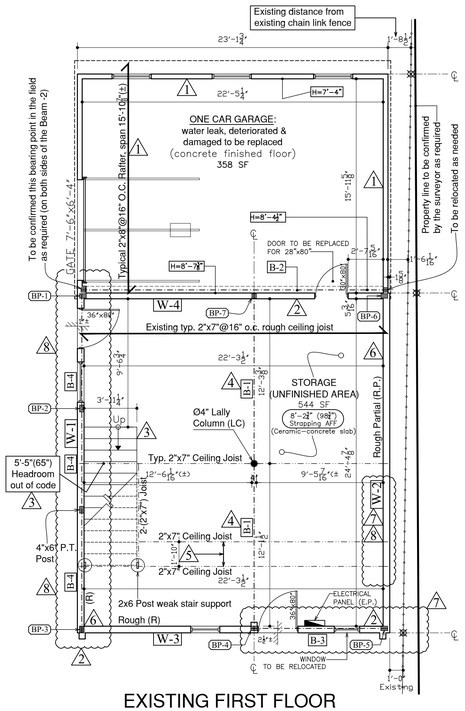
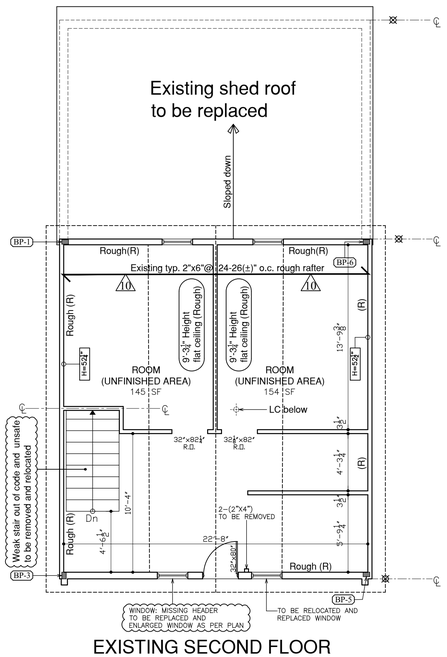
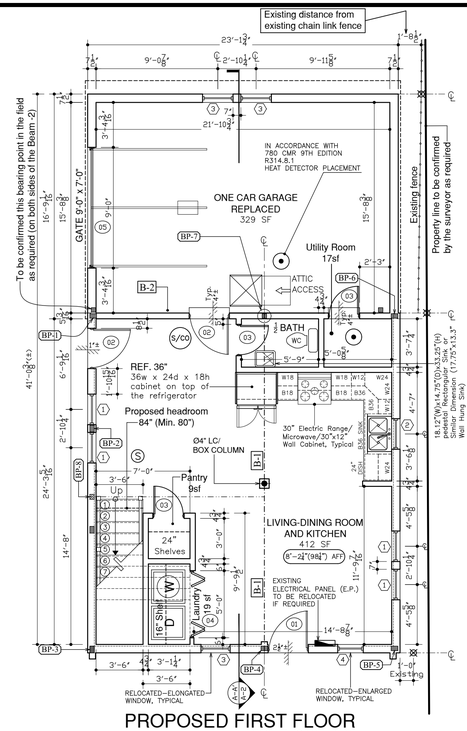


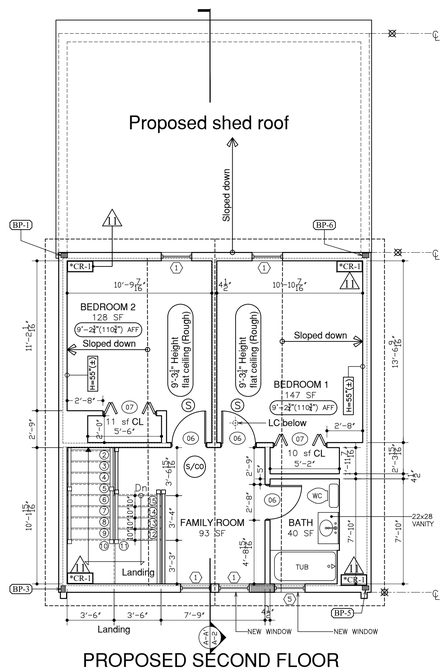
EXISTING FIRST FLOOR
SCALE: 3/16" = 1'-0"



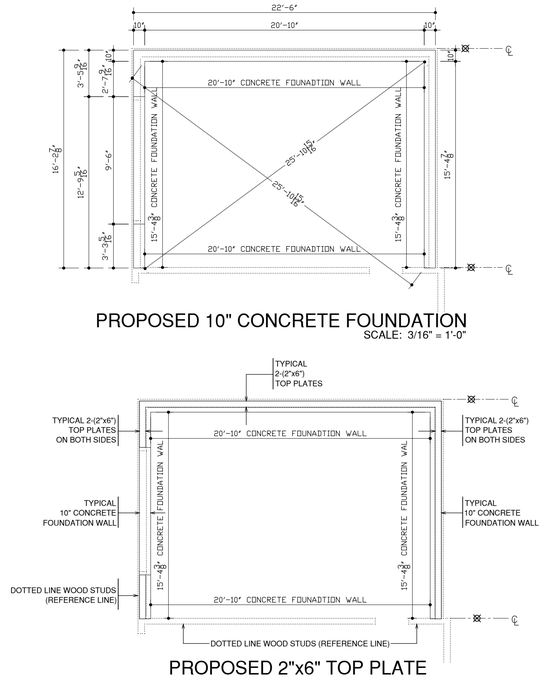
EXISTING SECOND FLOOR
SCALE: 3/16" = 1'-0"



PROPOSED FIRST FLOOR
SCALE: 3/16" = 1'-0"



PROPOSED SECOND FLOOR
SCALE: 3/16" = 1'-0"



PROPOSED 10" CONCRETE FOUNDATION
SCALE: 3/16" = 1'-0"

PROPOSED 2"x6" TOP PLATE
SCALE: 3/16" = 1'-0"

CONSTRUCTION NOTES FOR REINFORCEMENT AND REPAIRS:

