate policy in the name of the Town).**

☒ **B. Comprehensive Automobile Liability, with minimum coverages of $1,000,000 combined single limit for bodily injury and property damage, including, where applicable, coverage for any vehicle, all owned vehicles, scheduled vehicles, hired vehicles, non-owned vehicles and garage liability.**

☒ **C. Excess Liability, with minimum coverage of $5,000,000 in umbrella form, or such other form as approved by Town Department Head and Risk Management Director.**

☒ **D. Workers' Compensation and Employer's Liability, with minimum coverages as provided by Connecticut State Statutes.**

☐ **E. Professional Liability (for design and other professionals for Errors and Omissions), with minimum coverage of $5,000,000. If the policy is on a claims-made basis, coverage shall be continually renewed or extended for three (3) years after work is completed under the Contract.**

☐ **F. Other (Builder's Risk, etc.):_____.**

☒ **G. CERTIFICATE HOLDER: TOWN OF GREENWICH**

ATTN: BOARD OF EDUCATION. (Also fill in on ACORD Certificate of Insurance)

290 Greenwich Avenue, Greenwich, CT 06830.

The **Acord certificate of insurance form** must be executed by your insurance agent/broker and returned to this office. Company name and address must conform on all documents including insurance documentation. It is required that the agent/broker note the individual insurance companies providing coverage, rather than the insurance group, on the Acord form. The Contract number (provided to the awarded Contractor), project name and a brief description must be inserted in the "Description of Operations" field. It must be confirmed on the Acord Form that the Town of Greenwich is endorsed as an additional insured by having the appropriate box checked off and stating such in the "Description of Operations" field. **A letter from the awarded vendor's agent/broker certifying**

that the Town of Greenwich has been endorsed onto the general liability policy as an additional insured is also mandatory. This letter **must follow exactly the format provided by the Purchasing Department and must be signed by the same individual authorized representative who signed the Acord form.** If the insurance coverage required is provided on more than one Acord certificate of insurance, then additional endorsement letters are also required. Contract development will begin upon receipt of complete, correct insurance documentation.

The Contractor shall be responsible for maintaining the above insurance coverages in force to secure all of the Contractor's obligations under the Contract with an insurance company or companies with an AM Best Rating of B+:VII or better, licensed to write such insurance in Connecticut and acceptable to the Risk Manager, Town of Greenwich. For excess liability only, non-admitted insurers are acceptable, provided they are permitted to do business through Connecticut excess line brokers per listing on the current list of Licensed Insurance Companies, Approved Reinsurers, Surplus Lines Insurers and Risk Retention Groups issued by the State of Connecticut Insurance Department.

(SAMPLE ENDORSEMENT LETTER)

AGENT/BROKER

(LETTERHEAD)

(Date)

Eugene H. Watts, Senior Buyer
Purchasing Department
Town of Greenwich/Board of Education
290 Greenwich Avenue – Havemeyer Building
Greenwich, CT 06830

Re:

Town of Greenwich/Board of Education / **Contract #**

Dear Mr. Watts:

The undersigned hereby certifies as follows:

(1) I am a duly licensed insurance agent under the laws of the State of **[insert State]** and an authorized representative of all companies affording coverage under the Acord form submitted herewith;

(2) The Town of Greenwich has been endorsed as an additional insured under the general liability policy no. [insert policy number], issued by **[insert company affording coverage] to [name of insured]**;

(3) The general liability policy referenced in paragraph (2) above meets or exceeds the coverage in Commercial General Liability ISO form CG 00 01 10 01, including contractual liability;

(4) The policies listed in the Acord form submitted to the Town of Greenwich in connection with the above-referenced contract have been issued to the insured in the amounts stated and for the periods indicated in the Acord form; and

(5) The Town of Greenwich shall be given thirty (30) days prior written notice of cancellation, lapse or restrictive amendment (except ten days notice of nonpayment) of the policies listed in the Acord form.

Sincerely,

Authorized Representative for all companies listed in the Acord form

A.M. BEST KEY RATING GUIDE FORM

The following insurance companies are licensed in the State of Connecticut per the 2018 edition of the **A.M. Best Key Rating Guide For Property and Casualty,**

1. Company Name: _____

a) Page Number: _____

b) Rating is: _____

2. Company Name: _____

a) Page Number: _____

b) Rating is: _____

3. Company Name: _____

a) Page Number: _____

b) Rating is: _____

4. Company Name: _____

a) Page Number: _____

b) Rating is: _____

5. Company Name: _____

a) Page Number: _____

b) Rating is: _____

6. Company Name: _____

a) Page Number: _____

b) Rating is: _____

AFFIRMATIVE ACTION COMPLIANCE AFFIDAVIT

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

AFFIRMATIVE ACTION COMPLIANCE AFFIDAVIT

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes. According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to "aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials." "Minority business enterprise" is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: "(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n." "Minority" groups are defined in Section 32-9n of the Connecticut General Statutes as "(1) Black Americans . . .(2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4)Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . ." An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder's qualifications under the contract compliance requirements:

(a) the bidder's success in implementing an affirmative action plan;

(b) the bidder's success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;

(c) the bidder's promise to develop and implement a successful affirmative action plan;

(d) the bidder's submission of employment statistics contained in the "Employment Information Form", indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and

(e)the bidder's promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

***INSTRUCTIONS:** Bidders must sign acknowledgement below and return acknowledgement to Awarding Agency along with bid proposal.

The undersigned acknowledges receiving and reading a copy of the "Notification to Bidders" form.

_____ _____
Signature Date

On behalf of:

_____

_____

_____

CONSENT OF SURETY

The Undersigned surety, being the surety which issued bonds No._____ for the Town of Greenwich Contract No. _____ hereby consents to release of final payment and all retainages to the contractor-principal.

(Name of Surety)

By_____
Its

ACKNOWLEDGMENT

STATE OF

ss:

COUNTY OF

This is to certify the above signatory who executed this instrument was either known to me or satisfactorily proven to me to be the person whom he purports to be.

_____
Notary Public

AFFIDAVIT FOR FINAL PAYMENT

The undersigned, being duly sworn, deposes and says:

1. That he is the _____ of the contractor in
(Title)
the project hereinafter referred to and is authorized to execute this affidavit on behalf of the contractor;

2. In connection with Contract # for _____
(Project Title)
it is represented that all payrolls, bills for services, materials, supplies, equipment and other indebtedness have been paid or otherwise satisfied and that there are no outstanding claims against the undersigned by any sub-contractor or material supplier, or no outstanding claims or intent to file a claim against the Town of Greenwich;

. This Affidavit is made at the request of the Town of Greenwich for the purpose of inducing final payment and knowing that it will rely upon the truth of the representation herein made.

_____
(Authorized signature)

_____
(Type or print name of authorized person)

Subscribed and sworn to before me, a Notary

Public, in and for the County of _____

and State of _____, this _____day

of _____, 2019

_____
Notary Public

Greenwich Public Schools
Greenwich High School
Building Q Plumbing Upgrades

ACORD **CERTIFICATE OF LIABILITY INSURANCE**

PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER, THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.
	INSUREERS AFFORDING COVERAGE
INSURED	INSURER A:
	INSURER B:
	INSURER C:
	INSURER D:
	INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OF 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	POLICY NUMBER	POLICY EFFECTIVE DATE(MM/DD/YY)	POLICY EXPIRATION DATE(MM/DD/YY)	LIMITS
	GENERAL LIABILITY COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE ☒ OCCUR ☐ _____ ☐ _____ GENERAL AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐PROJECT ☐ LOC				EACH OCCURENCE FIRE DAMAGE (Any one fire) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGRREGATE PRODUCTS-COMP/OP AGG
	AUTOMOBILE LIABILITY ☐ ANY AUTO ALL OWNED AUTOS ☐ SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS ☐ _____ ☐				COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	GARAGE LIABILITY ☐ ANY AUTO ☐				AUTO ONLY-EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC / AGG
	EXCESS LIABILITY ☐ OCCUR ☐ CLAIMS MADE ☐ DEDUCTIBLE ☐ RETENTION $				EACH OCCURRENCE AGGREGATE
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATU / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE – POLICY LIMIT
	Professional Liability				

Greenwich Public Schools
Greenwich High School
Building Q Plumbing Upgrades

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS		
The Town of Greenwich, and Greenwich Public Schools, and Landmark Facilities Group, Inc. are listed as additional insured for contract no.		
CERTIFICATE HOLDER	X ADDITIONAL INSURED; INSURER LETTER: __	CANCELLATION
Certificate Holder: Town of Greenwich Board of Education 290 Greenwich Avenue Greenwich, CT 06830		SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OF REPRESENTATIONS AUTHORIZED REPRESENTATIVE

Greenwich Public Schools
Greenwich High School
Building Q Plumbing Upgrades

SECTION / DRAWING NO.	DESCRIPTION
T-001	COVER SHEET
T-002	PROJECT NOTES AND KEY PLAN
E-100	BUILDING Q LOWER LEVEL ELECTRICAL PLAN
E-200	BUILDING Q ELECTRICAL SPECIFICATIONS
P-001	PLUMBING SYMBOLS, DETAILS, AND NOTES
P-100	BUILDING Q LOWER LEVEL PLUMBING PLAN
P-300	PLUMBING SPECIFICATIONS

Department of Revenue Services
State of Connecticut
Attn: Discovery Unit
25 Sigourney Street
Hartford CT 06106-5032
(New 09/03)

Form AU-764

Deposit by a Person Doing Business With a Nonresident Contractor

Purpose: A person doing business with a nonresident contractor uses **Form AU-764** to deposit 5% of the total contract price with the Department of Revenue Services (DRS) for a specific project in the state. The deposit ensures all taxes due to the State of Connecticut from the contractor are paid to DRS. Read the instructions on the reverse side before you complete this form. If you need help, call **860-541-3280**, Monday through Friday, 8:00 a.m. to 5:00 p.m., and choose Option 7.

Part I: Nonresident Contractor Information

Name	Connecticut Tax Registration No.
Address (Street or PO Box, City, State, and ZIP Code)	

Part II: Person Doing Business With a Nonresident Contractor Information

Name	Connecticut Tax Registration No., Federal ID No., or SSN
Address (Street or PO Box, City, State, and ZIP Code)	

Part III: Project Information

Physical Location of Project (Street, City or Town)	Name of Project

Commencement Date	Completion Date for Nonresident Contractor	Total Contract Price or Amount of Change Order ☐ Check the box if this deposit is for a change order	Amount of Deposit

Conditions of the deposit for the project detailed above:

- The nonresident contractor has entered into a contract related to real property at a Connecticut location.
- The person doing business with the nonresident contractor is depositing 5% of the total contract price with DRS to ensure all taxes that become due and owing during the period of the contract will be paid.
- The deposit is made within 30 days of the completion of the project.
- The deposit will be returned to the nonresident contractor upon written request by the contractor after DRS has examined its records and determined all taxes, interest, and penalties due during the term of the contract have been paid.
- The person doing business with the nonresident contractor must attach a copy of the final periodic billing to **Form AU-764**.

Declaration: I, an authorized agent of the person doing business with a nonresident contractor named above, declare under the penalty of law that I have examined **Form AU-764** and, to the best of my knowledge and belief it is true, complete, and correct. I understand the penalty for willfully delivering a false document or return to DRS is a fine of not more than $5,000, or imprisonment for not more than five years, or both.

Print Name	Title
Authorized Signature	Date

Receipt of Deposit: DRS acknowledges receipt of $ _____ from the person named above as doing business with a nonresident contractor related to real property at the Connecticut location noted above.

Signature of Authorized DRS Representative	Telephone	Date

General Instructions

A person doing business with a nonresident contractor working in Connecticut must submit **Form AU-764**, *Deposit by a Person Doing Business With a Nonresident Contractor*, with a deposit of 5% of the total contract price, including change orders and add-ons, not later than 30 days after the completion of the contract. This applies to all contracts with nonresident contractors, regardless of the nature of the real property affected or the tax-exempt status of the property owner. For more information, see **Special Notice 2003(20)**, *Legislation Affecting Contracts With Nonresident Contractors.*

A *nonresident contractor* is a contractor who does not maintain a regular place of business in this state. A *regular place of business* means any bona fide office, factory, warehouse, or other space in Connecticut at which a contractor is doing business in its own name in a regular and systematic manner, and which place is continuously maintained, occupied, and used by the contractor in carrying on its business through its employees regularly in attendance to carry on the contractor's business in the contractor's own name. A regular place of business does not include a place of business for a statutory agent for service of process or a temporary office whether or not it is located at the site of construction. A regular place of business also does not include locations used by the contractor only for the duration of the contract, such as short-term leased offices, warehouses, storage facilities, or facilities that do not have full time staff with regular business hours. An office maintained, occupied and used by a person affiliated with a contractor is not a regular place of business of the contractor.

Specific Instructions

Part I: Enter the name and complete address of the nonresident contractor on whose behalf the deposit is being made. Include the nonresident contractor's Connecticut tax registration number.

Part II: Enter the name and complete address of the person doing business with the nonresident contractor. If the nonresident contractor is the general contractor, enter the name and address of the owner of the property. If the nonresident contractor is a subcontractor, enter the name and address of the general contractor.

Enter the Connecticut tax registration number of the person doing business with the nonresident contractor. If the person doing business with the nonresident contractor does not have a Connecticut tax registration number, enter that person's Federal Employer Identification Number or Social Security Number.

Part III: Enter the name of the project and the complete address, including the street address and the city or town where the project is physically located.

Enter the commencement date of this project. The commencement date is the date the contract is signed or the date the nonresident contractor begins work on the project, but it is never later than the date the nonresident contractor begins work.

Enter the date on which work on this project was completed, which is the date the final periodic billing for the contract was made by the nonresident contractor. Note the final periodic billing may be due before payment of any retainage becomes due. The person making the deposit must attach a copy of the final periodic billing to **Form AU-764**.

If this is a deposit for a change order occurring after the deposit for the initial contract has been remitted to DRS, enter the additional amount being deposited for the change order and check the box. For a change order made after the final periodic billing for the original contract, the change order is deemed complete when it is billed by the nonresident contractor. Attach a copy of the final billing for the change order.

Enter, in words and figures, the total amount paid to the nonresident contractor under the contract or for the change order. Check the box if the deposit is for a change order.

Multiply the total contract price or the amount of the change order by 5% (.05) and enter the result on this line.

Declaration: An authorized representative of the person doing business with a nonresident contractor must sign and date the declaration. Return **Form AU-764**, with the copy of the final periodic billing, to:

Department of Revenue Services
State of Connecticut
Discovery Unit
25 Sigourney Street
Hartford CT 06106

Receipt: DRS will acknowledge receipt of the deposit by completing the bottom of Form AU-764 and returning a copy of it to the person making the deposit. Unless indicated otherwise, the person doing business with the nonresident contractor will not be liable for any claim of the nonresident contractor for the amount or for any claim of DRS for any taxes arising from the activities of the nonresident contractor on the project for which the bond deposit was made, once DRS has verified that total deposits represent 5% of the total contract price paid to the nonresident contractor for this project, including any change orders, and that the deposit is made within 30 days of completion of the project.

