

THE CITY OF WALTHAM  
MASSACHUSETTS

PURCHASING DEPARTMENT

**CONSOLIDATED PUBLIC WORKS,  
GARAGE REPAIRS**

**ADDENDUM NO. 1**

Oct 23, 2019

**CHANGES, CORRECTIONS AND CLARIFICATIONS**

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications. The items set forth herein, whether of omission, addition, substitution or clarification are all to be included in and form a part of the proposal submitted.

THE NUMBER OF THIS ADDENDUM (NO. 1) MUST BE ACKNOWLEDGED IN SECTION 00 10 00 FORM FOR GENERAL BID

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**ITEM 1: ADDITION**

**Please see the newly located drawings for this project**

**End of Addendum 1**



**DESIGN CRITERIA:**

1. THE WORK OF THIS PROJECT IS A REPAIR OF THE WALL DUE TO A VEHICLE IMPACT. THE DAMAGE DOES NOT MEET THE DEFINITION OF "SUBSTANTIAL STRUCTURAL DAMAGE" TO THE BUILDING. NEW MEMBERS/COMPONENTS COMPLY WITH THE BUILDING CODE FOR NEW CONSTRUCTION.
2. IN ADDITION TO SELF-WEIGHT, REPAIRS ARE DESIGNED TO CARRY THE FOLLOWING LOADS:
  - GROUND SNOW LOAD = 40 PSF.
  - WIND LOAD = RISK CATEGORY II, BASIC WIND SPEED 127 MPH, EXPOSURE C.

**DESIGN STANDARD AND CODES OF PRACTICE:**

- EXISTING BUILDING CODE OF MASSACHUSETTS
- MASSACHUSETTS STATE BUILDING CODE, 9TH EDITION
- AISC STEEL CONSTRUCTION MANUAL, 14TH EDITION
- AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
- AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
- AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
- ANSI/SDI STANDARD FOR STEEL ROOF DECK
- MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES

**GENERAL NOTES:**

1. THE INTENT OF THE STRUCTURAL DRAWINGS IS TO DETAIL THE STRUCTURAL ELEMENTS NECESSARY TO SUPPORT THE COMPLETED PROJECT. ARCHITECTURAL DETAILS AND FINISH COMPONENTS MAY NOT BE SHOWN COMPLETELY. FOR EXAMPLE, THE OVERHEAD DOOR IS NOT DETAILED ON THESE STRUCTURAL DRAWINGS.
2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL AND OTHER TRADES TO COMPLETE THE WORK.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE ALL TRADES WITH THESE DRAWINGS AND FIELD CONDITIONS.
5. IN CASES OF CONFLICT BETWEEN THESE DRAWINGS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD (SER) AND OBTAIN CLARIFICATION PRIOR TO PROCEEDING WITH STRUCTURAL WORK.
6. DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS, UNLESS OTHERWISE NOTED.
7. ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE THESE DRAWINGS.
8. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.

**CONCRETE MASONRY:**

1. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT UNITS, WITH A NET AREA MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI.
2. NOTE THAT MASONRY UNITS ABOVE THE PROPOSED STEEL BEAM, AND MASONRY UNITS FOR THE PILASTERS, SHALL HAVE PLAIN ENDS.
3. MORTAR SHALL BE TYPE N.
4. GROUT FOR MASONRY CONSTRUCTION SHALL BE COARSE GROUT CONFORMING TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
5. MORTAR IS NOT AN ACCEPTABLE ALTERNATIVE FOR GROUT.
6. JOINT REINFORCEMENT FOR MASONRY CONSTRUCTION SHALL BE 3/16 INCH DIAMETER SMOOTH WIRE LADDER REINFORCEMENT CONFORMING TO ASTM A951. LADDER REINFORCEMENT SHALL BE GALVANIZED.
7. FLAT BAR STEEL FOR PILASTERS SHALL CONFORM TO ASTM A36, AND SHALL BE HOT DIP GALVANIZED.
8. LADDER REINFORCEMENT AND FLAT BAR ANCHORS SHALL EACH BE AT 16 INCHES ON CENTER VERTICALLY, AT ALTERNATE BED JOINTS.

**METAL SIDING:**

1. METAL SIDING AND TRIM SHOWN IS BASED ON THE 26 GAUGE PBU WALL PANEL FLUTED DESIGN AS MANUFACTURED BY MBCI, 3/4 INCH THICK WITH FLUTES SPACED AT 6 INCHES ON CENTERS. ANY SUBSTITUTE SYSTEM SHALL HAVE EQUAL OR BETTER STRENGTH.
2. FASTENERS SHALL BE HEX HEAD SCREWS WITH WASHERS AS RECOMMENDED/PROVIDED BY THE WALL PANEL MANUFACTURER.
3. PROVIDE MANUFACTURER'S TAPE SEALER AT ALL TERMINATIONS AND LAPS.
4. PROVIDE MANUFACTURER'S CLOSURES AND TRIM AT ALL TERMINATIONS OVERLAP MASONRY BY 3".

**STRUCTURAL STEEL:**

1. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:
  - ROLLED WIDE FLANGE BEAM: ASTM A572 OR A992, MINIMUM YIELD STRENGTH 50 KSI
  - ANGLES: ASTM A36 MIN YIELD STRENGTH 36 KSI
  - PLATES: ASTM A36
2. CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:
  - NUTS: ASTM A563
  - WASHERS: ASTM F436
  - ANCHOR RODS: ASTM F1554 GRADE 55 WITH WELDABILITY SUPPLEMENT S1
3. FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGN PROFESSIONALS.
4. FLAME CUTTING OF STRUCTURAL STEEL WILL NOT BE PERMITTED.

**STEEL ROOF DECK:**

1. STEEL ROOF DECK SHALL BE 20 GAUGE NARROW RIB DECK CONFORMING TO THE FOLLOWING:
  - STEEL FOR DECK ASTM A653, MINIMUM YIELD STRENGTH OF 33 KSI
  - ROOF DECK SHALL BE HOT-DIP GALVANIZED PER ASTM A653
2. PROVIDE STEEL ROOF DECK WITH 1 1/2" DEPTH.
3. PROVIDE MECHANICAL ANCHORAGE AT 6 INCH ON CENTERS SPACING TO SUPPORTING MEMBERS. SPOT WELDING OF DECK WILL NOT BE PERMITTED. USE ONLY FASTENERS APPROVED BY FM GLOBAL.

**MISCELLANEOUS WOOD BLOCKING:**

WOOD BLOCKING WILL BE REQUIRED FOR TRIMMING OUT AND COMPLETING THE FINAL RESTORATION OF ROOFING TO THE TOP OF THE WALL. ALL WOOD BLOCKING SHALL BE PRESSURE TREATED, AND ALL FASTENERS FOR THE WOOD BLOCKING SHALL BE EITHER HOT DIP GALVANIZED OR STAINLESS STEEL.

**CONCRETE ANCHORS:**

MECHANICAL AND ADHESIVE ANCHORS TO CONCRETE ARE SELECTED FROM THE HILTI PRODUCT LINE. ANY SUBSTITUTIONS TO THE SPECIFIED ANCHORS SHALL BE SUBMITTED WITH FULL DETAILS OF SIZE, MATERIAL, AND STRENGTH DATA TO SHOW THAT THE SUBSTITUTE IS EQUAL OR BETTER.

**CONCRETE SPALL REPAIRS:**

1. REPAIR MORTAR FOR REPAIR OF SPALLS OF THE CONCRETE FOUNDATION SHALL BE SIKAQUICK FNP AS MANUFACTURED BY SIKA. ANY SUBSTITUTION SHALL HAVE EQUAL OR BETTER COMPRESSIVE STRENGTH = 3,500 PSI AT 24 HOURS.
2. SPALL REPAIR MORTAR APPLICATION SHALL CONFORM IN ALL RESPECTS TO THE MANUFACTURER'S RECOMMENDATIONS, INCLUDING SURFACE PREPARATION, PRIMING, CURING, AND ADDITION OF COARSE AGGREGATE FOR DEEP REPAIR.



