Town of Granby is inviting you to a scheduled Zoom meeting.
https://us02web.zoom.us/j/89413997336?pwd=Rqy9TTbn99JqAlE8fnD7dxkDqGxpV5.1
Meeting ID: 894 1399 7336
Passcode: 856357

TOWN OF GRANBY
Public Building & Capital Project Committee
Regular Meeting Agenda
Thursday, November 12, 2026

6:00 p.m. Senior Center Community Room

1. Pledge Of Allegiance
2. Minutes
   - 2.I. Approval Of PBCPC Regular Meeting Minutes - October 14, 2026

     Documents:

     2 PBCPC 10.14.26 MEETING MINUTES W SIGNATURE PAGE.PDF
3. New Business
   - 3.I. None
4. Old Business
   - 4.I. Proposal Recommendation - Engineering Firm For Athletic Field Project

     Documents:

     3 2026-10-30 BENESCH RESPONSE TO COMMITTEE QUESTIONS.PDF
     4 BSC GROUP-RESPONSE TO REQUEST FOR CLARIFICATION.PDF
     5 SLR 2026-11-02-GRANBY-RESPONSES.PDF
   - 4.II. Proposal Recommendation - Engineering Firm For MEP For Middle School Project

     Documents:

     6 COMMITTEE QA - MIKE.PDF
     7 BL COMPANIES EMAIL RESPONSE.PDF
     8 H2M LP262054 GRANBY MS HVAC-RESPONSE LETTER-FINAL.PDF
5. Discussion Of Action Items For The Next Meeting
6. Adjournment

The next regular meeting of the Public Building & Capital Project Committee is scheduled for Wednesday, December 9, 2026, at 6 p.m. at the Senior Center.

TOWN OF GRANBY
PUBLIC BUILDING & CAPITAL PROJECT COMMITTEE
REGULAR MEETING MINUTES
OCTOBER 14, 2026

PRESENT: Chairman Mark Neumann, Anne Adamson, Peter Anderson, Mark Gottlieb, Christopher Lavigne, Michael Lengvarsky, Kent McCord, William Pascucci and David Peling

ALSO PRESENT: Mike Walsh, Town Manager

ABSENT: Kent McCord

1. PLEDGE OF ALLEGIANCE

2. MINUTES

2.I. Approval of PBCPC Regular Meeting Minutes from September 9, 2026

ON A MOTION by W. Pascucci, seconded by M. Lengvarsky, the committee voted (9-0-0) to approve the minutes of September 9, 2026, as presented.

3. NEW BUSINESS

3.I. Proposal Acceptance- Engineering Firm for Athletic Field Project

M. Walsh, Town Manager, provided an overview of the RFP process to date for both this project and the next agenda item. M. Walsh suggested that committee members take additional time to review the proposals submitted and send questions, via the committee chair, to the firms, and to delay acceptance of a proposal for each project until the next meeting of this committee on November 12, 2026. M. Neumann opened these suggestions to the committee for discussion. Discussion on both proposals ensued.

3.II. Proposal Acceptance- Engineering Firm for MEP for Middle School

See above minutes regarding 3.1.

ON A MOTION by A. Anderson, seconded by M. Gottlieb, the committee voted (9-0-0) to send all committee member questions on the two above proposals to M. Neumann by October 21, 2026, who would then send them to M. Walsh for distribution to the contractors, and to further discuss the proposals and select an engineering firm at the next regular meeting of this committee on November 12, 2026. An email sent by one contractor supplementing their original RFP submission was shared with the committee. A. Anderson and M. Gottlieb requested all proposal materials be shared with them in hard copy, and M. Walsh indicated that would be done.

4. DISCUSSION OF ACTION ITEMS FOR THE NEXT MEETING

The Town Manager and Chairman will create the agenda for the November meeting, which will include discussion of the proposals and any questions sent to the contractors, as well as

any responsive information received.

5. PUBLIC COMMENT

None

6. ADJOURNMENT:

ON A MOTION by A. Anderson, seconded by M. Gottlieb, the committee voted (9-0-0) to adjourn the meeting at approximately 6:25 p.m.

The next regular meeting of the Public Building & Capital Project Committee is scheduled for Wednesday, November 12, 2026, at 6 p.m. at the Senior Center.

Respectfully submitted,

Stephanie D'Ambrose

Stephanie D'Ambrose
Recording Secretary

200 Glastonbury Blvd., Suite 201
Glastonbury, CT 06033
www.benesch.com
P 860-633-8341

October 30, 2026

Michael P Walsh
Granby Town Manager
15 North Granby Road
Granby, CT 06035

RE: **Response to Committee Questions**
Granby Athletic Fields

Dear Mike:

Below please find our responses to the questions from the Building Committee, asked by you in your October 22, 2026 email. The committee questions are presented in **bold** and our responses in *italics*.

Question 1 - Please provide the duration of time you would expect the project to require in months from date that the town signs your contract to the final completion of all work including punch list items.

Benesch Response - We assume the town desires to have the fields ready for use by the start of school in September 2028. This is an aggressive schedule that runs approximately 20 months, assuming contract execution at the beginning of January 2027. Benesch has approximately 20 people in the Glastonbury Site Development Group to pull from to expedite the survey and design work, and in addition many other professionals in our other offices, if required. The two (2) largest items that could impact this aggressive schedule are as follows:

- *Land Use Permitting – we are beholden to the town process, public feedback and commission decisions. There will likely be residents who express safety concerns about the turf, and we will need a municipal wetlands permit and site plan approval, so permitting is a bit of an unknown. We have assumed 4½ months, which based on recent experience is fairly aggressive for a project of this magnitude, but not unattainable. The wetlands commission meets once a month and the planning/zoning commission meets twice a month. Early on we will collaborate with town staff and suggest calling special meetings, as necessary for the wetlands commission (so that they meet twice per month) and running the permitting concurrently between the two (2) commissions.*
- *Construction – we are targeting eight (8) months for construction so it will be critical to include the construction timeline requirements into the bid package, so as to solicit responses only from firms large enough to construct everything within this deadline.*

We have attached a design and construction schedule to this letter, which graphically represents the above written description.

Question 2 – Could you estimate the quantity of meetings that you have included and define for us quantity of in person vs remote. Do your in-person meetings include some evening meetings?

Benesch Response – We have assumed meetings during design, permitting and construction, as follows:

- *Design Meetings – we assume we will have bi-weekly meetings with the staff and stakeholders throughout the design process. We will be flexible and conduct these either during the day or the evening, depending on the best availability of the town representatives. We envision a combination of in-person and remote meetings. We will be flexible to meet the town's needs with the number and type of meetings.*
- *Permit Meetings – our fee covers the full scope of meetings required for land use permitting, including pre-application meetings with town staff and commission meetings.*
- *Construction – based on an eight (8) month construction timeline, we have assumed weekly site visits (~ 34) and bi-weekly Owner–Architect–Contractor (OAC) meetings (~17). We envision the OAC meetings will be held on site, but we could conduct those via Teams, if necessary.*

These numbers represent our approximation of the meetings we anticipate. They are not meant to represent an upper limit. If, during the project, it becomes apparent that we are required to attend a significant number of design and construction meetings, beyond our assumptions, we will notify you. Based on much previous, similar work, however, we feel comfortable with our above assumptions.

Question 3 - Does your proposal include assistance with approvals and/or permitting with applicable governing bodies such as inland wetlands and waterways and DEEP?

Benesch Response – Yes, our scope and lump sum fee includes the following land use permits:

- *Wetlands – Granby Inland Wetlands & Watercourses Commission*
- *Site Plan/Special Permit – Granby Planning & Zoning Commission*
- *Construction General Permit Associated with Stormwater – CT DEEP*

Following are items that are potentially associated with those permits, which we have excluded:

- *The CT DEEP Construction Stormwater Permit requires a review by DEEP for archeologically sensitive and listed species that may be present on the site. Based on their review, they may require additional studies. We have not included these additional studies because we do not know if they will be required and if they are, the specific scope of analysis required by DEEP. The CT DEEP Natural Diversity Database indicates the site is not within an area of concern, though one appears to be located to the north of the site. It would be our assumption that these studies would not be required since the only areas being disturbed are existing athletic fields.*
- *The CT DEEP Construction Stormwater Permit includes design required to obtain the permit, and then during construction the permit requires weekly erosion control inspections. Our scope includes all work required to obtain the permit, but not the weekly inspections. This can be put on the contractor or it can be performed by a qualified engineering firm. We are willing to perform these services, based on a negotiated fee, or we can assist the town in putting it out to bid, or we can put it on the contractor as part of our bid documents.*

Question 4 - Could you indicate how long permitting has been taking, in your experience, for this type of work.

Benesch Response – Permitting varies greatly from town to town. The two (2) local land use permits that are necessary will be required from the Inland Wetlands & Watercourses Commission and the Planning & Zoning Commission. These permits are mandated by state statute, but the administration of them varies from town to town. It is therefore difficult to predict an exact timeline since the process is subject to commissions that are comprised of volunteers, who have varying levels of technical expertise and understanding of their jurisdiction. Based on our recent, similar experience, we have estimated approximately four (4) to five (5) months will be required. However, we have identified strategies, as described in our response to Question 1, that we believe can help streamline the process.

