

INVITATION TO BID
for
ARCHITECTURAL SERVICES

Roof Replacement Project
Naugatuck High School
543 Rubber Avenue
Naugatuck, CT 06468

Release Date: April 10, 2019
Mandatory Walkthrough: April 16, 2019 2:00 p.m.
Bids Due: April 23, 2019 2:00 p.m.

INVITATION TO BID
for
ARCHITECTURAL SERVICES
Borough of Naugatuck, CT

Proposals will be received by the Borough of Naugatuck and Naugatuck Board of Education for Architectural Services to provide design services for the preparation of plans and construction documents for the roof replacement of Naugatuck High School, located at 543 Rubber Avenue, Naugatuck, CT 06770. The Borough will be submitting grant applications to the Department of Administrative Services with the intention of securing a grant from the Office of School Construction and Grants and Review (OSCGR).

The Invitation to bid and related documents are available at no cost from the Borough of Naugatuck web site <http://www.naugatuck-ct.gov>

Addenda if required shall be posted on the <http://www.naugatuck-ct.gov> web site. It is the respondent's responsibility to check the Town web site in advance of bid opening to determine if any addenda have been issued.

A mandatory pre-submittal meeting and site tour will be held at 2:00 p.m on Tuesday, April 16, 2019. Bidders will meet at the Naugatuck High School Main Lobby 543 Rubber Avenue, Naugatuck, CT 06770.

Sealed bids are due at 2:00 p.m. on Tuesday, April 23, 2019 at the Purchasing Agents Office, Town Hall 229 Church Street, Naugatuck, CT 06770.

The Borough of Naugatuck reserves the right to waive any informalities.

The Borough of Naugatuck is an affirmative action/equal opportunity employer, MBE's, WBE's and SBE's are encouraged to submit.

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INTRODUCTION

The Borough of Naugatuck and Naugatuck Board of Education requests professional services from an architectural firm for a roof replacement project at Naugatuck High School. The selected Firm will be working with the Building Committee to determine the most practical type of roof replacement for the existing facility.

The Naugatuck High School has approximately 220,000 sq. ft. of roof including approximately 174,000 s.f. covered with a surface applied photovoltaic cells directly adhered to the existing roof membrane. The Architect shall design a new roofing system for the entire building: The current roof system is a 20 year, PVC, single ply roof. The committee is open to other types of roof systems such as modified bitumen roof systems (hot-applied) and EPDM. Roof work will include minimum slope of ¼” inch per ft. including related flashings and all other necessary components. Design new internal roof drains where necessary to accommodate ¼” per ft. slope requirement including all existing roof drain bowls and design new drains (secondary) as needed. Removal of the existing white PVC membrane and inclusive solar array panels as well as removal of all conduit wiring under the roof and inverters will need to be included in the roof project. A Structural Engineer (Pustola and Associates) has been contracted by the Borough to complete the Structural Analysis for the Naugatuck High School. The scope of the report is included in appendix A and the full report will be made available on April 20, 2019 on the town website.

The existing surface applied photovoltaic cells have failed and must be removed as soon as possible. Due to the method of construction and heat weld adhesion to the PVC membrane, the photovoltaic cells and associated equipment cannot be removed without damaging the existing roof PVC membrane thus necessitating its replacement.

It is anticipated that a new photovoltaic system under a separate contract will be installed on the new roof following its completion. The new roofing system shall be designed to incorporate a future ballasted solar array.

The Borough of Naugatuck and its Agencies and Commissions Are Affirmative Action - Equal Opportunity employers. Respondents to the bid agree and warrant that in the performance of the work on these projects, they will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation, or physical disability. Respondents agree to provide the State of Connecticut Commission on Human Rights and Opportunities with such information requested by the Commission concerning employment practices and procedures.

There will be a mandatory pre-submittal meeting and site tour at 2:00 p.m on Tuesday, April 16, 2019. Bidders will meet at the Naugatuck High School Main Lobby, 543 Rubber Avenue, Naugatuck, CT 06770.

Questions regarding the RFP must be submitted in writing on or before Thursday, April 2019. The Boroughs responses will be placed on the Borough website for review.

Sealed bids are due at 2:00 p.m. on Tuesday, April 23, 2019 at the Purchasing Agents Office, Town Hall 229 Church Street, Naugatuck, CT 06770. Bids must be addressed.

1.0 General

- 1.1 The Building Committee is soliciting bids from architectural firms (hereinafter referred to as the "Firm") to develop plans and specifications for the replacement of approximately 220,000 square feet of roof at Naugatuck High School.
- 1.2 The Firm will provide all evaluation, specification development and drawings required to replace approximately 220,000 square feet of roof accounting for all electrical, mechanical, plumbing, HVAC systems and utilities in the affected area. The Scope of Services will include services through the bidding process as well as the entire construction phase and project closeout.
- 1.3 The existing roof is covered by approximately 174,000 s.f. of surface applied photovoltaic cells directly adhered to the existing roof membrane. The existing surface applied photovoltaic cells have failed and must be removed as soon as possible.
- 1.4 The roof shall be designed with new internal roof drains where necessary to accommodate ¼" per ft. slope requirement including all existing roof drain bowls and design new drains (secondary) as needed. The design shall include removal of the existing white PVC membrane and inclusive solar array panels as well as removal of all conduit wiring under the roof and inverters.
- 1.5 The Borough has contracted a Structural Engineer (Pustola and Associates) to complete the Structural Analysis for the Naugatuck High School. The scope of the report is included in appendix A and the full report will be made available on April 20, 2019 on the town website.

- 1.6 The Firm will have demonstrated experience in compliance with the State of Connecticut statutory and regulatory school construction procedures for Roof Replacement Projects that are grant funded.
- 1.7 The Firm shall obtain and maintain, at the Firm's expense, Professional Liability Insurance in a minimum amount of \$2,000,000. The apparent low bidder shall, within three (3) business days of the bid award, provide proof of this insurance.
- 1.8 The Firm shall obtain and maintain, at the Firm's expense, such insurance as will protect the Firm from claims under Workers' Compensation and Comprehensive General Liability Insurance that will protect the Borough of Naugatuck and Naugatuck Board of Education from all claims of bodily injury, death or property damage which may arise from the performance by the Firm or the Firm's employees in their functions and services to the Borough of Naugatuck and Naugatuck Board of Education. Limits of insurance shall be \$1,000,000 per occurrence, \$2,000,000 aggregate naming the Borough of Naugatuck and Naugatuck Board of Education as additional insureds. Workers' Compensation shall be in accordance with Connecticut Statutes. The apparent low bidder shall, within three (3) business days of the bid award, provide proof of this insurance.
- 1.9 The Committee will evaluate each Firm's bid package based upon all of the information provided in Section 8.0 Checklist and Evaluation.
- 1.10 The Committee reserves the right to reject any and all bids and to waive any informalities in the bidding process. It shall be understood that the award made by the Committee shall be final and conclusive and without recourse or appeal by the remaining Firms.

2.0 Scope of Services

The scope of services is generally defined as noted below. Firms submitting a bid are required to include information on how this scope of services will be addressed, including a timeline relative to the tasks defined below for the project identified in Sections 1.1 and 1.2.

- 2.1 Perform all investigative work necessary to establish existing conditions including but not limited to the effectiveness of the existing roof, systems impacted by roof replacement, survey of the existing surface applied photovoltaic system and the requirements for safe removal and existence of hazardous materials.
- 2.2 Review and utilize the Field inspection and Structural Report by Pustola & Associates. The final report will be posted on the town web site by April 20, 2019.
- 2.3 Analyzes various roofing systems available and meet with the School Building Committee to recommend a roofing system. It is anticipated that the new roofing system will be utilized for a new Ballasted Solar Photovoltaic system.
- 2.4 Prepare preliminary design and cost estimates. Please note that the Borough of Naugatuck is subject to prevailing wage requirements in accordance with Connecticut General Statutes. Budgets developed must be comprehensive, including costs for construction, administration and inspection, permitting, printing, advertising, architectural/engineering, special inspections, materials testing, etc. A presentation of the preliminary design and cost estimates to the Committee should be considered in your response.
- 2.5 Prepare complete construction plans, including, but not limited to, plan and profile views, cross sections, typical details and detailed cost estimate sheet. Design submissions will be required at the preliminary, semi-final, and final design stages.
- 2.6 Prepare all construction documents, including, but not limited to, notices, special provisions, and detailed unit price bid proposals. All construction documents shall be submitted at the semi-final stage.
- 2.7 Provide finished drawings and specifications to the Building Committee for bidding; it is expected that the Firm will be available for assistance in the bidding process.

- 2.8 Review and evaluate bids received, including detailed analysis of the three lowest bids and return a recommendation for award of contract.
- 2.9 The selected Firm's obligation during construction will involve plan and specification interpretation and clarification as necessary, attendance at weekly job meetings, assistance in compliance throughout construction, assistance in the coordination of special inspections, review of materials testing, limited inspection of work performed by contractor(s), and approval of payment requisitions from contractor(s).
- 2.10 The Architect shall include a fee for processing documents and reports in order to close out the project with the Office of School Construction and Grants and Review to its completion

3.0 Invoicing and Payment

- 3.1 Services will be paid for as the contract progresses. The bid submitted should include an outline of the payment schedule with percentage of contract amount due at each timeline. The Firm will then be required to submit an invoice, and upon acceptance of the Committee, payment will be made. Such payments shall be subject to all technical and procedural requirements of the Borough of Naugatuck and the State of Connecticut School Construction Grant Process.
- 3.2 The successful bidder will be expected to execute a standard AIA contract or other contract as approved by the Borough of Naugatuck and the State of Connecticut School Construction Grant Process. The Firm will be required to sign off on progress payments, substantial completion of the project and final completion of the project.

4.0 Documentation

4.1 Submittal Letter

The Firm shall submit a cover letter, signed by an authorized principal or agent of the Firm, which provides an overview of the Firm's bid, as well as the name, title, phone and fax numbers, and email address of the person to whom the Committee may direct questions concerning the request for qualifications.

4.2 History of the Firm and Resumes

The Firm must include a brief history of the company including:

- a) Firm size and organization
- b) Length of time the Firm has been in business
- c) Products and services offered
- d) Resumes of key individuals that will be assigned to this project

4.3 Key Issues and Experience

The Firm must demonstrate:

- a) Relevant Connecticut public school experience
- b) Previous work consistent with roof replacement projects
- c) Strength and experience of the consultant team assigned to the project

4.4 Qualifications

The Firm must demonstrate knowledge of the following:

- a) Experience and expertise in the construction, design, and renovation of school facilities as well as the ability to evaluate the physical condition of roofs
- b) Knowledge of state and federal laws pertaining to school buildings such as state and federal requirements, life safety requirements including the abatement of all hazardous materials and air quality issues, and other laws, regulations, and rules that provide for a healthy school environment
- c) Ability to provide full services to the project including engineers, architects, and consultants that will focus on delivering a comprehensive report on the replacement of the roof
- d) Experience in engaging the Committee in the roof replacement process, including educating them and seeking their input during the entire process.
- e) Demonstrated experience in compliance with the State of Connecticut statutory and regulatory school construction procedures for Roof Replacement Projects with CT OSCGR (Office of School Construction Grants and Review).

4.5 References

A list of at least two (2) current schools for which the Firm has completed such projects.

5.0 Project Schedule

The following timeline will be followed:

- Issue RFP Wednesday, April 10, 2019
- Mandatory Site Visit Tuesday, April 16, 2019, 2:00 p.m.
- Final Questions Thursday, April 18, 2019
- RFP bid date from qualified firms Tuesday, April 23, 2019, 2:00 p.m.
- School Building Committee Meeting Thursday, April 25, 2019
- Board of Education and April 25, 2019 or soon thereafter
- Board of Mayor and Burgesses
- Borough Contract signing with Architect Monday, April 29, 2019
- Meet with Building committee to determine the roofing system that will be utilized. Wednesday, May 1, 2019
- Advertise Roof Bid Friday, May 17, 2019
- Bid Opening Wednesday, May 29, 2019
- Roof Construction Bid award Tuesday, June 4, 2019
- Contract Signing Thursday, June 6, 2019
- Notice to Proceed to Contractor Tuesday, June 11, 2019
- Substantial completion of construction Friday, August 16, 2019

6.0 Fee Schedule

- 6.1 Fee Schedule: The Firm is to provide a maximum total cost, including all fees and reimbursable expenses, for the services associated with the roof replacement project. The total cost is to include the development of drawings as well as the development and printing of bid specifications for the project as described in Section 2.0 Scope of Services. The fee schedule is to be itemized by all costs relative to the services the Firm proposes to provide as identified in the Invitation to Bid, including reimbursable expenses, so that the Building Committee is aware of the total liability for architectural services. It will be assumed that all items not set out as reimbursable expenses will be absorbed by the bidder as part of the contract. In order to equitably compare each proposal, all reimbursable items involving multiple sets or copies, such as plans, specifications, et cetera, shall be based upon ten (10) sets. The Firm shall include a per copy cost for each set in their proposal. It is understood that the Committee can order additional copies if warranted at the per unit price shown in the proposal.

7.0 Responses to Bid

7.1 The Firm shall provide three (3) printed copies of their bid and one digital copy in PDF Format and may be required to meet with the Committee to discuss their bid.

7.2 The Firm shall mail or hand-deliver their bids in a sealed envelope and shall clearly mark the envelope as follows:

Architectural Services- High School Roof
Attn: Purchasing Agent
Town Hall
229 Church Street
Naugatuck, Connecticut 06770

7.3 The Borough of Naugatuck will receive bids until 2:00 pm on April 23, 2019, at the Purchasing Agents Office. Bids received after that time will not be considered. Interested parties are invited to attend. Bids will be opened publicly and read aloud immediately after the specified bid closing time.

7.4 No bid may be withdrawn within sixty (60) days of the bid opening.

7.5 If you have any questions, contact the Director of Public Works:

James R Stewart
Director of Public Works
246 Rubber Avenue
Naugatuck, CT 06770
(203)- 720-7072
Email: JStewart@naugatuck-ct.gov

8.0 Checklist and Evaluation

The following checklist represents the minimum requirements that will be used to evaluate and determine the lowest responsible qualified bidder. Please review the list carefully and ensure that each item is included in your bid package. Please return this sheet with your bid package and check off that each item is included.

- 8.1 The Firm has provided information on how the Scope of Services will be addressed relative to the project identified in Sections 1.1, 1.2 and Section 2.0 Scope of Services.
- 8.2 The Firm has included a timeline relative to the tasks defined in Section 2.0 Scope of Services. The Firm shall include a statement that they can meet the required schedule.
- 8.3 The Firm has included an outline of the payment schedule with percentage of contract amount due at each timeline. Refer to Section 3.1 under Invoicing and Payment.
- 8.4 The Firm has included a Submittal Letter signed by an authorized principal or agent of the Firm as outlined in Section 4.1 under Documentation.
- 8.5 The Firm has included History of the Firm and Resumes as outlined in Section 4.2 under Documentation.
- 8.6 The Firm has demonstrated Key Issues and Experience and outlined in Section 4.3 under Documentation.
- 8.7 The Firm has included Qualifications as outlined in Section 4.4 under Documentation.
- 8.8 The Firm has included at least two (2) References as indicated in Section 4.5 under Documentation.
- 8.9 The Firm has included a Fee Schedule that includes all costs associated with the roof replacement project, including reimbursable expenses, as specified in Section 6.1 under Fee Schedule as well as a cost per copy as specified in Section 6.1 under Fee Schedule.

- O 8.10 The Firm has provided three (3) printed copies and one(1) digital copy of their bid package as specified in Section 7.1 under Responses to Bid.
- O 8.11 The Firm has clearly marked the envelope as specified in Section 7.2 under Responses to Bid.
- O 8.12 The Firm has mailed or will hand-deliver their bid package no later than the designated opening date and time as specified in Section 7.3 under Responses to Bid.
- O 8.13 The Firm has submitted the FEE PROPOSAL & BID FORM

9.0 GENERAL TERMS AND CONDITIONS

A prospective respondent must be willing to adhere to the following terms and conditions and by submitting a proposal hereby accepts and will comply with them in their response to this Request for Proposal.

1. **Acceptance or Rejection by The Borough of Naugatuck**– Naugatuck reserves the right to accept and/or reject any or all proposals submitted for consideration to serve the best interests of the Borough of Naugatuck. Respondents whose proposals are not accepted will be notified in writing.
2. **Ownership of Documents** – All proposals submitted in response to this RFP are to be the sole property of the Borough of Naugatuck and subject to the provisions of Section 1-19 of the Connecticut General Statutes (re: Freedom of Information).
3. **Ownership of Subsequent Products** – Any product, whether acceptable or unacceptable, developed under a contract awarded as a result of this RFP is to be the sole property of the Borough of Naugatuck unless stated otherwise in the RFP or contract.
4. **Timing and Sequence** – Timing and sequence of events resulting from this RFP will ultimately be determined by the Borough of Naugatuck.
5. **Oral Agreements** – Any alleged oral agreement or arrangement made by a respondent with any agency or employee will be superseded by the written agreement.

6. **Amending or Canceling Requests** – The Borough of Naugatuck reserves the right to amend or cancel this RFP prior to the due date and time, if it is in the best interest of the Town of East Granby to do so.

7. **Rejection for Default or Misrepresentation** – The Borough of Naugatuck reserves the right to reject the proposal of the consultant that is in default of any prior contract or for misrepresentation.

8. **Clerical Errors in Awards** – The Borough of Naugatuck reserves the right to correct inaccurate awards resulting from its clerical errors

9. **Rejection of Submission** – Submissions will be rejected in whole or in part if they limit or modify any of the terms and conditions and/or specifications of the RFP.

10. **Changes to Submissions**– No additions or changes to the original RFP will be allowed after submittal.

11. **Contract Requirements** – A formal agreement will be entered into with the firm selected. The contents of the proposal submitted by the successful respondent and the RFP will become part of any contract award.

12. **Rights Reserved to Naugatuck**– The Borough of Naugatuck reserves the right to award in part, to reject any and all proposals, in whole or in part, and to waive technical defects, irregularities and omissions if, in its judgment, the best interests of the Town will be served.

13. **Withdrawal of Submission** – Negligence on the part of the respondent in preparing the RFP confers no right of withdrawal after the time fixed for the acceptance of the submission.

14. **Assigning, Transferring of Agreement** – The successful respondent is prohibited from assigning, transferring, conveying, subletting or otherwise disposing of the agreement, its rights, title or interest therein or its power to execute such agreement to any other person, company, or corporation without the prior consent and approval in writing by Naugatuck.

15. **Cost of Preparing RFP** – The Borough of Naugatuck shall not be responsible for any expenses incurred by the organization in preparing and submitting an RFP. An RFP shall provide a straightforward, concise delineation of the firm’s capabilities to satisfy the requirements of this request. Emphasis should be on completeness and clarity of content.

16. **Definition of Terms** – For the purpose of this RFP, whenever the word “respondent” appears, it shall refer to “Architect” and whenever the word “Architect” appears, it shall refer to “respondent”.

FEE PROPOSAL & BID FORM

Firms must acknowledge that the costs of items listed below are included in their base fee by the **proposed principle** initialing the service in the column provided. If an item is not initialed it will be considered not included in the base fee therefore the committee will consider the fee proposal non-responsive and the firm may not be considered for the project.

SERVICES	Breakout costs	COSTS INCLUDED
		Initial
Mechanical and Electrical engineering	N/A	
Structural engineering	N/A	
As-designed record drawings	Incl.	
As-constructed record drawings	Incl.	
Coordination of Owner’s consultants, as necessary	Incl.	
Insurance limits as described in the RFP.	Incl.	
Construction Services	Incl.	
Construction Document Close out	Incl.	

**INVITATION TO BID
for
ARCHITECTURAL SERVICES
Naugatuck High School Roof**

BID FORM

Lump Sum Bid Price

Design and Construction Services for Naugatuck High School Roof as per RFP

_____ (\$_____)

Time of Completion (Bid documents): _____ from date of Acceptance

Exclusions: Hazardous materials investigations or testing

Firm: _____

Address: _____

EMAIL: _____

Phone: _____

Name: _____ (Please Print)

Title: _____

Signature: _____ Date: _____

Appendix A

Pustola & Associates
CONSULTING ENGINEERS, LLC
(203) 729-6675 • Fax (203) 720-2816

Licensed Professional Engineers
New York & Connecticut

185 Meadow Street
Naugatuck, Connecticut 06770

Professional Service Agreement

March 20, 2019

Job No. 19286.00

This agreement is to confirm that services are to be performed by:

Pustola & Associates Consulting Engineers, LLC
185 Meadow Street
Naugatuck, Connecticut 06770

Client: Borough of Naugatuck
Individual: Jim McGarath
Address: 229 Church Street
City/State/Zip: Naugatuck, CT, 06770
Phone/Fax: 203-720-7006
Email: Jmcgrath@naugatuck.com

RE: Field inspection and structural report for the roof of Naugatuck High School, located at 543 Rubber Ave., Naugatuck, CT.

Reference Documents: None provided at this time, Structural Plans on file with the town to be delivered to Pustola & Associates after the execution of this contract. Estimate based on receiving structural drawings prior to commencing work.

I SCOPE OF SERVICES: the services to be provided shall be defined in Exhibit "A"

II FEE: The fee for the above described will be as follows:

- (X) Field Inspection and Verification
- (X) Analysis, Report & Certification

TOTAL FEE: \$20,571.00

III SPECIAL CONDITIONS: The following special conditions shall pertain:

Furnishing of Documents: Printing (\$3.50/ea.), postage and travel (.57/mile) are in addition to the lump sum prices and are reimbursable expenses.

EXHIBIT "A" SCOPE OF SERVICES

Services to be performed by Pustola & Associates:

FIELD INSPECTION AND VERIFICATION

- Perform field inspection of the existing roof structure. The inspection is to be performed via multiple walkthroughs.
- The purpose of the inspection is to verify the existing hanging dead loads & the assembly of the existing roof, and to verify the accuracy of the existing building structural drawings.

ANALYSIS, REPORT & CERTIFICATION

- Write design basis, determine and specify existing live loads, dead loads, snow loads, snow drift loads, and wind loads for the purpose of a gravity load analysis.
- Perform an analysis of the existing building using the verified structural drawings.
- Compile report summarizing the findings of the analysis. The report will include the allowable roof uniform load and relate this information to the proposed re-roofing project.
- Write a certification letter for use in obtaining permits and approvals for the proposed re-roofing installation.

ADDITIONAL SERVICES - TO BE BILLED AT RATES LISTED BELOW

- The following items are defined as additional work and will be billed at the rates listed below.
 - Review and approval of shop drawings
 - Attending periodic progress meetings to monitor design development and the construction process
 - Providing necessary engineering support, as required, to resolve technical issues in the field, and to clarify the intent of the design and project specifications
 - Review and answer applicable RFI's

PAYMENT SCHEDULE

- (X) 20% Down Payment
- (X) Monthly progress billings if required.
- (X) Balance due upon submission of report.

EXCLUSIONS

Note: Any item not listed or defined in Exhibit "A", Scope of Services should not be assumed to be included under the "Total Fee" given on page 1. Specific examples of exclusions are:

- Hazardous materials identification.
- Applications for permits, permit fees and planning and zoning approvals.
- Statement of Special Inspections.
- Schematics or Drawings not defined in the above proposal.
- Traffic design and consulting.
- Color 3D renderings.
- Structural, Civil and MEP design not defined by this proposal
- Destructive testing and repair of destructive testing
- Design of additional reinforcement to accommodate proposed loads

RATE SHEET SCHEDULE

<i>Position</i>	<i>Hourly Rate:</i>
Principal	\$210.00
Professional Engineer	\$125.00
Professional Architects	\$125.00
Civil Arc. Sr. Designer	\$115.00
Engineering	\$115.00
Draftsperson	\$95.00
Administrative	\$65.00

CONSTRUCTION ADMINISTRATION

<i>Position:</i>	<i>Hourly Rate:</i>
Project Manager	\$120.00
Superintendent	\$95.00
Estimator	\$95.00

General Terms and Conditions / Acceptance of Proposal:

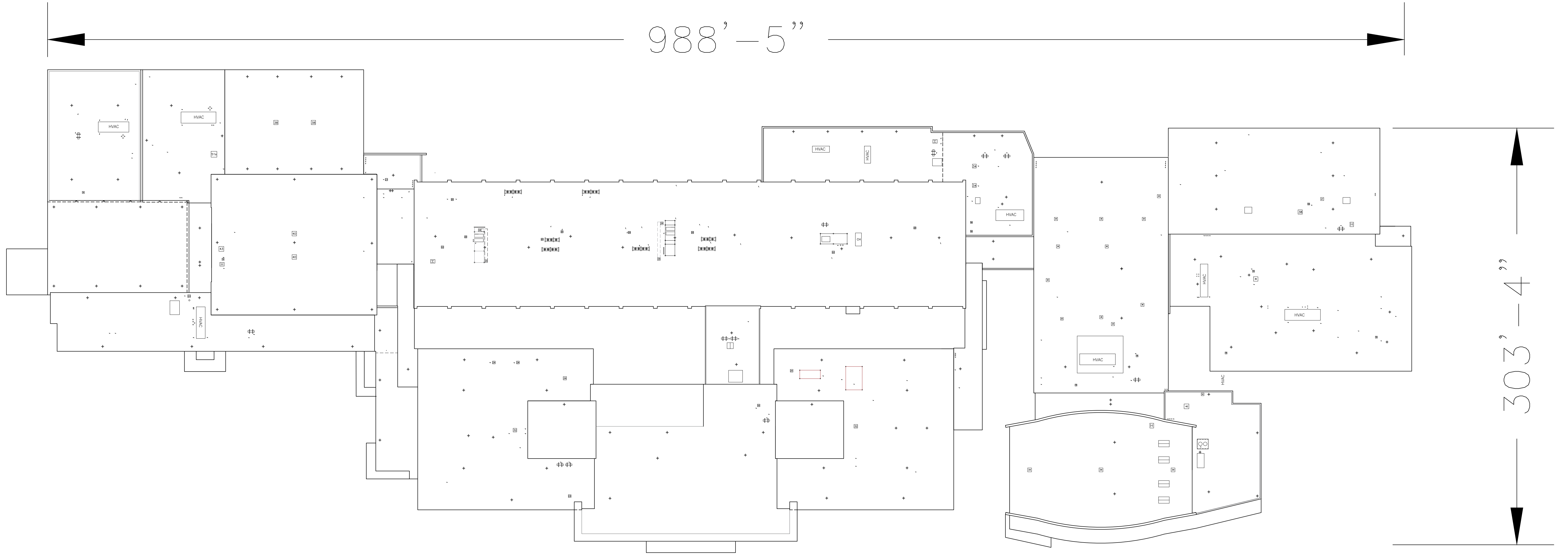
1. **ESTIMATED COMPLETION DATE:** Estimated project completion for is 3 Weeks. However, regulatory delays, and delays related to information and review by the client are beyond our control. In the event that the Engineer is obstructed or delayed in the completion of said services by any act of the client or the client's agents or by any act beyond the control of the Engineer, then the time herein fixed for the completion of the services shall be extended for a period of time equivalent of the time lost by reason of any or all of the aforementioned causes.
2. **TERMINATION:** This agreement may be terminated by either party upon five (5) days written notice by mutual consent or in the event of persistent failures of performance of material terms and conditions of this Agreement by the other party through no fault of the terminating party. The Engineer shall then be paid for the service completed up to the time of the termination date based upon the total amount of the contractually agreed to fees less any credit due the client for those services not yet performed as of the date of termination.
3. **SITE SAFETY:** CONSULTANT'S site responsibilities are limited solely to the activities of CONSULTANT and CONSULTANTS employees on Site. These responsibilities shall not be inferred by any party to mean that CONSULTANT has responsibility for site safety. Safety in, on, or about the site is the sole exclusive responsibility of the Contractor alone. The Contractor's methods of work performance, superintendence of the Contractor's employees, and sequencing of construction are also the sole and exclusive responsibilities of the contractor alone.
4. **RISK ALLOCATION:** In recognition of the relative risks, rewards and benefits of the project to both the Client and the firm, the risks have been allocated such that, to firms total liability to the Client for any and all injuries, claims, losses, expenses, damages or claim expenses arising out of this agreement from any cause or causes, shall not exceed \$ 50,000. Such causes include, but are not limited to the firms negligence, errors, omissions, strict liability, and breach of contract.
5. **FIDUCIARY RESPONSIBILITY:** The client confirms that neither the Consultant nor any of the Consultant's subconsultants or subcontractors has offered any fiduciary service to the Client and no fiduciary responsibility shall be owed to the Client by the Consultant or any of the Consultant's subconsultants or subcontractors, as a consequence of the Consultant's entering into this Agreement with the Client.
6. **DISPUTE RESOLUTION:** Any controversy or claim arising out of or relating to this agreement, contract, or breach thereof, shall be settled by mediation.
7. **ELECTRONIC FILES:** Electronic files shall be issued to the Owner, if requested, after payment of all services has been received. Pustola & Associates shall not be responsible for claims resulting from unauthorized reuse or unauthorized changes made to such files. Issued Files shall be for reference use only.
8. **PAYMENT:** Payment schedule is attached hereto as Exhibit "B" in the event that said account is unpaid after the thirtieth day subsequent to the date of the first billing, the client may be subject to a monthly service charge of one and one half percent on the then unpaid balance (18% true annual rate). In the event that any portion or all of this account remains unpaid seventy five (75) days subsequent to the last date of services performed on this contract, the Engineer reserves the right to initiate collection procedures for which the client shall pay all costs of collection, (Including reasonable attorneys' fees) as are required to obtain payment of fees and interest owed. Client's failure to make payment terms as per Exhibit "B", shall constitute a material breach of this agreement and shall be cause for termination by Pustola and Associates.

CLIENT AND ENGINEER HAVE EXECUTED THIS AGREEMENT ON DATES INDICATED:

CLIENT: *Barry Pustola*
Ref
4/29/19
DATE: *3/29/19*

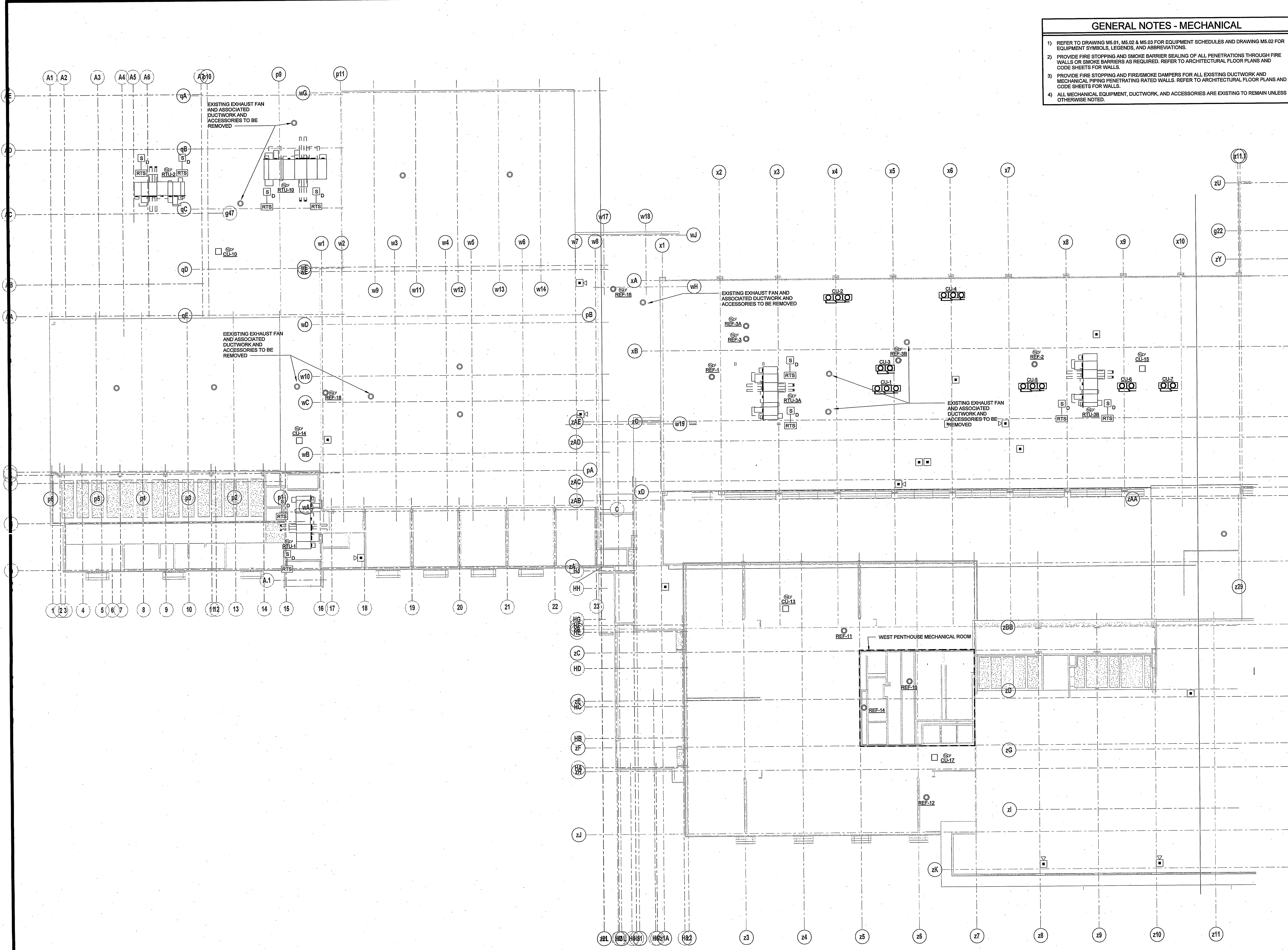
ENGINEER: *[Signature]*
DATE: *4/2/19*

Appendix B



Overall of Naugatuck High School

Appendix C



GENERAL NOTES - MECHANICAL

- 1) REFER TO DRAWING M5.01, M5.02 & M5.03 FOR EQUIPMENT SCHEDULES AND DRAWING M5.02 FOR EQUIPMENT SYMBOLS, LEGENDS, AND ABBREVIATIONS.
- 2) PROVIDE FIRE STOPPING AND SMOKE BARRIER SEALING OF ALL PENETRATIONS THROUGH FIRE WALLS OR SMOKE BARRIERS AS REQUIRED. REFER TO ARCHITECTURAL FLOOR PLANS AND CODE SHEETS FOR WALLS.
- 3) PROVIDE FIRE STOPPING AND FIRE/SMOKE DAMPERS FOR ALL EXISTING DUCTWORK AND MECHANICAL PIPING PENETRATING RATED WALLS. REFER TO ARCHITECTURAL FLOOR PLANS AND CODE SHEETS FOR WALLS.
- 4) ALL MECHANICAL EQUIPMENT, DUCTWORK, AND ACCESSORIES ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

ROOF MECHANICAL PLAN - AREAS A, B, AND H
 1/16" = 1'-0"

KAESTLE BOOS
 associates, inc

416 Slater Road, P.O. Box 2550, New Britain, CT 06050-2550
 Phone: 860-229-0281 Fax: 860-229-5303

325 Foxborough Boulevard, Suite 100, Foxborough, MA 02035
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CES
 Consulting Engineering Services, Inc.

811 Middle Street
 Middletown, CT 06457
 Tel: 860-632-1629
 Fax: 860-632-1768
 CES *201209.00



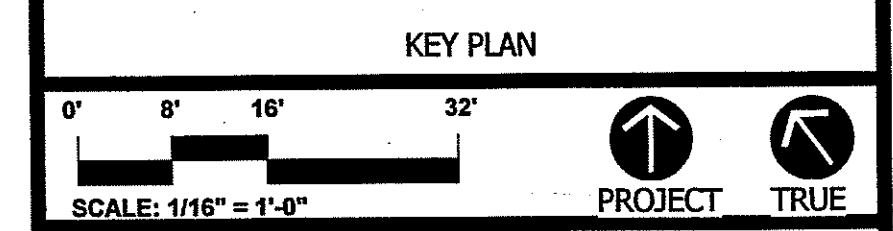
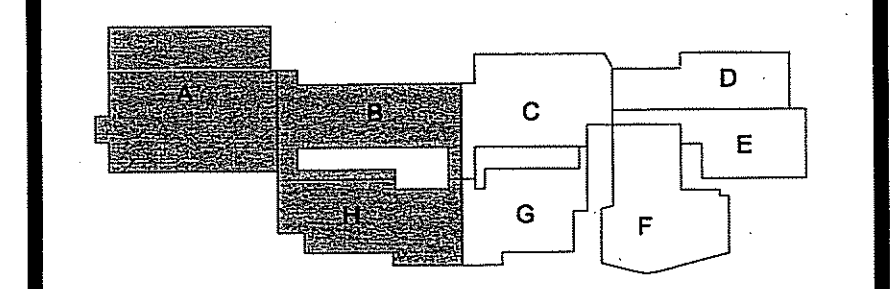
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FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01



BOROUGH OF NAUGATUCK
 CONNECTICUT

ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
 HS SPN: 088-0067 E/A/EC/CV/RN
 BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: KBW

ROOF MEP PLAN - AREAS A, B, AND H

DRAWING NO.: **MEP1.01**

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- GENERAL NOTES - MECHANICAL**
- REFER TO DRAWING M5.01, M5.02 & M5.03 FOR EQUIPMENT SCHEDULES AND DRAWING M5.02 FOR EQUIPMENT SYMBOLS, LEGENDS, AND ABBREVIATIONS.
 - PROVIDE FIRE STOPPING AND SMOKE BARRIER SEALING OF ALL PENETRATIONS THROUGH FIRE WALLS OR SMOKE BARRIERS AS REQUIRED. REFER TO ARCHITECTURAL FLOOR PLANS AND CODE SHEETS FOR WALLS.
 - PROVIDE FIRE STOPPING AND FIRE/SMOKE DAMPERS FOR ALL EXISTING DUCTWORK AND MECHANICAL PIPING PENETRATING RATED WALLS. REFER TO ARCHITECTURAL FLOOR PLANS AND CODE SHEETS FOR WALLS.
 - ALL MECHANICAL EQUIPMENT, DUCTWORK, AND ACCESSORIES ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

KAESTLE BOOS
associates, inc.

416 Slater Road, P.O. Box 2590, New Britain, CT 06050-2590
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325 Foxborough Boulevard, Suite 100, Foxborough, MA 02035
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CES
Consulting Engineering Services, Inc.

511 Middle Street
Middletown, CT 06457
Tel: 860 632-1983
Fax: 860 632-1795
CES #201208.00



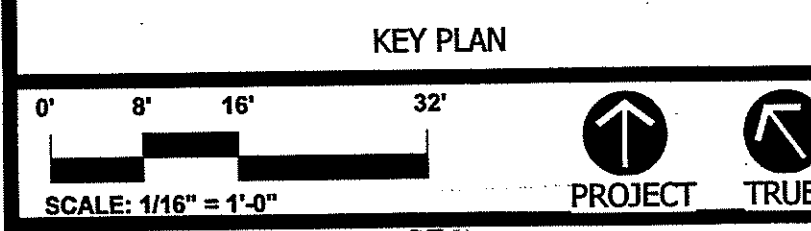
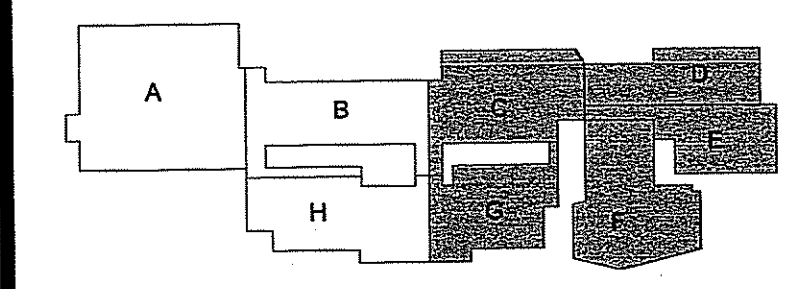
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BOROUGH OF NAUGATUCK
CONNECTICUT

ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

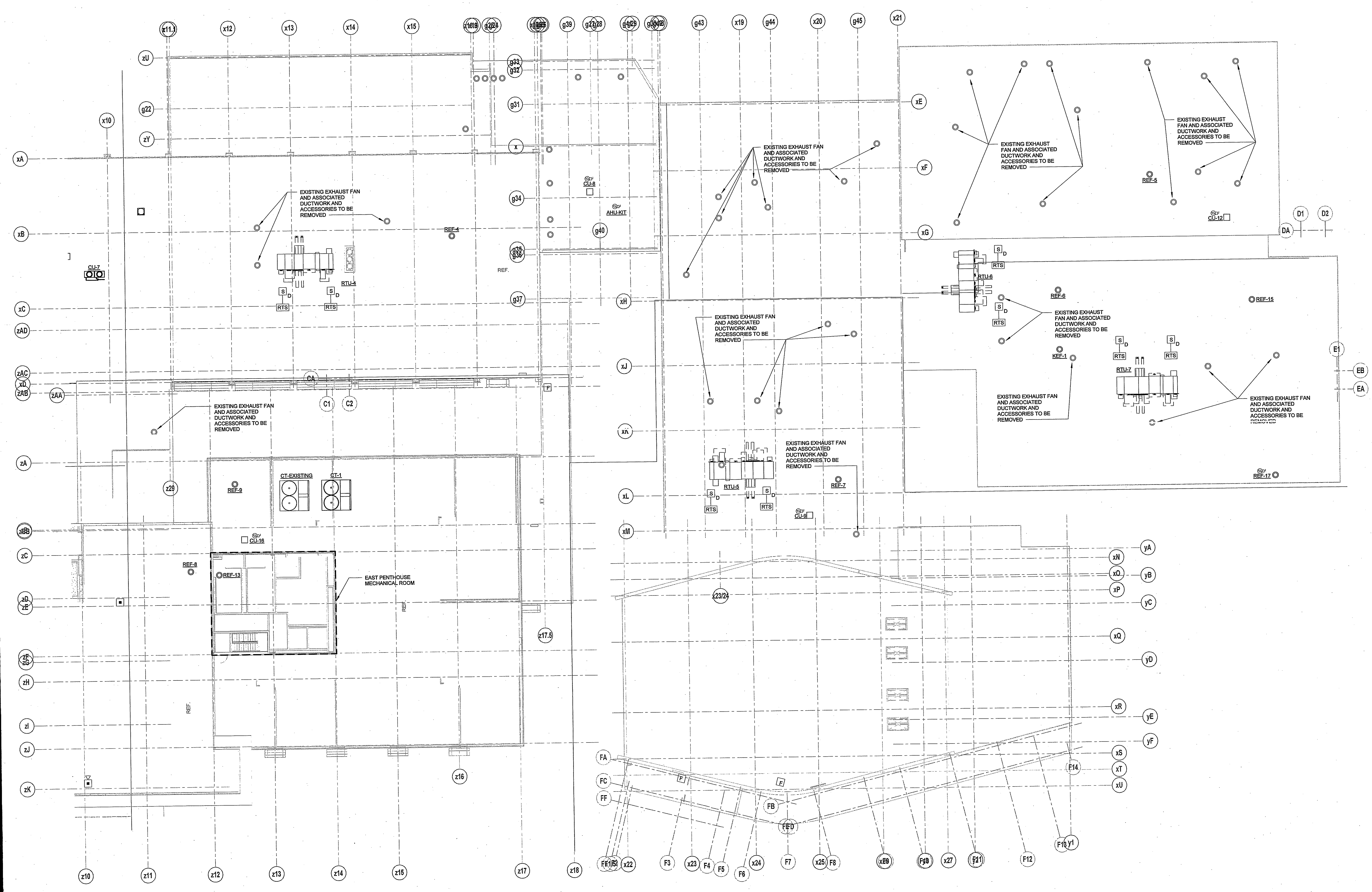
543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

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ROOF MEP PLAN - AREAS C, D, E, F AND G

DRAWING NO.: **MEP1.02**

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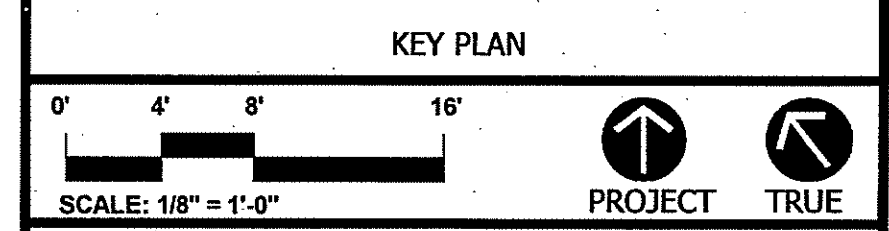
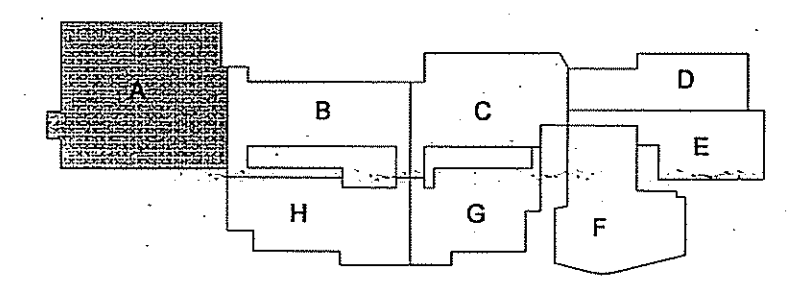
ROOF MECHANICAL PLAN - AREAS C, D, E, F AND G
1/16" = 1'-0"



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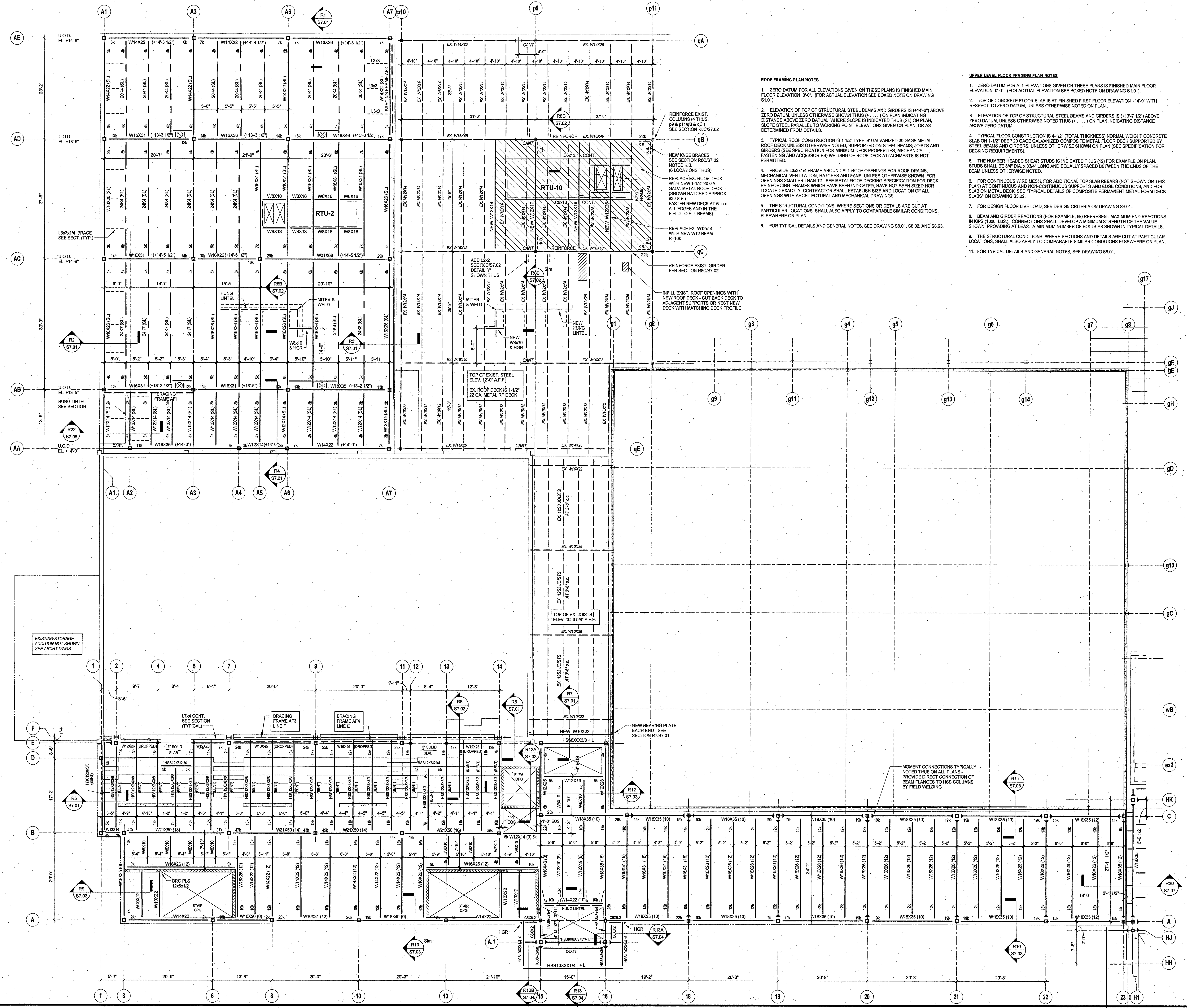
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543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: RL

UPPER LEVEL AND LOW ROOF FRAMING PLAN AREA A

DRAWING NO.: **S2.01**



ROOF FRAMING PLAN NOTES

- ZERO DATUM FOR ALL ELEVATIONS GIVEN ON THESE PLANS IS FINISHED MAIN FLOOR ELEVATION 0'-0". (FOR ACTUAL ELEVATION SEE BOXED NOTE ON DRAWING S1.01)
- ELEVATION OF TOP OF STRUCTURAL STEEL BEAMS AND GIRDERS IS (+14'-0") ABOVE ZERO DATUM, UNLESS OTHERWISE SHOWN THUS (+...) ON PLAN INDICATING DISTANCE ABOVE ZERO DATUM. WHERE SLOPE IS INDICATED THUS (S) ON PLAN, SLOPE STEEL PARALLEL TO WORKING POINT ELEVATIONS GIVEN ON PLAN, OR AS DETERMINED FROM DETAILS.
- TYPICAL ROOF CONSTRUCTION IS 1 1/2" TYPE 'B' GALVANIZED 20 GAUGE METAL ROOF DECK UNLESS OTHERWISE NOTED, SUPPORTED ON STEEL BEAMS AND GIRDERS (SEE SPECIFICATION FOR MINIMUM DECK PROPERTIES, MECHANICAL FASTENINGS AND ACCESSORIES) WELDING OF ROOF DECK ATTACHMENTS IS NOT PERMITTED.
- PROVIDE 1 3/4x1 1/4 FRAME AROUND ALL ROOF OPENINGS FOR ROOF DRAINS, MECHANICAL VENTILATION, HATCHES AND FANS, UNLESS OTHERWISE SHOWN. FOR OPENINGS SMALLER THAN 12" SEE METAL ROOF DECKING SPECIFICATION FOR DECK REINFORCING FRAMES WHICH HAVE BEEN INDICATED, HAVE NOT BEEN SIZED NOR LOCATED EXACTLY. CONTRACTOR SHALL ESTABLISH SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
- THE STRUCTURAL CONDITIONS, WHERE SECTIONS OR DETAILS ARE CUT AT PARTICULAR LOCATIONS, SHALL ALSO APPLY TO COMPARABLE SIMILAR CONDITIONS ELSEWHERE ON PLAN.
- FOR TYPICAL DETAILS AND GENERAL NOTES, SEE DRAWING S8.01, S8.02, AND S8.03.

UPPER LEVEL FLOOR FRAMING PLAN NOTES

- ZERO DATUM FOR ALL ELEVATIONS GIVEN ON THESE PLANS IS FINISHED MAIN FLOOR ELEVATION 0'-0". (FOR ACTUAL ELEVATION SEE BOXED NOTE ON DRAWING S1.01)
- TOP OF CONCRETE FLOOR SLAB IS AT FINISHED FIRST FLOOR ELEVATION +14'-0" WITH RESPECT TO ZERO DATUM, UNLESS OTHERWISE NOTED ON PLAN.
- ELEVATION OF TOP OF STRUCTURAL STEEL BEAMS AND GIRDERS IS (+13'-7 1/2") ABOVE ZERO DATUM, UNLESS OTHERWISE NOTED THUS (+...) ON PLAN INDICATING DISTANCE ABOVE ZERO DATUM.
- TYPICAL FLOOR CONSTRUCTION IS 4-1/2" (TOTAL THICKNESS) NORMAL WEIGHT CONCRETE SLAB ON 1-1/2" DEEP 20 GAUGE GALVANIZED COMPOSITE METAL FLOOR DECK SUPPORTED BY STEEL BEAMS AND GIRDERS, UNLESS OTHERWISE SHOWN ON PLAN (SEE SPECIFICATION FOR DECKING REQUIREMENTS).
- THE NUMBER HEADED SHEAR STUDS IS INDICATED THUS (12) FOR EXAMPLE ON PLAN. STUDS SHALL BE 3/4" DIA. x 3/4" LONG AND EQUALLY SPACED BETWEEN THE ENDS OF THE BEAM UNLESS OTHERWISE NOTED.
- FOR CONTINUOUS WIRE MESH, FOR ADDITIONAL TOP SLAB REBARS (NOT SHOWN ON THIS PLAN) AT CONTINUOUS AND NON-CONTINUOUS SUPPORTS AND EDGE CONDITIONS, AND FOR SLAB ON METAL DECK, SEE TYPICAL DETAILS OF COMPOSITE PERMANENT METAL FORM DECK SLABS ON DRAWING S3.02.
- FOR DESIGN FLOOR LIVE LOAD, SEE DESIGN CRITERIA ON DRAWING S4.01.
- BEAM AND GIRDER REACTIONS (FOR EXAMPLE, R8) REPRESENT MAXIMUM END REACTIONS IN KIIPS (1000 LBS.). CONNECTIONS SHALL DEVELOP A MINIMUM STRENGTH OF THE VALUE SHOWN, PROVIDING AT LEAST A MINIMUM NUMBER OF BOLTS AS SHOWN IN TYPICAL DETAILS.
- THE STRUCTURAL CONDITIONS, WHERE SECTIONS AND DETAILS ARE CUT AT PARTICULAR LOCATIONS, SHALL ALSO APPLY TO COMPARABLE SIMILAR CONDITIONS ELSEWHERE ON PLAN.
- FOR TYPICAL DETAILS AND GENERAL NOTES, SEE DRAWING S8.01.