Department of Revenue Services
State of Connecticut
PO Box 2937
Hartford CT 06104-2937
(Rev. 12/12)

Form REG-1
Business Taxes Registration Application

DRS use only Connecticut Tax Registration Number

1. Reason for Filing Form REG-1 Check the applicable box:

- ☐ Opening a new business including but not limited to:
  a. An existing out-of-state business opening a location in Connecticut;
  b. Selling at a craft show, flea market, fair, or other venue in Connecticut or selling over the Internet; **or**
  c. An existing out-of-state business having employees in Connecticut (including nonresident contractors and loan-out companies).
- ☐ Opening a new location. **Enter your Connecticut Tax Registration No:** _____
- ☐ Registering for additional taxes. **Enter your Connecticut Tax Registration No:** _____
- ☐ Reopening a closed business.
  Enter Connecticut Tax Registration No. of the closed business: _____
- ☐ Purchasing an ongoing business. The buyer of an existing business may be responsible for tax liabilities of the previous owner. See the Informational Publication on Successor Liability for Sales and Use Taxes, Admissions and Dues Tax, and Connecticut Income Tax Withholding, on the DRS website.
  Enter Connecticut Tax Registration No. of the previous owner: _____
- ☐ Forming a business entity under Connecticut law or a non-Connecticut entity required to register with or to obtain a certificate of authority from the Connecticut Secretary of the State before transacting business in Connecticut.
- ☐ Establishing a passive investment company (PIC).
- ☐ Changing organization type. **Enter your current Connecticut Tax Registration No:** _____
- ☐ Hiring household employees and intend to withhold Connecticut income tax.
- ☐ Other (explain); see *Who Needs to Complete REG-1*. _____

2. Business Information: Type of organization

- ☐ Sole proprietorship
- ☐ General partnership
- ☐ Limited liability partnership (LLP)
- ☐ Limited partnership (LP)
- ☐ Limited partnership taxed as a corporation
- ☐ Single member LLC (SMLLC)
- ☐ Single member LLC taxed as a corporation
- ☐ Single member LLC taxed as an S corporation
- ☐ Limited liability company (LLC) taxed as a partnership
- ☐ Limited liability company (LLC) taxed as a corporation
- ☐ Limited liability company (LLC) taxed as an S corporation
- ☐ Corporation
- ☐ S Corporation
- ☐ Qualified subchapter S subsidiary (QSSS)
- ☐ Other (explain): _____

3. Nature of Business Activity
Check the box(es) that best describe your business:
☐ Retailer ☐ Wholesaler ☐ Manufacturer ☐ Service provider ☐ Other (explain): _____

4. Major Business Activity
Describe your major business activities:
_____

5. Business Name and Address

Organization name: Enter the name of the sole proprietor, partnership, corporation, or LLC.	Federal Employer Identification Number, if applicable
Business trade name	CT Secretary of the State Business ID No., if applicable

Business Location: Enter the physical address of the business. A post office box or rural route number is not acceptable. Home-based businesses and flea market or craft show vendors must enter a home address.

Address line 1	Address line 2	
City	State	ZIP code
Mailing address line 1 (Street or PO Box)	Address line 2	
City	State	ZIP code
Business telephone number	Email address	Bank name

6. List All Owners, Partners, Corporate Officers, or LLC Members Attach a separate sheet if needed.

Name (last, first, middle initial)			Title
Home address line 1 (street)		Home address line 2	
City	State	ZIP code	Home telephone number
SSN	Date of birth	Bank name	

Name (last, first, middle initial)			Title
Home address line 1 (street)		Home address line 2	
City	State	ZIP code	Home telephone number
SSN	Date of birth	Bank name	

Name (last, first, middle initial)			Title
Home address line 1 (street)		Home address line 2	
City	State	ZIP code	Home telephone number
SSN	Date of birth	Bank name	

Name (last, first, middle initial)			Title
Home address line 1 (street)		Home address line 2	
City	State	ZIP code	Home telephone number
SSN	Date of birth	Bank name	

7. Income Tax Withholding

Are you an employer that transacts business or maintains an office in Connecticut and intends to pay wages to resident employees or nonresident employees who work in Connecticut?..... ☐ Yes ☐ No

If you have a Connecticut tax registration number for withholding for another location and intend to file withholding for this new location under that number, enter that number here: _____ and skip to Section 8; otherwise continue.

Are you an out-of-state company voluntarily registering to withhold Connecticut income tax for your Connecticut resident employees who work outside of Connecticut?..... ☐ Yes ☐ No

Do you intend to withhold Connecticut income tax from pension plans, annuity plans, retirement distributions, or gambling distributions?..... ☐ Yes ☐ No

Do you pay nonresident athletes or entertainers for services they render in Connecticut?..... ☐ Yes ☐ No

Do you only have household employees and wish to withhold Connecticut income tax?..... ☐ Yes ☐ No

Do you only have agricultural employees and wish to withhold Connecticut income tax?..... ☐ Yes ☐ No

If **Yes**, do you file federal Form 943, Employer's Annual Tax Return for Agricultural Employees, and wish to file **Form CT-941**, *Connecticut Quarterly Reconciliation of Withholding,* annually? .... ☐ Yes ☐ No

If you answered **Yes** to any of the income tax withholding questions, **enter the date** you will start withholding Connecticut income tax. ..... __ __ (m m) __ __ (d d) __ __ (y y)

If you use a payroll service, enter the name of the payroll company: _____

8. Sales and Use Taxes

Do you sell, or will you be selling, goods in Connecticut (either wholesale or retail)? ..... ☐ Yes ☐ No

Do you rent equipment or other tangible personal property to individuals or businesses in Connecticut? ..... ☐ Yes ☐ No

Do you serve meals or beverages in Connecticut? ..... ☐ Yes ☐ No

Do you provide a taxable service in Connecticut? See the Informational Publication, *Getting Started in Business, and the Special Notice on Legislative* Changes Affecting the Sales and Use Taxes, on the DRS website, for a list of taxable services..... ☐ Yes ☐ No

If you answered **Yes** to any of the sales and use taxes questions, **enter the date** you will start selling or leasing goods or taxable services. ..... m m d d y y

8a Prepaid Wireless Service E 9-1-1

Do you sell prepaid wireless service in Connecticut?..... ☐ Yes ☐ No

If you answered **Yes, enter the date** you will start to sell these in Connecticut. ..... m m d d y y

9. Room Occupancy Tax

Do you provide lodging rooms for rent in a hotel, motel, or rooming house in Connecticut for 30 consecutive days or less? ..... ☐ Yes ☐ No

If you answered **Yes, enter the date** you will start to provide rooms for rent for lodging purposes in Connecticut. ..... m m d d y y

10. Business Entity Tax Do not complete this section if the entity is liable for the corporation business tax.

The **business entity tax** applies to all of the following business types formed under Connecticut law and to those non-Connecticut entities required to register with or obtain a certificate of authority from the Connecticut Secretary of the State before transacting business in the state, whether or not the business has registered or filed a certificate of authority, as the case may be, with the Connecticut Secretary of the State.

- S corporations (Qualified subchapter S subsidiaries (QSSS) are not liable for the business entity tax.);
- Limited liability companies (LLCs or SMLLCs) — any limited liability company that is, for federal income tax purposes, either:
- Treated as a partnership if it has two or more members; **or**
- Disregarded as an entity separate from its owner if it has a single member;
- Limited liability partnerships (LLPs); **and**
- Limited partnership (LPs).

Are you a business entity as described above? ☐ Yes ☐ No

Enter state you are organized under: _____ **Enter date of organization.** ..... m m - d d - y y

If not organized in Connecticut, enter the earlier of the date you started business in Connecticut or the date you registered with the Connecticut Secretary of the State. ..... m m - d d - y y

Enter the month your tax year closes: _____

11. Corporation and Unrelated Business Income Taxes

Corporation Business Tax Do not complete this section if the entity is liable for the business entity tax.

Are you a corporation? ..... ☐ Yes ☐ No

Are you an LLC, SMLLC, or other association taxed as a corporation?..... ☐ Yes ☐ No

Is this corporation exempt from federal income tax?..... ☐ Yes ☐ No

Have you received a determination from the Internal Revenue Services (IRS) that this corporation is exempt from federal income tax?..... ☐ Yes ☐ No

If **Yes**, enclose a copy of your IRS letter of determination.

Enter state you are organized under: _____ **Enter date of organization.** ..... m m d d y y

If not a Connecticut corporation, enter the earlier of the date you started business in Connecticut or the date you registered with the Connecticut Secretary of the State. ..... m m d d y y

Enter the month the corporate year closes: _____

Unrelated Business Income Tax

Are you a federally exempt organization that has unrelated business income attributable to a trade or business in Connecticut?..... ☐ Yes ☐ No

If you answered **Yes, enter the date** the unrelated business income tax liability started. ..... m m d d y y

Passive Investment Company (PIC)

Is this corporation a passive investment company as defined in Conn. Gen. Stat.§12-213(a)(27)? ☐ Yes ☐ No

Enter the date the PIC was organized. ..... m m d d y y

Enter Connecticut tax registration number of the PIC's related financial service or insurance company: _____

12. Business Use Tax

If you are registered for or are registering for sales and use taxes, you do not need to complete this section.

Business use tax is due when a business purchases taxable goods or services including the purchase or lease of assets, consumable goods, and promotional items, for use in Connecticut without paying Connecticut sales tax.

Will you be purchasing taxable goods or services for use in Connecticut without paying Connecticut sales tax? ..... ☐ Yes ☐ No

If you answered **Yes** to the business use tax question, **enter the tax liability start date.** ..... m m d d y y

If you answered **No**, you must complete the *Business Use Tax Declaration* section below.

Business Use Tax Declaration: By registering for any of the taxes listed in this application, you have indicated to the Department of Revenue Services (DRS) that you may have a business use tax liability. Therefore, based on your application, you will be automatically registered for the business use tax unless you complete the following declaration.

I, _____(name of taxpayer or authorized representative of taxpayer), acknowledge I have read and understand the information concerning the business use tax and declare I will not be liable for business use tax. Please initial here. _____

13. Registration Fee Schedule

Enter the registration fee amount indicated. If you are liable for either sales and use taxes or room occupancy tax, or both, as indicated in Sections 8 or 9, you must pay a $100 registration fee. Enter the appropriate registration fee(s) from Addendum A if you are registering for the cigarette tax. You must include the total registration fee due with Form REG-1 or your registration application **will not be processed** and will be returned.

Make your check payable to: **Commissioner of Revenue Services**. If you register by mail, send Form REG-1 with your payment to: Department of Revenue Services, PO Box 2937, Hartford CT 06104-2937

			Registration Fee
a.	If registering for **sales and use taxes** or **room occupancy tax**, enter $100.*	a.	
b.	If registering for **cigarette tax,** see Addendum A.	b.	
c.	**Total registration fee due:** Add Line a and Line b.	c.	

* No fee is required for room occupancy tax if you are registered or are registering for sales and use taxes.

14. All Applicants Must Sign the Following Declaration

I declare under penalty of law that I have examined this application and, to the best of my knowledge and belief, it is true, complete, and correct. I understand the penalty for willfully delivering a false application to DRS is a fine of not more than $5,000, or imprisonment for not more than five years, or both.

Sign here and keep a copy for your records.	Signature of owner, partner, LLC member, or corporate officer	Date	Telephone number
	Print name of owner, partner, LLC member, or corporate officer	Title	

Department of Revenue Services
State of Connecticut
PO Box 2937
Hartford CT 06104-2937
(Rev. 11/04)

Instructions for Form REG-1
Business Taxes Registration Application

How to Register

On-line Registration

Save time and register for a Connecticut tax registration number at your convenience when you file **Form REG-1**, *Business Taxes Registration Application*, on-line at the Department of Revenue Services (DRS) Web site at **www.ct.gov/DRS** You will receive your tax registration number in the mail in about **six days**. If you owe a registration fee, you must pay the fee electronically by entering the account number and routing number for your checking or savings account.

If you are registering for a tax type that requires you attach Addendum B to the REG-1 or if you are registering as a cigarette retailer (included on Addendum A), you may register on-line. If you are registering for another tax type that requires you attach Addendum A, C, D, or E to the REG-1, you must register by mail or in person at any DRS office.

Mail in Registration

Complete Form REG-1 and mail it to DRS at:

Department of Revenue Services
PO Box 2937
Hartford CT 06104-2937

If you owe a registration fee, you must include payment by check or money order with the application. You will receive your Connecticut tax registration number in the mail in **5 to 6 weeks**.

Walk-in Registration

You may file Form REG-1 in person at any DRS office. You will be issued a Connecticut tax registration number **immediately**. Bring a photo identification, such as a driver's license, and a check or money order if you owe a registration fee. (Cash is accepted at the Hartford location only.)

DRS offices are located in:

Bridgeport 10 Middle St. 203-336-7890	**Hamden** 3074 Whitney Ave. 203-287-8243	**Hartford** 25 Sigourney St. 860-297-5962
Norwich 2 Cliff St. 860-889-2669	**Waterbury** 55 West Main St., Suite 100 203-805-6789	

The application must be signed by the individual owner, partner, officer of the corporation, member of the limited liability company, or another who has written authorization to sign in the form of a Power of Attorney. If anyone other than the owner brings the signed application to the office and wants to obtain the registration for the owner, he or she must have written authorization from the owner to obtain the registration on his or her behalf.

Purpose of Form REG-1

Use Form REG-1 to obtain a Connecticut tax registration number or to register for additional tax types under your current Connecticut tax registration number.

Use Form REG-1 to register for any of these taxes:

- Business entity tax
- Business use tax
- Corporation business tax *(including PIC)*
- Income tax withholding
- Room occupancy tax
- Sales and use taxes
- Unrelated business income tax

In addition to Form REG-1, you must complete and attach the appropriate addendum as noted to Form REG-1 to register for any of these taxes. The forms are available on the DRS Web site at **www.ct.gov/DRS**

REG-1 Addendum A:
- Cigarette taxes
- Tobacco products tax

REG-1 Addendum B:
- Admissions and dues taxes
- Dry cleaning surcharge
- Motor vehicle rental surcharge
- Tourism surcharge

REG-1 Addendum C:
- Motor fuels tax
- Petroleum products gross earnings tax

REG-1 Addendum D:
- Alcoholic beverages tax

REG-1 Addendum E:
- Community antenna television system companies tax
- Railroad companies tax
- Satellite companies tax
- Solid waste assessment
- Suppliers of natural gas
- Utility companies tax

Registering for Other Tax Types

To register for these taxes, use the form listed:

- Authority to Collect Use Tax **REG-7**
- International Fuel Tax Agreement (IFTA) **CT-IFTA-2**
- Motor Carrier Road Tax **REG-3MC**

For more information on registering with the Department of Revenue Services (DRS), visit DRS Web site at **www.ct.gov/DRS** or call 1-800-382-9463 (in-state) or 860-297-5962 (from out-of-state)

Who Needs to Complete DRS REG-1

Businesses must register with the Connecticut DRS if they:

- Have people working in Connecticut
- Withhold Connecticut income tax
- Operate a business in Connecticut
- Are required to file an annual report with the Connecticut Secretary of the State and are subject to the business entity tax
- Provide taxable services in Connecticut
- Sell, rent, or lease goods in Connecticut (wholesale or retail)
- Furnish space for storage of tangible personal property
- Have a manufacturing facility in Connecticut
- Serve meals or beverages in Connecticut
- Purchase taxable goods or services for use in Connecticut
- Provide lodgings in Connecticut subject to the room occupancy tax
- Carry on a business as a corporation in Connecticut
- Distribute alcoholic beverages in Connecticut
- Distribute motor fuel used to propel motor vehicles on public highways or roads in Connecticut
- Sell petroleum products in Connecticut
- Operate a place of amusement, entertainment, or recreation in Connecticut
- Operate a social, health, athletic, or sporting club in Connecticut
- Sell or distribute cigarettes or tobacco products in Connecticut
- Own, lease, maintain, operate, manage, or control a community antenna television system in Connecticut
- Provide satellite television services to Connecticut
- Operate a railroad in Connecticut on a for-profit basis
- Are a resources recovery facility in Connecticut
- Market natural gas to an end user in Connecticut
- Provide distribution or transmition services for electricity in Connecticut
- Sell electricity as a municipality to customers in Connecticut
- Manufacture, sell, or distribute gas to be used for light, heat, or power in Connecticut
- Operate a dry cleaning establishment in Connecticut

Registration Fees

Sales and use taxes	$ 50
Room occupancy tax*	$ 50
Cigarette dealer's license	$ 25
Cigarette distributor's license	$ 1,000
Cigarette distributor chain operator	
5 to 14 retail locations	$ 250
15 to 24 retail locations	$ 500
25 or more retail locations	$1,000
Cigarette manufacturer/importer	$5,000
Distributor of tobacco products	$100

* No fee is required for room occupancy tax if you are registered or are registering for sales and use taxes.