*Signature*  
 9 MAY 2019

DATE: 09 MAY 2019

STEPHEN G. MAKRIS, P.E.  
 CONSULTING ENGINEER, LLC

11 EPHRAIM DRIVE  
 MANSFIELD, MA 02048

DWN. BY SGM CK. BY SGM

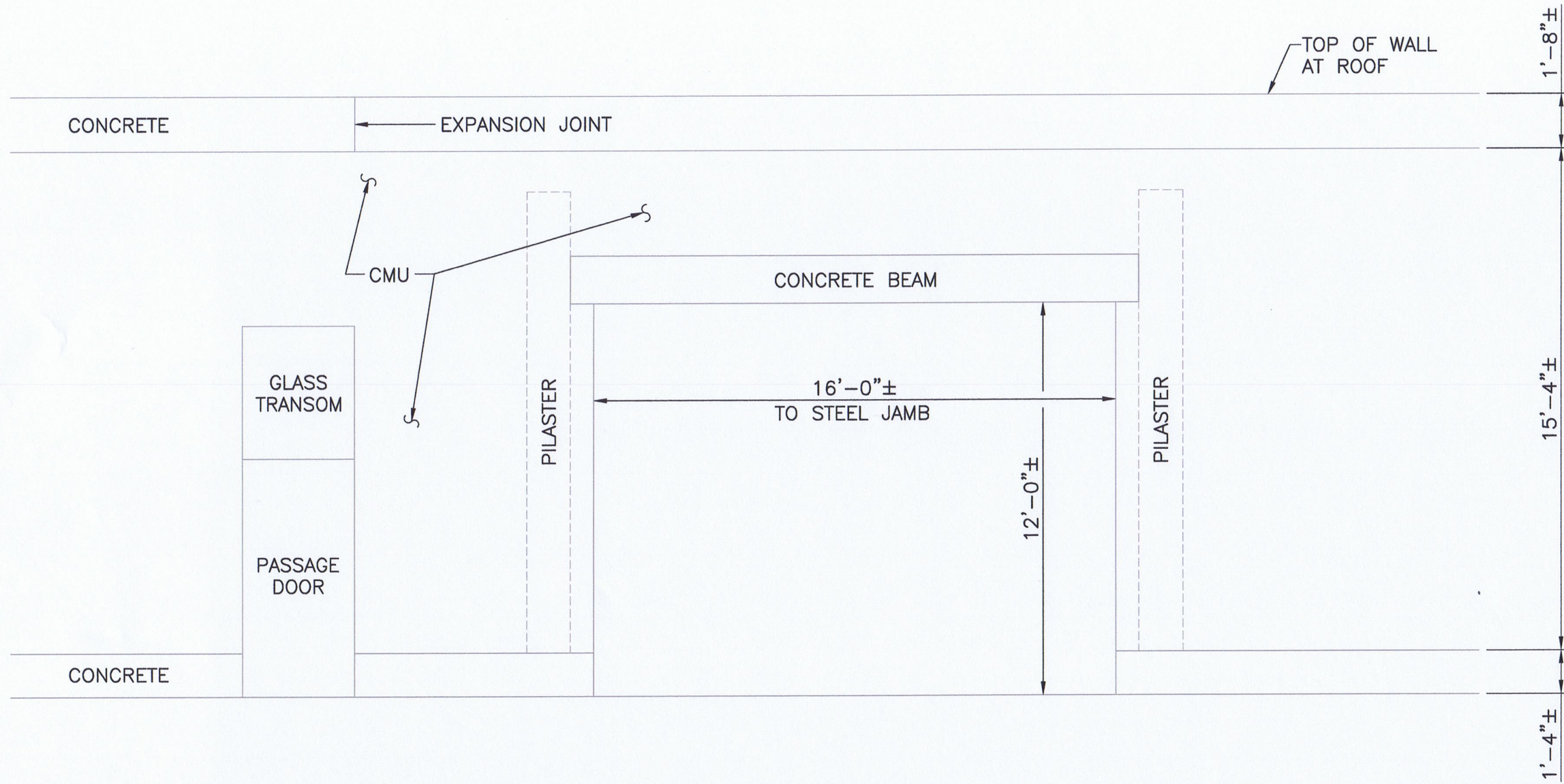
LEXINGTON STREET, WALTHAM, MA  
 DPW GARAGE - OVERHEAD DOOR #9  
 WALL REPAIRS

SHEET 1 OF 6


SHEET

S-1





**EXISTING ELEVATION**  
 SCALE: 1/4" = 1'-0"

  
*Stephen G. Makris*  
 9 MAY 2019

DATE: 09 MAY 2019

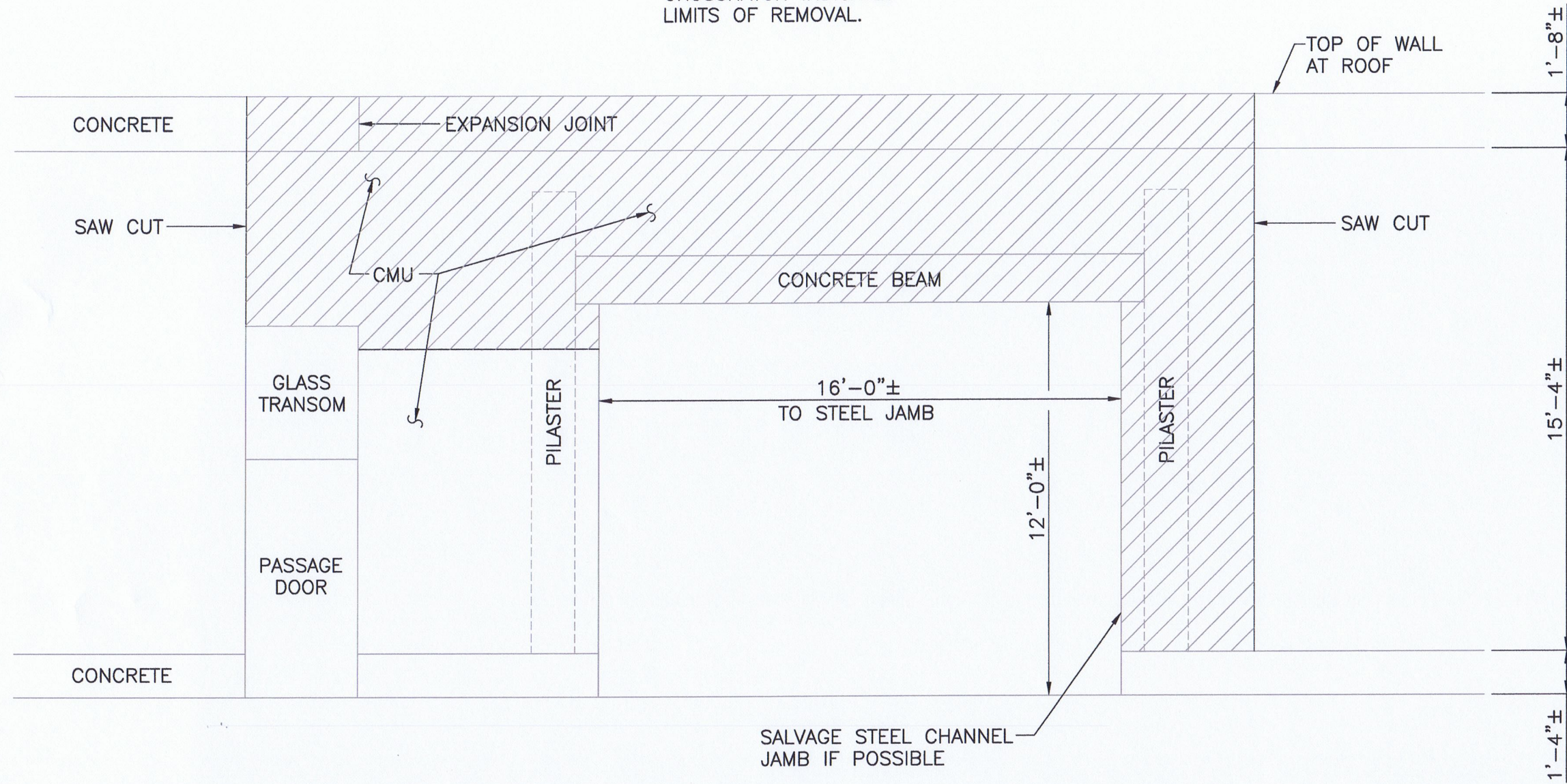
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 DPW GARAGE - OVERHEAD DOOR #9  
 WALL REPAIRS  
 SHEET 2 OF 6

SHEET  
**S-2**



**NOTE:**  
 CROSSHATCH INDICATES  
 LIMITS OF REMOVAL.



**ELEVATION OF LIMITS OF DEMOLITION**  
 SCALE: 1/4" = 1'-0"



*Handwritten signature and date:*  
 9 May 2019

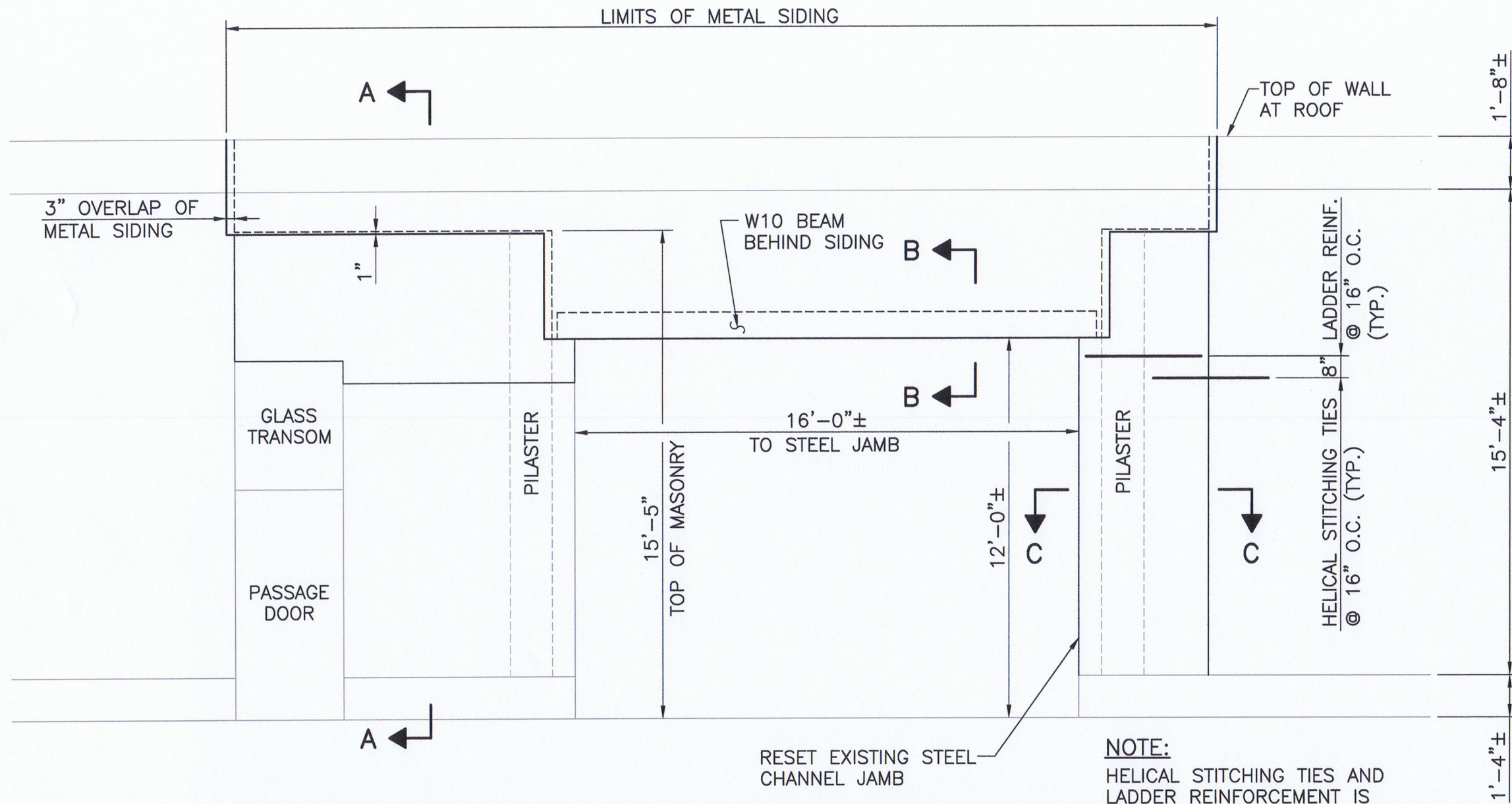
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 MANSFIELD, MA 02048  
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 DPW GARAGE - OVERHEAD DOOR #9  
 WALL REPAIRS  
 SHEET 3 OF 6