1. WEAK STRUCTURES GARAGE: EXISTING TYPICAL 2"x8"@16 (±)" O.C. RAFTER, MISSING COLLAR TIES AND CEILING JOISTS: WATER LEAK, DETERIORATED & DAMAGED TO BE REPLACED.
2. EXISTING WOOD FRAME 2"x4"@16" O.C. STUDS AND WOOD SHEATHING DETERIORATED AND DAMAGED TO BE REPLACED AS NEEDED, AND REINFORCED WALL STUDS ON THE ENTIRE FIRST FLOOR WITH 2"x6"@16" O.C. TO ATTACHED TO EACH EXISTING 2"x4" STUD. PLACE NEW 2"x6" P.T. PLATE STUDS BEFORE INSTALLING 2"x6" WALL STUDS.
3. EXISTING WEAK WOOD STAIR WITH OPENING RISER, 3-(2x12) @14½" O.C. STRINGER, AND 65 INCH CLEARANCE HEIGHT HEADROOM (OUT OF THE CODE), TO BE REPLACED AND RELOCATED AS PER PLAN.
4. EXISTING 6"x6" WOOD BEAM 1 (B-1) DETERIORATED AND DAMAGED TO BE REPLACED AS PER PLAN.
5. EXISTING 2"x7"@22" O.C. JOIST HERE TO BE REINFORCED (OUT OF THE CODE), TO BE REINFORCED WITH 2"x8" (SISTER JOISTS) OR PLACE AT 9½" O.C. ADDITIONAL JOIST.
6. WEAK STRUCTURES STORAGE: EXISTING TYPICAL BALLOON FRAME AND CONVECTIONAL FRAME 2"x4"@16" O.C., AND 2"x4"@24" O.C. ON LOAD-BEARING WALL 2. THE WALL 2 MUSH BE REINFORCED WITH 2"x6"@12 O.C. AND REINFORCE 1ST AND 2ND FLOOR WITH 2"x6" STUD ATTACHED A EACH 2"x4" STUD (USE TYP. 2"x6" P.T. PLATE).
7. EXISTING DETERIORATED AND DAMAGED FOR WATER LEAK: SHEATHING, STUDS AND SILL PLATE TO BE REPLACED OR REINFORCED AS NEEDED, AND EXISTING WALL DEFLECTION IN THIS AREA MUST BE CORRECTED AND REINFORCED WITH 2"X6" ATTACHED TO EACH 2"X4" AND PLACE HEADER OR BEAM AS NEEDED IN THE FIELD.
8. EXISTING LOAD-BEARING WALLS 1 & 2 (W-1 & W-2). THE WALL 1 HAS BEAM 4 (B-4) WITH A WEAK CONNECTION, CUT, DAMAGED AND DETERIORATED TO BE REPLACED.
9. EXISTING 2"x7"@22" O.C. OUT OF CODE TO BE REINFORCED WITH SISTER JOISTS.
10. EXISTING TYPICAL 2"x6"@24-26(±)" O.C. RAFTER, 2"x6"@24"-26"(±) O.C. COLLAR TIE OR BEAM AND 2"x6"@24"-26"(±) O.C. CEILING JOISTS AND R30-INSULATION.
11. PROPOSED REINFORCE WITH TYPICAL 1"x4" LET-IN BRACE (DIAGONAL SHEAR BRACING WALL) IN EACH CORNER ON 1ST AND 2ND FLOOR OF THE MAIN BUILDING [KEEPS WALLS FROM FALLING DOWN]. USE HOLDDOWN WITH THREADED ANCHOR (POST-INSTALLED) IN EACH CORNER OF THE MAIN BUILDING TO PROVIDING OVERTURNING RESTRAINT.

LEGEND

- B-1 Existing Beam 1 = 6" x 6" Rough Wood Beam to be replaced for 2-(1¾" x 9 ¼")Versa-Lam 2.1E LVL, f_b: 3,100 psi.
- B-2 Beam 2 = Existing remained and to be confirmed in the field as required. (EXISTING)
- B-3 Beam 3 = 2-(2" x 12") common lumber, span 9'-9" (PROPOSED).
- B-4 Exisitng Beam 4 = 4"x6" and 4"x8" (three sections: damaged, cut and weak connection) to be replaced for: 2-(1¾" x 9¼") Versa-Lam 2.1E LVL, span 9'-9" (PROPOSED).

Existing Bearing Point (BP):
(BP-1 to BP-6) 1-(4" x 6") pressured-treated (P.T.) post
(BP-7) 1-(4" x 4") pressured-treated (P.T.) post

Proposed Typical Minimum Bearing Point (BP):
(BP-8) 3-(2" x 4"), or 3-(2" x 6"), as needed
Directly through the support point (bearing point) to the foundation.

Typical Header (HR), Minimum for window and door:
HR
HR-1 = 2-(2"x8") + ½" Plywood, 2-Jack Studs or Trimmers for Header. Maximum span: 4'-2". (Interior load-bearing wall).
HR-2 = 2-(2"x8"), + ½" plywood, 2-jack studs or trimmers for header. maximum span: (4'-2"). (exterior load-bearing wall).
HR-3 = 2-(2"x4") or 2-(2"x6"), 1-Jack Studs or Trimmers for Header. Maximum span: 3'-6". (Interior partition wall).

or Typical Wood Ceiling Joists or floor joist.
Wood Beam.

LVL = Laminated Veneer Lumber
AFF = At finished floor
OC = On the center
W = Wall
Typ. = Typical
R.O. = Rough opening
Ins. = Insulation

PROPOSED DOOR SCHEDULE

SYMBOL	NOMINAL DOOR SIZE	ROUGH OPENING	MATERIAL	JAMB	1ST FLOOR	2ND FLOOR	QUANTITY	REMARK
1	3'-0" x 6'-8"	3'-2" x 6'-10"	STEEL	'	1	0	1	TRADITIONAL PATINA 3/4" OVAL LITE 2-PANEL REFINISHED WHITE, INSWING GALVANIZED STEEL PRE-HUNG FRONT DOOR AND ENERGY EFFICIENT CORE NOMINAL DOOR THICKNESS (IN) 2 IN.
2	3'-0" x 6'-8"	3'-2" x 6'-10"	STEEL	'	1	0	1	6-PANEL PRIMED GALVANIZED STEEL (RESISTS RUST AND CORROSION) PRE-HUNG, INSWING FRONT DOOR W/BRICKMOULD AND ENERGY-EFFICIENT CORE
3	2'-4" x 6'-8"	2'-6" x 6'-10"	WOOD	'	3	0	3	6 PANEL COLONIST DOOR
4	5'-0" x 6'-6"	5'-0" x 6'-6"	WOOD	'	1	0	1	LAUNDRY, 6 PANEL COLONIST DOOR
5	9'-0" x 7'-0"	4'-2" x 6'-10"	WOOD	'	1	0	1	PROPOSED GARAGE DOOR: CLASSIC COLLECTION 9'-0"x7'-0", 6.5 R-VALUE INSULATED WHITE GARAGE DOOR. MINIMUM HEADROOM: A CLEARANCE OF 12" (305 MM)
6	2'-8" x 6'-8"	2'-10" x 6'-10"	WOOD	'	0	3	3	BEDROOM DOOR, 6 PANEL COLONIST DOOR
7	4'-0" x 6'-8"	4'-0" x 6'-8"	WOOD	'	0	2	0	BEDROOM CLOSET, 6 PANEL COLONIST DOOR
NOTE: CONFIRM ALL DOORS WITH MANUFACTURERS NOMINAL SIZE.					7	5	10	

PROPOSED WINDOW SCHEDULE

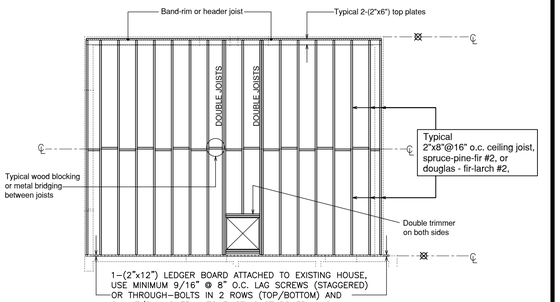
SYMBOL	NOMINAL WINDOW SIZE	ROUGH OPENING	JAMB	1ST FLOOR	2ND FLOOR	QUANTITY	REMARK
1	2'-7½" x 4'-8½" ⊕ ± 2'-2"	3'-1" x 3'-11½"	'	4	4	8	DOUBLE-HUNG WHITE VINYL FIN WITH J WINDOW, SCREEN INCLUDED
2	2'-3½" x 3'-1½" ⊕ ± 3'-8"	4'-2" x 2'-2½"	'	1	0	1	DOUBLE-HUNG WHITE VINYL FIN WITH J WINDOW, SCREEN INCLUDED
3	2'-3½" x 4'-0" ⊕ ± 2'-10"	2'-9½" x 1'-5½"	'	3	0	3	DOUBLE-HUNG WHITE VINYL FIN WITH J WINDOW, SCREEN INCLUDED
4	1'-10½" x 4'-0" ⊕ ± 2'-10"	2'-9½" x 1'-5½"	'	1	0	1	DOUBLE-HUNG WHITE VINYL FIN WITH J WINDOW, SCREEN INCLUDED
5	2'-3½" x 4'-8½" ⊕ ± 2'-2"	2'-9½" x 1'-5½"	'	0	1	1	DOUBLE-HUNG WHITE VINYL FIN WITH J WINDOW, SCREEN INCLUDED, TEMPERED GLASS
NOTE: CONFIRM ALL WINDOWS WITH MANUFACTURERS NOMINAL SIZE.				9	5	14	

