

# INSULATION GUIDELINES

## Code Checklist for Designers - Stretch Code

2009.12.02. All new construction shall meet the minimum R-value of 2.00 for Insulation Category Verification Source

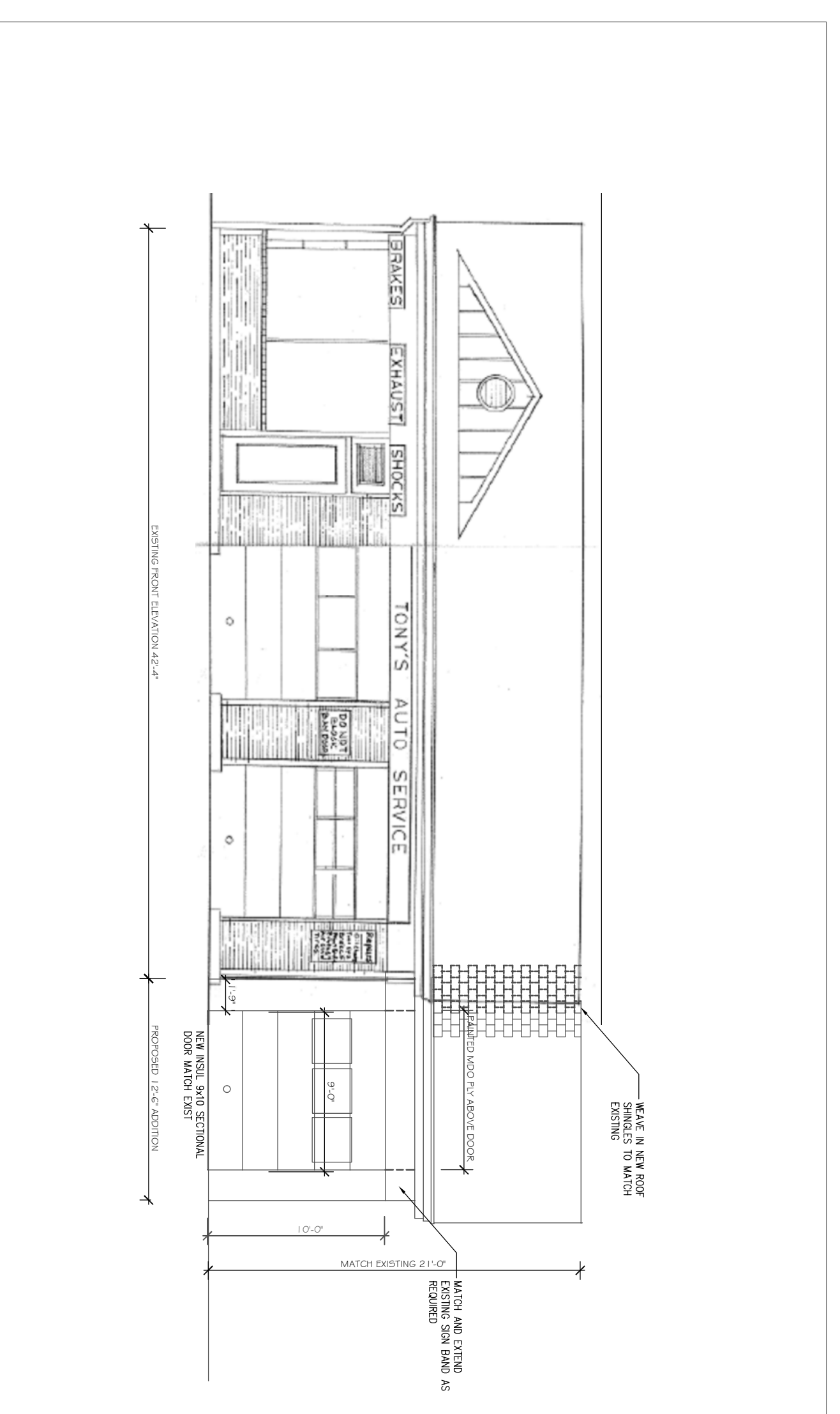
- Insulation
  - Roof or walls of unattached area: R-49, unless the area is attached to a building and the walls MAY be tapered when they meet exposed sheathing on plans, inspection: IECC 2009 402.1.1
  - EXCEPTION – up to 500 lb or 20%, whichever is less, of roof can be R-30
  - E-209 402.2.2
  - Existing walls - fill all with R-3 finish material. New walls R-21 (96) either 2x6 frame or 2x4 frame with 2" of insulation, inspection: IECC 2009 402.1.1
  - MA BD Code 8x Ed 159A 191.3
  - Floors R-30, existing floors R-3,5 each on plans, inspection: IECC 2009 402.1.1
  - Basement wall R-10 on the foundation wall or R-13 in a framed wall, inspection: IECC 2009 402.1.1
  - SLAB R-10, slab perimeter R-10 on plans, inspection: IECC 2009 402.1.1
  - Crawlspace wall R-10 on plans, inspection: IECC 2009 402.1.1
  - Mass walls (concrete/masonry) R-13 @ 50% of outside wall on plans, inspection: IECC 2009 402.1.1
  - For additions all U-values must meet IECC 2009 standards. No R-3 finish exception for existing walls, on plans, inspection: See Renovation section, 2009.
- Fenestration:
  - Windows U-30 or lower, door solid U-21 or U-33 or lower, lights U-55 or lower. Operations to unconditioned space must be gasketed + insulated, so avoid unconditioned space.
  - Windows must be gasketed + insulated, so avoid paperwork or copes
  - MA BD Code 8x Ed 159A 401.3, Energy SBH windows V.5, IECC 2009 402.3
  - U-9 to 15 IC2 of glazed fenestration can be exempt
  - IECC 2009 402.3 IECC 2009
  - One opaque (no glass), side-hinged door, up to 24 sq ft, inspection: IECC 2009 402.3 IECC 2009
  - IECC 2009 402.3 IECC 2009
- Air seals:
  - All penetrations, seams, and penetrations between conditioned + unconditioned space to create continuous barrier. If fabric must meet < 7 ACH 50
  - Energy Star Thermal bypass checklist by IECC 2009 402.4.2 402.4.1 MA BD Code 159A 401.3
- Lighting:
  - Lights in work or unconditioned space - IC rated and gasketed or gasketed to finish surface
  - Inspection IECC 2009 402.4.5
  - At least 80% of new lights must be high-efficiency on plans, inspection: IECC 2009 404.1
- HVAC:
  - Equipment sized using Manuals J S and D. Do not oversize
  - IECC 2009 403.6, IMC 1401.3
- Labeling –
  - 401.3 Compliance checklist on plans, inspection: IECC 103.1

## LEGEND

	EXISTING WALLS TO REMAIN	AL	Aluminum	MIN	Minimum
	EXISTING WALLS/CONSTRUCTION TO BE REMOVED	APPROX	Approximately	MISC	Miscellaneous
	NEW WALLS	BLDG	Building	NIC	Not in Contract
(N)	NEW	CLG	Ceiling	NTS	Not To Scale
(E)	EXISTING	CLR	Clear	OPP	Opposite
	BUILDING SECTION	COL	Column	P.LAM	Plastic Laminated
	DETAIL SECTION	CONC	Concrete	PLD	Plaster
	PARTITION TYPE	CONSTR	Construction	PTD	Painted
	NEW DOOR & DOOR NUMBER	COINT	Continuous	REC	Required
	WINDOW NUMBER	OPT	Optional	RO	Rough Opening
	INTERIOR ELEVATION	CTR	Ceramic Tile	SIM	Similar
		DET	Detail	SST	Stainless Steel
		DIA	Diameter	STD	Standard
		DISP	Dispenser	STL	Steel
		DN	Down	STOR	Storage
		DWG	Drawing	SUSP	Suspended
		ELEC	Electric(Electrical)	T&G	Torque & Groove
		EQ	Equal	THK	Thick
		ETR	Existing to Remain	TYP	Typical
		EXST	Existing	VPB	Vinyl Cove Base
		FLL	Finish Floor	VPB	Veneer Plaster Base
		GA	Gauge	WC	Water closet
		GL	Glass	WD	Wood
		GWB	Gypsum Wall Board	W/W	With
		HCP	Handicapped	W/O	Without
		HDP	High Density Polymer	WT	Weight
		HR	Hour		
		HT	Height		
		INSUL	Insulation(Insulated)		
		LI	Light		
		MAX	Maximum		
		MECH	Mechanical		

## LEGEND

## ABBREVIATIONS



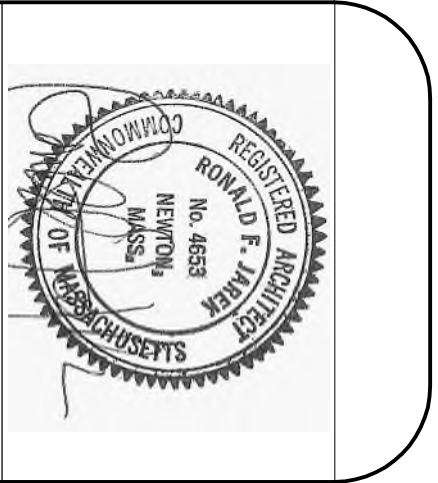
# 414 WATERTOWN STREET, NEWTON, MA PROPOSED GARAGE BAY EXTENSION