The state permit (CT DEEP Construction Stormwater General Permit) requires a review by CT DEEP NDDB and we will initiate that immediately. The General Permit must be submitted 60 days prior to the start of construction. We do not submit this until we have heard from the local permitting authorities that they are satisfied with our stormwater design. Since time is of the essence in this project, we anticipate we will submit this during the permitting process, after we are satisfied that our design is accepted, or at least mostly accepted, by the commissions.

Question 5 - Keeping in mind, we are working within a footprint that would be undergoing renovation, In your experience, would you be concerned about encountering rare or endangered species of plants or animals that could impact our project?

Benesch Response – As described in our response to Question 3, we do not anticipate listed species or areas of archeological concern would be impacted by the construction. That being said, DEEP may identify nearby areas of concern and require further studies. It has been our experience and belief that DEEP has in the past utilized this review to obtain studies that are funded by the applicant.

Question 6 - Assuming approval by the voters early December, then time for final contract acceptance, we could probably not begin work until 1/1/27. What work would you expect to be able to accomplish during the winter months?

Benesch Response – We will know well in advance of January if we will be selected for this project, should it pass referendum. Therefore, we will have our survey and geotechnical activities scheduled for early January, weather-permitting. We will prepare a schedule for the initial stakeholder meeting to obtain the necessary information to begin conceptual design during the survey/geotechnical process. We will prepare GIS-based survey early on in the process, which we will utilize to prepare conceptual plans for stakeholder review. Once our survey is complete, we will then utilize that for design past conceptual design. Also, as previously mentioned, we will initiate the NDDB review very early on in the process.

Additionally, we will evaluate, with the town, the option for utilizing the CREC cooperative purchasing for turf, which we most recently used on the Southern Connecticut State University project, as a way to possibly streamline the construction timeline.

Question 7 - Reimbursables or Direct Costs was not spelled out in all of the proposals. Can you estimate the expenditure that would be expected for Granby to include in budgeting?

Benesch Response - The submitted proposal identifies a $4,000 direct-expense allowance, billed at actual cost without markup, for items such as plan reproduction, mileage, shipping, abutter mailings and public-hearing signs.

Typically, the largest cost in this line item is the cost associated with plan reproduction, as required for land use permit applications and that is dependent on the size and number of plan sets the town requires.

Question 8 - Does your proposal include any presentation materials which can either be displayed at the Town Hall or digitally?

Benesch Response – Yes, we have included colored site renderings, as required, for presentations at commission hearings. Selected exhibits can be supplied as print-ready PDFs and digital images for Town Hall, public meetings and the Town's website. Our software and rendering capabilities allow us to produce high-quality renderings at relatively small efforts, and we are very happy to share these with our clients for use in promoting the project. Our fee includes renderings.

Question 9 - Are there any items that you would consider long lead items that could impact our schedule?

Benesch Response - Potential procurement constraints include synthetic turf/infill systems, stadium LED lighting and controls and specialty athletic equipment. We will correspond with vendors to understand specific supplier lead times. We will employ the following strategies to help streamline the purchasing and construction process:

- *Make early material decision.*
- *Prepare bid-documents concurrent with permitting.*
- *Determine eligible CREC cooperative purchases and independent field packages. If the town is open to considering this method of procurement.*

If you have any questions about this information, please call or e-mail me at 860-494-4359 or wwalter@benesch.com.

Sincerely,
Alfred Benesch & Company



Will Walter, PE
Senior Project Manager

GRANBY ATHLETIC FIELDS

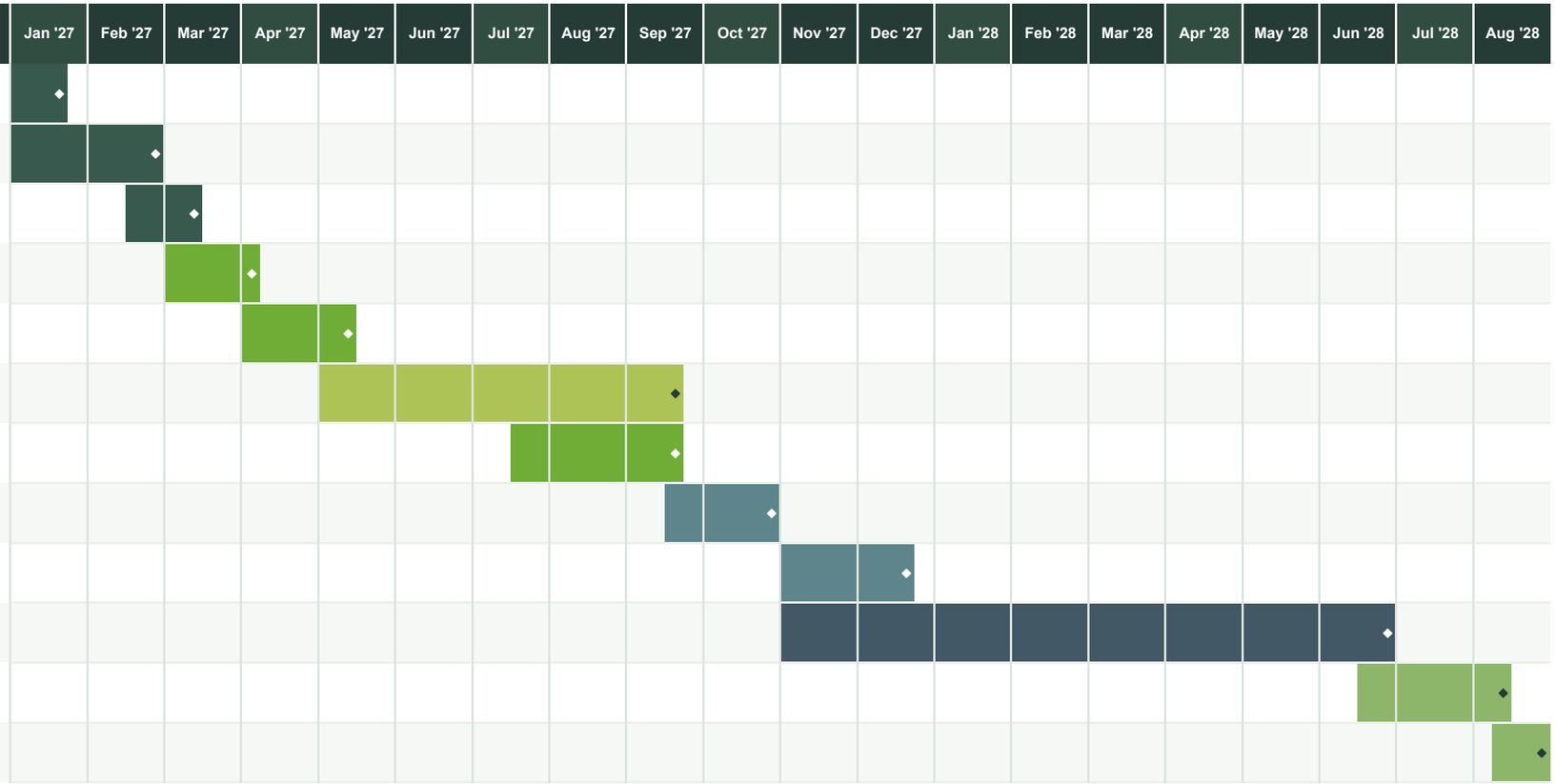
ALFRED BENESCH & COMPANY

PROPOSED DESIGN + CONSTRUCTION SCHEDULE | 30 OCTOBER 2026

NOTICE TO PROCEED	BID-READY TARGET	PLANNING DURATION	CONSTRUCTION START	PHYSICAL CLOSEOUT
04 Jan 2027	15 Sep 2027	19.9 months	Nov 2027	31 Aug 2028

COLOR KEY / ◆ phase finish — INVESTIGATION | DESIGN | PERMITTING | PROCUREMENT | CONSTRUCTION | COMPLETION

NO.	PHASE / ACTIVITY	START	FINISH	WKS
01	**Kickoff / Existing Information**	04 Jan 27	15 Jan 27	2.0
02	**Survey + Phase 1 Investigation**	04 Jan 27	26 Feb 27	8.0
03	**Investigation / Basis of Design**	15 Feb 27	12 Mar 27	4.0
04	**30% / Schematic Design**	01 Mar 27	02 Apr 27	5.0
05	**Design Development**	05 Apr 27	14 May 27	6.0
06	**Land-Use / Regulatory Permitting**	01 May 27	15 Sep 27	19.6
07	**Final CDs / Bid Documents**	15 Jul 27	15 Sep 27	9.0
08	**Bidding + Award**	15 Sep 27	31 Oct 27	6.6
09	**Mobilization / Procurement**	01 Nov 27	15 Dec 27	6.6
10	**Major Construction**	01 Nov 27	30 Jun 28	35.0
11	**Surfacing + Final Site Work**	19 Jun 28	11 Aug 28	8.0
12	**Punch List / Closeout**	14 Aug 28	31 Aug 28	2.8



SEPTEMBER BID READINESS | Complete approvals and final documents before bid release; mobilize in November.