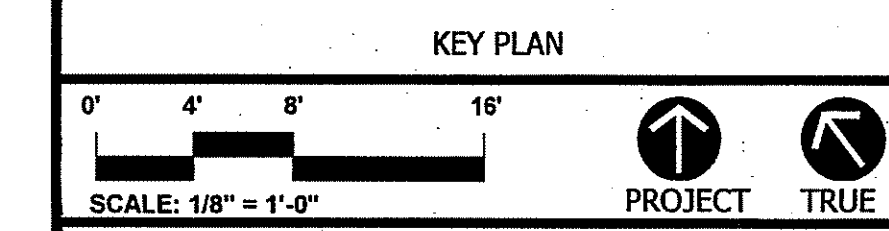
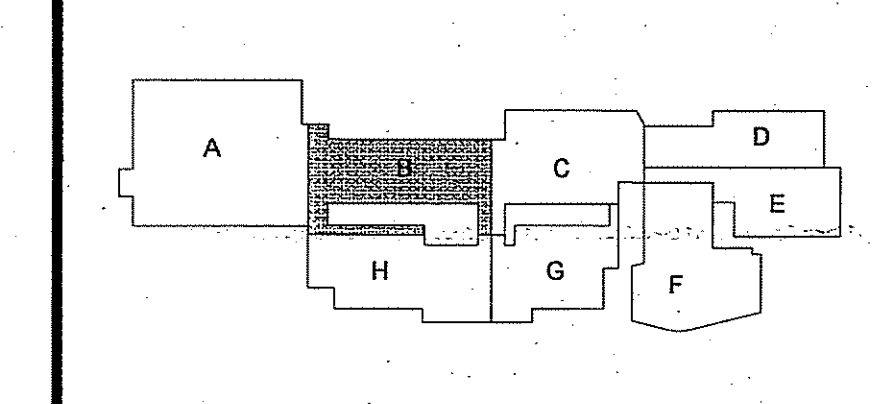
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BOROUGH OF NAUGATUCK
CONNECTICUT

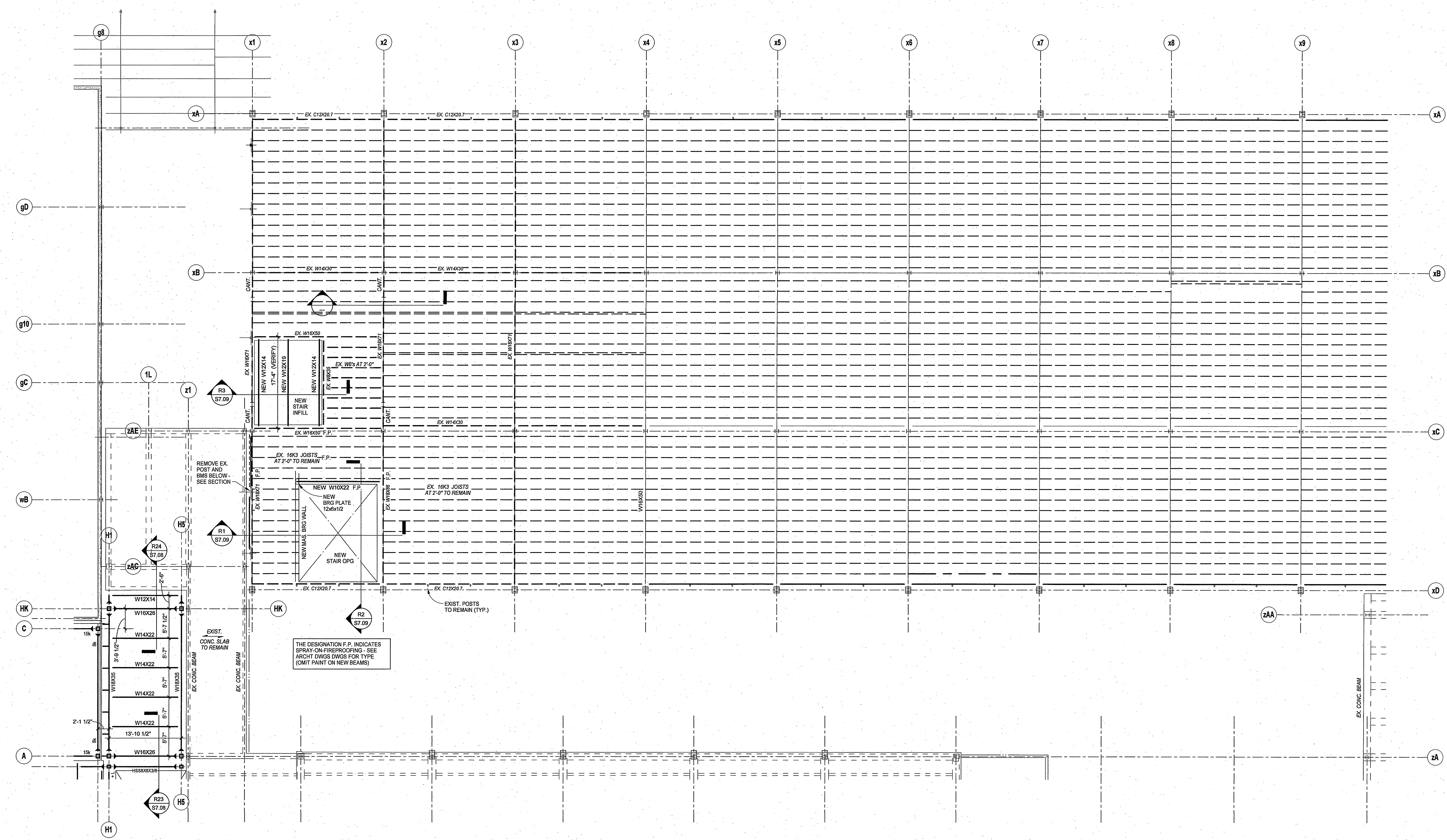
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: RL

UPPER LEVEL FRAMING PLAN AREA B

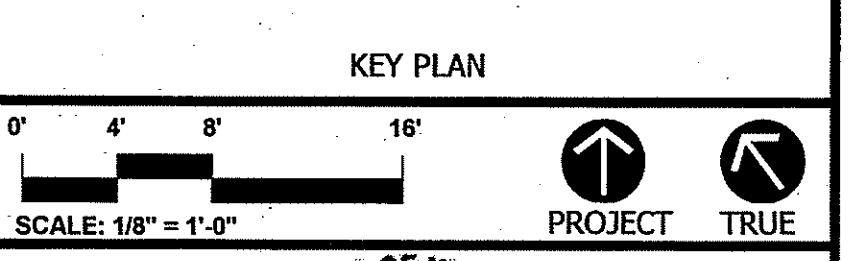
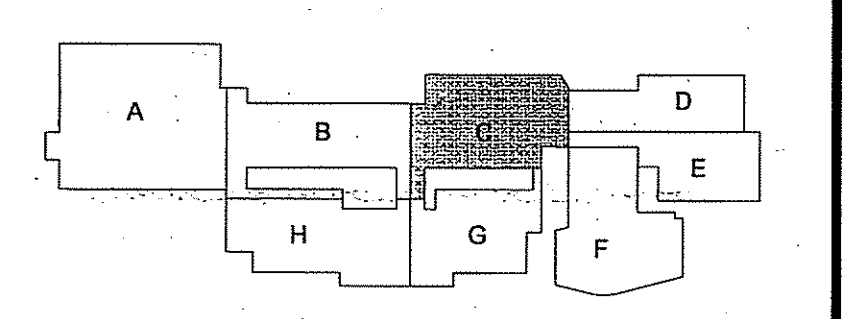
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BOROUGH OF NAUGATUCK
 CONNECTICUT

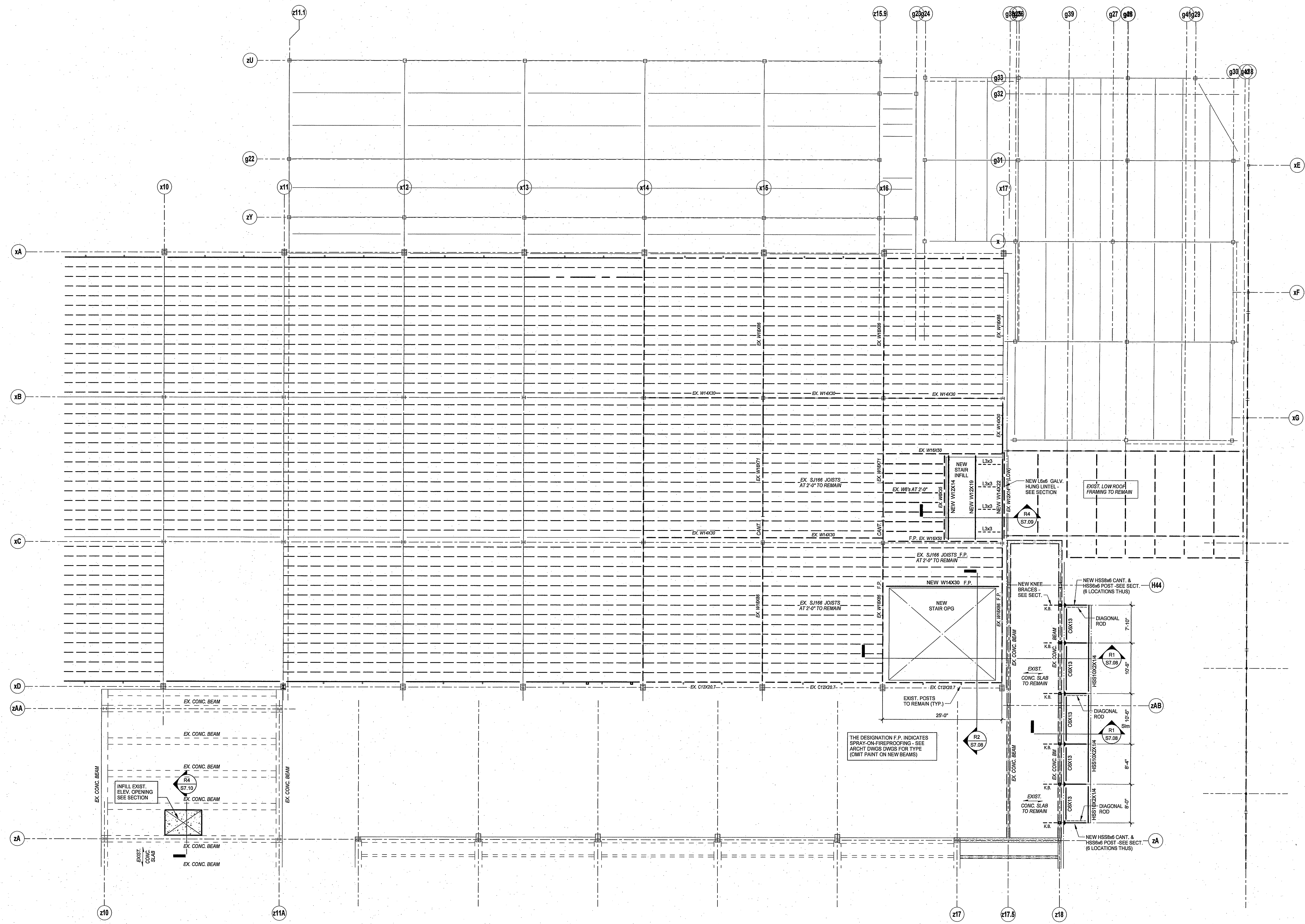
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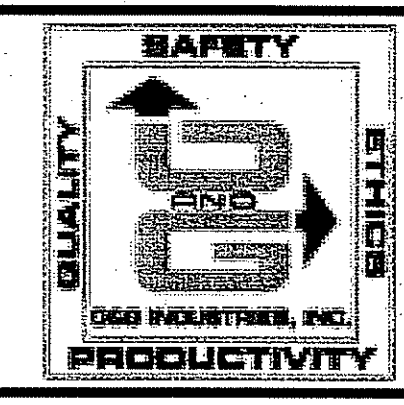
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PROJECT NO.: 11057.00 DRAWN BY: RL

UPPER LEVEL FRAMING PLAN AREA C

DRAWING NO.: **S2.03**

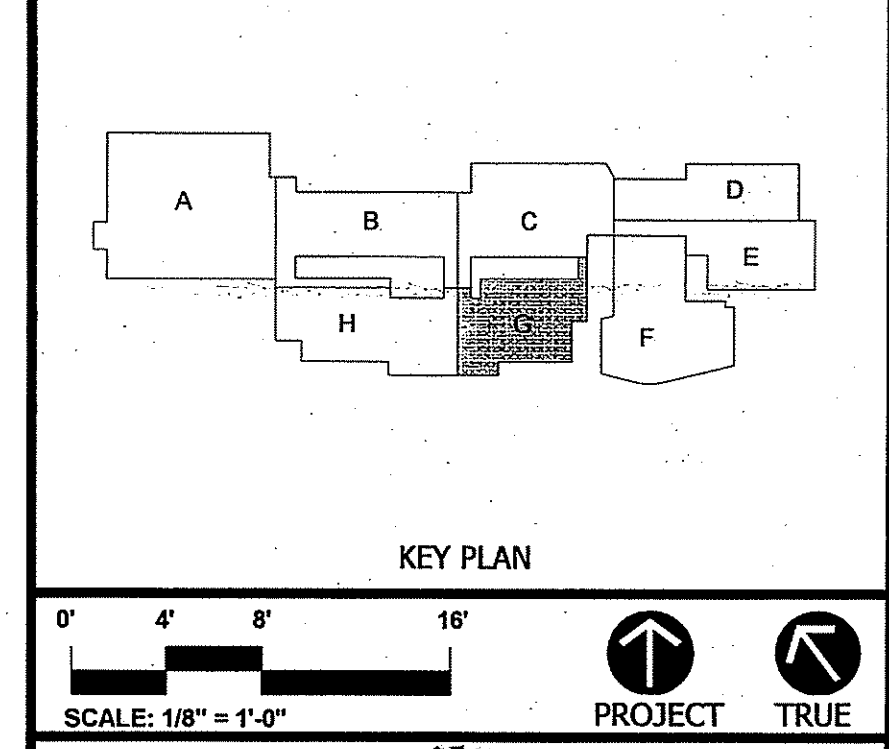




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BOROUGH OF NAUGATUCK
 CONNECTICUT

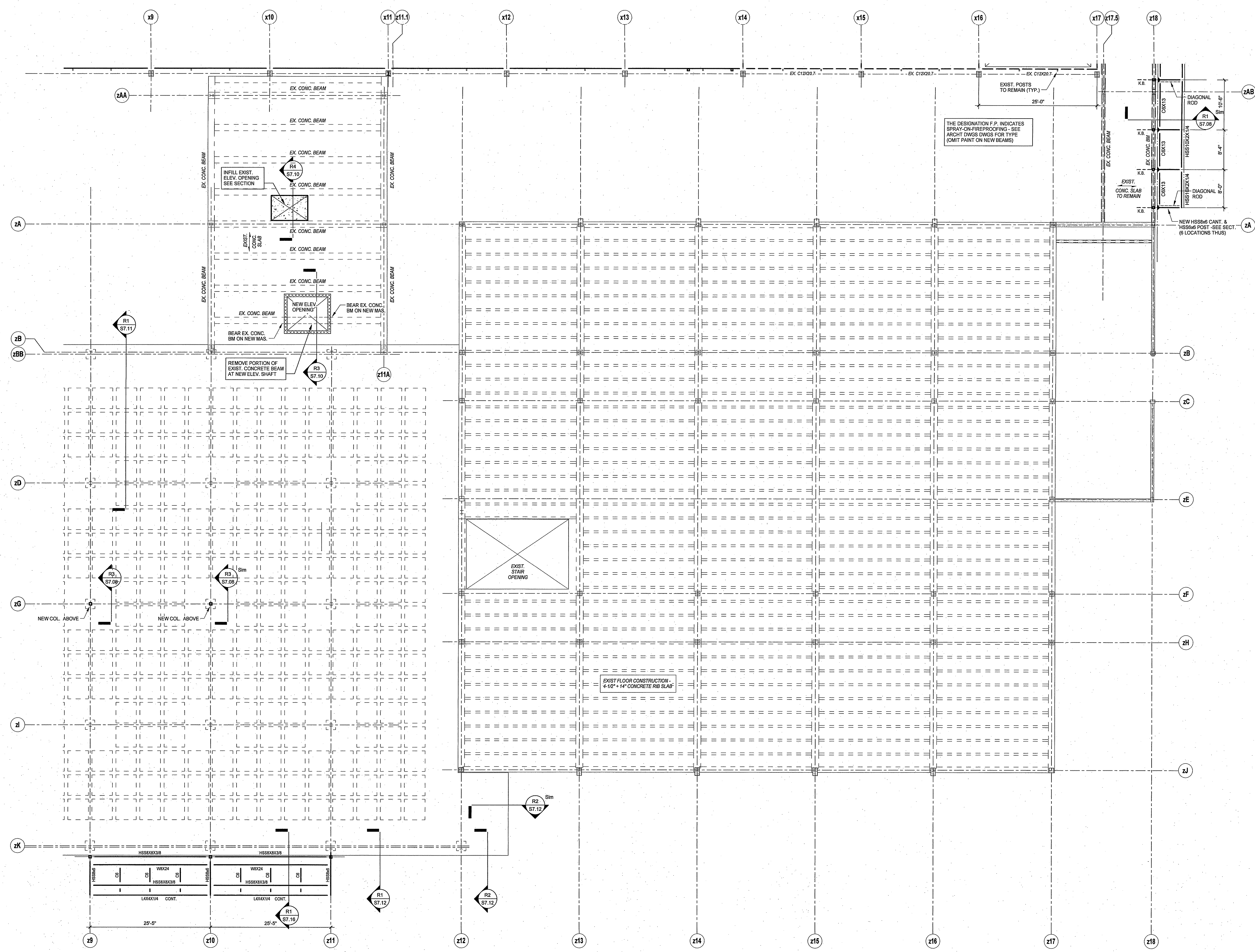
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543 RUBBER AVENUE NAUGATUCK, CT 06770
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UPPER LEVEL FRAMING PLAN AREA G

DRAWING NO.: **S2.06**





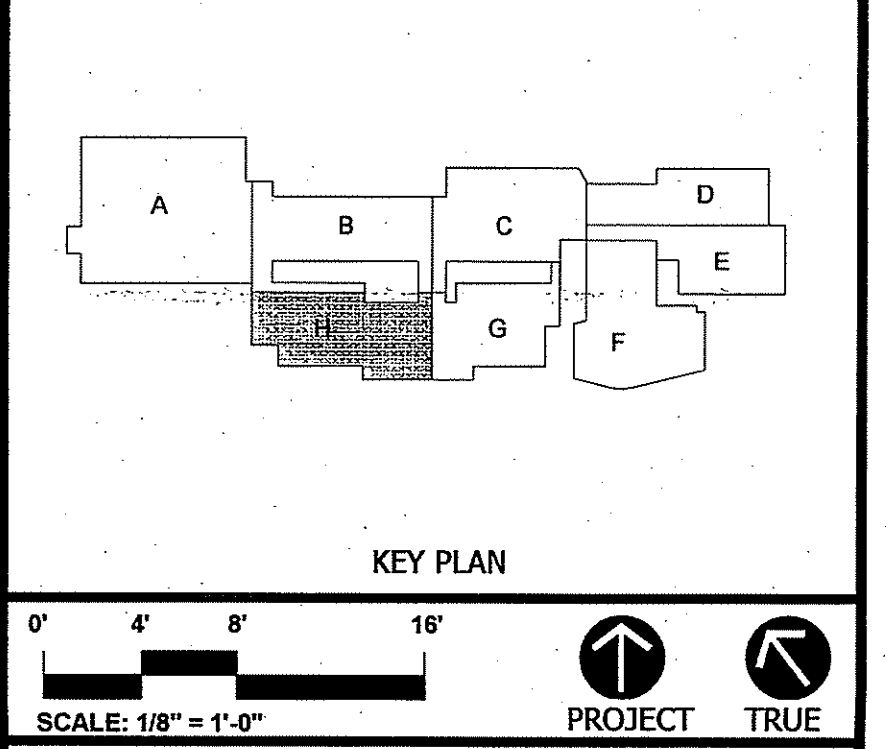
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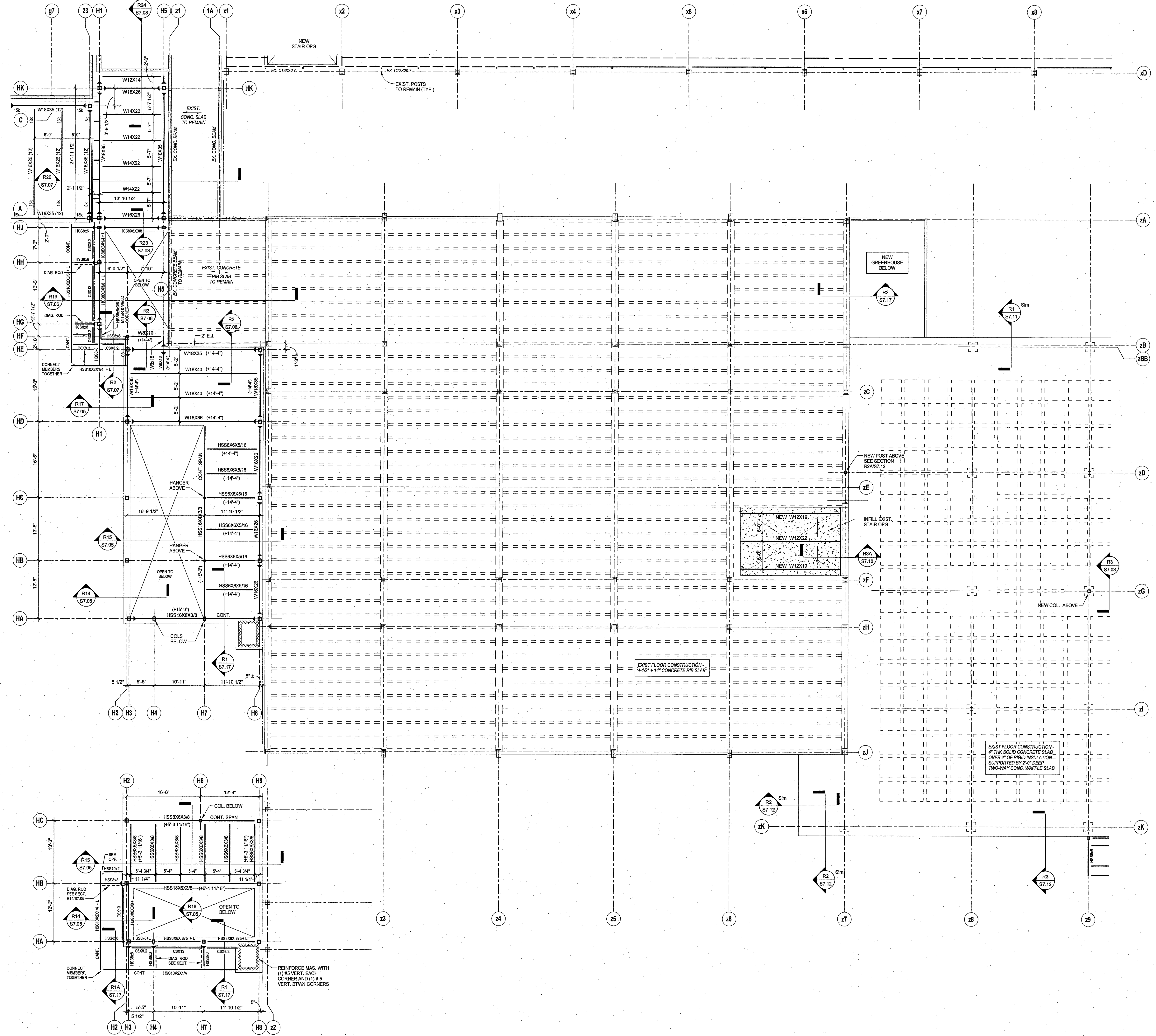
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UPPER LEVEL FRAMING PLAN AREA H

DRAWING NO.: **S2.07**



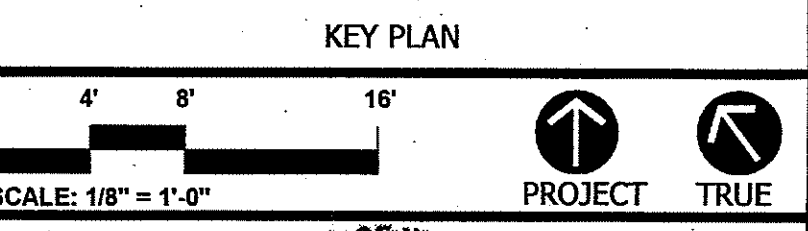
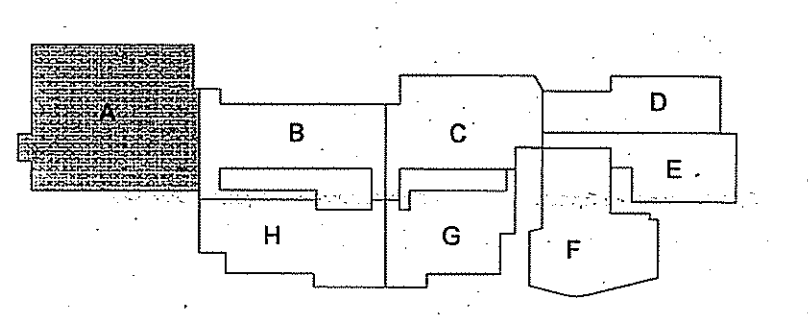
STAIR LANDING AND CANOPY FRAMING PLAN - AREA H



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BOROUGH OF NAUGATUCK
 CONNECTICUT

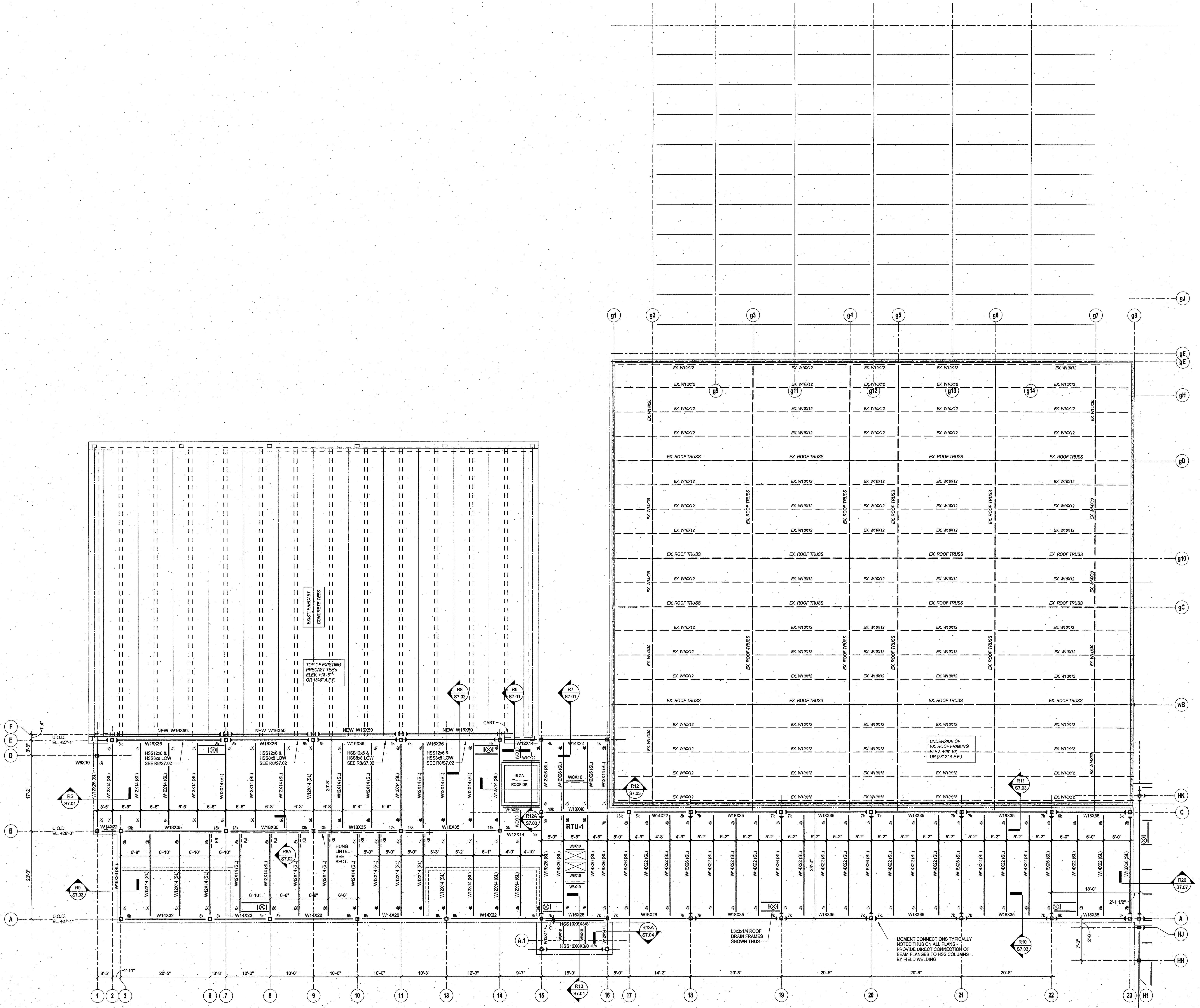
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543 RUBBER AVENUE NAUGATUCK, CT 06770
 HS SPN: 088-0067 E/A/EC/CV/RN
 BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: Author

ROOF FRAMING PLAN AREA A

DRAWING NO.: **S3.01**

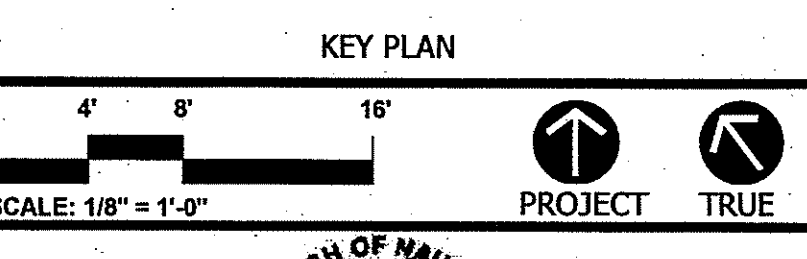
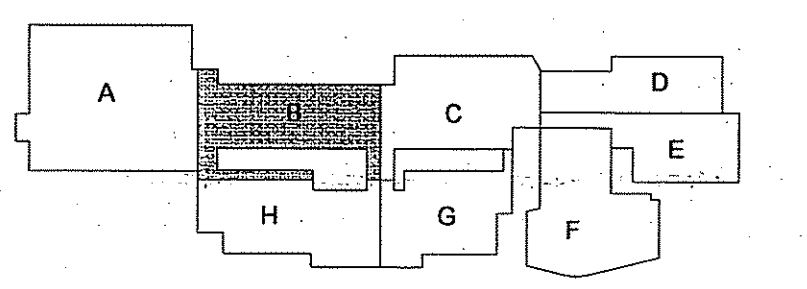




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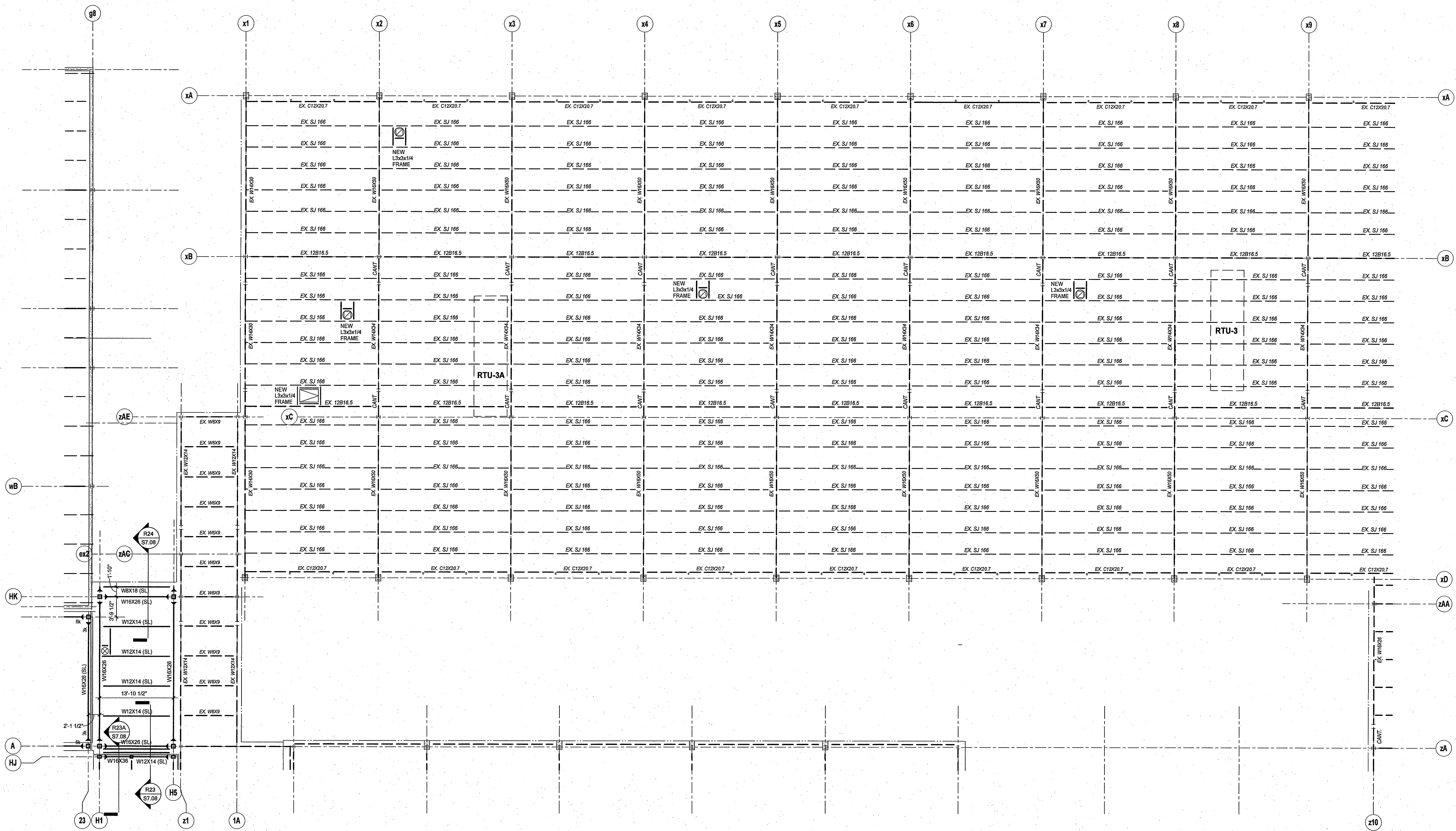
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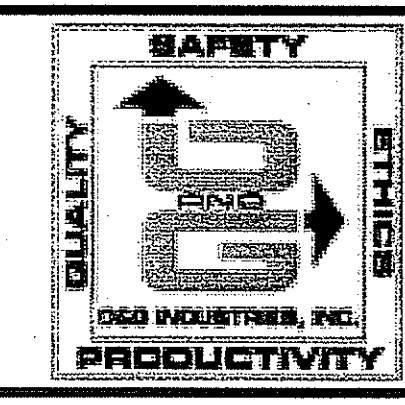
ROOF FRAMING PLAN AREA B

DRAWING NO.: **S3.02**



1 AREA B ROOF
1/8" = 1'-0"

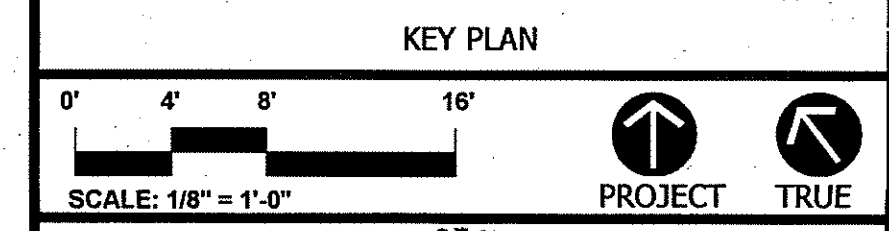
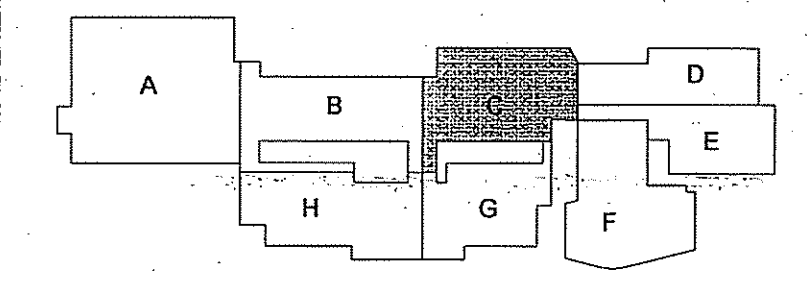
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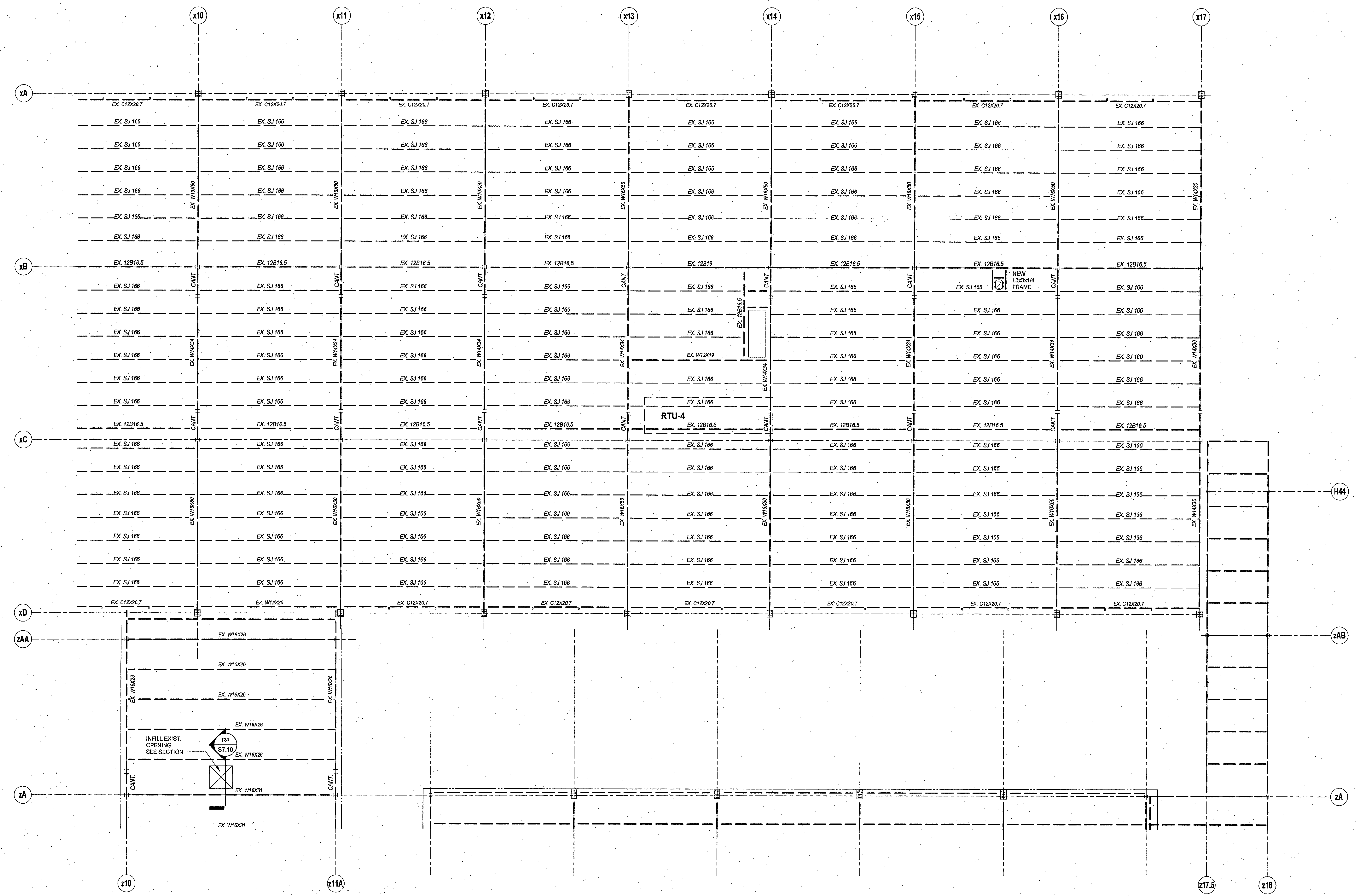
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543 RUBBER AVENUE NAUGATUCK, CT 06770
 HS SPN: 088-0067 E/A/EC/CV/RN
 BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: Author

ROOF FRAMING PLAN AREA C

DRAWING NO.: **S3.03**



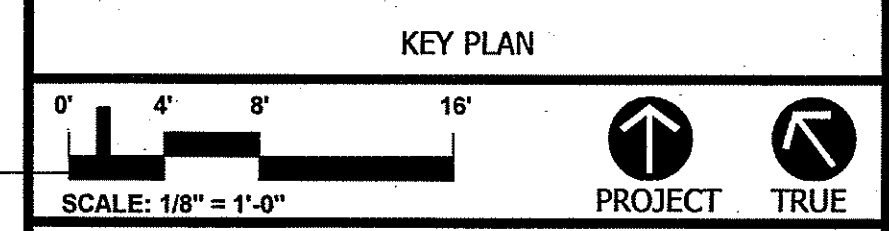
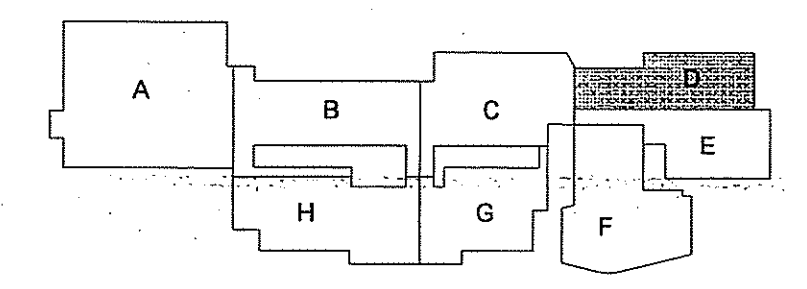
1 AREA C ROOF
 1/8" = 1'-0"



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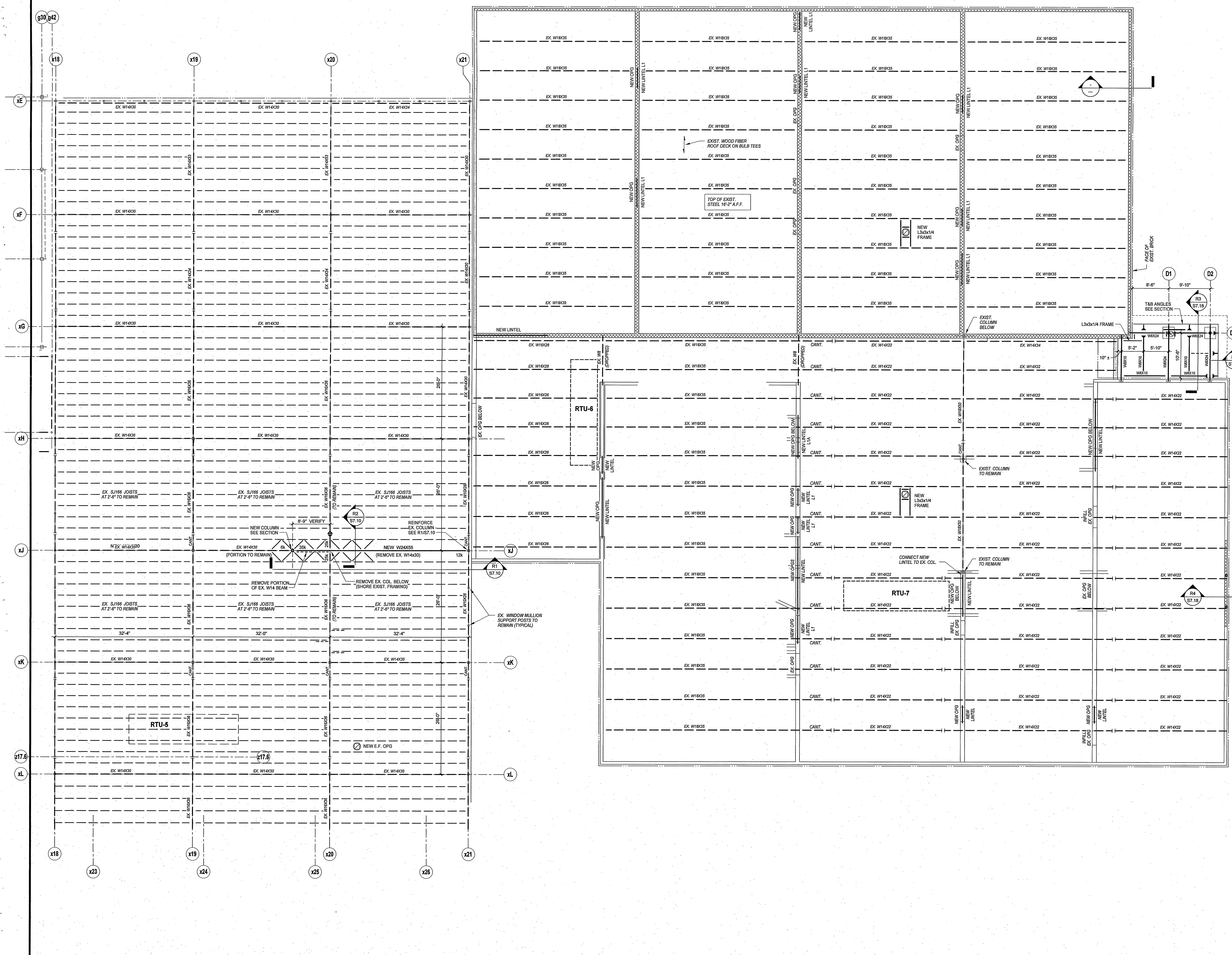
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PROJECT NO.: 11057.00 DRAWN BY: Author

ROOF FRAMING PLAN AREA D & E

DRAWING NO.: **S3.04**

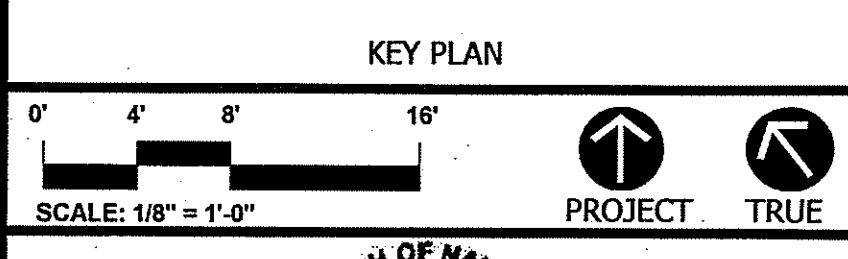
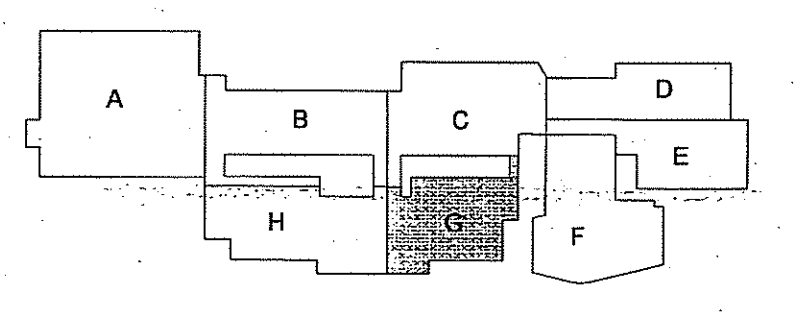




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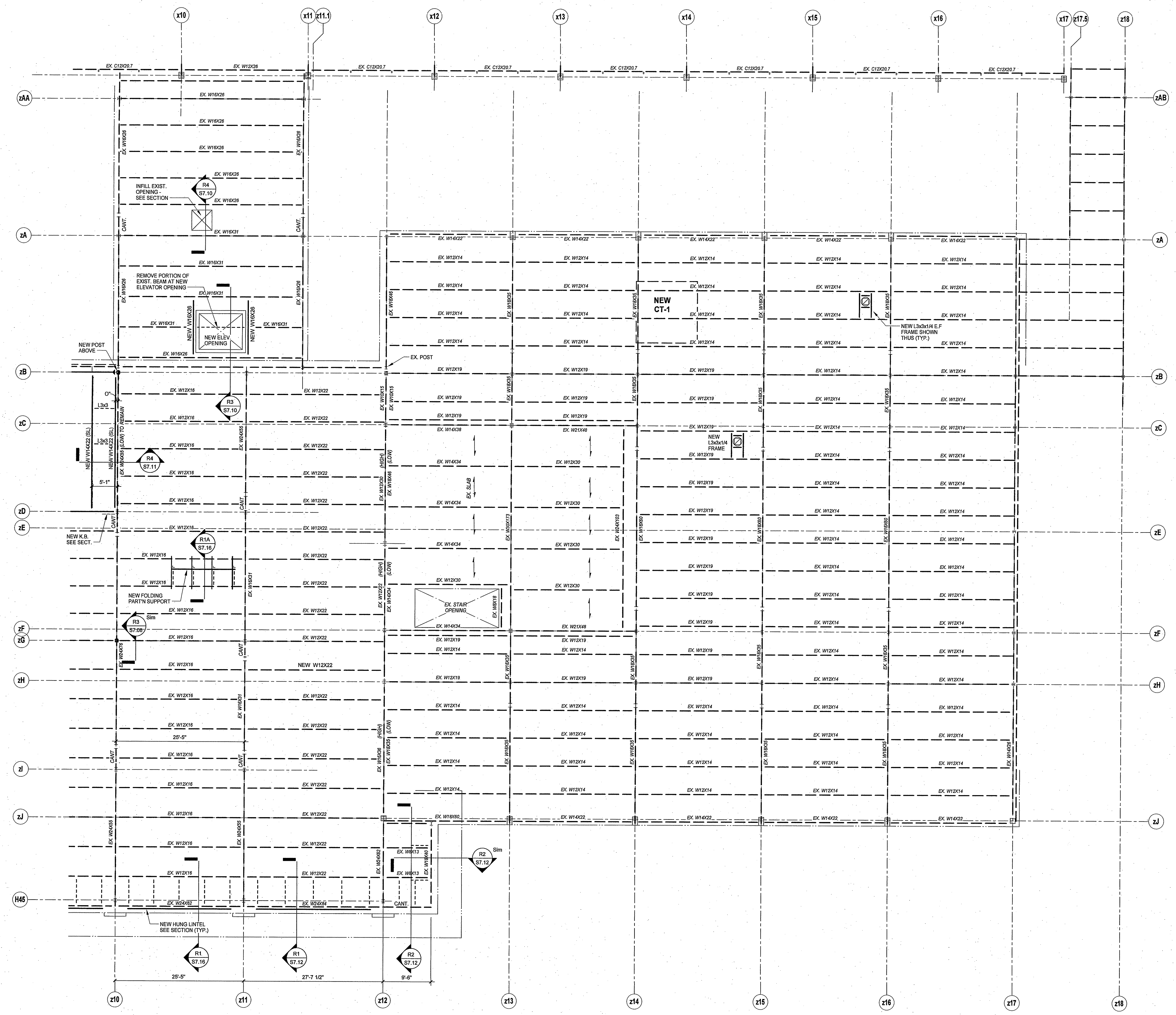


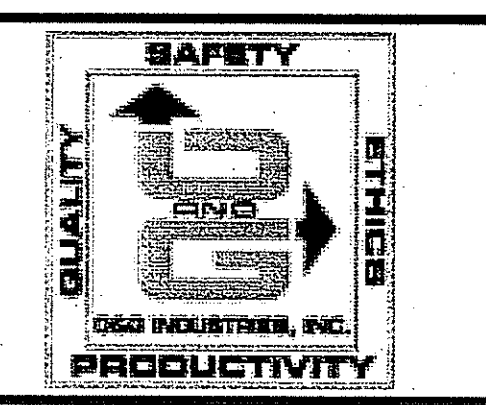
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PROJECT NO.: 11057.00 DRAWN BY: RL

ROOF FRAMING PLAN AREA G

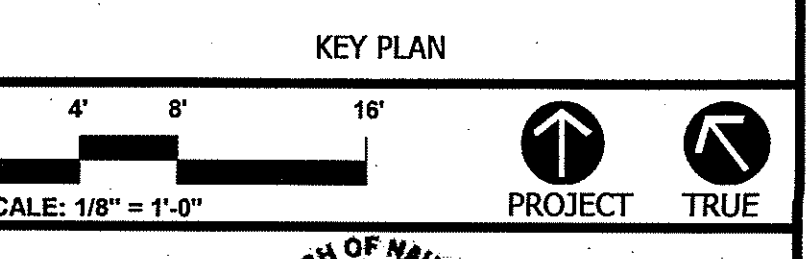
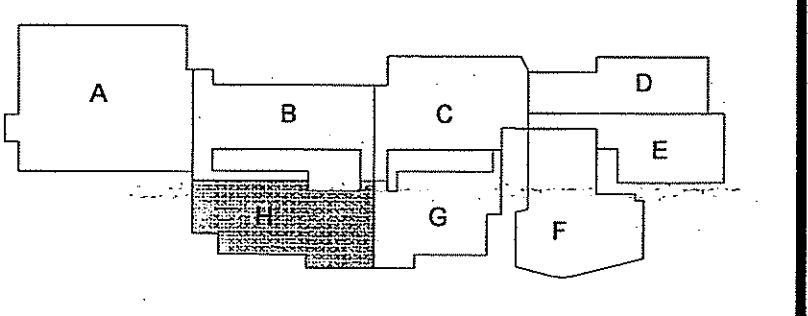




ISSUE DATE	
DATE	DESCRIPTION
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OCTOBER 23, 2012	DRAWINGS ISSUED FOR BSF REVIEW
JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

REVISION DATE		
Date	No.	Description

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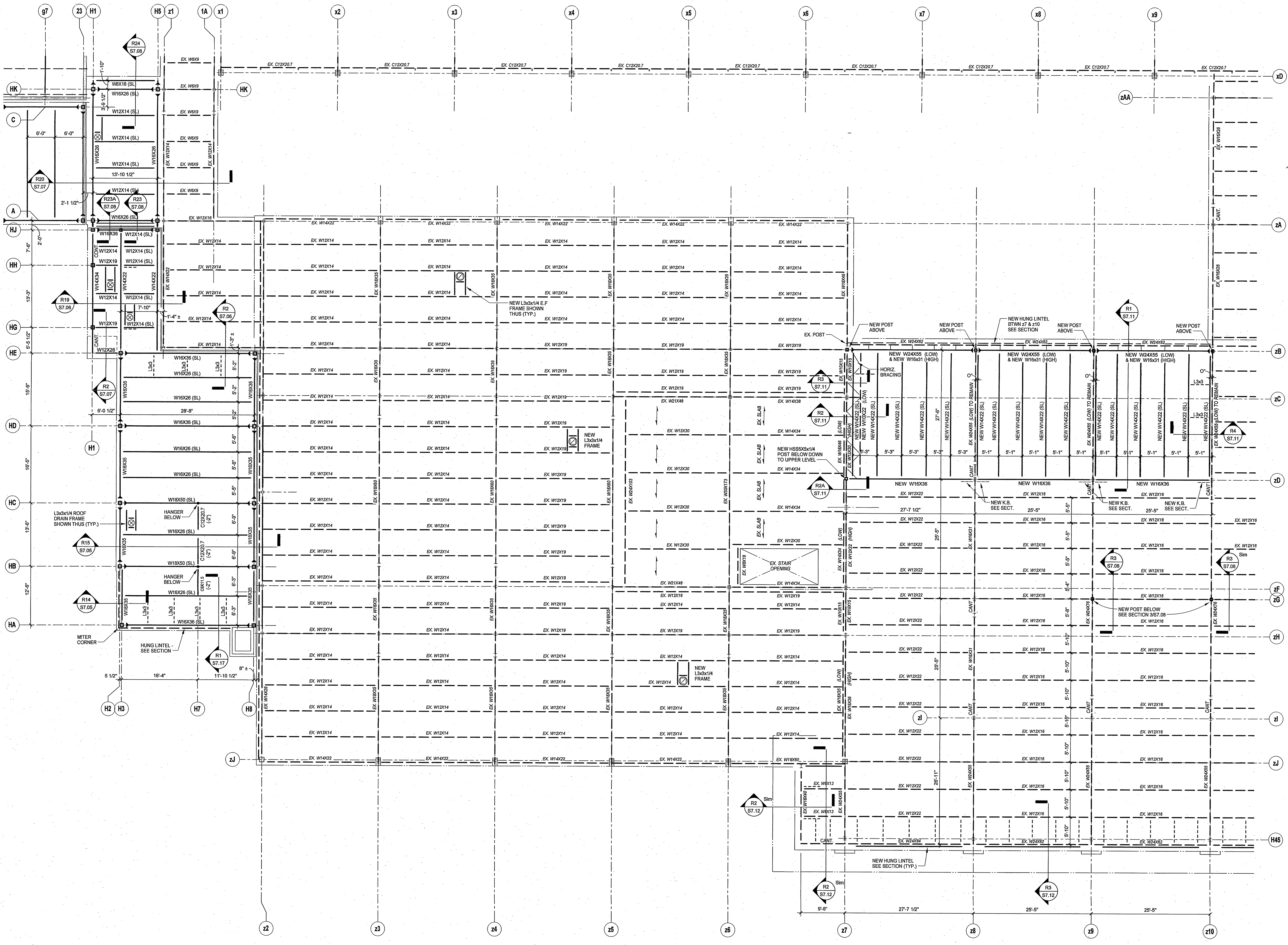
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
 HS SPN: 088-0067 E/A/EC/CV/RN
 BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: RL

ROOF FRAMING PLAN AREA H

DRAWING NO.: **S3.07**



COLUMN SCHEDULE - AREA A

COL NO	AA												AB			AC			AD			AE			A.1			A												B			C			D			E			F													
	A2	A4	A6	A7	A1	A3	A6	A7	A1	A3	A6	A7	A1	A3	A6	A7	A1	A3	A6	A7	15	16	3	6	8	10	13	15	16	18	19	20	21	22	23	1	3	7	9	11	14	15	17	18	19	20	21	22	23	1	2	4	5	7	9	11	12	13	14	15	16	2	7	9	11
LEVEL																																																																	
TOP OF ROOF STEEL ELEV. VARIES																																																																	
SEE PLAN																																																																	
TOP OF ROOF STEEL ELEV. VARIES																																																																	
SEE PLAN																																																																	
FINISHED FLOOR GYM ELEV. +0'-8"																																																																	
BASE PLATE																																																																	
BUTTRESS/PIER																																																																	

- COLUMN SCHEDULE NOTES**
- HEAVY SOLID LINE AT TOP OF COLUMN INDICATES NOMINAL TOP OF COLUMN. FOR ACTUAL ELEVATION SEE SECTIONS, PLANS AND DETAILS.
 - HEAVY SOLID LINE AT BOTTOM OF COLUMN INDICATES THE TOP OF CONCRETE FOOTING, PIER OR BUTTRESS SUPPORTING COLUMN. ALLOW 1" (3/4" GROUT PLUS 1/4" LEVELING PLATE) TO DETERMINE ELEVATION OF BOTTOM OF BASE PLATE.
 - FIRST DIMENSION GIVEN FOR RECTANGULAR COLUMNS OR BUTTRESSES IS IN THE EAST-WEST DIRECTION (LEFT TO RIGHT ON PLAN).
 - THE "B" DIMENSION GIVEN IN THE COLUMN SCHEDULE FOR RECTANGULAR BASE PLATES IS IN THE EAST-WEST DIRECTION (LEFT TO RIGHT ON PLAN).
 - ALL TUBULAR COLUMNS ARE HOLLOW, UNLESS OTHERWISE SHOWN IN DETAILS. PROVIDE 1/4" WELDED CAP PLATE TO PREVENT INTRUSION OF WATER.
 - SEE TYPICAL BUTTRESS PLAN DETAILS TO DETERMINE BUTTRESS SIZE GIVEN IN COLUMN SCHEDULE.
 - FOR TYPICAL DETAILS AND GENERAL NOTES SEE DRAWINGS S8.01 AND S8.02.

DESIGN CRITERIA

MINIMUM UNIFORMELY DISTRIBUTED FLOOR LIVE LOADS:

NEW MAIN LEVEL FLOOR 100 psf
 NEW UPPER LEVEL 100 psf
 STAIRS AND EXITS 100 psf
 NEW STORAGE & MECH. ROOMS 125 psf

ROOF LOADING DATA

GROUND SNOW LOAD Pg = 30 psf (2009 AMENDMENT, APPENDIX K)
 FLAT ROOF SNOW LOAD Pf = 30 psf (MIN.) Pf = 0.7 Ce Ct I Pg
 EXPOSURE CATEGORY B
 BUILDING CLASSIFICATION CATEGORY III
 SNOW EXPOSURE FACTOR Ce = 1.0
 IMPORTANCE FACTOR I = 1.1
 THERMAL FACTOR Ct = 1.0

WIND DESIGN DATA

ASCE 7-02/IBC 2003 ANALYTICAL PROCEDURE
 BASIC WIND SPEED FOR THE MUNICIPALITY OF NAUGATUCK V = 100 MPH (SBC 2009 AMENDMENT, APPENDIX K)
 BUILDING CLASSIFICATION CATEGORY III
 WIND IMPORTANCE FACTOR Iw = 1.15
 EXPOSURE CATEGORY EXPOSURE B
 ENCLOSED BUILDING

THE DESIGN WIND PRESSURES TO BE USED FOR EXTERIOR COMPONENTS AND CLADDING MATERIALS SHALL BE DETERMINED IN ACCORDANCE WITH SECTION 1609.6.1.2, IBC 2003.