414 WATERTOWN STREET, NEWTON, MA 02460

## LIST OF DRAWINGS

- A-0 TITLE SHEET, NOTES AND LEGEND
- A-1 GENERAL NOTES, MATERIALS LIST & FAR CALCS
- EX-1 EXISTING PLAN AND ELEVATIONS
- A-2 CONSTRUCTION PLAN AND SITE PLAN
- A-3 PROPOSED ELEVATIONS
- A-4 SECTIONS, DETAILS AND FRAMING PLAN

**Architect:**  
**Ronald F. Jarek**  
487 Watertown Street  
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**TITLE:**  
TITLT SHEET, NOTES  
AND LEGEND

**PROJECT:**  
414 WATERTOWN STREET, NEWTON, MA,  
PROPOSED GARAGE BAY EXTENSION  
414 WATERTOWN STREET  
NEWTON, MA 02460

**Ronald F. Jarek, Architect**  
487 Watertown Street  
Newtonville, MA 02460

DATE:	MAR07/21/2017
SCALE:	AS SHOWN
DRAWN BY:	KCJ
CHECKED BY:	RJ
ZONING/PERMITS AND SPECIAL PERMITS SET	

A-0

**GENERAL NOTES**

1. ALL WORK SHALL COMPLY WITH THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE, THE REQUIREMENTS OF THE CITY OF NEWTON, THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS AND ALL OTHER APPLICABLE REGULATIONS, LAWS, ORDINANCES, ETC. GOVERNING THIS WORK INCLUDING HERS RATINGS.
2. PRIOR TO SUBMITTING BID, CONTRACTOR MUST THOROUGHLY EXAMINE THE DRAWINGS, AND INSPECT THE BUILDING TO FULLY UNDERSTAND THE FACILITY, DIFFICULTIES AND RESTRICTIONS AFFECTING THE EXECUTION OF THE WORK UNDER THIS CONTRACT. THE FAILURE OF THE CONTRACTOR TO RECEIVE OR EXAMINE ADDITIONAL INFORMATION OR TO VISIT THE PROJECT OR TO ASK FOR CLARIFICATION IN ADVANCE RELIEVES AND OBLIGATES THE CONTRACTOR TO RECEIVE OR EXAMINE ADDITIONAL INFORMATION AT HIS OWN RISK AND UNDER NO OBLIGATION WITH RESPECT TO THIS WORK. NO CLAIMS FOR ANY
3. CONTRACTOR'S BID PRICE SHALL REFLECT ALL OF SPECIFIED WORK.
4. DRAWING INFORMATION IS TAKEN FROM EXISTING CONDITIONS AND RANDOM FIELD MEASUREMENTS AND IS PROVIDED ONLY TO ASSIST THE CONTRACTOR IN ESTABLISHING THE SCOPE OF WORK.
5. ALL EXISTING CONDITIONS AND PLAN AND DETAIL DIMENSIONS SHOULD BE VERIFIED IN THE FIELD PRIOR TO COMMENCING THE WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY DISCREPANCIES FOUND IN THE PLANS OR SPECIFICATIONS BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK. DO NOT SCALE THESE DRAWINGS FOR QUANTITIES, LENGTHS, SIZES, AREAS ETC.
6. IT IS NOT INTENDED THAT THESE DRAWINGS SHOW EVERY CUT, CONDITION ETC. OF THIS SYSTEM, HOWEVER, THE CONTRACTOR SHALL FURNISH A COMPLETE PRODUCT IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADE TO THE SATISFACTION OF THE ARCHITECT AND THE OWNER, AND IN STRICT CONFORMANCE WITH ALL APPLICABLE LOCAL AND STATE BUILDING CODE REGULATIONS.
8. CONTRACTOR SHALL REPAIR ALL AREAS DAMAGED BY DEMOLITION PRIOR TO INSTALLATION OF NEW MATERIAL.
9. IF HAZARDOUS WASTES ENCOUNTERED, STOP WORK & CONTACT THE OWNER & ARCHITECT IMMEDIATELY TO INITIATE ABATEMENT PROCEDURES IN ACCORDANCE WITH DHDQ STANDARDS.

**GENERAL NOTES STRUCTURAL (IF APPLICABLE)**

1. ALL WORK SHALL COMPLY WITH THE STATE OF MASSACHUSETTS BUILDING CODE, REQUIREMENTS OF THE CITY OF NEWTON, AND ALL OTHER LOCAL, STATE AND FEDERAL STANDARDS AND REGULATIONS.
2. DO NOT SCALE THIS DRAWING. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LIMITS AND LOCATIONS REGARDING LAYOUT OF ALL STRUCTURAL FRAMING MEMBERS AND CONNECTIONS. REFER TO ARCHITECT'S FOR ALL ELEVATIONS.
3. ALL DIMENSIONS SHALL BE REFERRED TO THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND THESE DRAWINGS SHALL BE REFERRED TO FOR SIZE AND LOCATION OF APPURTENANCES.
4. DIMENSIONS SHOWN ON THE DRAWINGS MUST BE COORDINATED WITH ARCHITECTURAL DRAWINGS PRIOR TO DETAILING, FABRICATION AND ERECTION OF ALL STRUCTURAL MEMBERS.
5. EXISTING LAYOUT, ITEMS AND CONDITIONS MAY DIFFER FROM AS SHOWN, ALL EXISTING CONDITIONS AND DIMENSIONS MUST BE VERIFIED IN FIELD PRIOR TO COMMENCING THE WORK. ANY DISCREPANCIES FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
6. IT IS THE BIDDER'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE SITE PRIOR TO BIDDING. FAILURE TO SO EXAMINE THE SITE AND THE CONTRACT DOCUMENTS WILL NOT RELIEVE THE BIDDER FROM ANY OBLIGATION UNDER THE BID AS SUBMITTED.
7. FABRICATOR FOR EACH STRUCTURAL TRADE SHALL PREPARE SHOP DRAWINGS SHOWING LOCATION, LIMITS, DIMENSIONS AND EXTENT OF ALL MEMBERS, CONNECTIONS AND DETAILS TO BE SUBMITTED FOR APPROVAL. NO ERECTION SHALL BE PERFORMED WITHOUT THE APPROVAL OF SHOP DRAWINGS.
8. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS AT ALL TIMES TO PROTECT ADJOINING PROPERTY FROM DAMAGE. ALL ABUTTING WORK SHALL BE RESTORED TO PRESENT CONDITION.
9. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL ITEMS FOR APPROVAL.

**FOUNDATION NOTES: NOT APPLICABLE**

1. FOOTINGS SHALL BE CARRIED TO ELEVATIONS SHOWN ON THE DRAWINGS AND DEFER IF NECESSARY TO OBTAIN A SAFE BEARING PRESSURE OF AT LEAST 2000 POUNDS PER SQUARE FOOT. CONTRACTOR SHALL VERIFY THE DESIGN BEARING CAPACITY THROUGH GEOTECHNICAL SERVICES PRIOR TO PLACING CONCRETE AND FOUNDATION SHALL BE PLACED ON FROZEN SOIL OR WATER. PROVIDE PROPER DRAINAGE OF EXCAVATION WITH PLASTIC PIPE TO PROTECT AGAINST WATER, WHERE IT IS NECESSARY TO RAISE THE GRADE BELOW SLAB DUE TO OVER EXCAVATION, STRUCTURAL FILL SHALL BE PLACED AND COMPACTED TO 95% DRY DENSITY.
3. PROVIDE PROPER DRAINAGE OF EXCAVATION OR COVER EXCAVATION WITH PLASTIC TO PROTECT AGAINST WATER.

**PLYWOOD NOTES**

1. ALL PLYWOOD SHEATHING SHALL BE APA RATED STRUCTURAL 1. PLYWOOD USED FOR ROOF SHEATHING SHALL BE EXTERIOR GRADE.
2. ALL EDGES SHALL BE TONGUE AND GROOVE JOINTED OR CONTINUOUSLY SUPPORTED WITH WOOD BLOCKING.