FIRE ALARM DEVICE LEGEND

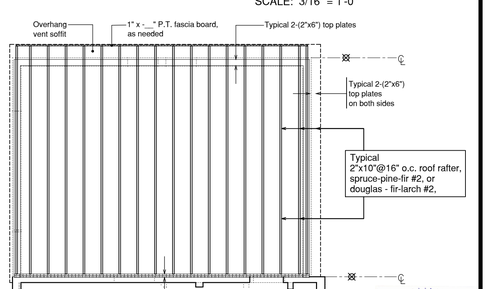
- (S) SMOKE ALARM (W). IN ACCORDANCE WITH 780 CMR 9TH EDITION R315.3 LOCATION.
- (CO) CARBON MONOXIDE ALARM (W). IN ACCORDANCE WITH 780 CMR 9TH EDITION R315.1 GENERAL: CARBON MONOXIDE ALARMS SHALL COMPLY WITH SECTION R315, 248 CMR, NFPA 720, AND THE MANUFACTURER'S INSTRUCTIONS (SHALL BE INTERCONNECTED).
- (S/CO) COMBINATION SMOKE & CARBON MONOXIDE ALARMS (W). IN ACCORDANCE WITH 780 CMR 9TH EDITION R315.4 COMBINATION ALARMS & 315.5 POWER SOURCE .
- (⊙) HEAT (W). IN ACCORDANCE WITH 780 CMR 9TH EDITION R314.8.1 HEAT DETECTOR PLACEMENT
- EX EXTINGUISHER.
- BATHROOM EXHAUST FAN MECHANIC VENTILATION A MINIMUM 50 CFM EACH/ WITH OR WITHOUT LIGHTING.

E = EXISTING
P = PROPOSED
W = WIRE OR WIRED (PROPOSED FIRE ALARM DEVICES)

NOTE:
THE BUILDER OR CONTRACTOR MUST CONFIRM, IN THE FIELD, ALL THE EXISTING PARTS AND DIMENSIONS OF THE PROJECT.



PROPOSED CEILING JOIST FRAMING PLAN
SCALE: 3/16" = 1'-0"



PROPOSED ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS
MARCOS A. VIACAVA
NO. 33645
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

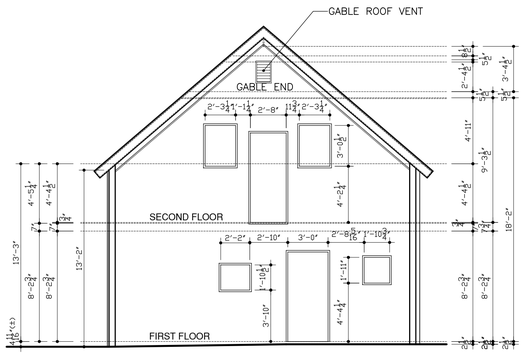
No.	Description	Date
1	EXISTING AND PROPOSED LAYOUT PLAN (FINAL)	02-13-2024
2	STRUCTURAL REPORT AND STRUCTURAL REINFORCEMENT (FINAL)	05-17-2024

VIACAD, LLC & MDJ, INC.
DESIGN BUILD, CONSTRUCTION MANAGEMENT & CONSULTING SERVICES
28 STOCKTON STREET, WORCESTER, MA 01610
TEL.: 774-312-0974 FAX: 508-363-1287

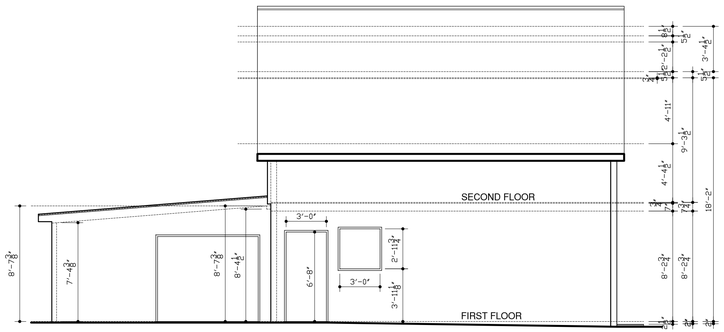
PROJECT & LOCATION: REMODEL AND STRUCTURAL REINFORCEMENT
547 CAMBRIDGE STREET
WORCESTER, MA

DRAWING TITTLE: EXISTING & PROPOSED 1ST FLOOR PLAN, FOUNDATION, FRAMING PLAN, FIRE ALARM DEVICES, LEGEND AND NOTES

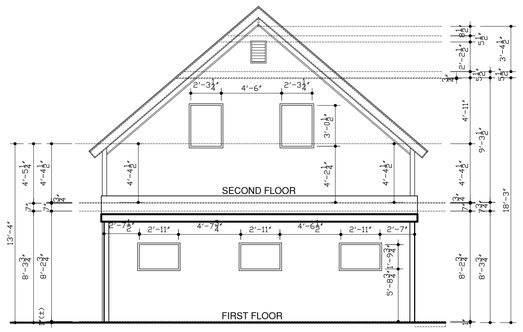
JOB NO.:	DRAWN BY:	DRAWING NO.:
100044455	JLM	A-1
SCALE: AS NOTED	DATE: 05-17-2024	



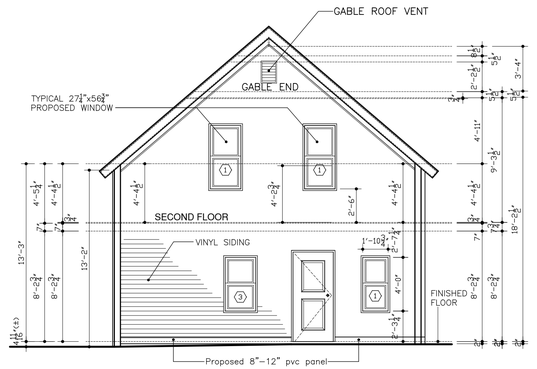
EXISTING FRONT ELEVATION
SCALE: 3/16" = 1'-0"



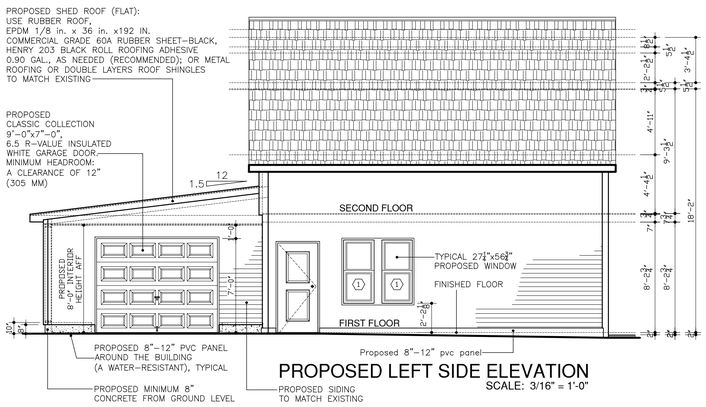
EXISTING LEFT SIDE ELEVATION
SCALE: 3/16" = 1'-0"