EARTHQUAKE DESIGN DATA

ASCE 7-02/IBC 2003 EQUIVALENT LATERAL FORCE PROCEDURE
 SEISMIC ACCELERATION FACTORS (2009 AMENDMENT, APPENDIX K)
 BUILDING OCCUPANCY CLASSIFICATION CATEGORY III
 SEISMIC USE GROUP II
 SEISMIC IMPORTANCE FACTOR I = 1.25
 Ss = 0.251 S1 = 0.064
 SITE CLASS C
 Fa = 1.2 Fv = 1.7
 Sms = 0.301 Smi = 0.109
 Sps = 0.200 Sp1 = 0.073
 SEISMIC DESIGN CATEGORY = B 0.167g ≤ Sps < 0.33g
 0.067g ≤ Sm1 < 0.133g

RESPONSE MODIFICATION COEFFICIENT R = 3
 SYSTEM OVERSTRENGTH FACTOR Ωb = 3
 DEFLECTION AMPLIFICATION FACTOR Cd = 3

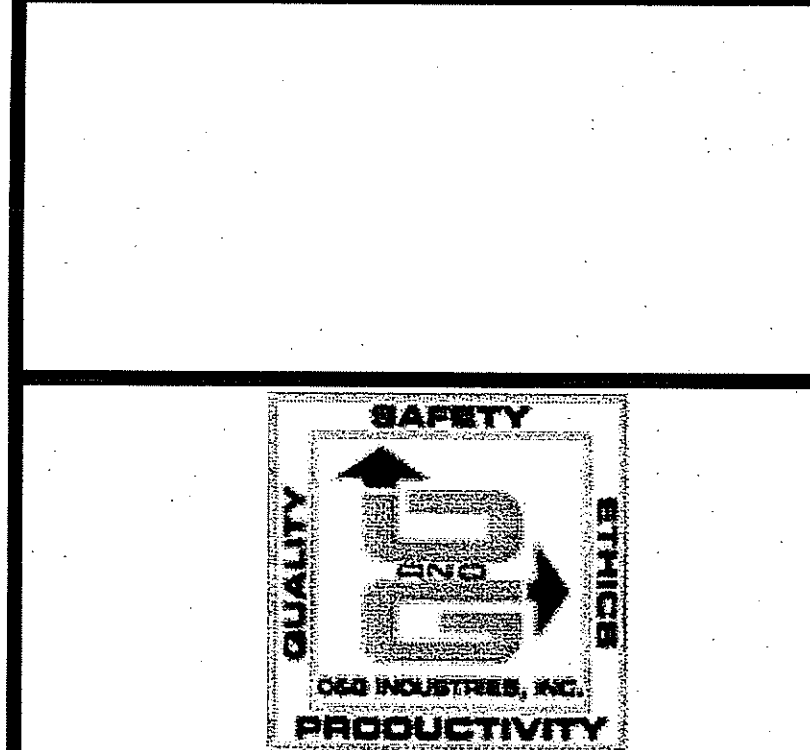
BASED ON A LATERAL-FORCE-RESISTING SYSTEM CONSISTING OF ORDINARY BRACED FRAMES, MOMENT FRAMES, AND MASONRY SHEAR WALLS

**KAESTLE BOOS
associates, inc**

416 Staler Road, P.O. Box 2590, New Britain, CT 06050-2590
 Phone: 860-229-0361 Fax: 860-229-5303

325 Foxborough Boulevard, Suite 100, Foxborough, MA 02035
 Phone: 508-549-9906 Fax: 508-549-9907

Email: kba@kba-architects.com Web: www.kba-architects.com



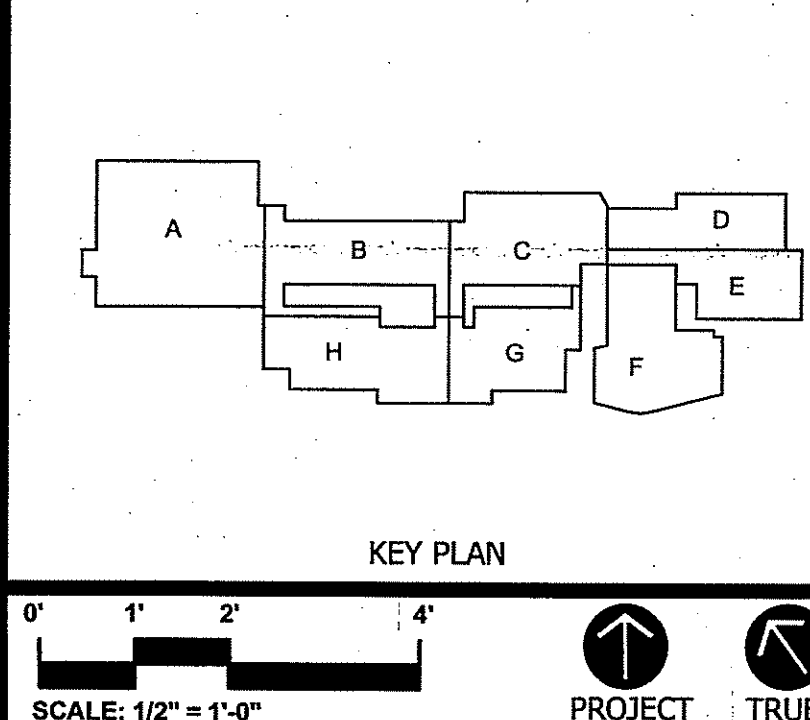
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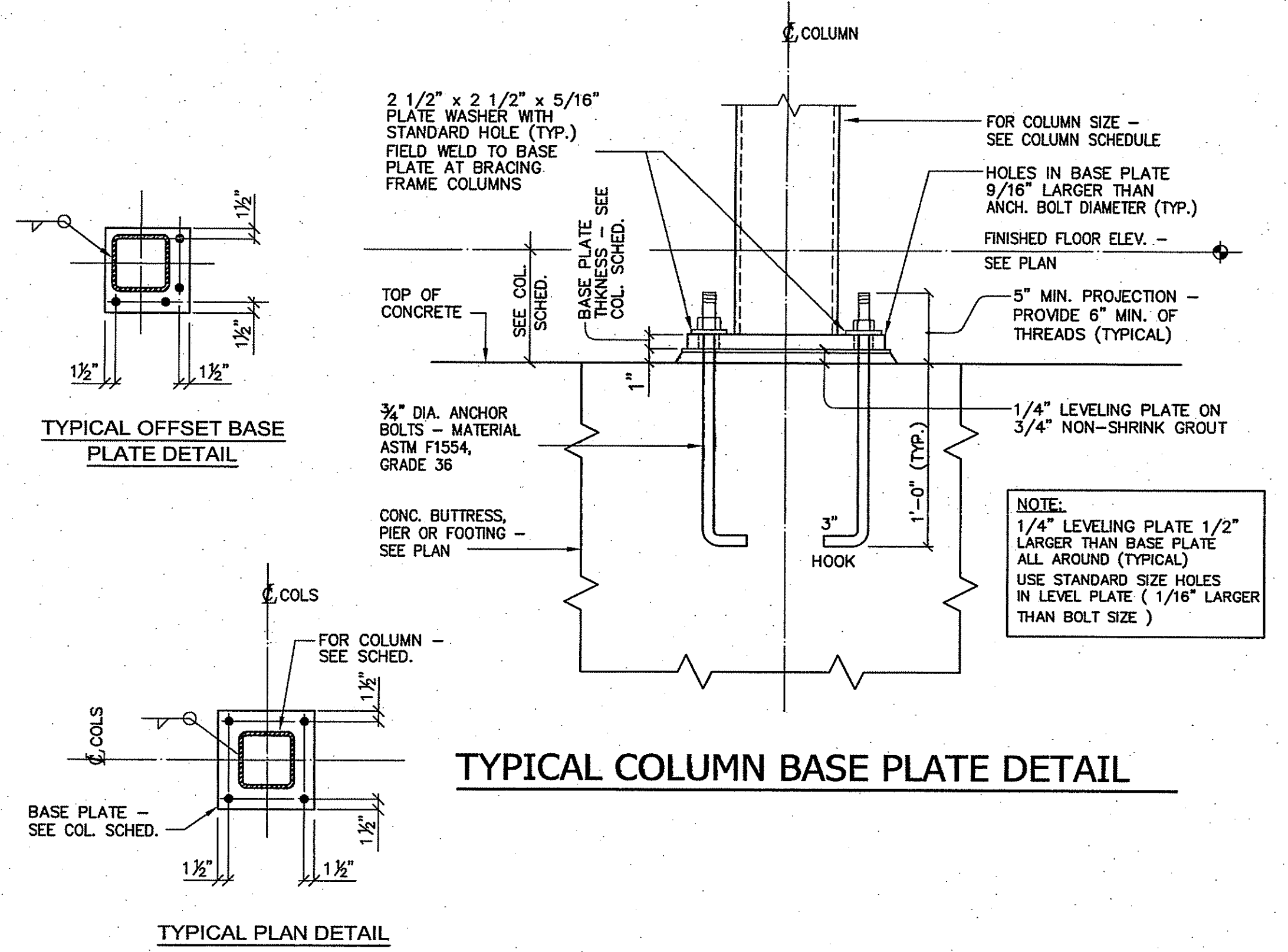
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543 RUBBER AVENUE NAUGATUCK, CT 06770
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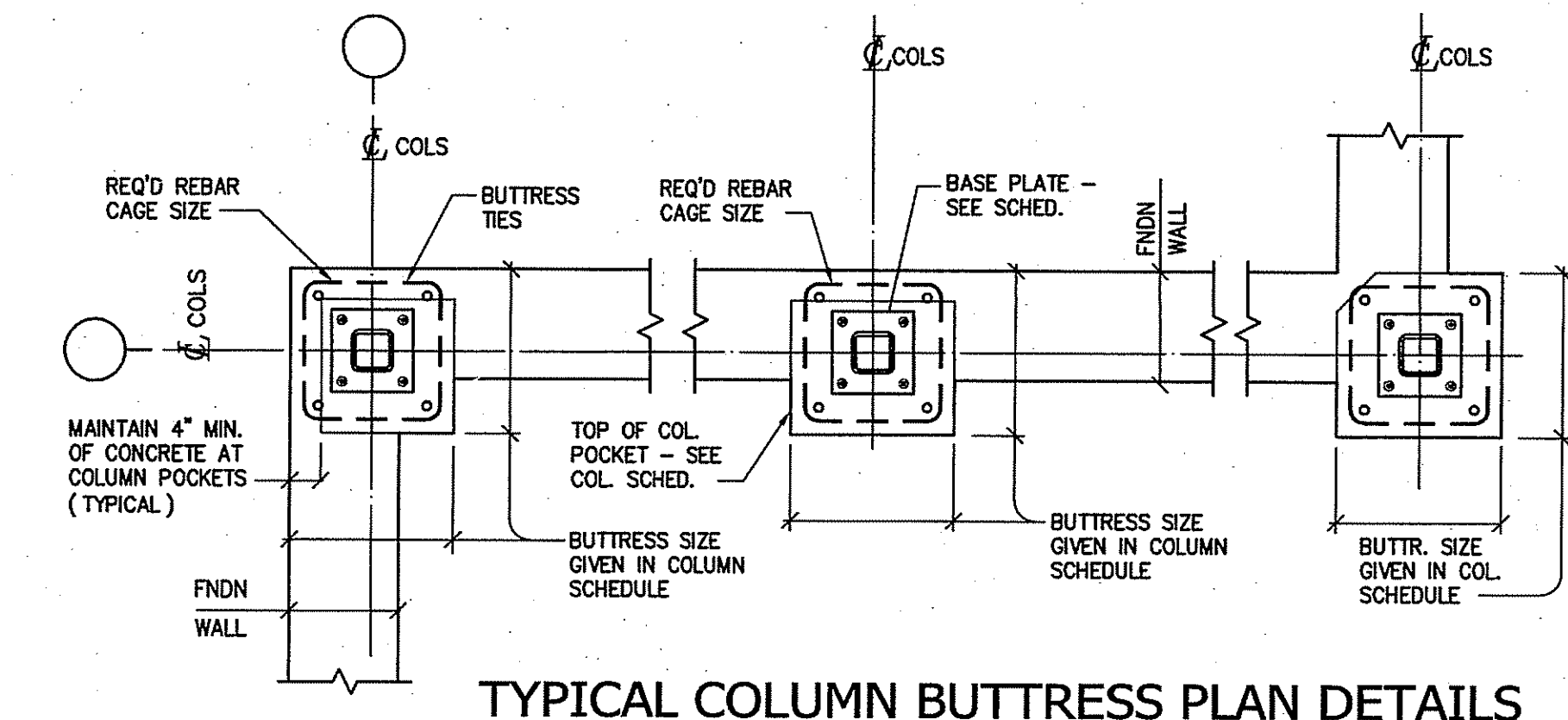
COLUMN SCHEDULE BRACING FRAMES DESIGN CRITERIA

DRAWING NO.: **S4.01**

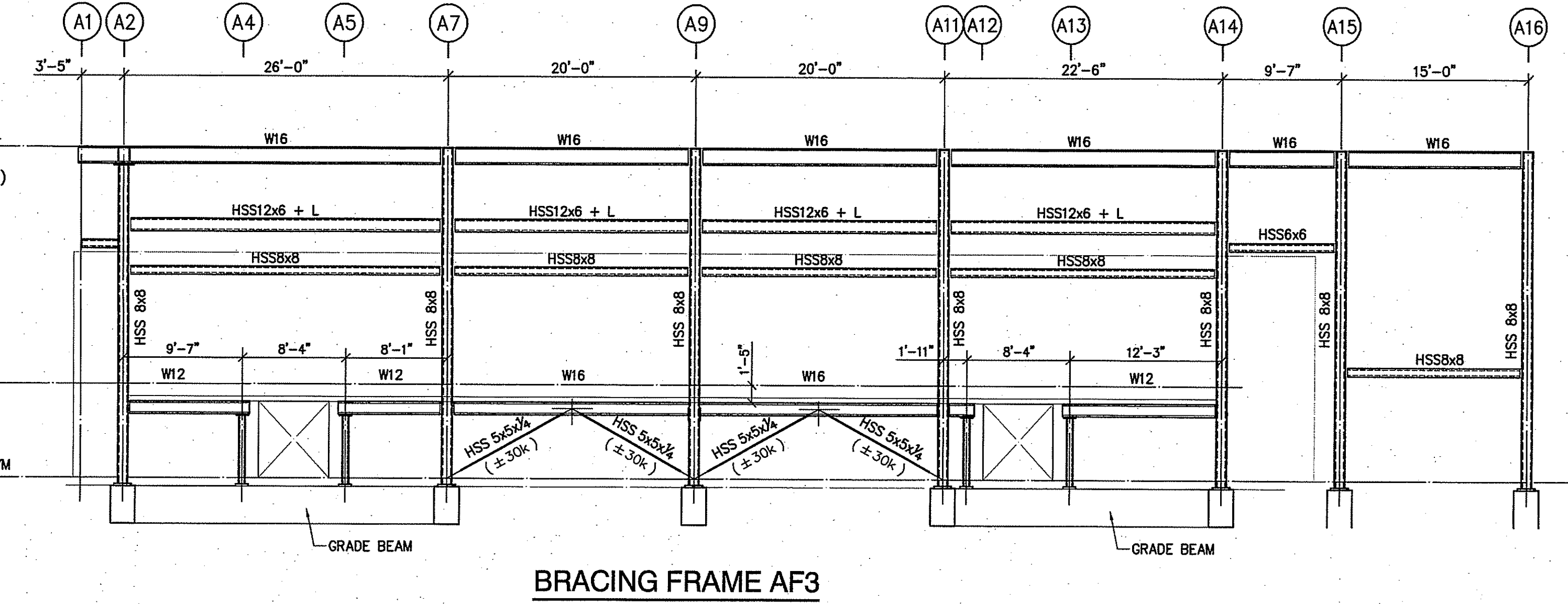
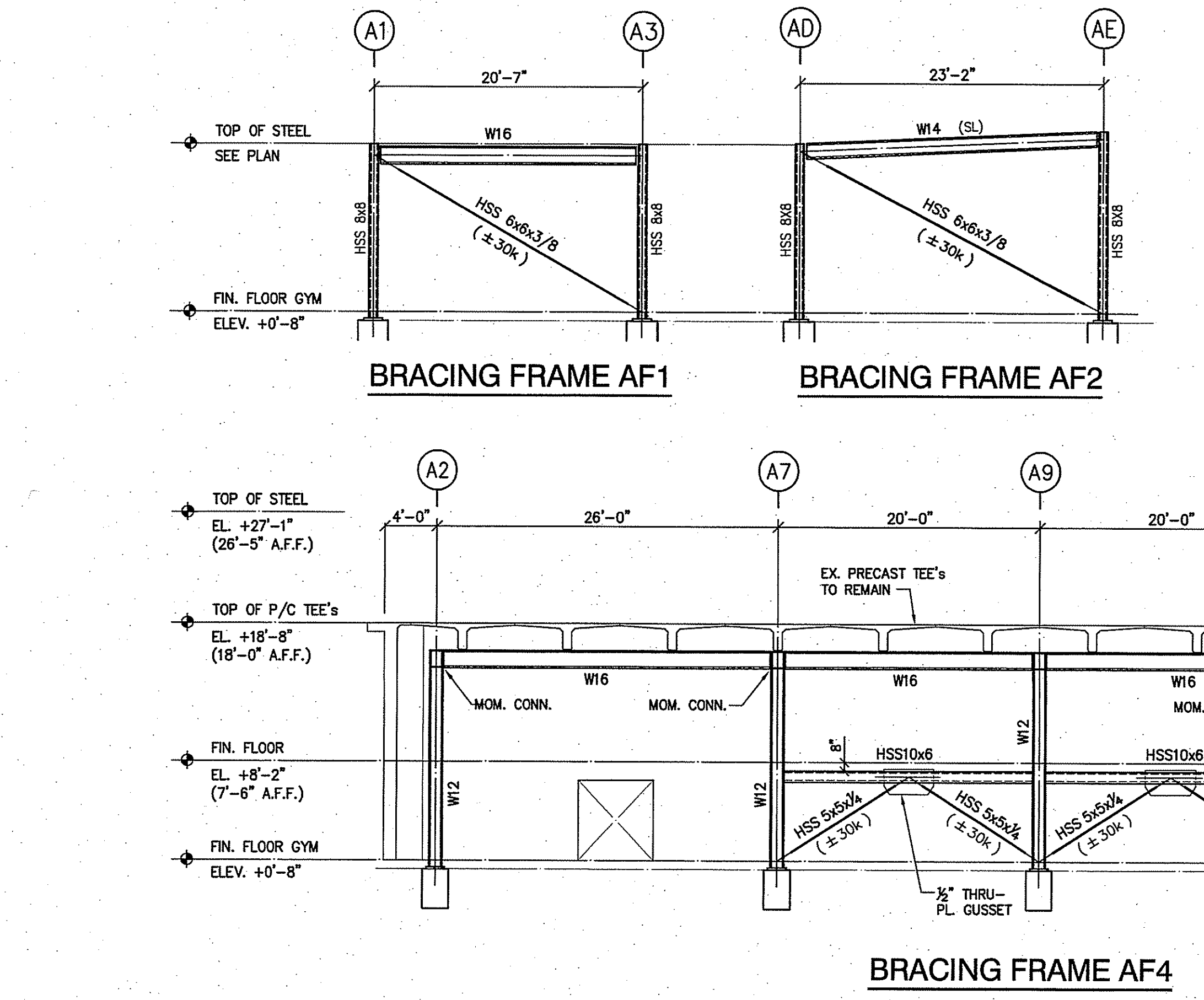


COLUMN SCHEDULE - AREA H

COL NO	HA												HB			HC			HD			HE			HF			HG			HH			HJ			A			HK				
	H3	H4	H7	H8	H2	H7	H8	H2	H6	H7	H8	H2	H8	H2	H8	H2	H8	H2	H8	H2	H1	H1	H2	H5	H1	H5	H1	H5	H1	H5	H1	H5	H1	H5	H1	H5								
LEVEL																																												
TOP OF ROOF STEEL ELEV. VARIES																																												
SEE PLANS & DETAILS																																												
UPPER LEVEL ELEV. +14'-8"																																												
FINISHED MAIN FLOOR ELEV. 0'-0"																																												
FINISHED LOBBY FLOOR ELEV. -4'-0"																																												
BASE PLATE																																												
BUTTRESS/PIER																																												



- BRACING FRAME NOTES**
- ALL FORCES ARE GIVEN IN KIPS (1000 LBS.). THE SYMBOL "+" INDICATES TENSION. THE SYMBOL "-" INDICATES COMPRESSION.
 - THE DIAGONAL BRACING FORCES SHOWN THUS, (+...-) ON THE BRACING FRAME ELEVATIONS ARE BASED ON LOAD COMBINATIONS USING ALLOWABLE STRESS DESIGN. THE CONNECTIONS OF DIAGONAL BRACINGS TO COLUMNS OR BEAMS SHALL BE DESIGNED USING ALLOWABLE STRESS DESIGN WITH NO STRESS INCREASE. BOLT VALUES OF CLASS A (SLIP CRITICAL) CONNECTION TYPE IN STANDARD HOLES SHALL BE USED (4 BOLTS MINIMUM). OMIT PAINT AT CONNECTION AS REQUIRED BY CODE.
 - FOR INFORMATION ON COLUMN BASE DETAILS SUCH AS BASE PLATE SIZES, ANCHOR BOLT SIZES, BOTTOM OF COLUMN ELEVATIONS, ETC., SEE COLUMN SCHEDULE AND TYPICAL DETAILS.



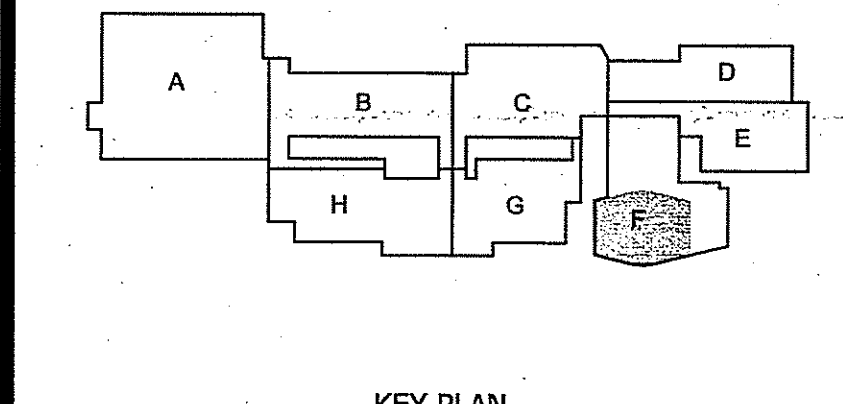
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AS NOTED PROJECT TRUE

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543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
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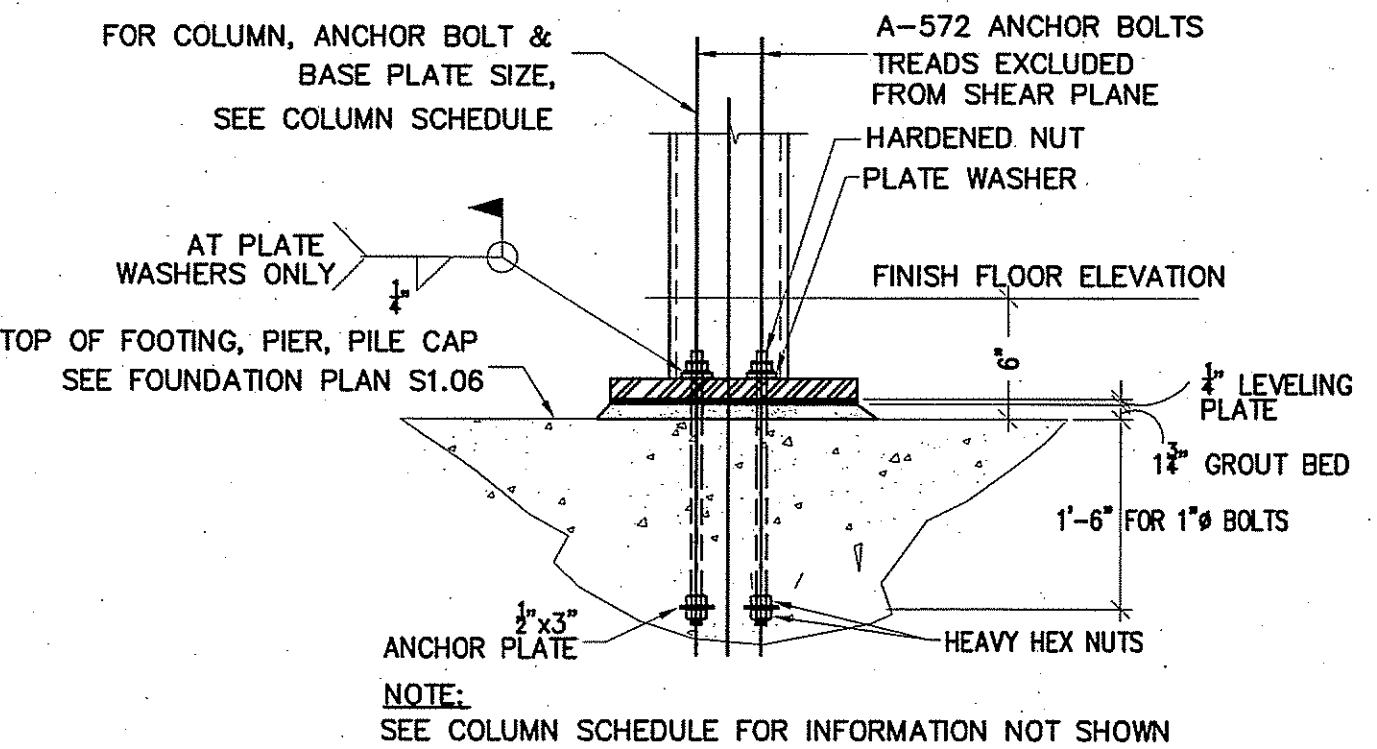
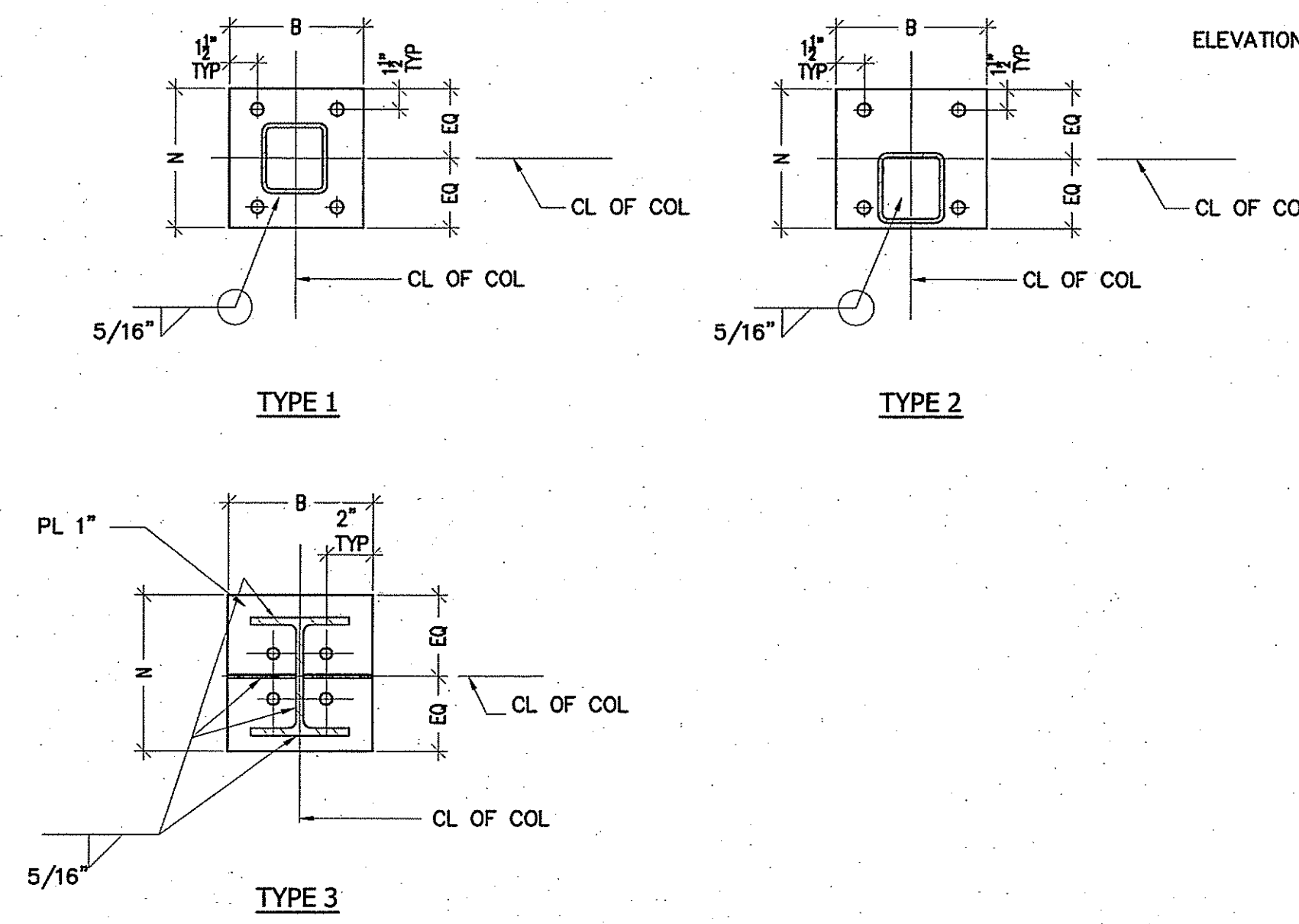
COLUMN SCHEDULE, TYP. BASE PLATE INSTALLATION DETAILS

DRAWING NO: **S4.02**

COLUMN SCHEDULE
SEE FLOOR PLANS FOR LOC.

COLUMN FLOOR	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12		C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31	C32	C33	C34	C35	C36	C37	C38	C39	C40 C47	C41 C48	C42	C43	C44		
QUANTITY	2	2	2	1	2	1	2	2	2	2	2	2		2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	
HIGH ROOF TOS EL. 27'-4"	[Diagrammatic representation of column heights]																																													
TECHNICAL LEVEL TOS EL. 18'-11 1/2"	[Diagrammatic representation of column heights]																																													
LOW ROOF TOS EL. 18'-8"	[Diagrammatic representation of column heights]																																													
MECH. LEVEL TOS EL. 14'-8" CORNICE LEVEL EL. 13'-6"	[Diagrammatic representation of column heights]																																													
ELEVATOR PLATFORM TOS EL. 11'-0 1/2"	[Diagrammatic representation of column heights]																																													
UPPER BALCONY TOS EL. 9'-7 1/2"	[Diagrammatic representation of column heights]																																													
MAIN LEVEL EL. 0'-0"	[Diagrammatic representation of column heights]																																													
EXIST FLOOR EL. VARIES SEE NOTE 4	[Diagrammatic representation of column heights]																																													
VESTIBULE EL. -2'-8"	[Diagrammatic representation of column heights]																																													
BASE PLATE N x B	PL 1" 12"x12"	PL 1" 12"x12"	PL 1" 12"x12"	PL 1" 12"x12"	PL 1" 12"x12"	PL 1" 12"x12"	PL 1" 12"x12"	PL 1" 12"x14"	PL 1" 12"x12"	PL 1" 12"x14"	PL 1" 12"x12"	PL 1" 12"x14"		PL 1" 12"x8"	PL 1" 12"x8"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 1" 14"x14"	PL 3/4" 10"x12"	
BASEPLATE TYPE	1	1	1	1	1	1	1	2	1	2	1	2		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANCHOR BOLTS QUANTITY MATERIAL	(4) 1" F1554 GR 55	(4) 1" F1554 GR 55	(4) 1" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55		(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55	(4) 3/8" F1554 GR 55		

- NOTES:**
- BOTTOM BASE PLATE ELEVATION ALL COLUMNS SHALL BE COORDINATED WITH CONCRETE PIER TOP ELEVATION. SEE PLAN S1.06 FOR TOP OF PIERS ELEVATION.
 - IF REQUIRED BY CONSTRUCTION CONSTRAINT OTHER SPLICE CONNECTIONS SHALL BE PLACED AT 48" DISTANCE FROM THE FLOOR FRAMING. SPLICE CONNECTION DESIGN SHALL FOLLOW AISC RECOMMENDATIONS.
 - ELEVATION OF TOP OF CONCRETE PILE CAP IS 6" BELOW THE EXISTING SLOPED CONCRETE FLOOR. VERIFY BOTTOM ELEVATION OF BASE PLATE IN FIELD TO ENSURE THE INSTALLATION OF THE BASE PLATE IN ACCORDANCE WITH DETAIL 2/S4.02.
 - FOR ALL TRANSFER BEAMS PROVIDE STIFFENERS -SEE TYPICAL DETAIL 3/S7.13 FOR STIFFENER INSTALLATION.





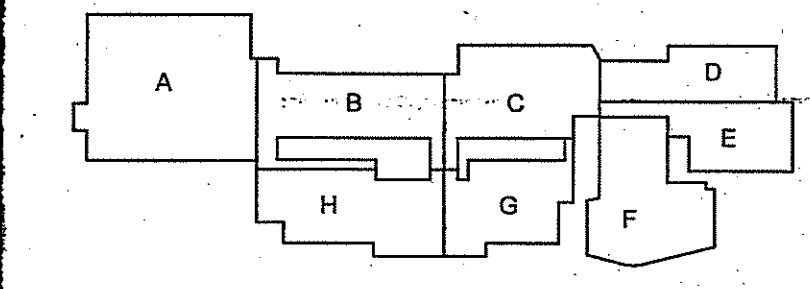
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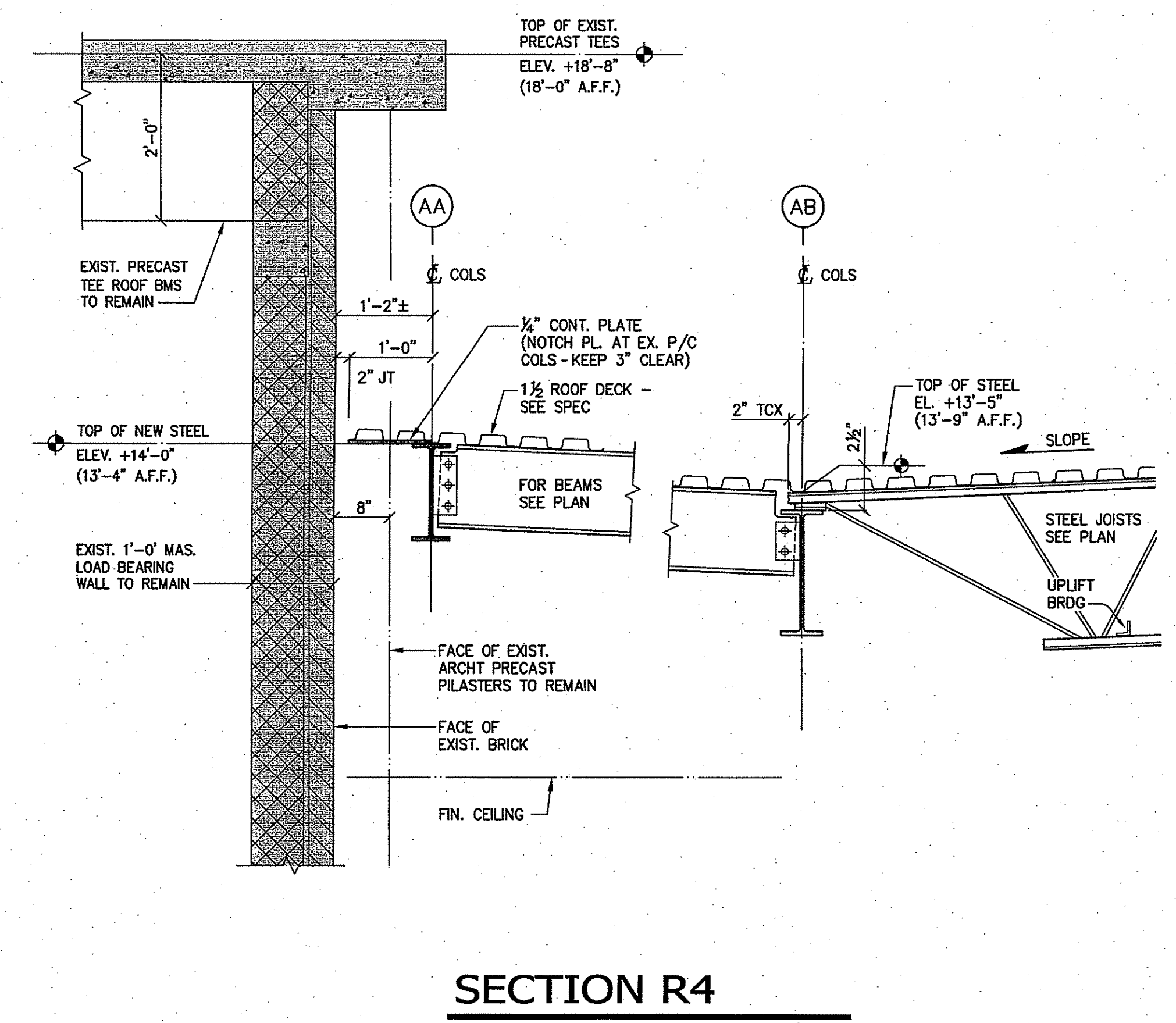
KEY PLAN
SCALE: 3/4" = 1'-0"
PROJECT TRUE

ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

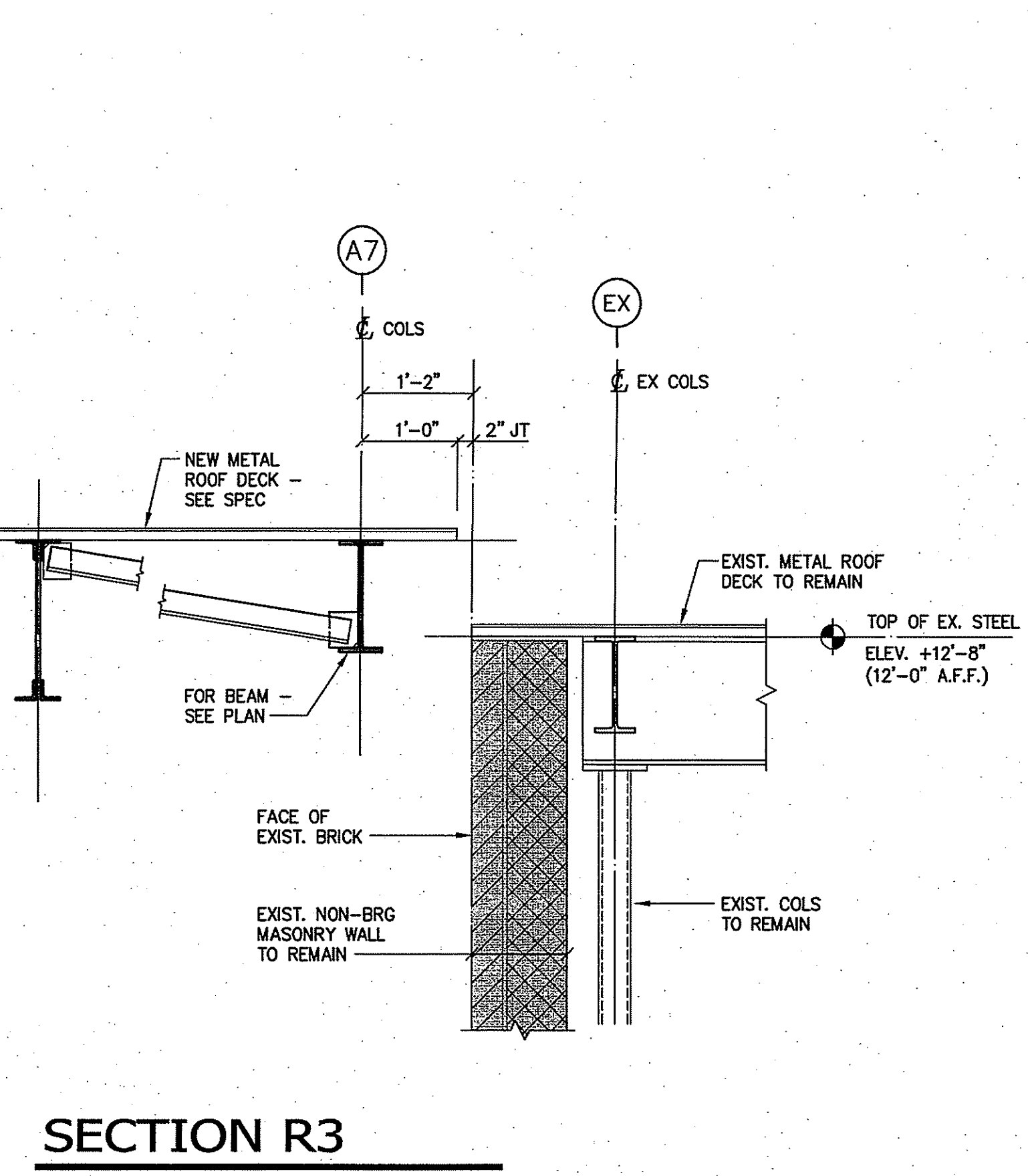
543 RUBBER AVENUE NAUGATUCK, CT 06770
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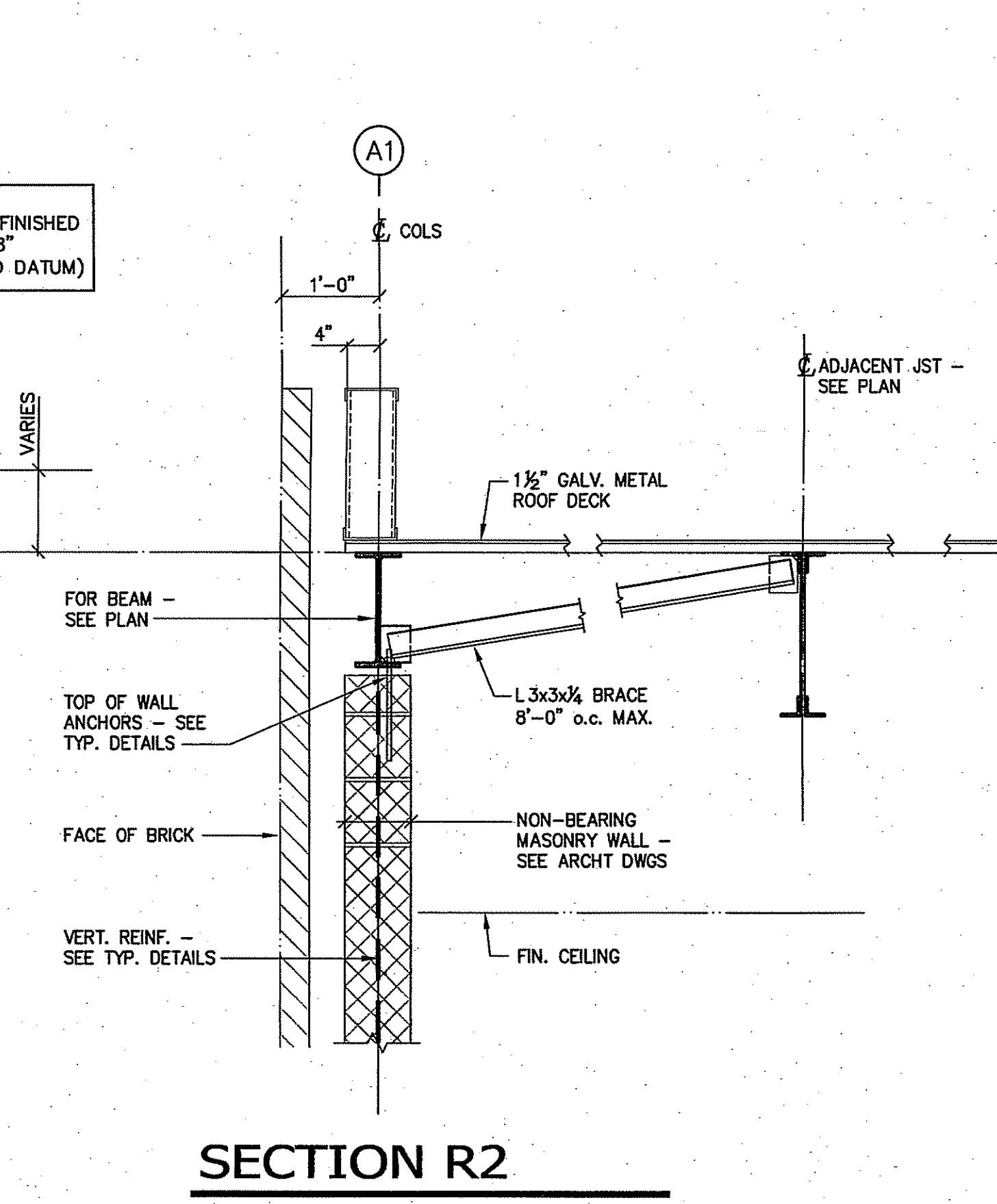
STRUCTURAL FRAMING DETAILS



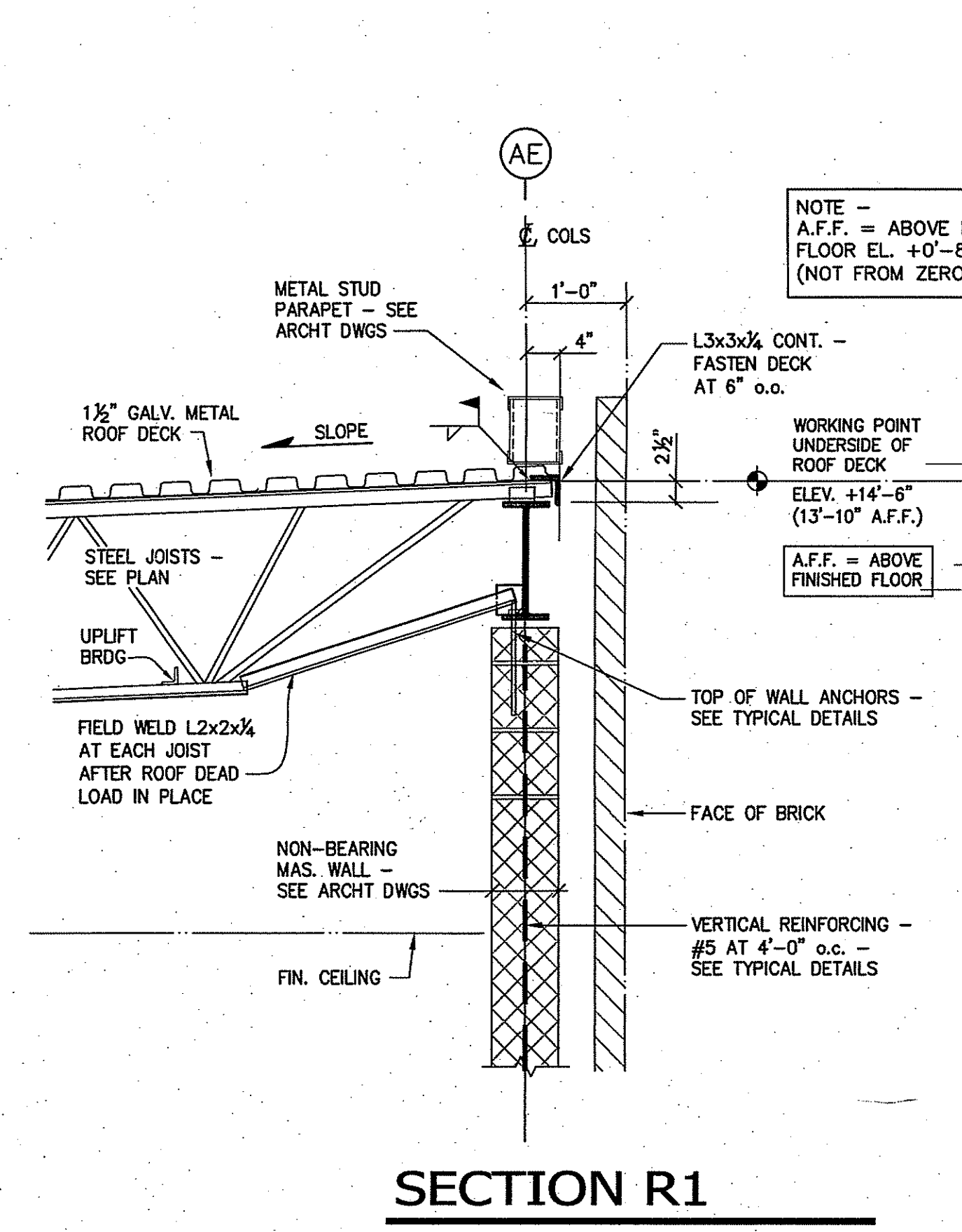
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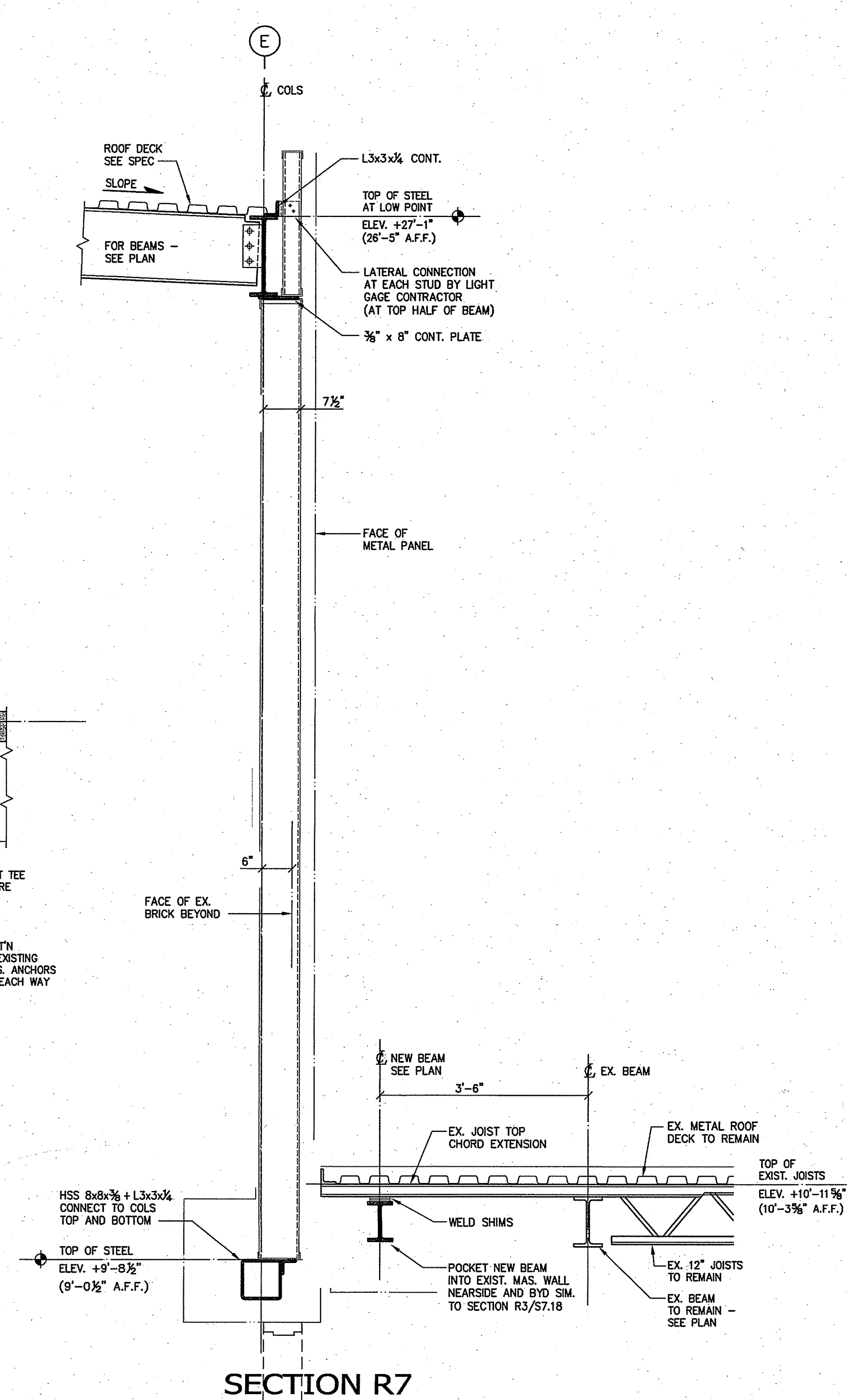
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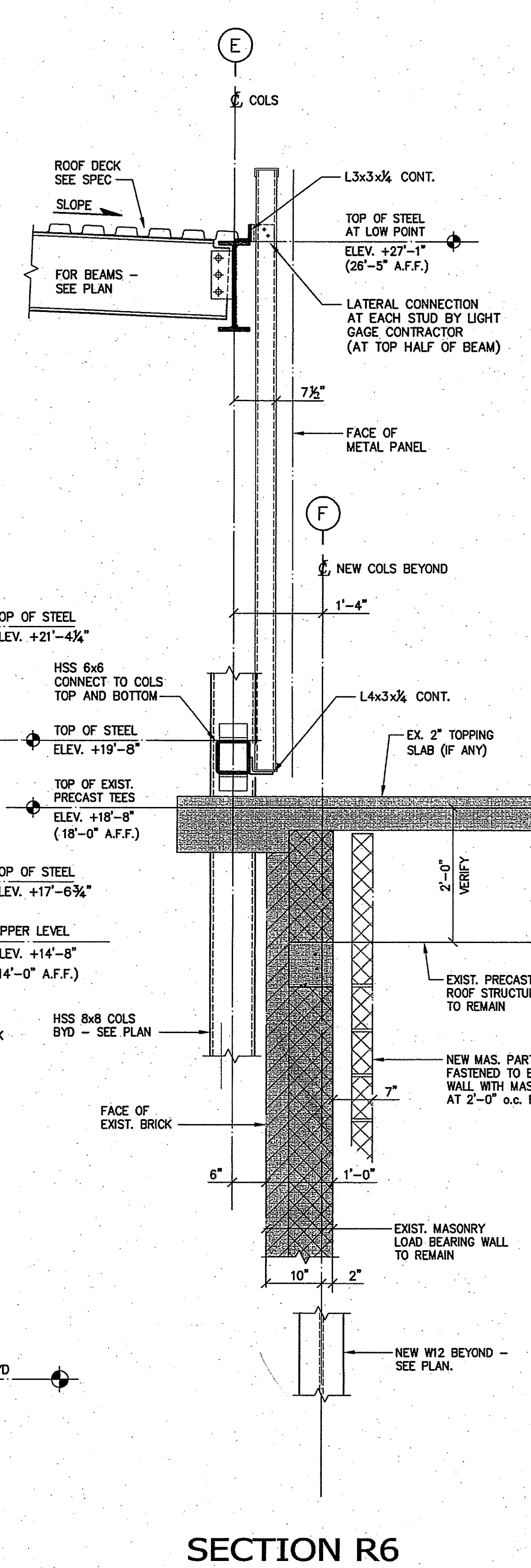
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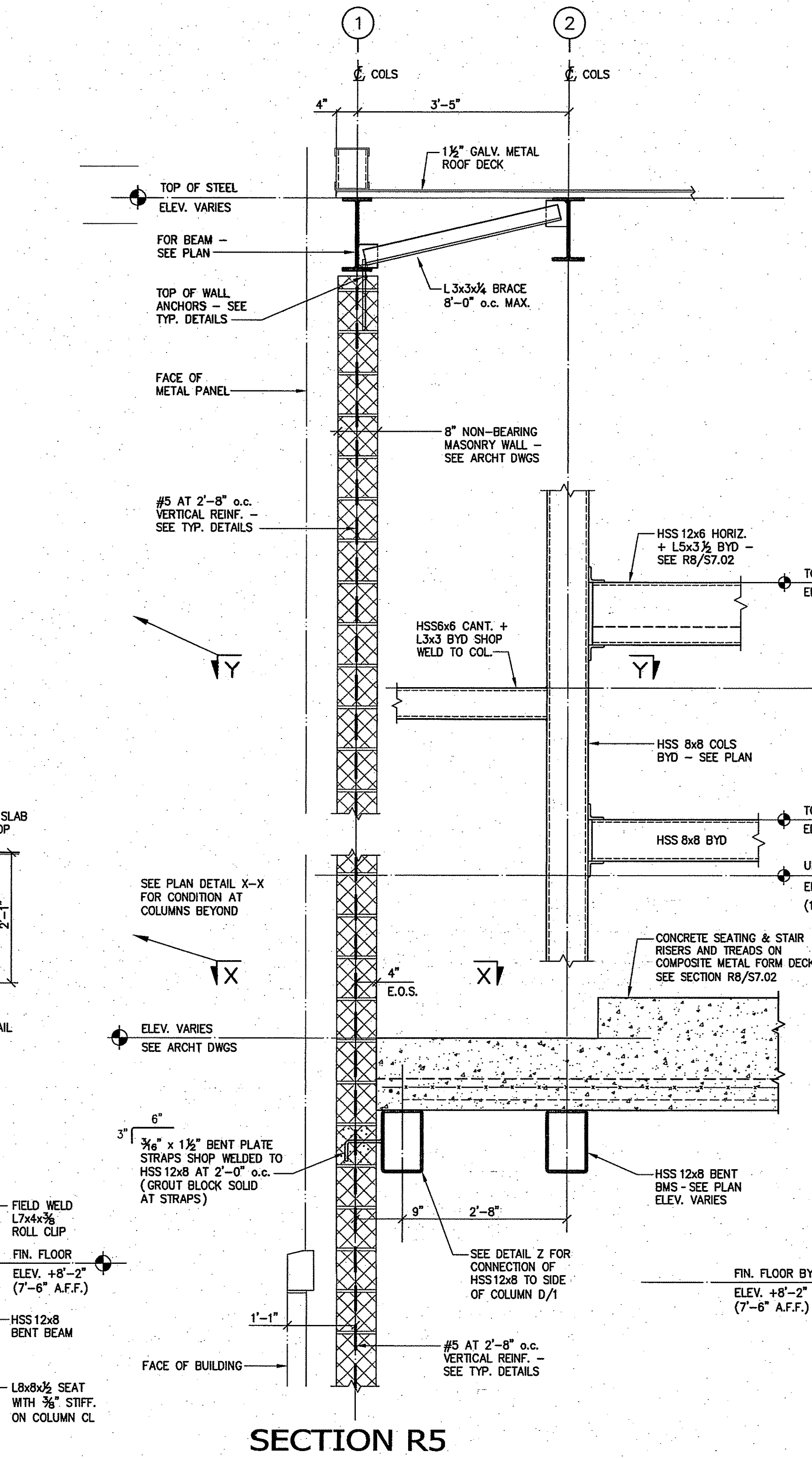
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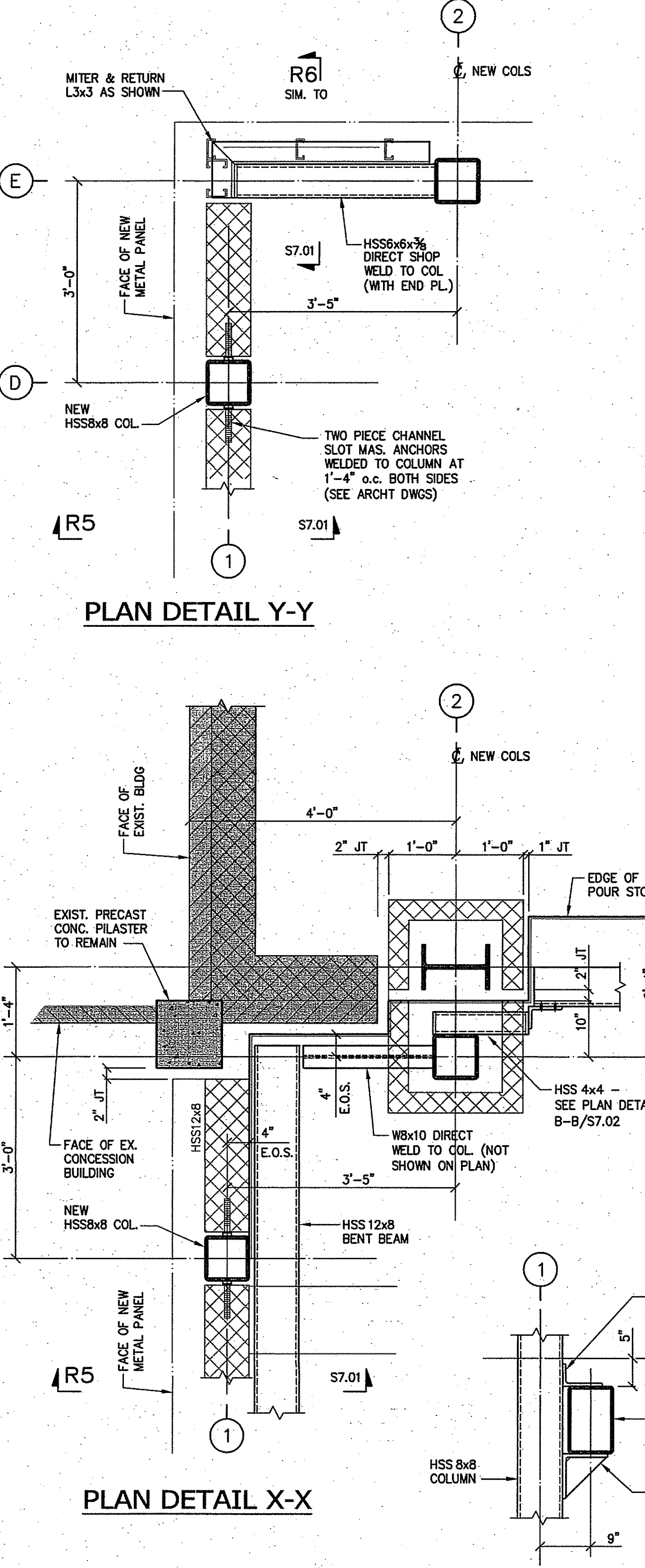
SECTION R7



SECTION R6



SECTION R5



DETAIL Z

PLAN DETAIL Y-Y

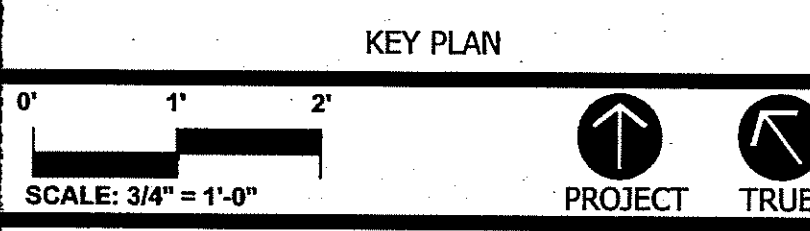
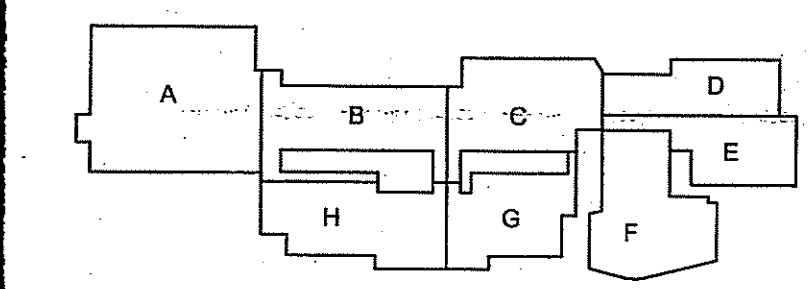
PLAN DETAIL X-X