**CONCRETE NOTES: NOT APPLICABLE**

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF AMERICAN CONCRETE INSTITUTE'S ACI 318 (BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE). CONCRETING SHALL FOLLOW REQUIREMENTS OF ACI 306 R FOR COLD WEATHER CURING AND ACI 305 R FOR HOT WEATHER CURING.
2. CONCRETE STRENGTH SHALL BE AS FOLLOWS: ALL CONCRETE MIN. COMPRESSIVE STRENGTH = 4000 PSI
3. ALL BAR REINFORCEMENT SHALL CONFORM TO ASTM A615 - GRADE 60.
4. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL BE SUPPLIED IN FLAT SHEETS. WELDED WIRE FABRIC SHALL BE 6x6-W4xW4 UNLESS NOTED.
5. MINIMUM CONCRETE CLEARANCES FOR PROTECTION OF REINFORCING:
  - SLABS: TOP - 2"
  - WALLS: ALL SIDES - 2" (MIN.)
6. ALL EXPOSED CONCRETE EDGES SHALL HAVE 3/4" CHAMFER, USING EDGING TOOL, WHERE NEEDED. EXPOSED CONCRETE SURFACES SHALL HAVE A PLYWOOD FINISH. JOINTS AND FNS SHALL BE SACKED TO A UNIFORM TEXTURE WHILE CONCRETE IS STILL GREEN, TO PRODUCE A SURFACE ACCEPTABLE TO THE DESIGNERS & OWNER.
7. CONSTRUCTION JOINT SPACING SHALL BE AS SHOWN ON THE DRAWINGS.
8. BONDING AGENT FOR ADHERING NEW CONCRETE TO EXISTING CONCRETE SHALL BE APPLIED PRIOR TO POURING NEW CONCRETE. BONDING AGENT SHALL BE "WELDORCET" AS MANUFACTURED BY LARSEN PRODUCTS CORP. OF ROCKVILLE, MD, OR APPROVED EQUAL.
9. DOWELLING OF NEW REINFORCEMENT INTO EXISTING CONCRETE SHALL BE ACHIEVED BY USING THE HILTI HVA "ADHESIVE ANCHOR METHOD". ALL INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
10. CONTROL JOINTS SHALL BE PLACED THROUGHOUT AND EQUALLY SPACED NOT EXCEEDING 10' ON CENTER, IN ANY DIRECTION.

**WOOD NOTES**

1. ALL STRUCTURAL WOODWORK, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN INSTITUTE OF WOOD CONSTRUCTION'S SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF WOOD STRUCTURES.
2. ALL STRUCTURAL LUMBER SHALL BE SOUTHERN PINE, DOUGLAS FIR, GRADE 1 OR APPROVED EQUAL WITH MINIMUM PROPERTIES OF: E = 1,800,000 PSI, Fv = 1500 PSI, Fv = 190 PSI.

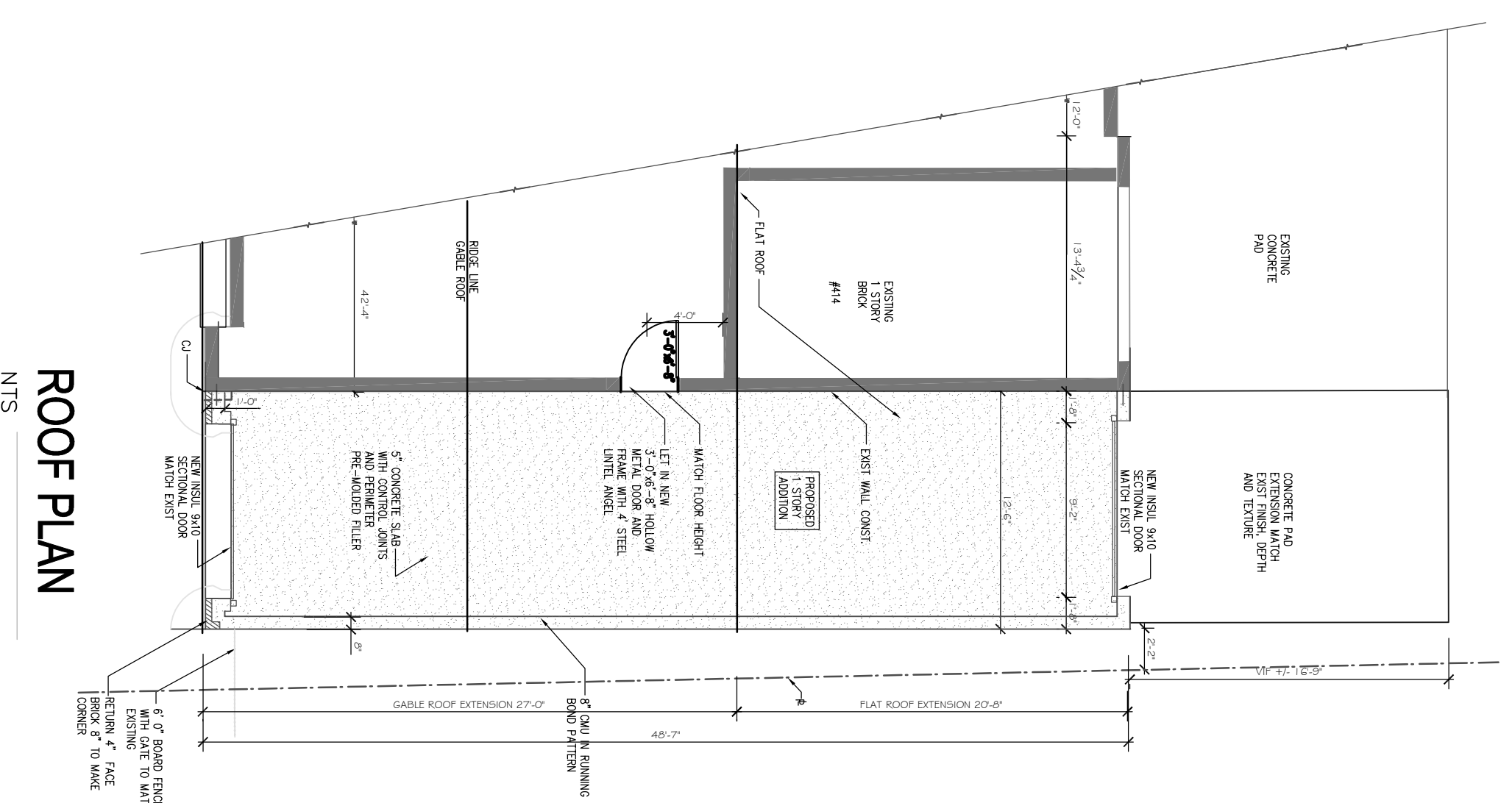
**NOTE - DIMENSION**

ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR MUST VERIFY ALL EXISTING DIMENSIONS AND PREPARE A LAYOUT DRAWING WITH ALL EXISTING CONDITION PRIOR TO PROCEEDING WITH ANY NEW WORK.

**PRODUCTS**

- SEE ATTACHED MATERIALS LIST FOR PRODUCTS AND/OR FINISHES

- PROJECT:**  
414 Watertown Street, Newton, MA
- MATERIALS LIST:**
1. All exterior cladding materials shall match adjoining materials and surfaces
  2. All interior finish materials shall match adjoining materials and surfaces
  3. All Lighting, Painting and/or Floor Drain Installation to match existing if required and is Design Build



**SQUARE FOOT CALCULATION & FAR INFORMATION**

AREA	414 WATERTOWN STREET		TOTAL S.F. ALLOWED, FAR=1.0	TOTAL FAR FOR EXISTING AND PROPOSED STRUCTURE AS TOTAL SF PROP
	EXIST. TOTAL	PROP. ADDITION		
BASEMENT	NA			
FIRST FLOOR	* 2,184 SF.	* 605 SF.		WIG THIS SP. ceiling relief requested
SECOND FLOOR	NA			
ATTIC	NA			
TOTAL SQ. FT.	* 2,184 SF.	* 605 SF.	* 10,922 SF.	* 2,789 SF. PROP.