SHEET  
**S-3**





**ELEVATION OF PROPOSED REPAIR**  
 SCALE: 1/4" = 1'-0"

**NOTE:**  
 HELICAL STITCHING TIES AND  
 LADDER REINFORCEMENT IS  
 REQUIRED AT ALL CMU.

COMMONWEALTH OF MASSACHUSETTS  
 REGISTERED PROFESSIONAL ENGINEER  
 STEPHEN G. MAKRIS  
 STRUCTURAL  
 No. 28440  
*Stephen G. Makris*  
 9 MAY 2019

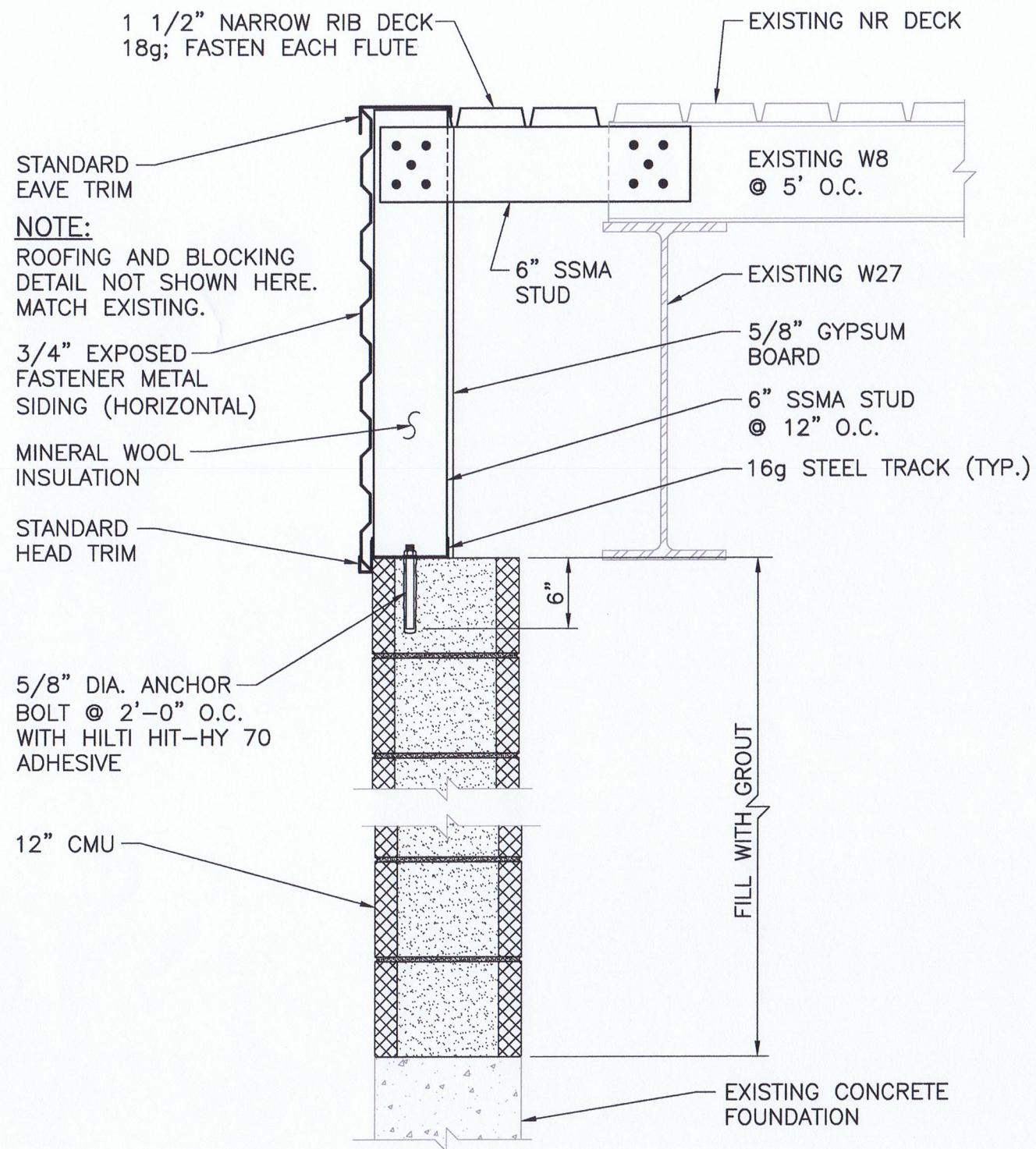
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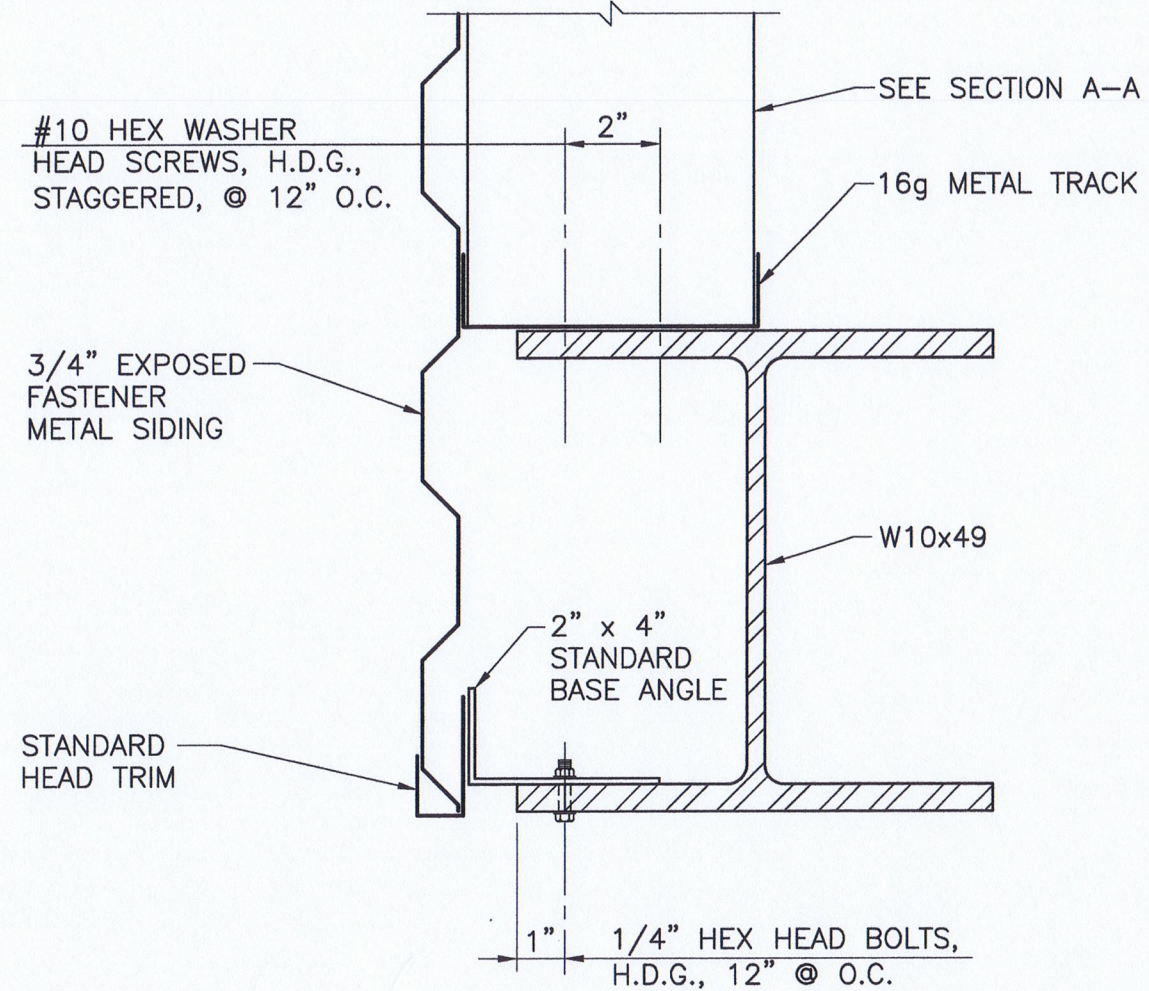
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 DPW GARAGE - OVERHEAD DOOR #9  
 WALL REPAIRS  
 SHEET 4 OF 6

