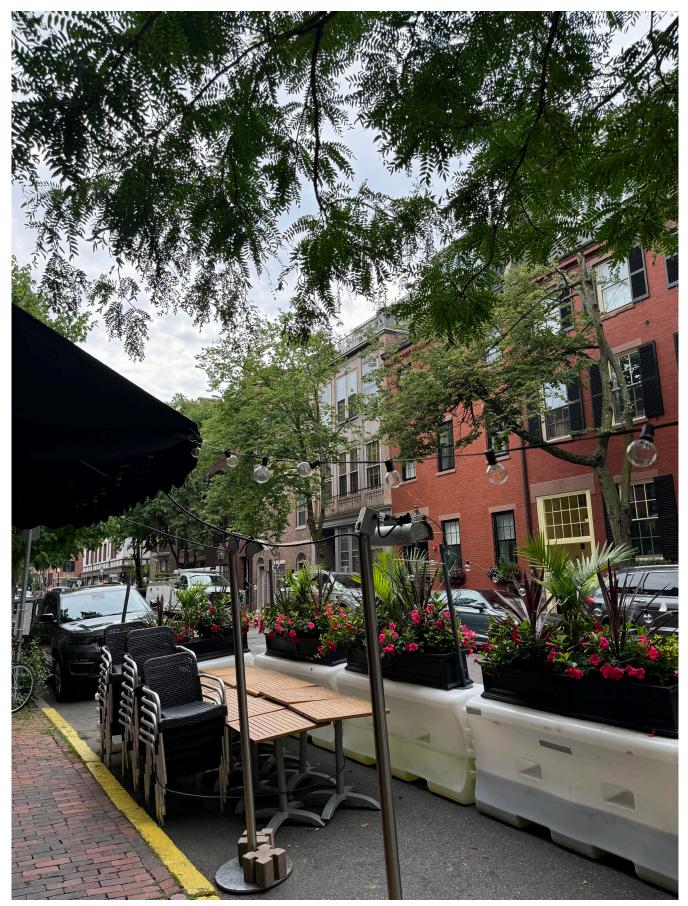
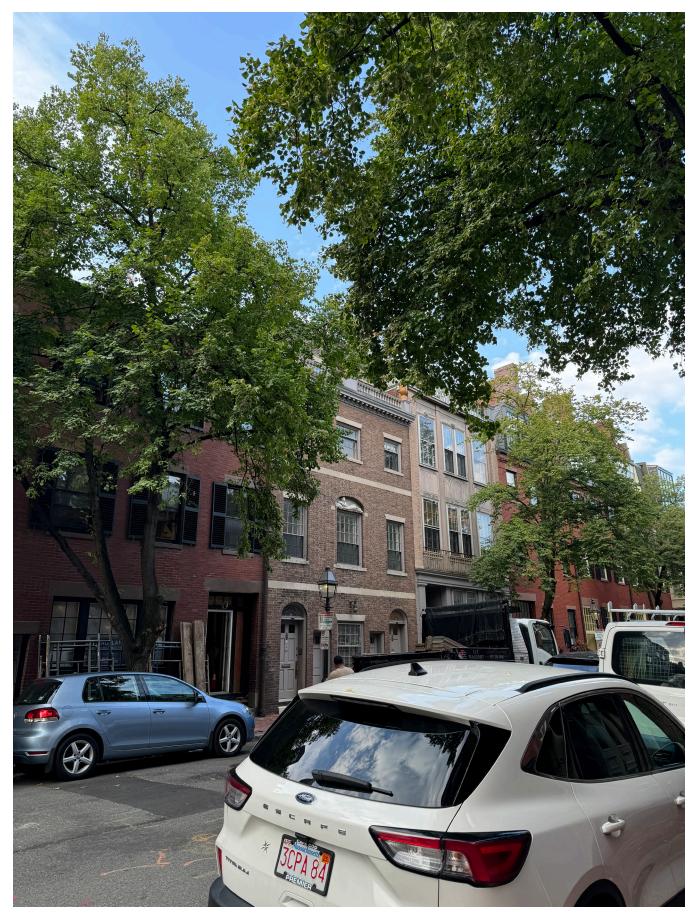