Electronic Filing Methods for Certain Tax Forms

Once you are registered with DRS, you may file certain tax forms by Internet or telephone using the DRS *Fast-File* program. Look for this logo.

Filing Requirements for All Taxes

See **Informational Publication 2003(28)**, *Getting Started in Business*, available on the DRS Web site at **www.ct.gov/DRS**

Other Connecticut Licensing Requirements

For information on other Connecticut licensing requirements, visit: **www.ct-clic.com**.

How to Get Help

Visit the DRS Web site at **www.ct.gov/DRS** and click on *Businesses*.

Personal assistance is available by telephone or at any DRS office locations, Monday through Friday, during business hours.

CONN-TAX, the DRS telephone information line, is available anytime.

- **1-800-382-9463** (in-state) or
- **860-297-5962** (from anywhere).

TTY, TDD, and Text Telephone users only may transmit inqu anytime by calling 860-297-4911.

Additional forms and publications are available anytime:

- **Internet:** Visit the DRS Web site at **www.ct.gov/DRS**
- **DRS TAX-FAX:** Call **860-297-5698** from the handset attached to your fax machine and select from the menu. Only forms (not publications) are available through TAX-FAX; or
- **Telephone:** Call **1-800-382-9463** (in-state) and select **Option 2** from a touch-tone telephone, or **860-297-4753** (from anywhere).

Application Instructions

Complete the entire application unless the section instructions indicate otherwise. Answering Yes to any question in Sections 7 through 12 means you may have a Connecticut tax liability for that tax. In each section where you answer Yes to any question, you must indicate the date you first incurred a tax liability in Connecticut for that tax type.

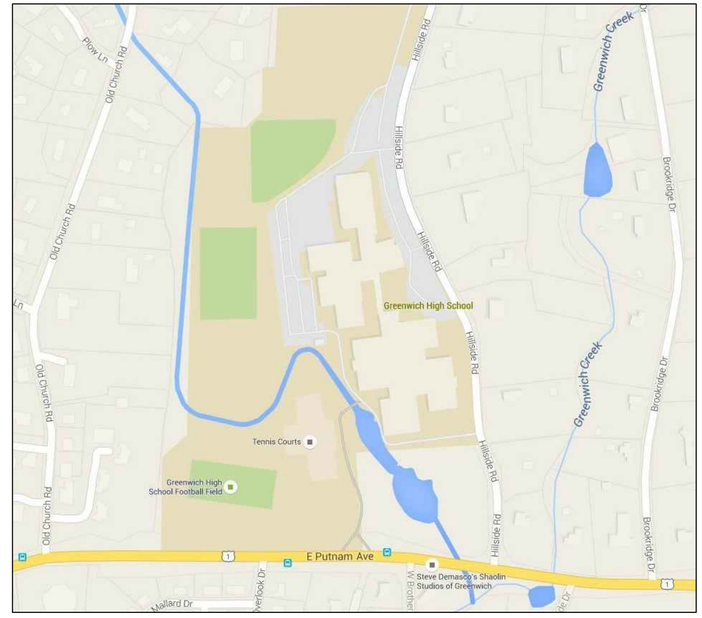
Exceptions:

- Taxpayers with a valid Connecticut tax registration number who wish to register for another tax must complete Sections 1 through 6, Section 14, and the section for the specific tax type(s) for which you wish to register. See the section *Purp of Form REG-1* on Page 1 of these instructions to deter if you have to complete an addendum to Form REG-1.
- Household employers who pay wages to and intend to withhold Connecticut income tax for housekeepers, nannies, health aides, caretakers, etc. – complete Sections 1 through 7 and 14 only.

GREENWICH HIGH SCHOOL
BUILDING Q PLUMBING UPGRADES

ISSUE: FOR BID DATE: MAY 03, 2019

BID # 2251-19



DOCUMENTS PREPARED BY:

LFG
LANDMARK FACILITIES GROUP, INC.
252 East Avenue
Norwalk, CT 06855
(203) 866-4626 Tel
(203) 866-8019 Fax

REV	DATE	DESCRIPTION
0	05-03-2019	BID SET

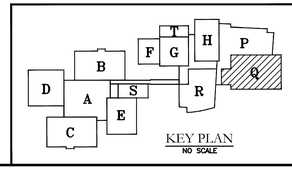
LFG
LANDMARK FACILITIES GROUP, INC.
252 East Avenue
Norwalk, CT 06855
(203) 866-4626 Tel
(203) 866-8019 Fax

BUILDING Q PLUMBING UPGRADES
GREENWICH HIGH SCHOOL
10 HILLSIDE RD., GREENWICH, CT 06830

SCALE: AS NOTED	APPROVED BY: GR	DRAWN BY:
DATE: 05-03-2019		CHECKED BY: RS

TITLE SHEET

BID NUMBER:	LFG JOB NUMBER:	DRAWING NUMBER:
2251-19	1018.002.HSBldgQCD	T-001



KEY PLAN
NO SCALE

DRAWING INDEX

T-001	COVER SHEET
T-002	PROJECT NOTES AND KEY PLAN
E-100	BUILDING Q LOWER LEVEL ELECTRICAL PLAN
E-200	BUILDING Q ELECTRICAL SPECIFICATIONS
P-001	PLUMBING SYMBOLS, DETAILS AND NOTES
P-100	BUILDING Q LOWER LEVEL PLUMBING PLAN
P-300	PLUMBING SPECIFICATIONS

PROJECT DESCRIPTION

1. THE PRIMARY INTENT OF THIS PROJECT IS TO REPLACE THE EXISTING HOT WATER HEATER AND INSTALL A SANITARY EJECTOR IN THE SUB-BASEMENT OF BUILDING Q, THE SCIENCE BUILDING.

2. INSTALLATION OF THE NEW WATER HEATER WILL RESULT IN DISRUPTION TO BUILDING DOMESTIC WATER SERVICE. FOR THIS REASON, CONTRACTOR SHALL SUBMIT A WORK PLAN FOR OWNER REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK. WORK PLAN SHALL IDENTIFY ESTIMATED 'DOWN TIME' FOR HOT WATER SERVICE.

3. CONTRACTOR SHALL HIRE CAMPUS CONTROLS CONTRACTOR FOR TIE-IN OF NEW DOMESTIC WATER HEATER AND SANITARY EJECTOR PUMPS TO EXISTING BUILDING AUTOMATION SYSTEM. CONTROLS CONTRACTOR SHALL PROVIDE GRAPHICS, SETPOINTS AND ALARMS TO REPORT THE FOLLOWING INFORMATION:

A. DOMESTIC HOT WATER SETPOINT.
B. DOMESTIC HW RECIRC PUMP 1 STATUS.
C. DOMESTIC HW RECIRC PUMP 2 STATUS.
D. SANITARY EJECTOR PUMP 1 STATUS.
E. SANITARY EJECTOR PUMP 2 STATUS.

ALARMS SHALL BE INITIATED AT THE GRAPHICAL USER INTERFACE FOR THE FOLLOWING CONDITIONS:

- LEAD PUMP FAIILS TO START.
- WATER REACHES HIGH FLOAT LEVEL.

ALL CONTROLS WORK SHALL BE PERFORMED BY:

CONNECTICUT TEMPERATURE CONTROLS
ATTN: MIKE SULLO
800-890-2022

4. CONTRACTOR SHALL HIRE WATER BALANCE CONTRACTOR TO VERIFY FLOW THROUGH HOT WATER PIPING TO WATER HEATER CONNECTED TO CENTRAL PLANT. SUBMIT WATER BALANCE REPORT FOR ENGINEERING APPROVAL PRIOR TO PROJECT CLOSEOUT.

PROJECT NOTES:

1. ALL BIDDERS SHALL VISIT PROJECT SITE TO THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS. CLAIMS FOR EXTRA PAYMENTS FOR WORK, WHICH COULD HAVE BEEN IDENTIFIED VIA CAREFUL SITE INSPECTION, WILL NOT BE ACKNOWLEDGED.

2. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL PREPARE SCALED PIPING SHOP DRAWINGS AND SUBMIT TO DESIGN ENGINEER FOR REVIEW/APPROVAL.

3. FOLLOWING INSTALLATION, CONTRACTOR SHALL INSULATE AND LABEL ALL PIPING PER SPECIFICATIONS. LABELS SHALL INDICATE PIPE CONTENTS AND INCLUDE DIRECTIONAL FLOW ARROWS.

4. UPON COMPLETION OF WORK, CONTRACTOR SHALL SUBMIT AS-BUILTS DRAWINGS IN ACCORDANCE WITH SPECIFICATIONS.

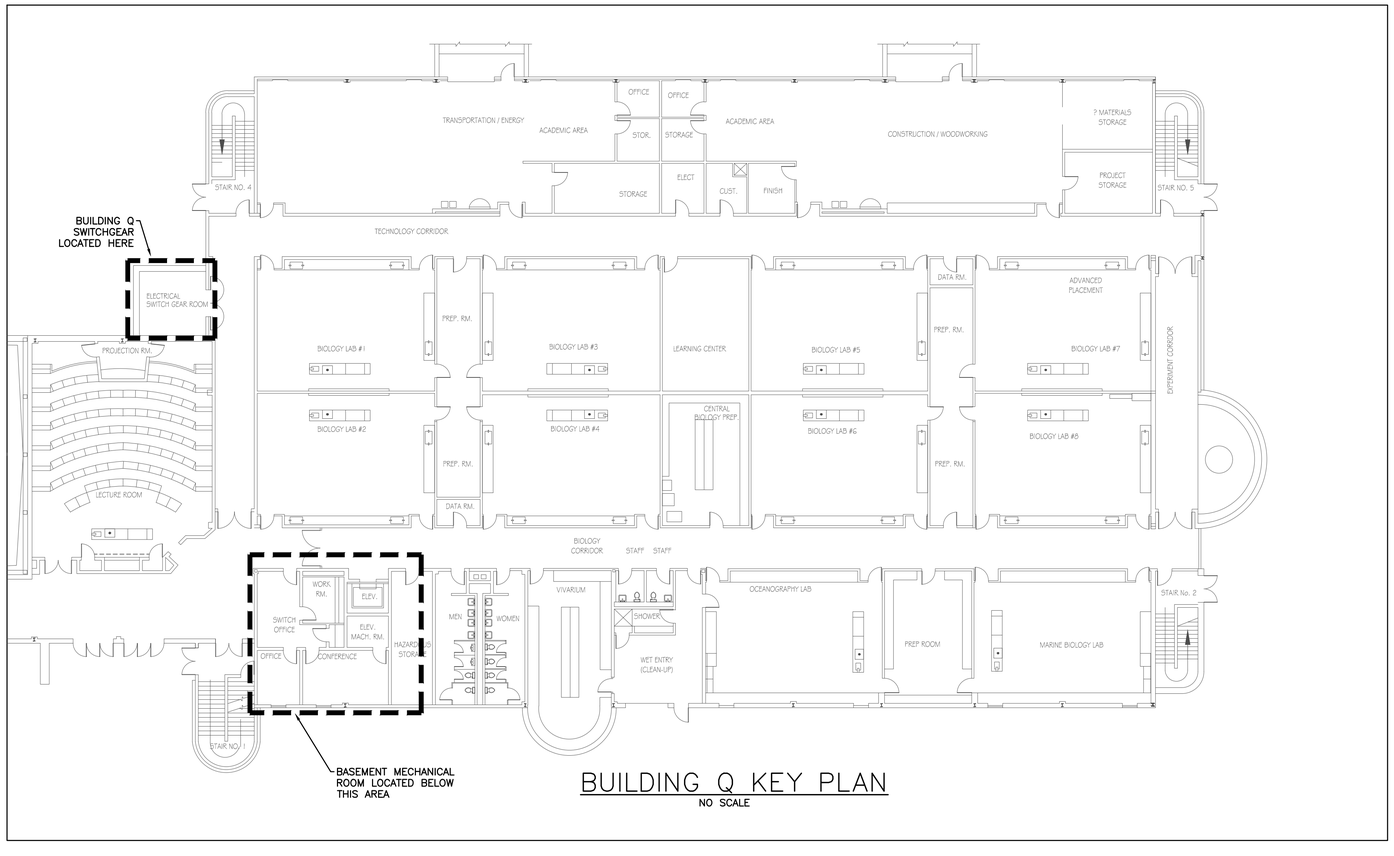
5. PROVIDE NO LESS THAN (2) HARD COPIES OF OPERATION AND MAINTENANCE MANUALS AT PROJECT CLOSEOUT. MANUALS SHALL INCLUDE ALL EQUIPMENT CUT SHEETS, OPERATING INSTRUCTIONS AND WARRANTY INFORMATION. SUBMIT FOR ENGINEER REVIEW PRIOR TO SUBMISSION TO OWNER.

6. CONTRACTOR SHALL NOTE THAT EJECTOR PUMPS ARE NOT INTENDED FOR SIMULTANEOUS OPERATION. CONTROLLER SHALL AUTOMATICALLY START STANDBY PUMP IN THE EVENT LEAD PUMP FAILS TO START. CONTROLLER SHALL ALTERNATE LEAD PUMP AFTER 20 PUMP CYCLES (ADJ.)

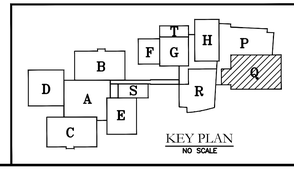
ADD ALTERNATE NOTES:

(A1) ALTERNATE #1

THE CONTRACTOR SHALL REPLACE THE DUPLEX SANITARY EJECTOR PUMPS. THE OWNER WILL PROVIDE PUMPS, THE CONTRACTOR SHALL ONLY PRICE THE INSTALLATION OF THE NEW PUMPS AND DEMOLITION OF THE EXISTING PUMPS.



BUILDING Q KEY PLAN
NO SCALE



KEY PLAN
NO SCALE

REV	DATE	DESCRIPTION
0	05-03-2019	BID SET

LFG
252 East Avenue
Norwalk, CT 06855
(203) 866-4626 Tel
(203) 866-8019 Fax
LANDMARK FACILITIES GROUP, INC.