SHEET  
**S-4**

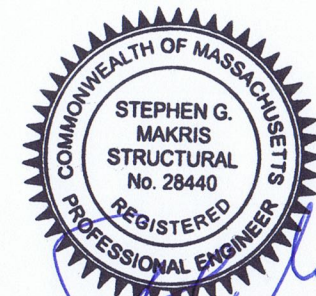




**SECTION A-A**  
SCALE: 1" = 1'-0"



**SECTION B-B**  
SCALE: 3" = 1'-0"



*Stephen G. Makris*  
9 MAY 2019

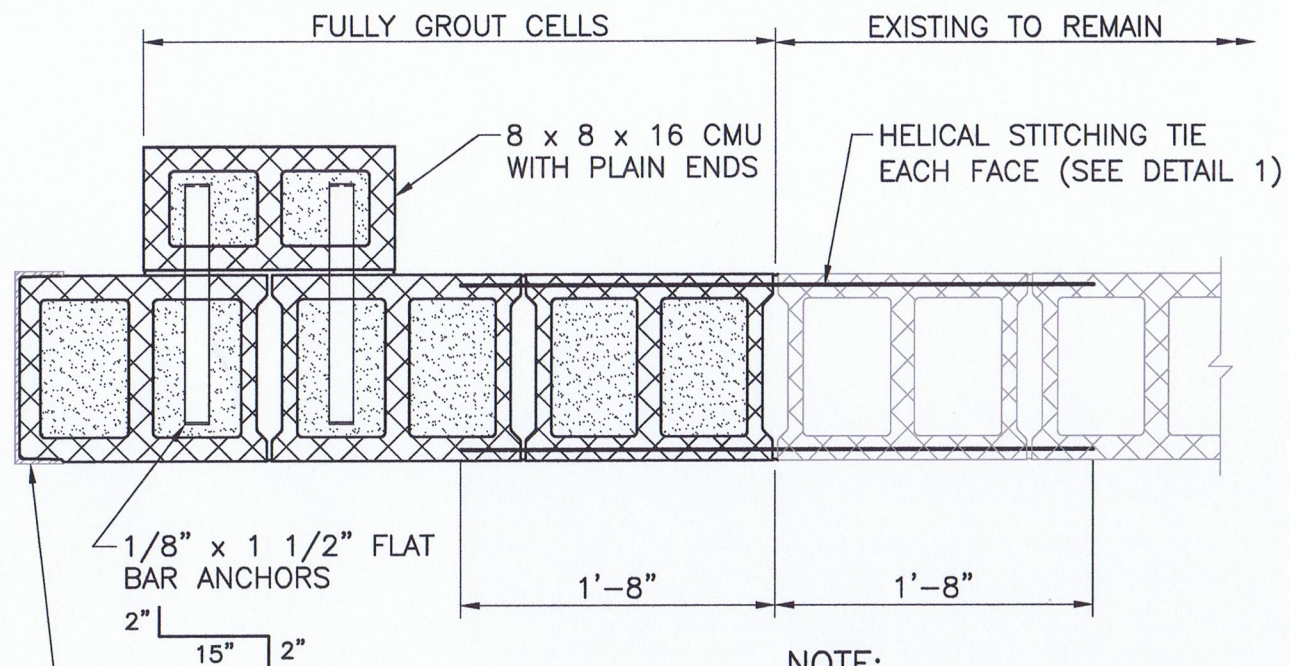
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MANSFIELD, MA 02048  
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LEXINGTON STREET, WALTHAM, MA  
DPW GARAGE - OVERHEAD DOOR #9  
WALL REPAIRS  
SHEET 5 OF 6

SHEET  
**S-5**





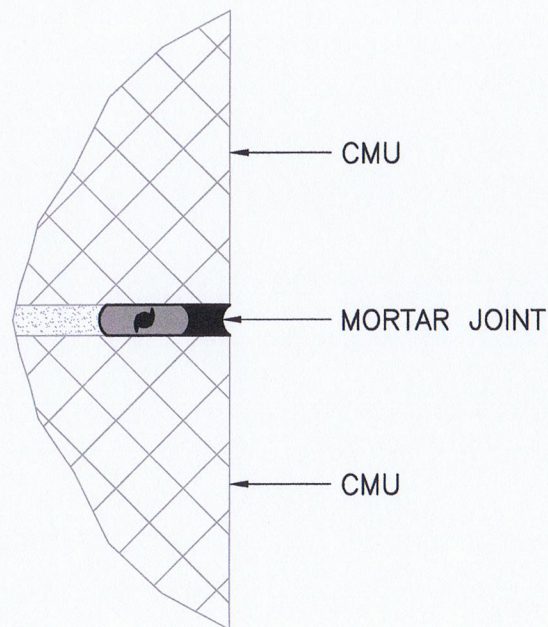
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**NOTE:**  
FLAT BAR ANCHORS AND HELICAL STITCHING TIES SHALL BE 16" O.C. VERTICALLY, ALTERNATE WITH LADDER REINFORCEMENT

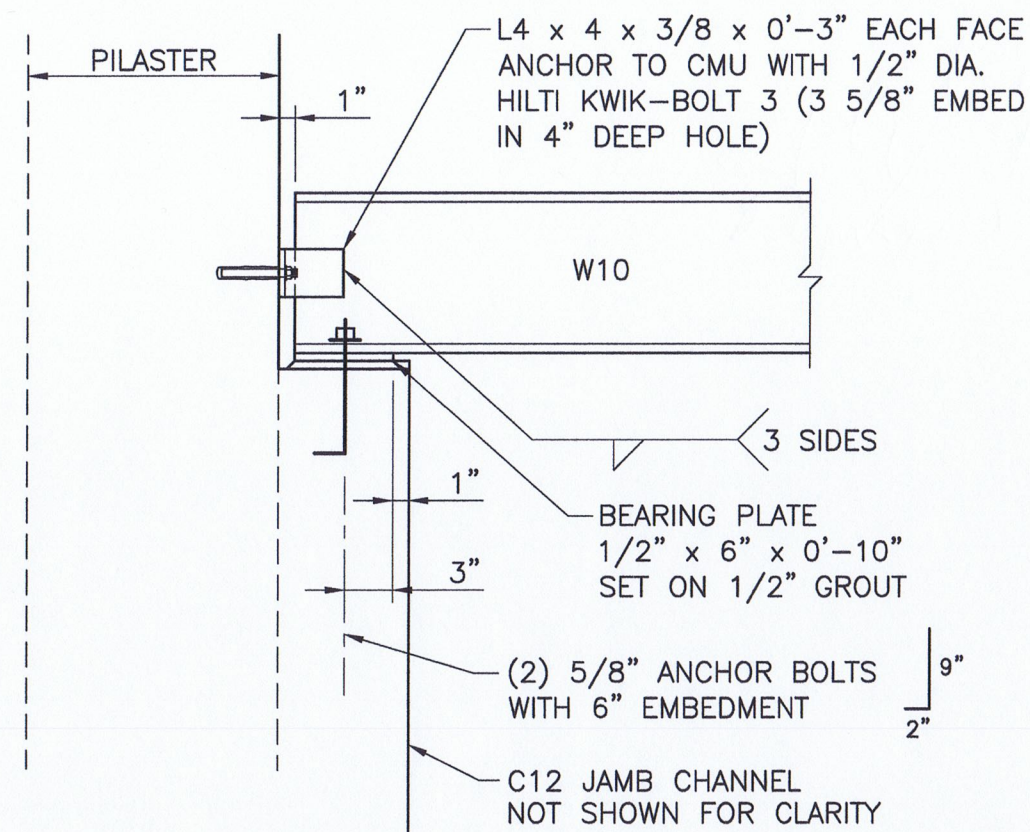
**SECTION C-C**  
SCALE: 1" = 1'-0"

**INSTALLATION NOTES:**

- GRIND OUT MORTAR 1 1/4" TO 1 1/2" DEEP WITH ROTARY GRINDING WHEEL.
- CLEAN OUT DEBRIS.
- FILL JOINT 2/3 DEEP WITH SIMPSON STRONG-TIE FX-263 REPAIR MORTAR.
- IMMEDIATELY EMBED THE TIE TO MID-DEPTH OF REPAIR AND TOOL MORTAR TO FULLY ENCAPSULATE THE TIE.
- COMPLETE THE MORTAR JOINT.



**DETAIL 1**  
SCALE: 6" = 1'-0"



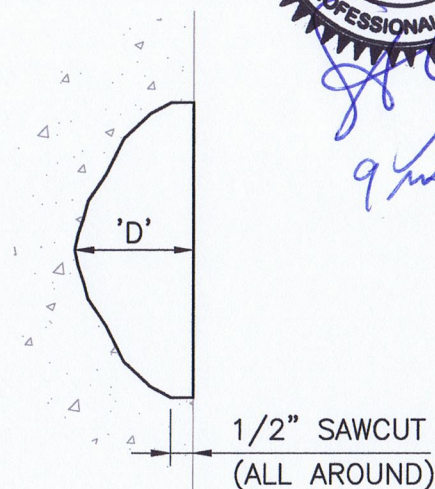
**DETAIL AT BEAM END**  
SCALE: 1" = 1'-0"

**SPALL REPAIR NOTES:**

- REMOVE ALL DETERIORATED CONCRETE.
- SAWCUT PERIMETER.
- WATERBLAST OR SANDBLAST.
- FORM SIDES AND EDGES.
- PREWET SURFACE TO SSD.
- POUR REPAIR MORTAR AND VIBRATE FORM.
- MOIST CURE FOR 24 HOURS.