\* ATTIC NOT CONSIDERED IN SQ FOOT CALCULATION

**FAR DIAGRAMS**

NTS



**TITLE**  
NOTES, MATERIALS & FAR CALC

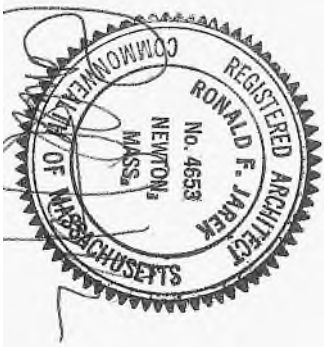
**PROJECT:**  
414 WATERTOWN STREET, NEWTON, MA,  
PROPOSED GARAGE BAY EXTENSION  
414 WATERTOWN STREET  
NEWTON, MA 02460

**Ronald F. Jarek, Architect**  
487 Watertown Street  
Newtonville, MA 02460

DATE:	MARCH 22, 2021
SCALE:	AS NOTED
DRAWN BY:	KJH
CHECKED BY:	RJ

ZONING REVIEW AND SPECIAL PERMIT SET

**A-1**



STAMP

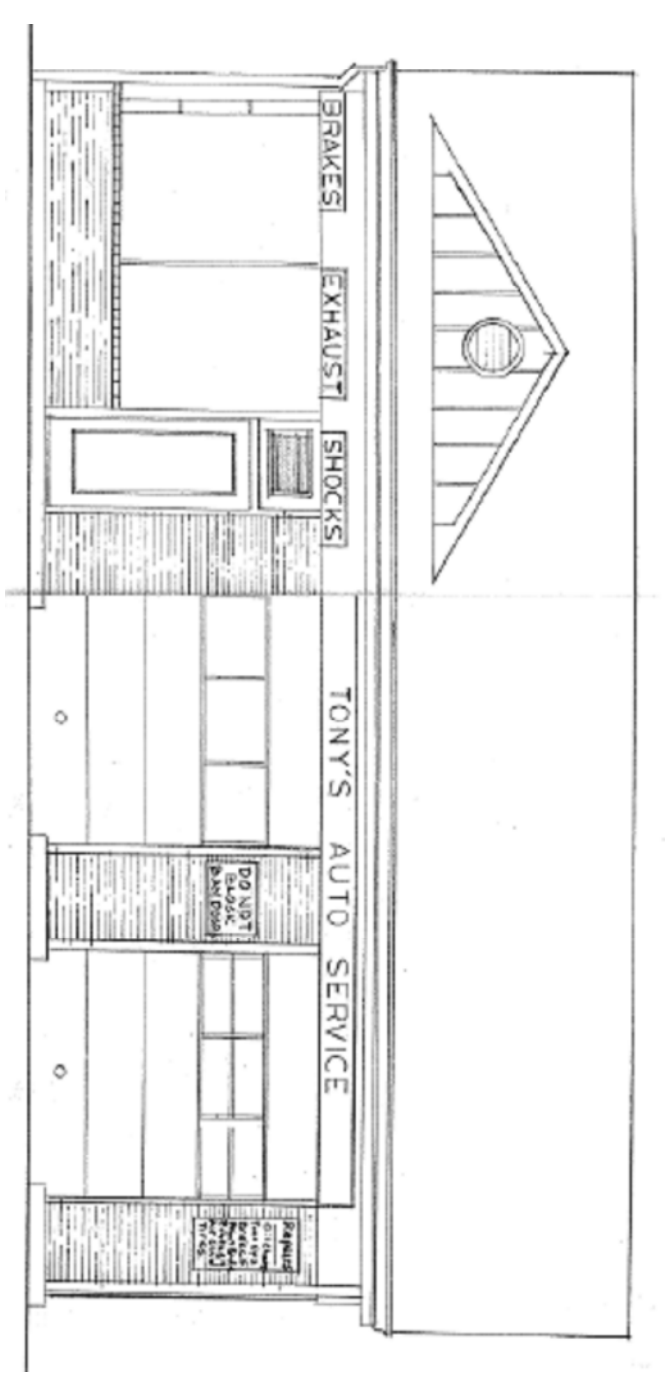
**TITLE:**  
EXISTING PLAN AND ELEVATIONS

**PROJECT:**  
414 WATERTOWN STREET, NEWTON, MA,  
PROPOSED GARAGE BAY EXTENSION  
414 WATERTOWN STREET  
NEWTON, MA 02460

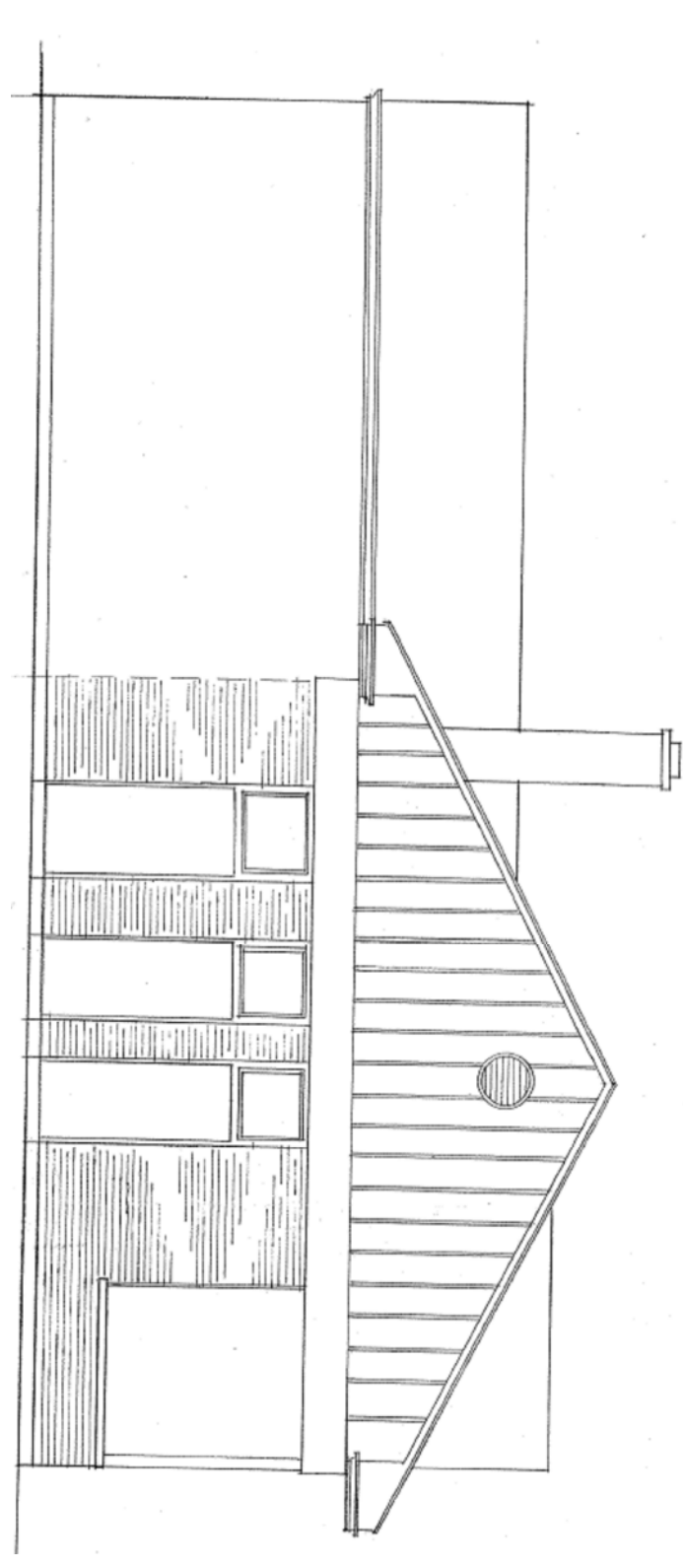
**Ronald F. Jarek, Architect**  
487 Watertown Street  
Newtonville, MA 02460