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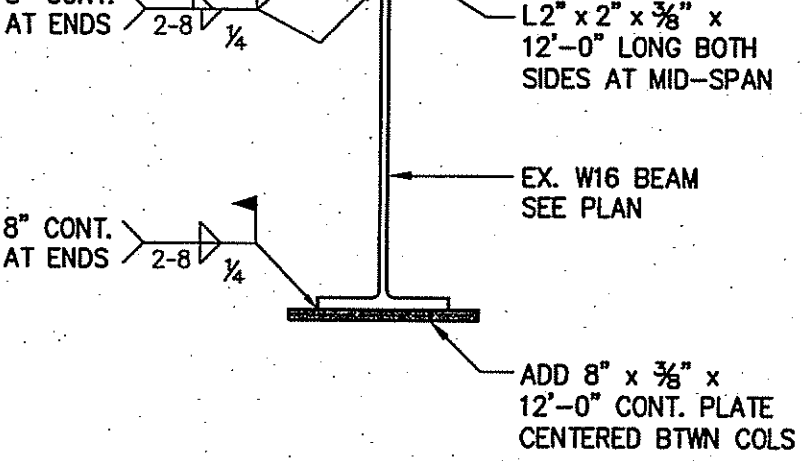
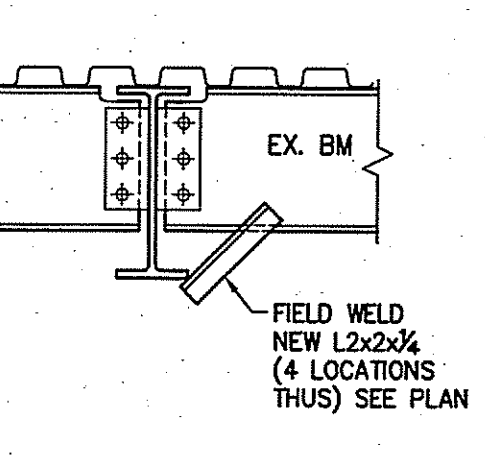
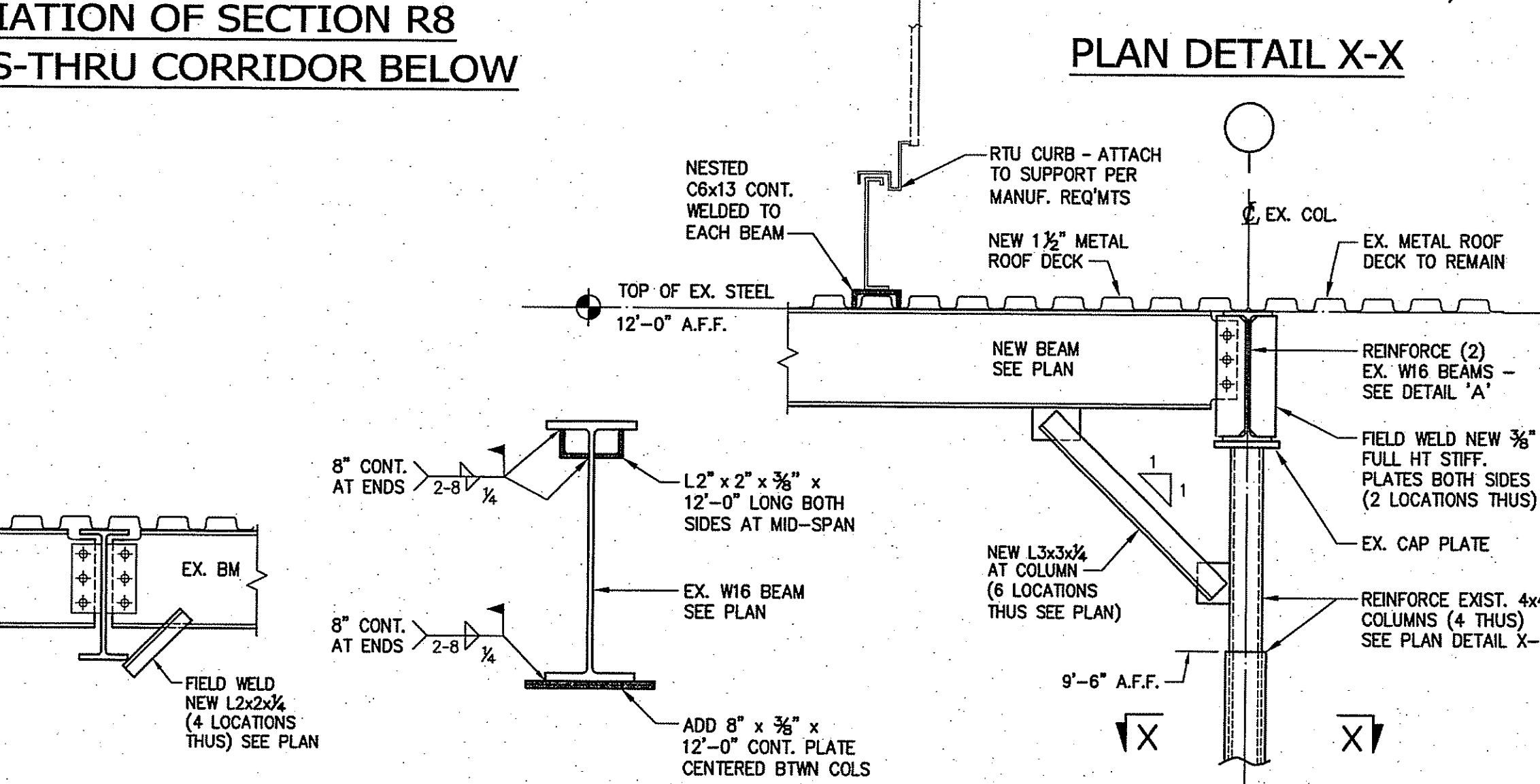
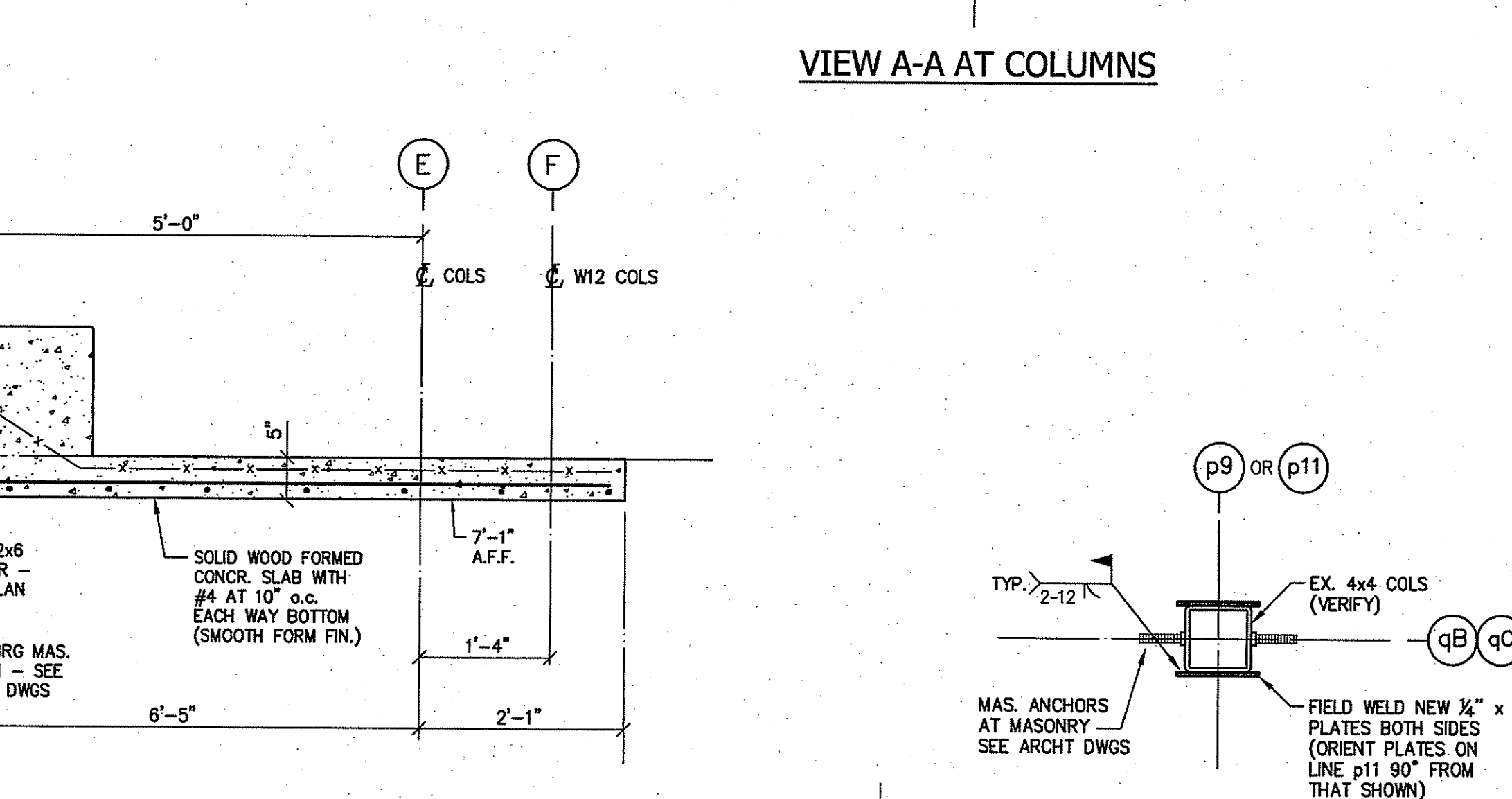
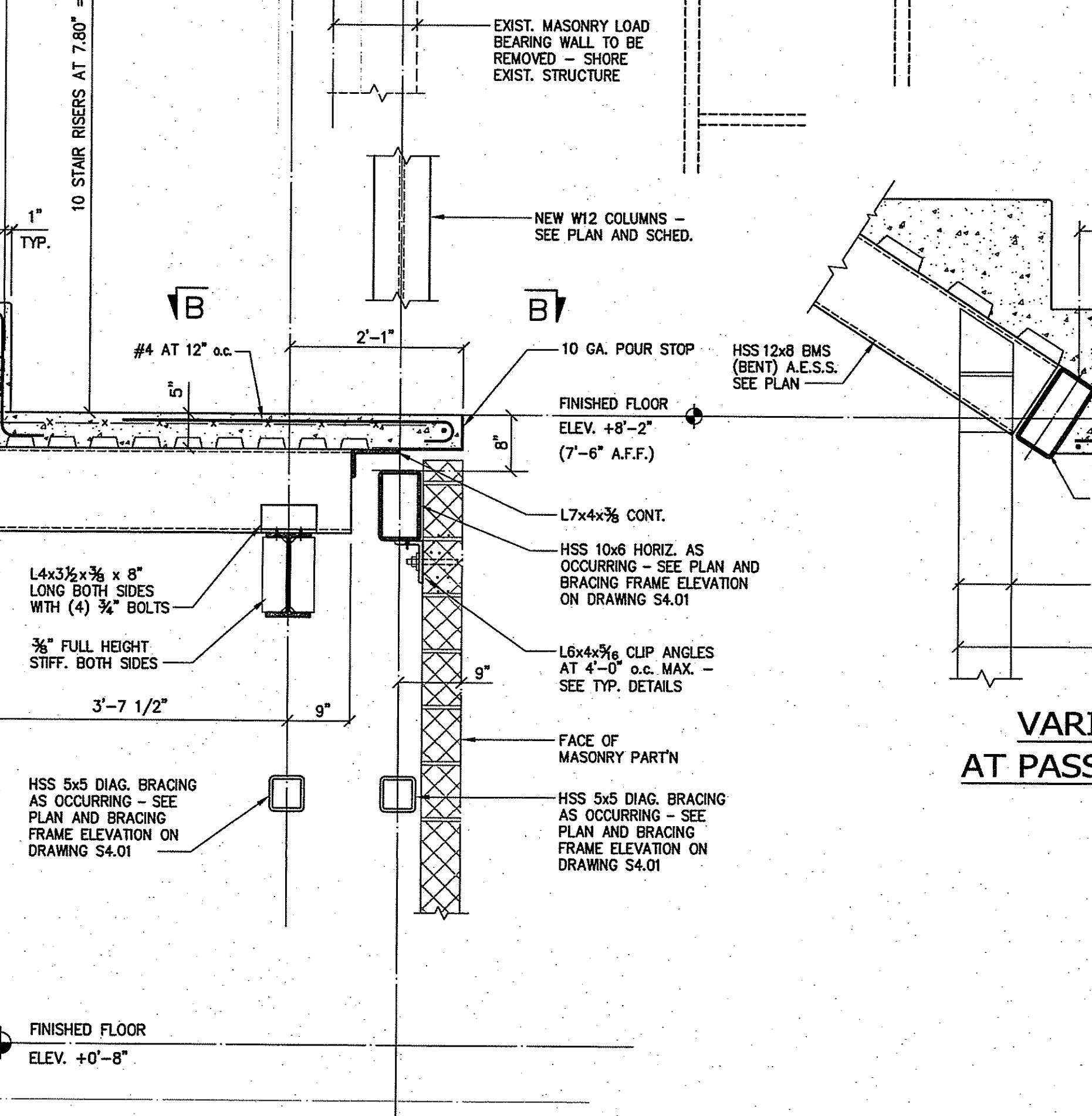
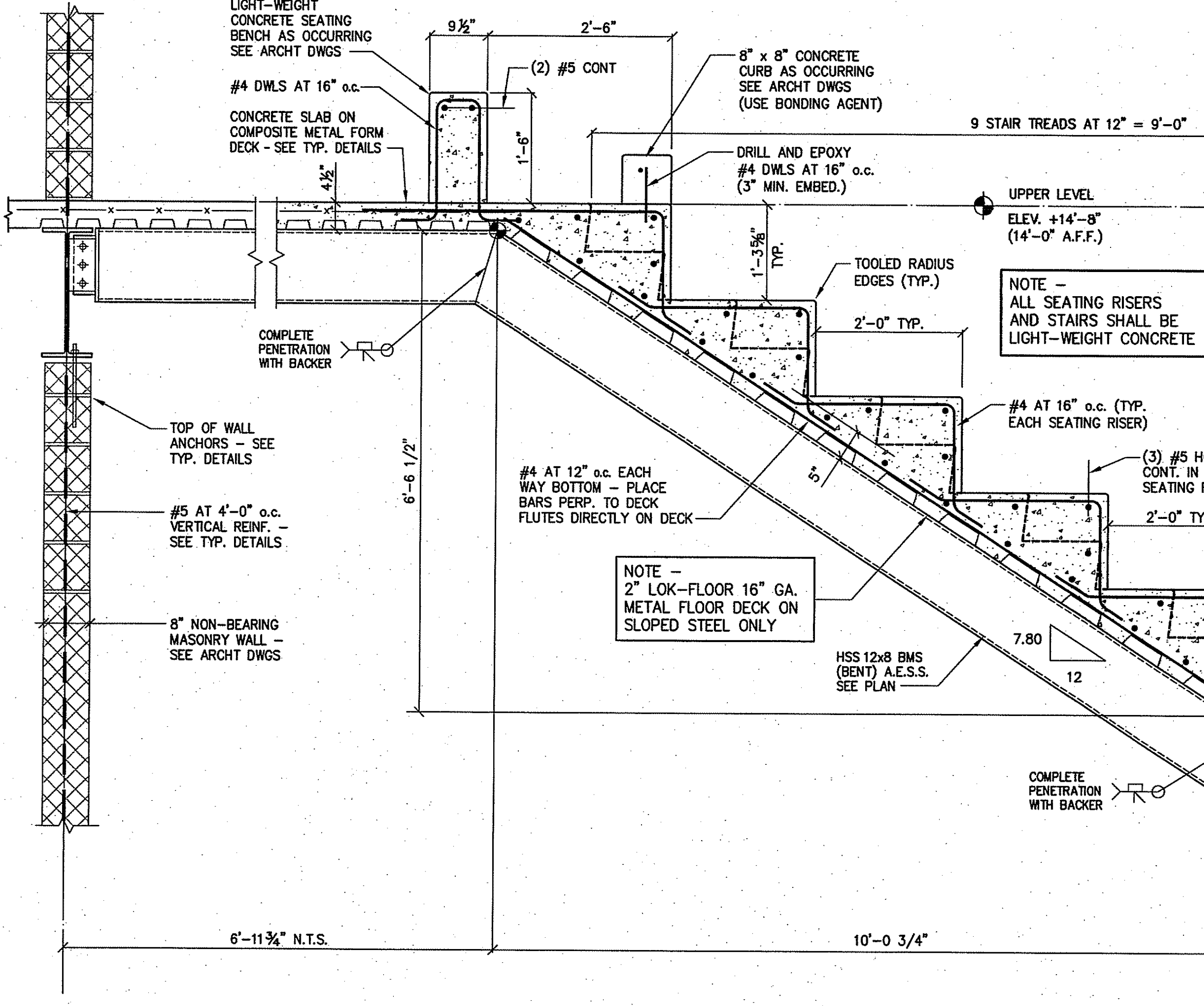
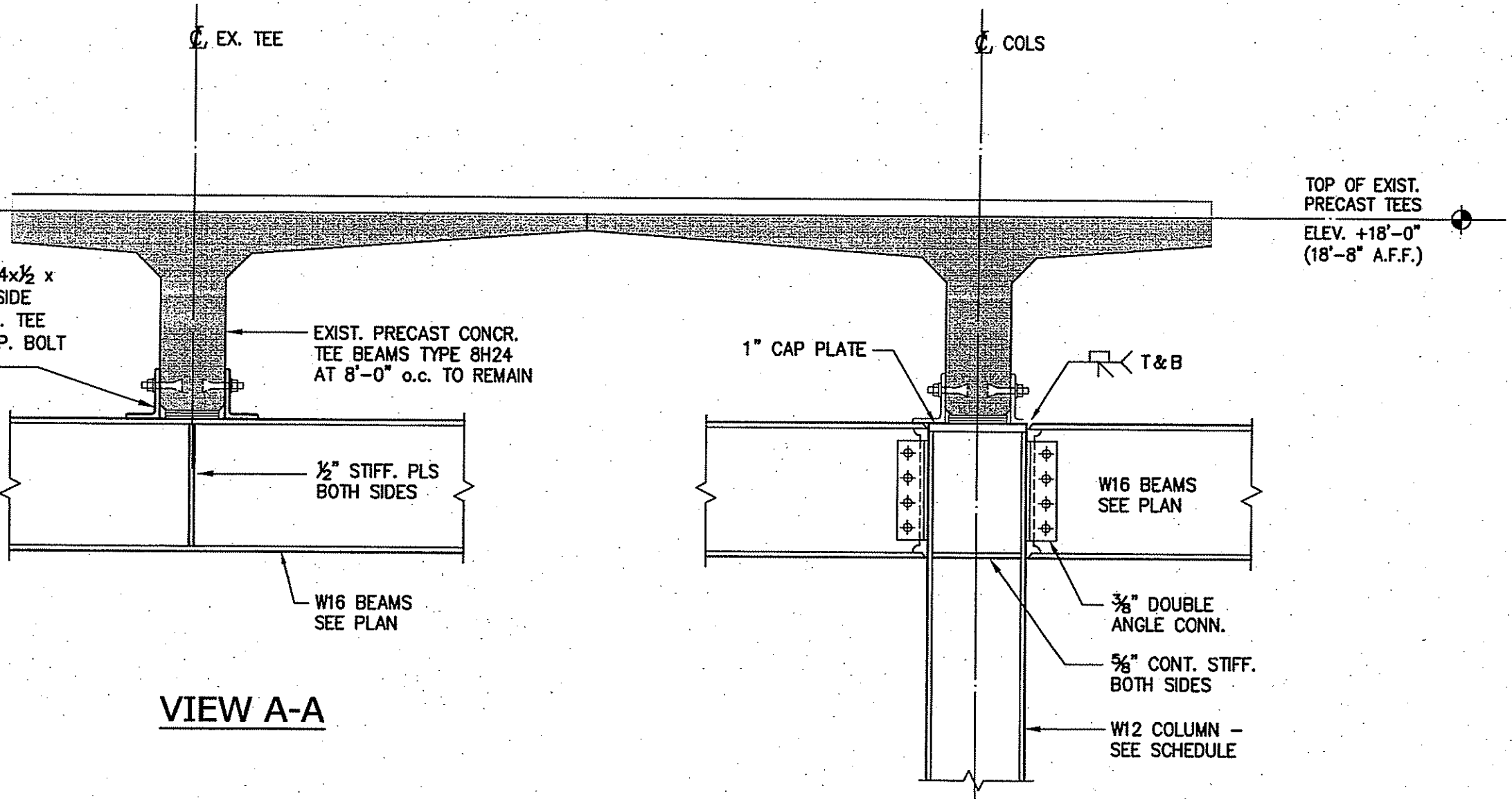
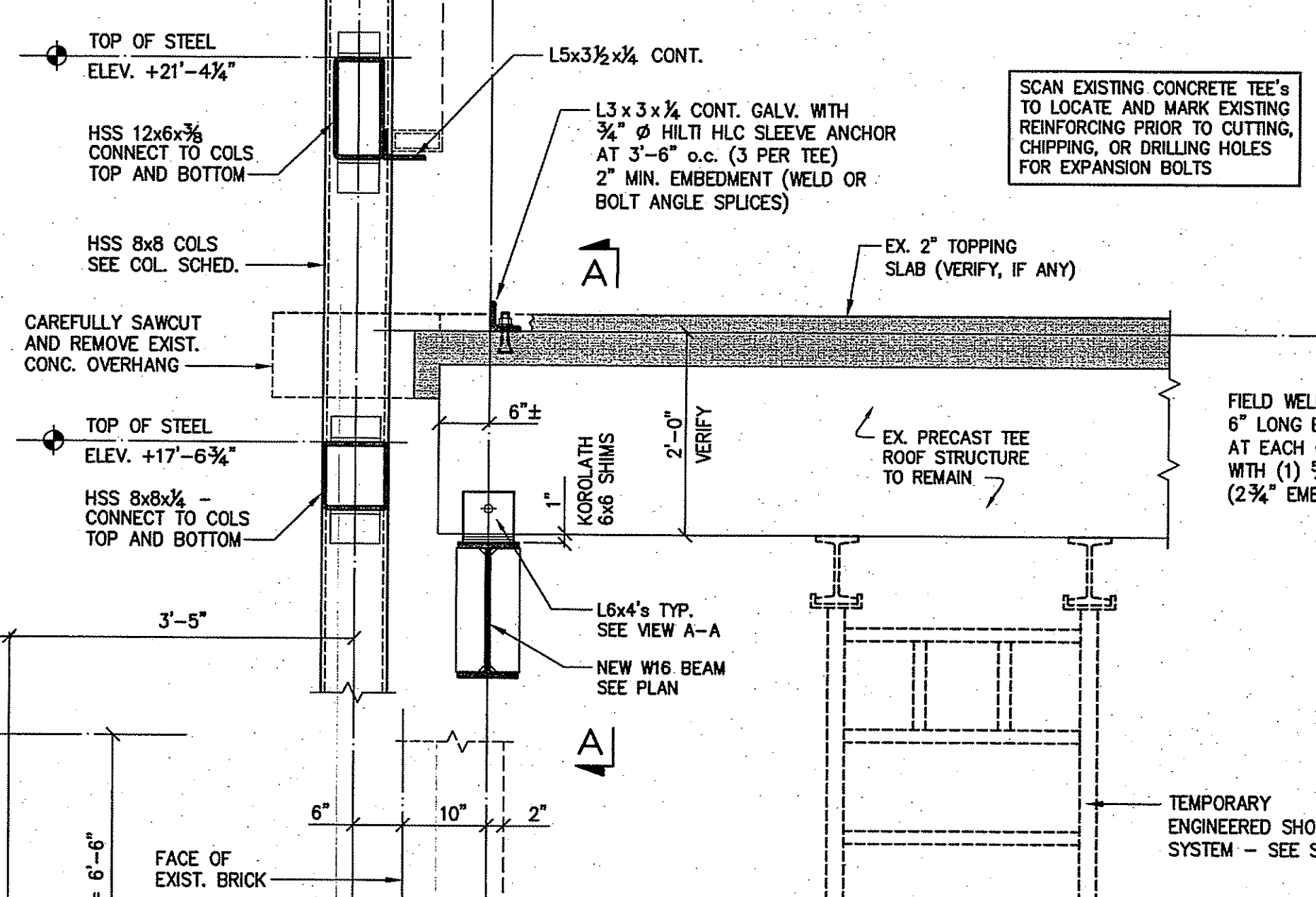
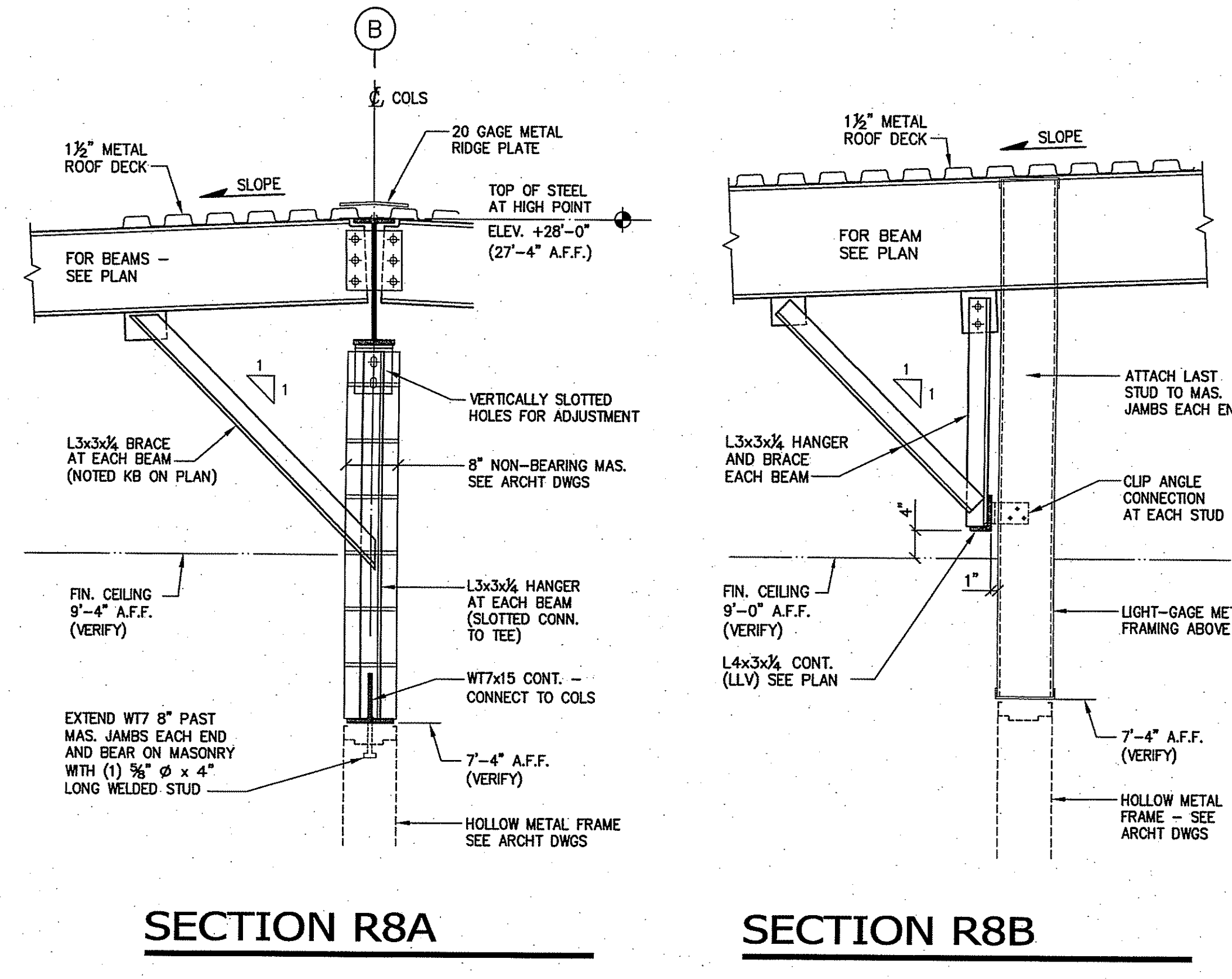
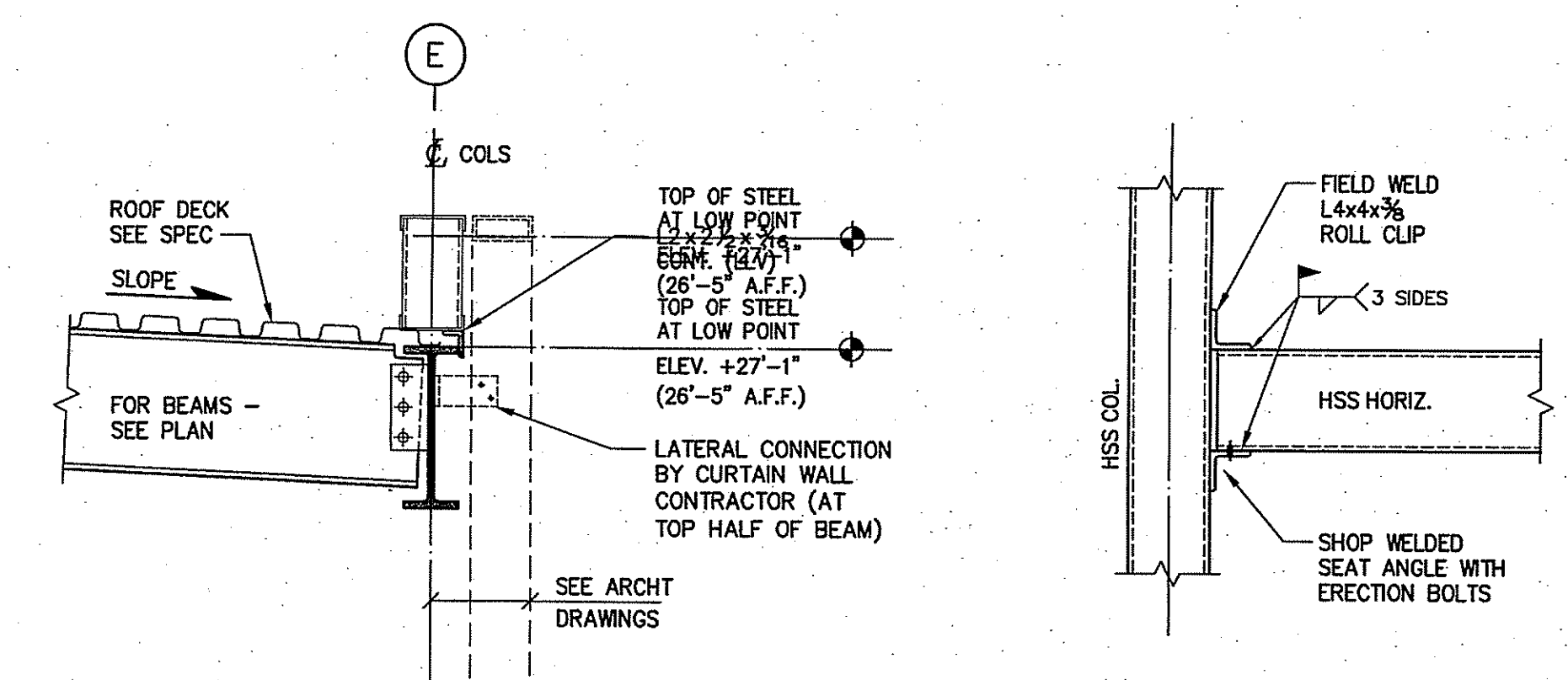
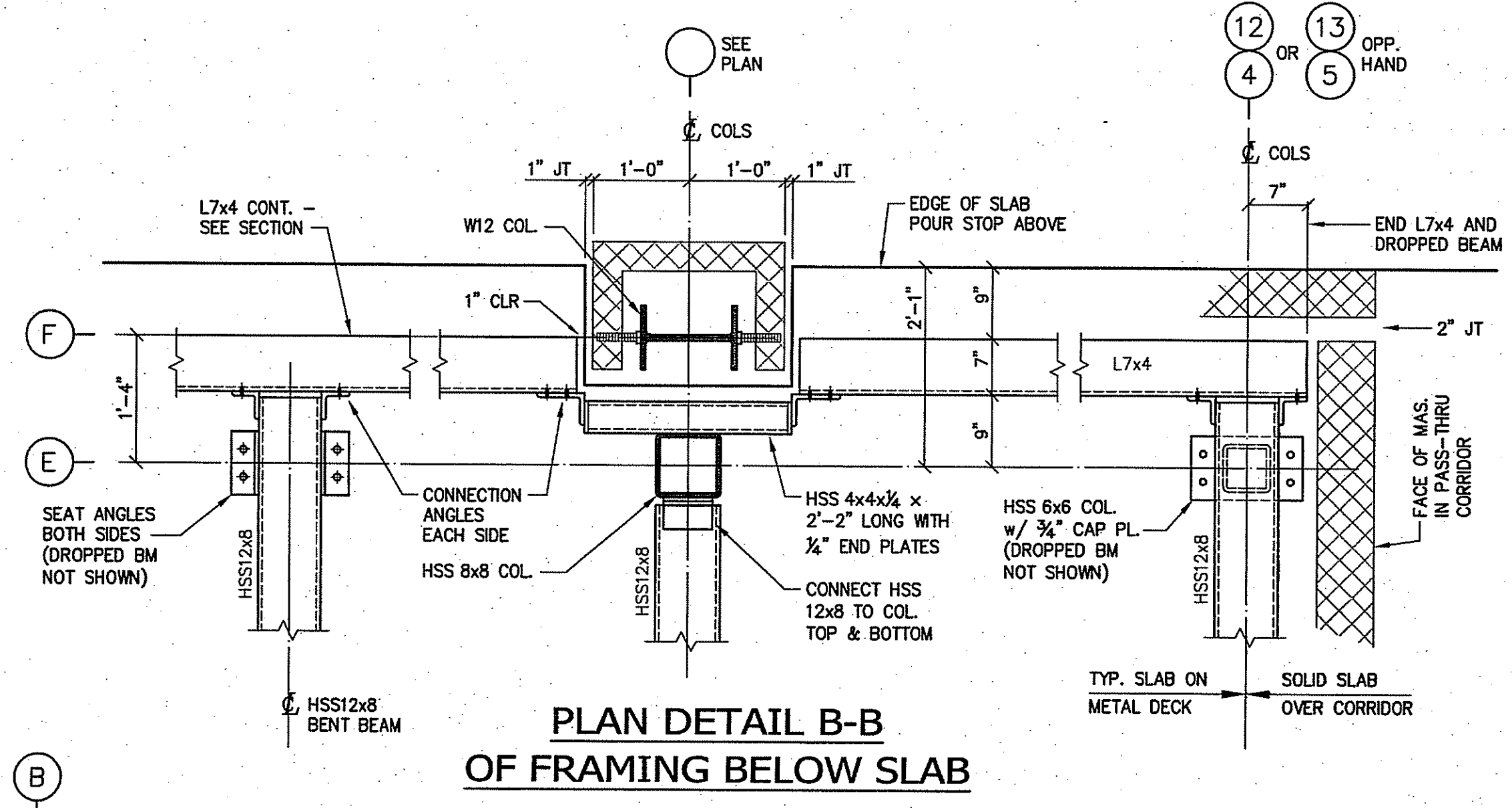
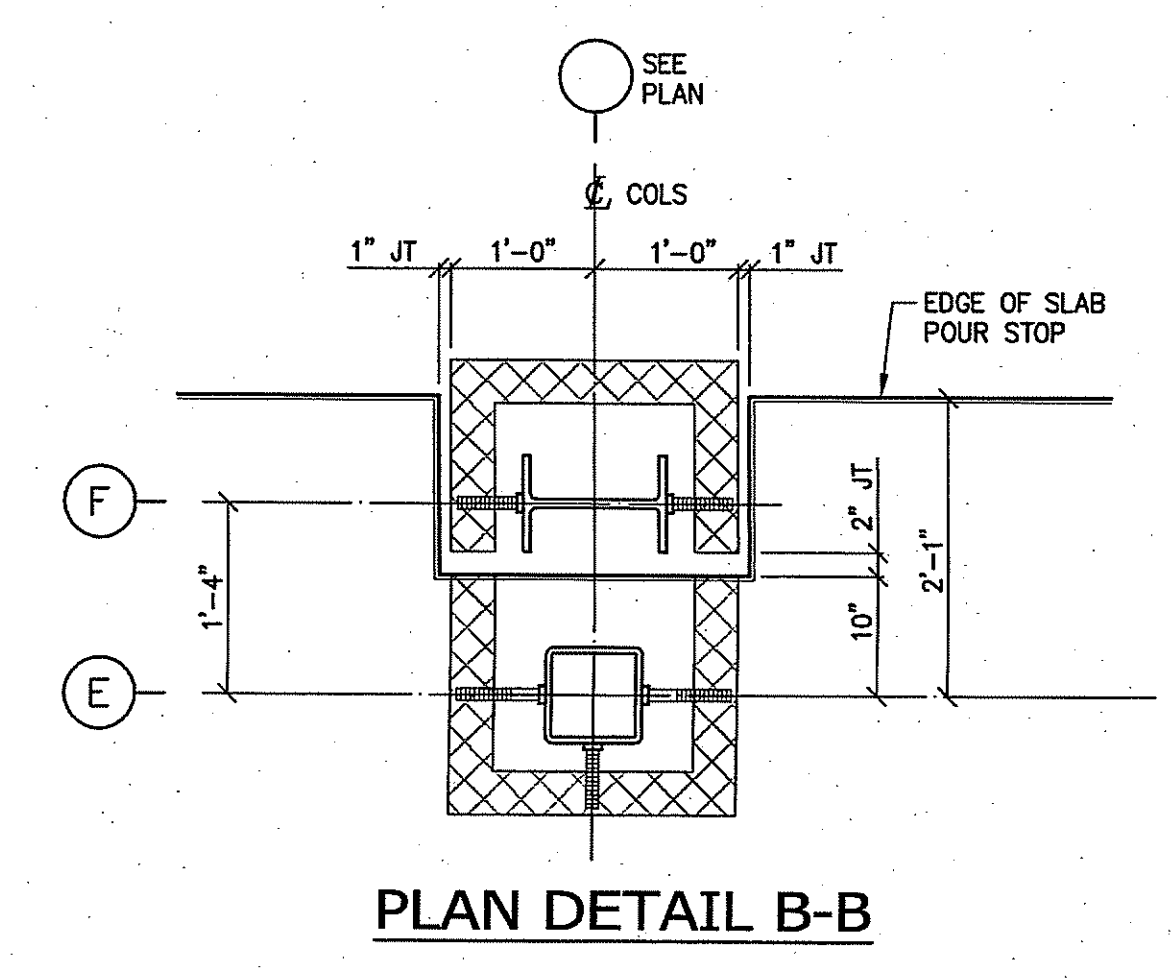
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543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

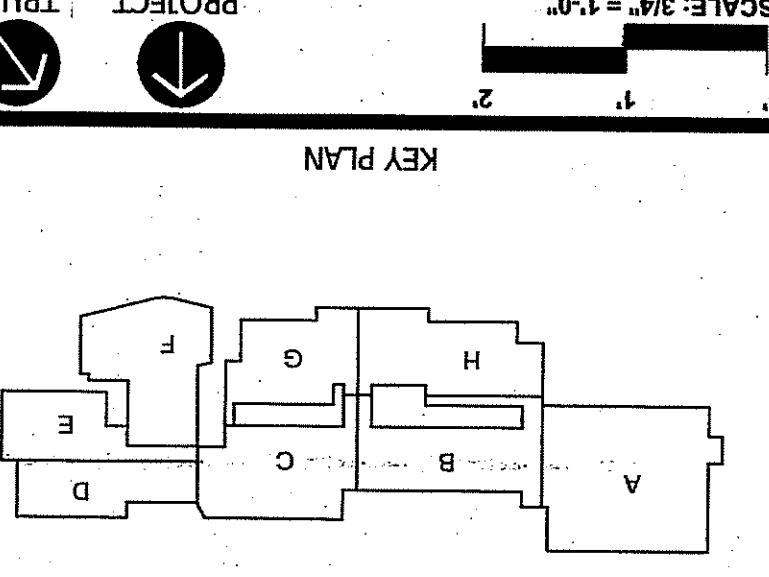
PROJECT NO.: 11057.00 DRAWN BY: RL

STRUCTURAL FRAMING DETAILS

DRAWING NO.: **S7.02**



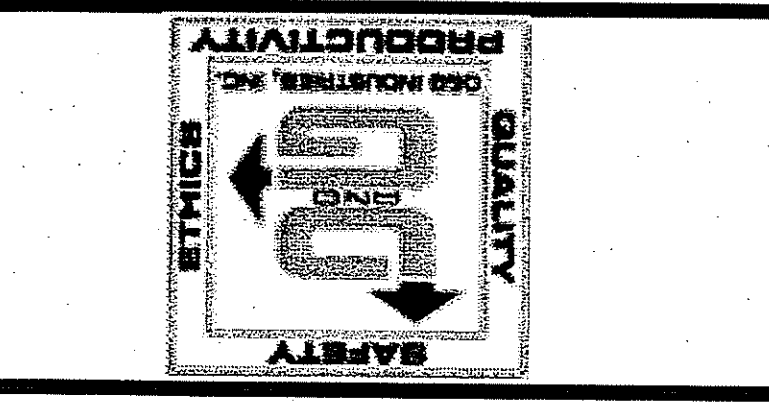
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION
STRUCTURAL FRAMING DETAILS



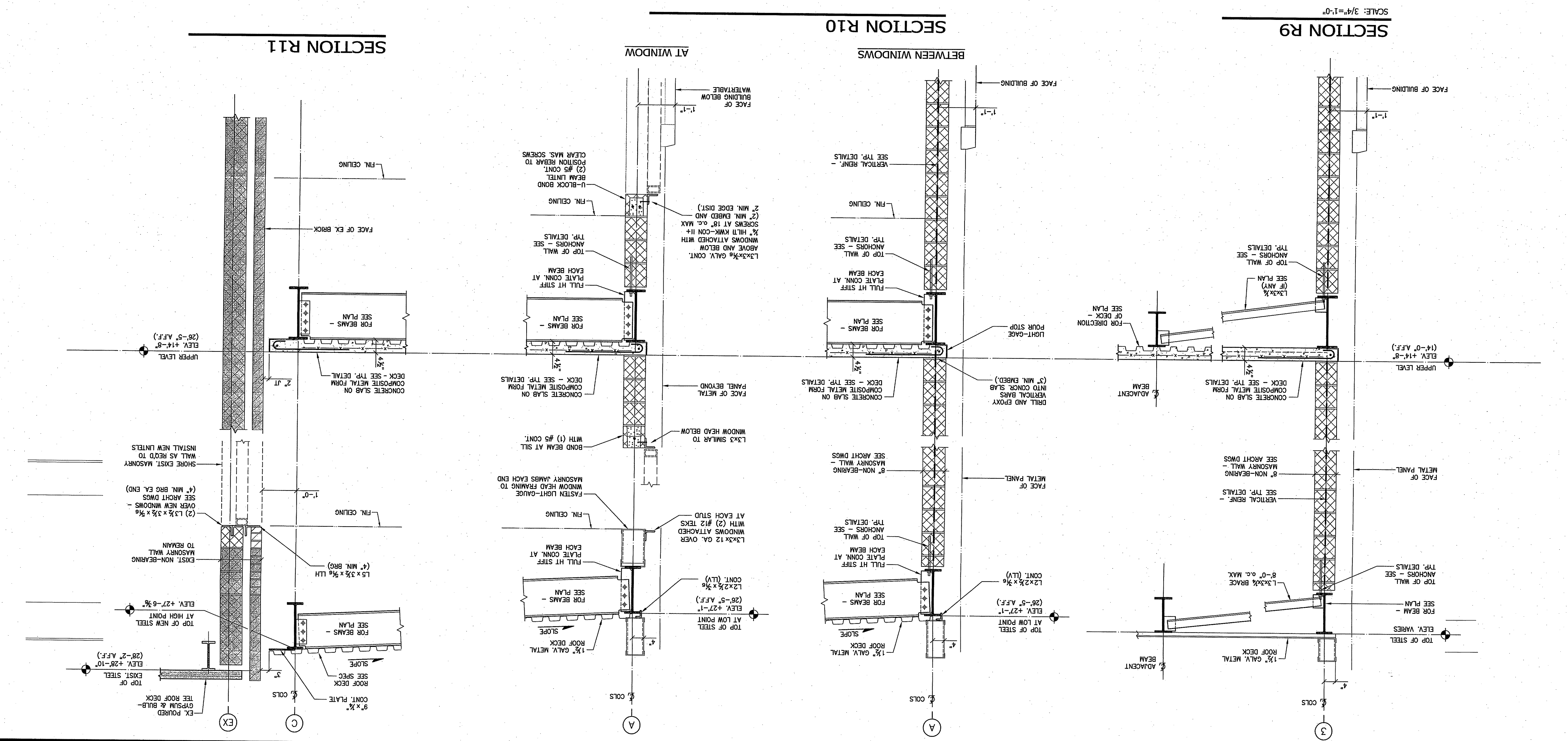
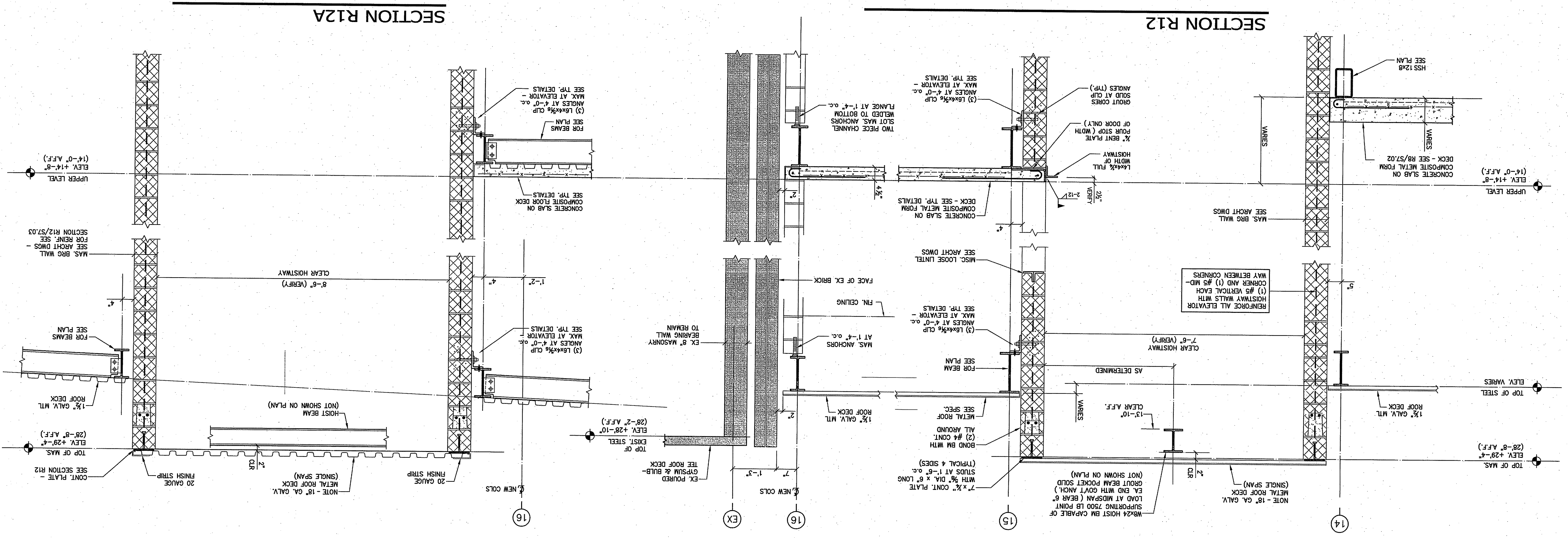
FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01

DATE	ISSUE DATE	DESCRIPTION
OCTOBER 16, 2012	OCTOBER 16, 2012	ISSUES FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012	OCTOBER 23, 2012	ISSUES FOR RFP REVIEW
JANUARY 04, 2013	JANUARY 04, 2013	ISSUES FOR BRIDING AND CONSTRUCTION PURPOSES

REVISION DATE	No.	Description



KAESTLE BOOS ASSOCIATES, INC.
 416 Shiner Road, P.O. Box 2290, New Britain, CT 06050-2290
 Phone: 860-229-0291 Fax: 860-229-9303
 326 Fitchburg Boulevard, Suite 100, Fitchburg, MA 02025
 Phone: 508-649-9908 Fax: 508-649-9907
 Email: kba@kba-architects.com Web: www.kba-architects.com



STRUCTURAL
FRAMING
DETAILS

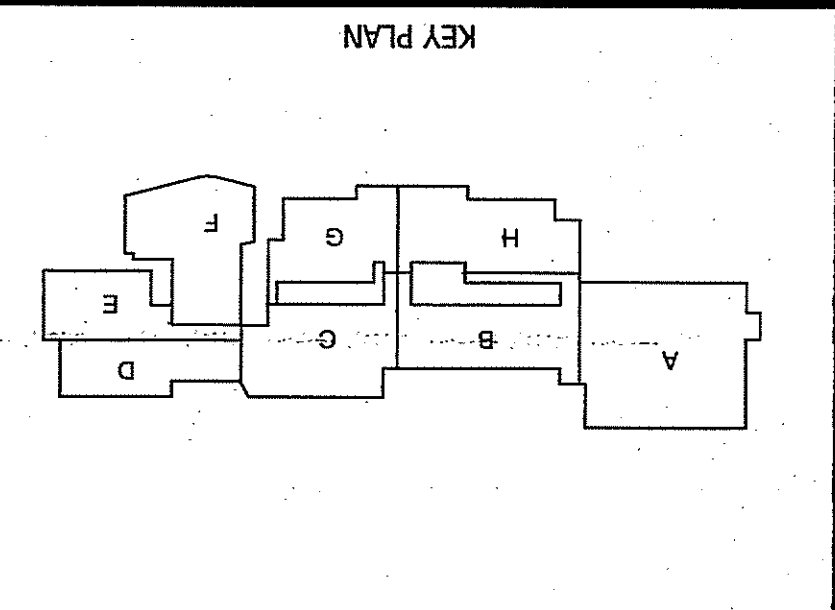
PROJECT NO.: 11057.00 DRAWN BY: RL

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

ADDITIONS AND
RENOVATIONS
TO NAUGATUCK
HIGH SCHOOL
AND NAUGATUCK
BOARD OF
EDUCATION

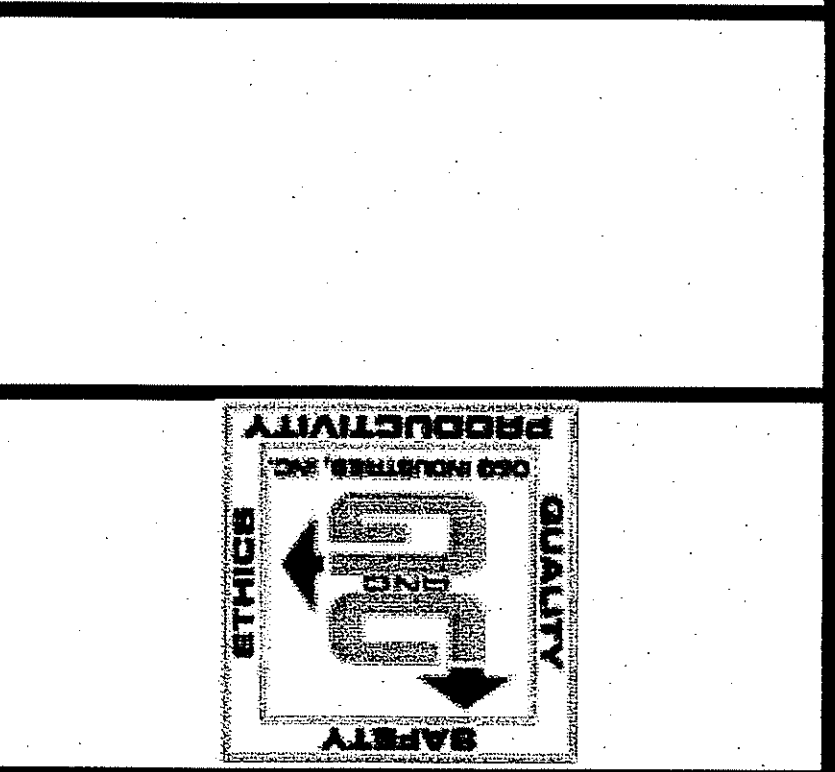


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PROJECT: TRUE



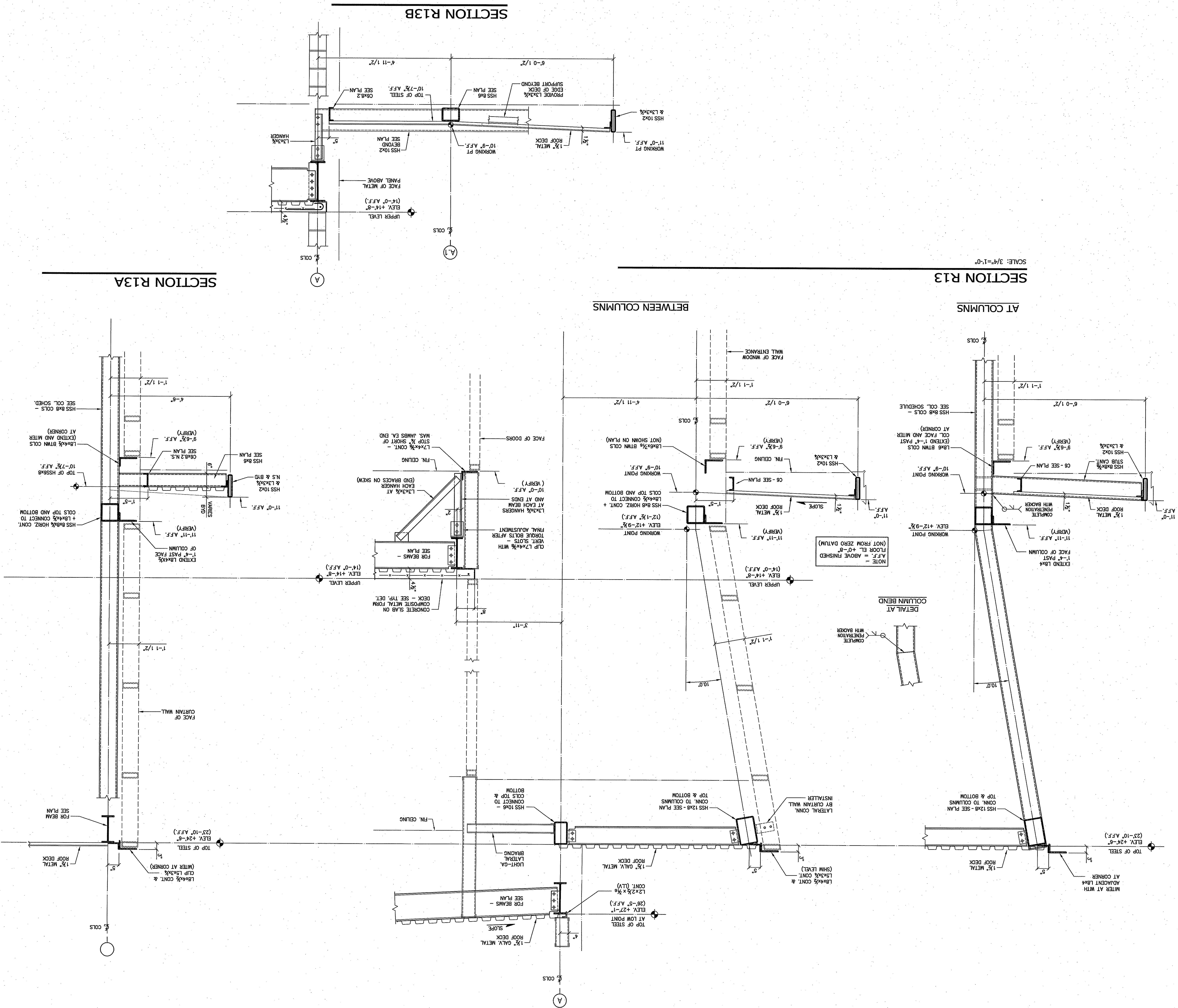
REVISION DATE	No.	Description
OCTOBER 16, 2012		DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012		DRAWINGS ISSUED FOR RSI REVIEW
JANUARY 04, 2013		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01

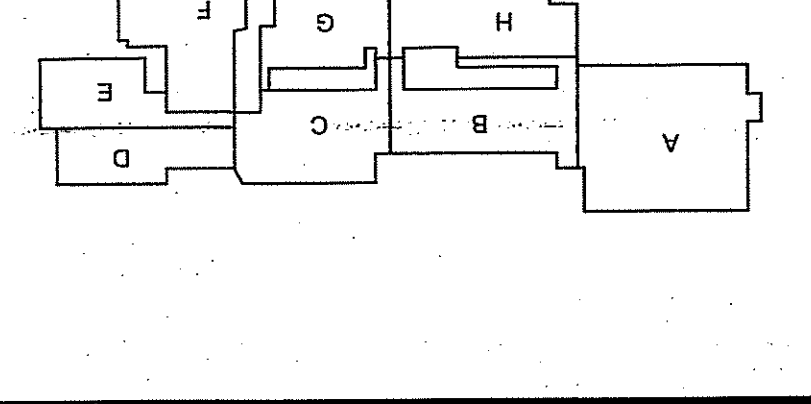


418 Slaters Road, P.O. Box 2590, New Britain, CT 06050-2590
Phone: 860-223-0381 Fax: 860-223-5303
325 Foxborough Boulevard, Suite 100, Foxborough, MA 02005
Phone: 508-549-9905 Fax: 508-549-9907
Email: kba@kba-architects.com Web: www.kba-architects.com

KASTLE BOOS
Associates, Inc.