**LIMITATIONS:**

- IF 'D' EXCEEDS 3" EXTEND MIX WITH 3/8" CLEAN AGGREGATE.
- IF RUSTED STEEL REINF EXPOSED REMOVE ALL RUST AND COAT WITH SIKA ARMATEC 110 EPOCEM.



*Signature*  
9 MAY 2019

**CONCRETE FOUNDATION SPALL REPAIR DETAIL**  
NOT TO SCALE

DATE: 09 MAY 2019

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WALL REPAIRS

SHEET 6 OF 6

SHEET

**S-6**



**DESIGN CRITERIA:**

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2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL AND OTHER TRADES TO COMPLETE THE WORK.
3. SHORING IS REQUIRED FOR THE CONCRETE BOND BEAM AND ADJACENT MASONRY. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION IS COMPLETED.
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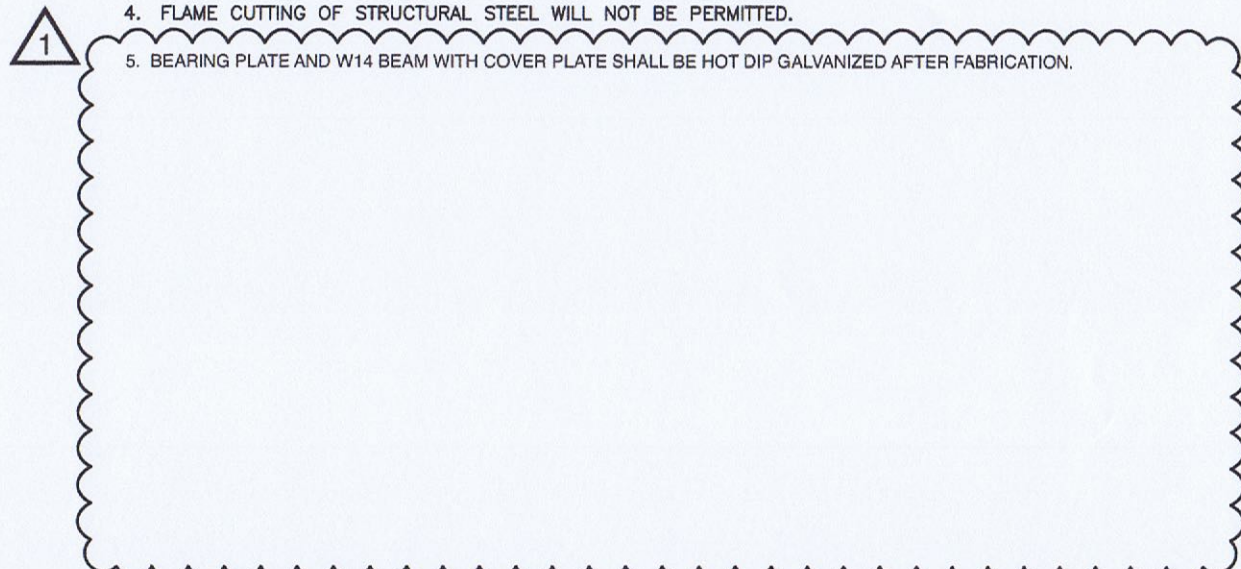
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1. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT UNITS, WITH A NET AREA MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI.
2. NOTE THAT MASONRY UNITS FOR THE PILASTERS SHALL HAVE PLAIN ENDS AT EXPOSED SIDES.
3. MORTAR SHALL BE TYPE N.
4. GROUT FOR MASONRY CONSTRUCTION SHALL BE COARSE GROUT CONFORMING TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
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  - ANCHOR RODS: ASTM F1554 GRADE 55 WITH WELDABILITY SUPPLEMENT S1
3. FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGN PROFESSIONALS.
4. FLAME CUTTING OF STRUCTURAL STEEL WILL NOT BE PERMITTED.
5. BEARING PLATE AND W14 BEAM WITH COVER PLATE SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.



**CONCRETE SPALL REPAIRS:**

1. REPAIR MORTAR FOR REPAIR OF SPALLS OF THE CONCRETE FOUNDATION SHALL BE SIKAQUICK FNP AS MANUFACTURED BY SIKA. ANY SUBSTITUTION SHALL HAVE EQUAL OR BETTER COMPRESSIVE STRENGTH = 3,500 PSI AT 24 HOURS.
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*Signature*  
 19 JUNE 2019  


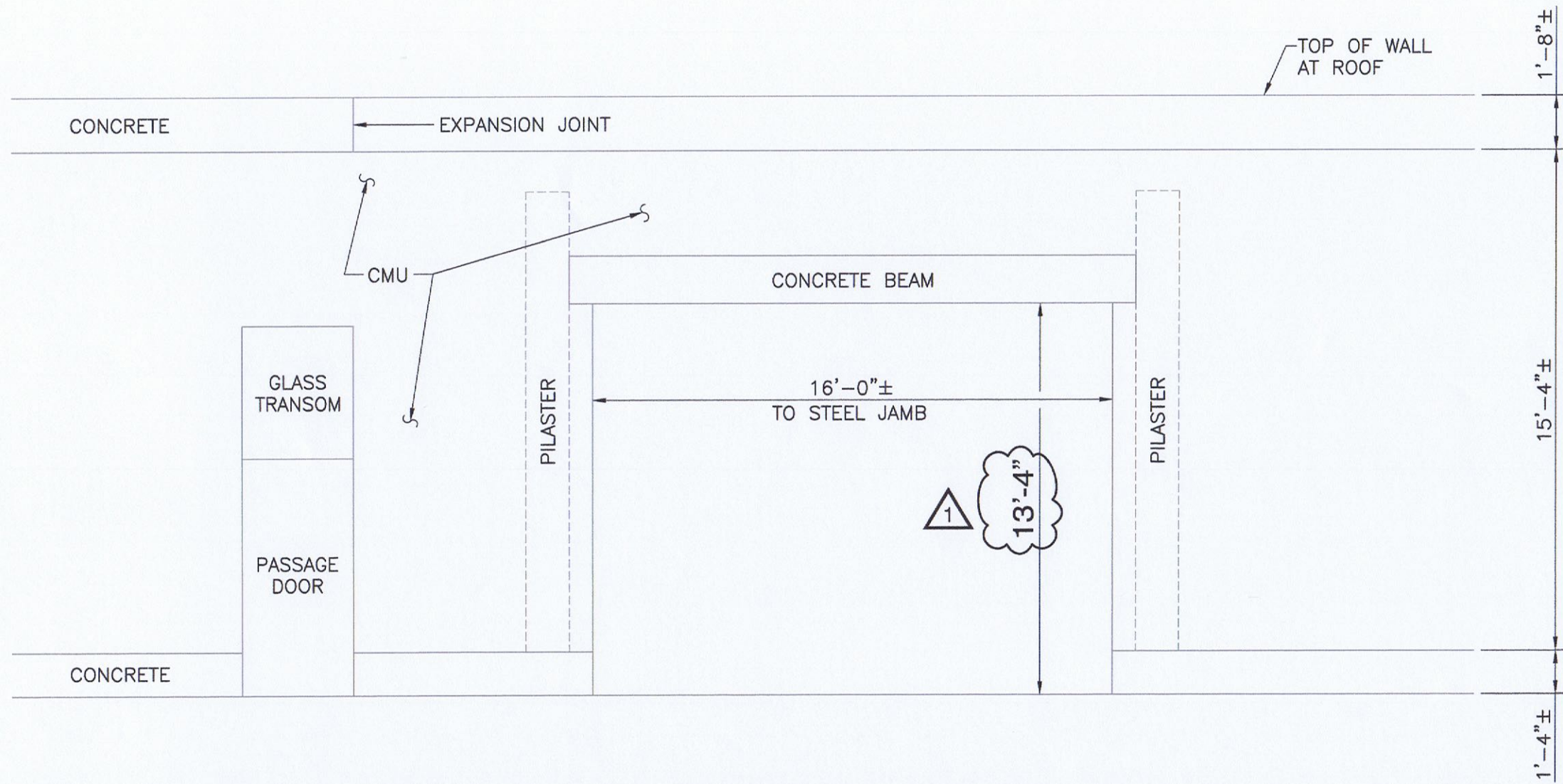
REV 1 : 19JUNE2019  
 DATE: 09 MAY 2019

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 MANSFIELD, MA 02048  
 DWN. BY SGM CK. BY SGM