BUILDING Q PLUMBING UPGRADES
GREENWICH HIGH SCHOOL
10 HILLSIDE RD., GREENWICH, CT 06830

SCALE: AS NOTED	APPROVED BY: GR	DRAWN BY:
DATE: 05-03-2019		CHECKED BY: RS

PROJECT NOTES & KEY PLAN

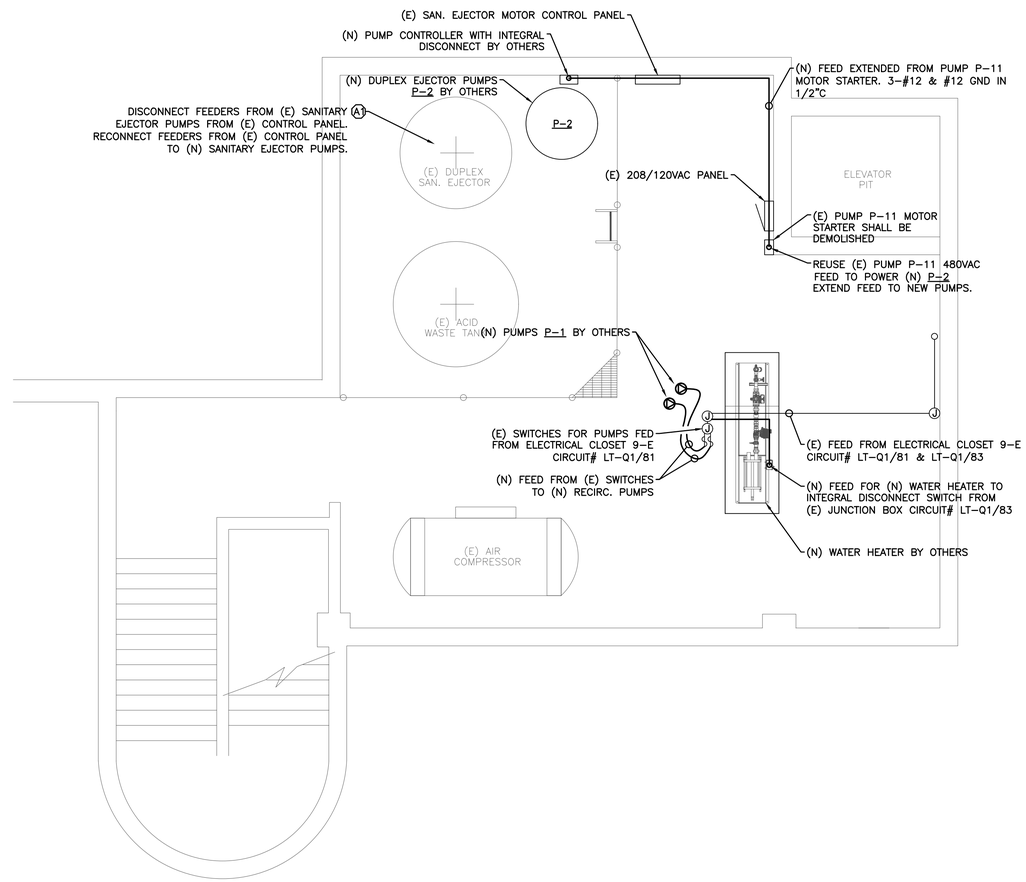
BID NUMBER:	LFG JOB NUMBER:	DRAWING NUMBER:
2251-19	101E/002:HSB&JqQCD	T-002

ELECTRICAL LEGEND

- (J) JUNCTION BOX
- LP/XX HOMERUN
- EXISTING PANEL
- SWITCH
- (N) NEW
- (E) EXISTING
- NEW
- EXISTING

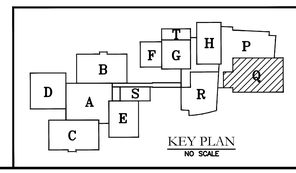
NOTES:

1. RELABEL CIRCUIT BREAKER, LOCATED IN THE BUILDING Q SWITCHGEAR ROOM, PREVIOUSLY FEEDING PUMP P–11 AND LABELED "P–11" TO "P–2 DUPLEX SUMP PUMP" VERIFY LABEL CONTENTS WITH OWNER BEFORE INSTALLATION.



BLDG Q LOWER LEVEL ELECTRICAL PLAN

1/4" = 1'–0"



KEY PLAN
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REV	DATE	DESCRIPTION
0	05-03-2019	BID SET

252 East Avenue
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GREENWICH HIGH SCHOOL
10 HILLSIDE RD., GREENWICH, CT 06830

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DATE: 05-03-2019		CHECKED BY: RS

BUILDING Q
LOWER LEVEL
ELECTRICAL PLAN

BID NUMBER:	LFG JOB NUMBER:	DRAWING NUMBER:
2251-19	101K/002:HSB&JqCD	E-100

ELECTRICAL SPECIFICATIONS

NOTES:

1. THE WORK OF THIS DIVISION SHALL INCLUDE ALL LABOR, MATERIALS AND APPARATUS NECESSARY FOR THE COMPLETION OF ALL ELECTRICAL WORK AS SHOWN ON THE DRAWINGS AND AS HEREINAFTER SPECIFIED, LEFT READY FOR SATISFACTORY OPERATION.

2. ANY APPLIANCE, MATERIALS OR LABOR THAT ARE OBVIOUSLY A PART OF THE ELECTRICAL WORK NECESSARY TO ITS PROPER PERFORMANCE, ALTHOUGH NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED AS IF CALLED FOR IN DETAIL WITHOUT ADDITIONAL COST.

3. WITHOUT INTENDING TO LIMIT AND/OR RESTRICT THE VOLUME OF WORK REQUIRED AND SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR, THE WORK OF THIS DIVISION SHALL, IN GENERAL COMPRISE THE FOLLOWING:

A. FURNISHING AND INSTALLATION OF NEW LIGHTING FIXTURES INCLUDING LAMPS AND ASSOCIATED BRANCH CIRCUITRY.
B. FURNISHING AND INSTALLATION OF RECEPTACLES AND ASSOCIATED BRANCH CIRCUITRY WIRING.
C. FURNISHING AND INSTALLATION OF NEW PANELS.
D. CONNECTION (WIRING) OF HVAC UNITS.
E. EMPTY CONDUIT RACEWAYS FOR TELEPHONE AND DATA WIRING.
F. CONFORMING TO ALL EXISTING CONDITIONS AT THE SITE.
G. TEMPORARY FACILITIES (LIGHTING AND POWER).

SHOP DRAWINGS:
SUBMIT TO ENGINEER COMPLETE SHOP DRAWINGS, CATALOG CUTS, WIRING DIAGRAMS AND ASSOCIATED DATA, FOR ALL MAJOR ELEMENTS OF THE ELECTRICAL WORK FOR REVIEW, CHECKING AND APPROVAL. NO EQUIPMENT SHALL BE FABRICATED, DELIVERED, ERECTED OR RECONNECTED OTHER THAN FROM DRAWINGS APPROVED BY THE ENGINEER. SHOP DRAWINGS IN THE NUMBER DIRECTED SHALL BE SUBMITTED FOR NOT LESS THAN THE FOLLOWING:

1. NEW PANELS.
2. TRANSFORMER
3. WIRING DEVICES.

IT SHALL BE UNDERSTOOD THAT APPROVAL OF DRAWINGS WILL NOT BIND THE ENGINEER OR THE OWNER TO THE FINAL ACCEPTANCE OF SUCH EQUIPMENT AS THE COMPLETED INSTALLATION AND TEST OF EQUIPMENT AS A WHOLE MUST BE PROVIDED AND GUARANTEED HEREIN AS SPECIFIED.

MATERIALS:

1. GENERAL

A. ELECTRIC RACEWAY AND SUPPORTING SYSTEMS SHALL BE FURNISHED AND INSTALLED COMPLETE, WITH ALL MATERIALS, FITTINGS, CONNECTIONS AND ACCESSORIES NECESSARY TO PROVIDE IN EACH INSTANCE, A COMPLETE OPERATING INSTALLATION, AS DESCRIBED HEREIN, AND INDICATED ON THE DRAWINGS.
B. THE DRAWINGS ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE WORK TO BE INSTALLED, BUT DO NOT SHOW ALL BENDS, FITTINGS, AND BOXES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING ALL HIS WORK AND ARRANGE SAME ACCORDINGLY, FURNISHING SUCH FITTINGS, BOXES AND SIMILAR ITEMS AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.

2. WIRING:

A. ALL WIRE AND CABLE, AS INDICATED, SPECIFIED OR REQUIRED, SHALL BE INSTALLED COMPLETE, INCLUDING ALL NECESSARY SPLICES AND CONNECTIONS TO EQUIPMENT DEVICES.
B. ALL WIRE NO. 8 WIRE AND LARGER SHALL BE SINGLE CONDUCTOR STRANDED COPPER OF NOT LESS THAN 98% CONDUCTIVITY, WITH 600 VOLT WITH THHN INSULATION (THWN FOR DAMP LOCATIONS). WIRE NO. 10 AWG AND SMALLER SHALL BE SOLID COPPER.
C. WIRE AND CABLE SHALL BE NO. 12 AWG MINIMUM, UNLESS, U.O.N
D. 15A AND 20A BRANCH CIRCUITS SHALL UTILIZE #12 L & N CONDUCTORS, U.O.N.
E. 25A AND 30A BRANCH CIRCUITS SHALL UTILIZE #10 L & N CONDUCTORS, U.O.N
F. 35A THROUGH 50A BRANCH CIRCUITS SHALL UTILIZE #8 L & N CONDUCTORS, U.O.N.
G. ALL BRANCH CIRCUITS SHALL HAVE GROUND CONDUCTORS IN ACCORDANCE WITH TABLE 250-122 OF THE NEC, U.O.N.
H. SUB FEEDERS AND BRANCH CIRCUITS IN EXCESS OF 100LF AND LESS THAN 200LF SHALL UTILIZE THE NEXT LARGER SIZE CONDUCTOR, U.O.N.
I. BRANCH CIRCUIT NUMBERS INDICATED ON THE DRAWINGS ARE FOR IDENTIFICATION PURPOSES ONLY AND DO NOT NECESSARILY REFER TO PANELBOARD CIRCUIT NUMBERS. BRANCH CIRCUITS SHALL BE CONNECTED TO CIRCUITS ON PANELBOARDS SO AS TO SECURE A REASONABLE BALANCE ON THE THREE PHASES. WHERE MORE THAN ONE CIRCUIT, WITH A COMMON NEUTRAL IS INSTALLED IN THE SAME CONDUIT, EACH PHASE WIRE SHALL BE CONNECTED TO A DIFFERENT LEG OF THE SYSTEM.
J. ALL CONDUCTORS SHALL BE COLOR CODED THROUGHOUT AND NUMBERED AND TAGGED AT EACH JUNCTION BOX, PULL BOX, PANEL AND DEVICE WITH SUITABLE FIREPROOF TAGS OR ADHESIVE IDENTIFICATION BANDS.

3. CONDUIT:

A. EXCEPT AS OTHERWISE INDICATED OR SPECIFIED, ALL WIRING INSIDE AND BEYOND CONFINES OF ELECTRIC CLOSET SHALL BE INSTALLED IN EMT (ELECTROGALVANIZED STEEL ELECTRICAL METALLIC TUBING).
B. RGS SHALL BE UTILIZED FOR EXTERIOR INSTALLATIONS WHERE EXPOSED
C. PVC MAY BE USED FOR INSTALLATION WHERE BURIED BELOW GRADE AND WHERE EMBEDDED IN A COVER OF AT LEAST 2"s OF CONCRETE
D. LIQUIDTIGHT FLEXIBLE, GALVANIZED STEEL CONDUIT, WITH CONTINUOUS COPPER BONDING CONDUCTOR, SHALL BE USED FOR CONNECTIONS, NOT EXCEEDING 18" IN LENGTH, TO MOTORS AND AT A OTHER LOCATIONS WHERE VIBRATION, OR MOVEMENT ARE ENCOUNTERED.
E. UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL WIRING SHALL BE INSTALLED CONCEALED IN CEILINGS, WALLS, SLABS, PIPE CHASES AND FURRED SPACES WHENEVER POSSIBLE.
F. CONDUIT AND FITTINGS SHALL CONFORM TO LATEST ACCEPTABLE CODE.
G. CONDUIT SHALL BE 1/2" TRADE SIZE MINIMUM, U.O.N
H. ALL CONDUITS WHICH ARE TO REMAIN EMPTY FOR FUTURE INTRODUCTION OF CONDUCTORS SHALL BE PROVIDED WITH A #12 NYLON DRAG WIRE WITH IDENTIFICATION TAG AT BOTH ENDS.
I. METAL CLAD CABLE (MC) CAN BE USED FOR FINAL CONNECTION OF LIGHTING.
J. CONDUIT FITTINGS SHALL BE APPROPRIATE FOR USE WITH THE CONDUIT TYPE AND LOCATION - COMPRESSION OR TWO SCREW FITTINGS FOR EMT, THREADED FITTINGS FOR RGS, SOCKET FITTINGS FOR PVC, ETC...

4. JUNCTION BOXES:

A. JUNCTION BOXES AND PULL BOXES SHALL BE PROVIDED WHERE INDICATED OR SPECIFIED, WHERE REQUIRED BY CODE AND WHERE NECESSARY TO FACILITATE THE INSTALLATION OF EQUIPMENT OR WIRING
B. THEY SHALL BE NEMA 3R FOR EXTERIOR LOCATIONS
C. THEY SHALL BE APPROPRIATE FOR USE WITH THE CONDUIT TYPE AND LOCATION - PLASTIC FOR PVC, SHEET METAL FOR EMT AND CAST STL OR DUCTIL IRON FOR RGS, ETC...

5. OUTLET BOXES:

A. EACH OUTLET FOR LIGHTING FIXTURE, WALL SWITCH, WALL RECEPTACLE, TELEPHONE OR OTHER USE SHALL BE PROVIDED WITH AN OUTLET BOX SUITABLE FOR THE USE FOR WHICH THE OUTLET IS TO BE INSTALLED AND TO THE LOCATION IN WHICH IT OCCURS, SECURED FIRMLY IN PLACE AND SET TRUE AND SQUARE WITH THE FINISHED SURFACE.
B. THEY SHALL BE NEMA 3R FOR EXTERIOR LOCATIONS
C. THEY SHALL BE APPROPRIATE FOR USE WITH THE CONDUIT TYPE AND LOCATION - SHEET METAL FOR EMT AND CAST STL OR DUCTIL IRON FOR RGS, ETC...