DATE	MARCH 21, 2011
SCALE	AS SHOWN
DRAWN BY	K.C.H.
CHECKED BY	R.J.
ZONING REVIEW AND SPECIAL PERMIT SET	

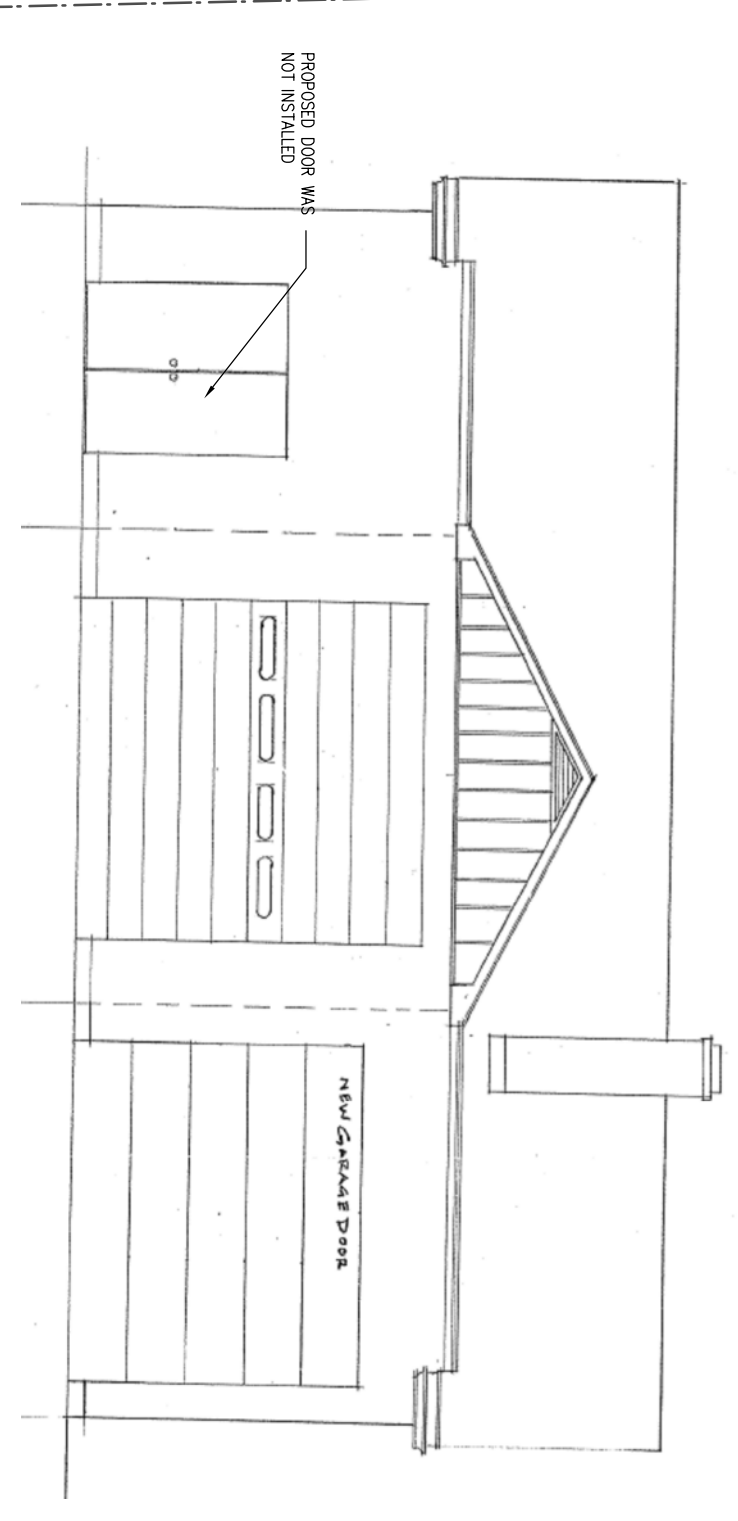
**EX 1**



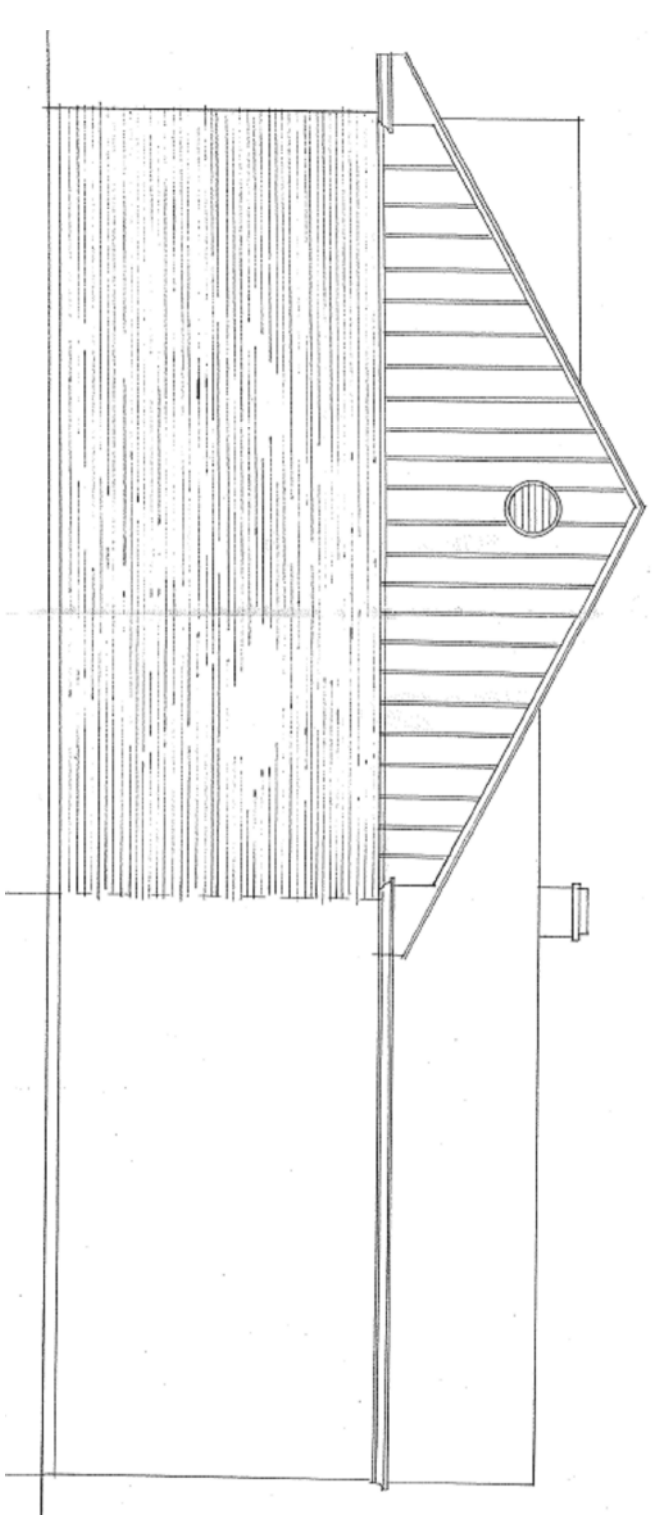
EXISTING FRONT ELEVATION  
1/2" = 1'-0"



EXISTING LEFT SIDE ELEVATION  
1/4" = 1'-0"



EXISTING REAR ELEVATION  
1/4" = 1'-0"

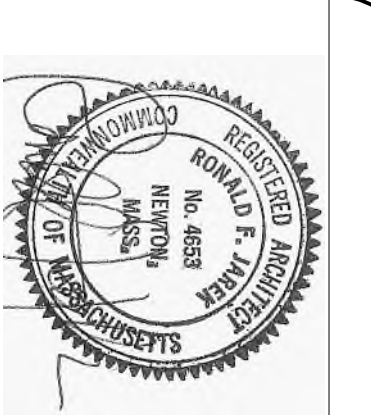


EXISTING RIGHT SIDE ELEVATION  
1/4" = 1'-0"

EXISTING ELEVATIONS  
1/4" = 1'-0"



**EXISTING SITE PLAN**  
1/4" = 1'-0"



STAMP

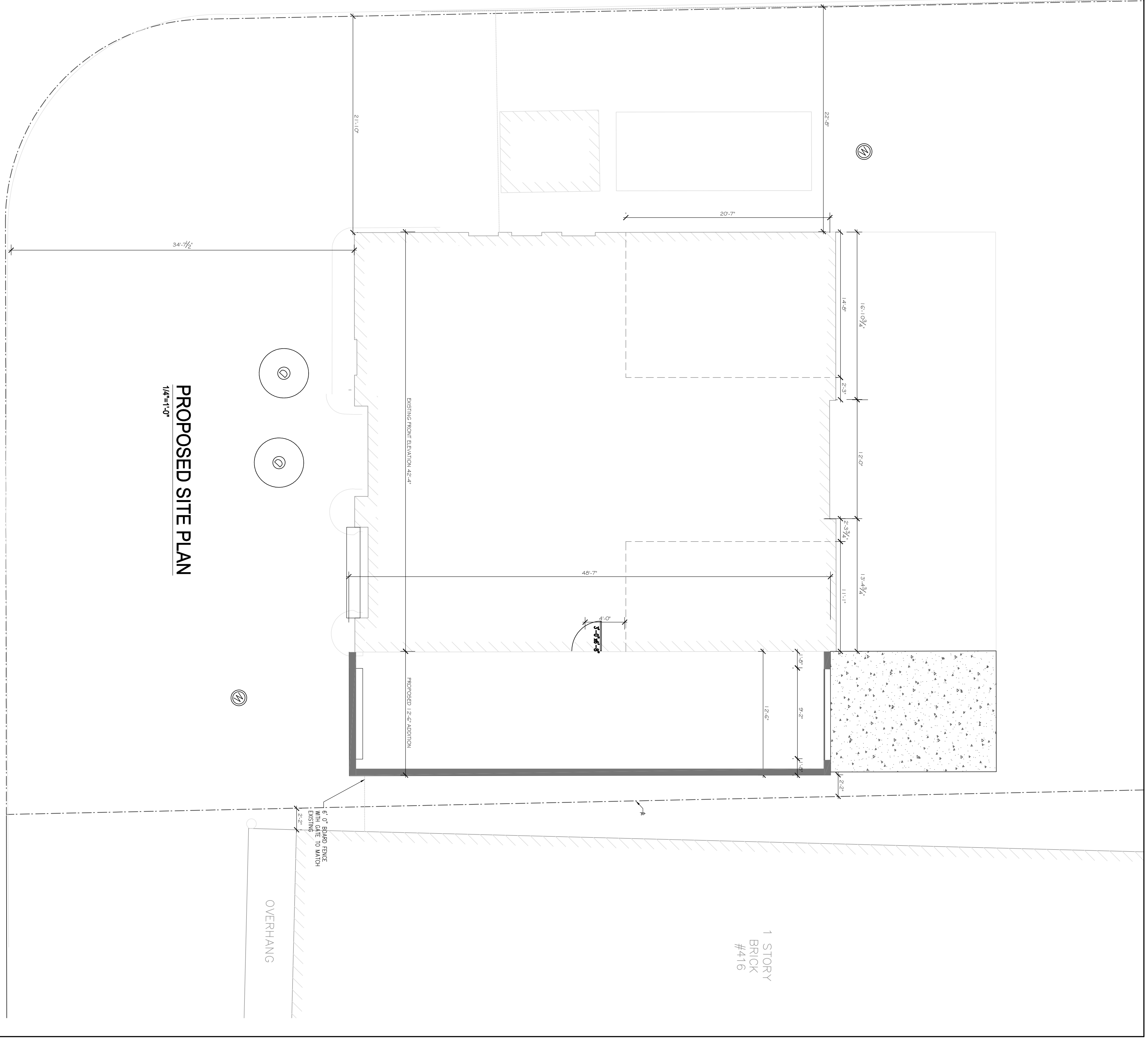
**TITLE:**  
CONSTRUCTION PLAN AND SITE PLAN