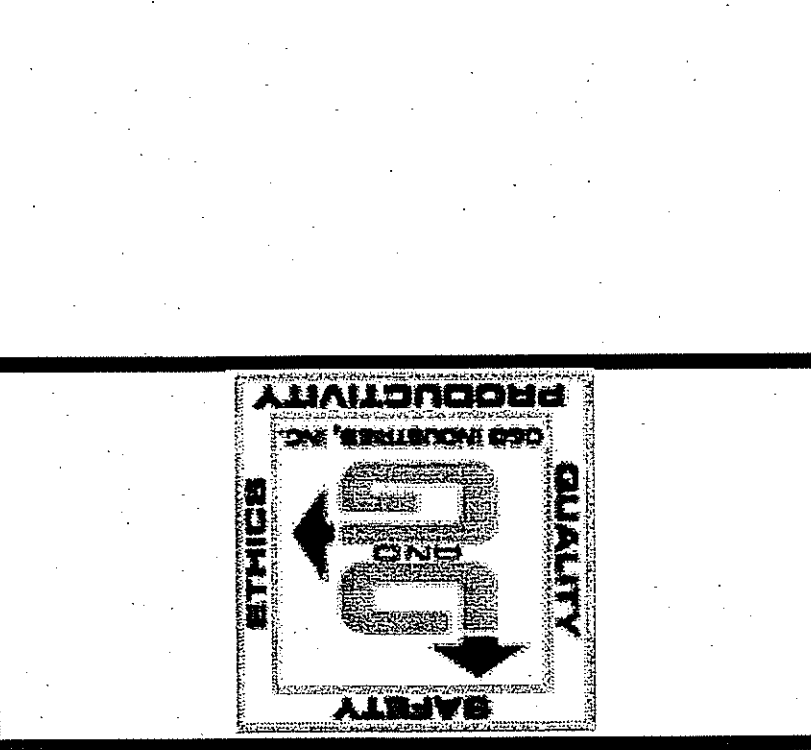


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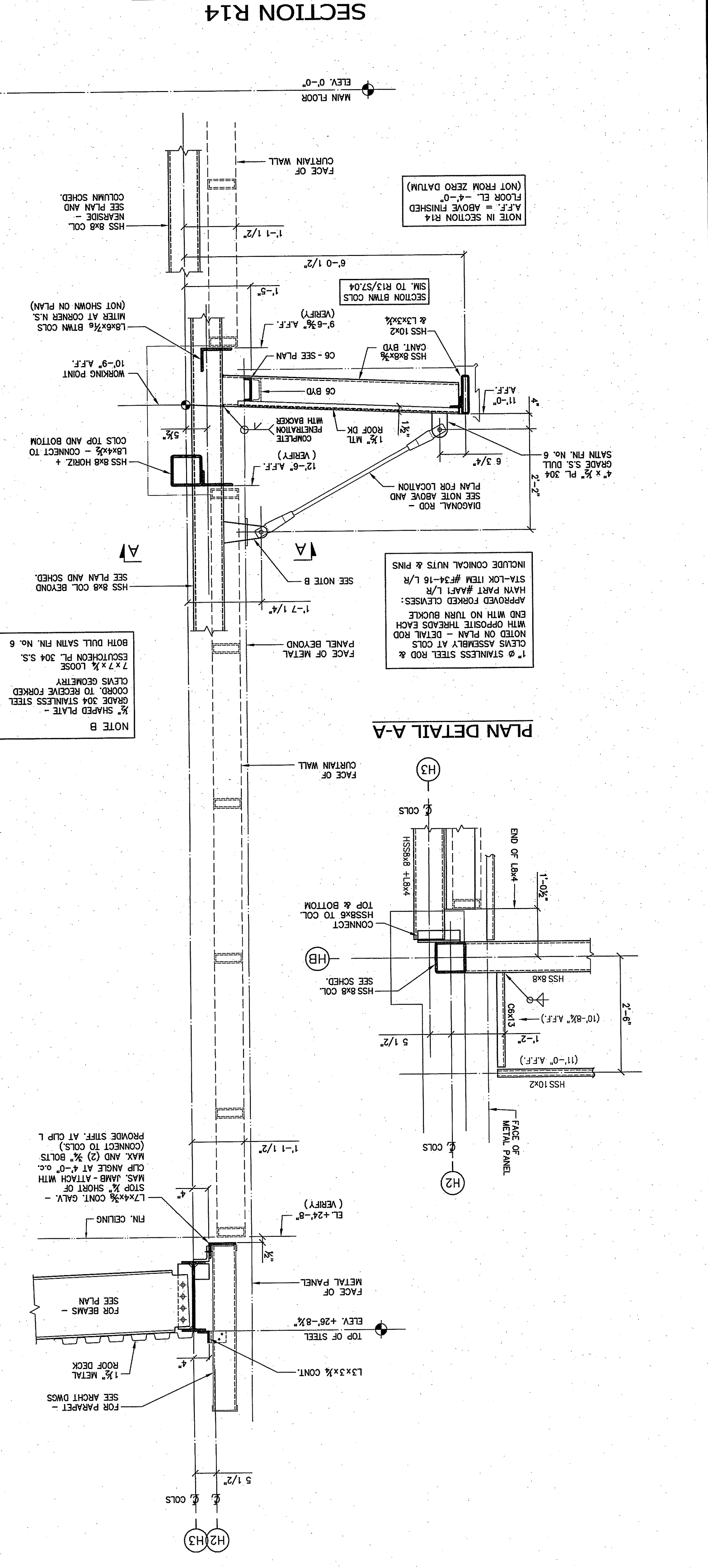
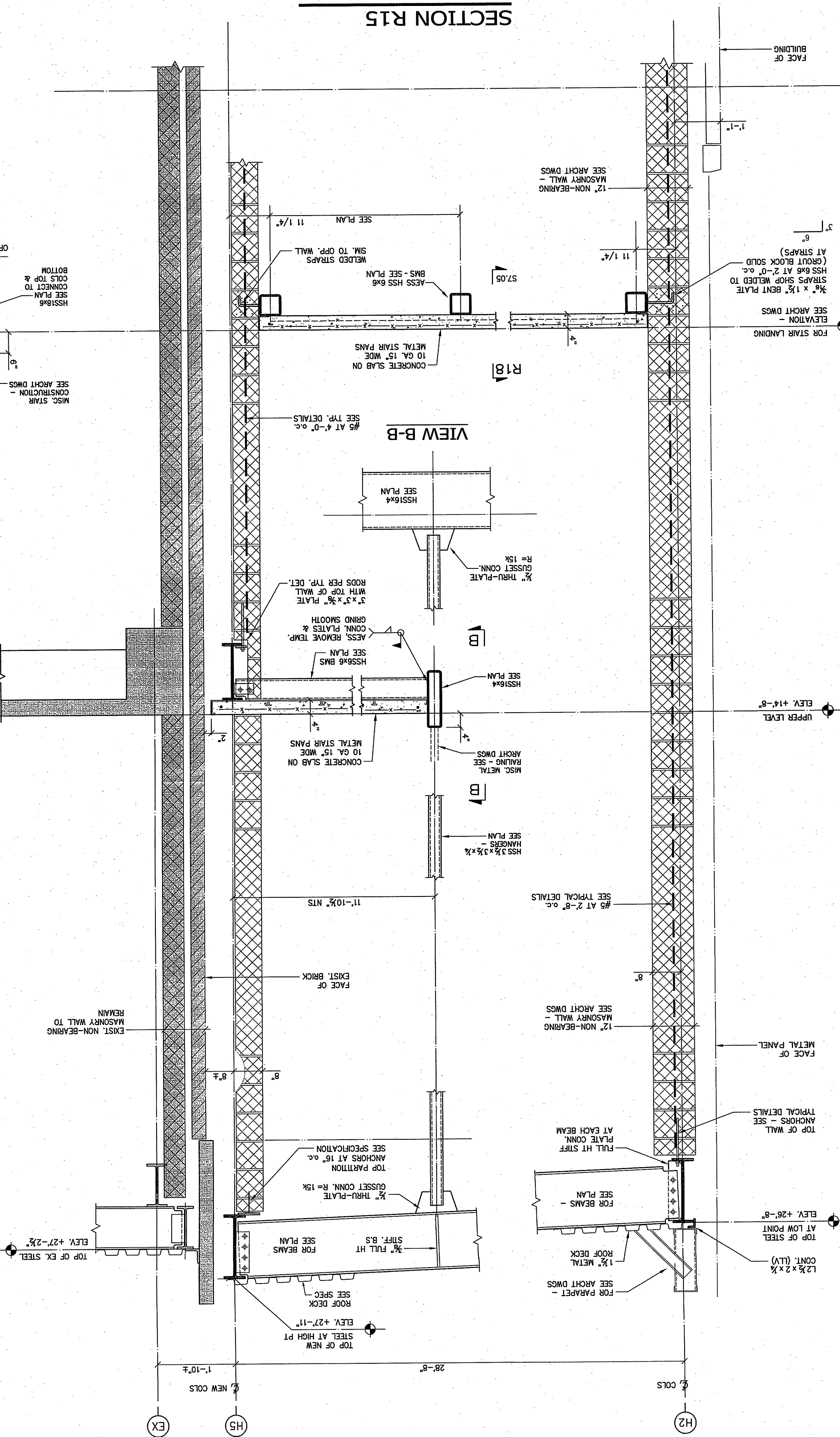
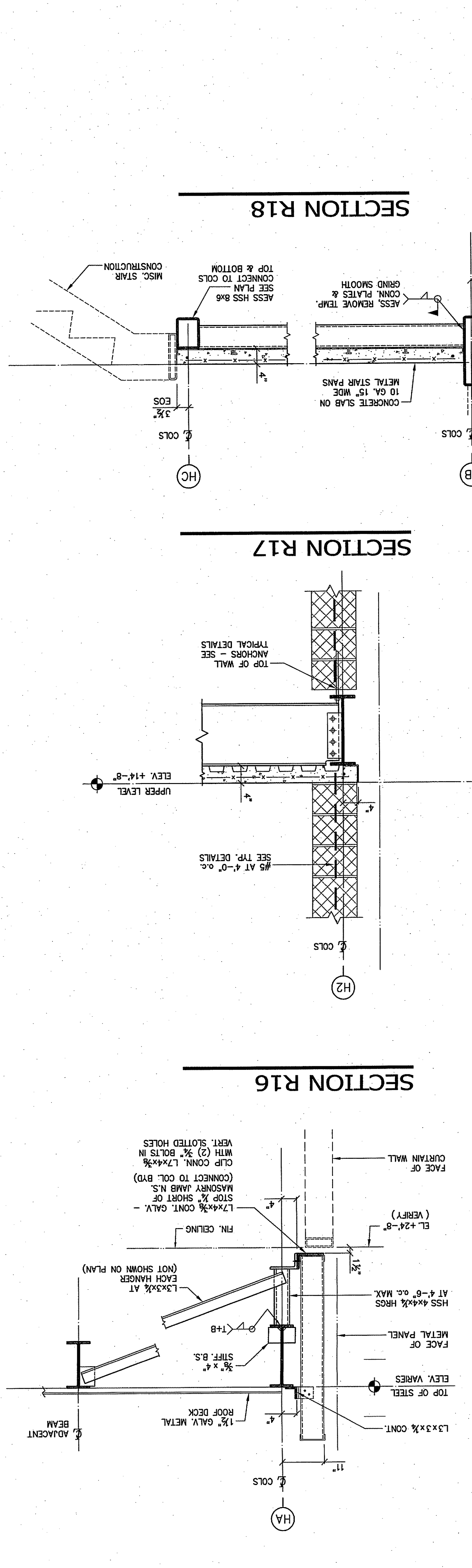


FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R.0.1

REVISION DATE	Date	No.	Description
ISSUE DATE			
DATE			DESCRIPTION
OCTOBER 16, 2012			DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012			REV. BEHOLD
JANUARY 04, 2013			DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



118 State Road, P.O. Box 2590, New Britain, CT 06050-2590
 Phone: 860-229-0361 Fax: 860-229-5303
 325 Foxborough Boulevard, Suite 100, Foxborough, MA 02035
 Phone: 508-549-9958 Fax: 508-549-9907
 Email: hba@hba-architects.com Web: www.hba-architects.com



ELEV. 0'-0" LOWER LOBBY

ELEV. 0'-0" MAIN FLOOR

ELEV. +14'-8" UPPER LEVEL

ELEV. +26'-8" TOP OF STEEL AT LOW POINT

ELEV. +27'-2 1/2" TOP OF EX. STEEL

ELEV. +27'-11" TOP OF NEW STEEL AT HIGH PT.

ELEV. +27'-2 1/2" TOP OF EX. STEEL

ELEV. +26'-8 1/2" TOP OF STEEL

ELEV. +26'-8 1/2" TOP OF STEEL

ELEV. +26'-8 1/2" TOP OF STEEL

SCALE: 3/4"=1'-0"

SECTION R14

SECTION R15

SECTION R18

SECTION R17

SECTION R16

VIEW B-B

PLAN DETAIL A-A

NOTE IN SECTION R14 (NOT FROM ZERO DATUM) FLOOR EL. = 0' GRADE S.S. DULL

NOTE B
 7 x 7 x 1/2 LOOSE
 CLIPS ASSEMBLY AT COLS
 NOTED ON PLAN - DETAIL FORKED
 END WITH NO TURN BUCKLE
 APPROVED FORKED CLIPPERS:
 HAN PART #147-1/8
 STAINLESS #304-16 L/R
 INCLUDE CONICAL NUTS & PINS
 SEE NOTE B
 HSS 8x8 COL. BEYOND
 FACE OF METAL
 PANEL BEYOND

NOTE B
 1/2 SHAPED PLATE -
 GRADE 304 STAINLESS STEEL
 CLIPS TO RECEIVE FORKED
 CLIPS GEOMETRY
 BOTH DULL SAINI FIN. NO. 6
 ESCUTCHION PL. 304 S.S.

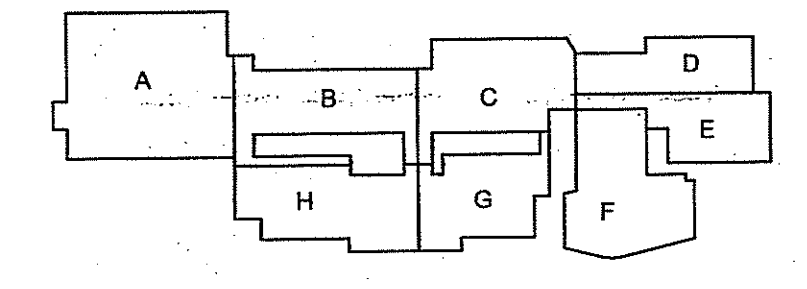
NOTE B
 1/2 SHAPED PLATE -
 GRADE 304 STAINLESS STEEL
 CLIPS TO RECEIVE FORKED
 CLIPS GEOMETRY
 BOTH DULL SAINI FIN. NO. 6
 ESCUTCHION PL. 304 S.S.



ISSUE DATE	
DATE	DESCRIPTION
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JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

REVISION DATE		
Date	No.	Description

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01



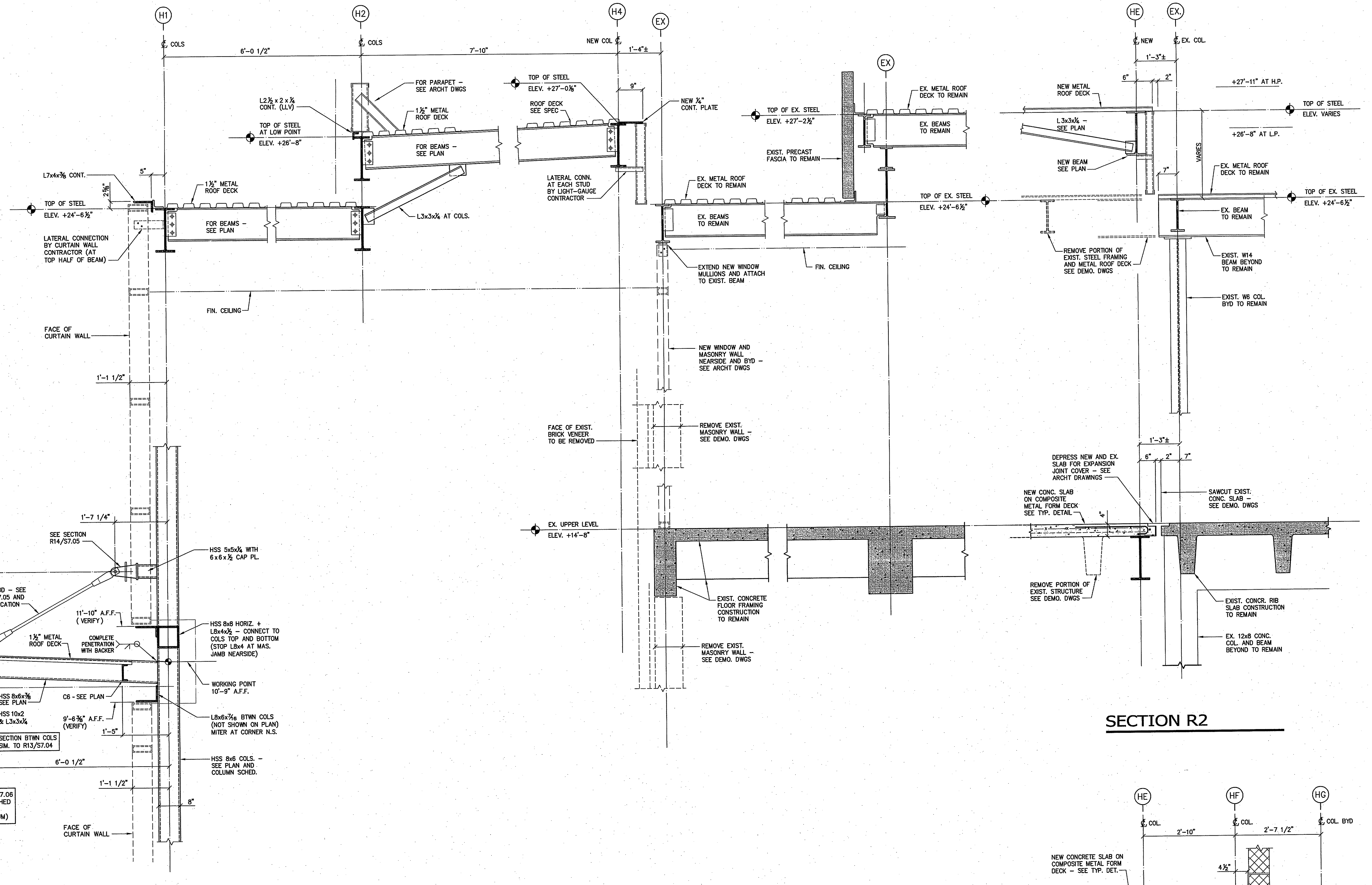
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 PROJECT TRUE

ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

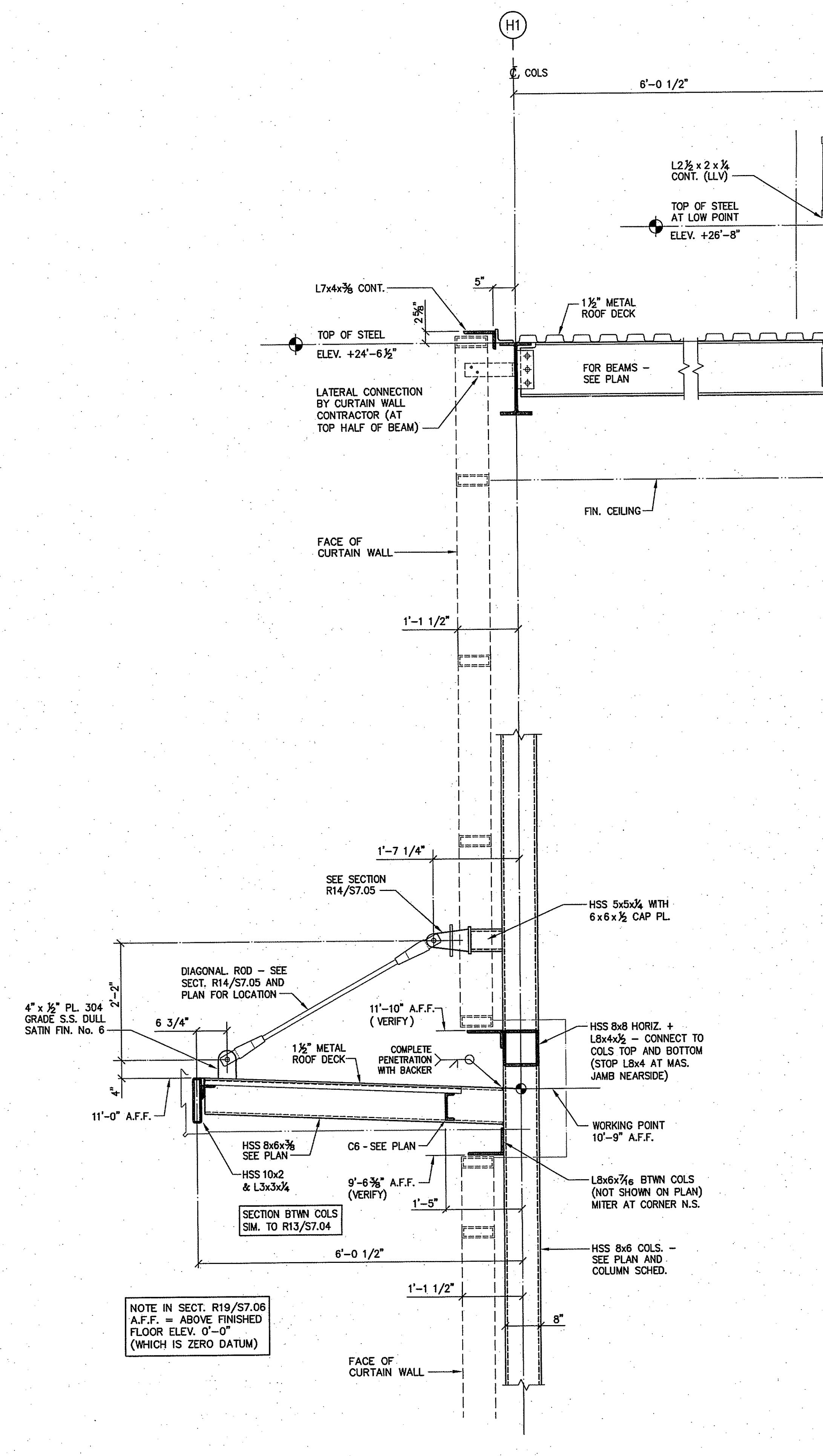
543 RUBBER AVENUE NAUGATUCK, CT 06770
 HS SPN: 088-0067 E/A/EC/CV/RN
 BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: RL

STRUCTURAL FRAMING DETAILS

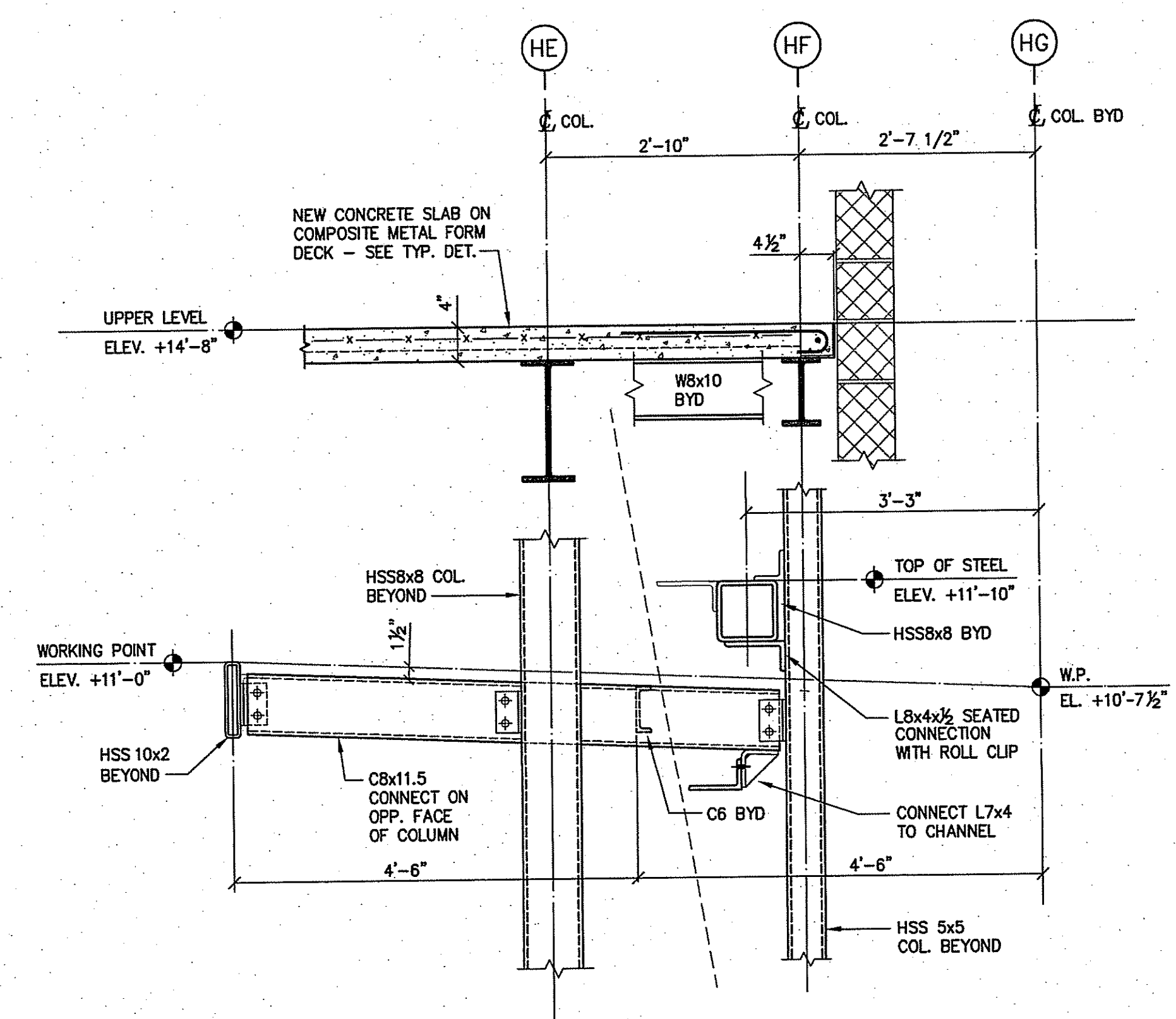


SECTION R2



SECTION R19

SCALE: 3/4" = 1'-0"



SECTION R3

NOTE IN SECT. R19/S7.08 A.F.F. = ABOVE FINISHED FLOOR ELEV. 0'-0" (WHICH IS ZERO DATUM)

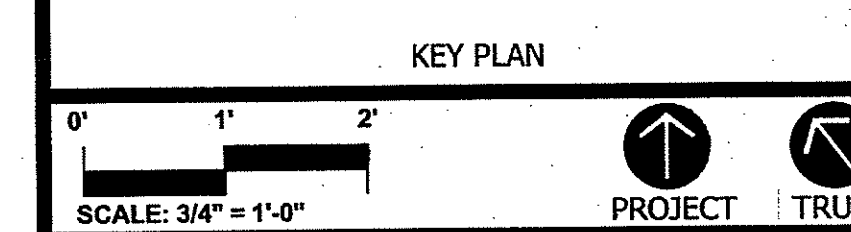
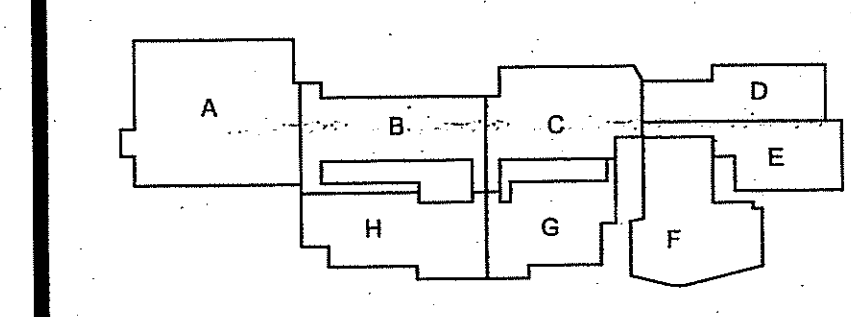
MAIN FLOOR ELEV. 0'-0"



DATE	DESCRIPTION
OCTOBER 16, 2012	DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012	DRAWINGS ISSUED FOR ISF REVIEW
JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

REVISION DATE		
Date	No.	Description

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01



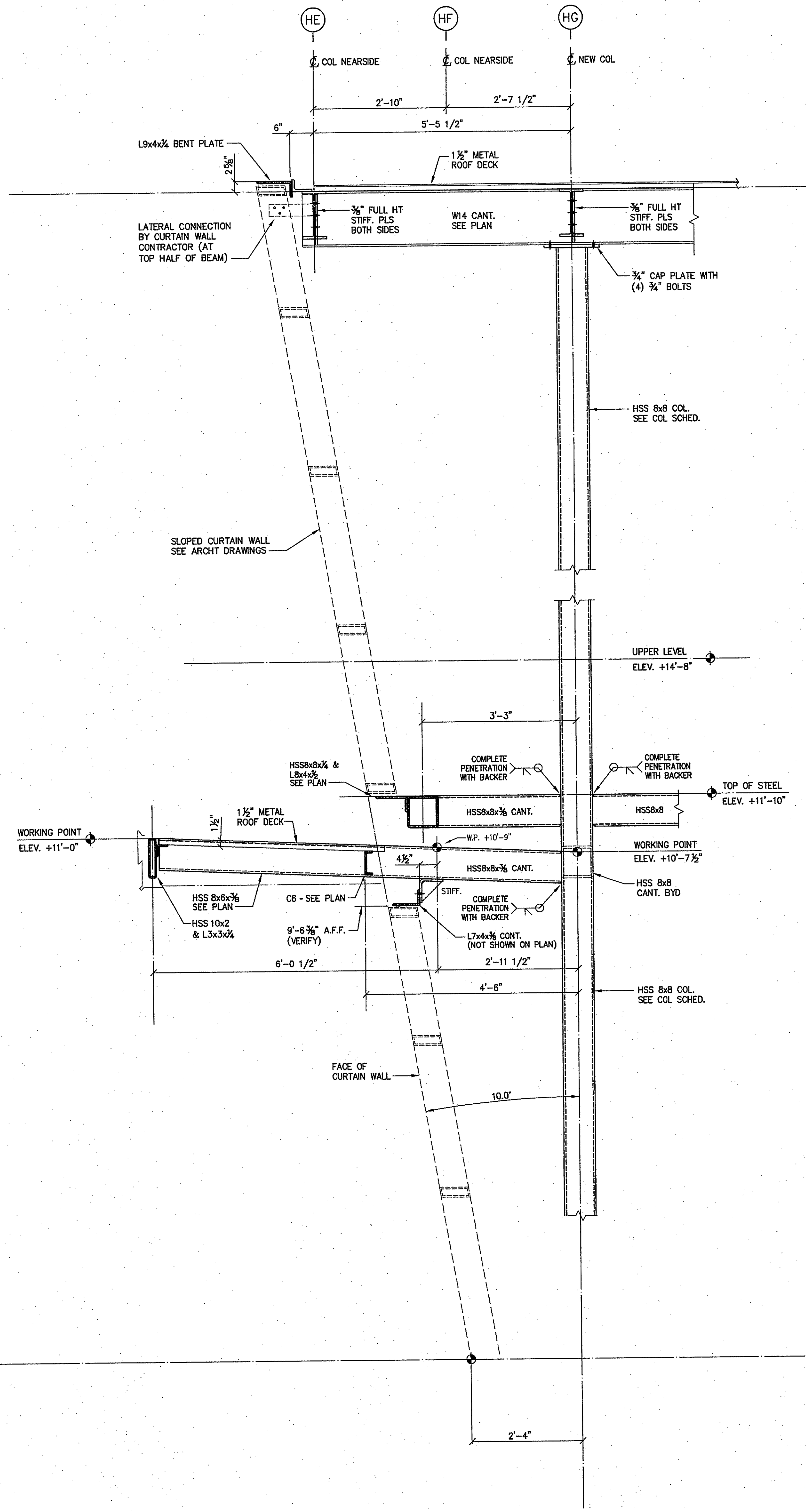
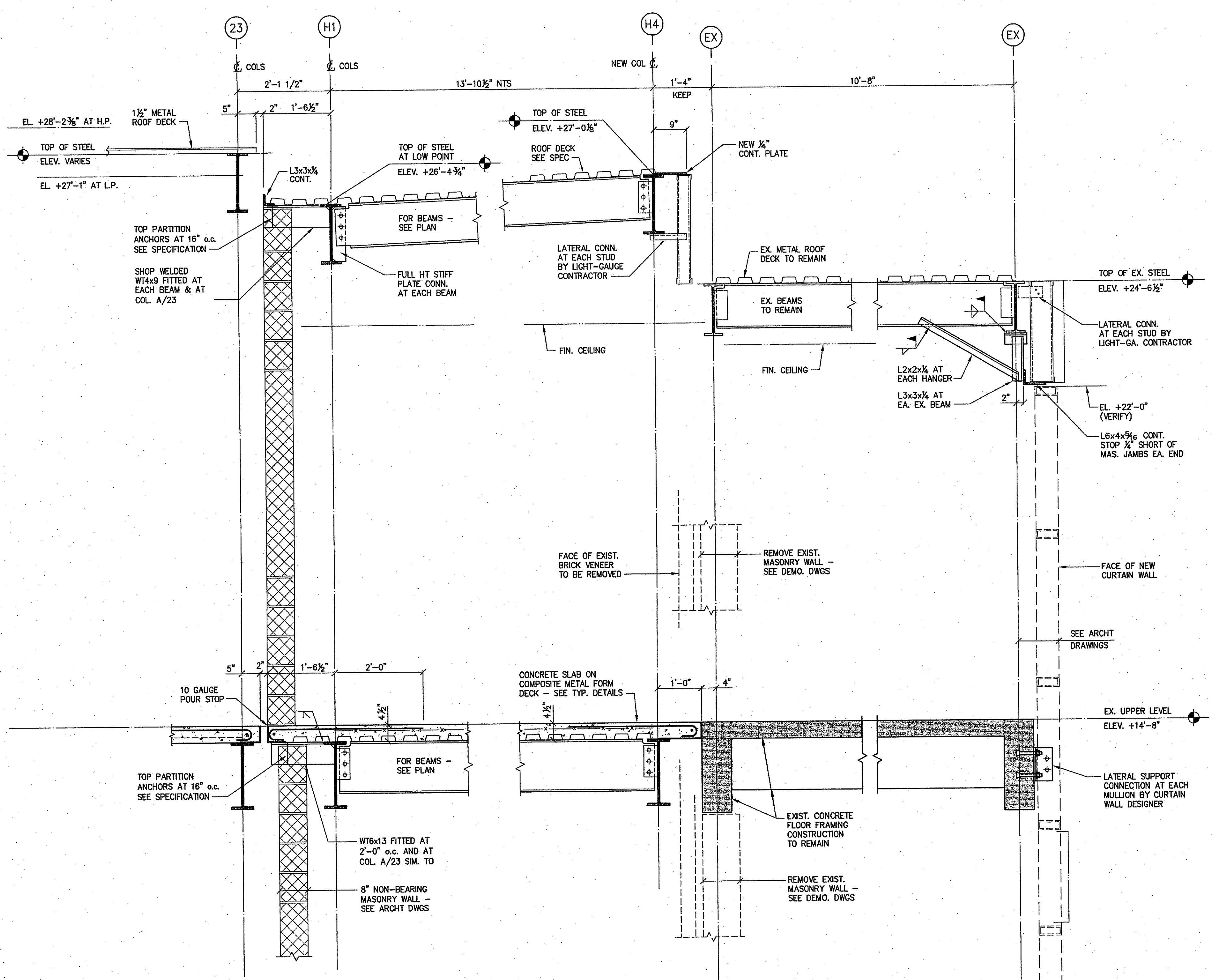
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11067.00 DRAWN BY: JRL

STRUCTURAL FRAMING DETAILS

DRAWING NO.: **S7.07**



MAIN FLOOR
ELEV. 0'-0"

SECTION R2



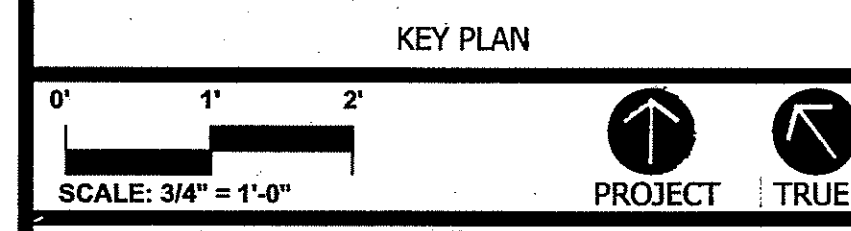
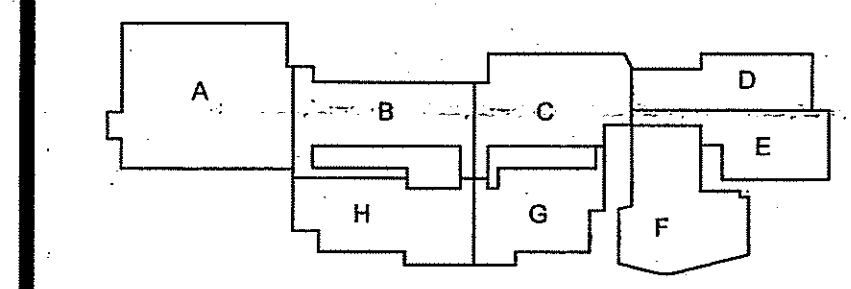
ISSUE DATE

DATE	DESCRIPTION
OCTOBER 16, 2012	DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012	DRAWINGS ISSUED FOR BSF REVIEW
JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

REVISION DATE

Date	No.	Description

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01



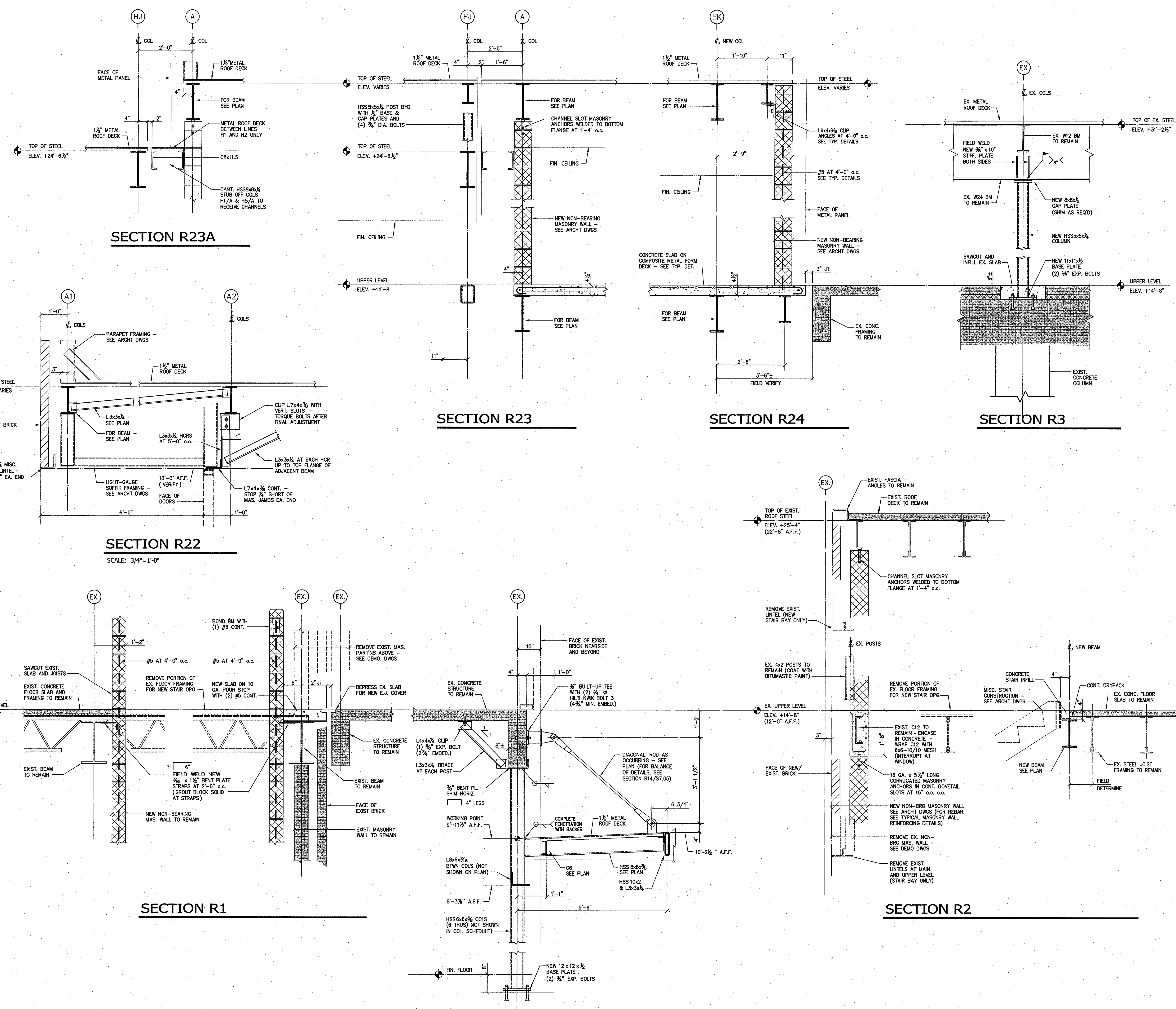
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: RL

STRUCTURAL FRAMING DETAILS

DRAWING NO.: **S7.08**



SECTION R23A

SECTION R23

SECTION R24

SECTION R3

SECTION R22

SCALE: 3/4"=1'-0"

SECTION R1

SECTION R2



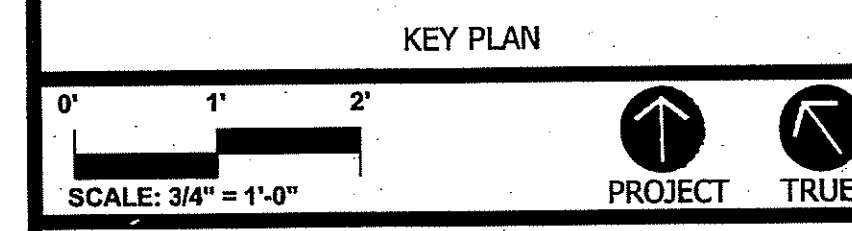
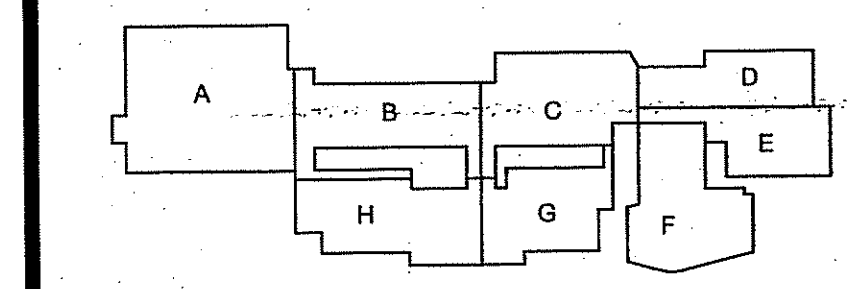
ISSUE DATE

DATE	DESCRIPTION
OCTOBER 16, 2012	DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012	DRAWINGS ISSUED FOR BSF REVIEW
JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

REVISION DATE

Date	No.	Description

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01

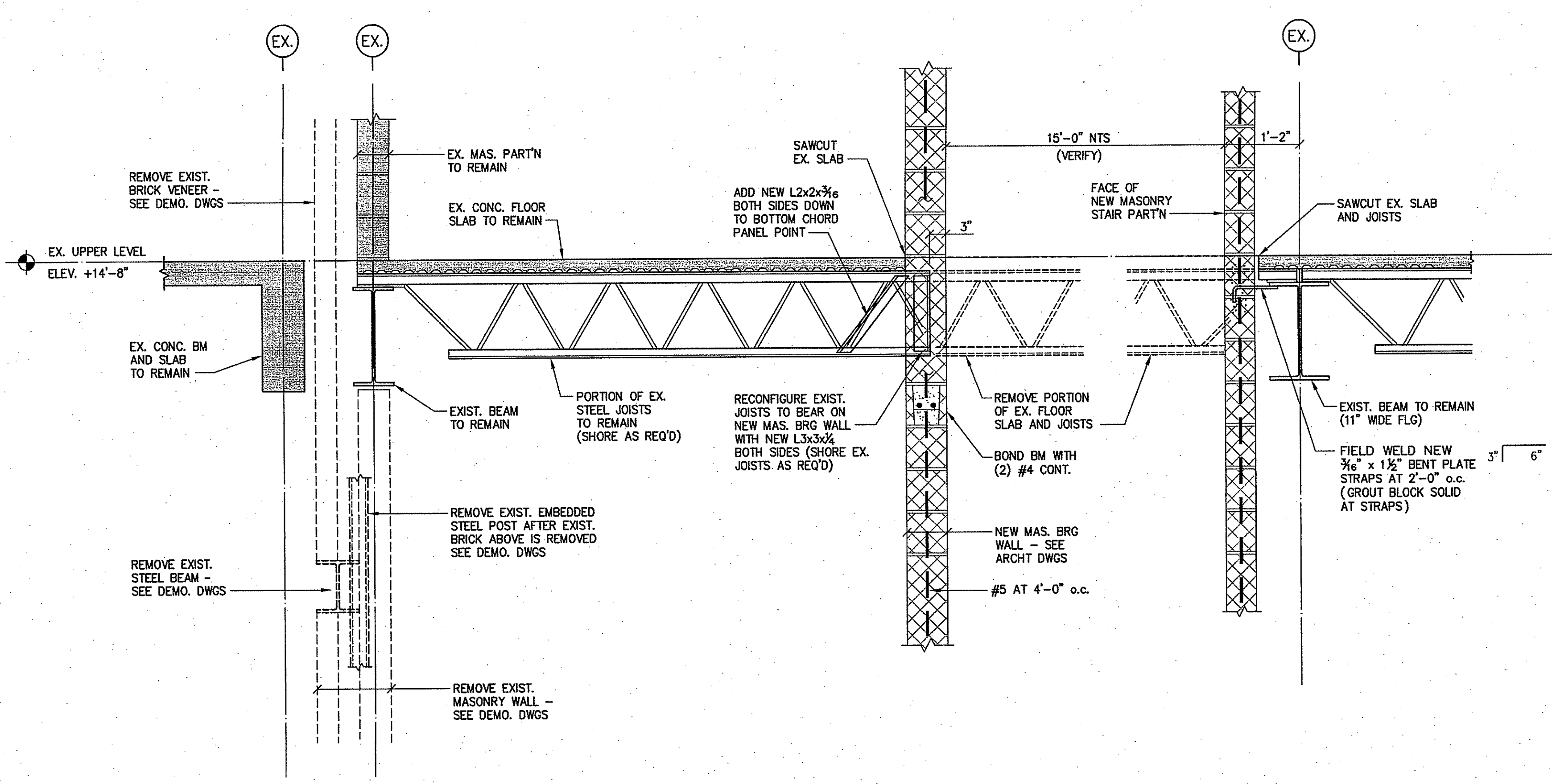


ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 098-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

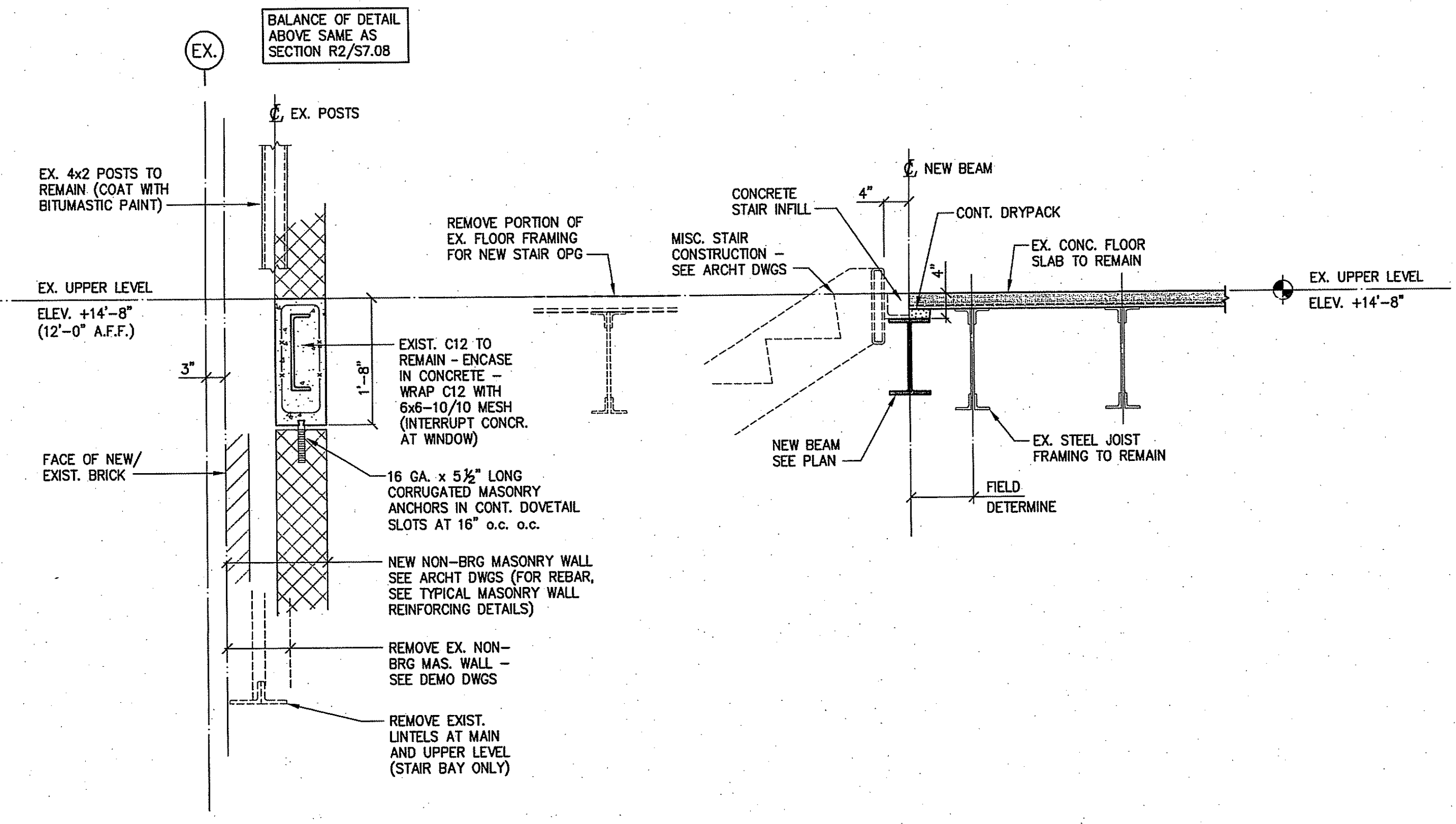
PROJECT NO.: 11057.00 DRAWN BY: RL

STRUCTURAL FRAMING DETAILS

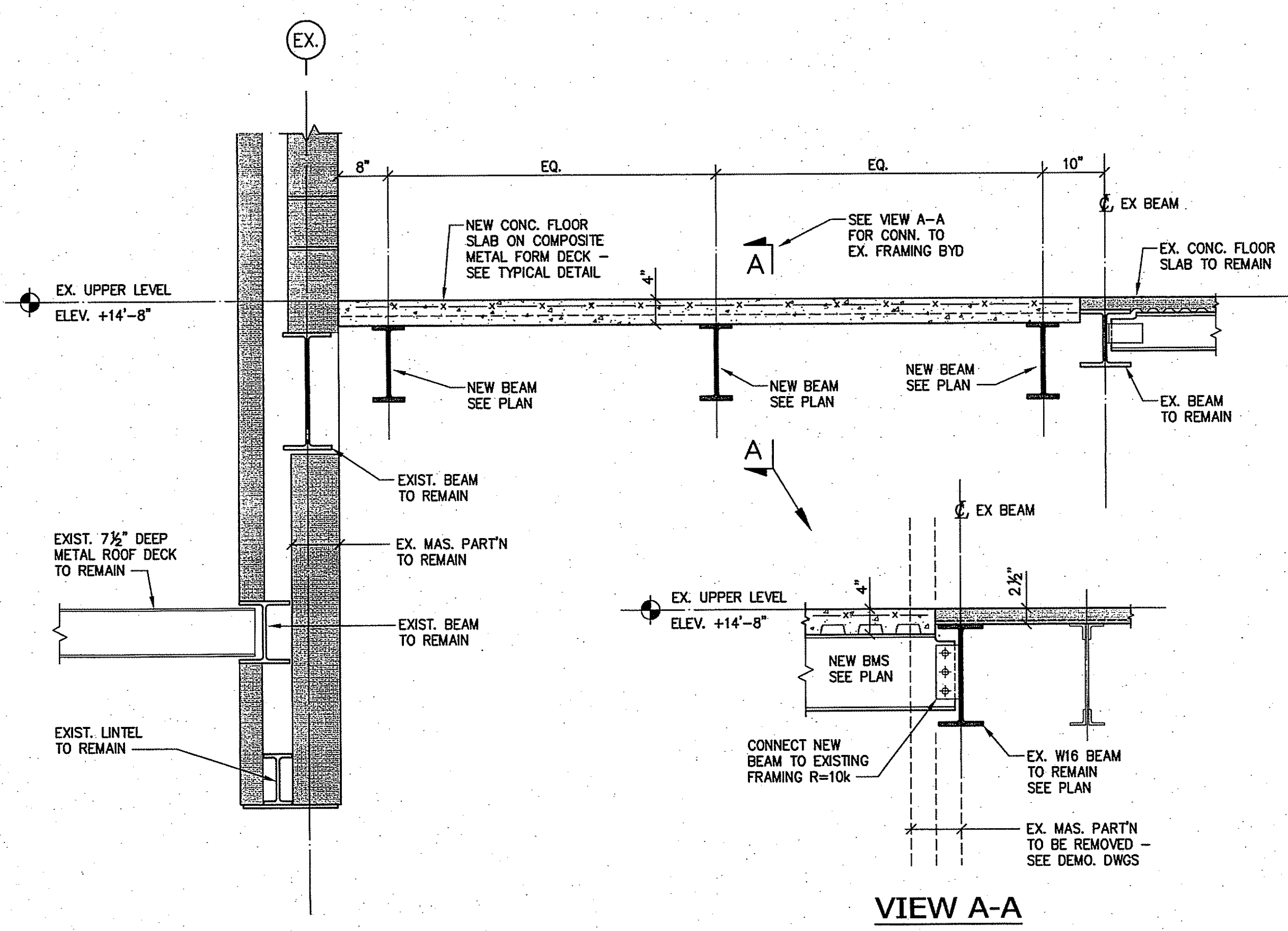


SECTION R1

SCALE: 3/4"=1'-0"

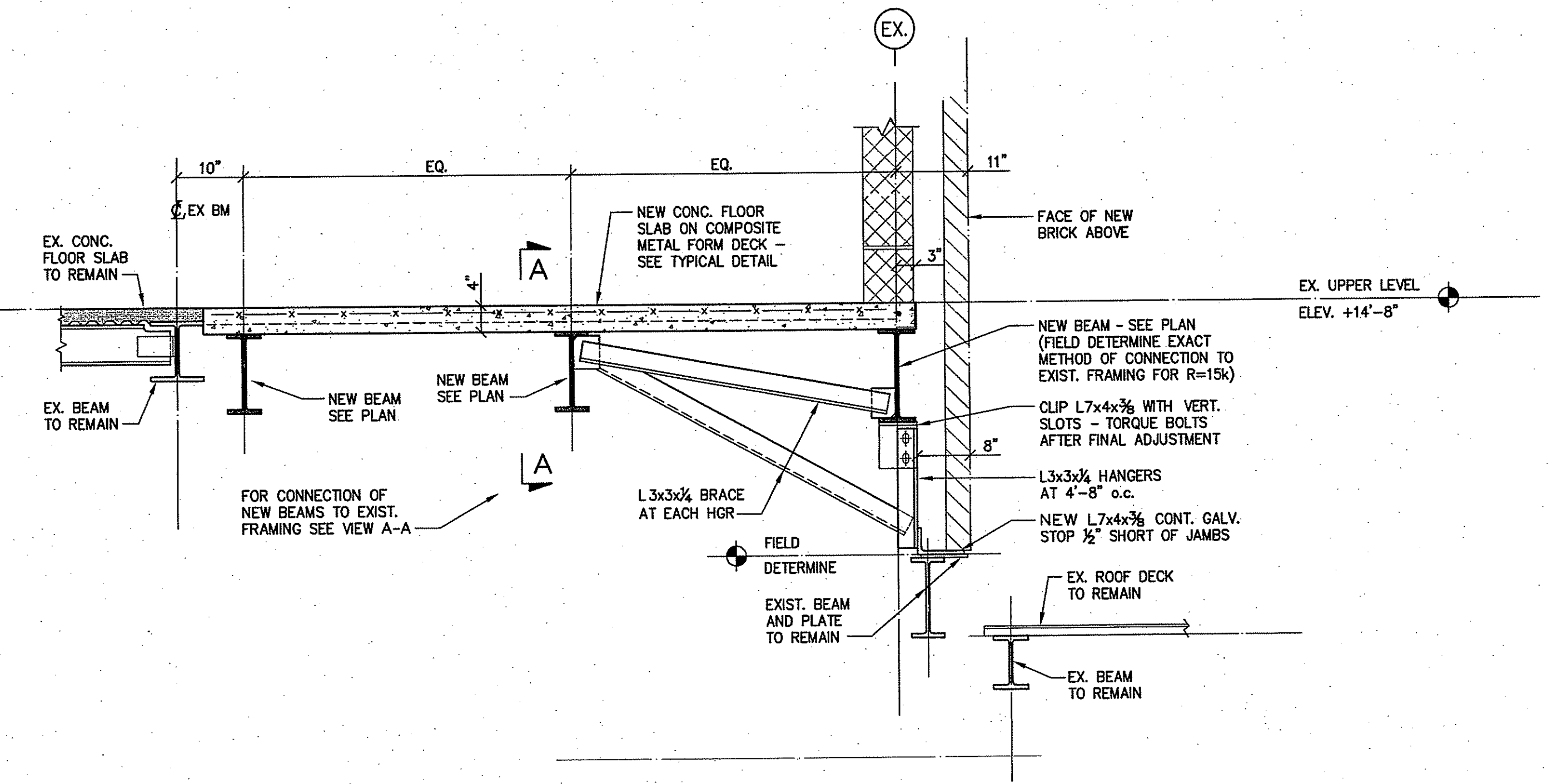


SECTION R2



SECTION R3

VIEW A-A



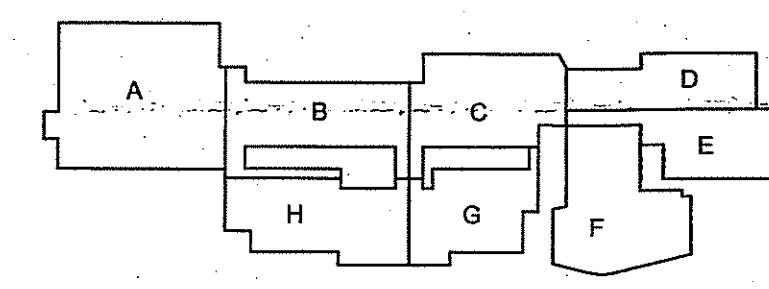
SECTION R4



REVISION DATE	
Date	Description

ISSUE DATE	
DATE	DESCRIPTION
OCTOBER 16, 2012	DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012	DRAWINGS ISSUED FOR BSF REVIEW
JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01



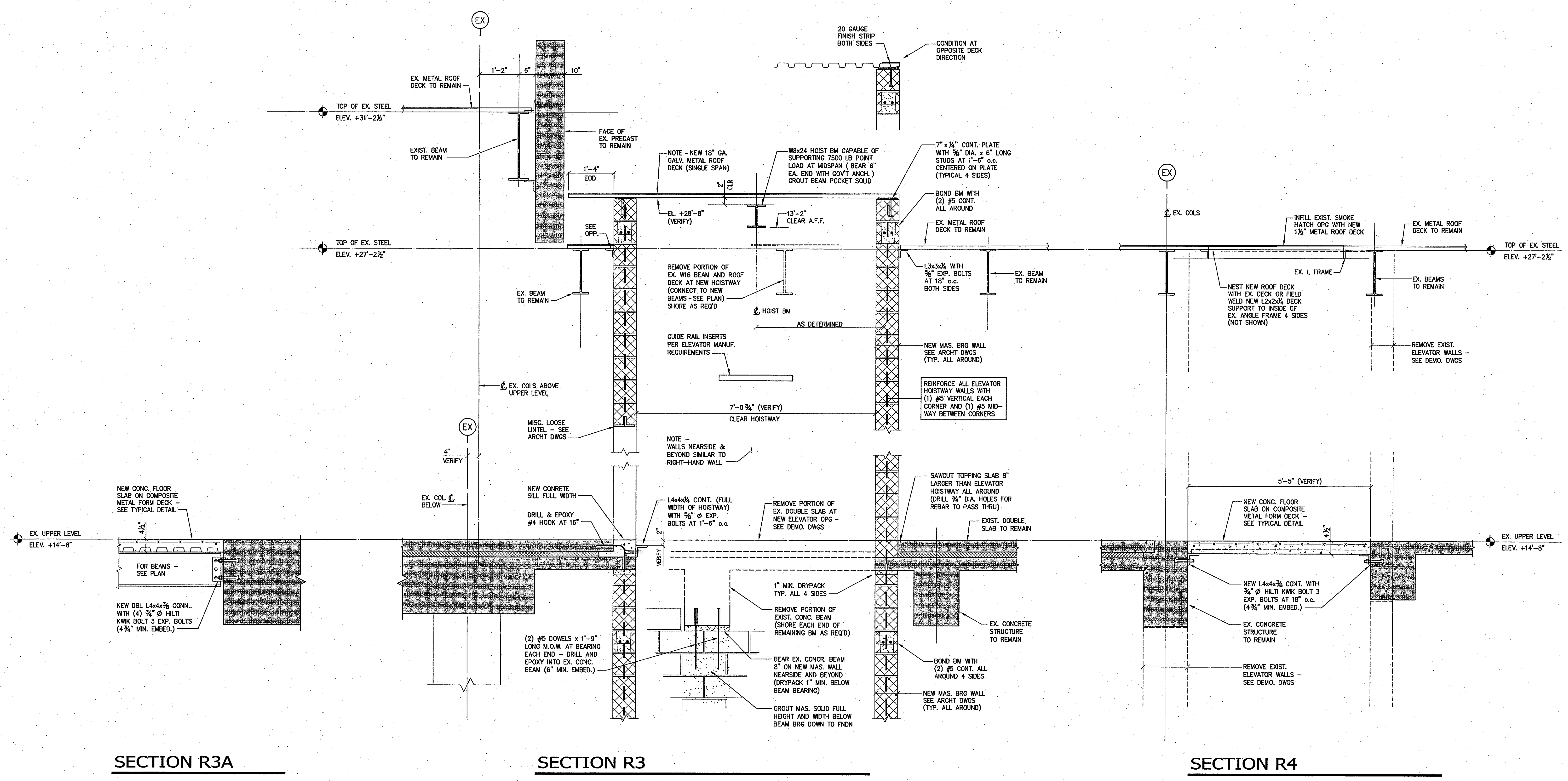
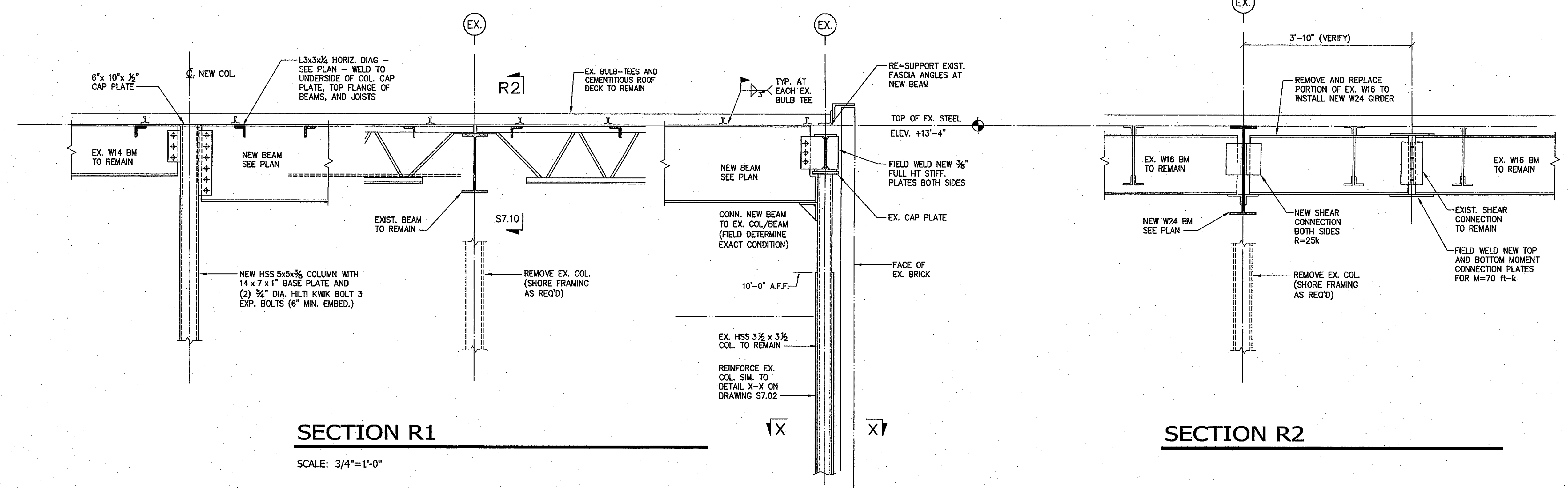
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: JRL