CHESTNUT ST VIEW OF FRONT FACADE



CHESTNUT ST VIEW OF FACADE FROM WEST



CHESTNUT ST VIEW OF FACADE FROM EAST



CHESTNUT ST VIEW OF FACADE FROM EAST/ RIVER ST



CLOSE UP OF 90 CHESTNUT ST FRONT FACADE



EAST FRONT DOOR CLOSE UP



RIVER ST VIEW OF REAR ELL



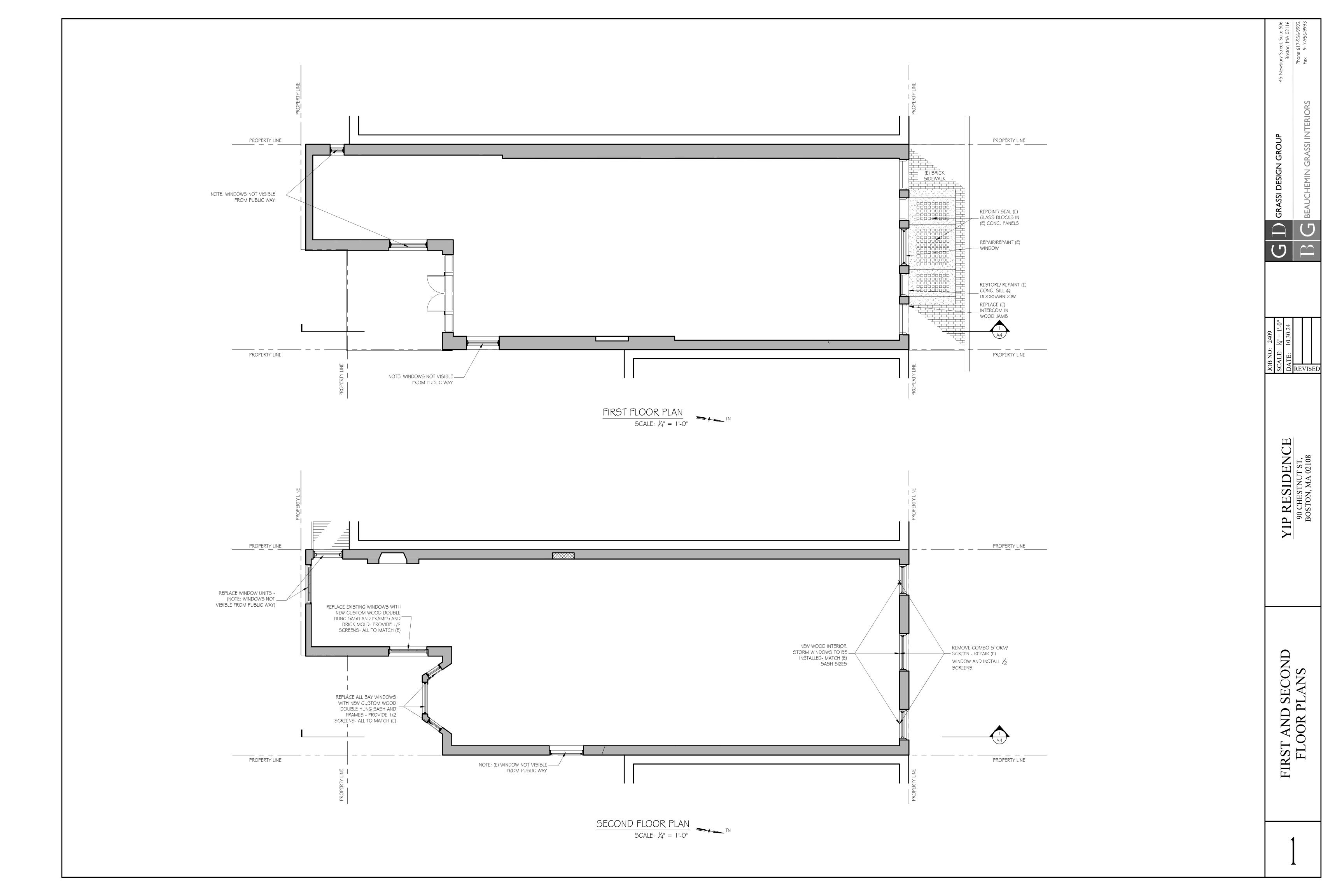
RIVER ST VIEW OF REAR ELL/ BAY

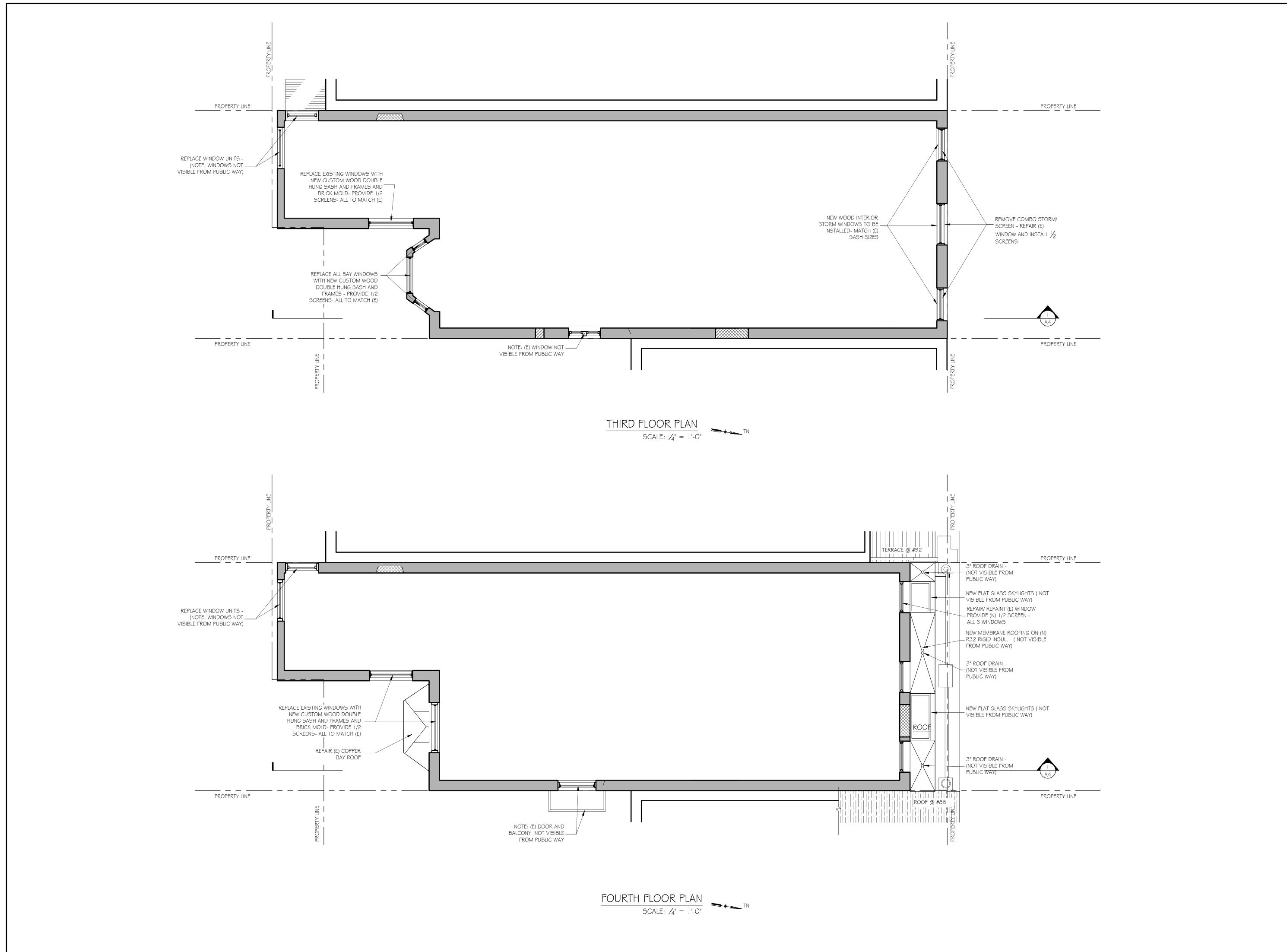


RIVER ST VIEW OF REAR ELL/ REAR WALL