PLANNING BASIS | NTP 04 Jan 2027. Agency approvals, remediation, procurement and weather govern the final sequence. Phases may overlap by work area.

10/30/2026 www.bscgroup.com

Michael P. Walsh
Town Manager
Town of Granby
15 N. Granby Road
Granby, CT 06035

RE: Granby Athletic Field Engineering Proposal – Response to Questions and Clarifications

Dear Mr. Walsh and members of the Public Building and Capital Project Committee,

BSC Group, Inc. (BSC) is pleased to submit our responses to your questions regarding our proposal for investigation, engineering, and design services for athletic facility improvements at Granby Memorial High School located at 54 N. Granby Road.

Question: Explain what Atterberg Limits Tests are.

Answer: The Atterberg Limits test is a simple lab procedure that shows how a clay or silt soil changes from a hard solid to a moldable plastic to a flowing liquid as its water content increases. It identifies the liquid limit (where it begins to flow), the plastic limit (where it can just barely be rolled into a thin thread without crumbling), and the shrinkage limit (below which drying no longer reduces its volume). The difference between the liquid and plastic limits, called the plasticity index, shows how sensitive the soil is to moisture. This matters for structural design because soils with a high plasticity index swell when wet and shrink when dry, which can crack slabs, lift foundations, and damage pavements. Because the test is quick and inexpensive, engineers use it early in a site investigation to classify soils, flag expansive or weak materials, estimate likely settlement and strength, and decide whether fill is suitable or fixes like deeper foundations, moisture control, or lime stabilization are needed.

Question: Explain what Rigid Inclusions, Controlled-Modulus Columns, Lightweight Fill and Hybrid Systems are.

Answer: Rigid Inclusions are vertical columns of stiff material, usually concrete, grout, or aggregate, installed into soft or weak ground to help it carry loads without settling too much. They are often built by drilling or displacing the soil and filling the hole with concrete or cement grout, and they are typically not structurally connected to the pavement or structure above. Instead, a layer of compacted granular material, called a load transfer platform, sits on top of the columns and spreads the load between them and the surrounding soil.

They are used for pavement support because soft clays, silts, and loose or organic soils can compress and settle unevenly under the weight of an embankment, roadway, or heavy traffic, leaving bumps, cracks, and costly repairs. Rigid inclusions work by being much stiffer than the soil around them, so they attract a large share of the load and pass it down to deeper, stronger layers. Through a process called arching, the load transfer platform channels stress onto the columns, which reduces the load on the soft soil and limits settlement. Compared with options like removing and replacing the soft soil or waiting for it to consolidate under a preload, rigid inclusions can be faster to build, can control settlement more reliably, and often

cause less disruption, which makes them especially useful for road and rail approaches, bridge abutments, and sites with tight schedules or strict settlement limits.

Controlled modulus columns (CMCs) are a specific type of rigid inclusion: vertical columns of cement grout installed into soft or loose ground to make it stiffer and reduce settlement. They are built using a special auger that screws into the soil and pushes it aside rather than pulling it out. Once the auger reaches the target depth, grout is pumped through its hollow stem as it is withdrawn, forming a continuous column. Because the soil is displaced instead of excavated, there are almost no spoils to haul away. The name comes from the fact that the stiffness (modulus) of the columns can be tuned by adjusting the grout mix, column diameter, and spacing, so the improved ground can be designed to behave in a predictable way.

Lightweight fill is the use of lightweight materials in place of conventional soil to build up an embankment or roadway grade. The goal is to reduce the weight placed on soft ground rather than strengthen the ground itself. Common lightweight fills include expanded polystyrene (EPS) geofoam blocks, foamed or cellular concrete, lightweight aggregates such as expanded clay or shale, and shredded tire or wood-based fills.

Hybrid systems combine light fill with other ground improvement methods, such as using geofoam or foamed concrete together with rigid inclusions, controlled modulus columns, or stone columns. The idea is to attack the settlement problem from two sides: the lighter fill reduces the load that has to be carried, and the columns stiffen the ground and pick up much of what remains. Some hybrid designs also pair light fill with geosynthetic reinforcement, drainage, or partial excavation of the softest soil.

Hybrid systems are often chosen when light fill alone is not enough, or when using columns alone would require a very dense or costly layout. Combining the two can reduce the number of columns needed, control both short-term and long-term settlement, and balance cost, schedule, and performance.

Question: Has BSC used any of the previously listed techniques in past projects?

Answer: BSC is currently working on the new Norwalk High School as a sub-consultant to Kaestle Boos Associates. The geotechnical investigations in the vicinity of the proposed synthetic turf field and running track encountered extensive, deep pockets of highly organic subsoils. The Geotechnical Report concluded that the proposed track and field would experience significant differential settlement without some form of ground improvement. The Owner accepted the recommended approach of rammed aggregate piers, a type of rigid inclusion. BSC worked closely with the project Geotechnical Engineer and Landscape Architect to prepare the contract documents for the track and field supported on the rammed aggregate pier reinforced subgrade. The project is currently in construction. Aggregate piers have been successfully installed below the new school building; however, the track and field has not yet been constructed.

Question: Please provide the duration of time you would expect the project to require in months from date that the town signs your contract to the final completion of all work including punch list items.

Answer: We anticipate that design and permitting will take approximately 9 months, with construction taking an additional 12 months, for a total of approximately 21 months.

Question: Could you estimate the quantity of meetings that you have included and define for us quantity of in person vs remote. Does your in-person meetings include some evening meetings?

Answer: We have included a total of 8 meetings during the design phase. We have assumed that the Task 1.5 Phase 1 Recommendations and Decision Workshop will be held in person; all others will be remote. Remote meetings make scheduling more convenient while reducing project costs. Evening meeting times are not distinguished separately and can be accommodated.

Question: Does your proposal include assistance with approvals and or permitting with applicable governing bodies such as inland wetlands and waterways and DEEP?

Answer: Yes. Task 2.4 Permitting describes the scope of work included, which covers Town of Granby Zoning site plan approval, Inland Wetlands approval, and CT DEEP General Permit registration.

Question: Could you indicate how long permitting has been taking, in your experience, for this type of work.

Answer: Typically, Town permitting takes two-three months. For this project, we anticipate needing Zoning and Inland Wetlands approval, which can run concurrently.

Question: Keeping in mind, we are working within a footprint that would be undergoing renovation, In your experience, would you be concerned about encountering rare or endangered species of plants or animals that could impact our project?

Answer: Based on a preliminary desktop review of the Connecticut Natural Diversity Database (NDDB), the project area is outside mapped NDDB areas. However, there is potential to encounter migratory species. As part of registering the project under CT DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, CT DEEP may perform a review and provide a determination letter. In our experience, this review rarely has a significant impact on projects of this type.



Question: Assuming approval by the voters early December, then time for final contract acceptance, we could probably not begin work until 1/1/27. What work would you expect to be able to accomplish during the winter months?

Answer: Depending on snow cover, we anticipate that topographic survey and geotechnical investigation can be performed. Wetland delineation requires observing soils; therefore snow cover or frozen soil may prohibit this work from being performed until conditions allow.

Question: Reimbursables or Direct Costs was not spelled out in all of the proposals. Can you estimate the expenditure that would be expected for Granby to include in budgeting?

Answer: Our fee is lump sum, with all expenses included.

Question: Does your proposal include any presentation materials which can either be displayed at the Town Hall or digitally?

Answer: Two-dimensional site plan renderings are included in our fee and can be provided in digital format for use by the Town.

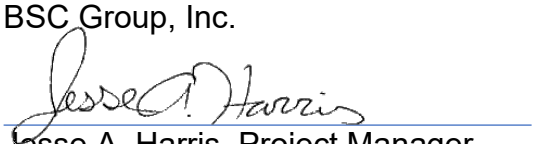
Question: Are there any items that you would consider long lead items that could impact our schedule?

Answer: Currently, geotechnical drillers are booked a month out; however, we anticipate this will be reduced during the winter months. Also, as noted above, snow cover and or frozen soils may delay topographic survey or wetland delineation.

BSC welcomes the opportunity to provide clarifications to our professional services proposal for this project. If you should have any questions or require additional information, please contact me at jharris@bscgroup.com or 860-652-8227.

Sincerely,

BSC Group, Inc.



Jesse A. Harris, Project Manager

SLR International Corporation
99 Realty Drive, Cheshire, Connecticut, 06410

November 2, 2026

Attention: Mike Walsh, Town Manager
Town of Granby
15 North Granby Road
Granby, CT 06035

SLR Project No.: 141.P51644.00001

Client Reference No.: 12712

RE: Investigation and Design Services for Athletic Field Improvements
Stadium Field, Track, Field Two, and Baseball Field at the
Granby Memorial High School Complex
Granby, Connecticut

Dear Mr. Walsh,

This letter provides our responses regarding the above-referenced project in two groups: questions specific to SLR, followed by questions for all firms. Each group retains its own question and response numbering.

C1. Explain how imaging and linear excavation tools work?