6. FASTENINGS, SUPPORTS AND HANGERS:

A. ALL PARTS OF THE ELECTRICAL INSTALLATION SHALL BE ADEQUATELY SUPPORTED FROM THE BUILDING CONSTRUCTION USING APPROVED CLAMP SCREWS WITH INSERTS OR EXPANSION ANCHORS, EXPANSION BOLTS AND TOGGLE BOLTS "IN NO CASE SHALL THE HUNG CEILING MEMBERS OR WIRES BE USED TO SUPPORT CONDUIT".
B. ALL FASTENINGS, SUPPORTS, CLAMPS, ANCHORS, AND SIMILAR ITEMS SHALL BE OF TYPE SUITABLE FOR THE PURPOSE - IF SUPPORTING LOADS IN TENSION IN EXCESS OF 200#S OR LOADS IN SHEAR IN EXCESS OF 400#S THE CONTRACTOR SHALL PROVIDE A REPORT CERTIFIED BY AN ENGINEER ATTESTING TO THE VORACITY OF HIS SELECTION

7. WIRING DEVICES:
ALL DEVICES SHALL BE SPECIFICATION GRADE, U.L. APPROVED.

A. DUPLEX RECEPTACLE 20 AMP, 2 POLE, 3 WIRE, 125 V, GRD. TYPE HUBBELL #5362 WHI, OR APP. EQUAL.
B. SINGLE RECEPTACLE 20 AMP, 2 POLE, 3 WIRE, 125 V, GRD. TYPE HUBBELL #5361 WHI, OR APP. EQUAL.
C. SINGLE POLE SWITCH 20 AMP, 125 V, GRD. TYPE, HUBBELL #1221 WHI, OR APP. EQUAL.
D. THREE WAY SWITCH 20 AMP, 125 V, GRD. TYPE, HUBBELL #1223 WHI, OR APP. EQUAL.
E. PLATE FOR SINGLE SWITCH - SMOOTH NYLON WHITE, HUBBELL #PIW, OR APP. EQUAL.
F. PLATE FOR DUPLEX RECEPTACLE - SMOOTH NYLON WHITE, HUBBELL #P8W, PR APP. EQUAL.
G. PLATE FOR SINGLE RECEPTACLE - SMOOTH NYLON WHITE, HUBBELL #P7W, OR APP.
H. WHERE MORE THAN ONE SWITCH OR RECEPTACLE ARE PLACED IN THE SAME LOCATION CONTRACTOR SHALL GANG DEVICES AND USE COMMON MULTI GANG PLATES.
I. ALL SWITCHES SHALL BE QUIET TYPE.
J. ALL DEVICES AND PLATES SHALL BE FURNISHED AS INDICATED BY THE ARCHITECT

8. SAFETY SWITCHES

A. SAFETY SWITCHES SHALL BE OF SIZE NOTED ON THE DRAWINGS, OR AS REQUIRED, FUSIBLE OR NON FUSIBLE AND EACH CONTAINED IN A GENERAL PURPOSE NEMA I ENCLOSURE WHEN INSTALLED INDOORS AND NEMA 3R ENCLOSURE FOR OUTDOOR INSTALLATION. ALL SWITCHES SHALL BE HEAVY DUTY TYPE AND SHALL HAVE QUICK MAKE QUICK BREAK MECHANISM
B. ALL SWITCHES SHALL BE OF PROPER HORSEPOWER RATING AS APPLICABLE AND HAVE DUAL INTERLOCKS DESIGNED TO INTERLOCK THE SWITCH BOX DOOR WITH THE SWITCH OPERATING MECHANISM.

9. GROUNDING

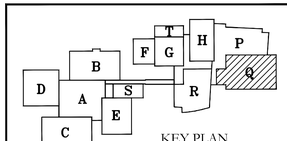
A. ALL ELECTRICAL WORK SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250
B. PROVIDE BOTH SYSTEM AND EQUIPMENT GROUNDING IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL INSPECTION AUTHORITIES: USE COPPER STRAPS, WIRES, AND CABLES BRAZED OR BOLTED TO CLAMPS, BUSHINGS, LUGS OR FITTINGS APPROVED FOR THE PURPOSE.
C. ALL ENCLOSURES AND OTHER NON CURRENT CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, RACEWAY SYSTEMS AND EQUIPMENT GROUND BUSES SHALL BE EFFECTIVELY GROUNDED TO THE BUILDING GROUNDING SYSTEMS THROUGH THE SYSTEM GROUND CONDUCTORS, METALLIC CONDUITS AND OTHER RACEWAYS AND ENCLOSURES FOR CONDUCTORS SHALL BE METALLICALLY JOINED TOGETHER INTO A CONTINUOUS ELECTRICAL CONDUCTOR, AS TO PROVIDE EFFECTIVE ELECTRICAL CONTINUITY.
D. EQUIPMENT LOCATED REMOTELY FROM THE GROUND CONDUCTORS SHALL BE GROUNDED TO THE NEAREST AVAILABLE COLD WATER PIPING, MOTOR FRAMES SHALL BE GROUNDED THROUGH THEIR CONDUITS.

10. AS-BUILT (DRAWINGS) UPON COMPLETION OF THE ELECTRICAL INSTALLATION,

A. THE CONTRACTOR SHALL FURNISH THE ENGINEER TWO SETS OF AS BUILT DRAWINGS IN HARD COPY AND ACAD 2016 FOR REVIEW AND APPROVAL. AFTER THE ENGINEERS APPROVAL OF THE DRAWINGS, THE CONTRACTOR SHALL FURNISH THE OWNER WITH ACAD 2016 AND REPRODUCIBLE SETS OF THE SAME FOR HIS RECORDS. THE AS-BUILT DRAWINGS SHALL SHOW THE FOLLOWING INFORMATION:
   1. LOCATION OF ALL RECEPTACLES, SWITCHES AND LIGHTING FIXTURES.
   2. LOCATION OF JUNCTION BOXES, PULL BOXES AND PANELS.
   3. LOCATION (ROUTING) OF ALL BRANCH CIRCUITS AND PANELS.
   4. DESIGNATION OF ALL BRANCH CIRCUITS.
   5. WIRE SIZES WHERE WIRE LARGER THAN #12 AWG IS USED.
   6. CONDUIT SIZE
   7. LOCATION OF ALL FIRE ALARM DEVICES.
B. FIELD ANNOTATED (CORRECTED) CONTRACT DRAWINGS ARE NOT ACCEPTABLE AS "AS-BUILT" OR "SHOP DRAWINGS".

GENERAL:

A. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH THE NEC, AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION
B. CONNECTION OF NEW PANELS SHALL BE AT A TIME CONVENIENT TO THE BUILDING OWNER AFTER SUFFICIENT TIME HAS BEEN GIVEN AND HIS APPROVAL OBTAINED.
C. CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS IN THE FIELD. RELOCATE ALL EXISTING WIRING WHICH INTERFERES WITH NEW INSTALLATION AND MUST BE MAINTAINED.
D. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ADDITIONAL CONDUITS, CABLES AND PULL BOXES AS REQUIRED FOR ROUTING OF CONDUITS AND PULLING OF CABLES.
E. ELECTRICAL CONTRACTOR SHALL FILE AND OBTAIN AN APPROVED ELECTRICAL CERTIFICATE FROM THE BUILDING DEPT.
F. LOCATION OF ALL ELECTRICAL EQUIPMENT IS APPROXIMATE, EXACT LOCATION TO BE VERIFIED IN THE FIELD.
G. STUDY OTHER SECTIONS OF THE SPECIFICATIONS AND DRAWINGS COOPERATE WITH OTHER TRADES. COORDINATE WORK TO AVOID INTERFERENCES. WHEN IN DOUBT, CONSULT ENGINEER BEFORE PERFORMANCE.
H. PERFORM ALL NECESSARY CUTTING AND PATCHING. LEAVE PREMISES IN CONDITION SATISFACTORY TO THE ENGINEER/OWNER.
I. OBTAIN PERMISSION OF OWNER BEFORE CUTTING STRUCTURAL MEMBERS.
J. NOTIFY ENGINEER OF CONFLICTS BETWEEN DRAWINGS AND SPECIFICATIONS BEFORE BIDDING. THE ENGINEER'S DECISION WILL GOVERN EITHER BEFORE OR AFTER BIDDING.
K. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC EXCEPT WHERE DIMENSIONED. DO NOT SCALE. FOLLOW ARCHITECTURAL, STRUCTURAL AND MANUFACTURER'S SHOP DRAWINGS FOR GREATER ACCURACY. CONSULT ENGINEER IN CASE OF DOUBT OR CONFLICT. UNLESS NOTED, FIXED DIMENSIONS ARE BASED ON THE PRODUCT OF ONE MANUFACTURER, VERIFY DIMENSIONS WITH THE PRODUCT OF THE SHOP DRAWINGS OF THE MATERIALS ACTUALLY APPROVED OR PURCHASED. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL COST AND DELAYS IN THE WORK RESULTING FROM SUBSTITUTION UNDER THIS DIVISION; INCLUDING, BUT NOT LIMITED TO, ANY CHANGES IN DECISION, INSTALLATION.
L. EQUIPMENT, SUCH AS PANELS, JUNCTION BOXES, SAFETY SWITCHES, MOTOR STARTERS, CIRCUIT BREAKERS, AND SIMILAR ITEMS SHALL BE IDENTIFIED BY NAME, WITH ENGRAVED LAMINATED PHENOLIC NAMEPLATES NOT SMALLER TAN 1" X 3" WITH CHARACTERS NOT LESS THAN 1/2" AND FASTENED WITH COUNTER OVAL HEAD BRASS MACHINE SCREWS OR RIVETS.
M. CONDUIT SHALL BE 1/2" MIN. UNLESS OTHERWISE NOTED.
N. COLOR, FINISH AND TYPE OF PLATES SHALL BE APPROVED BY THE OWNER PRIOR TO PURCHASE.
O. ALL CUTTING PATCHING AND FIRE-STOPPINGREQUIRED FOR WORK OF THIS DIVISION IS INCLUDED HEREIN. COORDINATION WITH GENERAL CONTRACTOR AND OTHER TRADES IS IMPERATIVE. CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR AND THE ADDED EXPENSE OF ADJUSTING FOR IMPROPER HOLES, SUPPORTS, ETC.
P. SINGLE GANG BOXES SHALL BE PROVIDED WHERE TELEPHONE OUTLETS ARE INDICATED.
Q. IN THE EVENT OF ANY CONFLICT BETWEEN INFORMATION ON THE DRAWINGS AND INFORMATION ON THE SPECS, THE MOST COSTLY ALTERNATIVE WILL GOVERN.



KEY PLAN
NO SCALE

REV	DATE	DESCRIPTION
0	05-03-2019	BID SET

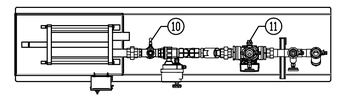
LFG
252 East Avenue
Norwalk, CT 06855
(203) 866-4626 Tel
(203) 866-8019 Fax
LANDMARK FACILITIES GROUP, INC.

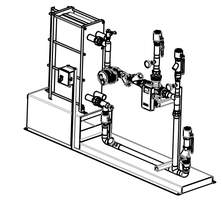
BUILDING Q PLUMBING UPGRADES
GREENWICH HIGH SCHOOL
10 HILLSIDE RD., GREENWICH, CT 06830

SCALE: AS NOTED	APPROVED BY: GR	DRAWN BY:
DATE: 05-03-2019		CHECKED BY: RS

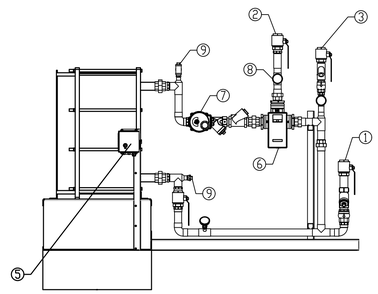
BLDG. Q
ELECTRICAL SPECIFICATIONS

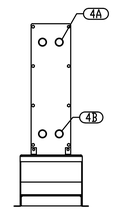
BID NUMBER:	LFG JOB NUMBER:	DRAWING NUMBER:
2251-19	1018.0021HSB&QCD	E-200





DIGITAL FLO BOILER WATER/WATER PLATE & FRAME HEAT EXCHANGER DOUBLE WALL





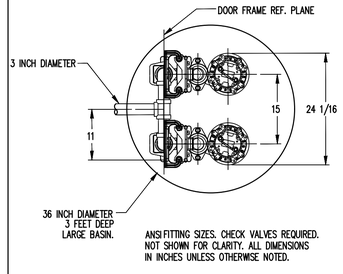
ITEM	DESCRIPTION	CONNECTION
1	COLD WATER INLET	2" NPT
2	MIXED WATER OUTLET	2" NPT
3	RECIRC WATER INLET	1-1/2" NPT
4A	PRIMARY(BOILER) INLET	2" NPT
4B	PRIMARY(BOILER) OUTLET	2" NPT
5	ELECTRICAL PANEL	110VAC @ 0.7A
6	DRV80	3" NPT
7	N.C. ACTUATED BALL VALVE SAFETY SHUT OFF	2" NPT
8	THERMEMETER (3)	
9	CIP CONNECTION (2)	1" NPT
10	SRV(PRESSURE) PIPE TO DRAIN	1" NPT
11	SRV(CONNECTION FOR USER SUPPLIED T&P)	1" NPT
	ITEM	MATERIAL
	PIPING	COPPER TYPE "L"
	EXCHANGER PLATE MATL.	T316L SS
	EXCHANGER GASKET MATL.	NITRILE

NOTES:

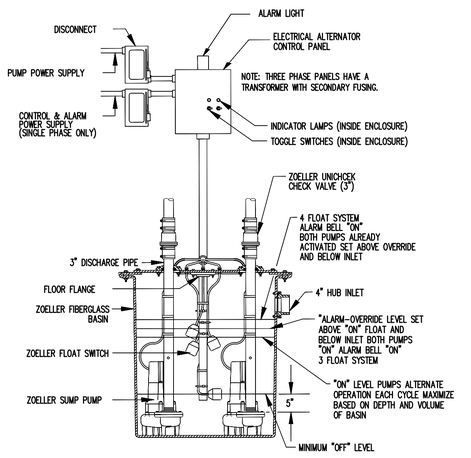
1. COMPLETE ASSEMBLY LEAD FREE COMPLIANT – THE WETTED SURFACE OF THIS PRODUCT CONTACTED BY CONSUMABLE WATER CONTAINS LESS THAN ONE QUARTER OF ONE PERCENT (0.25%) OF LEAD BY WEIGHT.
2. PACKAGE INCLUDES ALL REQUIRED INLET CHECK VALVES AND STRAINERS ON DOMESTIC SIDE.
3. DRV, SAFETY SHUT OFF AND ELECTRICAL PANEL ARE PREWIRED TO PROVIDE A SINGLE ELECTRICAL LANDING POINT AT THE PANEL.

HEAT EXCHANGER DETAIL

NO SCALE

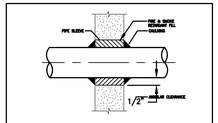


ANSI FITTING SIZES. CHECK VALVES REQUIRED. NOT SHOWN FOR CLARITY. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.