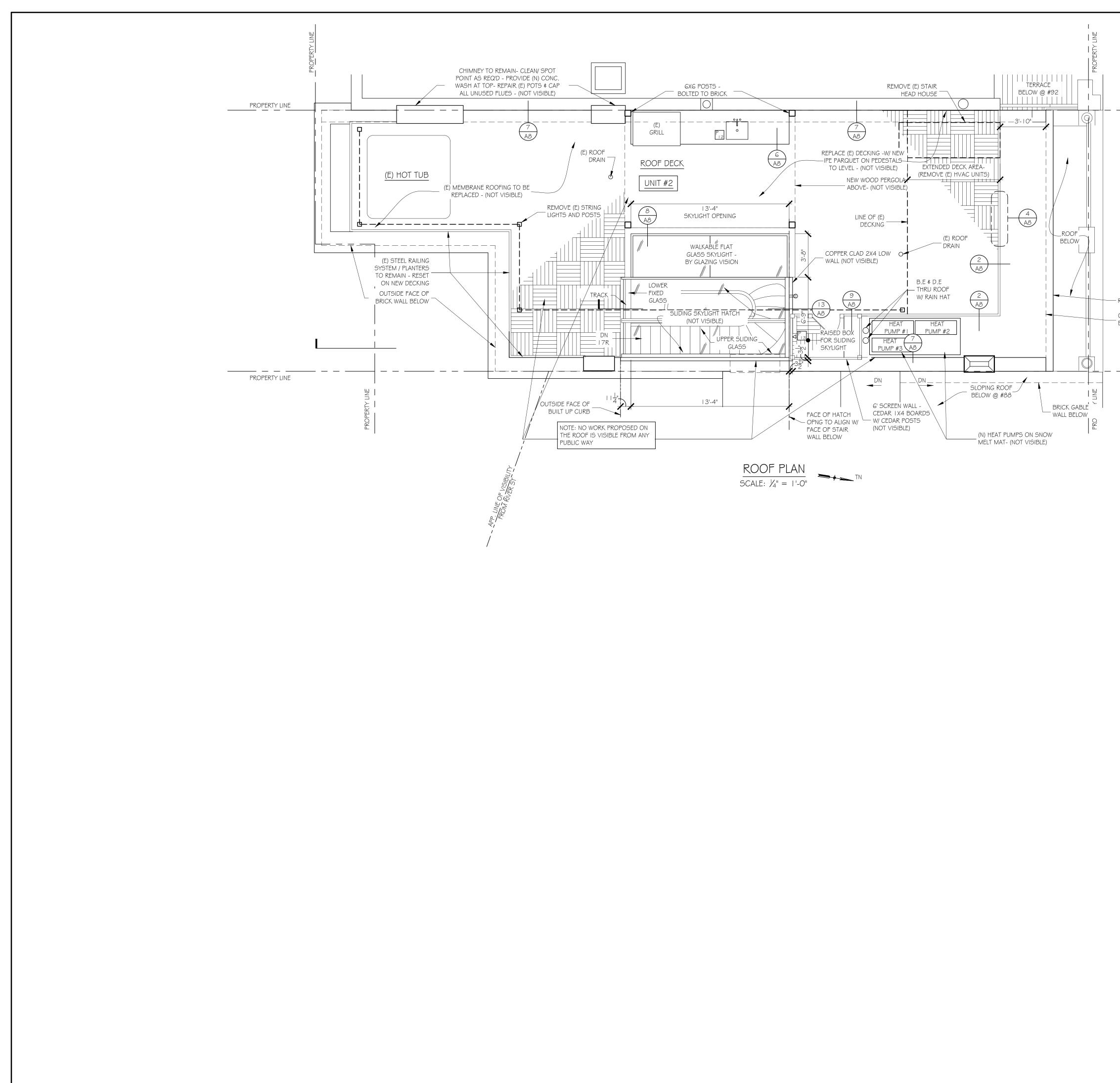


RIVER ST VIEW OF REAR PORTION OF PARTY WALL





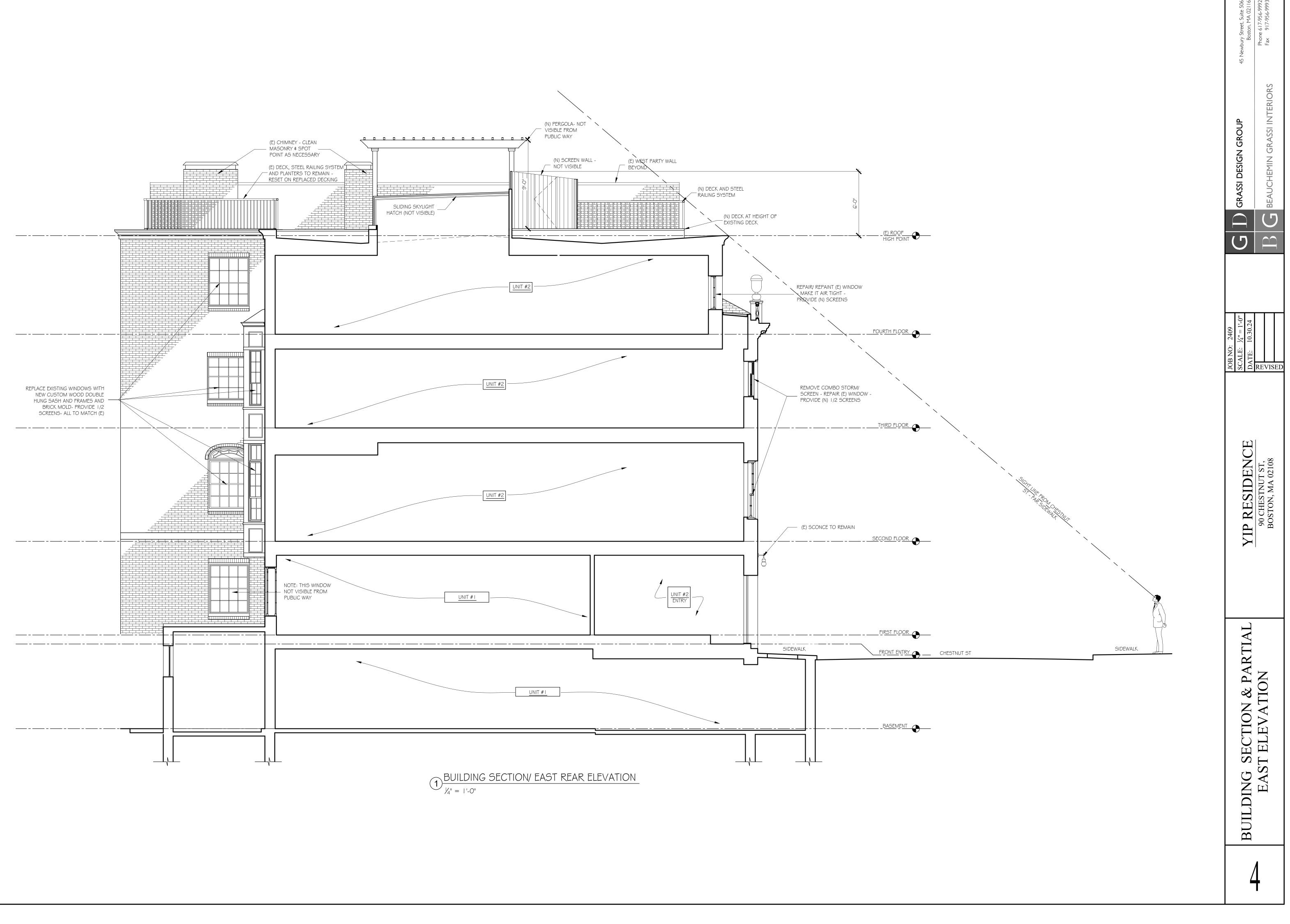
	THIP & EOUBTHELOOD MANS	YIP RESIDENCE	JOB NO: 2409 SCALE: J_4 " = 1'-0" DATE: $10.30.24$	C D GRASSI DESIGN GROUP	45 Newbury Street, Suite 506 Boston, MA 02116
)	I TIND & FUUNI T FLUUR FLANS	90 CHESTNUT ST, BOSTON, MA 02108	REVISED	B G BEAUCHEMIN GRASSI INTERIORS	Phone 617-956-9992 Fax 917-956-9993