R1. Imaging and targeted linear excavation provide complementary views of subsurface conditions: imaging helps identify areas that warrant closer investigation, while strategic trenching allows direct observation of soil and fill materials. Unlike isolated bore holes, a trench exposes a continuous cross section along its alignment, reducing gaps between observation points. Excavated material can be evaluated at the surface, and a camera can be lowered into the trench to document exposed soil horizons. Together, these methods help focus the investigation on the conditions most likely to affect design, construction cost, and field performance. Electrical Resistivity Imaging is described in Response R2 below.

C2. Explain what electrical resistivity imaging is.

R2. Electrical Resistivity Imaging (ERI) is a non-invasive geophysical survey method that measures how strongly subsurface materials resist electrical current. The measurements are interpreted to develop cross-sectional images of variations in soil, rock, groundwater, and possible buried features. ERI provides a broader picture between isolated investigation points, helping identify areas for targeted borings or excavation. Its results are interpreted—not direct observations—and therefore should be evaluated alongside site history and physical investigation findings – as we suggest in conjunction with linear trenching.

For synthetic turf field design, this broader understanding of subsurface conditions is particularly important for evaluating existing drainage characteristics, identifying areas of inconsistent subgrade conditions, and determining the extent of potential excavation, soil replacement, and drainage improvements. By identifying subsurface variability early in the design process, ERI can help minimize unexpected construction conditions, and reduce unnecessary earthwork. The resulting information can also support more informed decisions regarding subgrade preparation and the design of the aggregate base and subsurface drainage infrastructure.

When integrated with a targeted program of linear trenching, ERI offers a more complete and cost-effective approach to subsurface characterization than reliance on conventional borings alone. This combined approach can reduce uncertainty during design and construction, improve the basis for construction cost estimates, and support the long-term performance, stability, and drainage of the synthetic turf field.

C3. Explain drone derived photogrammetry.

R3. Drone-derived photogrammetry provides a highly effective, non-invasive method for evaluating the condition and performance of an existing synthetic turf athletic field. Drone-derived photogrammetry uses overlapping aerial photographs to develop maps, topographic information, 3D models, and digital terrain surfaces.

This process is particularly useful in open spaces with limited obstructions and relatively flat topography, such as an athletic field. Drone camera technology captures detailed, georeferenced information across the entire playing surface, reducing reliance on interpolation between widely spaced survey points. This broad surface coverage complements traditional field surveying; the level of detail and accuracy depends on the survey approach and site conditions.

C4. How do the previous tools provide more complete information vs. borings?

R4. The suggested methods complement the boring information provided to date by extending investigation coverage between individual boring locations. Borings provide detailed information at specific points, but conditions between those points must be inferred. ERI helps identify subsurface variations along survey lines, and targeted trenching provides direct observation of soil and fill along excavated alignments. Drone-derived photogrammetry documents surface micro-topography with broad coverage and can offer efficiency and detail advantages over traditional field surveying. Together, these methods provide a more comprehensive picture while reducing—not eliminating—the need for interpretation.

Our review of historical aerial imagery of the stadium site indicates that fill was placed to expand the track and field area, particularly on the east side, where the majority of issues have occurred to date. These observations support prioritizing due diligence during site investigations before committing to costly soil removals or post-tension slab construction. We believe that a more comprehensive understanding of subsurface conditions can result in cost savings for the overall field rehabilitation project. The proposed approach is intended to reduce gaps

between spot investigations, better define the extent of potentially unsuitable material, and support more informed design and excavation decisions.

C5. Can SLR provide other projects that have utilized the previous investigative tools?

R5. Our in-house survey department has been at the forefront of drone-derived photogrammetry and Lidar for years and has recently added sonar survey equipment to our capabilities. We have provided drone photogrammetry on a wide variety of projects including riverine restorations, public parks, urban streetscapes, and athletic fields. Just this past week SLR completed drone photogrammetry and lidar services for Pratt & Whitney Stadium and Rentschler Field in East Hartford.

We have not used ERI to date.

In 2023-24, SLR partnered with the Town of Enfield to investigate drainage issues at the high school grass fields. Linear excavations helped us better understand subsurface conditions, including overly compacted soils. We then converted several fields to sand-slit drainage and collection systems, again using a similar process of linear excavations. These improvements substantially improved surface and subsurface drainage, overall field playability, and recovery.

Responses to questions for all firms:

C1. Please provide the duration of time your would expect the project to require in months from date that the town signs your contract to the final completion of all work including punch list items.

R1. Assuming the Town adds bidding and construction-phase services, which were not included in our previous scope, we anticipate the schedule below from contract execution through final completion, including punch list items. These planning durations provide a practical framework for coordinating design decisions, approvals, procurement, and construction; they are estimates rather than guaranteed completion dates.

- **Investigation, design, and permitting: 4-5 months**
- **Bidding and construction contract award: 2 months**
- **Construction:**
  - **Stadium Track & Field and Field 2: approximately 4 months**
  - **Baseball/softball field: approximately 3 months**
- **Punch list completion and closeout: approximately 1 month**

Based on these assumptions, the estimated duration is 11–12 months for the Stadium Track & Field and Field 2 improvements and 10–11 months for the baseball/softball field improvements. Concurrent bidding and construction may provide opportunities to streamline delivery. The final schedule will depend on field conditions, permitting, Town decisions, procurement, and contractor sequencing.

C2. Could you estimate the quantity of meetings that you have included and define for us quantity of in person vs. remote. Do your in-person meetings include some evening meetings?

R2. Our anticipated meeting allowance for the combined project is outlined below. Unless otherwise noted, these meetings are assumed to be in person, providing direct opportunities to resolve issues, confirm decisions, and maintain alignment with the Town throughout delivery.

- **Investigation, design, and permitting: Approximately 8 in-person meetings**
- **Bidding and construction contract award: Approximately 2 in-person meetings**
- **Construction:**
  - **Stadium Track & Field and Field 2: approximately 16 in-person meetings**
  - **Baseball/softball field: approximately 12 in-person meetings***
- **Punch list completion and closeout: Approximately 1 in-person meeting**

If projects are constructed concurrently, the number of weekly progress meetings would be reduced by approximately 12 meetings.

In addition to the meetings listed above, we anticipate remote coordination meetings and conference calls with Town staff, project stakeholders, permitting agencies, and the contractor as needed. These remote meetings are not specifically limited in number and will be used as appropriate to support timely decisions, clear communication, and schedule coordination.

Most meetings are expected to occur during normal business hours. Attendance at evening meetings—including presentations to Town boards, commissions, committees, and public forums—is included as required. This allows the project team to support public and stakeholder engagement at key decision points.

C3. Does your proposal include assistance with approvals and or permitting with applicable governing bodies such as inland wetlands and waterways and DEEP?

R3. Yes. Our proposal includes assistance with applicable local and state approvals and regulatory permitting, including preparation of supporting materials and coordination with the Inland Wetlands and Watercourses Commission, Connecticut DEEP, and other governing agencies as required. This support helps align the design with applicable requirements and address agency comments during review. Permit application fees, if applicable, are the Town's responsibility; approval decisions remain with the governing agencies.

C4. Could you indicate how long permitting has been taking, in your experience, for this type of work.

R4. Based on our experience with similar projects, permitting and regulatory review can typically be completed in approximately two months. This is a planning allowance, not a guaranteed approval period: timing depends on agency meeting schedules, workload, application requirements, and the complexity of the

improvements. Proactive coordination and clear supporting materials can help address review questions early and reduce avoidable delays.

C5. Keeping in mind, we are working within a footprint that would be undergoing renovation, in your experience, would you be concerned about encountering rare or endangered species of plants or animals that could impact our project?

R5. Based on our experience with comparable renovations within previously developed athletic facility footprints, we have no specific concerns at this stage regarding rare or endangered plant or animal species. However, prior development alone does not confirm the absence of protected species or eliminate environmental review requirements. Any required reviews will be conducted as part of permitting to verify site conditions and identify applicable constraints before they affect design or construction decisions.

C6. Assuming approval by the voters early December, then time for final contract acceptance, we could probably not begin work until 1/1/27. What work would you expect to be able to accomplish during the winter months?

R6. A January 1, 2027 start can provide a productive winter planning period. Assuming minimal or no snow cover and suitable access and ground conditions, we anticipate completing the required site investigation and existing conditions assessments during the winter months. Weather-sensitive tasks may need to be sequenced around field conditions. Regardless of field investigation timing, available mapping and existing data can support preliminary design concepts and preliminary opinions of probable construction cost, keeping the project moving while site findings are developed.

During this period, we can conduct a stakeholder kickoff meeting and a subsequent review of preliminary design concepts and cost estimates. Preliminary plans can also support early discussions with Town departments and land use staff. This parallel approach brings priorities, budget considerations, and regulatory feedback into the design process early, helping reduce avoidable revisions later.

C7. Reimbursables or Direct Costs was not spelled out in all of the proposals. Can you estimate the expenditure that would be expected for Granby to include in budgeting?