**PROJECT:**  
414 WATERTOWN STREET, NEWTON, MA,  
PROPOSED GARAGE BAY EXTENSION  
414 WATERTOWN STREET  
NEWTON, MA 02460

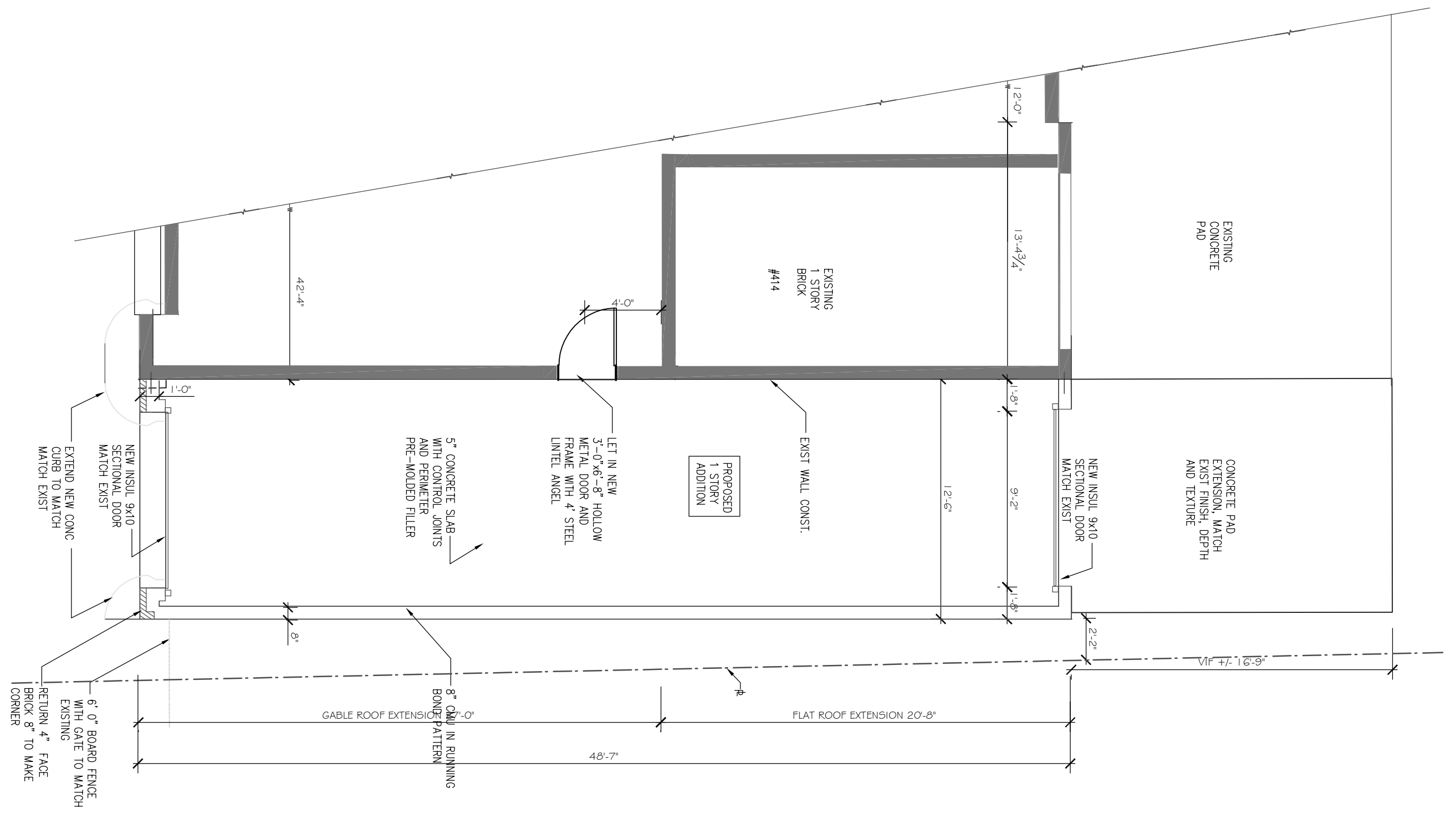
**Ronald F. Jarek, Architect**  
487 Watertown Street  
Newtonville, MA 02460

DATE:	MARCH 22, 2017
SCALE:	AS NOTED
DRAWN BY:	K.C.H.
CHECKED BY:	R.J.
ZONING REVIEW AND SPECIAL PERMIT SET	

**A-2**



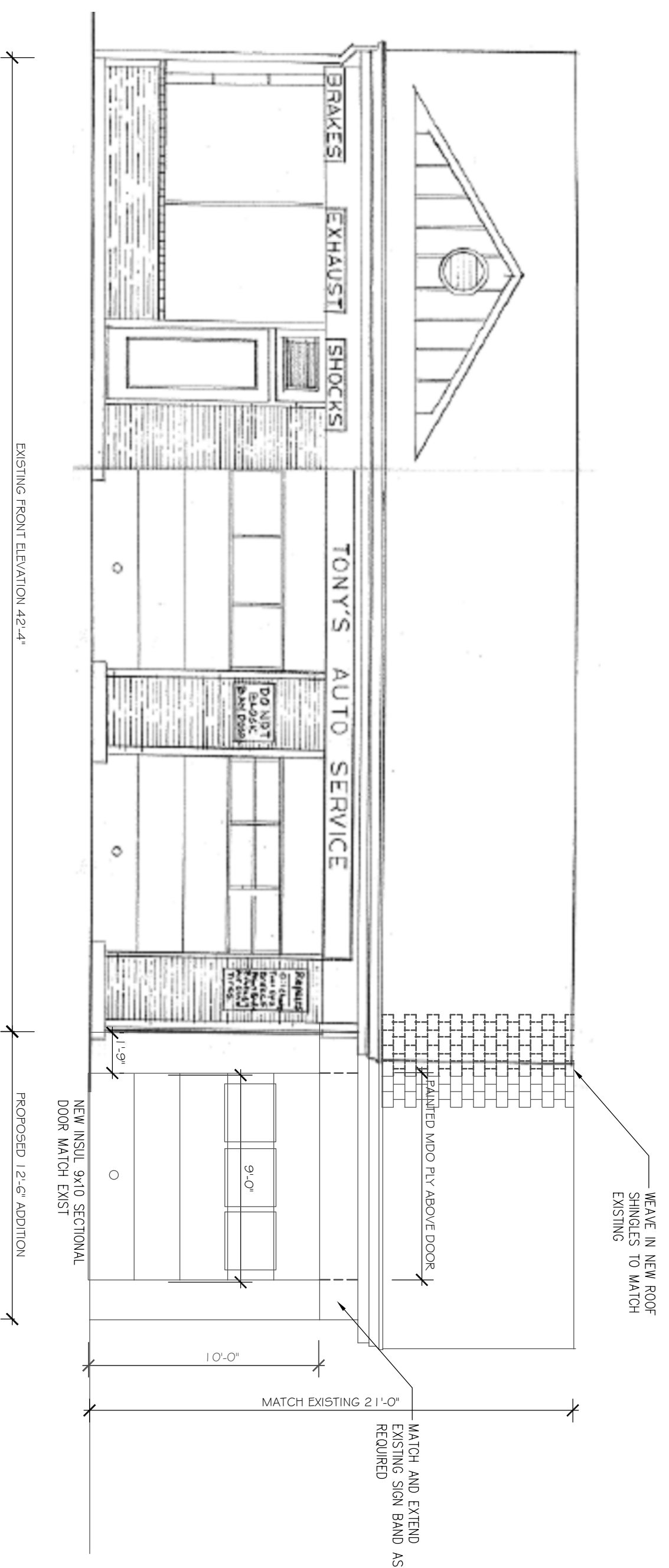
**PROPOSED SITE PLAN**  
1/4"=1'-0"