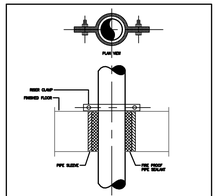


TYPICAL INSTALLATION USING DUPLEX CONTROL PANEL

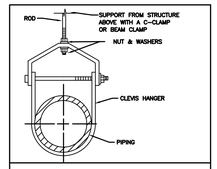
NO SCALE



WALL PENETRATION TO RESIST THE PASSAGE OF SMOKE DETAIL



PIPE SLEEVE THRU FLOOR SLAB DETAIL



PIPE HANGER
NO SCALE

PLUMBING ABBREVIATION LIST

	NOTE: NOT ALL SYMBOLS ARE USED
SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BLDG	BUILDING
BWV	BACKWATER VALVE
CO	CLEANOUT
DPCO	CLEANOUT DECK PLATE
CV	CHECK VALVE
CW	COLD WATER
CLG	CEILING
CONN	CONNECT
CONT	CONTINUATION
DN	DOWN (PENETRATES FLOOR SLAB)
DR	DRAIN
EX	EXISTING
EL	ELEVATION
FC	FLOW CONTROL FITTING
FD	FLOOR DRAIN
FPHB	FREEZE PROOF HOSE BIBB
FL	FLOOR
FS	FLOOR SINK
G	GAS PIPING
GAL	GALLONS
GE	GREASE INTERCEPTOR UNIT
GPM	GALLONS PER MINUTE
GW	GREASE WASTE PIPE
GV	GAS VENT
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
IW	INDIRECT WASTE
L*	LAVATORY (* INDICATES TYPE – SEE SCHEDULE)
G	GAS
MTD	MOUNTED
NTS	NOT TO SCALE
PD	PUMP DISCHARGE
PSI	POUNDS PER SQUARE INCH (GAUGE)
RAC	RUN ABOVE CEILING
RBS	RUN BELOW SLAB
RInS	RUN IN FLOOR SLAB (TRENCH)
RD	ROOF DRAIN
S	SANITARY PIPING
SO	SOLIDS INTERCEPTOR UNIT
ST	STORM PIPING
TYP	TYPICAL
UP	UP (PENETRATES FLOOR SLAB)
V	VENT
VB	VACUUM BREAKER
VIF	VERIFY IN FIELD
VTR	VENT THRU ROOF
W	WASTE PIPING
W*	WATER CLOSET (* INDICATES TYPE – SEE SCHEDULE)
WCO	WALL CLEANOUT
WH	WATER HEATER
WTPS	WATER TIGHT PIPE SLEEVE

PLUMBING SYMBOL LIST

	NOTE: NOT ALL SYMBOLS ARE USED
SYMBOL	DESCRIPTION
	EXISTING PIPING TO REMAIN
	EXISTING PIPING TO BE REMOVED
	WASTE PIPE ABOVE FLOOR/SLAB (W) & (GW)
	WASTE PIPE BELOW FLOOR/SLAB (W) & (GW)
	SANITARY PIPE ABOVE FLOOR/SLAB (S)
	SANITARY PIPE BELOW FLOOR/SLAB (S)
	VENT PIPE (V)
	EXISTING COLD WATER PIPING
	COLD WATER PIPING (CW)
	HOT WATER PIPING
	HOT WATER RETURN WATER PIPING
IW	INDIRECT WASTE PIPING
	PIPE RISE OR UP THRU FLOOR
	PIPE DROP OR DOWN THRU FLOOR
	BOTTOM OF PIPE TAKE-OFF CONNECTION
	TOP OF PIPE TAKE-OFF CONNECTION
	CLEANOUT (CO)
	UNION
	VALVE IN RISE / VERTICAL
	P-TRAP
	DECKPLATE CLEANOUT (DPCO)
	POINT OF NEW CONNECTION
	POINT OF NEW DISCONNECTION
	FLOOR DRAIN
	BALL VALVE
	BACKWATER VALVE
	CHECK VALVE
	TEMPERATURE & PRESURE RELIEF VALVE (T&P)
	VACUUM BREAKER (VB)
	FAUCET WATER CONNECTION POINT
	TRAP PRIMER

PLUMBING EQUIPMENT SCHEDULE

FD FLOOR DRAIN JOSAM COMPANY MODEL #25520,WITH CLAMP RING SOLID WATER DAM, 4" OUTLET, CAST IRON W/ 1/2" TRAP PRIMER CONNECTION. INSTALL PER MANUFACTURERS INSTRUCTIONS.

TP TRAP PRIMER VALVE: PRECISION PLUMBING PRODUCTS MODEL #P-500LP, AUTOMATIC TRAP PRIMER, 1/2" INLET/OUTLET, CHROME PLATED, W/INTEGRAL VACUUM BREAKER. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

RPZ REDUCED PRESSURE ZONE BACK FLOW PREVENTER: ZURN MODEL #375XL, 2" HORIZONTAL INSTALLATION, PROVIDE HUB DRAIN AT RELIEF PORT. PROVIDE 3" GAP BETWEEN RELIEF PORT AND HUB DRAIN

P-1 HOT WATER RE-CIRCULATION PUMP, BELL & GOSSET MODEL# PL-36B, 115V, 60HZ, 1/6 HP, QUANTITY=2

P-2 DUPLEX SUMP PUMP SYSTEM, ZOELLER MODEL #6189, 2 HP, 140GPM AT 10 FEET HEAD LOSS, 460V , 3 PH, QUANTITY=2. CENTRI PRO BASIN MODEL # A7-3636, CONTROL PANEL CENTRI PRO MODEL #C003403S3N1

HX DOMESTIC WATER HEAT EXCHANGER WATER HEATER, ARMSTRONG DIGITAL-FLO MODEL #DF65WDW50

PLUMBING GENERAL NOTES

1. GENERAL NOTES, SYMBOLS LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS MARKED P.
2. DRAWINGS ARE DIAGRAMMATIC: DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD.
3. WORK OF THIS SECTION IS SPECIFIED IN SECTION 22000.
4. NEITHER ACCURACY NOR COMPLETION OF UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING UTILITY IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
5. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE CONNECTICUT STATE PLUMBING CODE AND ALL APPLICABLE LOCAL CODES AND DRAWINGS.
6. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES, INCLUDING (BUT NOT LIMITED TO), ELECTRICAL, HVAC PROCESS PIPING, SPRINKLER, PLUMBING, STRUCTURAL, AND GENERAL ARCHITECTURE.
7. ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE, AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
8. NO WORK SHALL BE INSTALLED IN VIOLATION OF ANY GOVERNING CODES. ANY WORK SHOWN ON THE DRAWINGS WHICH IS IN VIOLATION OF SUCH CODES SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
9. ALL PIPING PENETRATING CEILING AND WALLS SHALL BE INSTALLED WITH CHROME (STAINLESS WHERE NOTED) PLATED ESCUTCHEONS AT THE PENETRATION. ALL PIPING PENETRATING EXTERIOR WALLS AND ROOFS SHALL BE FLASHED IN AN APPROVED MANNER AND SHALL BE SEALED WEATHER TIGHT. PIPING PENETRATING RATED PARTITIONS SHALL BE PROTECTED AS REQUIRED BY LOCAL CODE AUTHORITY (SEE DETAILS).
10. MANUFACTURER'S MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
11. PRODUCTION INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
12. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
13. TOPS OF ALL FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR. ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON FLOOR TILES.
14. PROVIDE SHUTOFF VALVES ON ALL BRANCH PIPING AND ON ALL SUPPLIES TO INDIVIDUAL FIXTURES AND EQUIPMENT. PROVIDE BALL VALVES ON ALL WATER MAIN BRANCHES IN CORRIDORS AND WHERE INDICATED ON DRAWINGS. ALL VALVES SHALL BE ACCESSIBLE.
15. ALL SLEEVES THROUGH CONCRETE FLOORS AND ALL CORE DRILLING OF CONCRETE FLOORS AND WALLS SHALL BE BY THIS CONTRACTOR.
16. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERE WITH FIRE-PROOFING WORK.
17. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS.
18. RUN PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS.
19. PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING.
20. PROVIDE VENTS AT HIGH POINTS IN PIPING SYSTEMS AND DRAIN VALVES AT LOW POINTS.
21. PROVIDE GAUGE FITTINGS AND THERMOMETER WELLS AT HOT WATER SUPPLY.
22. VERIFY EXACT SIZES, LOCATIONS, INVERTS AND ELEVATIONS PRIOR TO RUNNING ANY PIPING. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL FIXTURES AND EQUIPMENT.
23. PIPING SHALL NOT RUN OVER ELECTRICAL PANELS AND SHALL BE COORDINATED WITH WORK OF OTHER TRADES.

REV	DATE	DESCRIPTION
0	05-03-2019	BID SET

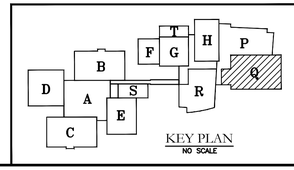
LFG
LANDMARK FACILITIES GROUP, INC.
252 East Avenue
Norwalk, CT 06855
(203) 866-4626 Tel
(203) 866-8019 Fax

BUILDING Q PLUMBING UPGRADES
GREENWICH HIGH SCHOOL
10 HILLSIDE RD., GREENWICH, CT 06830

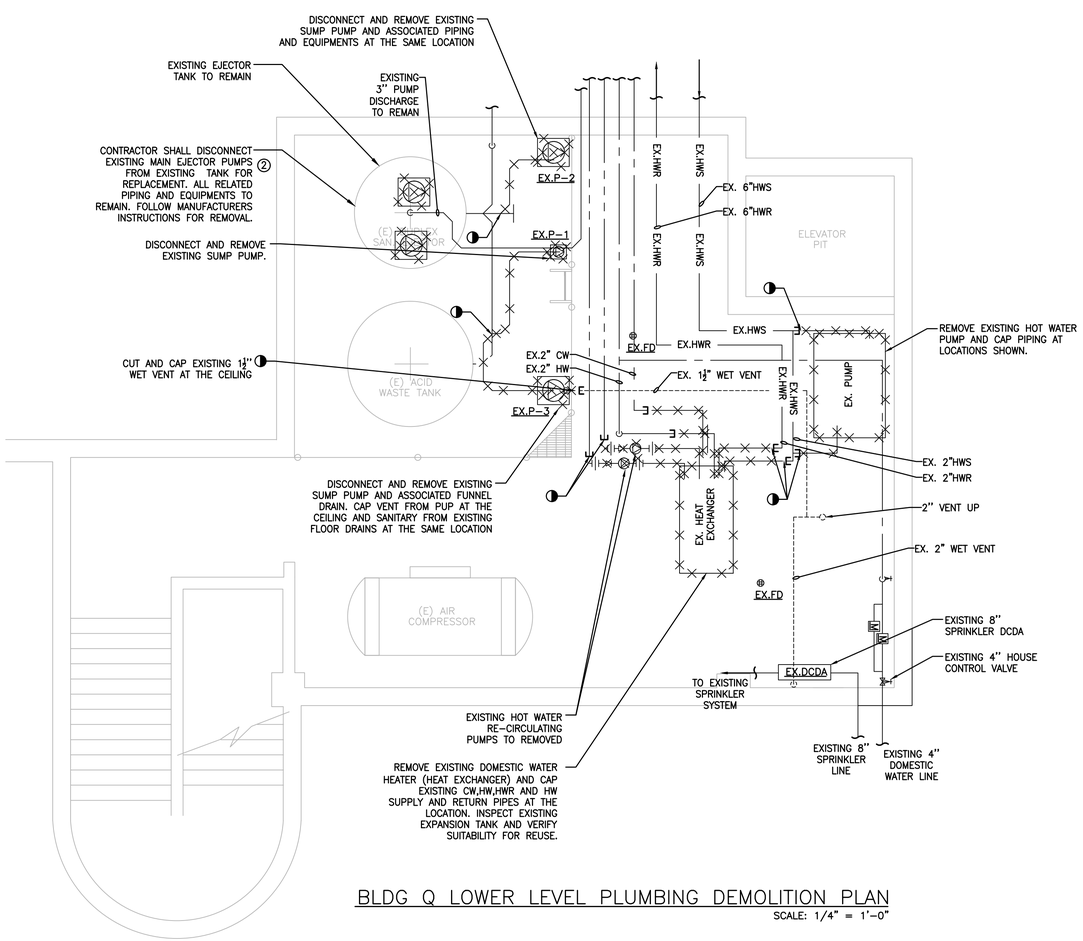
SCALE: AS NOTED	APPROVED BY: GR	DRAWN BY: AH
DATE: 05-03-2019		CHECKED BY: RS

PLUMBING SYMBOLS, DETAILS AND NOTES

BID NUMBER: 2251-19	LFG JOB NUMBER: 1018.0021HSB&QCD	DRAWING NUMBER: P-001

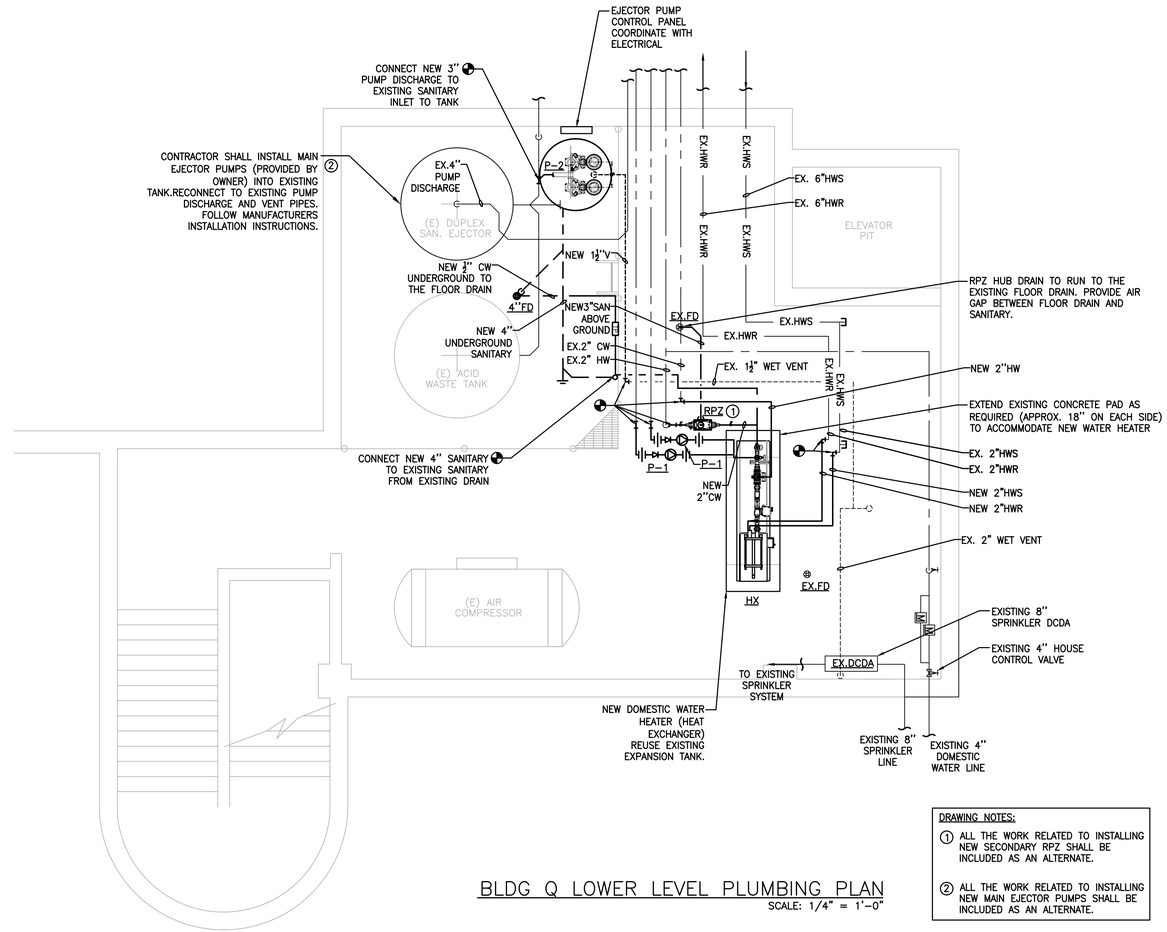


KEY PLAN
NO SCALE



BLDG Q LOWER LEVEL PLUMBING DEMOLITION PLAN

SCALE: 1/4" = 1'-0"



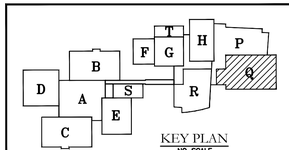
BLDG Q LOWER LEVEL PLUMBING PLAN

SCALE: 1/4" = 1'-0"

DRAWING NOTES:

1. ALL THE WORK RELATED TO INSTALLING NEW SECONDARY RPZ SHALL BE INCLUDED AS AN ALTERNATE.
2. ALL THE WORK RELATED TO INSTALLING NEW MAIN EJECTOR PUMPS SHALL BE INCLUDED AS AN ALTERNATE.

REV	DATE	DESCRIPTION
0	05-03-2019	BID SET



KEY PLAN

NO SCALE

LFG

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LANDMARK FACILITIES GROUP, INC.