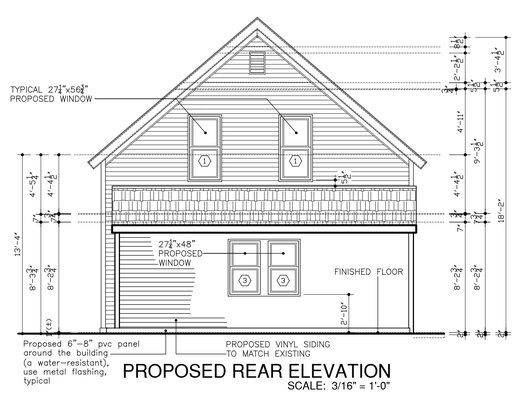
EXISTING REAR ELEVATION
SCALE: 3/16" = 1'-0"



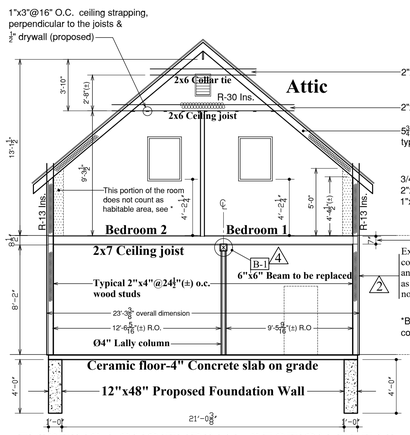
PROPOSED FRONT ELEVATION
SCALE: 3/16" = 1'-0"



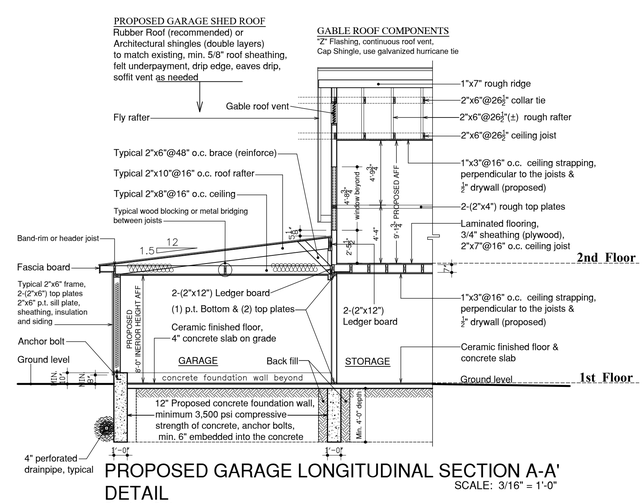
PROPOSED LEFT SIDE ELEVATION
SCALE: 3/16" = 1'-0"



PROPOSED REAR ELEVATION
SCALE: 3/16" = 1'-0"



EXISTING LONGITUDINAL SECTION DETAIL (SKETCH)
SCALE: 3/16" = 1'-0"



PROPOSED GARAGE LONGITUDINAL SECTION A-A' DETAIL
SCALE: 3/16" = 1'-0"

Foundation Bolting:
Min. Ø 5/8"@16" O.C. Galv. anchor bolt, min. 4" embed into the concrete (depth), nuts and 1/4" plate washers, 9" min. from corner studs, 12 maximum to end of sill plate.

GENERAL NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH APPLICABLE THE 2015 INTERNATIONAL RESIDENTIAL CODE (IRC), 9th EDITION 780 CMR MASSACHUSETTS RESIDENTIAL CODE, 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND 2020 MASSACHUSETTS ENERGY CODE, AMENDED FROM THE 2018 IECC, OSHA COMPLIANCE 2015, DEPARTMENT OF BUILDINGS RULES AND REGULATIONS AND ANY OTHER AGENCY HAVING JURISDICTION. ALL MATERIALS, FORMS AND METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL MEET BUILDING CODE STANDARDS.
2. ALL NEW SHEET ROCK WORK IS TO BE TAPED, POINTED AND SHALL RECEIVE ONE COAT OF PRIMER.
3. FIRE ALARMS: PROPOSED FIRE ALARM DEVICES IN THIS HOUSE, AND CONNECT DETECTORS DEVICE, AS REQUIRED IN THE FIELD. (USE BACK-UP BATTERY FOR FIRE ALARM DEVICES).
4. FIRE-RESISTANCE RATED WALL ASSEMBLY USE 1/2" MIN. GYPSUM BOARD AS PER CODE.
5. PLACE DOUBLE JOIST BELOW PARTITION NON-LOAD-BEARING WALL OR LOAD-BEARING WALL, AS REQUIRED.
6. INSULATION: IN COMPLIANCE WITH 2018 IECC AND 2020 MASSACHUSETTS AMENDED FROM 2018 IECC: TABLE 402.1.2, 402.1.4, AND 405.5.2.
7. CONFIRM ALL EXISTING CONDITION IN THE FIELD AS REQUIRED.

CONSTRUCTION NOTE:
1. USE METAL CONNECTOR FOR POST, COLUMN, GIRDER, BEAM, JOIST AND RAFTER, AS REQUIRED.
2. USE BLOCKING BETWEEN JOIST ON ALL TOP WALL OF BEARING WALL.
3. USE MIN. DOUBLE 2"x8" + 1/2" PLYWOOD HEADER IN ALL DOORS OR WINDOWS/OPENING ON BEARING WALL.
4. USE TEMPORARY BEARING SUPPORT (SHORING AND BRACING), AS REQUIRED.
5. USE BRIDGING 1"x3" @ 8'–0" MAX. WOOD OR METAL BRIDGE, AS REQUIRED.
6. USE 1/2" MIN. GYPSUM BOARD AS PER CODE (2015–2020 IRC) FIRE RATING, AND AS PER PLAN.
7. PLACE DOUBLE JOIST BELOW PARTITION WALL OR LOAD–BEARING WALL.
8. CONFIRM ALL EXISTING CONDITION IN FIELD AS REQUIRED.

STAIR :
a. EXTRINGERS 2"x12"@12" O.C. MAXIMUM.
b. PROPOSED HEIGHT STAIR RISER = 7", AND 7¾" MAXIMUM BY CODE,
c. STAIR TREAD HEIGHT = MINIMUM 10".
d. STAIR NOSINGS = (3/4") MINIMUM AND (1–1/4") MAXIMUM.
STAIR RAILING HEIGHT AND HANDRAIL: 34"–38" (PROPOSED MINIMUM 36")

CHAPTER 4 [RE] RESIDENTIAL ENERGY EFFICIENCY
In accordance with 2018 International Energy Code (IECC) and 2020 Massachusetts Energy Code, Amended from the 2018 IECC:

Section R402.1.2 Insulation and Fenestration Criteria
Table R402.1.2 Insulation and Fenestration Requirements by Components.

R402.1.3 R-Value Computation. See 2020 Massachusetts amended.
R402.1.4 U-factor alternative, and 2020 Massachusetts amended.
Table 402.1.4 Equivalent U-factor.

R402.2.1 Ceiling with attic spaces, and 2020 Massachusetts amended.

R402.2.8 Floors
See Table 402.1.2
R402.2.11 Crawl space walls

R402.3.1 U-factor.

R402.3 Fenestration (prescriptive). In addition to the requirements of Section R402, fenestration shall comply with section R402.3.1 through R402.3.5.

R402.4.1 Building thermal envelope

R402.4.1.1 Installation. Shall be comply with
Table R402.4.1.1 and
Table R402.4.1.2

R405.5.2 Residence Specifications.
See Table: R405.5.2(1) Specifications for the Standard Reference and Proposed Designs:

Building Component	Standard Reference Design	Proposed Design
-	-	-
-	-	-

2020 MASSACHUSETTS ENERGY CODE, AMENDED FROM THE 2018 IECC:

R402.1.4 U-factor alternative.