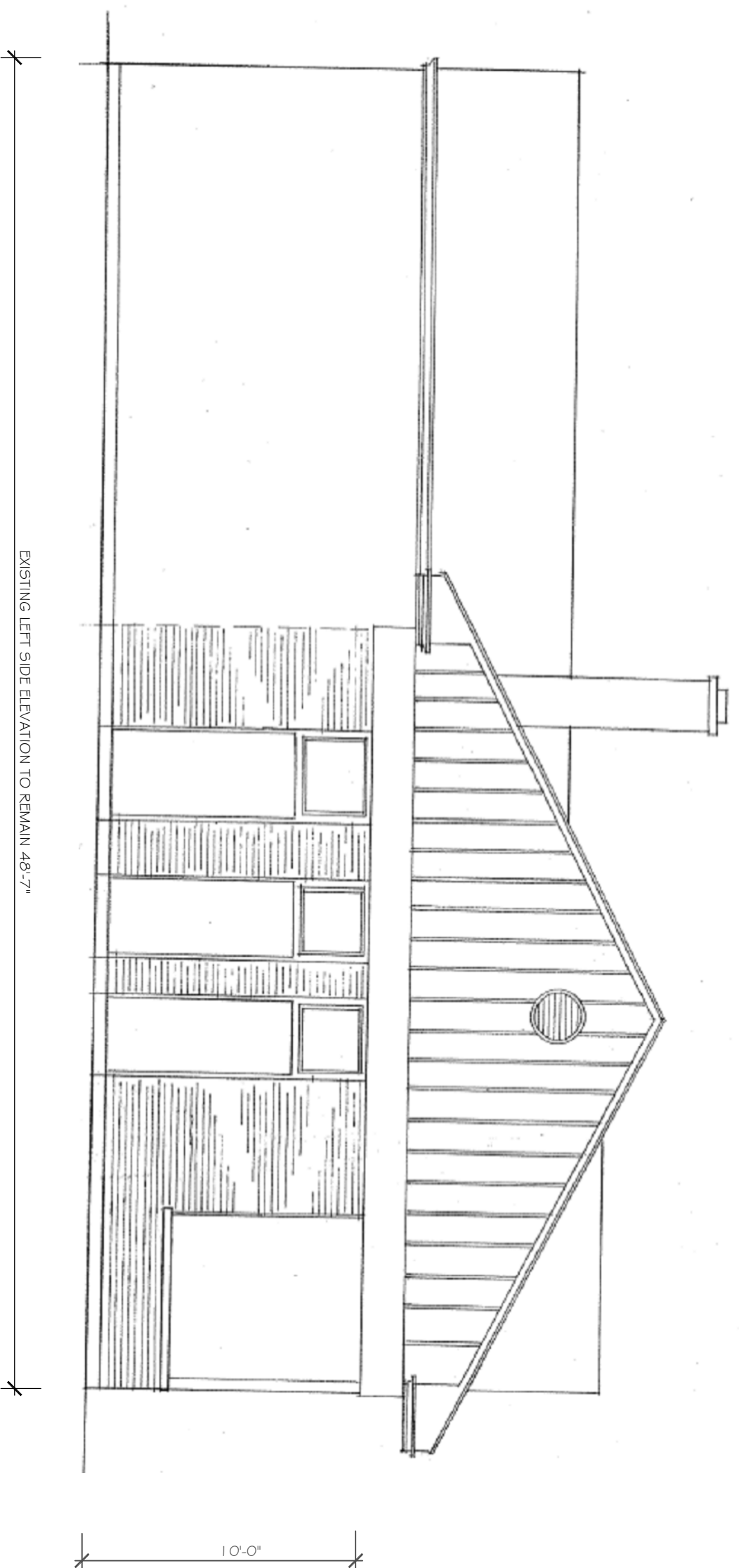
**PROPOSED FLOOR PLAN**  
1/4"=1'-0"