BUILDING Q PLUMBING UPGRADES
GREENWICH HIGH SCHOOL
10 HILLSIDE RD., GREENWICH, CT 06830

SCALE: AS NOTED	APPROVED BY: GR	DRAWN BY: AH
DATE: 05-03-2019		CHECKED BY: RS

BLDG. Q
LOWER LEVEL
PLUMBING PLAN

BID NUMBER:	LFG JOB NUMBER:	DRAWING NUMBER:
2251-19	1018.0024HSB&gQCD	P-100

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

A. SECTION INCLUDES SURFACE PREPARATION AND APPLICATION OF HIGH–PERFORMANCE COATING SYSTEMS ON THE FOLLOWING SUBSTRATES: INTERIOR SUBSTRATES: STEEL.

1.3 ACTION SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED. INCLUDE PREPARATION REQUIREMENTS AND APPLICATION INSTRUCTIONS.

1.4 DELIVERY, STORAGE, AND HANDLING

A. STORE MATERIALS NOT IN USE IN TIGHTLY COVERED CONTAINERS IN WELL–VENTILATED AREAS WITH AMBIENT TEMPERATURES CONTINUOUSLY MAINTAINED AT NOT LESS THAN 45 DEG F.

1. MAINTAIN CONTAINERS IN CLEAN CONDITION, FREE OF FOREIGN MATERIALS AND RESIDUE.

2. REMOVE RAGS AND WASTE FROM STORAGE AREAS DAILY.

1.5 FIELD CONDITIONS

A. APPLY COATINGS ONLY WHEN TEMPERATURE OF SURFACES TO BE COATED AND SURROUNDING AIR TEMPERATURES ARE BETWEEN 50 AND 95 DEG F.

SANITARY WASTE AND VENT PIPING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

A. SECTION INCLUDES: PIPE, TUBE, AND FITTINGS.

1.3 PERFORMANCE REQUIREMENTS

A. COMPONENTS AND INSTALLATION SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING MINIMUM WORKING PRESSURE UNLESS OTHERWISE INDICATED: WASTE, FORCE–MAIN PIPING: 50 PSIG.

PART 2 – PRODUCTS

2.1 PIPING MATERIALS

A. COMPLY WITH REQUIREMENTS IN "PIPING SCHEDULE" ARTICLE FOR APPLICATIONS OF PIPE, TUBE, FITTING MATERIALS, AND JOINING METHODS FOR SPECIFIC SERVICES, SERVICE LOCATIONS, AND PIPE SIZES.

2.2 GALVANIZED–STEEL PIPE AND FITTINGS

A. GALVANIZED–STEEL PIPE: ASTM A 53/A 53M, TYPE E, STANDARD WEIGHT CLASS. INCLUDE SQUARE–CUT–GROOVED OR THREADED ENDS MATCHING JOINING METHOD.

B. GROOVED–JOINT, GALVANIZED–STEEL–PIPE APPURTENANCES:

1. GALVANIZED, GROOVED–END FITTINGS FOR GALVANIZED–STEEL PIPING: ASTM A 536 DUCTILE–IRON CASTINGS, ASTM A 47/A 47M MALLEABLE–IRON CASTINGS, ASTM A 234/A 234M FORGED STEEL FITTINGS, OR ASTM A 106/A 106M STEEL PIPES WITH DIMENSIONS MATCHING ASTM A 53/A 53M STEEL PIPE, AND COMPLYING WITH AWWA C606 FOR GROOVED ENDS.

2. GROOVED MECHANICAL COUPLINGS FOR GALVANIZED–STEEL PIPING: ASTM F 1476, TYPE I. INCLUDE FERROUS HOUSING SECTIONS WITH CONTINUOUS CURVED KEYS; EPDM–RUBBER GASKET SUITABLE FOR HOT AND COLD WATER; AND BOLTS AND NUTS.

PART 3 – EXECUTION

3.1 JOINT CONSTRUCTION

A. GROOVED JOINTS: CUT GROOVE ENDS OF PIPE ACCORDING TO AWWA C606. LUBRICATE AND INSTALL GASKET OVER ENDS OF PIPES OR PIPE AND FITTING. INSTALL COUPLING HOUSING SECTIONS, OVER GASKET, WITH KEYS SEATED IN PIPING GROOVES. INSTALL AND TIGHTEN HOUSING BOLTS.

3.2 VALVE INSTALLATION

A. SHUTOFF VALVES: INSTALL GATE VALVE FOR PIPING NPS 2–1/2 AND LARGER.

B. CHECK VALVES: INSTALL SWING CHECK VALVE, BETWEEN PUMP AND SHUTOFF VALVE, ON EACH SEWAGE PUMP DISCHARGE.

3.3 HANGER AND SUPPORT INSTALLATION

1. INSTALL CARBON–STEEL PIPE HANGERS FOR HORIZONTAL PIPING IN NON–CORROSIVE ENVIRONMENTS.

A. INSTALL HANGERS FOR STEEL PIPING WITH THE FOLLOWING MAXIMUM HORIZONTAL SPACING AND MINIMUM ROD DIAMETERS:

1. NPS 3: 12 FEET WITH 1/2–INCH ROD.

2. NPS 4 AND NPS 5: 12 FEET WITH 5/8–INCH ROD.

3. NPS 6 AND NPS 8: 12 FEET WITH 3/4–INCH ROD.

3.4 FIELD QUALITY CONTROL

C. DURING INSTALLATION, NOTIFY AUTHORITIES HAVING JURISDICTION AT LEAST 24 HOURS BEFORE INSPECTION MUST BE MADE. PERFORM TESTS SPECIFIED BELOW IN PRESENCE OF AUTHORITIES HAVING JURISDICTION.

1. ROUGHING–IN INSPECTION: ARRANGE FOR INSPECTION OF PIPING BEFORE CONCEALING OR CLOSING–IN AFTER ROUGHING–IN AND BEFORE SETTING FIXTURES.

2. FINAL INSPECTION: ARRANGE FOR FINAL INSPECTION BY AUTHORITIES HAVING JURISDICTION TO OBSERVE TESTS SPECIFIED BELOW AND TO ENSURE COMPLIANCE WITH REQUIREMENTS.

B. REINSPECTION: IF AUTHORITIES HAVING JURISDICTION FIND THAT PIPING WILL NOT PASS TEST OR INSPECTION, MAKE REQUIRED CORRECTIONS AND ARRANGE FOR REINSPECTION.

C. REPORTS: PREPARE INSPECTION REPORTS AND HAVE THEM SIGNED BY AUTHORITIES HAVING JURISDICTION.

D. TEST FORCE–MAIN PIPING ACCORDING TO PROCEDURES OF AUTHORITIES HAVING JURISDICTION OR, IN ABSENCE OF PUBLISHED PROCEDURES, AS FOLLOWS:

1. LEAVE UNCOVERED AND UNCONCEALED NEW, ALTERED, EXTENDED, OR REPLACED FORCE–MAIN PIPING UNTIL IT HAS BEEN TESTED AND APPROVED. EXPOSE WORK THAT WAS COVERED OR CONCEALED BEFORE IT WAS TESTED.

2. CAP AND SUBJECT PIPING TO STATIC–WATER PRESSURE OF 50 PSIG ABOVE OPERATING PRESSURE, WITHOUT EXCEEDING PRESSURE RATING OF PIPING SYSTEM MATERIALS. ISOLATE TEST SOURCE AND ALLOW TO STAND FOR FOUR HOURS. LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED.

3. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING, OR PORTION THEREOF, UNTIL SATISFACTORY RESULTS ARE OBTAINED.

4. PREPARE REPORTS FOR TESTS AND REQUIRED CORRECTIVE ACTION.

3.5 PIPING SCHEDULE

A. FLANGES AND UNIONS MAY BE USED ON ABOVEGROUND PRESSURE PIPING UNLESS OTHERWISE INDICATED.

B. SANITARY DRAINAGE AND VENT

1. INSTALL SANITARY AND VENT PIPES AT PROPER SLOPES PER CONNECTICUT PLUMBING CODE

C. ABOVE GROUND

1. CAST IRON PIPE: NO–HUB WITH SCHEDULE 40 PIPE AND FITTINGS.

2. NEOPRENE GASKET WITH 4–BAND CLAMPS ON ALL RISERS. 2–BAND CLAMPS ACCEPTABLE ON HORIZONTAL PIPES RUN ONLY.

D. UNDERGROUND

1. POLYVINYL CHLORIDE PIPE (PVC): PLASTIC PIPE WITH SCHEDULE 40 PIPE AND FITTINGS. COMPLYING TO THE STANDARD ASTM D2665 WITH A SOLID, CELLULAR CORE OR COMPOSITE WALL.

SUMP PUMPS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

E. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

A. SECTION INCLUDES: SUBMERSIBLE SUMP PUMPS AND CONTROLS.

1.3 ACTION SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED. INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES. INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, AND FURNISHED SPECIALTIES AND ACCESSORIES.
WIRING DIAGRAMS: FOR POWER, SIGNAL, AND CONTROL WIRING.

1.4 CLOSEOUT SUBMITTALS

A. OPERATION AND MAINTENANCE DATA: FOR PUMPS AND CONTROLS, TO INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

1.5 QUALITY ASSURANCE

A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. UL COMPLIANCE: COMPLY WITH UL 778 FOR MOTOR–OPERATED WATER PUMPS.

1.6 DELIVERY, STORAGE, AND HANDLING

A. RETAIN SHIPPING FLANGE PROTECTIVE COVERS AND PROTECTIVE COATINGS DURING STORAGE.

B. PROTECT BEARINGS AND COUPLINGS AGAINST DAMAGE.

C. COMPLY WITH PUMP MANUFACTURER'S WRITTEN RIGGING INSTRUCTIONS FOR HANDLING.

1.7 COORDINATION

A. COORDINATE SIZES AND LOCATIONS OF CONCRETE BASES WITH ACTUAL EQUIPMENT PROVIDED.

PART 2 – PRODUCTS

2.1 SUBMERSIBLE STORM WATER PUMPS

A. SUBMERSIBLE, QUICK–DISCONNECT, SEMI–PERMANENT PORTABLE, DOUBLE–SEAL SUMP PUMPS:

1. BASIS–OF–DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT INDICATED ON DRAWINGS OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING:
   a. ZOELLER MODEL#6189

2. DESCRIPTION: FACTORY–ASSEMBLED AND –TESTED SEWAGE–PUMP UNIT WITH GUIDE–RAIL SUPPORTS.

3. PUMP TYPE: SUBMERSIBLE, END–SUCTION, SINGLE–STAGE, CLOSE–COUPLED, OVERHUNG–IMPELLER, CENTRIFUGAL SUMP PUMP AS DEFINED IN HI 1.1–1.2 AND HI 1.3.

4. PUMP CASING: CAST IRON, WITH OPEN INLET, AND DISCHARGE FITTINGS FOR CONNECTION TO GUIDE–RAIL SUPPORT.

5. IMPELLER:
STATICALLY AND DYNAMICALLY BALANCED,NEMA B, BRONZE VORTEX , RPM 3450

6. PUMP AND MOTOR SHAFT: STAINLESS STEEL 416 S.S

7. SEALS: MECHANICAL.

8. MOISTURE–SENSING PROBE: OPTIONAL MUST BE INCLUDED IN BID PRICE. INTERNAL MOISTURE SENSOR AND MOISTURE ALARM.

9. MOTOR: OIL–FILLED, HERMETICALLY SEALED, CAPACITOR–START TYPE; WITH BUILT–IN OVERLOAD PROTECTION; LIFTING EYE OR LUG; AND THREE–CONDUCTOR, WATERPROOF POWER CABLE OF LENGTH REQUIRED AND WITH GROUNDING PLUG AND CABLE–SEALING ASSEMBLY FOR CONNECTION AT PUMP.
   a. MOTOR HOUSING FLUID: OIL.
   b. COMPLY WITH NEMA B DESIGNATION, TEMPERATURE RATING, SERVICE FACTOR, ENCLOSURE TYPE, AND EFFICIENCY REQUIREMENTS FOR MOTORS.
   c. MOTOR SIZES: MINIMUM SIZE AS INDICATED. IF NOT INDICATED, LARGE ENOUGH SO DRIVEN LOAD WILL NOT REQUIRE MOTOR TO OPERATE IN SERVICE FACTOR RANGE ABOVE 1.0.

10. CONTROLS:
   a. ENCLOSURE: NEMA 250, TYPE 1; WALL–MOUNTED.
   b. SWITCH TYPE: MECHANICAL–FLOAT TYPE, IN NEMA 250, TYPE 6 ENCLOSURES WITH MOUNTING ROD AND ELECTRIC CABLES. INCLUDE DOUBLE CONTAINMENT SPLICE BOX, AND FPS PRESSURE TRANSDUCER.
   c. AUTOMATIC ALTERNATOR: START ALTERNATING PUMPS ON SUCCESSIVE CYCLES. NON–SIMULTANEOUS OPERATION IS NOT REQUIRED.
   d. HIGH–WATER ALARM: ROD–MOUNTED, NEMA 250, TYPE 6 ENCLOSURE WITH MECHANICAL–FLOAT SWITCH MATCHING CONTROL AND ELECTRIC BELL; WITH TRANSFORMER AND CONTACTS FOR REMOTE ALARM BELL.
   e. INCLUDE ACCROSS THE LINE MOTOR STARTERS.

11. CONTROL–INTERFACE FEATURES:
   a. REMOTE ALARM CONTACTS: FOR REMOTE ALARM INTERFACE.
   b. BUILDING AUTOMATION SYSTEM INTERFACE: AUXILIARY CONTACTS IN PUMP CONTROLS FOR INTERFACE TO BUILDING AUTOMATION SYSTEM AND CAPABLE OF PROVIDING THE FOLLOWING:

      1) ON–OFF STATUS OF PUMP.

      2) HIGH WATER ALARM STATUS.

B. CAPACITIES AND CHARACTERISTICS:

13. UNIT CAPACITY: 140 GPM FOR 10 FEET HEAD LOSS.

14. NUMBER OF PUMPS: TWO.

15. EACH PUMP:
   l. CAPACITY: 140 GPM FOR 10 FEET HEAD LOSS.
   m. TOTAL DYNAMIC HEAD: 10 FEET.
   n. DISCHARGE PIPE SIZE: 3 INCH.
   o. MOTOR HORSEPOWER: 2.
   p. ELECTRICAL CHARACTERISTICS: VOLTS: 460, PHASES: 3, HERTZ: 60.

2.2 SUMP (BASIN) COVERS

A. BASIN COVERS: FABRICATE METAL COVER WITH OPENINGS HAVING GASKETS, SEALS, AND BUSHINGS; FOR ACCESS TO PUMPS, CONTROL RODS, DISCHARGE PIPING, VENT CONNECTIONS, AND POWER CABLES. COVER MUST BE GAS TIGHT.

1. COVER MAY BE PARTIAL ACCESS HATCH AND PARTIAL BLANK DIAMOND PLATE FOR PIPE AND CONDUIT PASS THROUGH.

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. CENTRI PRO

D. FLOOR DOORS, GENERAL: EQUIP EACH DOOR WITH ADJUSTABLE COUNTERBALANCING SPRINGS, HEAVY–DUTY HOLD–OPEN ARM THAT AUTOMATICALLY LOCKS DOOR OPEN AT 90 DEGREES, RELEASE HANDLE WITH RED VINYL GRIP THAT ALLOWS FOR ONE–HANDED CLOSURE, AND RECESSED LIFT HANDLE.