LEXINGTON STREET, WALTHAM, MA  
 DPW GARAGE - OVERHEAD DOOR #9  
 WALL REPAIRS  
 SHEET 1 OF 6

SHEET  
 S-1





**EXISTING ELEVATION**  
 SCALE: 1/4" = 1'-0"



*Stephen G. Makris*  
 19 JUNE 2019

LEXINGTON STREET, WALTHAM, MA  
 DPW GARAGE - OVERHEAD DOOR #9  
 WALL REPAIRS

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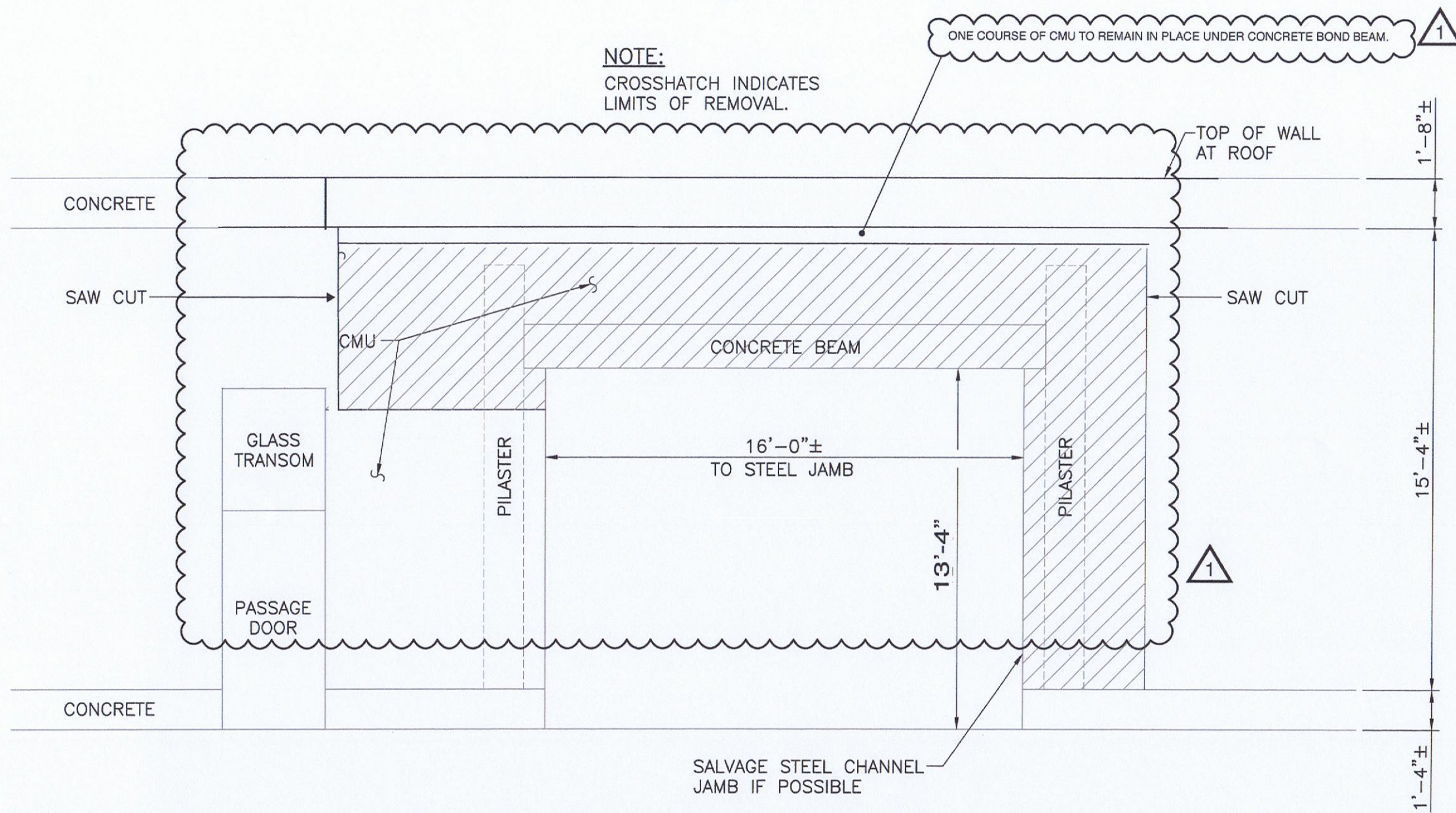
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SHEET  
**S-2**

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SHEET 2 OF 6





**ELEVATION OF LIMITS OF DEMOLITION**  
 SCALE: 1/4" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS  
 REGISTERED PROFESSIONAL ENGINEER  
 STEPHEN G. MAKRIS  
 STRUCTURAL  
 No. 28440  
*Stephen G. Makris*  
 19 JUNE 2019

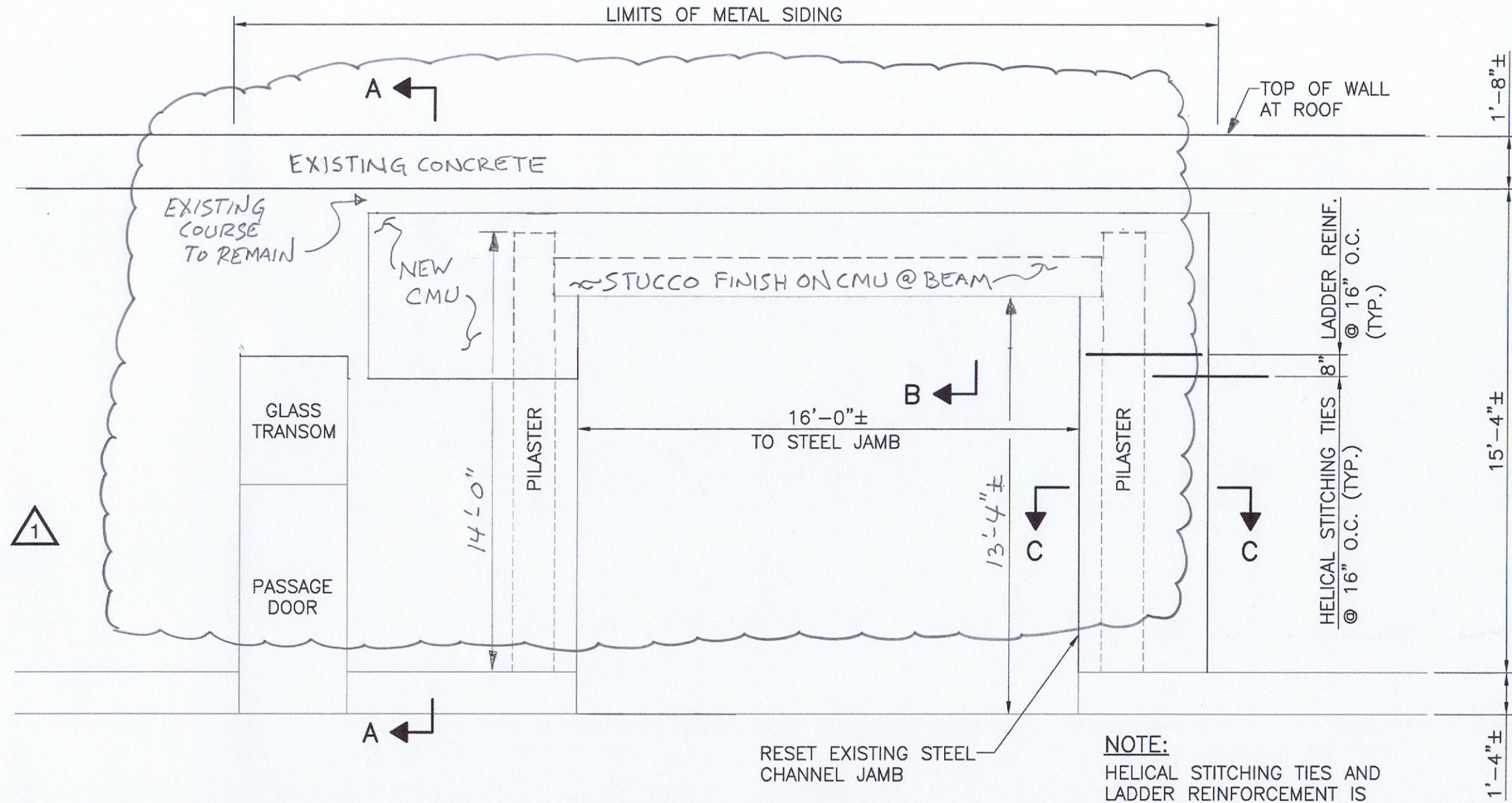
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LEXINGTON STREET, WALTHAM, MA  
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 WALL REPAIRS  
 SHEET 3 OF 6