Climate Zone	Fenestration U-factor	Skylight U-factor	Ceiling U-factor	Wall U-factor	Wall U-factor[b]	Floor U-factor	Wall U-factor	Space Wall U-factor
5 and Marine 4	0.30	0.55	0.026	0.060	0.082	0.033	0.050	0.055

2018 INTERNATIONAL ENERGY CODE (IECC):
Section R402.1.2 Insulation and Fenestration Criteria
Table R402.1.2 Insulation and Fenestration Requirements by Components.

Climate Zone	Fenestration U-factor[b]	Skylight[b] U-factor	Glazed Fenestration SHGC[b,e]	Ceiling R-Value	Wood Frame wall R-Value	Mass Wall R-Value	Floor R-Value	Basement[c] Wall R-Value	Slab[d] R-Value & Depth
5 and Marine 4	0.30	0.55	NR	49	20 or 13+5[h]	13/17	30[g]	15/19	10, 2ft

PROPOSED INTERIOR STAIR :
a. STRINGERS 2"x12"@12" O.C. MAXIMUM.
b. PROPOSED HEIGHT STAIR RISER = 7", AND 7¾" MAXIMUM BY CODE,
c. STAIR TREAD HEIGHT = MINIMUM 10".
d. STAIR NOSINGS = (3/4") MINIMUM AND (1-1/4") MAXIMUM.
STAIR RAILING HEIGHT AND HANDRAIL: 34"-38", PROPOSED MIN. 36",
USE 42" HANDRAIL HEIGHT ON SECOND FLOOR

REVISIONS:

No.	Description	Date
1	EXISTING AND PROPOSED LAYOUT PLAN (FINAL)	02–13–2024
2	STRUCTURAL REPORT AND STRUCTURAL REINFORCEMENT (FINAL)	05–17–2024

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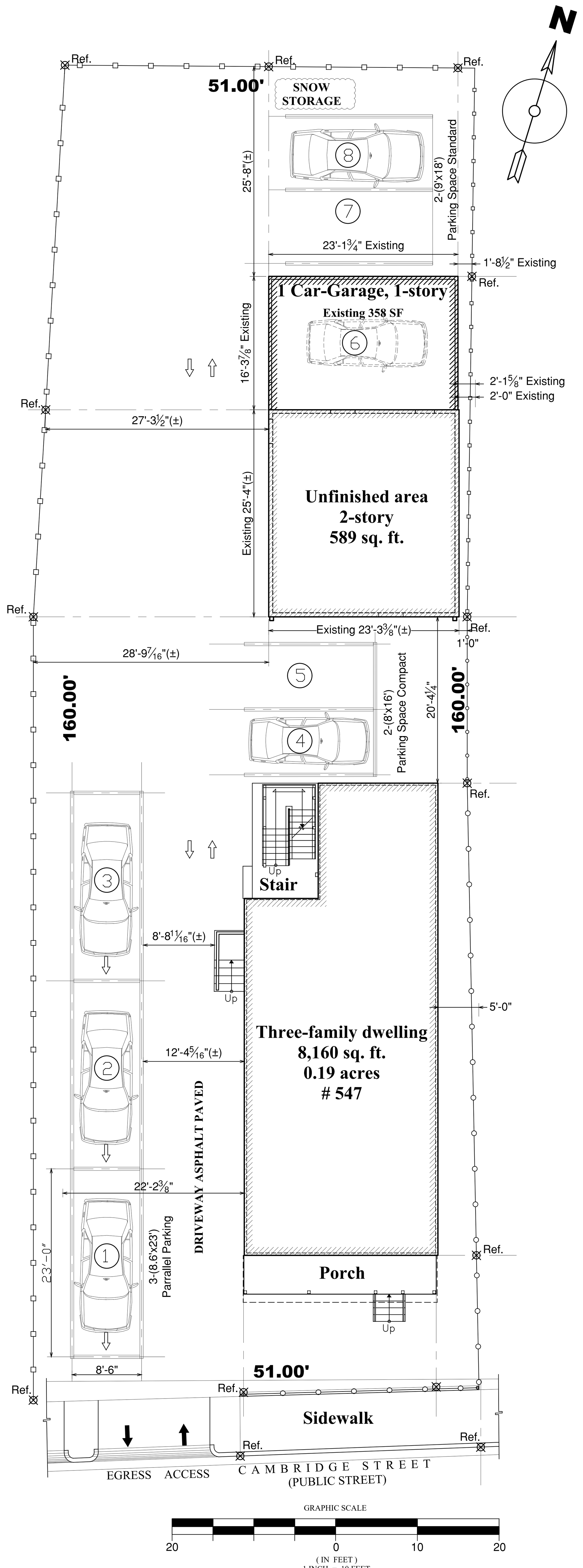
28 STOCKTON STREET, WORCESTER, MA 01610
TEL.: 774–312–0974 FAX: 508–363–1287

PROJECT & LOCATION: REMODEL AND STRUCTURAL REINFORCEMENT
547 CAMBRIDGE STREET
WORCESTER, MA

DRAWING TITTLE: EXISTING & PROPOSED ELEVATIONS, SECTIONS, AND CONSTRUCTION NOTES

JOB NO.: 100044455
DRAWN BY: JLM
SCALE: AS NOTED
DATE: 05-17-2024
DRAWING NO.: A-2



PARKING PLAN

SCALE: 1" = 10'-0"

OWNER:
PICHARDO, YERKI M.
547 CAMBRIDGE STREET,
WORCESTER, MA 01610

PROJECT STATISTICS

Use Zoning District: rg-5 (Residential, General)
Lot: #07, Block: 042 Map: 00025
Lot Area: 8,160 square feet (0.19 ac)
Building 1: #547
Year Built: 1890
Style: Three Family
Model: 4-8 Units
Stories: 2.50
Occupancy: 3
Living Area: 3,030 sf
Gross area: 5,334 sf

REQUIREMENTS FOR PARKING SPACES

A. Three Family Dwelling: Requesting 2 parking spaces per apartment.

NOTE: The entire parking lot area has asphalt paved except rear setback.

PERCENTAGE OF LOT COVERED BY BUILDING = 65% FROM LOT

- 5,334 SF / 8,160 SF LOT = 0.65 % OR 65% FROM LOT (EXISTING).
- 5,319.5 SF / 8,160 SF LOT = 0.65 % OR 65% FROM LOT (PROPOSED).

Building 1 sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	1,242	1,242
FUS	Upper Story, Finished	1,242	1,242
FU2	Upper 1/2 Finished	1,092	546
EPH	Enclosed Porch	180	0
FB1	Basement 1/4 Finished	1,092	0
OPH	Open Porch	276	0
ubm	Basement, Unfinished	210	0
		5,334	3,030

Building 2 sub-Areas (sq ft) (Garage-Unfinished Area)			Legend
Code	Description	Gross Area	Living Area
FGR	Garage	391	0
UNF	Unfinished Area (2-Stories)	1,639	0

LOCATION	EXISTING USE	MODEL	Calculation	Required	Proposed
547 Cambridge St	Residence Three-family dwelling	4 - 8 Units, 2.5 Stories	2 space per Apartment	8 Spaces	8 Display/spaces
			TOTAL	8 spaces	8 spaces