STRUCTURAL FRAMING DETAILS

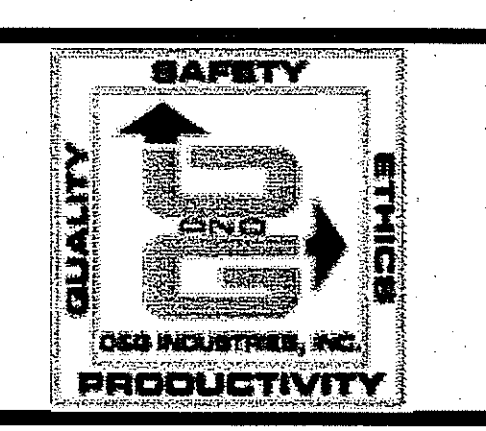
DRAWING NO.: **S7.10**



SECTION R3A

SECTION R3

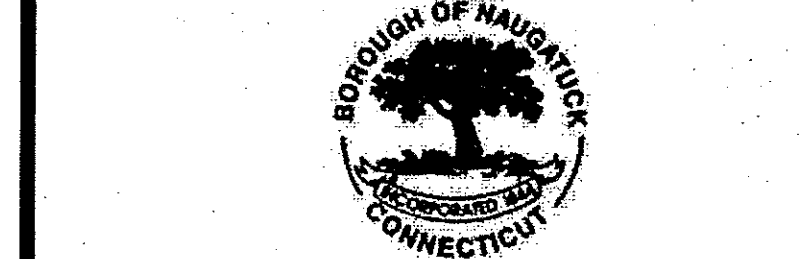
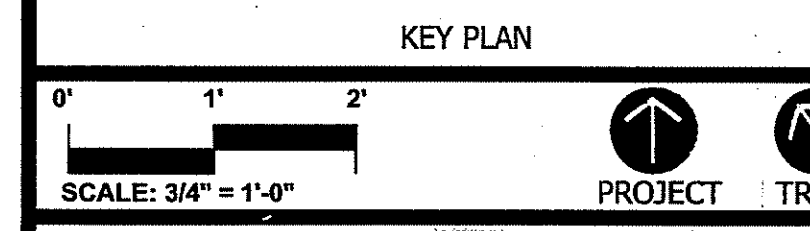
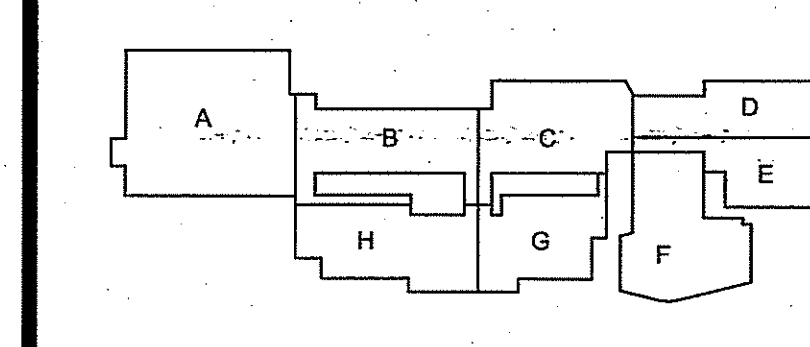
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DATE	DESCRIPTION
OCTOBER 16, 2012	DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012	DRAWINGS ISSUED FOR BSF REVIEW
JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

REVISION DATE		
Date	No.	Description

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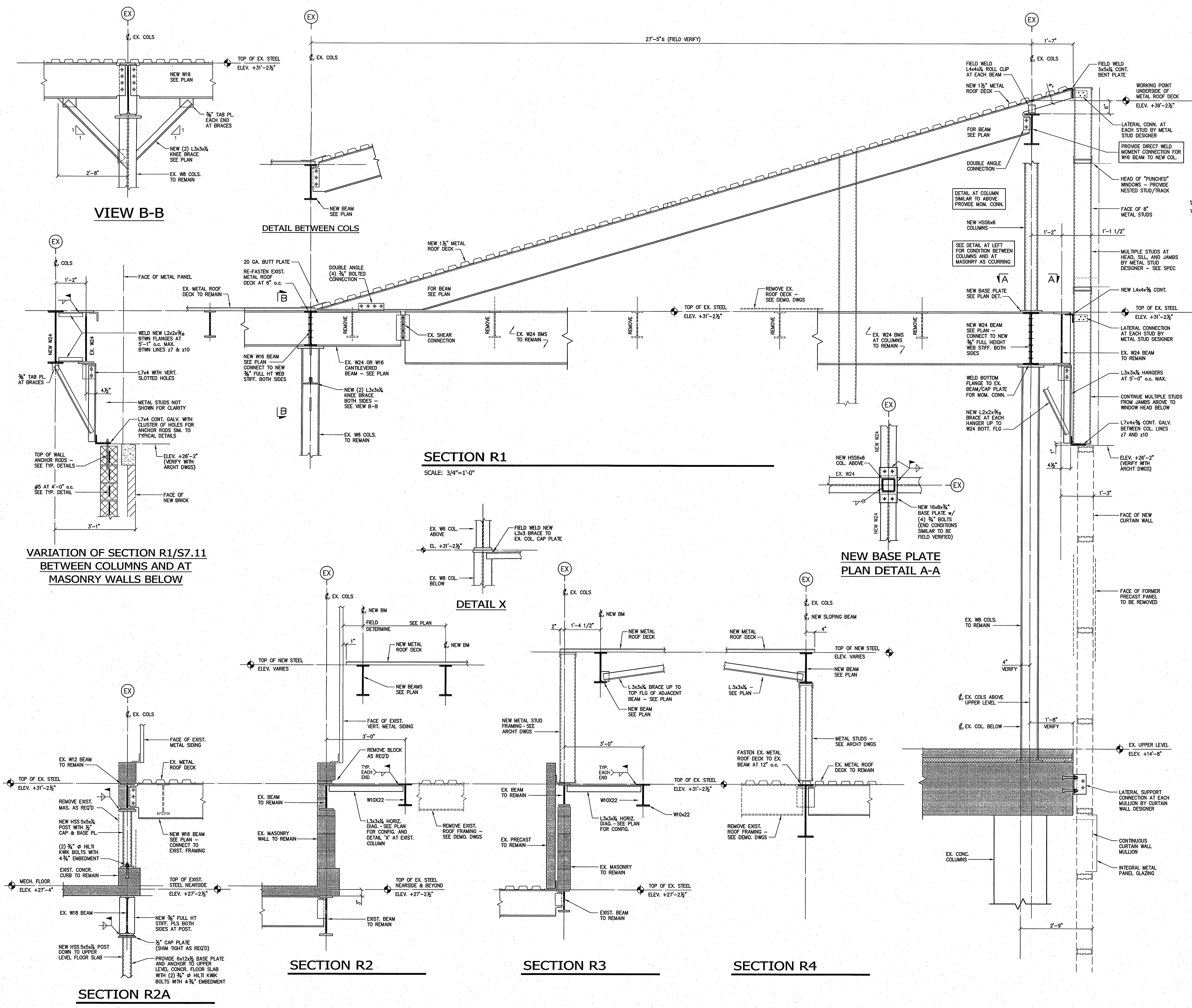
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: RL

STRUCTURAL FRAMING DETAILS

DRAWING NO.: **S7.11**



VIEW B-B

SECTION R1

SCALE: 3/4"=1'-0"

DETAIL X

NEW BASE PLATE PLAN DETAIL A-A

SECTION R2

SECTION R3

SECTION R4

SECTION R2A

VARIATION OF SECTION R1/S7.11 BETWEEN COLUMNS AND AT MASONRY WALLS BELOW

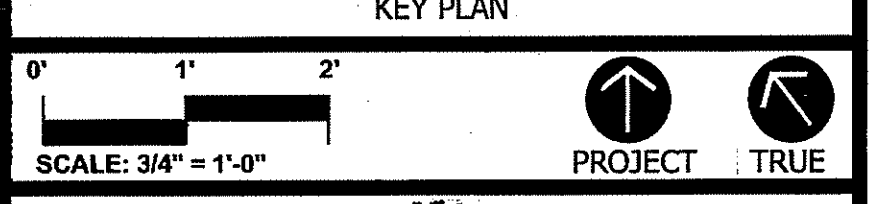
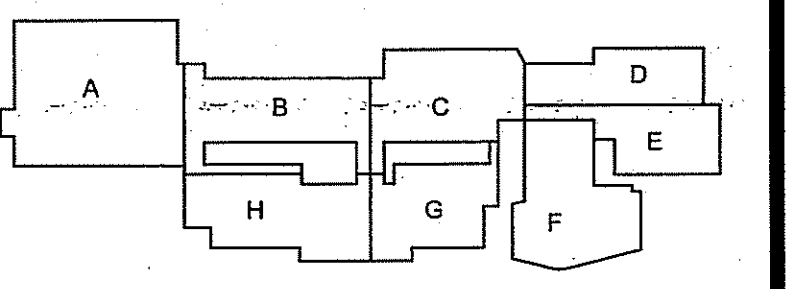
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REVISION DATE	
Date	Description

REVISION DATE	
Date	Description

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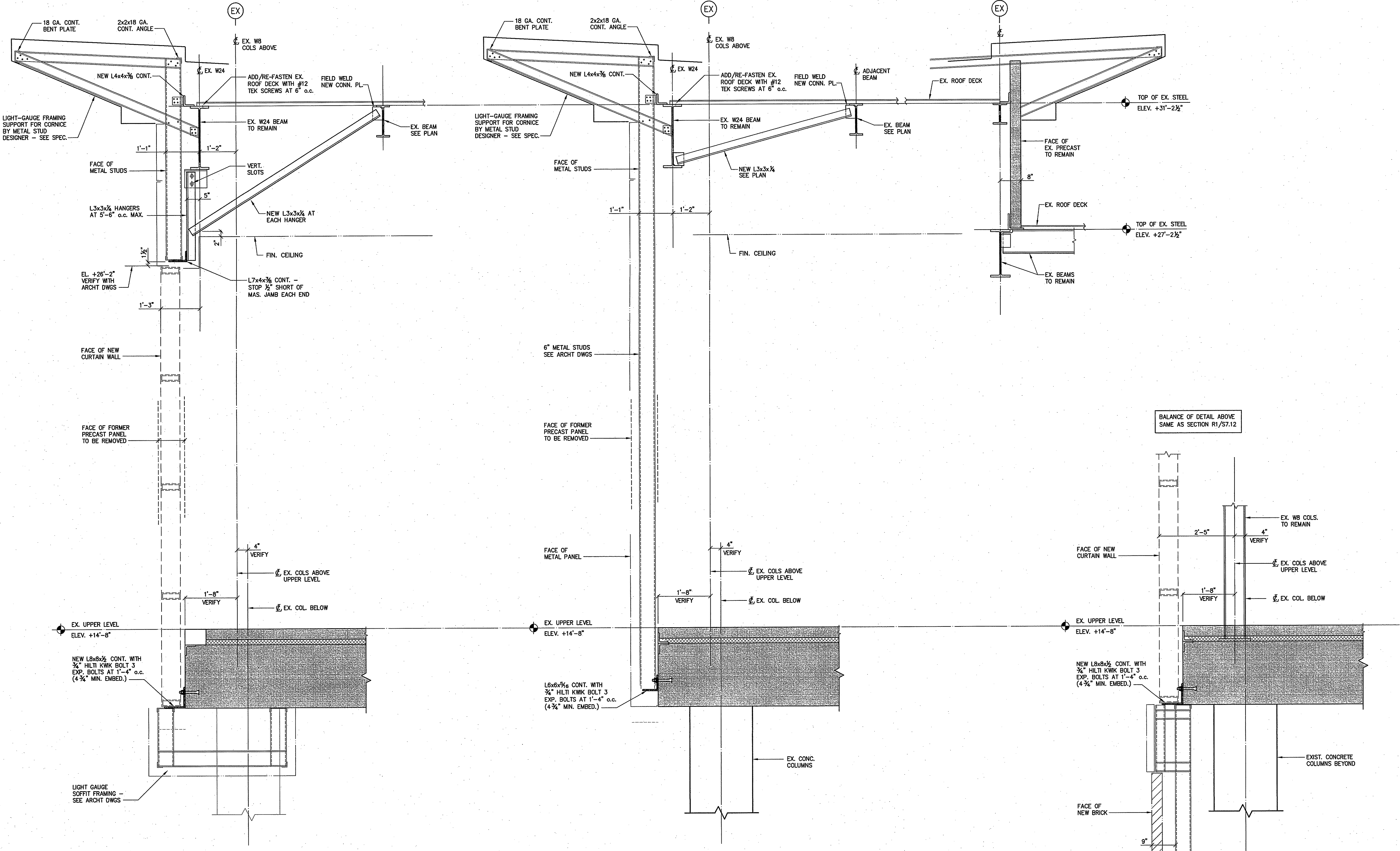
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: JRL

STRUCTURAL FRAMING DETAILS

DRAWING NO.: **S7.12**



SECTION R1
SCALE: 3/4"=1'-0"

SECTION R2

SECTION R3

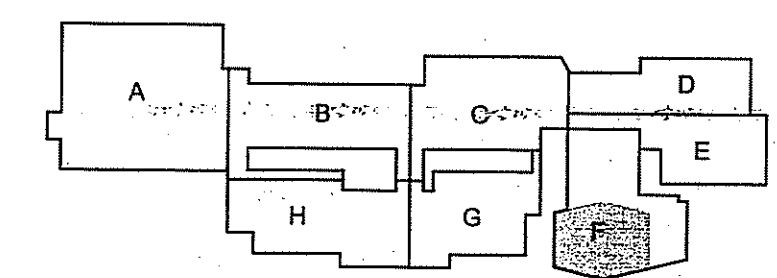


ISSUE DATE

DATE	DESCRIPTION
OCTOBER 16, 2012	DRAWINGS ISSUED FOR BUILDING COMMITTEE AND BOARD OF EDUCATION REVIEW
OCTOBER 23, 2012	DRAWINGS ISSUED FOR BSF REVIEW
JANUARY 04, 2013	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

REVISION DATE		
Date	No.	Description

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, AND GENERAL NOTES SEE SHEET R0.01



KEY PLAN

AS NOTED



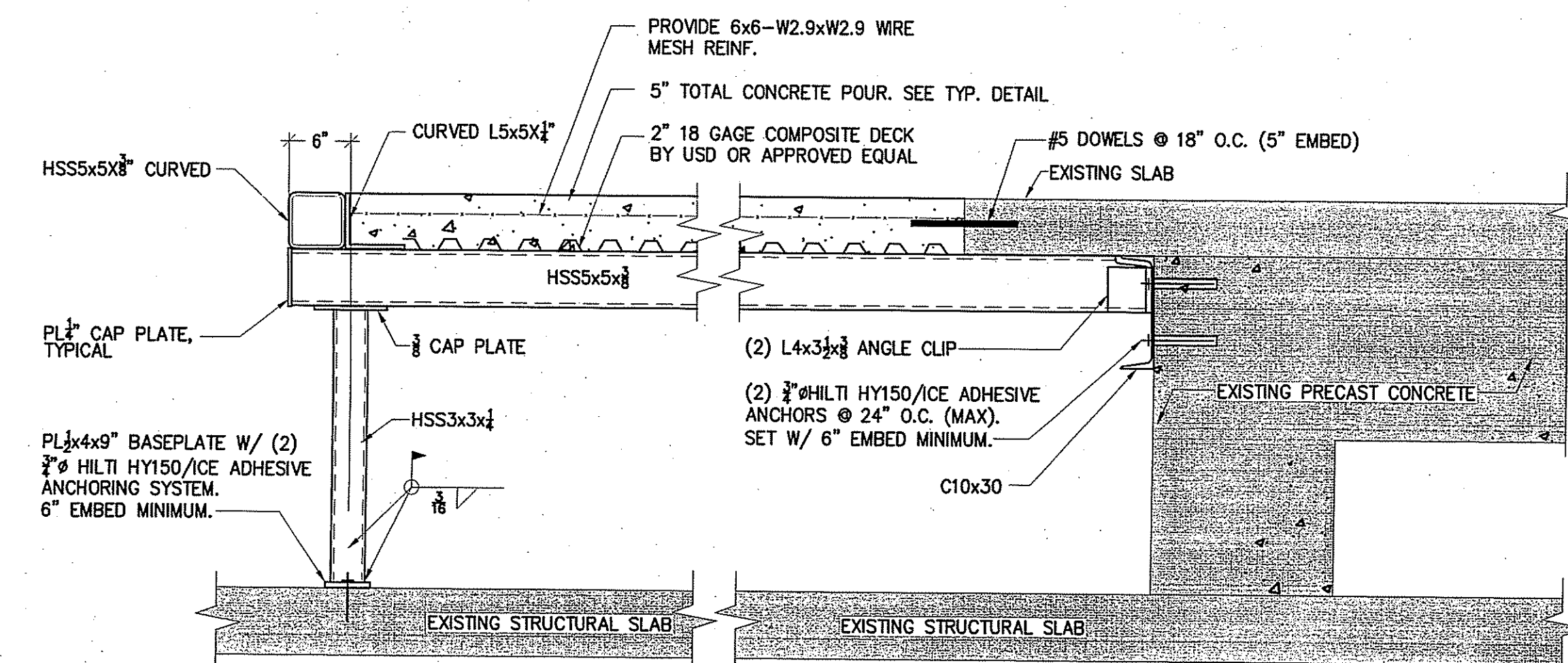
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

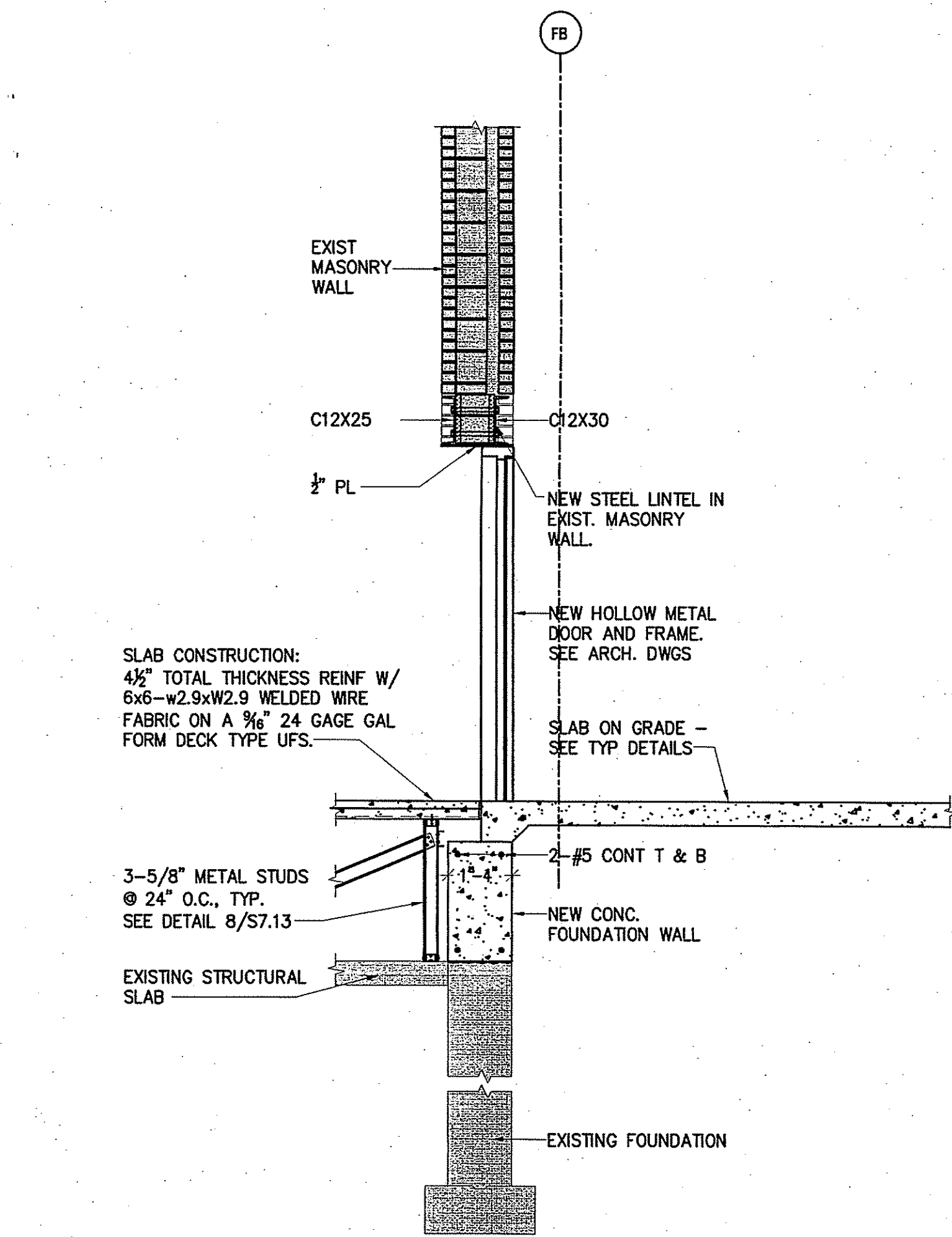
PROJECT NO: 11057.00

DRAWN BY: JJB

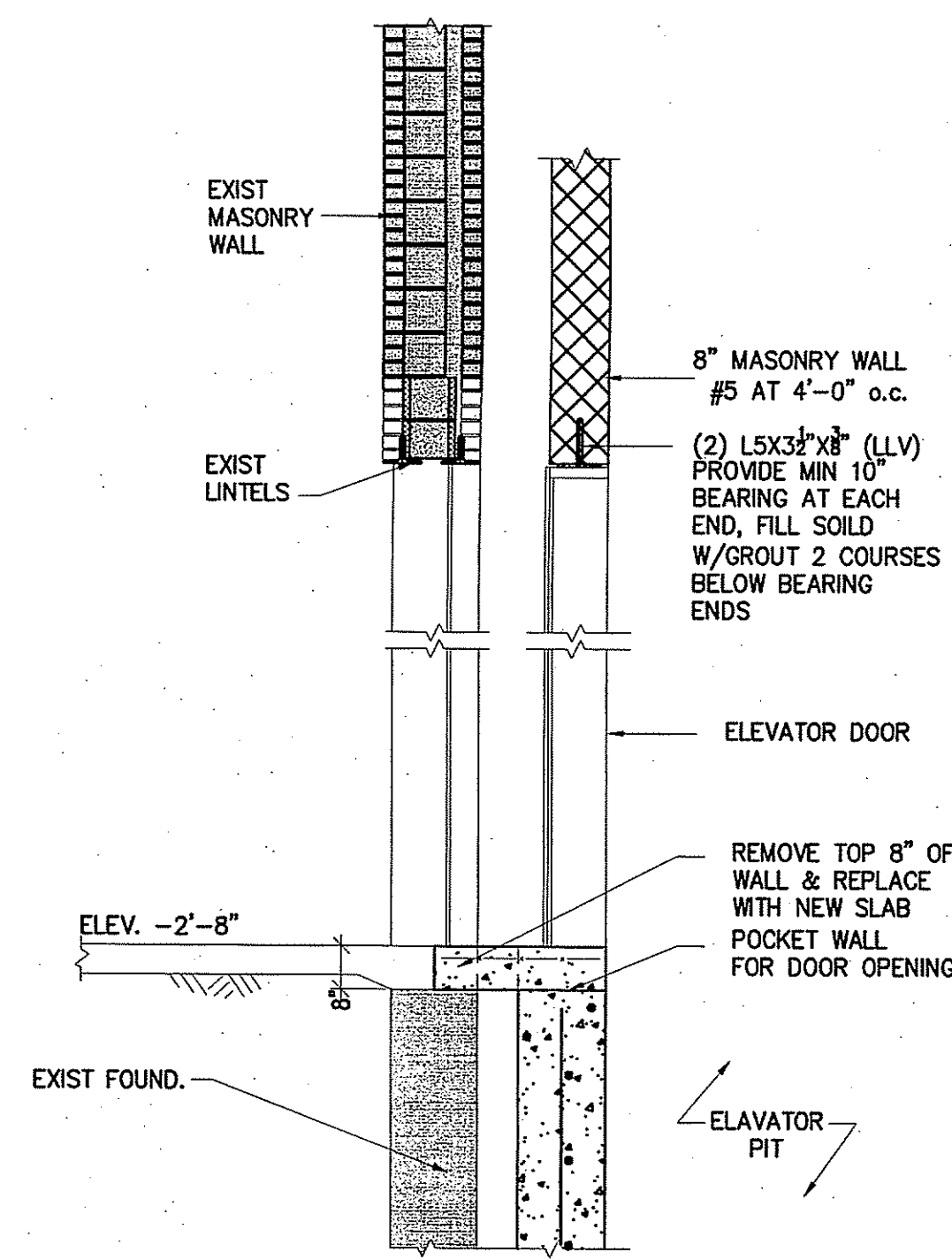
TYPICAL FRAMING DETAILS



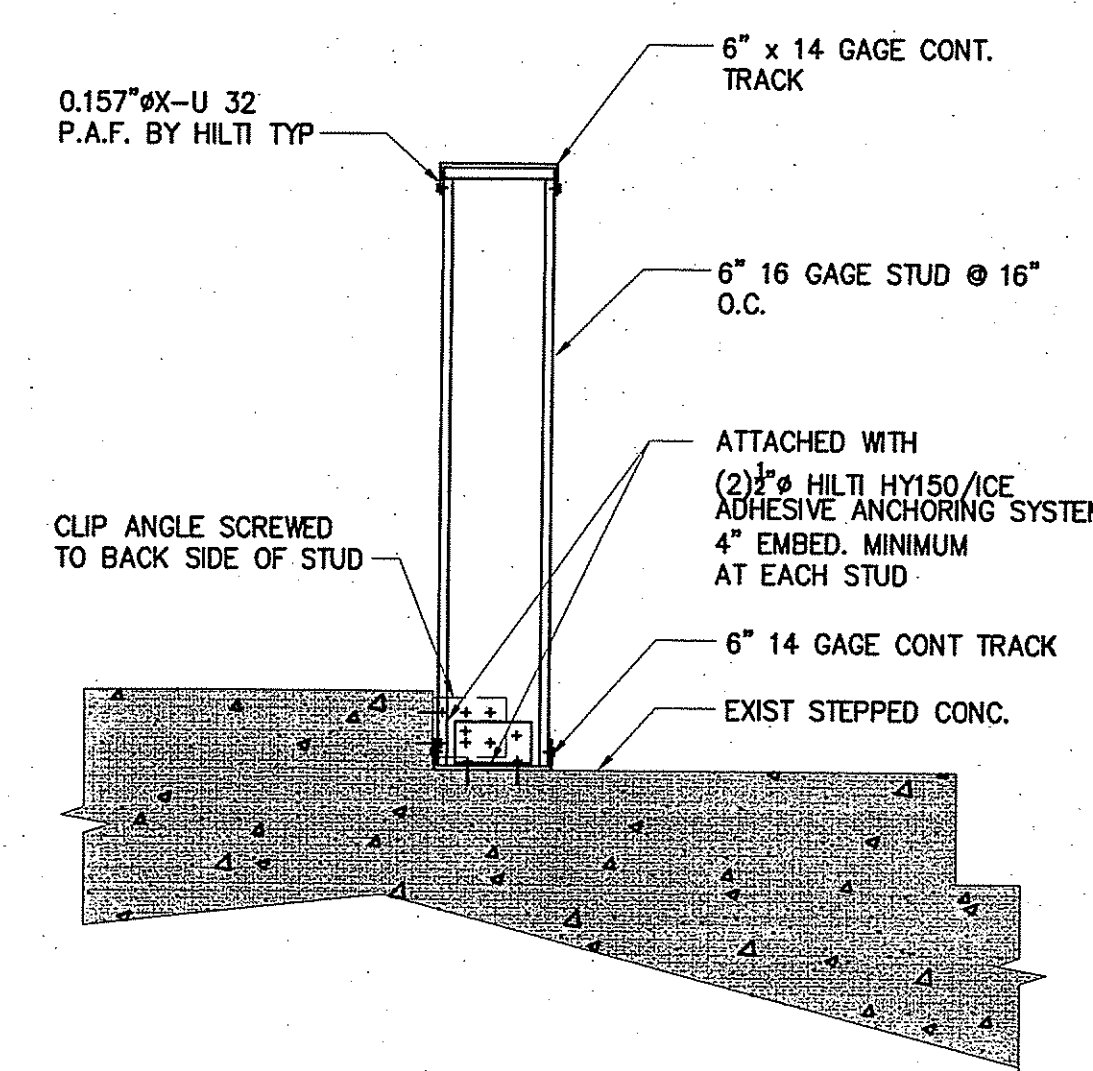
5 CONNECTION DETAIL
SCALE: 3/4" = 1'-0"



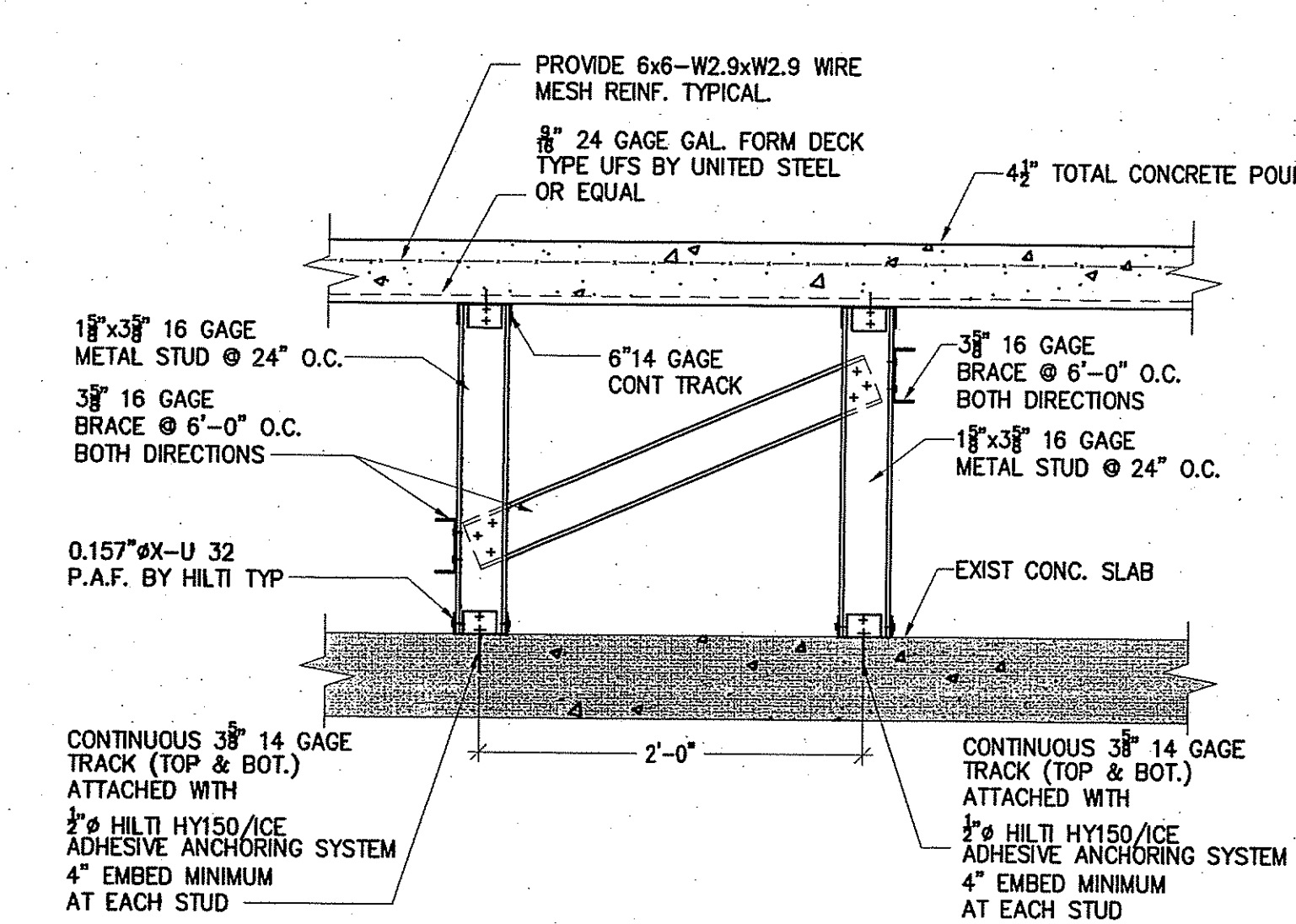
1 SECTION THRU DOOR OPENING
SCALE: 3/4" = 1'-0"



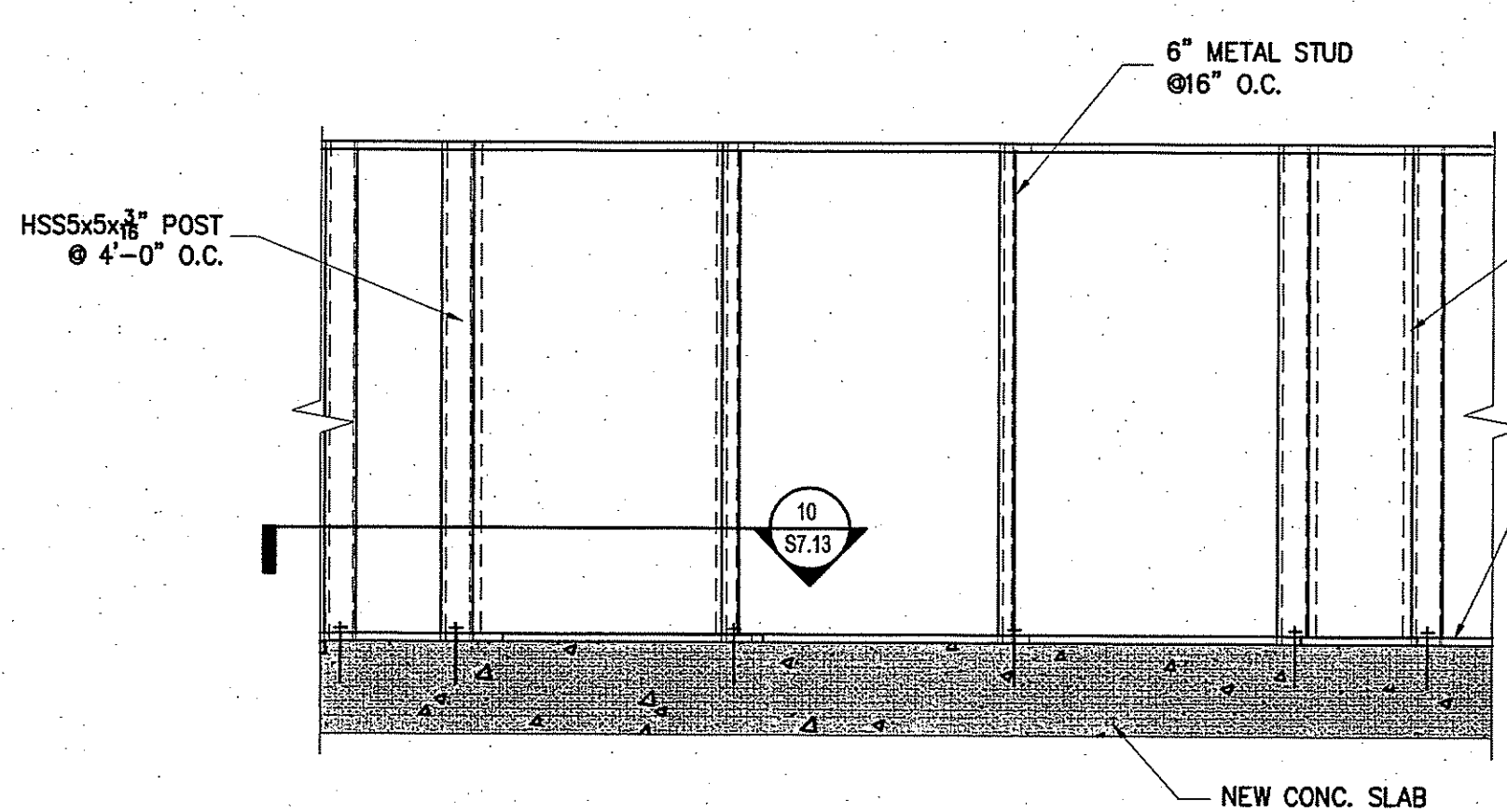
2 SECTION THRU ELEVATOR DOOR OPENING
SCALE: 3/4" = 1'-0"



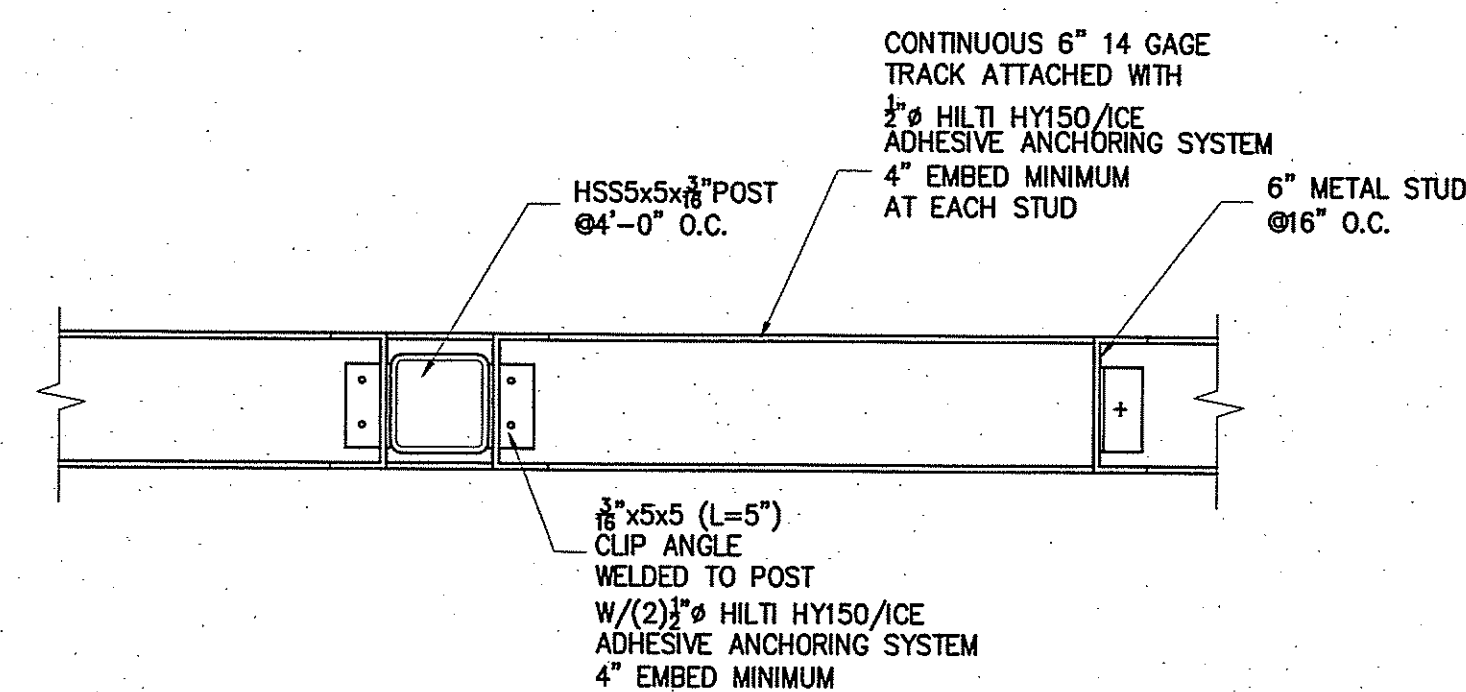
7 FLOOR BARRIER INSTALLATION DETAIL
SCALE: 3/4" = 1'-0"



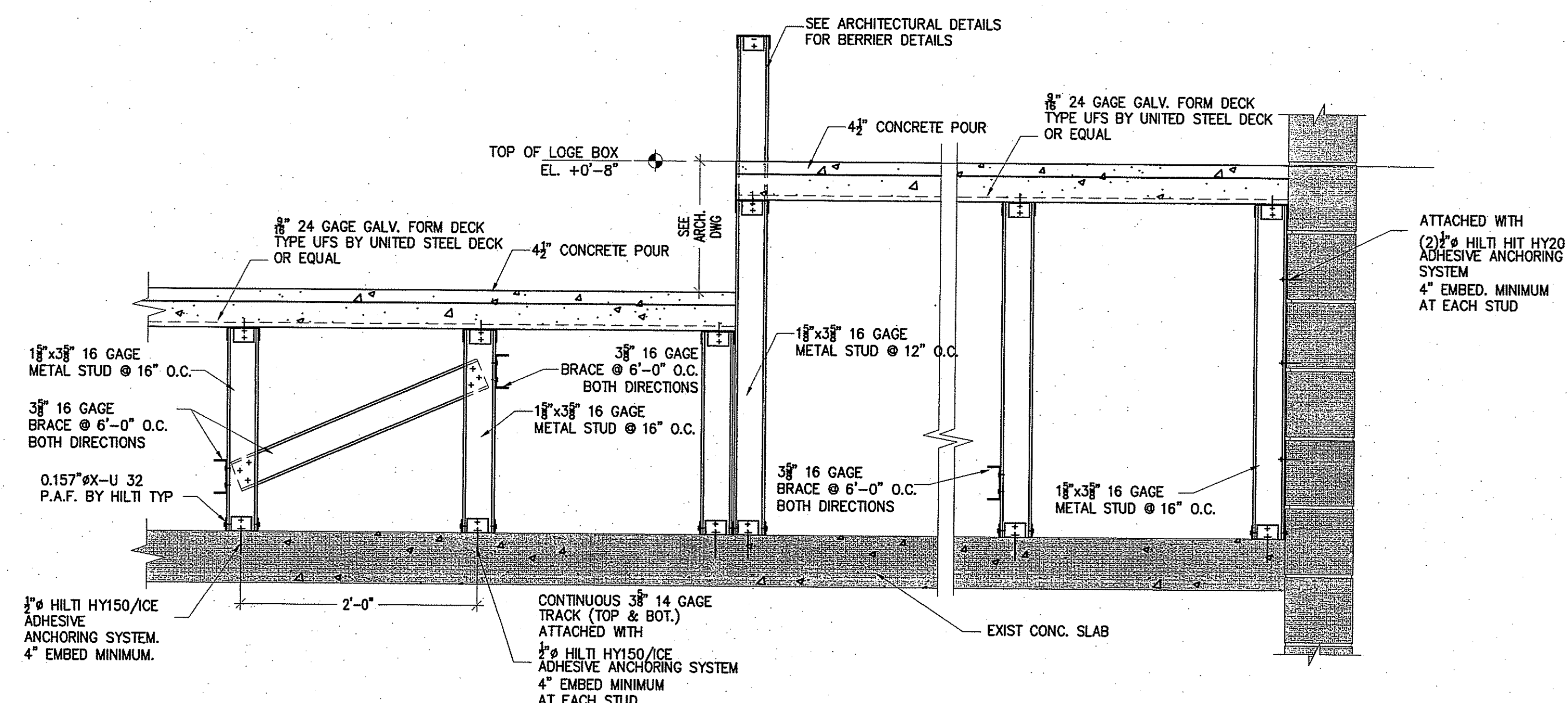
8 RAISED FLOOR SECTION
SCALE: 3/4" = 1'-0"



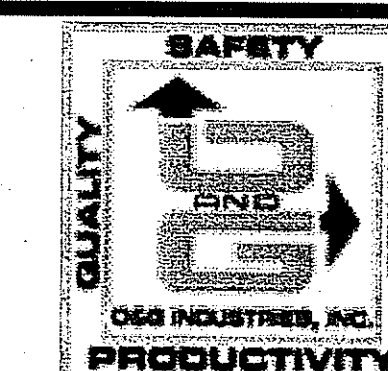
9 LOW WALL INSTALLATION DETAIL
SCALE: 3/4" = 1'-0"



10 SECTION
SCALE: 3/4" = 1'-0"



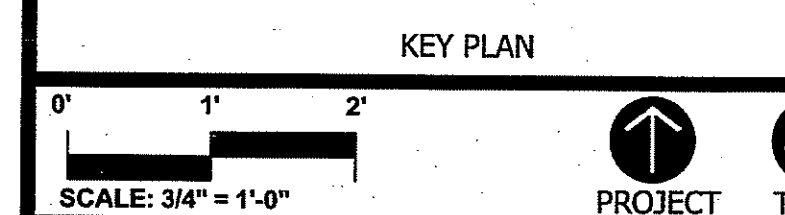
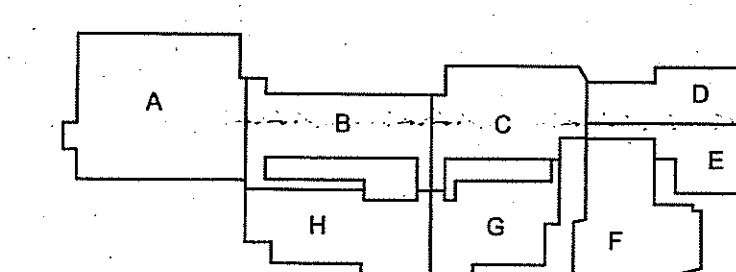
11 RAISED FLOOR SECTION
SCALE: 3/4" = 1'-0"



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ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

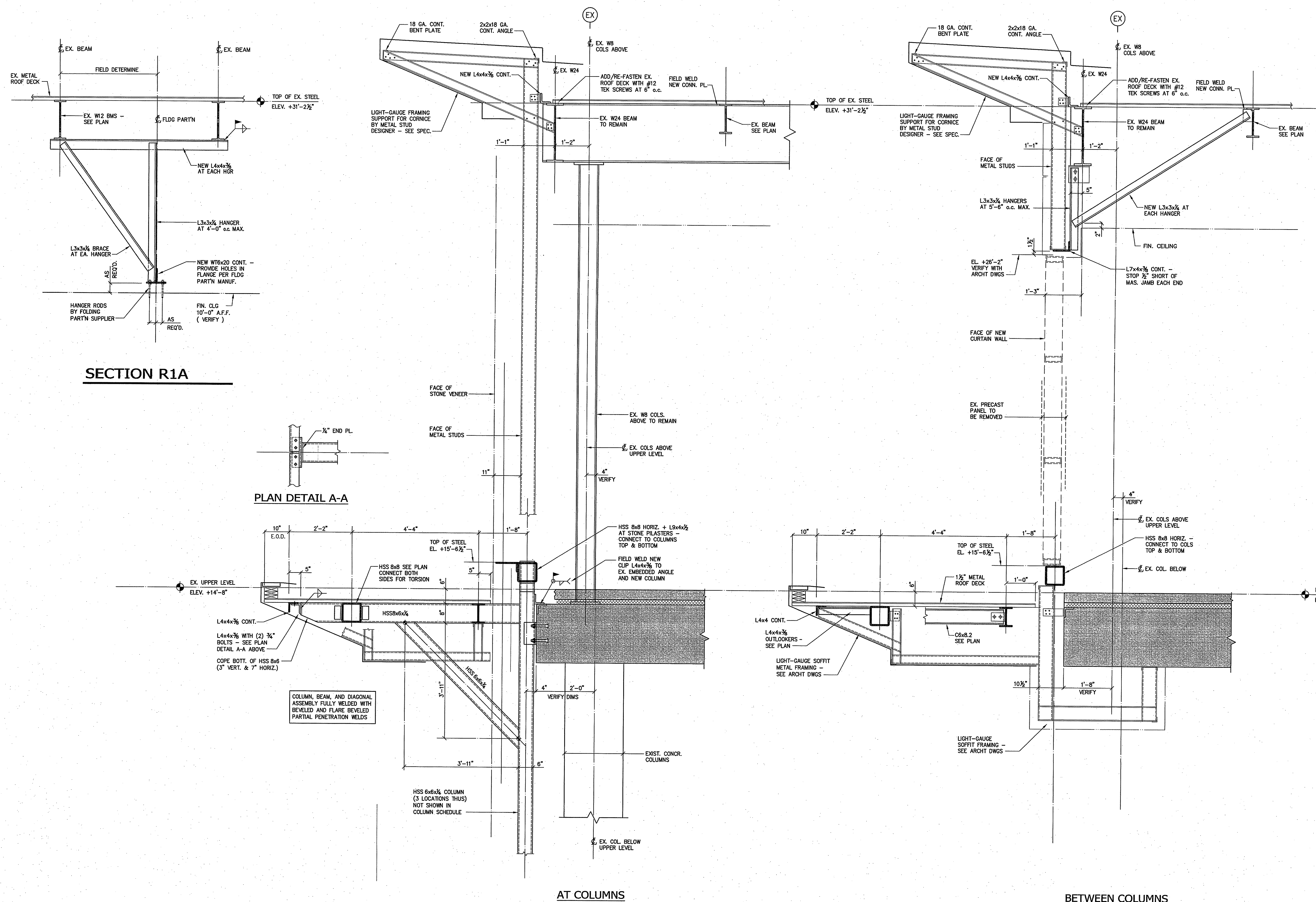
543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: JRL

STRUCTURAL FRAMING DETAILS

DRAWING NO.: **S7.16**

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SECTION R1A

PLAN DETAIL A-A

SECTION R1

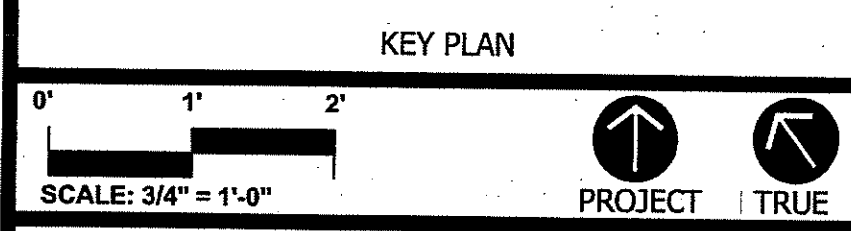
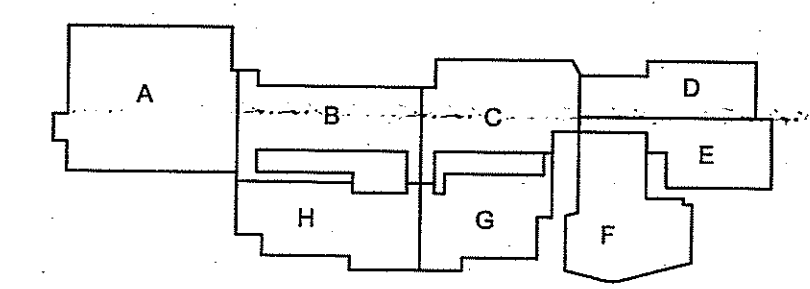
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BOARD OF NAUGATUCK CONNECTICUT

ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

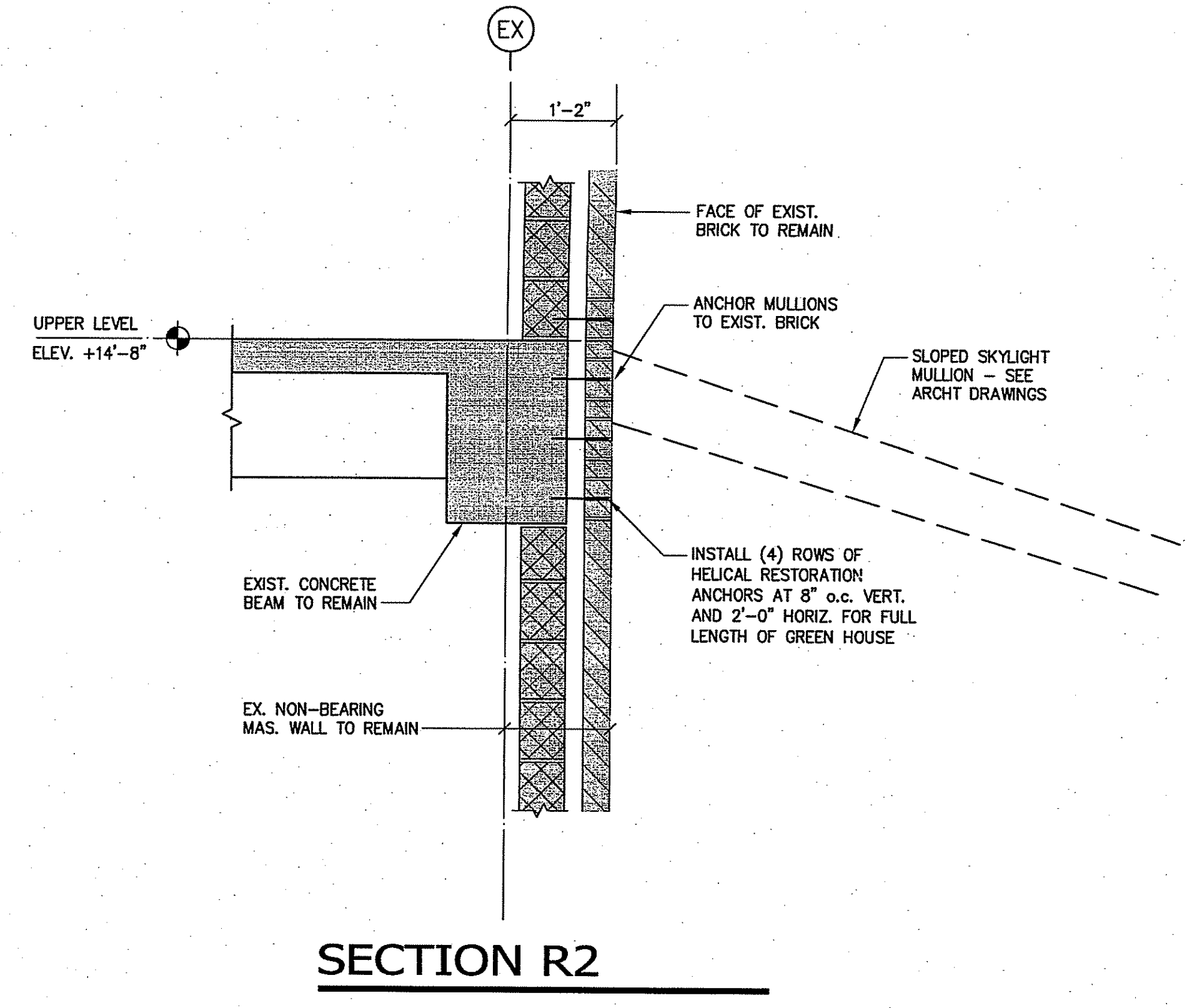
543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
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PROJECT NO.: 11057.00 DRAWN BY: JRL

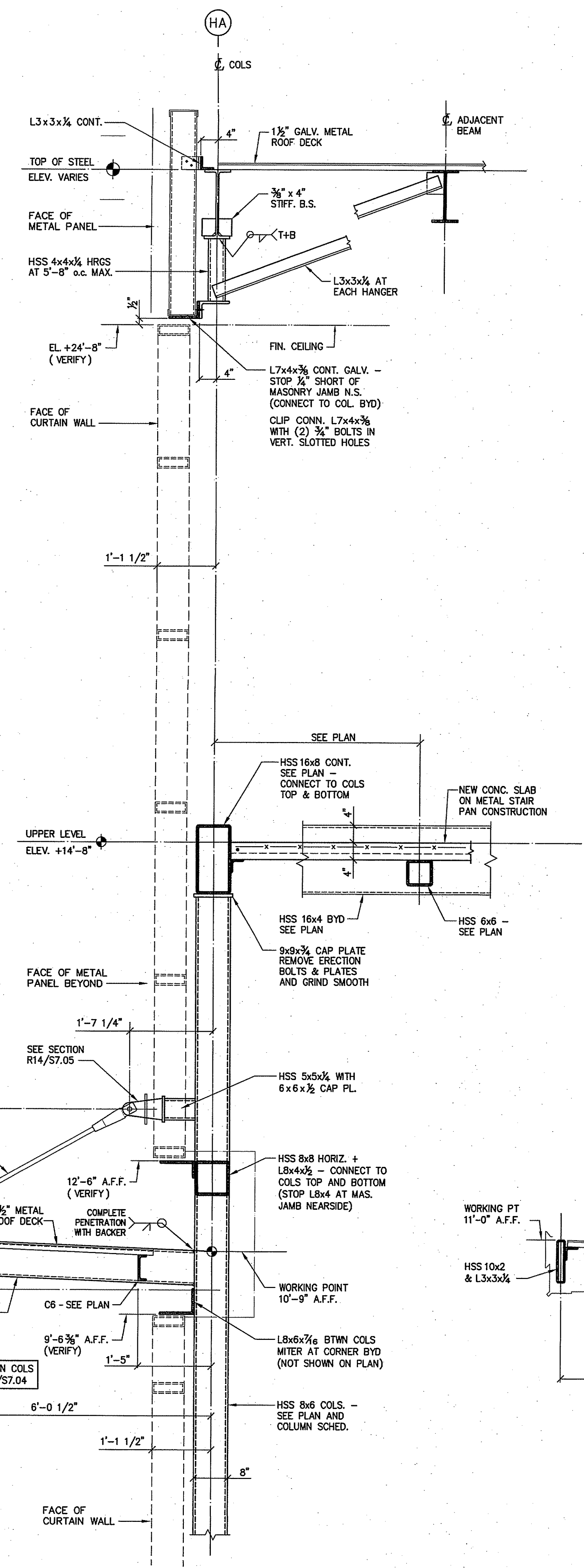
STRUCTURAL FRAMING DETAILS

DRAWING NO.: **S7.17**

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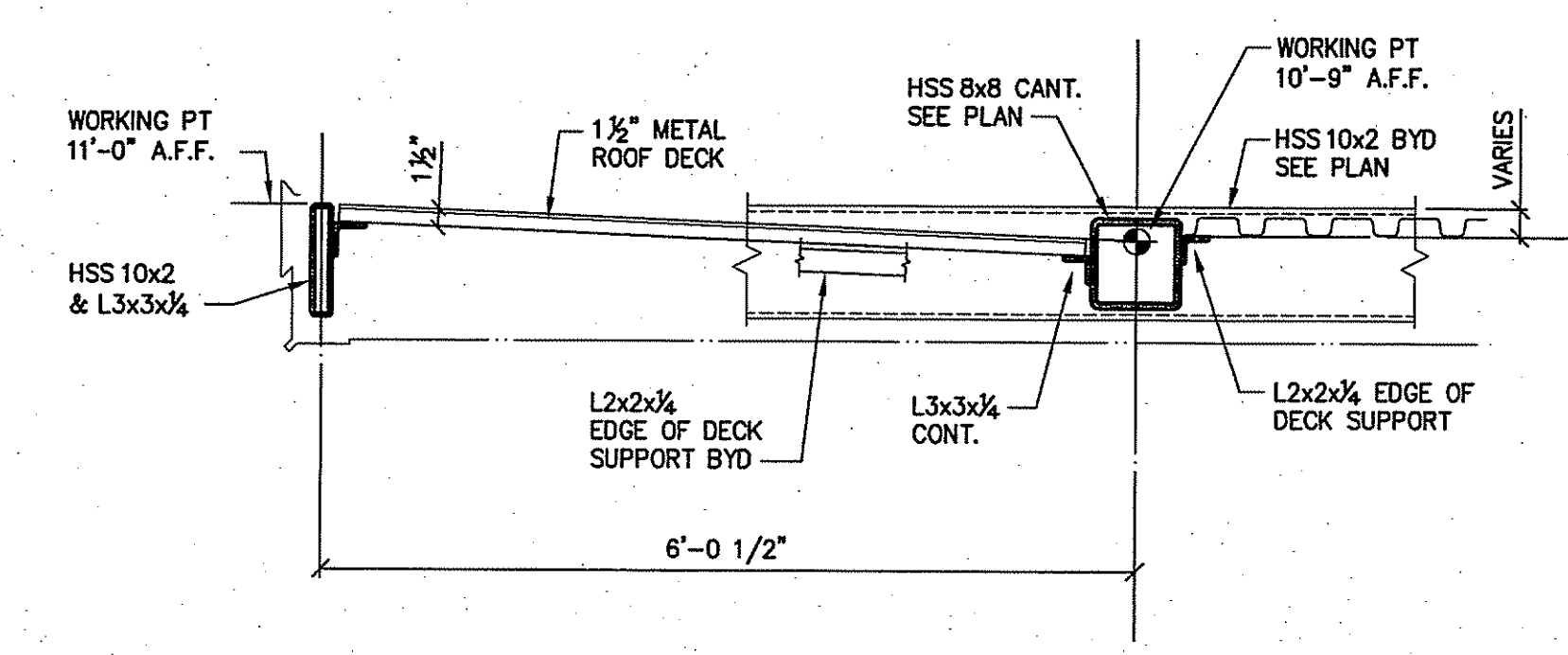