E. GASTIGHT ALUMINUM FLOOR DOOR: SINGLE–LEAF OPENING. EXTRUDED–ALUMINUM GUTTER FRAME WITH NPS 1–1/2 DRAINAGE COUPLING AND 1/4–INCH–THICK, DIAMOND–PATTERN, ALUMINUM TREAD PLATE DOOR; GAS TIGHT; LOADING CAPACITY TO SUPPORT 150–LBF/SQ. FT. PEDESTRIAN LIVE LOAD.

F. HARDWARE: PROVIDE THE FOLLOWING:

1. HINGES: HEAVY–DUTY, ALUMINUM BUTT HINGES WITH STAINLESS–STEEL PINS.

2. LATCH: STAINLESS–STEEL SLAM LATCH WITH LOOSE TEE HANDLE.

3. LOCK: NONE.
HARDWARE MATERIAL: MANUFACTURER'S STANDARD.

G. ALUMINUM EXTRUSIONS: ASTM B 221, ALLOY 6063–T6.

H. ALUMINUM–ALLOY ROLLED TREAD PLATE: ASTM B 632/B 632M, ALLOY 6061–T6.

I. ALUMINUM SHEET: ASTM B 209, ALLOY AND TEMPER RECOMMENDED BY ALUMINUM PRODUCER AND FINISHER FOR TYPE OF USE AND FINISH INDICATED, AND WITH NOT LESS THAN STRENGTH AND DURABILITY PROPERTIES OF ALLOY 5005–H15; WITH MINIMUM SHEET THICKNESS ACCORDING TO ANSI H35.2.

J. FRAME ANCHORS: SAME TYPE AS DOOR FACE.

K. INSERTS, BOLTS, AND ANCHOR FASTENERS: HOT–DIP GALVANIZED STEEL ACCORDING TO ASTM A 153/A 153M OR ASTM F 2329.

PART 3 – EXECUTION

3.1 EXAMINATION

A. EXAMINE ROUGHING–IN FOR PLUMBING PIPING TO VERIFY ACTUAL LOCATIONS OF SANITARY DRAINAGE AND VENT PIPING CONNECTIONS BEFORE SEWAGE PUMP INSTALLATION.

3.2 INSTALLATION

A. PUMP INSTALLATION STANDARDS:

1. COMPLY WITH HI 1.4 FOR INSTALLATION OF CENTRIFUGAL PUMPS.

B. WIRING WITHIN ENCLOSURES: BUNDLE, LACE, AND TRAIN CONDUCTORS TO TERMINAL POINTS WITH NO EXCESS AND WITHOUT EXCEEDING MANUFACTURER'S LIMITATIONS ON BENDING RADII. PROVIDE AND USE LACING BARS AND DISTRIBUTION SPOOLS.

3.3 CONNECTIONS

A. DRAWINGS INDICATE GENERAL ARRANGEMENT OF PIPING, FITTINGS, AND SPECIALTIES.

B. INSTALL PIPING ADJACENT TO EQUIPMENT TO ALLOW SERVICE AND MAINTENANCE.

3.4 FIELD QUALITY CONTROL

A. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY–AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT, TEST, AND ADJUST COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS.

B. PERFORM TESTS AND INSPECTIONS.

1. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY–AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING.

C. TESTS AND INSPECTIONS:

1. PERFORM EACH VISUAL AND MECHANICAL INSPECTION.

2. LEAK TEST: AFTER INSTALLATION, CHARGE SYSTEM AND TEST FOR LEAKS. REPAIR LEAKS AND RETEST UNTIL NO LEAKS EXIST.

3. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER MOTOR ROTATION AND UNIT OPERATION.

4. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.

D. PUMPS AND CONTROLS WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS.

E. PREPARE TEST AND INSPECTION REPORTS.

3.5 STARTUP SERVICE

1. COMPLETE INSTALLATION AND STARTUP CHECKS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

2. ENGAGE A FACTORY–AUTHORIZED SERVICE REPRESENTATIVE TO PERFORM STARTUP SERVICE.

3.6 ADJUSTING

A. ADJUST PUMPS TO FUNCTION SMOOTHLY AND LUBRICATE AS RECOMMENDED BY MANUFACTURER.

B. ADJUST CONTROL SET POINTS.

DOMESTIC WATER HEATER

PART 2 – PRODUCTS:

2.1 WATER HEATER, HEAT EXCHANGER: ARMSTRONG DIGITAL–FLO MODEL #DF65WDW50

A. WATER HEATER SHALL HAVE A 10–YEAR HEAT EXCHANGER AND 3–YEAR PARTS FOR COMMERCIAL USE PER WATER HEATER IS RATED FOR 150 PSI WORKING WATER PRESSURE AND 300 PSI TEST PRESSURE. ALL NPE "A" MODELS SHALL INCLUDE AN INTERNAL CIRCULATION PUMP AND 0.5 GALLON BUFFER TANK. THE WATER HEATER SHALL BE CONTROLLED BY AN INTERNAL CIRCUIT BOARD THAT MONITORS THE INLET AND OUTLET TEMPERATURES WITH INSTALLED THERMISTORS.

2.2 THERMAL EXPANSION TANK, ET1:

A. THERMAL EXPANSION TANK: AMTROL, STEEL SHELL, HEAVY DUTY BUTYL NSF/ANSI 61 DIAPHRAGM, IN–LINE MOUNTING, MAX. TEMP 200 °F, POLYPROPYLENE LINER, SCHRADER VALVE, 150 PSIG WORKING PRESSURE, DESIGNED AND CONSTRUCTED PER ASME CODE SECTION VIII, DIVISION 1.

6. DOMESTIC WATER PIPE AND FITTINGS:

1. TYPE L HARD COPPER TUBING WITH CAST BRONZE OR WROUGHT COPPER FITTINGS AND 95/5 TIN ANTIMONY SOLDER JOINTS.

C. ALL EXPOSED PIPE AND FITTINGS SHALL BE CHROME PLATED BRASS.

D. ALL EXPOSED PIPING PASSING THROUGH WALLS, FLOORS, CEILINGS, AND PARTITIONS SHALL BE PROVIDED WITH CHROME PLATED CAST BRASS ESCUTCHEONS HELD IN PLACE WITH SET SCREWS.

E. PROVIDE 18" MINIMUM SPUN CLOSED AIR CHAMBERS INSTALLED ON EACH WATER SUPPLY PIPE AT ALL LAVATORY AND SINK FIXTURES.

F. PROVIDE STAINLESS STEEL WATER HAMMER ARRESTOR WITH DIELECTRIC FITTINGS CAPABLE OF BOTH VERTICAL AND HORIZONTAL INSTALLATION, ON ALL PIPING RUN WITH QUICK CLOSING VALVES. SIZE PER MANUFACTURE RECOMMENDATION. (OR 18 MIN. SPUN CLOSED AIR CHAMBERS MAY INSTALLED ON EACH WATER SUPPLY.

7. VALVES:

A. BALL VALVES:

1. TWO–PIECE, BRONZE, END ENTRY, 600 PSI WWP; SIMILAR TO STOCKHAM #S–216 BR–R–T, #S–216 BR–R–S.

B. CHECK VALVES:

1. BRONZE, THREADED CAP, TEFLON DISC; SIMILAR TO STOCKHAM #B310T, B–320T.

8. INSULATION:

A. ALL INSULATION (INCLUDING JACKET, FACING AND ADHESIVE) SHALL HAVE PROCEDURES LISTED IN ASTM E–84, NFPA 255 AND UL 273; NOT EXCEEDING A FLAME SPREAD OF 25 AND A SMOKE DEVELOPED OF 50.

B. ON VALVES AND FITTINGS PROVIDE PRE–MOLDED FIBERGLASS FITTINGS. VAPOR SEAL INSULATION ON CW AND HW.

C. CW PIPING: PROVIDE 1 IN. THICK FIBERGLASS SECTION PIPE COVERING WITH VAPOR BARRIER JACKET.

D. HW PIPING: PROVIDE 1 IN. THICK FIBERGLASS SECTIONAL PIPE COVERING.

9. PLUMBING FIXTURES:

A. PROVIDE ALL FIXTURES WITH STOP VALVES AND SUPPLIES AND FIXTURE TRAPS AS REQUIRED.

B. ALL FIXTURES WILL BE SUPPLIED BY OWNER BY DESIGN BUILDER (KIMBALL CONSTRUCTION).

C. PROVIDE ALL COPPER SPUN CLOSED AIR CHAMBERS ON ALL FIXTURE SUPPLY PIPES. AIR CHAMBER SHALL BE 18 INCH LONG MINIMUM.

D. PROVIDE ALL WATTS MODEL LF05 LEAD FREE WATER HAMMER ARRESTOR ON ALL FIXTURE SUPPLY PIPES, INCLUDING WASHING MACHINE AND DISHWASHER SUPPLY.

10. WATER HEATER:

A. DOMESTIC WATER HEAT EXCHANGER WATER HEATER, ARMSTRONG DIGITAL–FLO MODEL #DF65WDW50 TO BE INSTALLED AS PER MANUFACTURERS SUGGESTIONS.

11. PIPING SUPPORTS:

A. SUPPORT ALL PIPING FROM BUILDING CONSTRUCTION BY PROVIDING INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), AND ACCEPTABLE BRACKETS. SUBMIT ALL METHODS FOR REVIEW.

B. PROVIDE TRAPEZE HANGERS FOR BOLTED ANGLES OR CHANNELS FOR GROUPED LINES AND SERVICES.

C. PROVIDE ADDITIONAL FRAMING WHERE BUILDING CONSTRUCTION IS INADEQUATE. SUBMIT FOR REVIEW.

D. SUSPENDED HORIZONTAL PIPING:

1. SUPPORT ALL PIPING INDEPENDENTLY FROM STRUCTURE USING HEAVY IRON–HINGED TYPE HANGERS, SIMILAR TO ANVIL INTERNATIONAL CLEVIS NO. 260.

2. PROVIDE ELECTROPLATED SOLID–BAND HANGERS SIMILAR TO AUTO–GRIP, FOR TWO–INCH AND SMALLER PIPE.

3. PROVIDE WALL BRACKETS FOR WALL SUPPORTED PIPING AND PROVIDE PIPE SADDLES FOR FLOOR MOUNTED PIPING.

4. PROVIDE SUPPORTS WITH COPPER LINING FOR UN–INSULATED COPPER PIPING.

5. SUSPEND PIPING FROM INSERTS, USING BEAM CLAMPS WITH RETAINING CLAMP OR LOCKNUT, STEEL FISHPLATES, CANTILEVER BRACKETS OR OTHER ACCEPTED MEANS. BEAM CLAMPS SHALL BE SIMILAR TO ANVIL INTERNATIONAL MODELS 14, 133, 134, OR 227.

6. C–CLAMPS SHALL ONLY BE PROVIDED AND APPROVED WITH A MINIMUM OF THE FOLLOWING COMPONENTS; CLAMP WITH SET SCREW AND LOCK NUT, AND RETAINING CLAMP. CLAMP SHALL BE ANVIL INTERNATIONAL MODEL 86 WITH 89X RETAINING STRAP. (THE INSTALLATION OF C–CLAMPS WITHOUT LOCK NUT OF RETAINING STRAP IS NOT APPROVED).

7. SUSPEND PIPING BY RODS WITH DOUBLE NUTS.

8. PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND ACCEPTED WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS.

9. SUPPORT BRANCH FIXTURE WATER PIPING IN CHASES WITH COPPER–PLATED METAL BRACKETS, SECURED TO STUDS, SIMILAR TO HOLD RITE NOS. 102–18, 107–18, 102–26, OR 101–26.

E. PROVIDE 180 DEGREE ARC GALVANIZED METAL COVERING SHIELDS ON HANGERS FOR INSULATED PIPING WITHOUT INCOMPRESSIBLE INSULATING BLOCK IN INSULATION AT HANGERS.

F. MAXIMUM HANGER SPACING AS INDICATED.

1. PIPE 1 INCH AND SMALLER SHALL BE EVERY 8 FEET.
2. PIPE 1–1/4 INCH AND LARGER SHALL BE EVERY 10 FEET.
3. COPPER TUBING 1–1/4 INCH AND SMALLER SHALL BE EVERY 6 FEET.
4. COPPER TUBING 1–1/2 INCH AND LARGER SHALL BE EVERY 10 FEET.
5. CAST IRON: EVERY FIVE FEET AND AT EVERY FITTING OR JOINT.

G. VERTICAL PIPING:

1. PROVIDE SPACING AS INDICATED:

   a. THREADED PIPING SHALL BE EVERY OTHER FLOOR LEVEL, AT A MAXIMUM OF 25 FEET ON CENTERS.

   b. CAST IRON PIPING SHALL BE EVERY FLOOR LEVEL, MAXIMUM 20 FEET ON CENTERS; HUBLESS PIPE IS THE EXCEPTION, REQUIRING A MAXIMUM OF 10 FEET ON CENTERS.

   c. TUBING SHALL BE EVERY FLOOR LEVEL MAXIMUM TEN FEET ON CENTERS.

H. EXPANSION ANCHORS:

1. PROVIDE SMOOTH WALL, NON–SELF DRILLING INTERNAL PLUG EXPANSION TYPE ANCHORS CONSTRUCTED OF AISC 12L14 STEEL AND ZINC PLATED IN ACCORDANCE WITH FED. SPEC. QQ–A–325 TYPE 1, CLASS 3.

2. DO NOT EXCEED 1/4 OF AVERAGE VALVES FOR A SPECIFIC ANCHOR SIZE USING 2000 PSIG CONCRETE ONLY, FOR MAXIMUM WORKING LOADS.

3. PROVIDE SPACING AND INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

4. EXPANSION ANCHORS SHALL BE U.L. LISTED AND SIMILAR TO HILTI HDI.

A. DOMESTIC WATER PIPING:

1. TEST PIPING HYDROSTATICALLY AT A PRESSURE OF 125 PSI.

2. DURATION OF TEST SHALL BE 2 HOURS WITHOUT A LOSS IN PRESSURE.

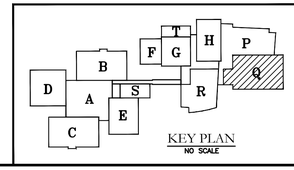
B. DRAINAGE AND VENT PIPING:

1. CAP ALL OUTLETS AND FILL PIPING SYSTEM TO OVERFLOWING FROM A POINT AT LEAST 10 FEET ABOVE THE FLOOR.

12. TESTS:

2. THE WATER LEVEL SHALL REMAIN CONSTANT THROUGHOUT THE TEST DURATION OF 2 HOURS.

C. ARRANGE AND COORDINATE TESTS WITH OWNER 48 HOURS IN ADVANCE NOTIFY ENGINEER AND ARCHITECT OF TEST AND DATE TIME.



KEY PLAN
NO SCALE

REV	DATE	DESCRIPTION
0	05-03-2019	BID SET

LFG
LANDMARK FACILITIES GROUP, INC.
252 East Avenue
Norwalk, CT 06855
(203) 866-4626 Tel
(203) 866-8019 Fax

BUILDING Q PLUMBING UPGRADES
GREENWICH HIGH SCHOOL
10 HILLSIDE RD., GREENWICH, CT 06830

SCALE: AS NOTED	APPROVED BY: GR	DRAWN BY: AH
DATE: 05-03-2019		CHECKED BY: RS

PLUMBING SPECIFICATIONS

BID NUMBER:	LFG JOB NUMBER:	DRAWING NUMBER:
2251-19	1018.002HSBMgQCD	P-300