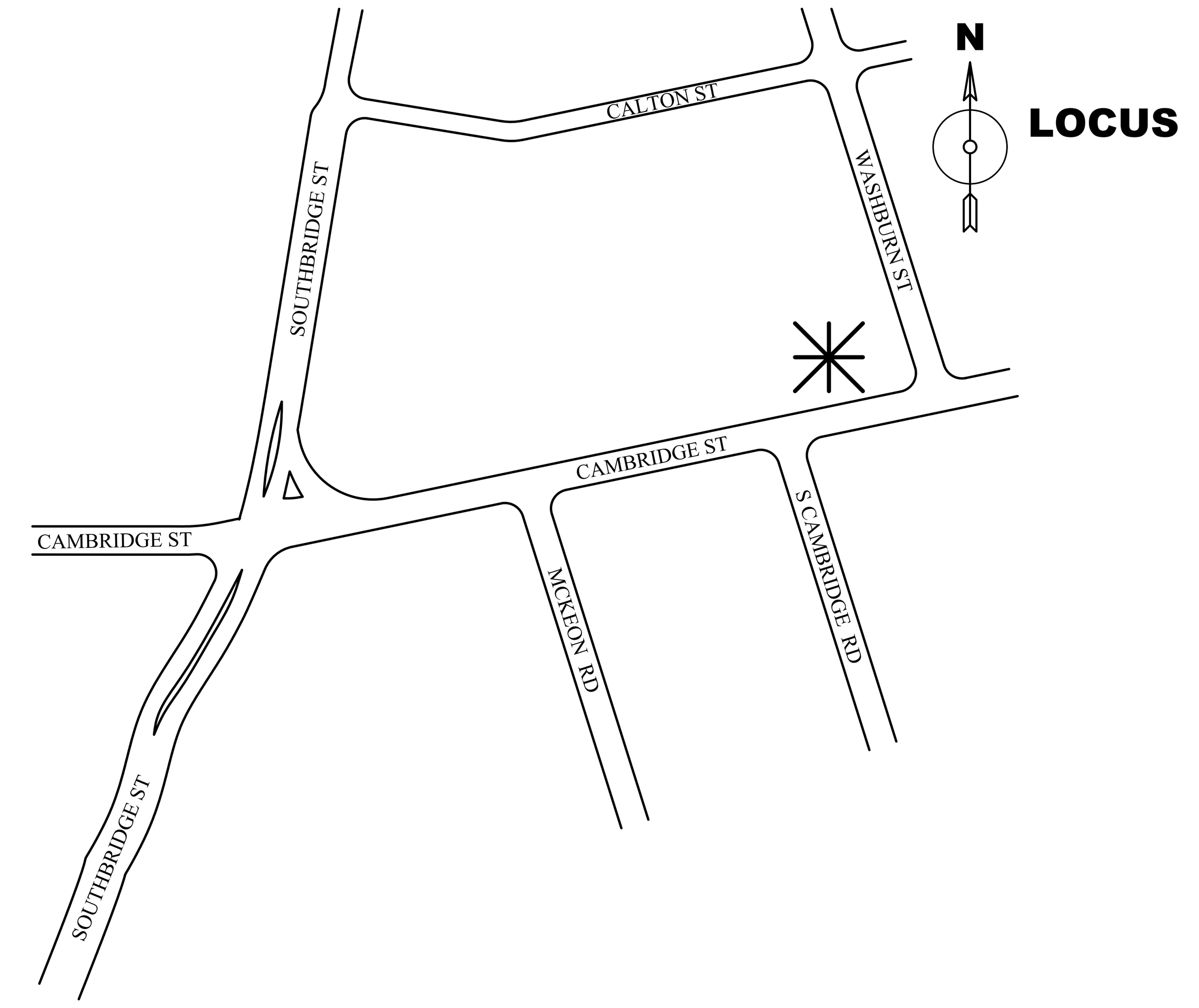
SYMBOLS

- DIRECTION OF TRAFFIC
- PRECAST BUMPER (OPTIONAL)
- PROPERTY LINE
- 4'-0" (48") HEIGHT CHAIN LINK FENCE, (EXISTING)
- 5'-8" (68") HEIGHT WOOD FENCE, (EXISTING)

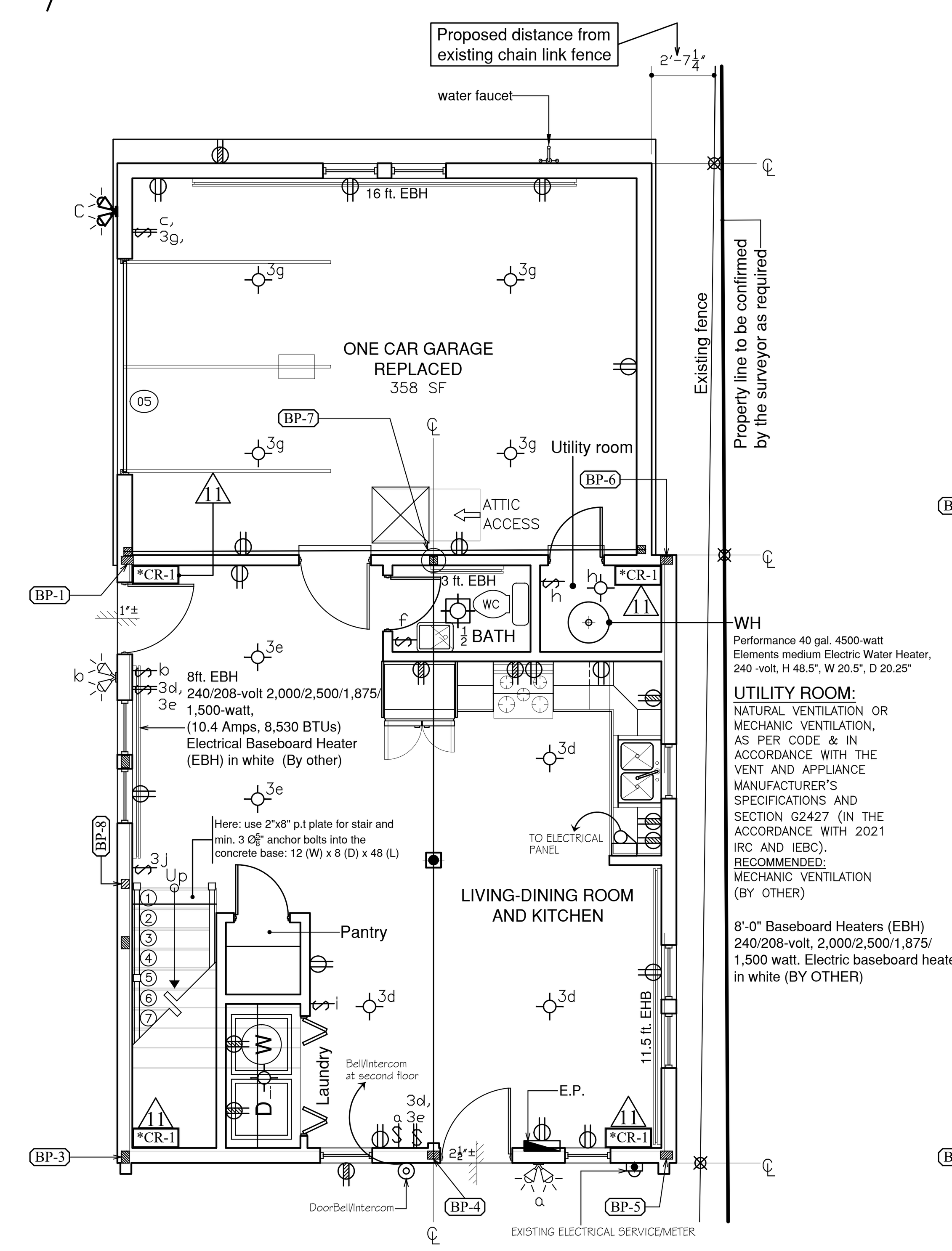
NOTE:
THE BUILDER OR CONSTRUCTOR MUST CONFIRM IN THE FIELD ALL THE EXISTING PARTS OF THE PROJECT.