SECTION R2



SECTION R1

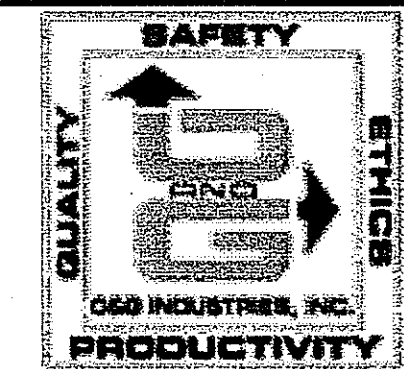
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SECTION R1A

MAIN FLOOR
ELEV. 0'-0"

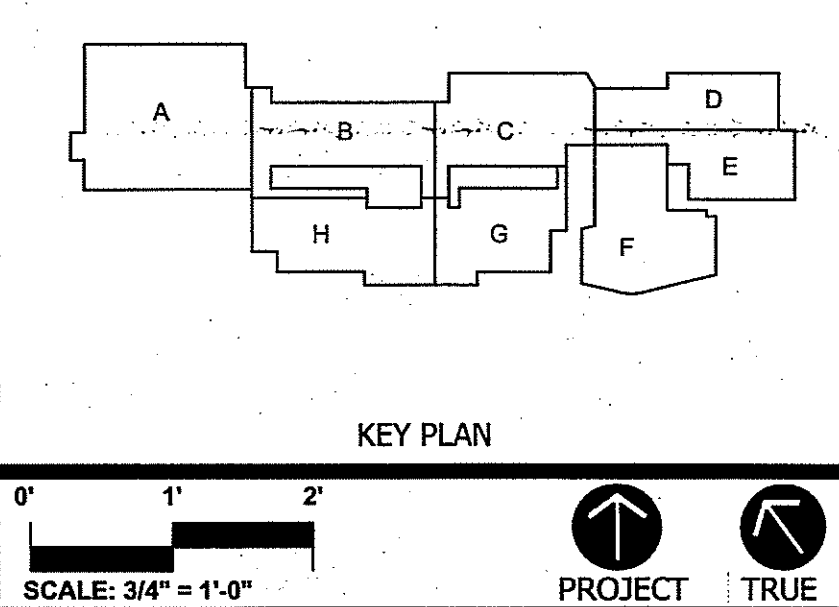
NOTE IN SECT. R1/ST.17
A.F.F. = ABOVE FINISHED
FLOOR EL. -4'-0"
(NOT FROM ZERO DATUM)



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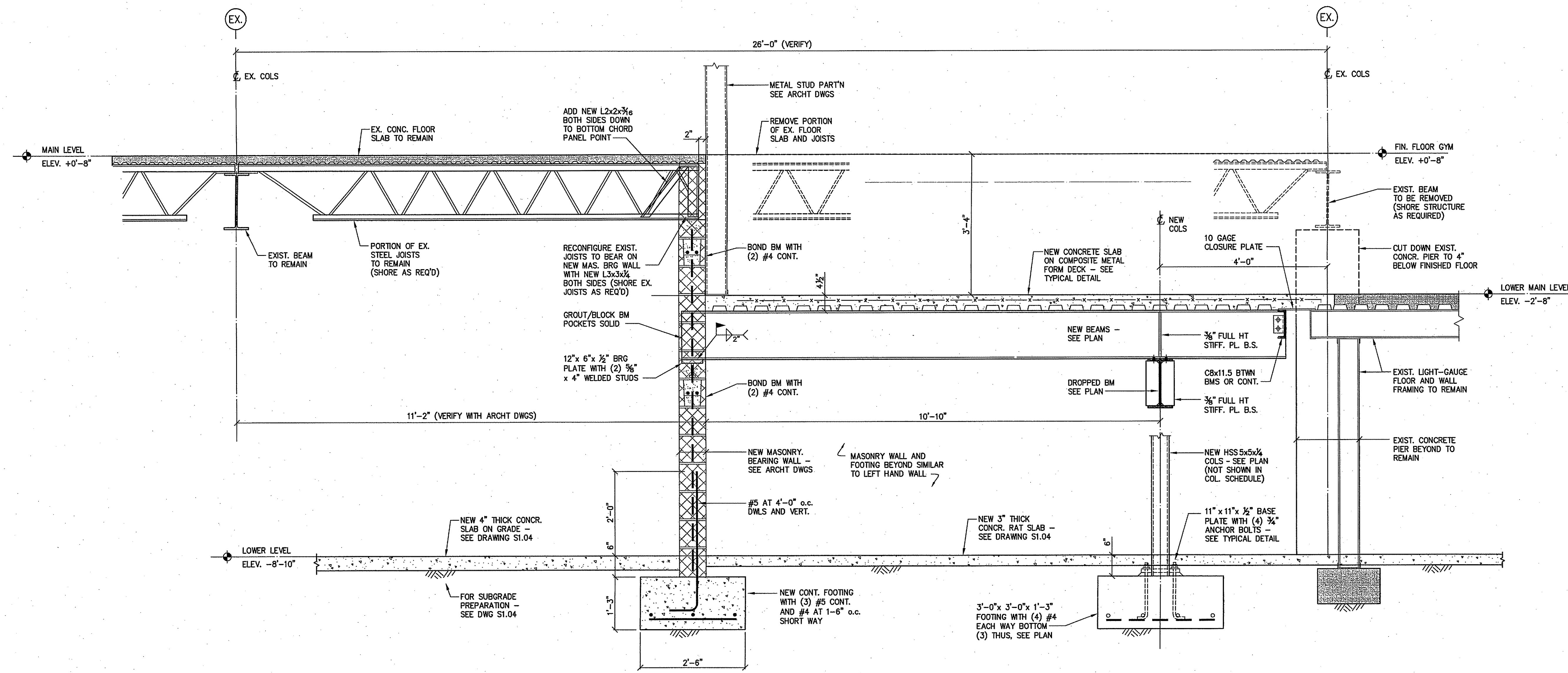
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: RL

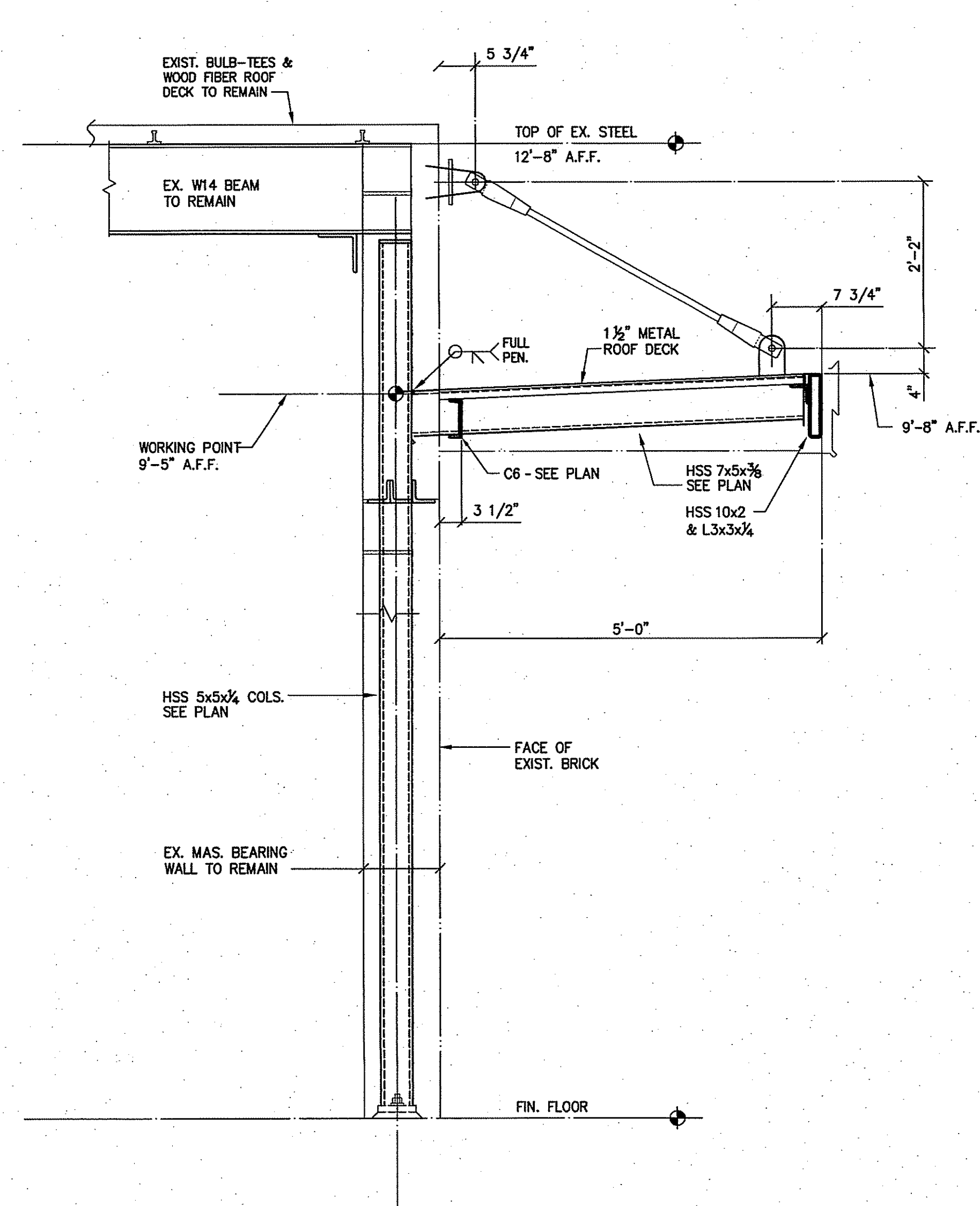
STRUCTURAL FRAMING DETAILS

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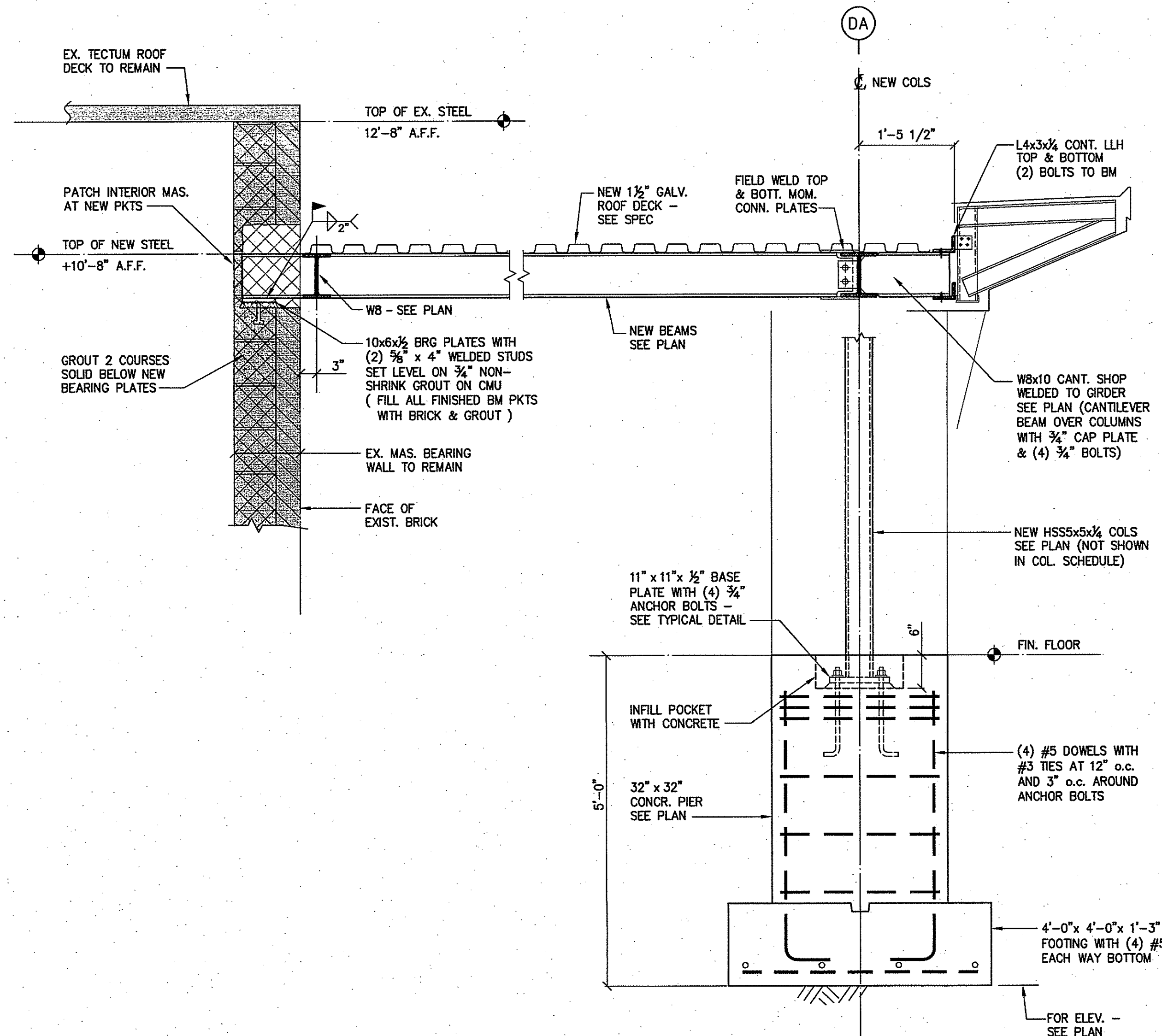


SECTION R1

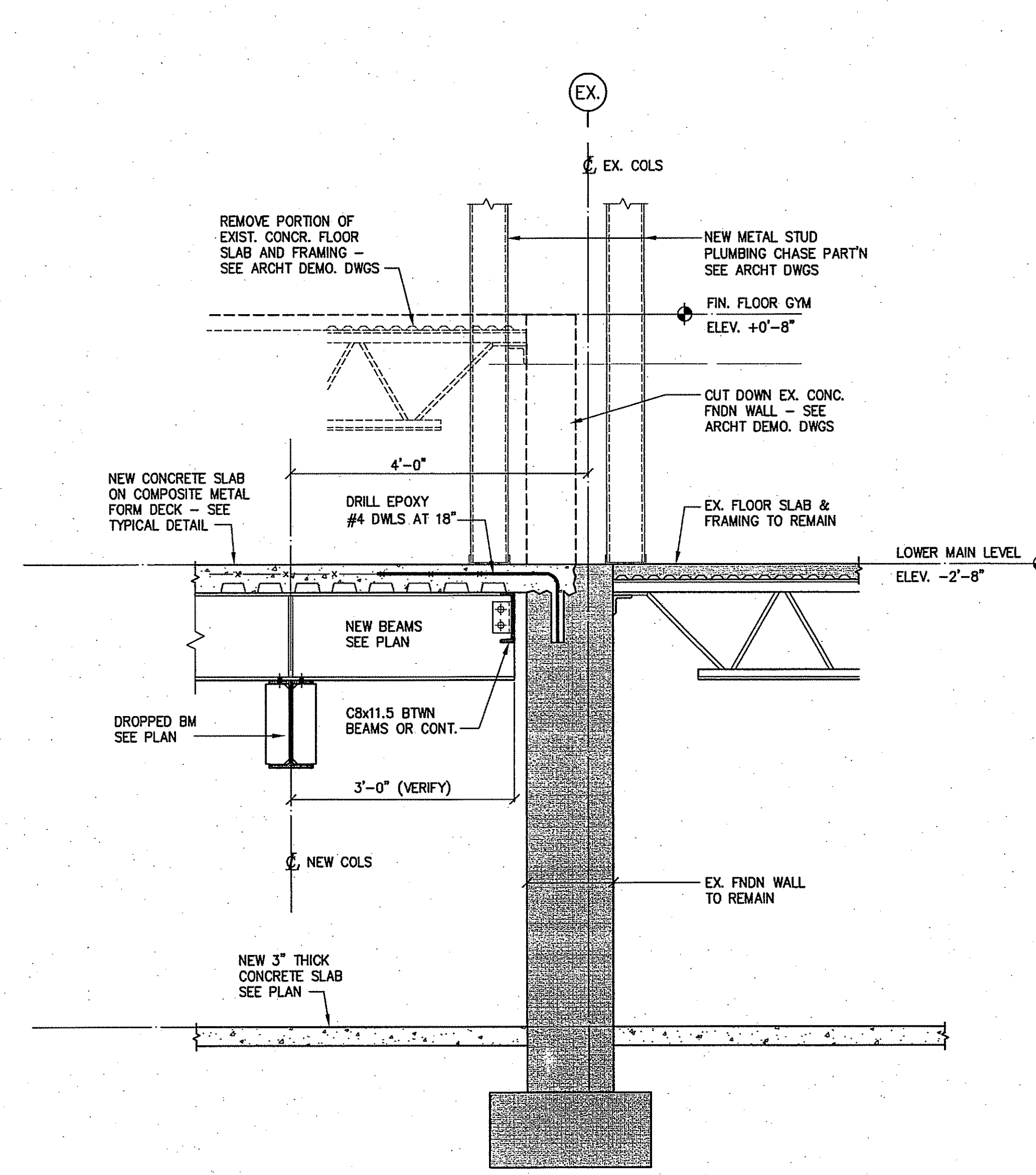
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SECTION R4



SECTION R3



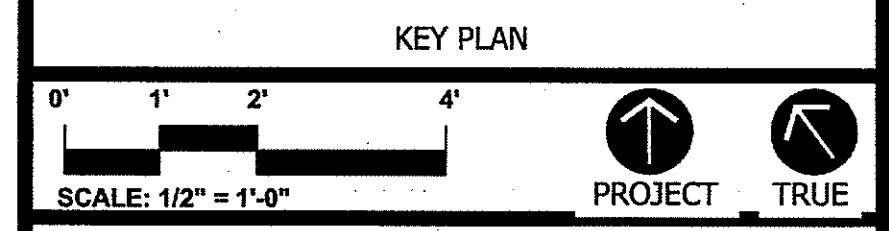
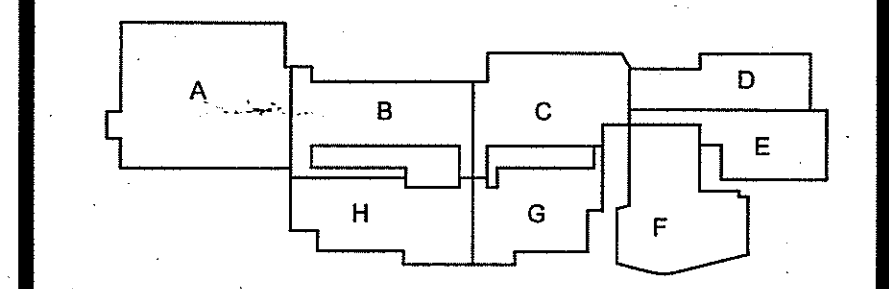
SECTION R2



DATE	ISSUE DATE	DESCRIPTION
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BOARDS OF NAUGATUCK CONNECTICUT

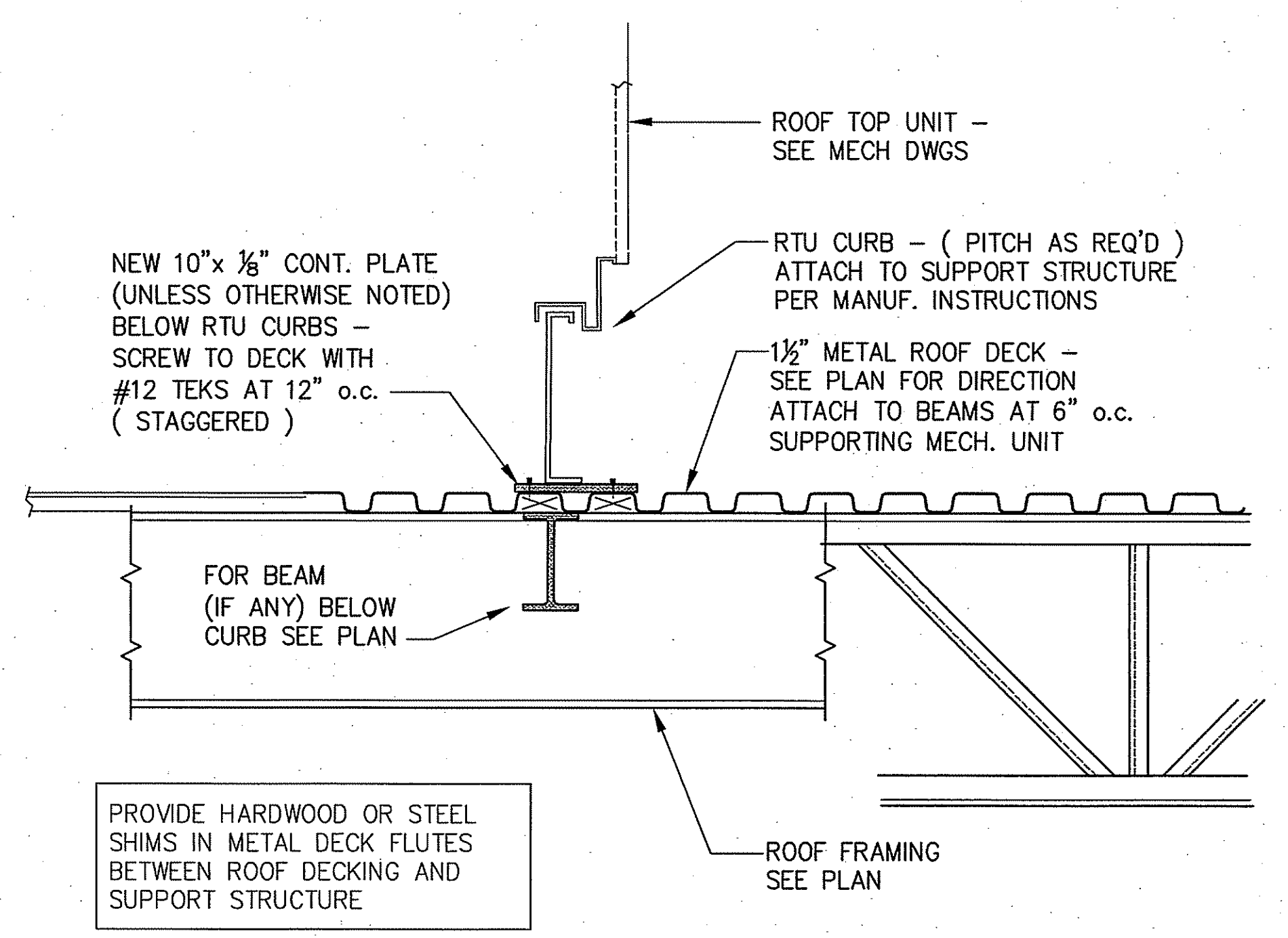
ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

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HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

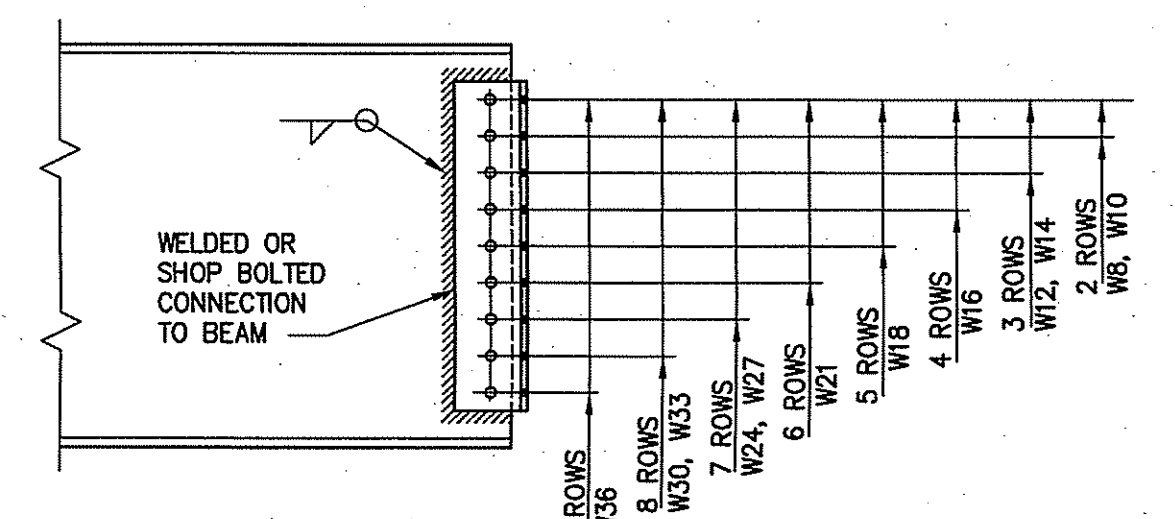
PROJECT NO.: 11057.00 DRAWN BY: RL

TYPICAL DETAILS

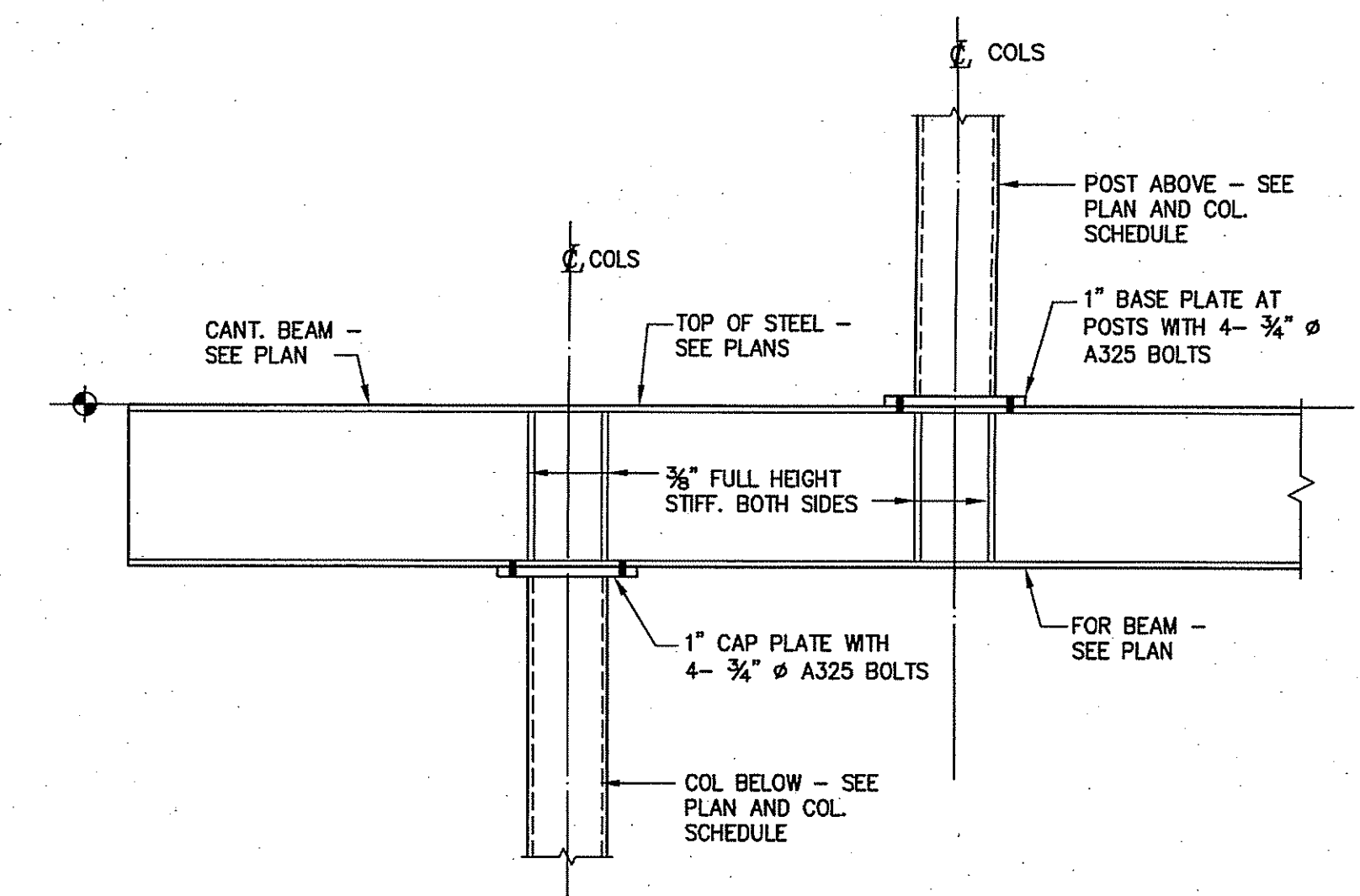
DRAWING NO.: **S8.02**



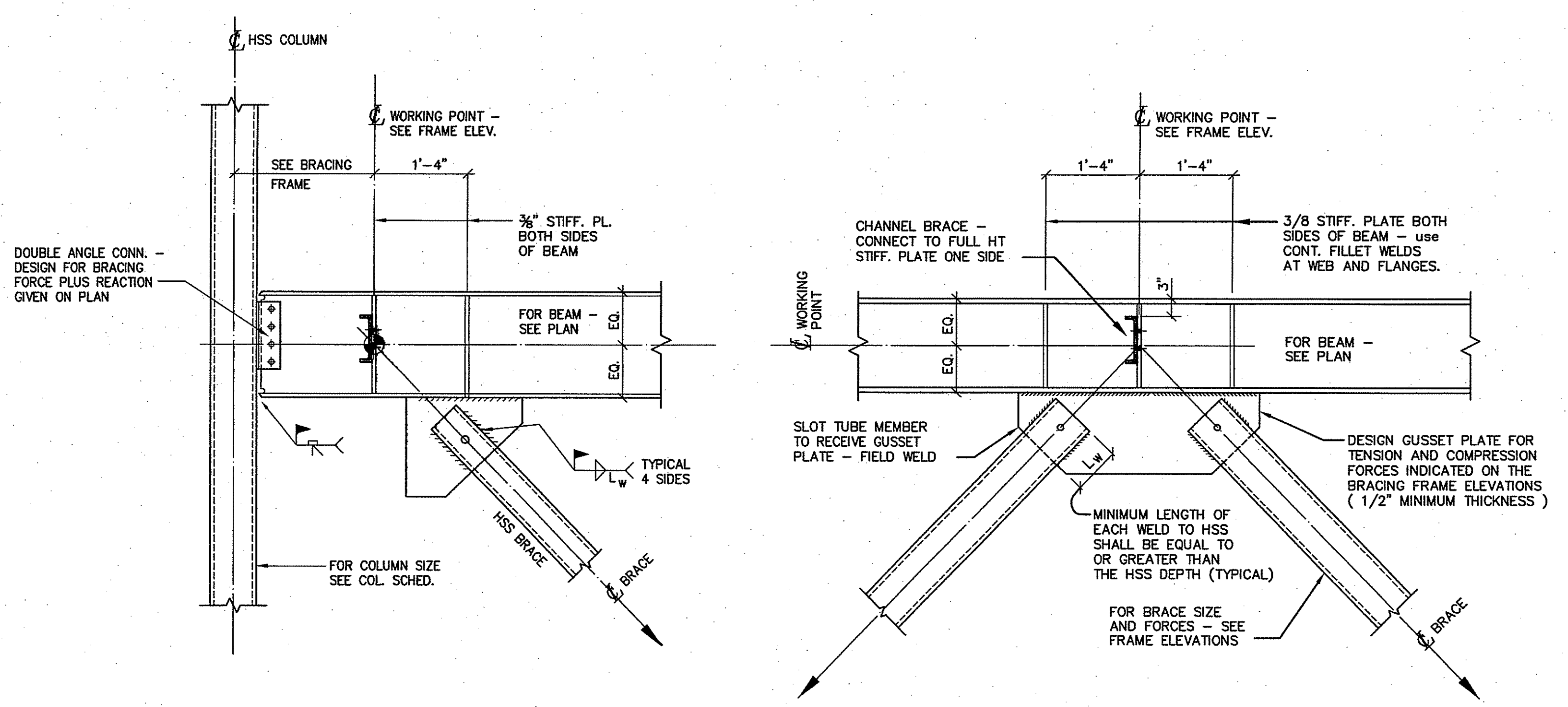
TYPICAL ROOF CURB SUPPORT DETAIL



MINIMUM STEEL BEAM CONNECTION DETAIL

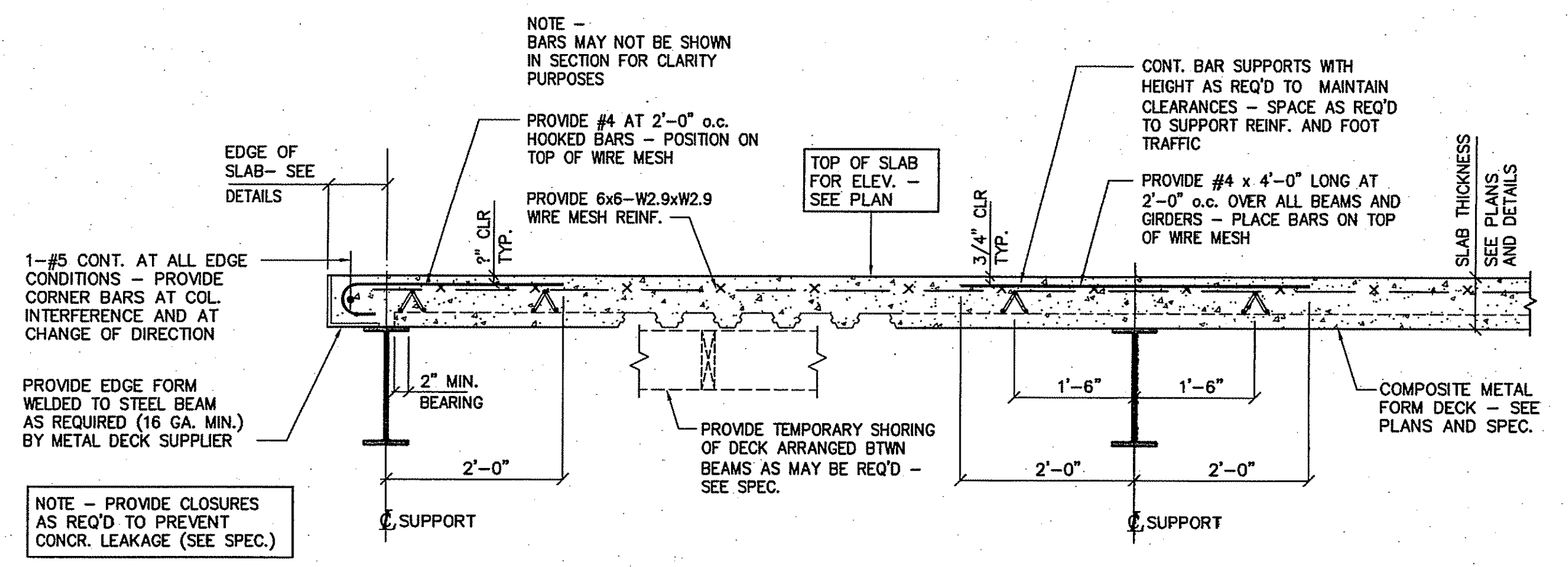


TYPICAL CARRIED COLUMN AND CANTILEVERED BEAM DETAIL



TYPICAL ECCENTRIC BEAM-COLUMN CONDITION

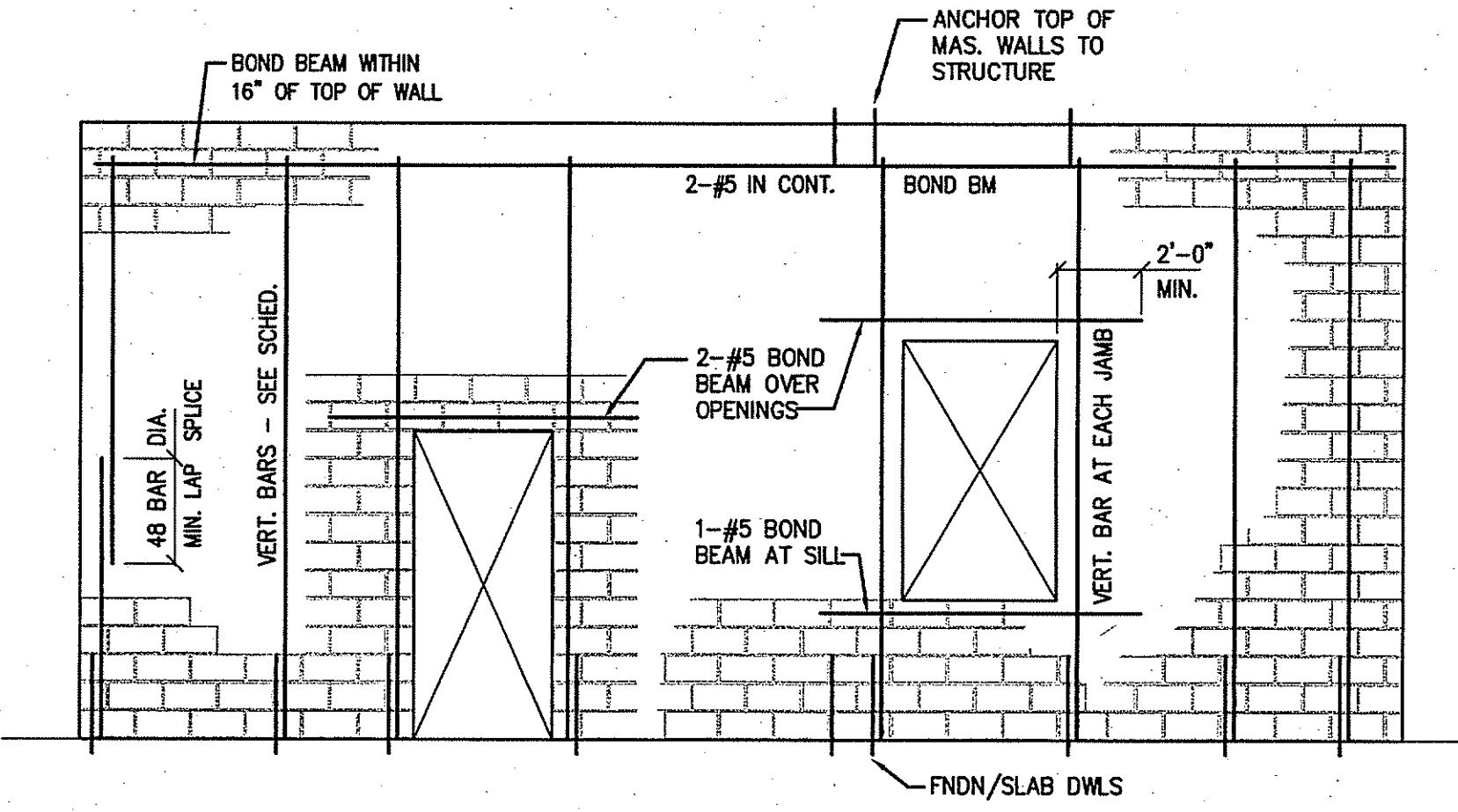
INVERTED V-BRACED CONNECTION



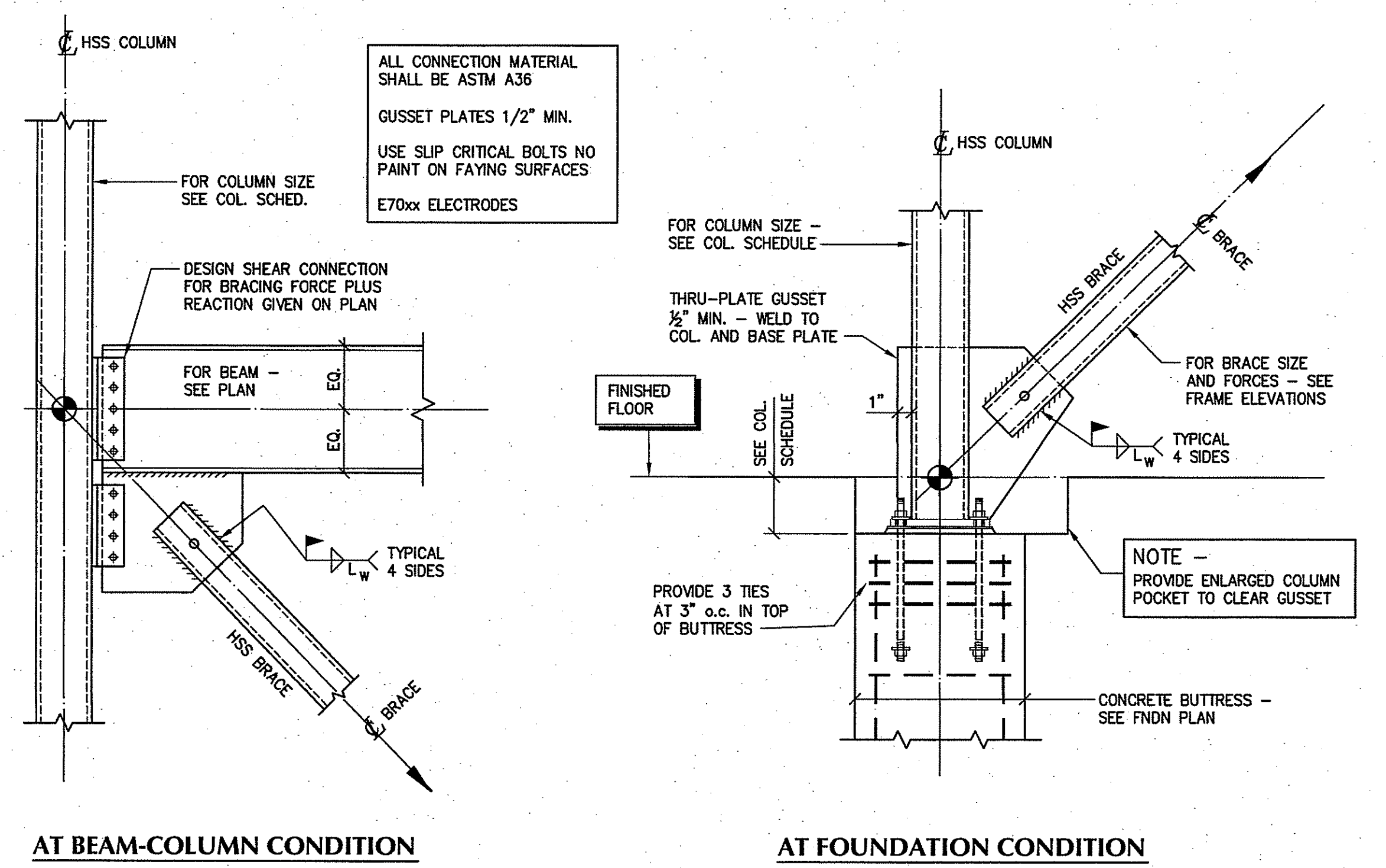
TYPICAL DETAIL OF SLAB ON COMPOSITE METAL FORM DECK

REINFORCED MASONRY NOTES

1. ALL MASONRY WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-08).
2. THE COMPRESSIVE STRENGTH OF MASONRY, f_m , SHALL BE AT LEAST 1500 psi DETERMINED BY THE UNIT STRENGTH METHOD DESCRIBED IN ACI 530-02.
3. CONCRETE MASONRY UNITS SHALL BE LIGHT WEIGHT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 1900 psi AND CONFORM TO ASTM C90.
4. MORTAR FOR BLOCK WALL CONSTRUCTION SHALL BE PRE-BLENDED TYPE-S CONFORMING TO ASTM C270.
5. GROUT FOR BLOCK WALLS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 psi BASED ON THE PROPORTION SPECIFICATION OF ASTM C476. MIX GROUT TO A CONSISTENCY THAT HAS A SLUMP BETWEEN 8 AND 11 INCHES.
6. REINFORCING BARS SHALL BE UNCOATED ASTM A615, GRADE 60.
7. INTERIOR NON-LOAD BEARING MASONRY PARTITIONS ARE REINFORCED WITH #4 VERTICAL BARS SPACED AT 4'-0" UNLESS OTHERWISE NOTED ON PLANS. VERTICAL BARS SHALL BE DOWELED AND EPOXIED 3" MINIMUM INTO SLAB.
8. WHERE BOND BEAMS ARE INDICATED ON THE DRAWINGS, PROVIDE 2-#5 CONTINUOUS BARS. EXTEND BARS 2'-0" MINIMUM BEYOND THE JAMBS OF THE OPENINGS.
9. PROVIDE 9 ga. LADDER-TYPE DUR-O-WAL JOINT REINFORCING AT 16" o.c. IN ALL WALLS. SEE SPECIFICATION.
10. THE MINIMUM LENGTH OF LAP FOR REINFORCING BARS EMBEDDED IN GROUT SHALL BE 48 BAR DIAMETERS, UNLESS SHOWN OTHERWISE ON DRAWINGS.
11. PLACE REINFORCING BARS BEFORE GROUTING. PLACE GROUT IN LIFTS NOT EXCEEDING 5 FEET. CONSOLIDATE EACH LIFT BY MECHANICAL VIBRATION.
12. PROPERLY SECURE REINFORCING BARS TO MAINTAIN THE POSITION INDICATED ON THE DRAWINGS. BARS TO BE LOCATED IN CENTER OF CELLS UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR SHALL SUBMIT GROUT AND MORTAR MIX DESIGNS AND REINFORCING STEEL SHOP DRAWINGS, FOR REVIEW, BEFORE PROCEEDING WITH THE WORK.
14. FOR LOOSE LINTEL SCHEDULE. SEE ARCHITECTURAL DRAWING R0.02.



TYPICAL MASONRY WALL REINFORCING DETAIL



TYPICAL BRACING CONNECTION DETAILS

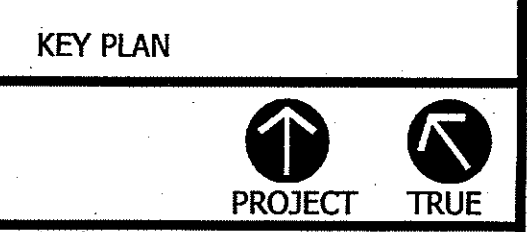
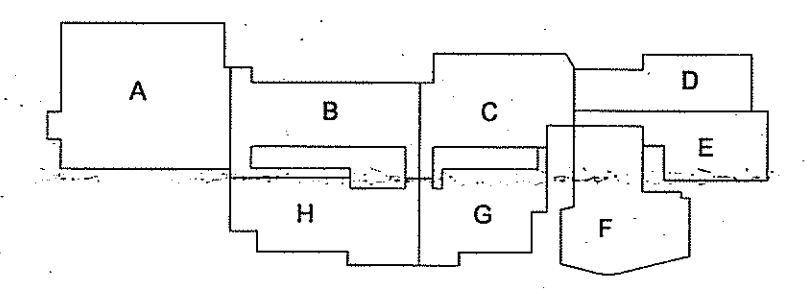
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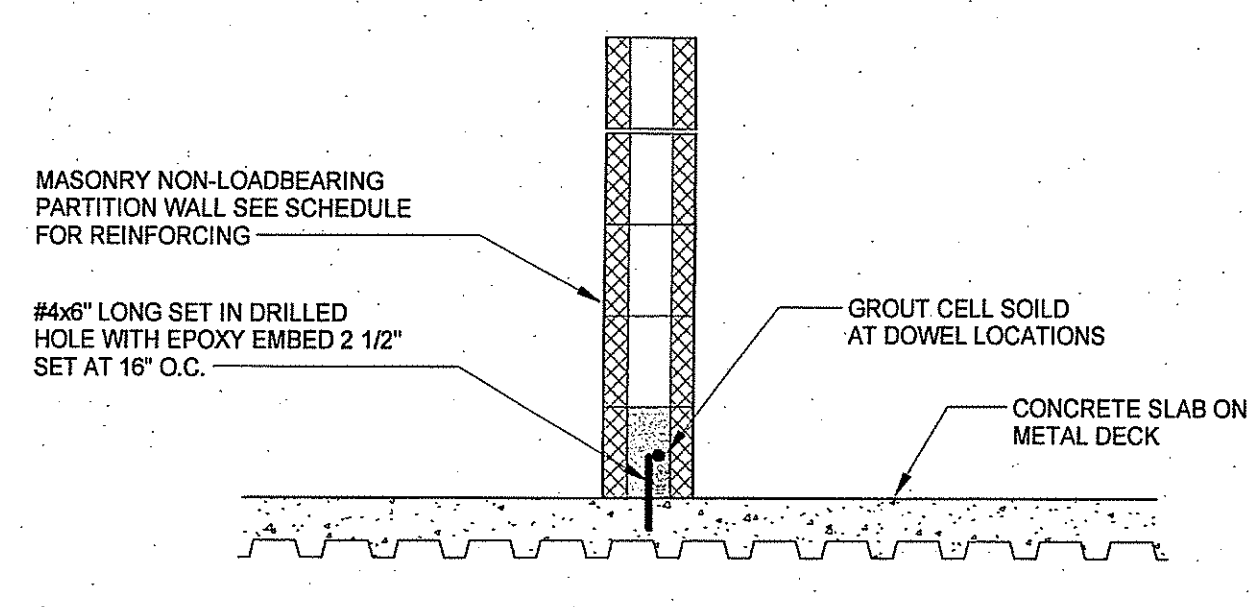


ADDITIONS AND RENOVATIONS TO NAUGATUCK HIGH SCHOOL AND NAUGATUCK BOARD OF EDUCATION

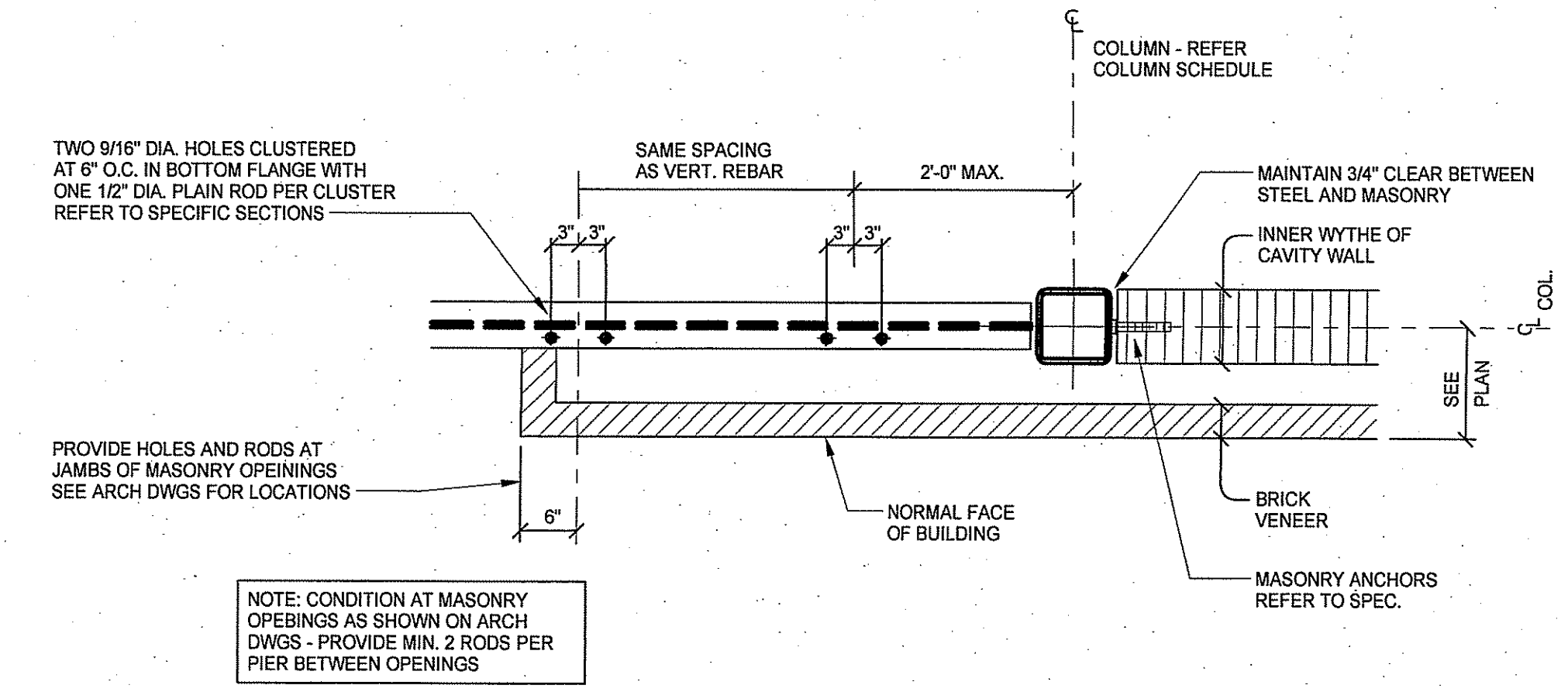
543 RUBBER AVENUE NAUGATUCK, CT 06770
HS SPN: 088-0067 E/A/EC/CV/RN
BOE SPN: 088-0068 A/EC/CV/RN

PROJECT NO.: 11057.00 DRAWN BY: Author

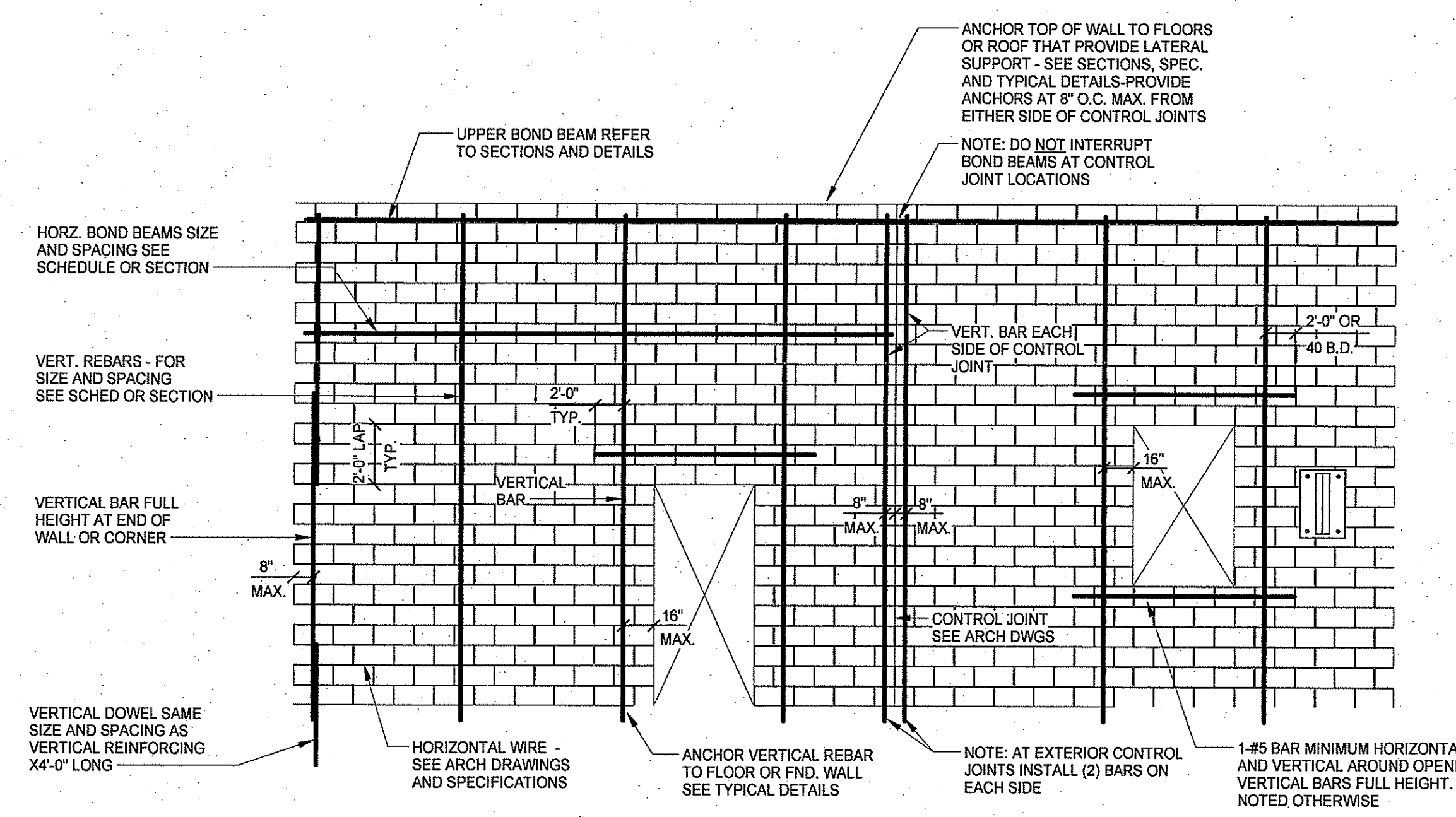
TYPICAL DETAILS



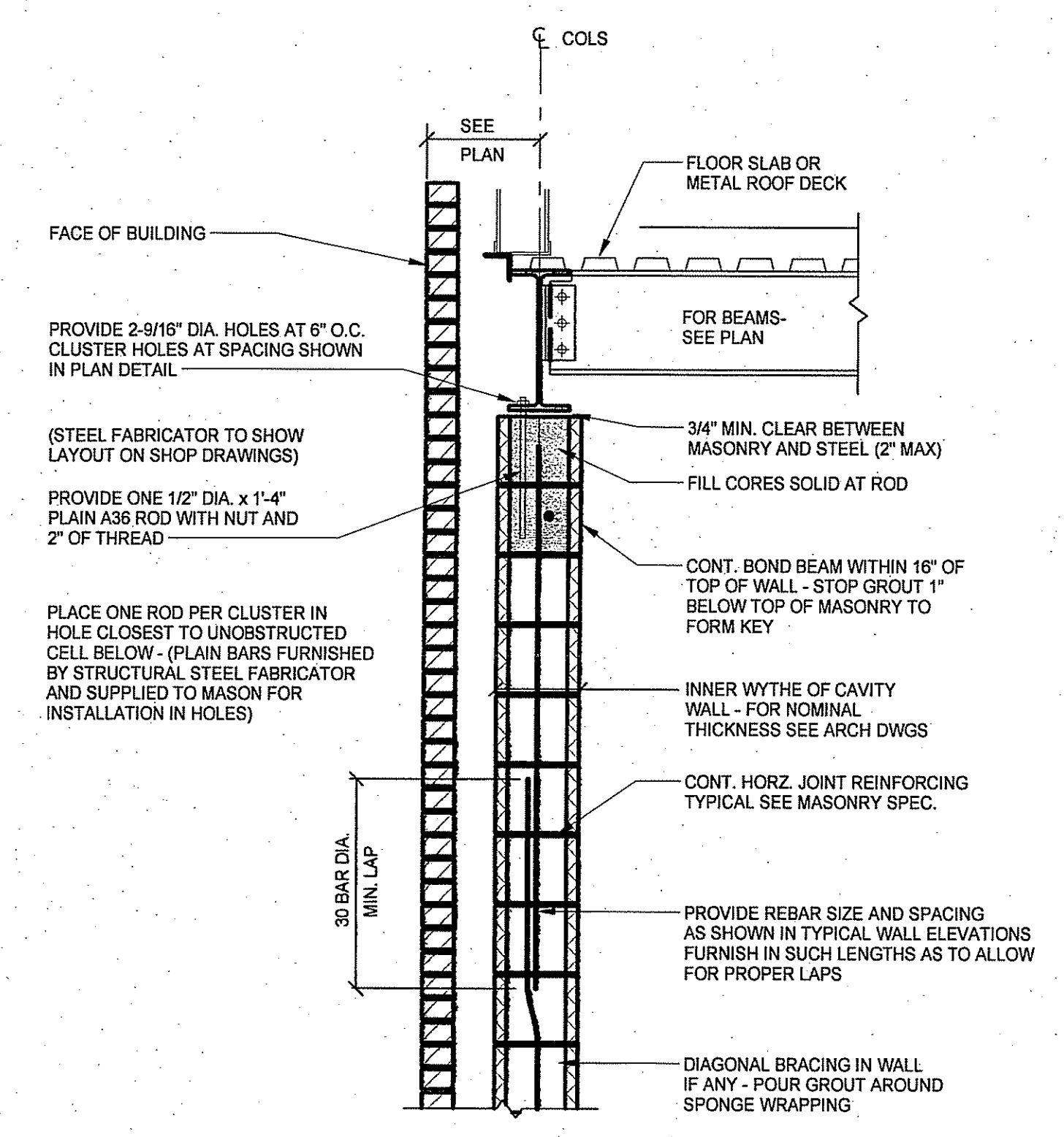
NON-LOADBEARING MASONRY PARTITION WALL TO SLAB ON METAL DECK DETAIL (SLAB ON GRADE SIMILAR TO)