R7. All reimbursable expenses and direct costs associated with our proposed scope are included in the lump-sum fees. We do not anticipate additional reimbursable or direct-cost expenditures requiring separate Town budgeting for that scope. This provides a clear basis for budgeting our proposed services. As noted in Response R3, permit application fees, if applicable, remain the Town's responsibility; any added bidding or construction-phase services would also need to be reflected in the agreed scope and fee.

C8. Does your proposal include any presentation materials which can either be displayed at the Town Hall or digitally?

R8. Yes. Our proposal includes a color rendering of the proposed improvements in both high-resolution digital and printed formats. These materials will be suitable for Town Hall display, public meetings, community outreach, and electronic distribution. A clear visual presentation helps residents and stakeholders understand the proposed improvements and supports informed discussion at key project milestones.

C9. Are there any items that you would consider long lead items that could impact our schedule?

R9. At this stage, we do not anticipate significant long-lead items for the Stadium Track & Field or Field 2 turf replacement projects. For the baseball/softball field improvements, specialty components—including prefabricated dugouts and other owner-selected amenities—may require longer procurement periods depending on the final design and manufacturer. Identifying these items early, confirming supplier lead times, and making timely Town selections will be important to protecting the schedule. Advance procurement may be considered where appropriate. Supporting site infrastructure can often be constructed before component delivery, but the final sequence and schedule effects will depend on the selected products and contractor coordination.

Regards,

SLR International Corporation



Kevin Fuselier, PLA, LEED GA
Senior Principal/Team Leader, Landscape Architect
kfuselier@slrconsulting.com

Michael P. Walsh
Granby Town Manager
15 N. Granby Road
Granby, CT 06035

E-Mail: mwalsh@granby-ct.gov

Office Phone: 860-844-5302
Facsimile: 860-653-4769

Hello Mark,

Following are my questions for the engineering firms and a few for Mike.

Thanks.
Peter

For Mike:

1. Benesch and BCS both mentioned in their Phase 2 section that they would provide bidding assistance and construction phase services and SLR mentioned they would not provide those services. SLR referred to the towns request for information limited to development of a bid-ready project. Could this be clarified?

2. For the Middle School HVAC work, does the school system have a EPA Indoor Air Quality program in place?
Yes. All Granby schools comply with the CT Indoor Air Quality Inspection Program yearly as outlined here:
IAQ Requirements for School Districts
Here is a link to the Granby Schools Facilities page where we are required to publicly publish yearly results:
Tools for Schools | Granby Public Schools
We are currently conducting our 2026 surveys for all schools, due by 12/31/26.

3. For the Middle School HVAC work, how will the town handle balancing and testing of new HVAC equipment as this has not been included in the proposals from BL and H2M?
CT has in place a mandate that evert K-12 district must provide a comprehensive HVAC system evaluation every 5 years, with a minimum of 20% of schools assessed each year (for Granby this would be 1 school a year). The Middle School assessment took place April 2026 by Fuss and O'Neill where full testing and balancing took place (These results are scheduled to be shared publicly in the 11/4/26 BOE meeting by a representative from Fuss and O'Neill) . Do to the constant and ongoing issues with aged equipment, the main concentration has been on making repairs / minor replacements as items break of fail. We do not currently have a vendor on contract to perform testing and balancing work should new HVAC equipment be installed, and would have to budget for that work going forward.

4. For the Middle School HVAC work, how will the town handle identification, testing and abatement of hazardous materials, if necessary?
The BOE has 2 a contracted company Platform Environmental that performs all required annual radon, asbestos, and DEEP testing and reporting and have been available as needed whenever anything involving hazardous materials is found or requires abatement and/or removal. They have intimate knowledge of the structural and mechanical systems of the buildings district wide. They would be our first choice to assist in identifying, testing, and abating any hazardous materials. We also use Tradebe who is capable of handling this.

From: Silberquit, Evan, PE
To: Mike Walsh
Cc: Betsy Mazzotta; Mark Neumann
Subject: RE: Questions for engineering firms
Date: Monday, November 2, 2026 3:55:59 PM
Attachments: image001.png

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mike,

Thank you for reaching out. Please see responses to questions below:

1. Please provide the duration of time you would expect the project to require in months from date that the town signs your contract to the final completion of all work including punch list items.

BL is anticipating 4-6 weeks to complete the Investigation Phase followed by 10-14 weeks for the Design Phase. The Design Phase includes 2 weeks for Granby's review at 50% completion. The duration for the approval of the Phase 1 report and decision on which recommendations to include in the design scope is unknown at this time and not included in the above estimate. Additionally, construction duration for similar value projects could range from 6 to 15 months depending on numerous factors.

2. Could you estimate the quantity of meetings that you have included, and define for us quantity of in person vs remote. Does your in person meetings include some evening meetings?

We included two in-person meetings, one at the end of each phase. We assumed four additional virtual meetings. We did not assume any in-person evening meetings, as most municipalities have moved away from them in recent years. We are willing to modify this approach based on the Town's feedback.

3. Does your proposal include assistance with approvals and or permitting with applicable governing bodies such as inland wetlands and waterways and DEEP?

As the RFP did not request permitting support, we did not include. Permitting typically occurs once the construction phase begins.

4. Could you indicate how long permitting has been taking, in your experience, for this type of work.

This varies by municipality, although we see that the Granby building official allows up to

30 days to approve or request revisions to a submitted application.

5. Assuming approval by the voters early December, then time for final contract acceptance, we could probably not begin work until 1/1/27. What work would you expect to be able to accomplish during the winter months?

It is anticipated that both phases of our work can be performed during winter months. Outdoor assessments will have to be coordinated with weather conditions.

6. Reimbursables or Direct Costs was not spelled out in all of the proposals. Can you estimate the expenditure that would be expected for Granby to include in budgeting?

Based on the number of meetings above, plus our expected site visits to support the project, we have included all reimbursable expenses and direct costs in our fixed fee.

7. Does your proposal include any presentation materials which can either be displayed at the Town Hall or digitally?

Presentation and marketing materials were not requested and not included in our proposal. However, we are open to discussing specific needs to support this project.

8. Are there any items that you would consider long lead items that could impact our schedule?

Recently, electrical switchgear has been the most problematic in terms of lead time. However, until final scope has been determined, it is unclear whether new switchgear will be required.

Evan Silberquit, PE
Manager, MEP Engineering
Principal
BL Companies | Employee owned. Client driven.

Architecture
Engineering
Environmental
Land Surveying
BL Companies

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Windsor, CT 06095 | tel 866.970.6535

October 26, 2026

Mr. Michael P. Walsh
Granby Town Manager
15 N. Granby Road
Granby, CT 06035

Re: Proposal for Granby Middle School HVAC Replacements
Responses to Additional Questions
H2M Proposal No.: LP262054

Dear Mr. Walsh:

On behalf of **H2M Architects & Engineers, Inc. (H2M)**, thank you for the opportunity to provide additional information regarding our proposal for the Town of Granby's Middle School MEP project. We appreciate the Committee's review and offer the following responses to its questions.

1. Anticipated Project Duration

Assuming the Town authorizes H2M to proceed on or about January 1, 2027, we anticipate an overall project duration of approximately 22 months, with final completion, including construction and punch list activities, occurring in approximately October 2028.

A preliminary schedule would generally include:

- **January through early Spring 2027:** Project initiation, document review, field investigations, system evaluations, and development of preliminary recommendations.
- **Spring 2027**: Design development, construction documents, cost estimating, and coordination with the Town and applicable regulatory agencies.
- **Early Summer 2027 through Spring 2028**: Permit reviews, bidding, contractor selection, and procurement of long-lead equipment.
- **Summer 2028**: Construction, startup, testing, and commissioning activities during the period of reduced school occupancy.
- **Early Fall 2028**: Final inspections, closeout documentation, and completion of punch list items.

The attached detailed schedule may be refined as the scope is confirmed and will depend on permitting requirements, Town review periods, school access, contractor availability, and equipment lead times.

2. Meetings

Our proposal includes meetings at key milestones throughout the project. We anticipate approximately eight to ten meetings, consisting of an appropriate combination of in-person and remote meetings.

Our proposed approach is to have H2M's Project Manager attend regular coordination meetings in person when beneficial, with mechanical, electrical, and other technical staff participating either in person or remotely, based on the meeting agenda. Key site investigations, design reviews, public presentations, and construction meetings will be attended in person, as appropriate. H2M is flexible regarding meeting format and can accommodate a reasonable number of evening meetings when required for presentations to the Committee, Town boards, or the public. H2M did not include any pre-bond approval support associated with our fee.

3. Regulatory Approvals and Permitting

Regulatory building permitting through the Town of Granby is included in our proposed services. Based on our current understanding that all proposed improvements will be confined to the existing building envelope, applications to the Inland Wetlands and Watercourses Commission (IWWC) and Connecticut Department of Energy and Environmental Protection (CTDEEP) are not anticipated. Should the project scope change to include exterior work or site disturbance, the need for additional regulatory approvals will be re-evaluated.

4. Anticipated Permitting Duration

Based on the current project scope, regulatory review is expected to be limited to building permitting through the Town of Granby. For preliminary scheduling purposes, we recommend allowing approximately three to six months for permit review and approval. The actual duration will depend on the final scope of work, completeness of the submission, and the Town's review schedule. H2M will coordinate permitting requirements early in the design process and incorporate the anticipated review period into the overall project schedule.