LAND SURVEYOR:

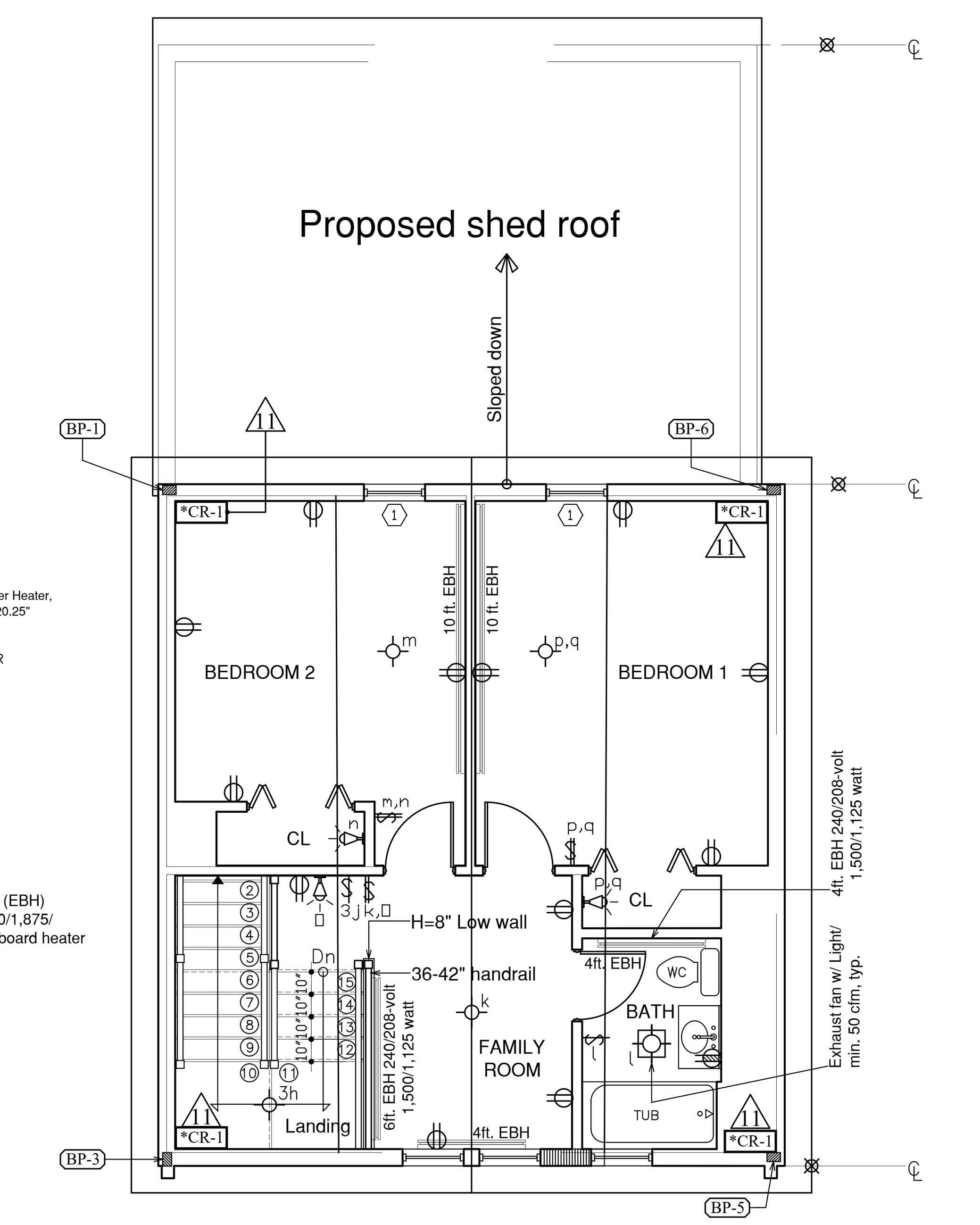
INFORMATION PROVIDED IN THIS PLAN IS FOR REFERENCE ONLY AND EXCLUSIVELY FOR THE EXISTING FENCE (USED AS REFERENCE): IF IT IS REQUIRED TO CONFIRM THE LIMITS OF THE PROPERTY LINE OF THE LOT. THIS SHOULD BE DONE WITH A LAND SURVEYOR LICENSED BY MASSACHUSETTS IN ACCORDANCE WITH THE 2015 INTERNATIONAL RESIDENTIAL CODE AND ANY OTHER AGENCY HAVING JURISDICTION.



N LOCUS



PROPOSED 1ST FLOOR ELECTRIC HEAT, PLUG AND LIGHTING MAP (BY OTHER) SCALE: 3/16" = 1'-0"



PROPOSED 2ND FLOOR ELECTRIC HEAT, PLUG AND LIGHTING MAP (BY OTHER) SCALE: 3/16" = 1'-0"

LEGEND

- SINGLE POLE SWITCH, 15A., 120V.,
- DOUBLE POLE SWITCH, 15A., 120V.,
- THREE WAY SWITCH, 15A., 120V.,
- INCAND/FLUOR. FIXTURE, WALL MTD.
- RECESSED LIGHT
- DUPLEX RECEPTACLE, 15A., 125V., GRND.,
- GFCI PROTECTED (WATERPROOF)
- INCAND OR FLUOR. FIXTURE, CEILING

IN ACCORDANCE WITH NFPA 70 NATIONAL ELECTRICAL CODE
INTERNATIONAL ELECTRICAL CODE 2023 EDITION (BY OTHER)

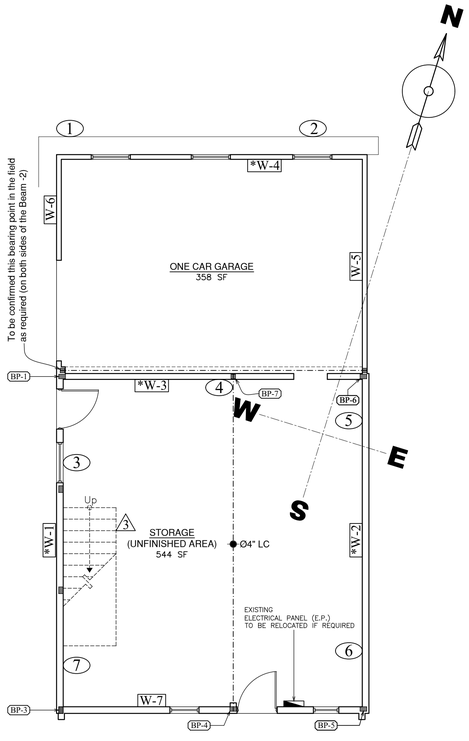
REVISIONS:		
No.	Description	Date
1	EXISTING AND PROPOSED LAYOUT PLAN (FINAL)	02-13-2024
2	STRUCTURAL REPORT AND STRUCTURAL REINFORCEMENT (FINAL)	05-17-2024

VIACAD, LLC & MDJ, INC.
DESIGN BUILD, CONSTRUCTION MANAGEMENT & CONSULTING SERVICES
28 STOCKTON STREET, WORCESTER, MA 01610
TEL.: 774-312-0974 FAX: 508-363-1287

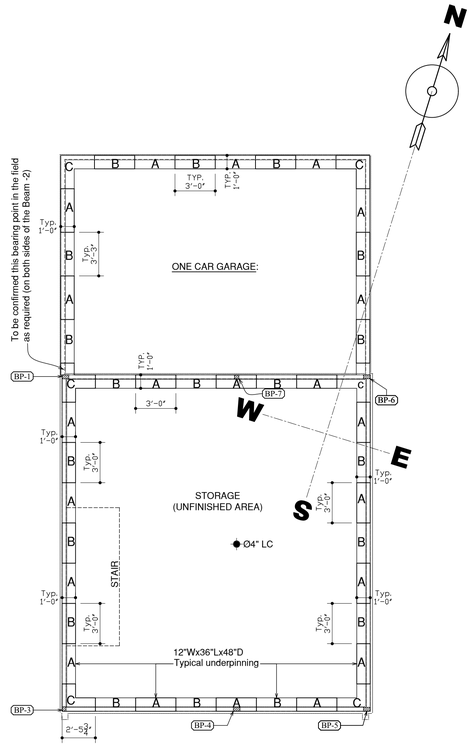
PROJECT & LOCATION: REMODEL AND STRUCTURAL REINFORCEMENT
547 CAMBRIDGE STREET
WORCESTER, MA