TYPICAL BOTTOM FLANGE HOLE SPACING PLAN DETAIL



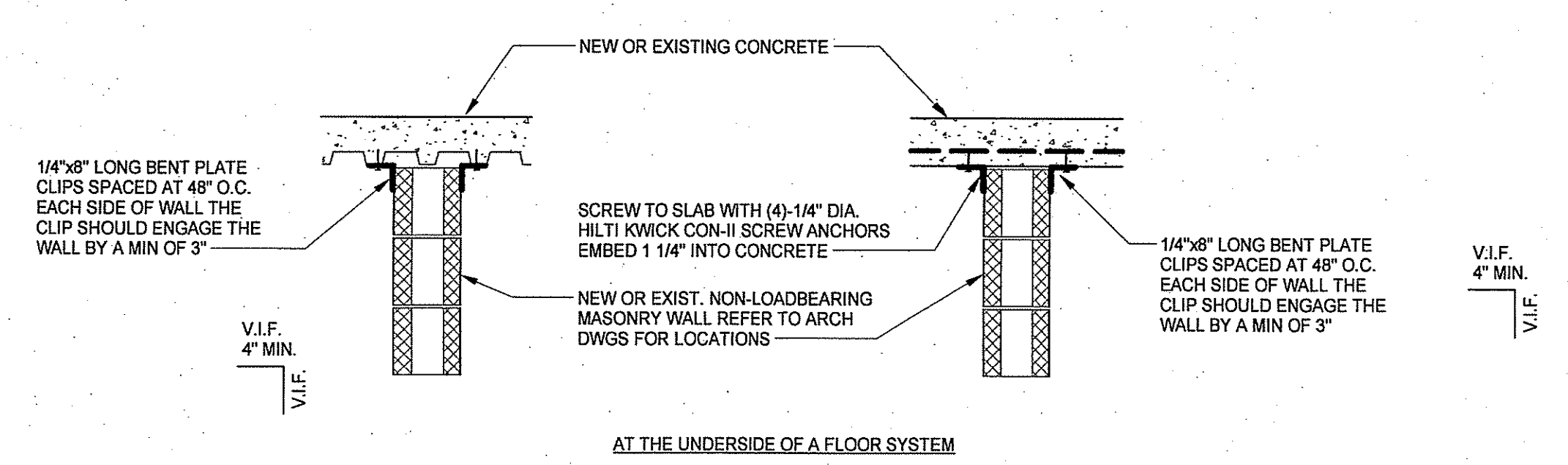
TYPICAL MASONRY WALL REINFORCING DETAIL



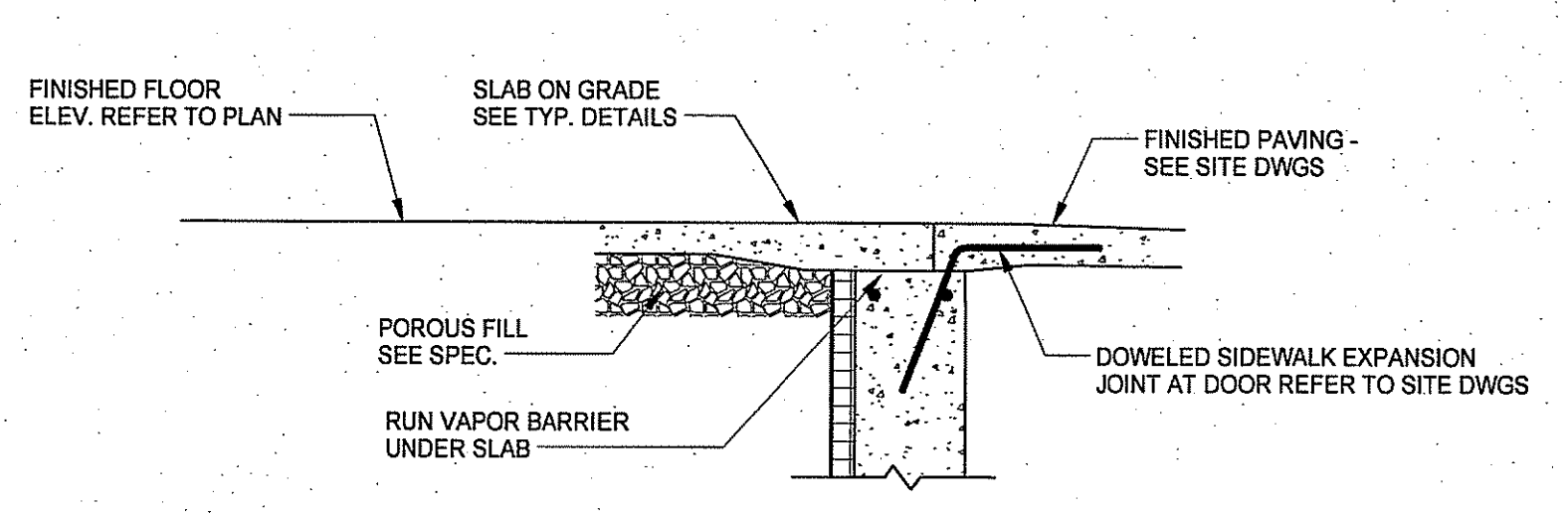
TYPICAL EXTERIOR MASONRY WALL SECTION

WALL DESCRIPTION	TYPE	VERTICAL REINFORCING	HORIZONTAL BOND BEAM REINFORCING	REMARKS	NET COMPRESSIVE STRENGTH f _m (PSI)
INTERIOR & EXTERIOR BEARING & SHEAR WALLS	ALL	#5 AT 4'-0" O.C. UNLESS OTHERWISE NOTED	SEE SECTIONS	SEE TYPICAL MASONRY WALL ELEVATION	1500 PSI
INTERIOR NON-LOAD BEARING PARTITIONS	ALL	NONE	NONE	SEE TYPICAL MASONRY WALL ELEVATION	1500 PSI
INTERIOR PARTITIONS GREATER THAN 15'-0" IN HEIGHT	ALL	#4 AT 48" O.C.	NONE	SEE TYPICAL MASONRY WALL ELEVATION	1500 PSI

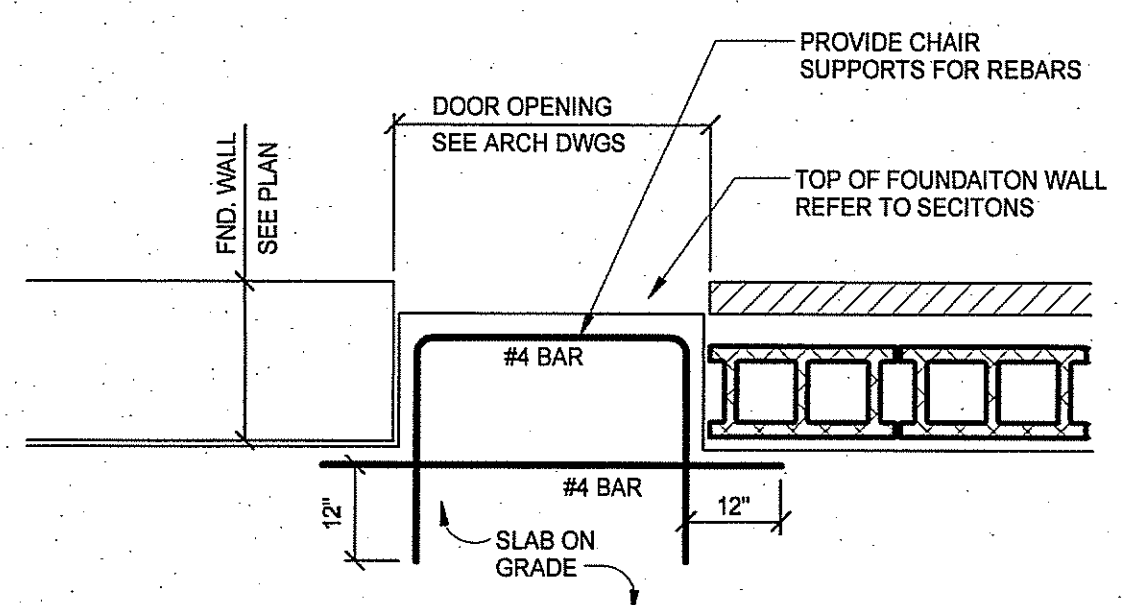
NOTES:
GROUT MINIMUM COMPRESSIVE STRENGTH SHALL BE 2000 PSI
THE GROUT IN THE VERTICAL CELLS SHALL BE CONSOLIDATED USING MECHANICAL VIBRATION METHODS



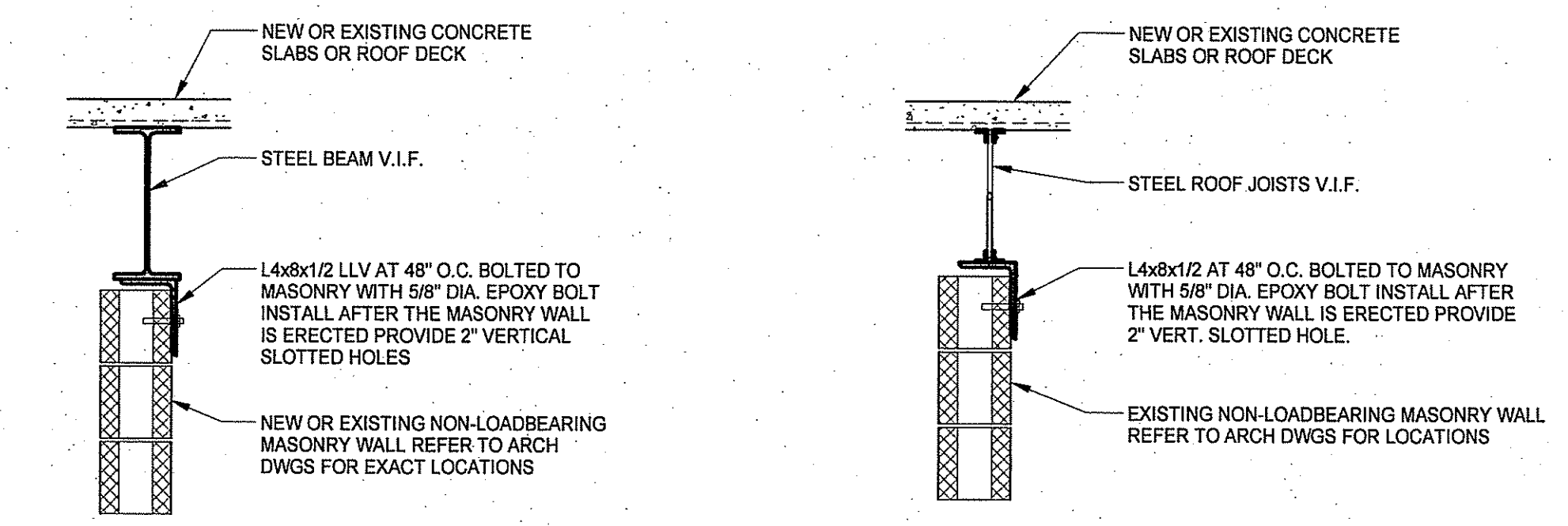
TYPICAL TOP OF MASONRY WALL CLIP DETAILS AT NEW AND EXISTING WALLS



TYPICAL DETAIL AT DOORS



TYPICAL PLAN DETAIL AT DOORS



TYPICAL TOP OF MASONRY WALL CLIP DETAILS AT NEW AND EXISTING WALLS

NOTE: ALL NEW AND EXISTING INTERIOR NON-LOADBEARING MASONRY WALLS MUST BE CLIPPED BACK TO EITHER THE FLOOR OR ROOF STRUCTURE PER THE ABOVE DETAILS

Appendix D

June 19, 2007

Mr. Robert Neth
Chairman
Naugatuck Building Committee
30 City Brook Road
Naugatuck, CT 06770-3100

**Re: Estimate for the Reroofing and Related Work at the
Naugatuck High School
Naugatuck, CT**

Dear Mr. Neth:

The following is a revised breakdown of the estimated costs for the year 2008 and projected reimbursements to install a new 20-year warranted, PVC, single-ply roof with an building integrated photovoltaic panel ("BIPV") system incorporated into the roof membrane of the Naugatuck High School.

Area Calculations:

The total square footage of the High School roof is 194,400 square feet. The 9,600 square foot kitchen addition was constructed in 2005 and as such, would not be eligible for reimbursement. Also, there are 11,650 sq. ft. of roofing installed in 1992 and that will only be eligible for 59.15% reimbursement (20% less). Therefore, the remaining area of roof eligible for 73.93% reimbursement will be 173,150 square feet.

Roof Costs, Estimated:

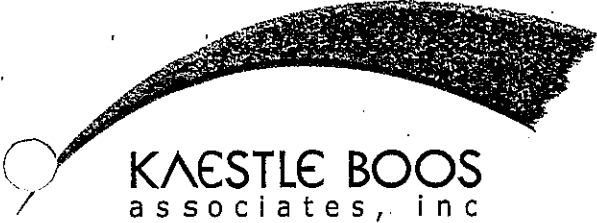
The estimated cost for a new PVC roof system described above is budgeted at \$15.85 per square foot, including tear-off of the existing roof system and a 5% contingency as well as 8% for inflation. This translates to \$2,929,080. The contingency of \$300,000 will not be eligible for reimbursement, (\$2,929,080 - \$300,000) making the amount eligible for reimbursement \$2,629,080.

The estimate cost for architectural fees is \$125,000, including Construction Administration is eligible for reimbursement, (\$2,629,080 + \$125,000) bringing the new eligible total to \$2,754,080.

BIPV System Size and Costs, Estimated:

An initial estimate of the potential BIPV system size is approximately 364kW.

The estimated gross cost for the 364kW BIPV system, prior to reimbursements from state agencies, is approximately \$3,179,484 per calculations provided by Solar Integrated Technologies, Inc. (see attached email).



Total Cost Estimated:

The combined cost of the roofing project and the BIPV panels is $\$2,754,080 + \$3,179,484 = \$5,933,564$.

Estimated Reimbursements:

The Connecticut Clean Energy Fund ("CT CEF") will reimburse up to \$5.00/watt. However, based on other projects that have received funding from the CT CEF, a conservative reimbursement estimate (based on $\$4.50 \times 364,776$ watts) is \$1,641,492.

BSF has ruled that the balance of funds, (after CT CEF grant money is deducted from gross system cost) is eligible for reimbursement for a total of $(\$5,933,564 - \$1,641,492) \$4,292,072$. Of this remaining cost, \$307,670 would be reimbursed at 59.15% ($\$307,670 \times 59.15\% = \$181,986$) and \$3,984,402 would be reimbursed at 73.93% ($\$3,984,402 \times 73.93\% = \$2,945,668$) for a total of $(\$181,986 + \$2,945,668) \$3,127,654$. The sum total of reimbursements is \$4,769,146 ($\$1,641,492 + \$3,127,654$). This would reduce project costs for the Borough of Naugatuck to a total of $(\$6,233,564 - 4,769,146) \$1,464,418$.

Of the estimated \$6,233,564 total project cost, Naugatuck's net cost for the BIPV panel system of \$3,179,484 is estimated to be only \$400,954.50 ($\$3,179,484 - \$1,641,492 = \$1,537,992 - 73.93\% = \$400,954.50$) after deducting the reimbursement from the CT CEF and the 73.93% from the BSF, which will be paid back in less than seven years by the energy savings generated by the new roof system.

If you have any questions, please feel free to contact me.

Very truly yours,

Richard Kirby
Associate
KAESTLE BOOS ASSOCIATES, INC.

RK:lh

Enclosure

c: Wayne McAllister (w/enc.)

Overview

The major portion of the roof coverings are more than 20 years old and consist of mechanically fastened single-ply EPDM membranes. The only exceptions are the original asphalt built-up roofs with gravel on the mechanical room penthouses on the 1976 addition, 11,650 sq. ft. of single ply EPDM that is 16 years old and fully adhered single-ply EPDM roof on the 2003 cafeteria addition that is in good condition.

Assessment

- With the exception of the 2003 cafeteria addition, all the roofs are totally flat with no pitch to the drains. This condition is a code violation and results in extensive areas of ponding water which not only is a safety hazard when it freezes, but the water acts like a magnifying glass on the sun's harmful UV rays causing the accelerated deterioration of the membrane lap seams which have caused a history of leaks requiring constant maintenance and repair.



Ponding water





Ponding water

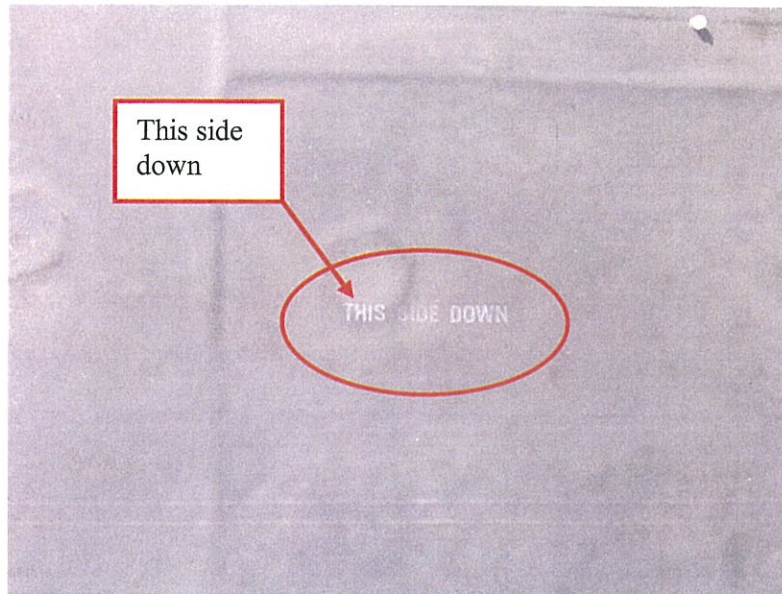


- The roof substrate consisting of insulation and cover boards was not designed and installed properly. Water that leaked into the system was absorbed by the roof insulation boards and went through numerous freeze/thaw cycles which separated the insulation boards from the roof decks causing blistering across the roof surface. The blisters could eventually split open from foot traffic and/or the heavy build up of snow and ice. In addition, this condition may cause the roof to blow off completely during a high wind event. In either case, it would result in catastrophic failure.

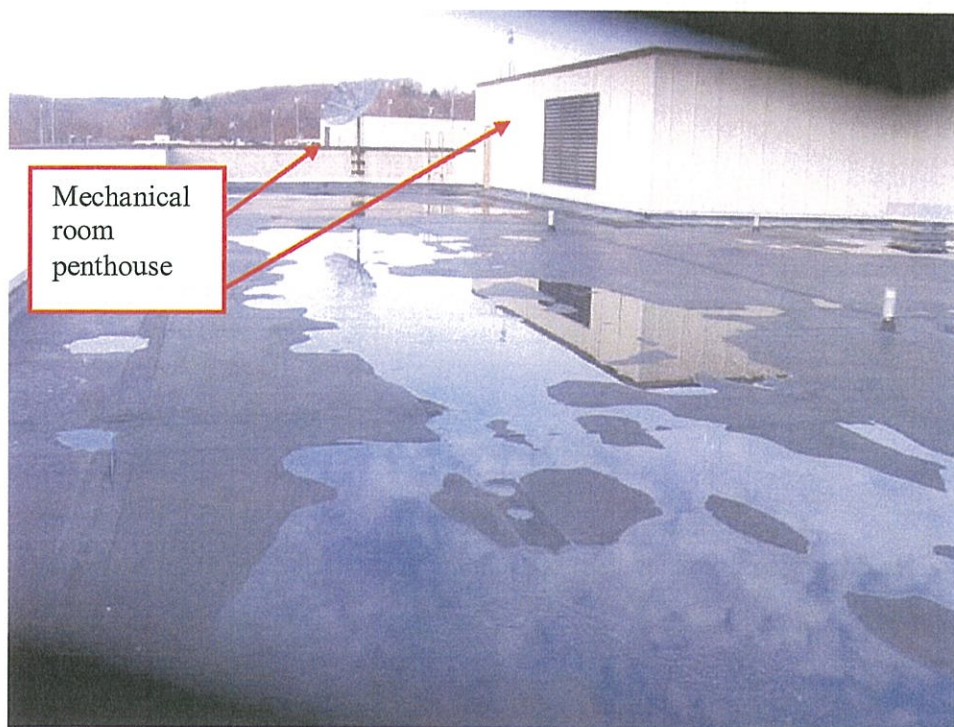


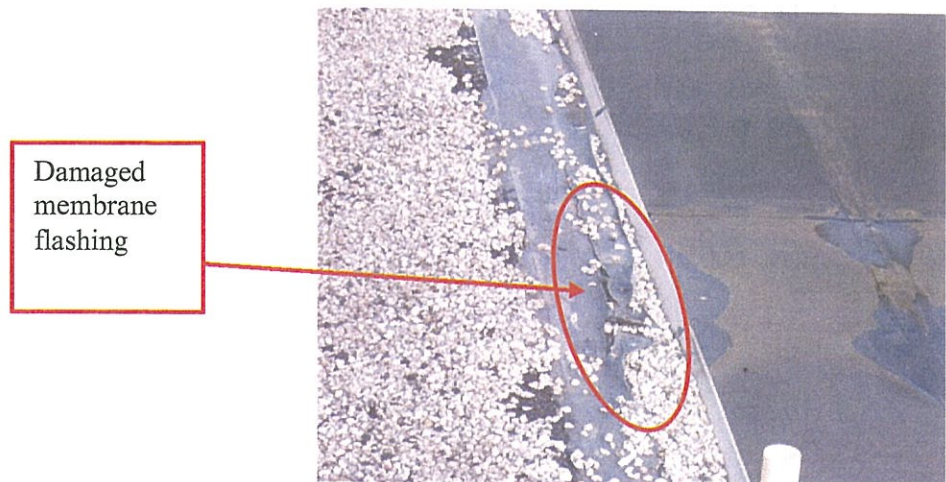
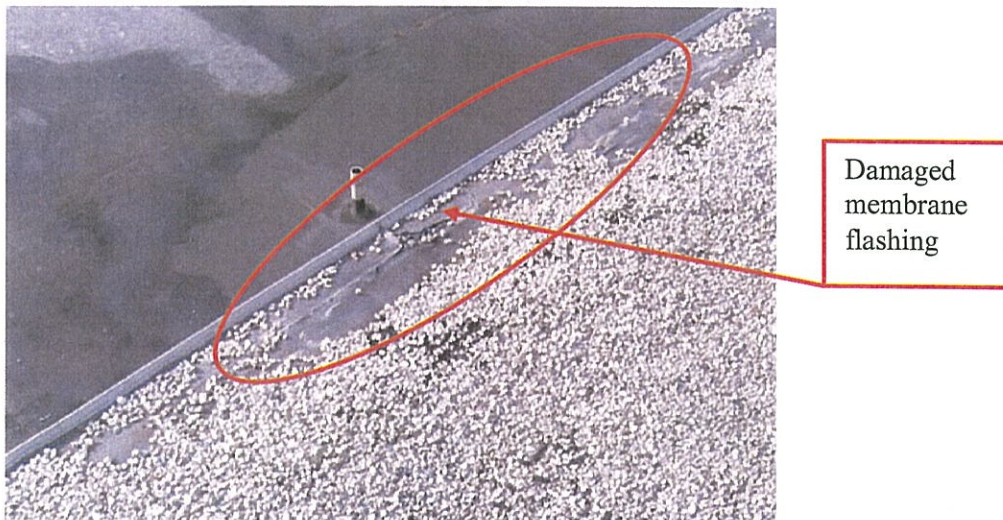
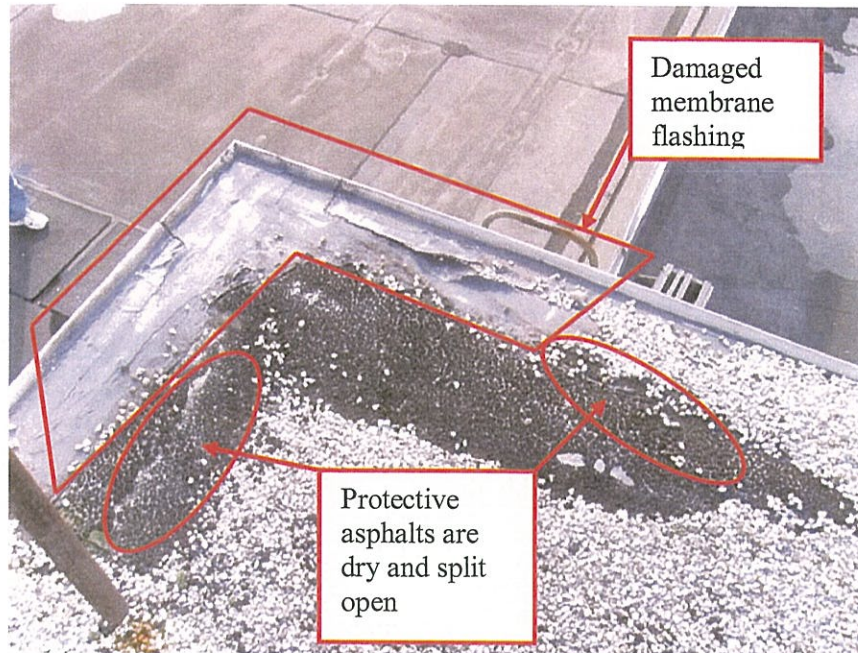


- The roofs have no secondary drainage systems (overflow drains or scuppers) which is a plumbing code violation.
- Sections of the roof membrane have been installed upside down.



- The built-up asphalt roofs with gravel covering the mechanical room roofs are over 30 years old. They have reached the end of their life expectancy. The perimeter membrane flashings are dried and split open allowing water to enter the facility.





- The built-up asphalt roof with gravel covering the connector between the classroom wing and the gymnasium is totally flat with only a scupper to drain the water. The scupper is at a high point consequently, ponding water is always present on the roof. As previously stated, ponding water accelerates the deterioration of the roof system which is not an acceptable condition.



- Access to the roof top equipment using a non-secured, wood ladder is a code violation and a safety hazard.



Recommendations

The roofs were not designed and installed correctly and are in poor condition and do not meet current codes. To avoid possible catastrophic failure, remove all the roofing membrane systems down to the decks, with the exception of the 2003 cafeteria addition. Replace with a new 20 year warrantee system that incorporates tapered insulation to meet building code requirements and more roof drains to enhance drain flow to eliminate ponding water. Provide a secondary drainage system to address plumbing code deficiencies.

Naugatuck Public Schools



Tuttle House

John Petuch
Business Manager

June 19, 2007

RE: Re-roofing Project
Naugatuck High School Education Specifications
Naugatuck, CT
KBA # 06041.00

The School Building Committee and the Naugatuck Board of Education is requesting to approve the submission of an ED049 State Building Project Grant Application to fund adding the installation of photovoltaic solar panels to the Naugatuck High School re-roofing project scope.

The new project will require \$6,233,564.00 funding approval from the Borough of Naugatuck. The project consists of two components:

1. The roof replacement of approximately 184,800 square feet
2. Installation of an integrated photovoltaic panel system

The roof panel system will generate 364 KW of electricity with the equivalent of approximately \$65,000.00 in savings per year. The Connecticut Clean Energy Fund will reimburse the city at least \$1,641,492.00 for the installation of the photovoltaic roof panels. The eligible project expenses for the State Grant reimbursement is 73.93%. There is a section of roof (11,650 sq. ft.) which is 16 years old and is eligible for 20% less.

PROPOSED AUTHORIZATION

Naugatuck High School Construction Cost (Approx. 184,800 sq. ft.)	\$5,933,564.00
Reimbursement from the "Connecticut Clean Energy Fund"	(\$1,641,492.00)
Sub-Total	\$4,292,072.00
Reimbursement of 173,150 sq. ft. (73.93%)	(\$3,127,654.00)
Reimbursement of 11,650 sq ft. (20% less)	(\$181,986.00)
Cost for Naugatuck Construction	\$982,432.00
Additional costs include contingency, financial, insurances, bonds, etc.	\$481,986.00
Total Cost for Naugatuck	\$1,464,418.00

380 Church Street • Naugatuck, Connecticut 06770
(203) 720-5265 • Fax (203) 720-5276



BOROUGH OF NAUGATUCK

JUDITH E. CROSSWAIT, BOROUGH CLERK

229 CHURCH STREET
NAUGATUCK, CT 06770
203 / 720-7008
FAX 203 / 720-7099

June 26, 2007

To Whom It May Concern:

Please note the following as recorded in the minutes of the Special Meeting of the Joint Boards of Mayor and Burgesses and Board of Finance held on May 22, 2007:

"Motion by Deputy Mayor Rossi and seconded by Burgess Neth that the Joint Boards of Mayor and Burgesses and Finance Board adopt the following resolution:

**BOROUGH OF NAUGATUCK
JOINT MEETING OF BOARD OF FINANCE
AND BOARD OF MAYOR AND BURGESSES**

RESOLUTION

RE: Appropriation and Bond Authorization of \$6,233,564 for the High School Roof Replacement Project.

RESOLVED, that

(i) the sum of \$6,233,564 be appropriated for the cost of the High School Roof Replacement Project, including, but not limited to, the replacement of the roof on the Naugatuck High School with a new roof containing solar panels and all alterations, repairs and improvements in connection therewith, as well as engineering, architectural and temporary and permanent financing costs (the "Project"), and to meet said appropriation and in lieu of a tax therefor, bonds of the Borough be issued pursuant to the Charter of the Borough and Chapter 109 of the Connecticut General Statutes, as amended, or any other provision of law thereto enabling, in the amount of \$6,233,564 or so much thereof as may be necessary after deducting grants or other sources of funds available therefor; and

(ii) that the Mayor and the Treasurer of the Borough be authorized to issue and sell temporary notes of the Borough not to exceed \$6,233,564 in anticipation of the receipt of the proceeds from the sale of such bonds and to determine the amount, date, date of maturity, interest rate, form and other details of such notes or bonds, pursuant to the Charter of the Borough and Chapter 109 of the Connecticut General Statutes, as amended, or any other provision of law thereto enabling, provided that the proceeds from the sale of such notes shall be used for said purpose; and

(iii) that the Mayor and the Treasurer of the Borough shall sign the bonds or notes by either manual or facsimile signatures and that the law firm of Pullman & Comley, LLC is designated as bond counsel to approve the legality of the bonds or notes; and

(iv) that the Mayor is authorized to designate a bank or trust company to be the certifying bank, registrar, transfer agent and paying agent of the bonds or notes; to sell the bonds or notes at public or private sale; to deliver the bonds or notes; and to perform all other acts which are necessary or appropriate to issue the bonds or notes including entering into a continuing disclosure agreement pursuant to the Securities and Exchange Commission Rule 15(c)(2)(12). The Mayor and the Treasurer of the Borough are further authorized to bind the Borough pursuant to such representations and covenants as they deem necessary or advisable in order to maintain the continued exemption from federal income taxation of interest on the bonds or notes, including covenants to pay rebates of investment earnings to the United States in future years.

ROLL CALL VOTE:

FOR:

ABSTAIN:

Mayor M. Bronko
T. K. Rossi
R. Butler Jr.
D. Carten
R. Gallant
N. Hein

J. Merrill
D. Scinto
J. Tavares
R. Burns
A. Campbell
M. Fragoso

D. Hoff
H. Kogut
R. Neth
P. Scully
R. Woodfield

OPPOSED:

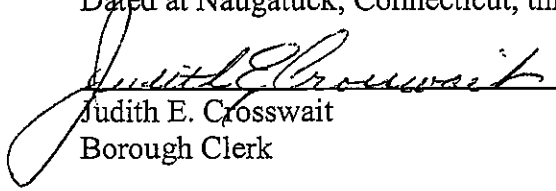
None

None

Motion carried 17-0-0"

I, Judith E. Crosswait, Borough Clerk of the Town of Naugatuck, hereby certifies that the above is a true and attested copy of the minutes of the regular meeting of the Joint Boards of Mayor and Burgesses and Finance Board held on May 22, 2007.

Dated at Naugatuck, Connecticut, this 26th. day of June, 2007


Judith E. Crosswait
Borough Clerk

cc: W. McAllister/J. Petuch/File



BOROUGH OF NAUGATUCK

JUDITH E. CROSSWAIT, BOROUGH CLERK

229 CHURCH STREET
NAUGATUCK, CT 06770
203 / 720-7008
FAX 203 / 720-7099

June 26, 2007

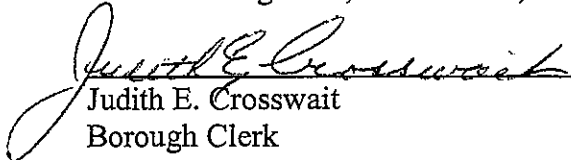
To Whom It May concern:

At the May 1, 2007 regular meeting of the Board of Mayor and Burgesses it was unanimously voted to:

1. Establish a Naugatuck High School Solar Roof Building Committee consisting of the members of the Borough Solar Committee and the members of the Naugatuck Public Schools Facilities Committee.

I, Judith E. Crosswait, Borough Clerk of the Town of Naugatuck, hereby certifies that the above is a true and attested copy of the minutes of the regular meeting of the Joint Boards of Mayor and Burgesses and Finance Board held on May 1, 2007.

Dated at Naugatuck, Connecticut, this 26th. day of June, 2007


Judith E. Crosswait
Borough Clerk

cc: W. McAllister/J. Petuch/File



BOROUGH OF NAUGATUCK

JUDITH E. CROSSWAIT, BOROUGH CLERK

229 CHURCH STREET
NAUGATUCK, CT 06770
203 / 720-7008
FAX 203 / 720-7099

June 26, 2007

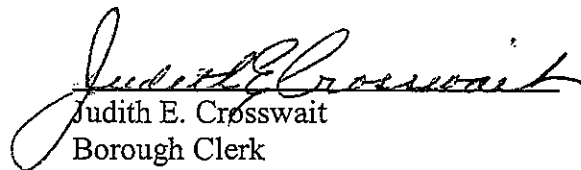
To Whom It May Concern:

At the May 8, 2007 regular meeting of the Joint Boards of Mayor and Burgesses and Board of Finance it was unanimously agreed to:

1. Authorize Richard Kirby of Kaestle Boos Associates LLC to prepare schematic drawings and outline specifications as necessary for the specific purpose of roof replacement and installation of solar generating capacity at the Naugatuck High School.
2. Authorize Naugatuck Public Schools Business Manager John Petuch to file an EDO49 grant application with the Connecticut State Department of Education Bureau of School Facilities and the applicable grant application with David Ljungquist of Connecticut Innovations for applicable Connecticut Clean Energy Fund Rebates.

I, Judith E. Crosswait, Borough Clerk of the Town of Naugatuck, hereby certifies that the above is a true and attested copy of the minutes of the regular meeting of the Joint Boards of Mayor and Burgesses and Finance Board held on May 8, 2007.

Dated at Naugatuck, Connecticut, this 26th. day of June, 2007


Judith E. Crosswait
Borough Clerk

cc: W. McAllister/J. Petuch/File

NAUGATUCK PUBLIC SCHOOLS



October 23, 2007

Mr. David Wedge
State of Connecticut
Office of School Facilities
165 Capital Avenue
P.O. Box 2219
Hartford, Connecticut 06145

Re: Re-roofing Project
Naugatuck High School Education Specifications
Naugatuck, Connecticut
KBA #07038.00

Dear Mr. Wedge:

The School Building Committee and the Naugatuck Board of Education is requesting to approve the submission of an ED042 State Building Project Grant Application to fund the Naugatuck High School re-roofing project, which includes the installation of an integrated photovoltaic panel system.

The Borough of Naugatuck has approved bonding for \$6,358,564.00 to cover the entire cost of construction. The project consists of two components:

1. The roof replacement of approximately 184,800 square feet
2. Installation of an integrated photovoltaic panel system

The roof panel system will generate 364 KW of electricity with the equivalent of approximately \$65,000.00 in savings per year. The Connecticut Clean Energy Fund will reimburse the city at least \$1,641,492.00 for the installation of the photovoltaic roof panels. The eligible project expenses for the State Grant reimbursement is 73.93%. There is a section of roof (11,650 sq. ft.), which is 16 years old and is eligible for 20% less.

PROPOSED AUTHORIZATION

Naugatuck High School Construction Cost (Approx. 184,800 sq. ft.)	\$6,358,564.00
Estimated Reimbursement from the "Connecticut Clean Energy Fund"	<u>(\$1,641,492.00)</u>
Sub-total	\$4,717,072.00

Mr. David Wedge

-2-

October 23, 2007

Estimated Reimbursement of 173,150 sq. ft. (73.93%) BSF	(\$3,487,331.00)
Estimated Reimbursement of 11,650 sq. ft. (20% less) BSF	\$ 158,500.00)
Cost to the Borough of Naugatuck for Construction	<u>\$1,071,241.00</u>

Sincerely,



John Tindall-Gibson, Ph.D.
Superintendent of Schools

NAUGATUCK PUBLIC SCHOOLS



October 23, 2007

Ms. Paige Farnham
STATE DEPARTMENT OF EDUCATION
Office of School Facilities
165 Capitol Avenue
Hartford, Connecticut 06106-1630

RE: CORRECTED STATE PROJECT NO.
Previously documented as: 088-9961 A/EC/RR
Corrected project no.: 088-0061 A/RR

Dear Ms. Farnham:

I am writing to explain the special circumstances that require that the replacement of the roof on State Project No. 088-0061 A/RR should be allowed relief from the ½" per ft. slope requirement on specific designated roof decks and still be fully eligible for State reimbursement. The original construction, dating back to 1958, consisted of poured gypsum roof decks that were not designed to withstand the additional loads resulting from the tapered insulation necessary to provide the ½" per ft. sloped finished roof surface. The subsequent major additions consisted of metal roof decks and will not be a problem to meet the ½" per ft. requirement. Furthermore, the 1958 construction has additional conditions which will have a major impact when increasing the slope with tapered insulation. Specifically those related to the increased the number of roof drains to keep the volume of tapered insulation to a manageable and affordable level. These and other issues are addressed in a letter from Kaestle Boos Associates, Inc. and attached to this communication for your review.

Based on the stated rationale and circumstances unique to this project, I request that the ½" per ft. requirement be waived on the roofs of the 1958 addition.

Sincerely,

A handwritten signature in black ink that reads "J.T. Gibson". The signature is written in a cursive, somewhat stylized font.

John Tindall-Gibson, Ph.D.
Superintendent of Schools

JTG/cak

Enclosure

c: Mr. David Wedge

NAUGATUCK PUBLIC SCHOOLS



October 16, 2007

Mr. David Wedge
State of Connecticut
Office of School Facilities
165 Capital Avenue
P.O. Box 2219
Hartford, Connecticut 06145

Re: Re-roofing and related work at Naugatuck High School
Naugatuck, Connecticut
KBA #07038.00
State Project Number - 088-0061 A/RR

Dear Mr. Wedge:

This is to confirm that the Naugatuck High School is a designated handicap accessible building.

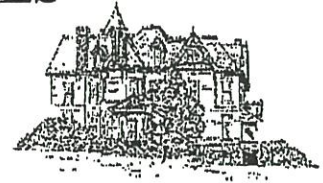
Sincerely,

A handwritten signature in black ink that reads "J. T. Gibson". The signature is stylized and written in a cursive-like font.

John Tindall-Gibson, Ph.D.
Superintendent of Schools

380 Church Street • Naugatuck, Connecticut 06770
(203) 720-5265 • Fax (203) 720-5276

NAUGATUCK PUBLIC SCHOOLS



October 16, 2007

Mr. David Wedge
State of Connecticut
Office of School Facilities
165 Capital Avenue
P.O. Box 2219
Hartford, Connecticut 06145

Re: Re-roofing and related work at Naugatuck High School
Naugatuck, Connecticut
KBA #07038.00
State Project Number - 088-0061 A/RR

Dear Mr. Wedge:

This is to confirm that the Naugatuck High School is aware that the above-referenced school building project exceeds the State Standard Space Specification, and that 100 percent of the prorated project costs for the space in excess of the standard (based on final project data) will be the full responsibility of the town and/or school district unless formally waived by the Commissioner of Education.

Sincerely,

A handwritten signature in black ink, appearing to read "JTGibson". The signature is stylized and written in a cursive-like font.

John Tindall-Gibson, Ph.D.
Superintendent of Schools

NAUGATUCK PUBLIC SCHOOLS



October 16, 2007

Mr. David Wedge
State of Connecticut
Office of School Facilities
165 Capital Avenue
P.O. Box 2219
Hartford, Connecticut 06145

Re: Re-roofing and related work at Naugatuck High School
Naugatuck, Connecticut
KBA #07038.00
State Project Number - 088-0061 A/RR

Dear Mr. Wedge:

As required by Connecticut General Statutes Section 10-283(a)(1) as amended, I offer the following:

I affirm that in the design of the above-mentioned project, this school district considered the maximization of natural light and the use and feasibility of wireless connectivity technology in new construction and alteration or renovation of a (this) school building.

Sincerely,

A handwritten signature in black ink that reads "John Tindall-Gibson". The signature is written in a cursive style with a large, stylized "J" and "G".

John Tindall-Gibson, Ph.D.
Superintendent of Schools

380 Church Street • Naugatuck, Connecticut 06770
(203) 720-5265 • Fax (203) 720-5276

**GRANT APPLICATION AND EXECUTIVE SUMMARY OF
 EDUCATIONAL SPECIFICATIONS FOR A SCHOOL BUILDING PROJECT**

DISTRICT NAME: Naugatuck	FACILITY NAME AND ADDRESS: Naugatuck High School 543 Rubber Avenue Naugatuck, CT 06770	STATE PROJECT NUMBER: (FOR SDE USE ONLY)
CONTACT PERSON & TELEPHONE NUMBER John Petuch (203) 720-5265		

Note: This application must be accompanied by (A) a certified copy of the resolution or resolutions adopted by the legislative body of the applicant (i) establishing a building committee for the project; (ii) authorizing at least the preparation of schematic drawings and outline specifications for the proposed project, (iii) authorizing the filing of this grant application, and (iv) authorizing funding for the project and (B) education specifications for the project and written approval of such education specifications by the district's board of education.

TYPE OF FACILITY

- | | |
|--|---|
| Standard Program | Check
One
Only
<input checked="" type="checkbox"/> |
| Regional Vocational Agriculture Center pursuant to CGS Section 10-65 | <input type="checkbox"/> |
| Regional Special Education Center pursuant to CGS Section 10-76e | <input type="checkbox"/> |
| Board of Education Administrative Facility | <input type="checkbox"/> |
| Interdistrict Magnet pursuant to CGS Section 10-264h | <input type="checkbox"/> |
| Non-Magnet Interdistrict Cooperative pursuant to CGS Section 10-158a | <input type="checkbox"/> |

TYPE OF PROJECT

- | | Check all
that apply | Complete and
submit schedules: |
|---|--|-----------------------------------|
| Purchase of Facility | <input type="checkbox"/> (PF) | 1, 2, 3, 4 |
| New Facility Construction | <input type="checkbox"/> (N) | 1, 2, 3, 4, 6 |
| Extension of Facility | <input type="checkbox"/> (E) | 1, 2, 3, 4, 6, 8 |
| Alteration of Existing Facility | <input type="checkbox"/> (A) | 1, 2, 4, 5, 6, 8 |
| Purchase of Relocatable Classrooms | <input type="checkbox"/> (RE) | 1, 2, 3, 4, 6, 8 |
| Energy Conservation | <input type="checkbox"/> (EC) | 1, 2, 3, 4, 5, 6, 8 |
| Roof Replacement | <input checked="" type="checkbox"/> (RR) | 1, 2, 7 |
| Code Violation | <input type="checkbox"/> (CV) | 1, 2, 5 |
| Indoor Air Quality | <input type="checkbox"/> (IAQ) | 1, 2, 5 |
| Site Acquisition | <input type="checkbox"/> (PS) | 1, 2, 3, 4 |
| Vo-Ag Equipment pursuant to CGS Section 10-65 | <input type="checkbox"/> (VE) | 1, 2 |
| Renovation pursuant to CGS Section 10-286 | <input type="checkbox"/> (RNV) | 1, 2, 3, 4, 5, 6, 7, 8 |

COMPLETE SCHEDULE 9 IF ELIGIBLE FOR ADDITIONAL REIMBURSEMENT AS A:

- | | |
|--|---|
| School Readiness Program pursuant to CGS Section 10-285a(e). | Check all
that apply
<input type="checkbox"/> |
| Lighthouse School pursuant to CGS Section 10-285a(f) | <input type="checkbox"/> |
| Interdistrict Attendance Program (CHOICE) pursuant to CGS Section 10-285a(g) | <input type="checkbox"/> |
| Class Size Reduction Program pursuant to CGS Section 10-285a(h) | <input type="checkbox"/> |
| Full-Day Kindergarten Program pursuant to CGS Section 10-285a(h) | <input type="checkbox"/> |

CERTIFICATION: I hereby certify that the above referenced school district has been duly authorized in accordance with C.G.S. Section 10-283 to apply for and accept grants as provided in Chapter 173 of the Connecticut General Statutes and that all requirements of Section 10-287c-4 of the regulations of the state board of education pertaining to use of funds, maintaining of records and access thereto will be met.

Superintendent's/Director's Name Dr. John Tindall-Gibson	Signature:	Date:
--	------------	-------

State Project No. _____

Schedule 1: General Project Data

a. Is this project in accordance with the district's long-term school building program established pursuant to CGS Section 10-220?

YES NO

Explain answer:

b. Does the district intend to continue using this facility for public educational purposes for the foreseeable future?

YES NO

If "NO", explain answer:

c. Check all applicable reasons for this project:

Increased facility enrollment due to general student population increase.

Increased facility enrollment due to redistricting or regrading of facilities.

Programmatic changes within the facility.

Correction of code violations

Upgrade of facility due to general age and condition.

Replacement of existing facility. Name of facility being replaced: _____

Upgrade of facility to current voice, data and video technology standards.

Repair to facility for damages due to catastrophic loss (fire, flood, wind, etc.)

Energy Conservation (describe): Roof replacement includes installation of

integrated photovoltaic roof panels generating 364 KW of electrical
power which will be designed into the roofing system. The 364 KW is

Other (explain): estimated to save \$65,000 per year in the electrical billing.

d. List separately, and give reasons for, any work on: 1) Outdoor athletic facilities and/or Tennis courts, 2) Natatorium, 3) Gymnasium seating area, or 4) Auditorium seating area. Check here if not applicable.

e. Within the 5 years prior to the date of this application, has the district abandoned, sold, leased, demolished or redirected the use of any school facility constructed or renovated with state assistance?

YES NO

If "YES", provide name of facility and brief details _____

Schedule 2: ESTIMATED PROJECT COSTS AND FINANCING

A. ELIGIBLE AUDITORIUM SEATING AREA:

a1. Auditorium seating capacity	<input type="text"/>	
a2. Total square footage of auditorium	_____	s.f.
a3. Square footage of seating area	_____	s.f.
a4. Total construction cost of auditorium (excluding seats and installation)	_____	
a5. Construction cost of seating area ((Item a3 / Item a2) x Item a4)	_____	
a6. Costs of seats and installation (not included in Item a4)	_____	
a7. Total cost of auditorium seating area (Item a5 + Item a6)	=====	

B. PROJECT FINANCING:

General Fund:	
State Grant - Progress Payments	<u>\$3,382,519</u>
Other General Funding	_____
Current Bonds/Notes	_____
Future Bonds/Notes	<u>\$1,236,553</u>
Sub-Total General Fund/Bonding	<u>\$4,619,072</u>
Other Funding:	
Rebates (CT CEF)	<u>\$1,614,492</u>
Insurance Proceeds	_____
Federal/Other State Grants	_____
Other Financing	_____
Describe: _____	
Sub-Total Other Funding	<u>\$1,614,492</u>
TOTAL FINANCING	<u>\$6,233,564</u>

C. ESTIMATED PROJECT COSTS:

ELIGIBLE COSTS

Architectural Design	<u>\$125,000</u>
Site Acquisition	_____
Facility Purchase	_____
Other professional fees	_____
Construction (Fully eligible)	* <u>\$4,194,072</u>
Bonus area - School Readiness	_____
Bonus area - Full day K/Class size reduction	_____
Equipment/Furnishings	_____
Eligible Costs Sub-Total	<u>\$4,319,072</u>

LIMITED ELIGIBLE COSTS

Outdoor Athletic Facilities and Tennis Courts	_____
Natorium	_____
Eligible auditorium seating area (from Item a7)	_____
Eligible gymnasium seating area costs	_____
Limited Eligible Costs Sub-Total	_____

INELIGIBLE COSTS

Ineligible site acquisition costs	_____
Ineligible facility purchase costs	_____
Ineligible construction costs	_____
Ineligible bonus area-School Readiness	_____
Ineligible bonus area-Full day K/Class size	_____
Unauthorized cost increase	_____
Contingency	<u>\$300,000</u>
Other ineligible costs Rebate from	<u>\$1,614,492</u>
Describe: <u>CT Clean Air Fund</u>	
Ineligible Costs Sub-Total	<u>\$1,914,492</u>

TOTAL ESTIMATED PROJECT COSTS **\$6,233,564**

NOTE: "TOTAL FINANCING" MUST AGREE WITH "TOTAL ESTIMATED PROJECT COSTS"

* Includes balance of costs to install photovoltaic panels not covered by rebate from the Connecticut Clean Air Fund. ("CT CEF")

State Project No. _____

Schedule 3: Site and Facility Purchase Data

Note: The cost of purchasing a site or a building and site shall not be eligible for reimbursement unless the State Department of Education has inspected and authorized the use of the site or the building and site prior to review of final plans. No school building project for which state assistance is sought shall be undertaken except according to a plan and on a site approved by the State Department of Education, the town or regional board of education and by the building committee of such town or district.

a. This project includes purchase of: (check all that apply)

Building (Submit copies of two current independent appraisals AND Worksheet to Determine Maximum Eligible Cost of Purchasing a Facility or Site)

Relocatable(s) (If previously owned, submit copies of two current independent appraisals AND Worksheet to Determine Maximum Eligible Cost of Purchasing a Facility or Site)

* **Site** (Submit copies of two current independent appraisals AND Worksheet to Determine Maximum Eligible Cost of Purchasing a Facility or Site)

No site or facility purchase

* If this project includes a site purchase, complete items b. through d.

b. Number of acres owned for this facility prior to this purchase. _____ acres

c. Number of acres purchased as part of this project. _____ acres

d. Total acres after this purchase (b + c) _____ acres

Schedule 4: Educational Technology Infrastructure

a. Does this project include educational technology enhancements for voice, data and video? YES NO

b. Are technology enhancements planned in accordance with the "Guidelines for Technology Infrastructure in Connecticut Schools" published by the State Department of Education? YES NO

c. Indicate the extent of the educational technology infrastructure in the facility at completion of this project (check all that apply).

Entire Facility	_____	Media Center	_____
Student Support Areas	_____	Computer Labs	_____
Some Classrooms	_____	None	_____
All Classrooms	_____		

d. If this project does not address the needs of educational technology, explain why not.

_____ Already addressed for entire facility.

_____ Other: (explain)

State Project No. _____

Schedule 5: Codes

Indicate the codes being addressed by this project.

(Check all that apply)

OSHA

ACCESS FOR PERSONS WITH DISABILITIES

_____ Accessibility to all programs

_____ Limited accessibility (describe) _____

BUILDING

_____ Building area limits

_____ Structural load

_____ Seismic analysis

_____ Mixed use

HEALTH

_____ Asbestos

_____ Kitchen

_____ Toilet rooms

_____ Environment

FIRE

_____ Sprinkler

_____ Rating of elements

_____ Fire alarm

_____ Emergency lighting

_____ HVAC

_____ Rescue & vent windows

_____ Electrical

OTHER (describe work not listed above.) _____

Schedule 6: Space Standards Data

Please also complete and submit the Space Standards Worksheet.

a. Year of Original Construction for this facility

b. Total facility floor area prior to this project

+ _____ sq.ft.

c. Existing floor area which will be removed from service as part of this project

- _____ sq.ft.

e. New floor area which will be added as part of this project

+ _____ sq.ft.

f. Total facility floor area at the completion of this project (b - c + e)

= _____ sq.ft.

g. Portion of the total facility floor area, at completion of this project, constructed prior to 1950

_____ sq.ft.

h. Highest projected enrollment for this facility during the 8 year period starting the next October 1 following the date of this application

_____ students

i. Grades which will be housed in the facility during this 8 year projection period (Circle all that apply)

Pre-K/K 1 2 3 4 5 6 7 8 9 10 11 12

State Project No. _____

Schedule 7: Roof Replacement

a. Is this a vertical replacement (i.e. removal of all materials down to or including the deck before installation) of a whole roof? YES NO *

* If "NO", proceed no further; this roof replacement is not eligible for a Chapter 173 grant.

b. Is this the only roof covering the entire facility? YES NO

c. For all roof replacement projects:
What is the total roofing area of the facility? 194,400 square feet
What is the area of the roof being replaced? 184,800 square feet

d. Roof replacement costs by age of roof: (Complete for all roof replacement projects.):
Note: If roof area is 15 years or older and less than 20 years old, REDUCED roof replacement costs are eligible for grant payments. Costs will be reduced per the table below for roofs which are not certified below for improper design or construction.

Roof Section Designation or Description (if applicable)	Square Footage of Roof Section	Age of Roof Section	Estimated Roof Replacement Costs	Estimated Ineligible Costs	Project Costs Reduction
All other roofs	173,150	20+ years	* \$3,984,402		N/A
		19 years			5%
		18 years			10%
		17 years			15%
Industrial Tech. Wing	11,650	16 years	* \$307,670		20%
		15 years			25%
Kitchen/Cafeteria	9,600 (NIC)	Less than 15 years			100%

* **Estimated costs includes photovoltaic panels less Connecticut Clean Air Fund rebate of \$ 1,641,492**

e. For roof areas less than 20 years old:
Note: If roof area is less than 20 years old, BOTH certifications below MUST be signed for TOTAL roof replacement costs to be considered for grant payments.

1. I hereby certify and attest that I have inspected said roof area and found it to be:
improperly designed _____
improperly constructed _____

Signature _____ Print Name _____

Title (check one) Registered Architect _____ Registered Engineer _____

2. I hereby certify and attest that the district has recovered damages in the amount of \$ _____ and is prohibited from recovery of further damages or has no other recourse at law or in equity.

Signature _____ Print Name _____

Title (check one) Town Attorney _____ Board Attorney _____

State Project No. _____

Schedule 8: Extension and Alteration Detail

a. Extension Projects - If additional floor space is being added, indicate each type in the boxes below.
Use blank spaces provided for types not listed.

<input type="checkbox"/> Regular instruction	<input type="checkbox"/> Computer rooms	<input type="checkbox"/> Health	<input type="checkbox"/> Natatorium
<input type="checkbox"/> Special ed.	<input type="checkbox"/> Industrial arts	<input type="checkbox"/> Guidance office	<input type="checkbox"/> Kitchen
<input type="checkbox"/> Science labs.	<input type="checkbox"/> Music	<input type="checkbox"/> Auditorium	<input type="checkbox"/> Cafeteria
<input type="checkbox"/> Media center	<input type="checkbox"/> Phys. ed.	<input type="checkbox"/> School admin.	<input type="checkbox"/> Custodial
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

If extension is a relocatable, check the applicable box:

<input type="checkbox"/> New (includes installation)	<input type="checkbox"/> Used (includes installation)	<input type="checkbox"/> Intradistrict (installation only)
---	--	---

b. Alteration Projects - Check the appropriate box below.

Relocation of existing programs to newly constructed space. Describe programs being moved.

Change in the use of existing space. Provide detail (e.g. regular ed classrooms converted to science lab; media center converted to special ed rooms).

Schedule 9: Supplemental Data for School Building Projects Involving Bonus Programs Pursuant to C.G.S. Section 10-285a, subsections (e) through (h).

School Readiness Program (C.G.S. Section 10-285a(e))

Square footage included in this project for a school readiness program. _____ sq. ft.

Square footage of total project area. _____ sq. ft.

Lighthouse School (C.G.S. Section 10-285a(f))

(The project must be located in an existing public school building)

Is this project necessary to convert the building for use as a lighthouse school pursuant to C.G.S. Section 10-266cc? _____ YES/ _____ NO

Out-of-District Students (CHOICE) (C.G.S. Section 10-285a(g))

Total number of spaces at this facility that will be made available at the completion of this project. _____

Highest projected eight-year enrollment for this facility. _____

Full-Day Kindergarten or Reduced Class-Size (C.G.S. Section 10-285a(h))

Is the school:

in a priority school district? _____ YES/ _____ NO

a priority school in a non-priority school district? _____ YES/ _____ NO

Is the project necessary in order to:

offer a full-day kindergarten? _____ YES/ _____ NO

reduce class size pursuant to C.G.S. Section 10-265f? _____ YES/ _____ NO

Square footage of total project area. _____ sq. ft.

Square footage of area used primarily for such full-day kindergarten. _____ sq. ft.

Square footage of area used primarily for such reduced-size classes. _____ sq. ft.

Connecticut State Department of Education
School Construction Grant Management System (SCGMS)
User: Naugatuck Public Schools Selected District: 088-Naugatuck

HELP

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FORM ED049. Superintendent's Certification

State project #: TMP-088-VSJF Facility: Naugatuck High School

Superintendent's Certification

Please provide your initials in each input box next to each of the following statements acknowledging you are aware of each requirement as specified in Public Act 03-220. As applicable, support documentation will be required prior to SDE approval of the plans and specifications.

JTG If the project is for the construction a new facility, an extension to an existing facility, the replacement of a building, the purchase of an existing facility, or for the full renovation of an existing facility, I understand that prior to the SDE approval of architectural plans, we must provide for a Phase I environmental site assessment in accordance with the American Society for Testing and Materials Standard #1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, or similar subsequent standard.

JTG I understand that no architectural plan approval will be given for any project if the site of the facility is in an area of moderate or high radon potential, as indicated in the Department of Environmental Protection's Radon Potential Map, or similar subsequent publication, except where the school building project plan will incorporate construction techniques to mitigate radon levels in the air of the facility. The district will provide documentation indicating the level of radon potential at the applicable school prior to SDE approval of the plans and specifications.

JTG If the plans incorporate new roof construction or the total replacement of an existing roof, the following must be met (to be included in the bid specification):

- A. A minimum roof pitch of one-half inch per foot;
- B. A minimum twenty-year unlimited manufacturer's guarantee for water tightness covering material and workmanship on the entire roofing system;
- C. The inclusion of vapor retarders, insulation, bitumen, felts, membranes, flashing, metals, decks and any other feature required by the roof design;
- D. That all manufacturer's materials to be used in the roofing system are specified to meet the latest standards for individual components of the roofing systems of the American Society for Testing and Materials.

JTG In the case of a major alteration, renovation or extension of a building to be used for public school purposes, the plans must incorporate the guidelines set forth in the Sheet Metal and Air Conditioning Contractors National Association's publication entitled "Indoor Air Quality Guidelines for Occupied Buildings Under Construction" or similar subsequent publication;

JTG In the case of new construction, extension, renovation or replacement, the plans must include a plan that the building maintenance staff responsible for such facility are trained or are receiving training or that the applicant plans to provide training in the appropriate areas of plant operations including, but not limited to, heating, ventilation and air