SHEET  
**S-3**





**ELEVATION OF PROPOSED REPAIR**

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

**NOTE:**  
HELICAL STITCHING TIES AND  
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19 JUNE 2019

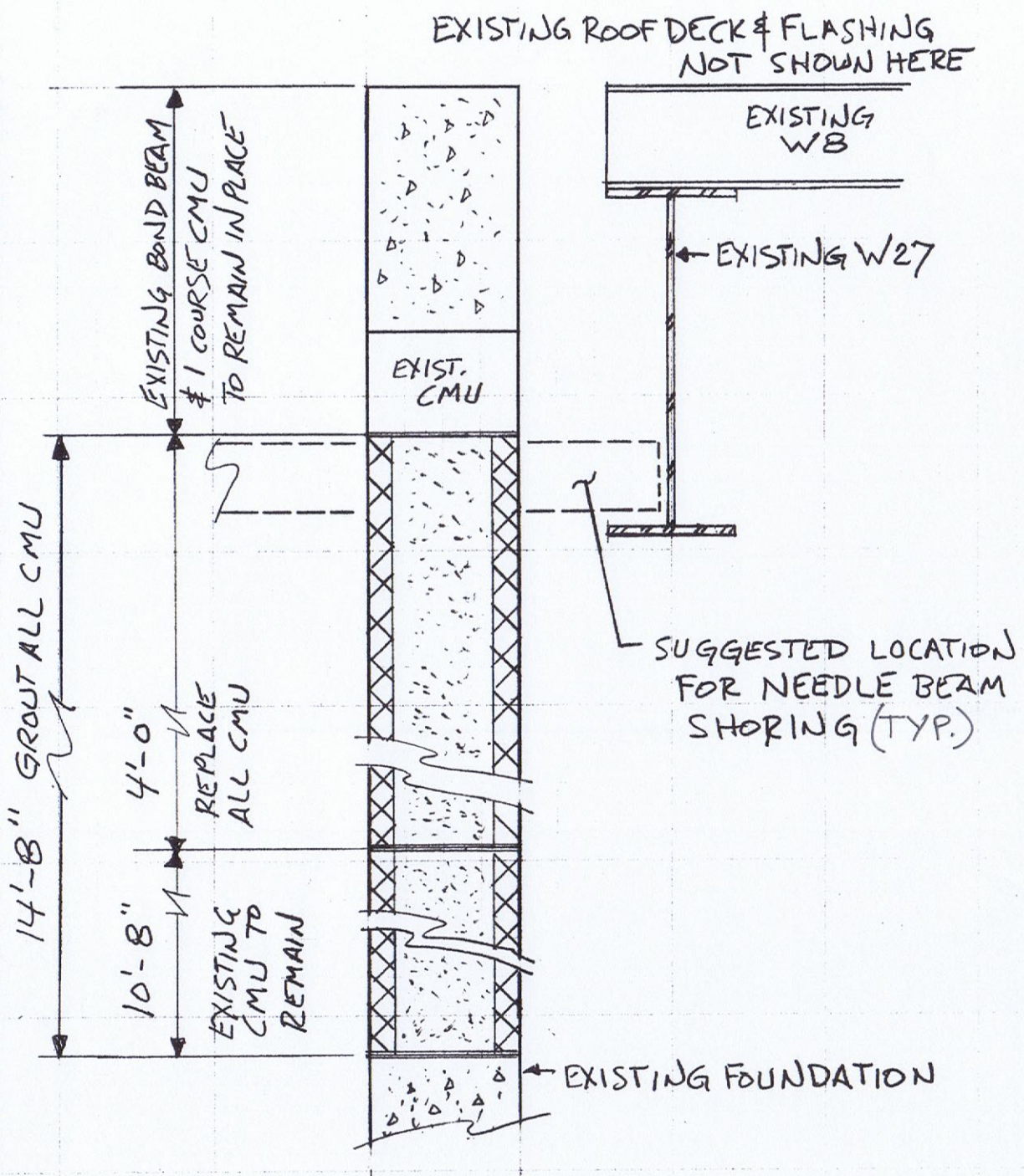
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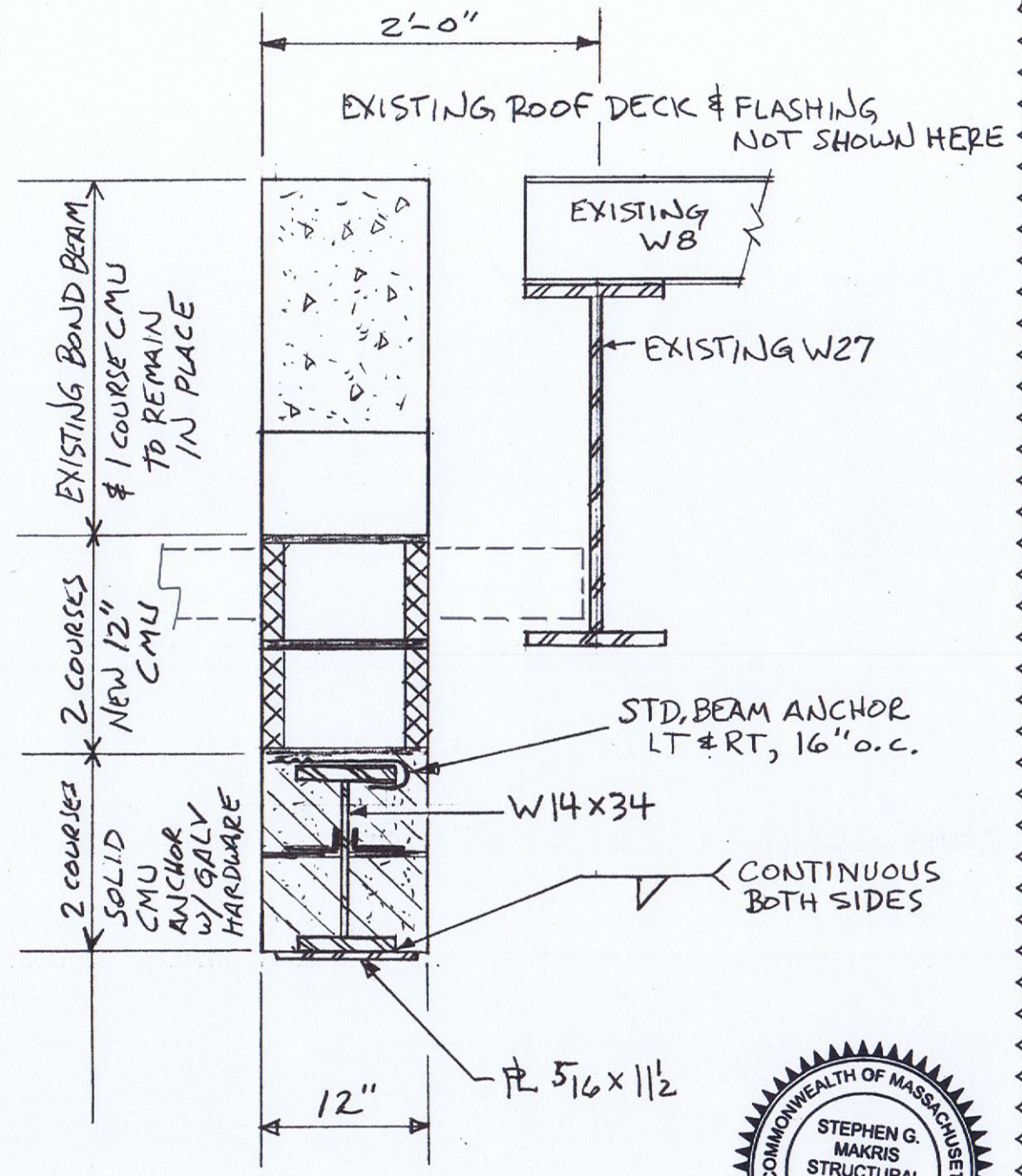
LEXINGTON STREET, WALTHAM, MA  
DPW GARAGE - OVERHEAD DOOR #9  
WALL REPAIRS  
SHEET 4 OF 6

SHEET  
**S-4**





SECTION A-A  
SCALE: 1" = 1'-0"



SECTION B-B  
SCALE: 1" = 1'-0"



*Signature*  
19 JUNE 2019

1

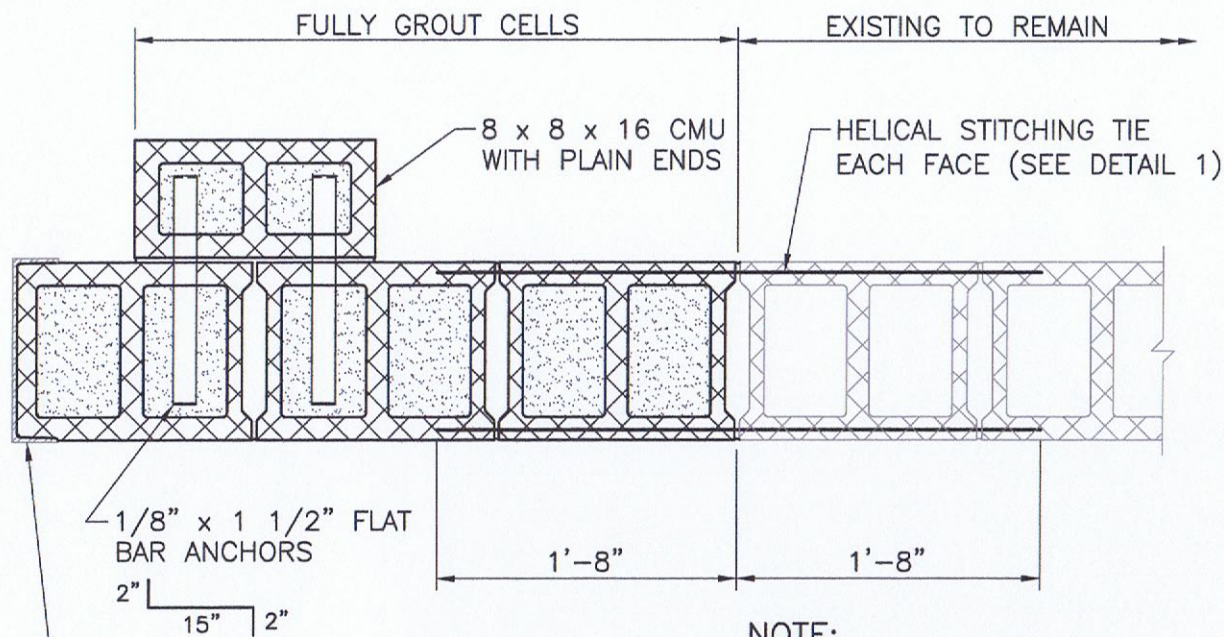
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SHEET 5 OF 6