ADAMS STREET

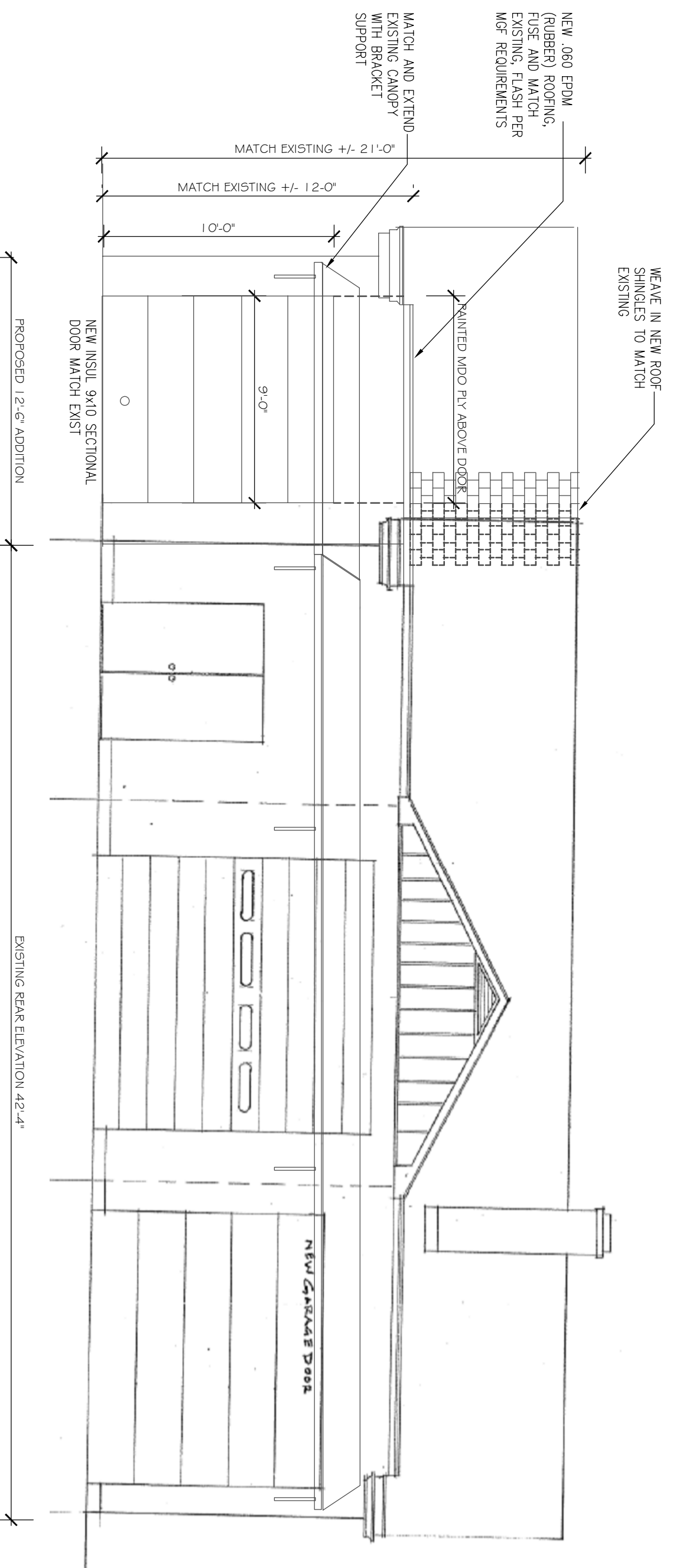
WATERTOWN STREET



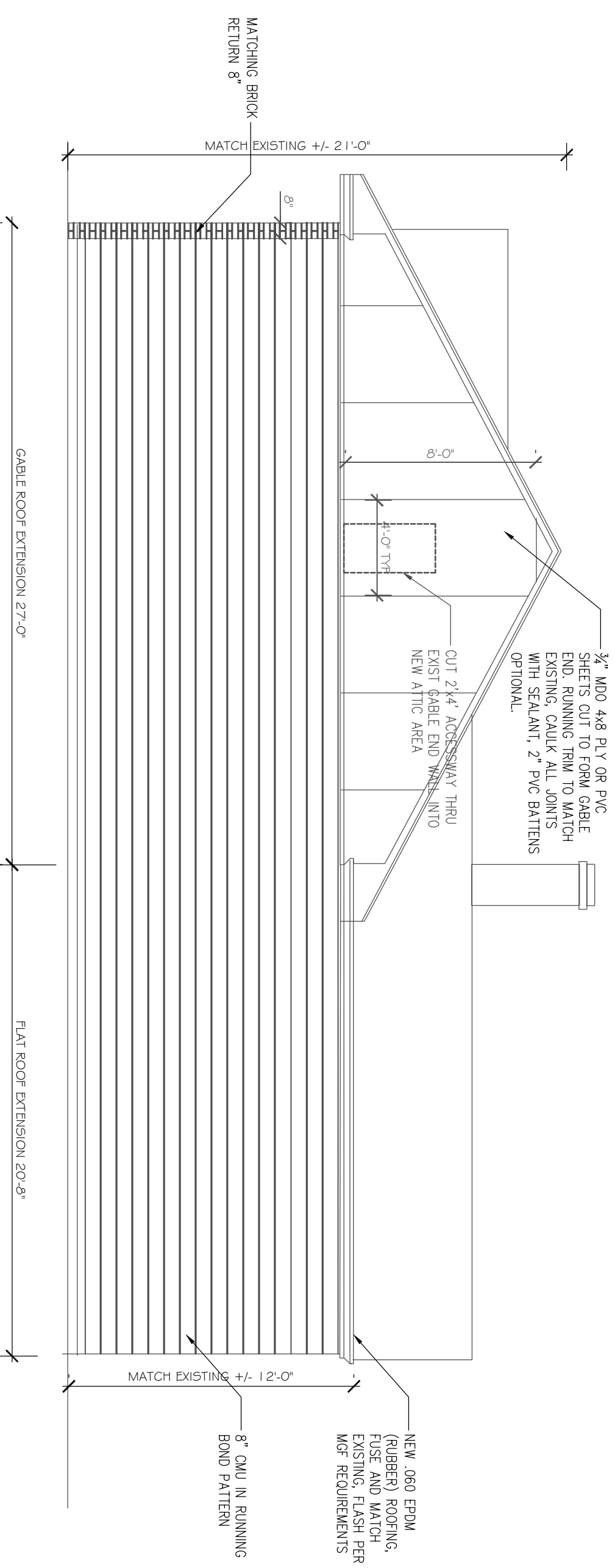
**PROPOSED FRONT ELEVATION**  
1/4"=1'-0"



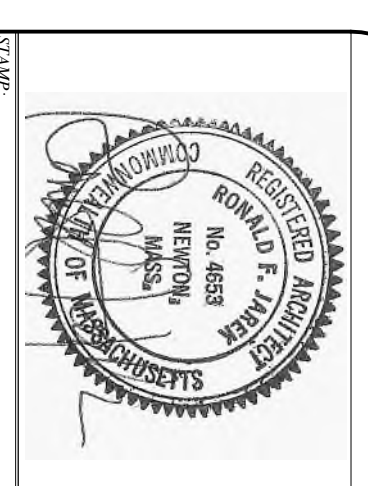
**PROPOSED RIGHT SIDE ELEVATION**  
1/4"=1'-0"



**PROPOSED REAR ELEVATION**  
1/4"=1'-0"



**PROPOSED RIGHT SIDE ELEVATION**  
1/4"=1'-0"



**TITLE:**  
PROPOSED ELEVATIONS

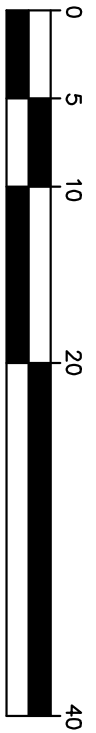
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PROPOSED GARAGE BAY EXTENSION  
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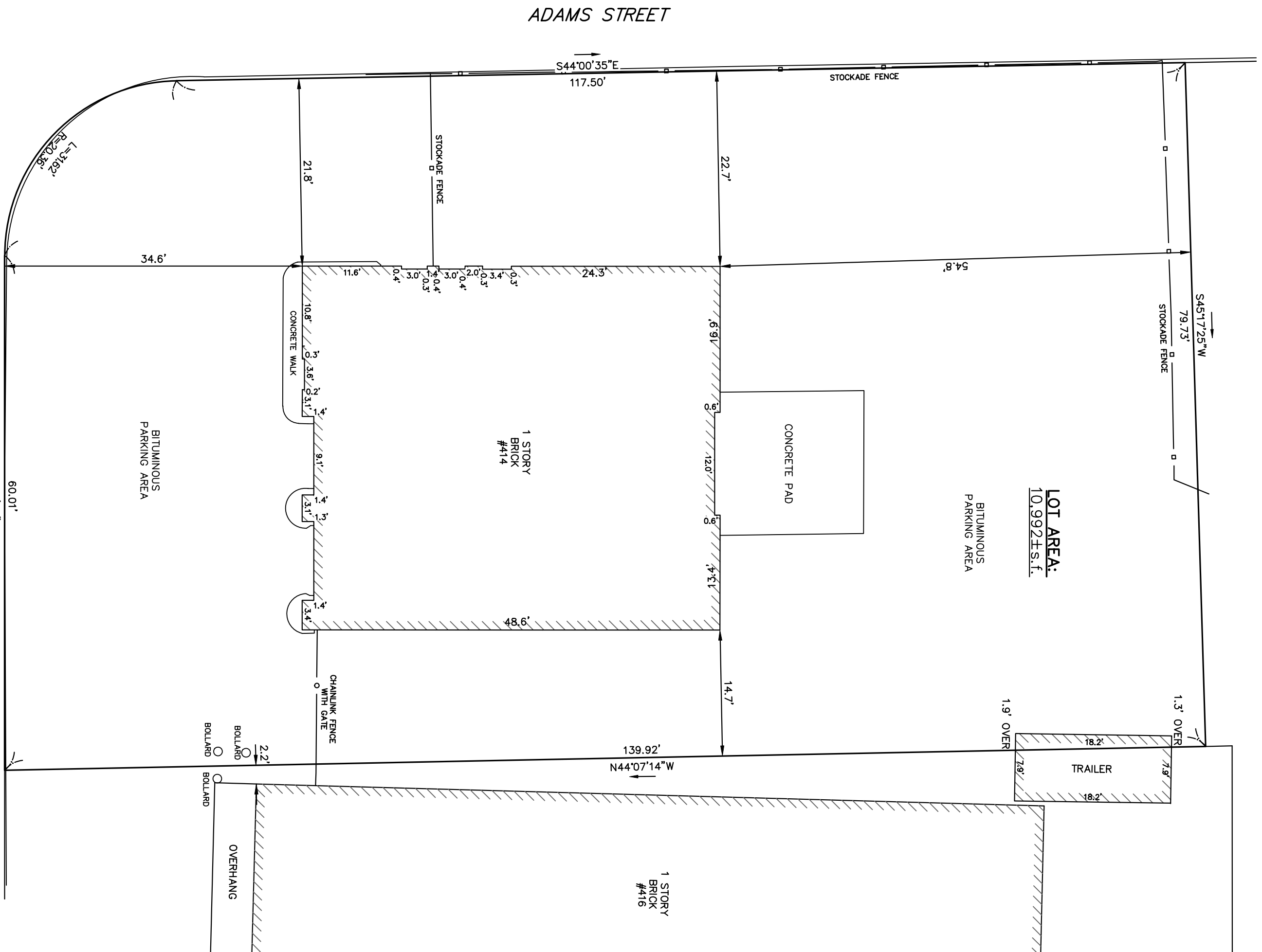
DATE:	MARCH 22, 2021
SCALE:	AS NOTED
DRAWN BY:	K.G.H.
CHECKED BY:	R.J.
ZONING REVIEW AND SPECIAL PERMIT SET	

**LEGEND**

- /// BUILDING
- PROPERTY LINE W/  
BEARING DISTANCE
- STOCKADE FENCE
- CHAINLINK FENCE



SCALE: 1" = 10'



ADAMS STREET

WATERTOWN STREET

ZONING CHART			
NEWTON, MASSACHUSETTS			
ZONE:	SUBMISSION:		
BU-2	AS-BUILT		
REGULATION	REQUIRED	PROPOSED	AS-BUILT
As Of Right	10,000s.f.	10,992±s.f.	N/C
Min. Lot Area	2	1	N/C
Max. # of Stories	24'	—	—
Building Height	10,000-19,999	—	—
Gross Flood Area/ Site Plan Approval	Avg. of Setback	34.6'	34.6'
Front Setback	2.2*	14.7'	14.7'
Side Setback	0	54.8'	54.8'
Rear Setback	0	54.8'	54.8'

\*Distance equal to the side yard setback of the abutting building.

**SITE PLAN**

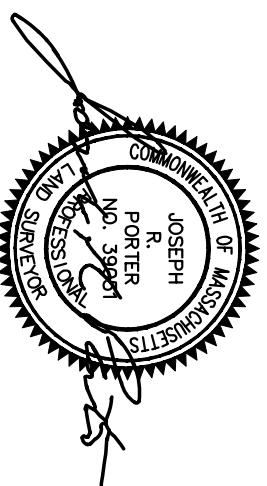
**NEWTON, MASSACHUSETTS**

SHOWING AS-BUILT CONDITIONS AT

#414 WATERTOWN STREET

SCALE: 1in.=10ft. DATE: OCTOBER 1, 2013

PROJECT: 210209



**VTP**  
**ASSOCIATES**  
INC.

LAND SURVEYORS - CIVIL ENGINEERS,  
132 ADAMS STREET 2ND FLOOR SUITE 3  
NEWTON, MA 02458  
(617) 552-8271