5. Work During the Winter Months

A January 2027 start date will allow H2M to advance a substantial portion of the project during the winter, including:

- Project kickoff and coordination with Town and school representatives.
- Review of available record drawings, reports, operating information, and prior studies.
- Field verification of accessible mechanical, electrical, plumbing, and building systems.
- Interviews with facilities and maintenance personnel.
- Evaluation of existing equipment condition and system performance.
- Identification and evaluation of potential improvement alternatives.
- Development of conceptual recommendations and preliminary cost estimates.
- Preparation of design documents and early coordination with applicable permitting agencies.

We will coordinate detailed field investigations to be scheduled on January 18 and 19 while the school is closed for Martin Luther King Day and a Professional Development Day to take advantage of when students are not present but the building remains accessible. This minimizes disruption while allowing the design to progress during the school year.

6. Reimbursable and Direct Costs

H2M does not anticipate charging the Town separately for routine travel associated with the services described in our proposal.

Direct regulatory fees, permit application fees, specialized testing, and other third-party fees are not included in our proposed professional fee. Because these costs depend on the final scope of work and approvals required, they cannot be reliably estimated until the permitting needs are identified. H2M will advise the Town of anticipated direct costs before they are incurred and will not proceed with material additional expenses without the Town's authorization.

7. Presentation Materials

H2M can provide presentation support and materials suitable for display at Town Hall or digital distribution. Depending on the project phase, these materials may include:

- Existing-condition summaries.

- Photographs and diagrams.
- Recommended improvement alternatives.
- Preliminary project schedules.
- Opinion-of-cost summaries.
- Presentation boards or digital exhibits.
- PowerPoint materials for Committee, Board, or public presentations.

The format and level of detail will be coordinated with the Town based on the intended audience and purpose.

8. Long-Lead Items

Major mechanical and electrical equipment may have extended manufacturing and delivery periods. Potential long-lead items may include HVAC equipment, electrical distribution equipment, switchgear, transformers, generators, controls, and certain custom-fabricated components.

Depending on the selected systems and market conditions at the time of procurement, lead times may range from several months to more than one year. H2M will identify long-lead equipment during design and will evaluate strategies such as early equipment selection, pre-purchasing, advance procurement packages, approved equivalent equipment, and phased construction.

Equipment availability is one of the primary reasons we recommend planning for construction during the summer of 2028 rather than summer 2027. This schedule provides adequate time for design, permitting, bidding, equipment procurement, and coordination of construction activities around school operations.

H2M appreciates the opportunity to provide additional clarification on our proposed approach. Our team understands the coordination required to successfully complete improvements within an occupied school environment, particularly when it comes to scheduling work, maintaining school operations, securing permits, and planning for long-lead equipment. We are ready to begin upon authorization and will work closely with the Town and School District to keep the project moving while minimizing disruption to students, staff, and the community. Our goal is straightforward: deliver practical, cost-effective improvements that meet the Middle School's needs now and well into the future.

We encourage you to contact the following references regarding H2M's school experience:

- **ADV Construction Group (CM, Elmont School District):** Frank Marino, fmarino@advconstructiongroup.com, 516.546.3221
- **White Plains School District:** Frank Stefanelli, frankstefanelli@wpcsd.k12.ny.us, 914.422.2049

If you have any additional questions or would like further information regarding our proposal, please feel free to contact me at 860.607.9011 x1034 or glevasseur@h2m.com. Thank you again for your consideration. We look forward to the opportunity to partner with the Town.

Respectfully Submitted,
H2M Architects & Engineers, Inc.

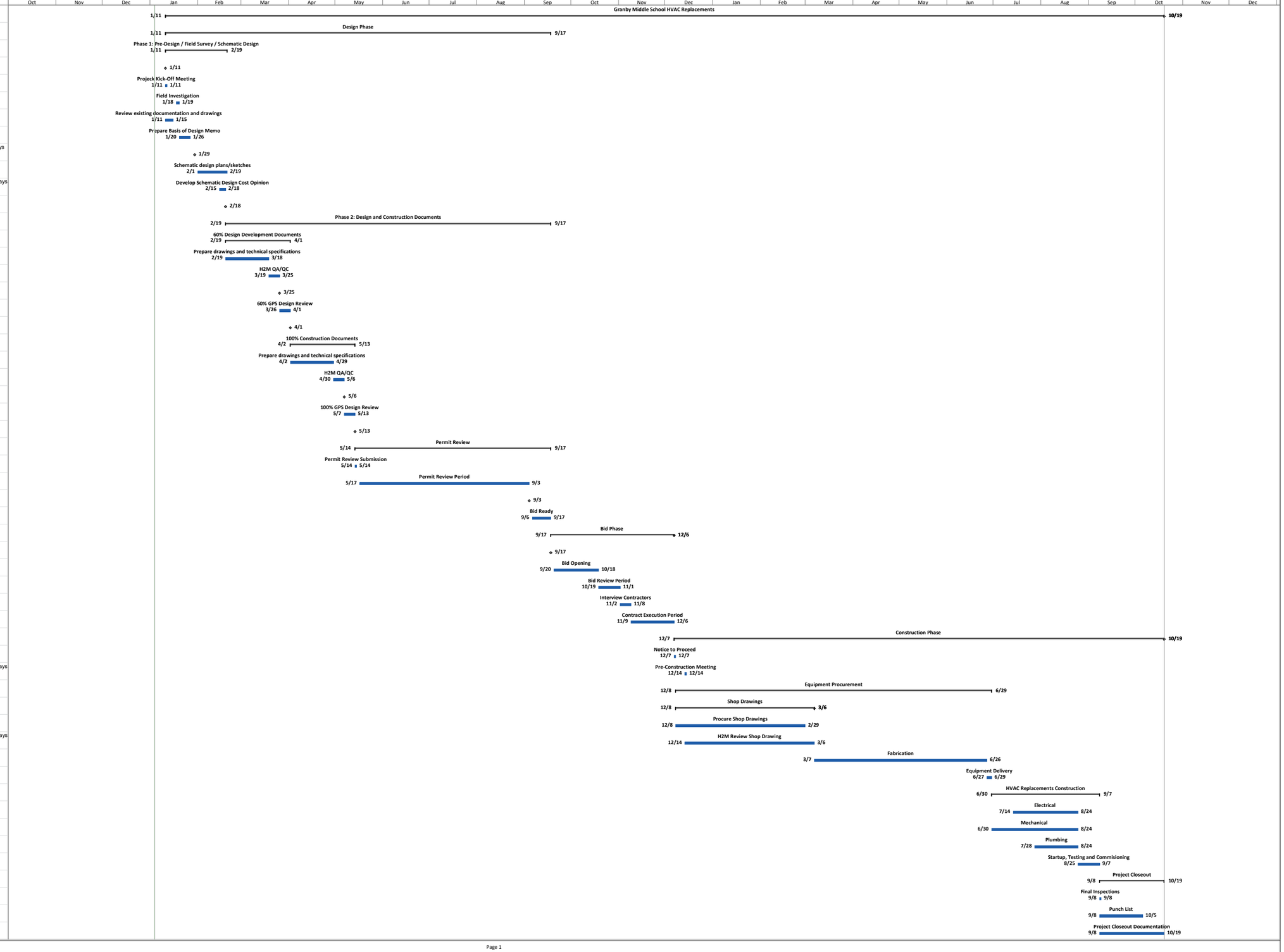
Gregory J. Levasseur, P.E.
Vice President, Windsor Office Director

Alexander Hochhausl, P.E.
Vice President, Mechanical Discipline Lead

J:\PROPS\2026\262054 (T.Granby-Eng Svcs-Athletic Fields) Muni-CT\02 Working Files\LP262054\LP262054 Granby MS HVAC-Response Letter.docx

Project: Granby Middle School HVAC Replacements
Esitimated Project Construction Schedule
Date: Mon 10/26/26