DRAWING TITTLE: PROPOSED PARKING PLAN, PROJECT INFORMATION AND ELECTRICAL MAP

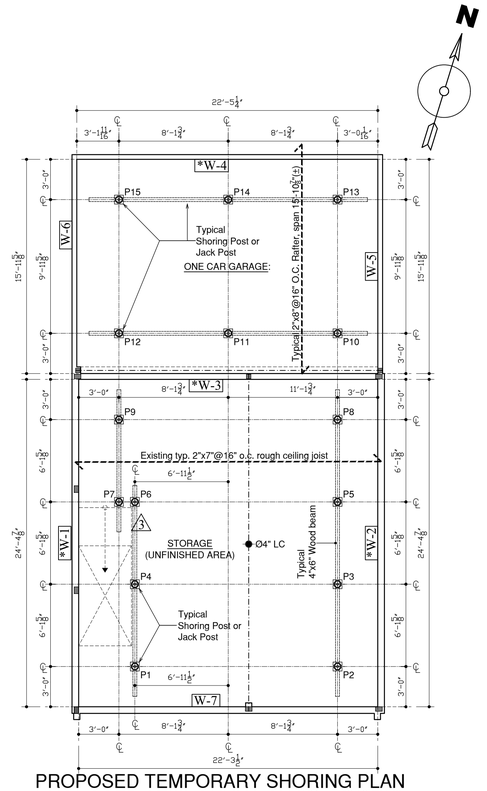
JOB NO.: 100044455
SCALE: AS NOTED
DRAWN BY: JLM
DATE: 05-17-2024
DRAWING NO.: A-3



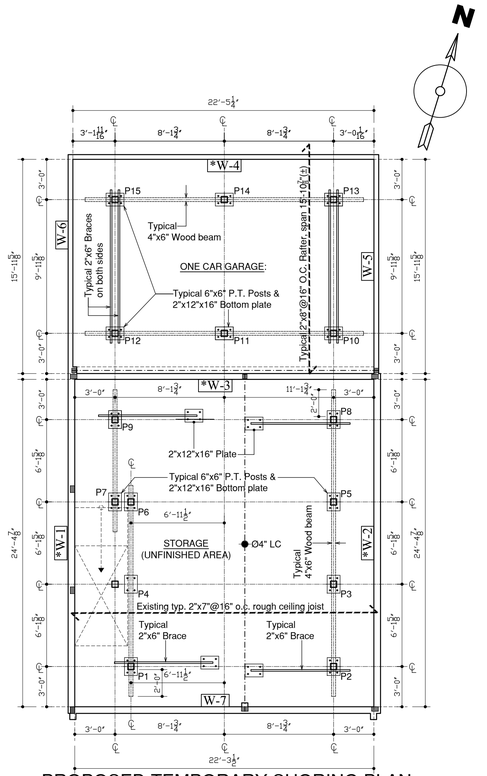
PROPERTY FOUNDATION TEST FIELD LOCATION
SCALE: 3/16" = 1'-0"



PROPOSED UNDERPINNING PLAN
(Walls Foundation Reinforcement)
SCALE: 3/16" = 1'-0"



PROPOSED TEMPORARY SHORING PLAN
Shoring or Jack post (OPTION I)
SCALE: 3/16" = 1'-0"



PROPOSED TEMPORARY SHORING PLAN
6"x6" Posts (OPTION II)
SCALE: 3/16" = 1'-0"

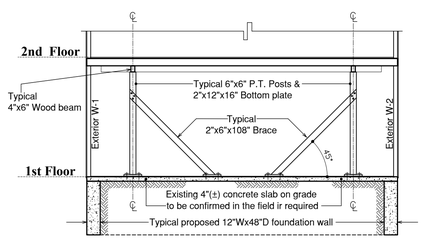
PROPERTY FOUNDATION TESTING FIELD REPORT						
Project Name	Rear Addition (Two story wood frame residential structure) at 547 Cambridge					
Project Address	547 Cambridge Street Worcester, MA					
Foundation Research Results Summary						
Test No. #	Date Location Test	Date of test	Test location or General test Area	Ubication	Remark	Pass or Fail
*①	4/20/24	4/21/24	Footing Area Northwest	BW-4	Missing Footing	FAIL
*②	4/20/24	4/21/24	Footing Area Northwest	BW-4	Missing Footing	FAIL
*③	4/20/24	4/21/24	Footing Area Southwest	BW-1	Missing Footing	FAIL
*④	4/20/24	4/21/24	Footing Area Northwest	BW-3	Missing Footing	FAIL
*⑤	4/20/24	4/21/24	Footing Area Northeast	BW-2	Partial Footing (21" Depth ±)	FAIL
*⑥	4/20/24	4/21/24	Footing Area Southeast	BW-2	Partial Footing (21" Depth ±)	FAIL
*⑦	4/20/24	4/21/24	Footing Area Southwest	BW-1	Missing Footing	FAIL

PROPOSED REINFORCEMENT
Existing weak and unsafe structure load-bearing walls and non-load bearing walls:
Recommended pour concrete (underpinnings) underneath concrete slab and all exterior load-bearing walls 1-4 (W-1 to W-4) and non-load bearing walls 5 to 7 (W-5 to W-7), see Proposed Underpinning Plan.

* Bearing wall (BW) test locations.

NOTE:

- During the entire visual review test of the foundation area in the field, the relevant inspection were carried out and we were able to notice that the building in question does not have a foundation wall and footing. Which makes the structure unsafe because it does not have an adequate foundation to support its own weight, live load, dead load, wind load, snow load, etc. Therefore, it has been recommended to reinforce the base of the building with a foundation wall (underpinning). See plan attached.
- The wood Post 7 (BP-7) had a footing (16"W x 16" L x 24"D) ± , place underpinning underneath also (Typical).
- The underpinning's must be poured alternately as per plan.



PROPOSED TEMPORARY SHORING DETAIL SKETCH (OPTION II)
proposed footing

A. Typical Super S Series 8 ft. 4 in. Jack Post ($109.00):H 100 in, W 4 in., D 5 in.
- Compression load range is 18,000 lbs. - 9,100 lbs. (Minimum capacity)
- Adjust from 4 ft. 8 in. to 8 ft. 4 in.
- Double carriage bolts and nuts.
- Strong galvanized plates.
- Etc.

B. The MetalTech "M" series shoring post 5 ft 6 in.
- 66 in. to 120 in. (5 ft 6 in. to 10 ft.) Medium Duty Adjustable Shoring Jack Post.
- H 66 in, W 6 in., D 6 in.
- High load capacity - 8,850 lbs. to 4,100 lbs.
- Conforms to standard ANSI/SSFI SH300-2007.

COMMONWEALTH OF MASSACHUSETTS
MARCOS A. CRUZ
NO. 53645
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

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PROJECT & LOCATION: REMODEL AND STRUCTURAL REINFORCE MENT
547 CAMBRIDGE STREET
WORCESTER, MA

DRAWING TITTLE: FOUNDATION REPORT AND
PROPOSED FOUNDATION REINFORCEMENT

JOB NO.: 100044455
DRAWN BY: JLM
SCALE: AS NOTED
DATE: 05-17-2024
DRAWING NO.: A-4