SHEET  
S-5





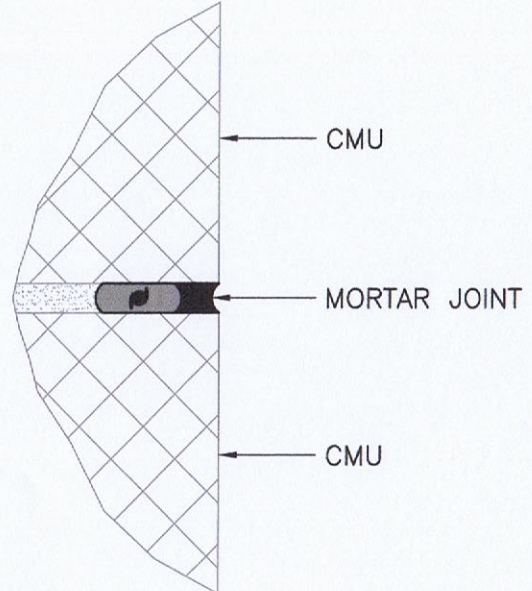
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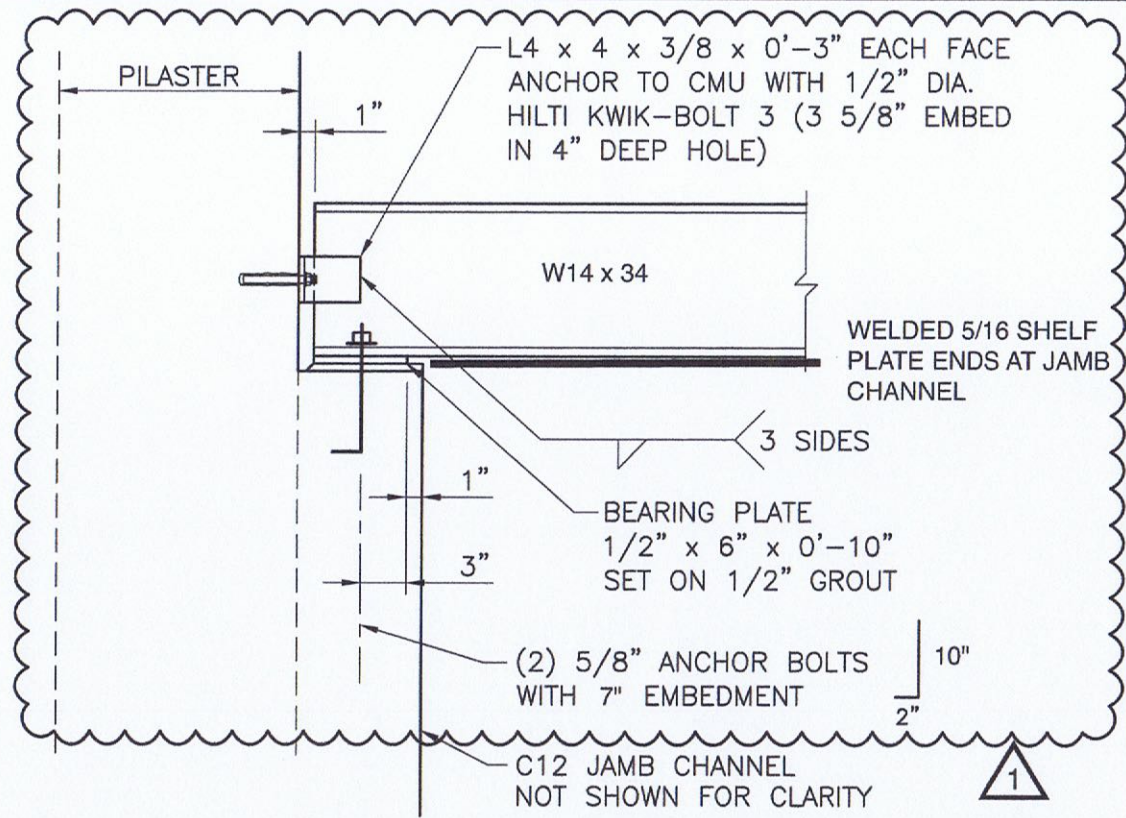
**SECTION C-C**  
SCALE: 1" = 1'-0"

**INSTALLATION NOTES:**

- GRIND OUT MORTAR 1 1/4" TO 1 1/2" DEEP WITH ROTARY GRINDING WHEEL.
- CLEAN OUT DEBRIS.
- FILL JOINT 2/3 DEEP WITH SIMPSON STRONG-TIE FX-263 REPAIR MORTAR.
- IMMEDIATELY EMBED THE TIE TO MID-DEPTH OF REPAIR AND TOOL MORTAR TO FULLY ENCAPSULATE THE TIE.
- COMPLETE THE MORTAR JOINT.



**DETAIL 1**  
SCALE: 6" = 1'-0"



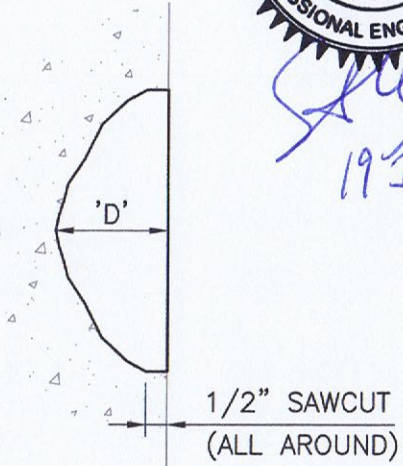
**DETAIL AT BEAM END**  
NOT TO SCALE

**SPALL REPAIR NOTES:**

- REMOVE ALL DETERIORATED CONCRETE.
- SAWCUT PERIMETER.
- WATERBLAST OF SANDBLAST.
- FORM SIDES AND EDGES.
- PREWET SURFACE TO SSD.
- POUR REPAIR MORTAR AND VIBRATE FORM.
- MOIST CURE FOR 24 HOURS.

**LIMITATIONS:**

- IF 'D' EXCEEDS 3" EXTEND MIX WITH 3/8" CLEAN AGGREGATE.
- IF RUSTED STEEL REINF EXPOSED REMOVE ALL RUST AND COAT WITH SIKA ARMATEC 110 EPOCEM.



*Signature*  
19 JUNE 2019

**CONCRETE FOUNDATION SPALL REPAIR DETAIL**  
NOT TO SCALE

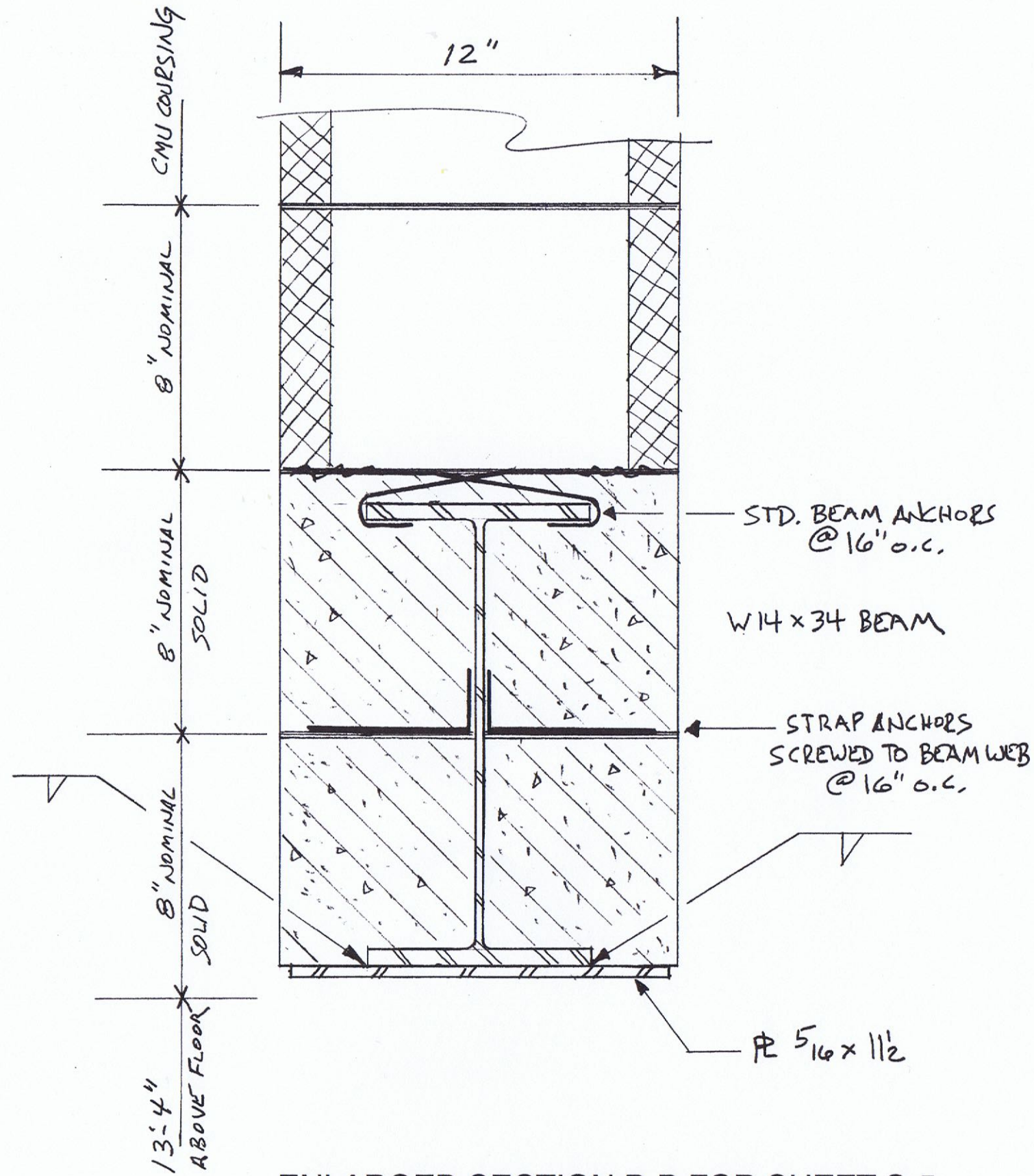
REV 1 : 19JUNE2019  
DATE: 09 MAY 2019

STEPHEN G. MAKRIS, P.E.  
CONSULTING ENGINEER, LLC  
11 EPHRAIM DRIVE  
MANSFIELD, MA 02048  
DWN. BY SGM CK. BY SGM

LEXINGTON STREET, WALTHAM, MA  
DPW GARAGE - OVERHEAD DOOR #9  
WALL REPAIRS  
SHEET 6 OF 6

SHEET  
**S-6**





ENLARGED SECTION B-B FOR SHEET S-5  
SCALE: 3" = 1'-0"



*Stephen G. Makris*  
21 JUNE 2019

STEPHEN G. MAKRIS, P.E.  
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11 EPHRAIM DRIVE  
MANSFIELD, MA 02048

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WALL REPAIRS

21 JUNE 2019

SHEET

SKS-1