ID	Task Name	Duration	Start	Finish	Predecessors
1	Granby Middle School HVAC Replacements	464 days	Mon 1/11/27	Thu 10/19/28	
2	Design Phase	180 days	Mon 1/11/27	Fri 9/17/27	
3	**Phase 1: Pre-Design / Field Survey / Schematic Design**	**30 days**	**Mon 1/11/27**	**Fri 2/19/27**	
4	Notice to Proceed	0 days	Mon 1/11/27	Mon 1/11/27	
5	Projeck Kick-Off Meeting	1 day	Mon 1/11/27	Mon 1/11/27	4
6	Field Investigation	2 days	Mon 1/18/27	Tue 1/19/27	
7	Review existing documentation and drawings	5 days	Mon 1/11/27	Fri 1/15/27	4
8	Prepare Basis of Design Memo	5 days	Wed 1/20/27	Tue 1/26/27	6
9	Basis of Design Scope Review Meeting	0 days	Fri 1/29/27	Fri 1/29/27	8FS+3 days
10	Schematic design plans/sketches	15 days	Mon 2/1/27	Fri 2/19/27	9
11	Develop Schematic Design Cost Opinion	4 days	Mon 2/15/27	Thu 2/18/27	9FS+10 days
12	Schematic Design Review Meeting	0 days	Thu 2/18/27	Thu 2/18/27	11
13	**Phase 2: Design and Construction Documents**	**151 days**	**Fri 2/19/27**	**Fri 9/17/27**	
14	**60% Design Development Documents**	**30 days**	**Fri 2/19/27**	**Thu 4/1/27**	
15	Prepare drawings and technical specifications	20 days	Fri 2/19/27	Thu 3/18/27	12
16	H2M QA/QC	5 days	Fri 3/19/27	Thu 3/25/27	15
17	60% Design Submission	0 days	Thu 3/25/27	Thu 3/25/27	16
18	60% GPS Design Review	5 days	Fri 3/26/27	Thu 4/1/27	17
19	60% Design Review Meeting	0 days	Thu 4/1/27	Thu 4/1/27	18
20	**100% Construction Documents**	**30 days**	**Fri 4/2/27**	**Thu 5/13/27**	
21	Prepare drawings and technical specifications	20 days	Fri 4/2/27	Thu 4/29/27	19
22	H2M QA/QC	5 days	Fri 4/30/27	Thu 5/6/27	21
23	100% Design Submission	0 days	Thu 5/6/27	Thu 5/6/27	22
24	100% GPS Design Review	5 days	Fri 5/7/27	Thu 5/13/27	23
25	100% Design Review Meeting	0 days	Thu 5/13/27	Thu 5/13/27	24
26	**Permit Review**	**91 days**	**Fri 5/14/27**	**Fri 9/17/27**	
27	Permit Review Submission	1 day	Fri 5/14/27	Fri 5/14/27	25
28	Permit Review Period	80 days	Mon 5/17/27	Fri 9/3/27	27
29	Permit Approval	0 days	Fri 9/3/27	Fri 9/3/27	28
30	Bid Ready	10 days	Mon 9/6/27	Fri 9/17/27	29
31	Bid Phase	56 days	Fri 9/17/27	Mon 12/6/27	
32	Bid Advertisement	0 days	Fri 9/17/27	Fri 9/17/27	13
33	Bid Opening	21 days	Mon 9/20/27	Mon 10/18/27	32
34	Bid Review Period	10 days	Tue 10/19/27	Mon 11/1/27	33
35	Interview Contractors	5 days	Tue 11/2/27	Mon 11/8/27	34
36	Contract Execution Period	20 days	Tue 11/9/27	Mon 12/6/27	35
37	**Construction Phase**	**228 days**	**Tue 12/7/27**	**Thu 10/19/28**	
38	Notice to Proceed	1 day	Tue 12/7/27	Tue 12/7/27	36
39	Pre-Construction Meeting	1 day	Tue 12/14/27	Tue 12/14/27	36FS+5 days
40	**Equipment Procurement**	**147 days**	**Wed 12/8/27**	**Thu 6/29/28**	
41	**Shop Drawings**	**64 days**	**Wed 12/8/27**	**Mon 3/6/28**	
42	Procure Shop Drawings	60 days	Wed 12/8/27	Tue 2/29/28	38
43	H2M Review Shop Drawing	60 days	Tue 12/14/27	Mon 3/6/28	38SS+5 days
44	Fabrication	80 days	Tue 3/7/28	Mon 6/26/28	43
45	Equipment Delivery	3 days	Tue 6/27/28	Thu 6/29/28	44
46	**HVAC Replacements Construction**	**50 days**	**Fri 6/30/28**	**Thu 9/7/28**	
47	Electrical	30 days	Fri 7/14/28	Thu 8/24/28	45FS+10 days
48	Mechanical	40 days	Fri 6/30/28	Thu 8/24/28	45
49	Plumbing	20 days	Fri 7/28/28	Thu 8/24/28	45FS+20 days
50	Startup, Testing and Commisioning	10 days	Fri 8/25/28	Thu 9/7/28	47
51	**Project Closeout**	**30 days**	**Fri 9/8/28**	**Thu 10/19/28**	
52	Final Inspections	1 day	Fri 9/8/28	Fri 9/8/28	50
53	Punch List	20 days	Fri 9/8/28	Thu 10/5/28	50
54	Project Closeout Documentation	30 days	Fri 9/8/28	Thu 10/19/28	50



District-Wide HVAC Upgrades

White Plains City School District
White Plains, NY

Construction Cost: $5.1 million

SERVICES PROVIDED

- Mechanical Engineering
- Heating
- Ventilation
- Air Conditioning
- Chiller Plants



The White Plains City School District needed HVAC equipment upgrades at the Church Street Elementary School, George Washington Elementary School, Mamaroneck Avenue Elementary School, Ridgeway Elementary School, Rochambeau School, Eastview Middle School, Highlands Middle School and White Plains High School.

We provided complete engineering services from investigation through the construction administration phase for the district-wide, multi-building HVAC equipment upgrades. This project included the following:

- Replacement of HVAC and H&V central station air handling units in capacities ranging from 1,000 to 38,000 cfm. Heating coil types included both low pressure steam and hot water. Cooling coil types included both direct expansion (DX) and chilled water
- Installation of 125 ton air-cooled, chilled water plant
- Replacement of unit ventilators of varying types - heating coils included low pressure steam, hot water and electric - direct expansion (DX) type cooling coils with remote mounted air-cooled condensing units were utilized in several units
- Replacement of gas-fired HVAC rooftop units in capacities ranging from eight to 30 tons
- Installation of a commercial kitchen exhaust hood, ansul system and make-up air unit
- Replacement of roof mounted, in-line and ceiling exhaust fans
- Utilization of control strategies such as single-zone variable air volume and demand controlled ventilation when possible to increase energy efficiency
- Upgrade of existing Building Automation System (BAS) for integration of new equipment - upgrade included new DDC controllers and a front-end computer graphical interface to allow for remote equipment monitoring and adjustment

We worked closely with the facility to develop a construction phasing plan that spanned a total of three years to minimize any impact on the existing operations of the buildings.

District-Wide HVAC Replacements

Elmont School District

Elmont, NY

Construction Cost: $35 million

SERVICES PROVIDED

- Architectural Design
- Electrical Evaluations
- Interior/Exterior Lighting
- Power Distribution Systems
- Environmental Investigation & Abatement
- Mold, Asbestos, & Lead
- Energy/Building Systems Management
- Energy Recovery Systems
- Heating, Ventilation, & Air Conditioning
- Variable Refrigerant Flow (VRF) Systems
- HVAC/Electrical Upgrade Support







H2M replaced and upgraded the Elmont School District's HVAC infrastructure to a more efficient, state-of-the-art system.

The Elmont School District's HVAC equipment had exceeded its life expectancy. Across the District's six buildings, the old oil-fired steam boiler plant needed to serve approximately 500,000 square feet of classrooms, gymnasiums, auditoriums, libraries, cafeterias, and administrative offices. To avoid mechanical failure, improve occupant quality of life, and prepare for New York State's decarbonization goals, the District decided to upgrade to a state-of-the-art, high-efficiency, all-electric HVAC system. The community passed a $52 million bond, $35 million of which was reserved for HVAC upgrades. This upgrade comprises variable refrigerant flow (VRF) heat pump systems with dedicated outside air system (DOAS) rooftop units that will provide pre-filtered and conditioned air and individual space heating and cooling control.

H2M began by performing extensive field surveys to document the existing system and spaces and develop a plan. Each building needed new ductwork, piping, electrical services, and structural reinforcements for the new equipment. The scope of work includes adding ventilation and a building management system to enable monitoring and precision control; replacing the existing exhaust infrastructure, including toilet exhaust; installing new ceilings and efficient lighting; and removing the underground oil storage tanks and old boilers.

The work will be conducted over three years. During the school year, work in the classrooms will take place after-hours. All construction and demolition is phased to only impact a few classrooms at a time. Classes in the effected zones are being relocated to existing empty classrooms for the duration of construction.

Village Hall HVAC Renovations

Inc. Village of Rockville Centre
Rockville Centre, NY

Construction Cost: $1 million

SERVICES PROVIDED

HVAC Engineering
Mechanical Engineering
Air Handler Design



The Village Hall building in the Village of Rockville Centre called for the replacement of all existing perimeter fan coil units serving the heating and cooling needs of the existing building.

The proposed design consists of a new heat pump variable refrigerant (VRF) system with energy recovery ventilation. The new VRF system design uses ducted fan coil units throughout the building. Space was a challenge for this project as the original wood frame structure was not designed to accommodate any mechanical systems. The smaller size of the ducted fan coils allowed more flexibility in designing the new HVAC system to fit within the available spaces of the building.

The new system was designed to maximize energy savings while improving occupant comfort and indoor air quality. Specifically, the new system will introduce mechanical ventilation to all occupied spaces, greatly improving the indoor air quality of the building. The new system is designed to replace an existing two-pipe changeover system that offered little flexibility to building occupants to switch between heating and cooling, which was done seasonally. The new system will be able to respond to changes in heating/cooling demand quickly and throughout the day. New air handlers that were designed for the project will use VRF technology along with single zone VAV control strategies to maximize efficiency and occupant comfort.

HVAC Air Handler Upgrades

Levittown Public Library

Levittown, NY

Construction Cost: $1.15 million

SERVICES PROVIDED

Design
Bidding
Construction Administration



The existing HVAC systems serving the Levittown Public Library had reached the end of their service and were in need of replacement.

H2M performed an investigation of the existing systems and provided a feasibility study which included multiple options for HVAC upgrades. After considering first costs, operations and maintenance costs, system efficiencies and the impacts of construction on the operation of the Library, a project program was created. The design included the demolition of existing building air handlers, chiller plant and hot water heating plant. New air-cooled equipment was located on the roof to facilitate access and maintenance. A new high efficiency boiler plant was provided along with new hot water heating coils. Existing chilled water fan coil units were replaced with variable refrigerant flow (VRF) fan coil units and an energy recovery ventilation system.

We provided engineering services from the original investigation through construction administration and inspection. We worked closely with the Library's construction manager in monitoring all construction activities and phasing. Due to the cooperation of all parties involved, the Library was able to remain open to the public with the duration of construction.



HVAC Upgrades for COVID-19 Mitigation

Town of Hempstead
Hempstead, NY

Construction Cost: $10.8 million

SERVICES PROVIDED

- COVID Mitigation
- Heating, Ventilation, and Air Conditioning (HVAC)
- Energy Recovery Systems
- MEP Engineering
- Chiller Plants
- Heating & Boiler Plants



In response to the COVID-19 pandemic, the Town of Hempstead selected H2M to perform a review of all Town buildings and provide feasible recommendations and best practices to mitigate COVID-19 transmission.

This involved the investigation of approximately 50 Town-owned/ operated buildings in less than one month, which were largely unoccupied since March 2020, impacting Town operations. This included a wide variety of building types, applications, and restraints. The buildings surveyed included a large indoor pool complex, the main town hall buildings at 350 Front Street and 1 Washington, the Conservation and Waterways Admin. building, and the main office for the Water Department.

All spaces and mechanical systems were reviewed to determine the feasibility of increasing ventilation air, increasing filtration, and implementing new technologies, such as UVc and bipolar ionization. H2M reviewed the existing system's condition and ability to support the required upgrades. In cases where equipment was at or near end of life, replacement was recommended if equipment lead time and construction schedule could support it. H2M's mechanical engineering team coordinated extensively with various disciplines to prepare plans, including our architectural, electrical, and environmental departments.

H2M worked with the Town's Purchasing Department to expedite the emergency procurement of the equipment and labor contracts. Our team interacted closely with the Town HVAC group to ensure they were satisfied with equipment selections and that it would meet or exceed their operational needs.

To meet the expedited construction deadline, the project was split into multiple separate materials and labor contracts. This allowed the expedited equipment procurement process to commence while design, construction documents, and bidding occurred in parallel. This strategic approach removed the typical linear dependencies of a typical design-build project, and greatly compressed the schedule. H2M's mechanical engineers surveyed all buildings in less than one month to support the construction completion date of December 31, 2020.

The Mechanical team drafted an extensive report for the Town which detailed the main buildings where COVID mitigation strategies could be implemented. The report also included recommendations for the mitigation strategies based on data



from ASHRAE and the CDC. The three main recommendations were increasing the quantity of outdoor air being brought into the various buildings to flush out contaminated air, increasing filtration to at least MERV 13, and installing UVc sterilization technology as part of HVAC systems. Sterilization options varied from UVc devices in the airstream of a packaged unit to portable fan filter units with UVc inside of them.

One building that presented unique challenges was the "Conservation and Waterways" building located in Lido Beach. The initial design involved simply replacing the outdoor chiller which had badly corroded due to the saltwater environment, rendering it almost inoperable. This prevented the Town from operating the air handling unit which resulted in little to no outdoor air being brought into the building. Equipment lead times and issues with the existing equipment in the mechanical room required further action. A different chiller with a special salt resistant coating was installed and the mechanical room was completely overhauled with new pumps, expansion tanks, and a heat exchanger.

All of the various Town buildings were completed by the December 31st deadline with the unavoidable exception of the Merrick Golf Course building. This exception was allowed due to CARES Act provisions for delays caused by COVID19. The factory which produced the unit to be installed at the Golf Course experienced a COVID outbreak which slowed production and delayed the delivery of the equipment.

H2M's comprehensive review and recommendations for the Town of Hempstead enabled significant improvements to indoor air quality in all the town buildings due to upgraded filtration, HVAC systems, and UVc sterilization. At minimum, building occupants are receiving the code required amount of outdoor air, and in some cases are greatly surpassing the code requirements.





Heating Plant Replacement

Hastings-on-Hudson Union Free School District
Hastings-on-Hudson, NY

Construction Cost: $1 million

SERVICES PROVIDED

HVAC Engineering



H2M was selected by the Hastings-on-Hudson Union Free School District to design a replacement heating plant for the District's 25-year-old steam boiler plant.

H2M was selected by the Hastings-on-Hudson Union Free School District to design a replacement heating plant for the District's 25-year-old steam boiler plant, which had recently begun to fail. In addition, the District desired to convert their existing steam system to a hot water system, as their building heating systems were operated with hot water.

H2M performed a conversion from steam boilers to hot water boilers to meet the District's needs. Both existing steam boilers and existing heat exchangers were removed. After an evaluation of the existing heating plant, H2M found that the existing burners were only a few years old and could be reused, helping to reduce the overall project budget. H2M also reused the recently replaced existing hydronic pump sets to further reduce construction costs.

The conversion from steam to hot water was more efficient, so H2M was able to specify smaller boilers, which also helped save the District construction and operating costs.

The boiler room was located in the basement of the school, making access challenging. The existing boilers had to be removed in sections since it was not possible to remove them in one piece. To bring the new boilers into the boiler room, H2M proposed to remove the existing combustion air louvers to overcome the space constraints. H2M confirmed that replacement combustion air louvers were sized according to code, and specified new louvers with appropriate boiler control system interlocks. The end result was a fully functioning heating plant upgrade which fully met the design intent of the District.

Energy Audit

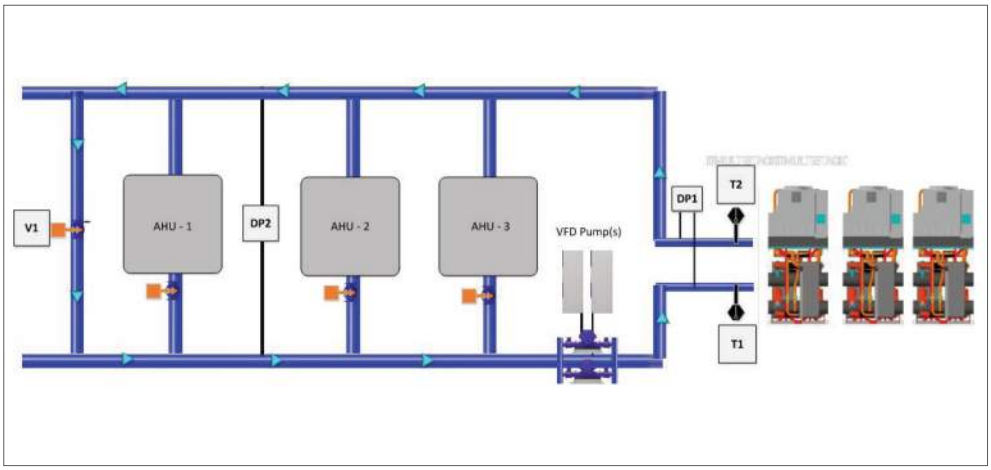
Confidential Client

Queens, NY

Construction Cost: $3.5 million

SERVICES PROVIDED

Heating
Ventilation & Air Conditioning
Cooling Towers





H2M was selected by a confidential client to conduct an energy analysis, provide system replacement options, develop construction documents, and support the client through construction and start-up phases.

The client's facility was using an outdated steam absorption chillers for cooling. Natural gas usage was higher in the summer for cooling purposes than in the winter for heating. To improve energy efficiency and reduce carbon emissions, the project involved replacing the steam boilers with condensing hot water boilers and substituting a single absorption chiller with six 50-ton modular water-cooled chillers. Retaining the existing condenser water systems was cost-effective due to the available roof space.

As the building already used a hot water system via a heat exchanger, the conversion from steam to hot water boilers was efficient and cost effective. In addition to the enhanced efficiency of the new equipment, this project provided N+1 redundancy and capacity to accommodate future loads for both heating and the chilled water systems. The building supports a highly diverse load profile and includes critical spaces for redundancy. Therefore, having turn down capability was critical.

Further improvements in efficiency were achieved by implementing variable speed pumping, replacing air handlers with energy recovery units, and upgrading the building management system to optimize scheduling and economizer operations.

Upon project completion, the building's carbon emissions were reduced by 55% and annual energy cost were reduced by 38%. Most of these reductions and savings resulted from switching from an absorption chiller to an electric chiller, as there was no use for the waste heat previously rejected to the atmosphere. The client now has a state-of-the-art HVAC system that is a working example of high efficiency and robust design.