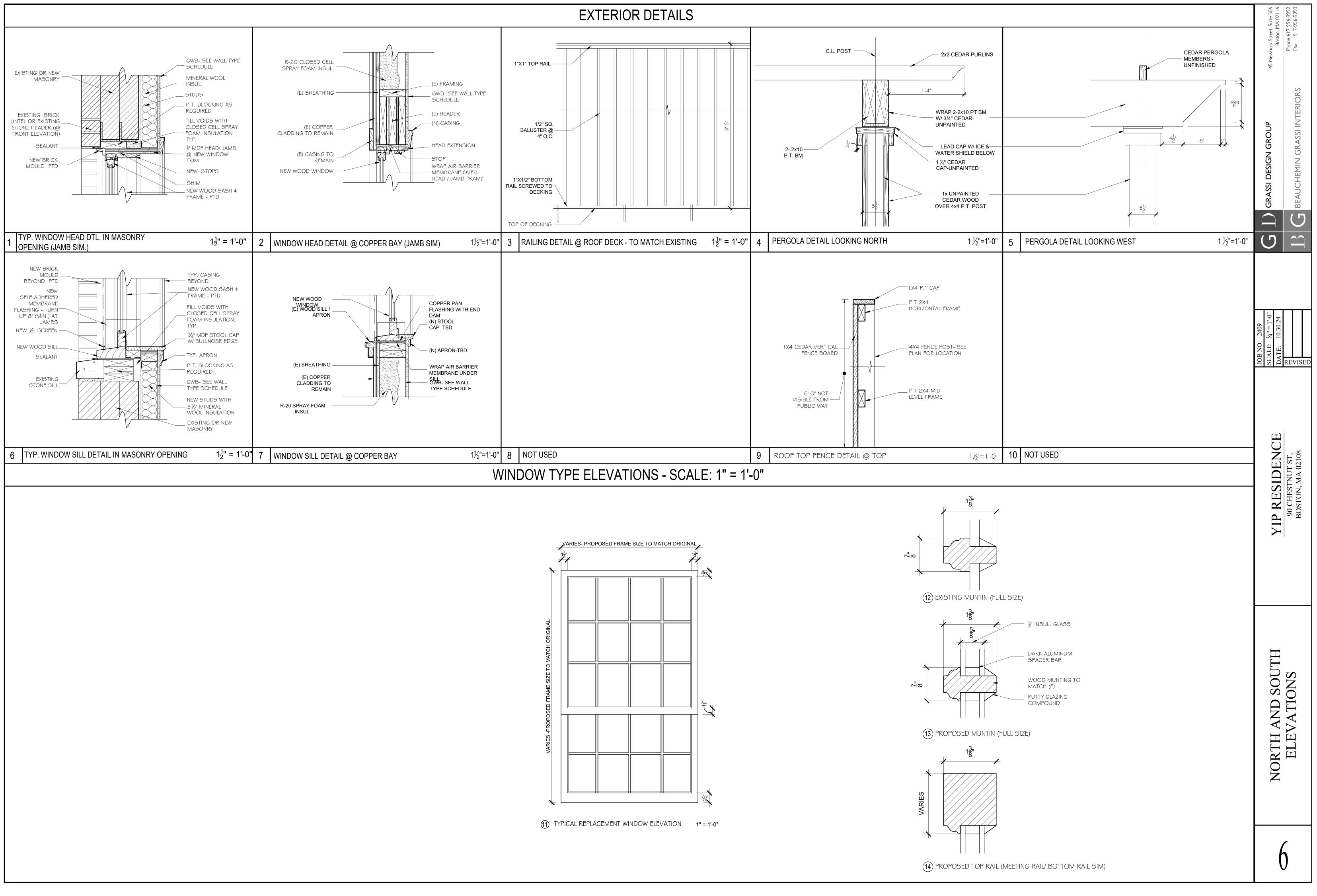
		3	
		ROOF PLAN	
		YIP RESIDENCE	90 CHESTNUT ST, BOSTON, MA 02108
PROPERTY LINE	00. 7409		REVISED
			B G BEAUCHEMIN GRASSI INTERIORS
		45 Newbury Street, Suite 506 Boston, MA 02116	Phone 617-956-9992 Fax 917-956-9993

- ROOF EDGE OUTSIDE FACE OF BRICK WALL BELOW











Siedle Steel - Video Door station - Intercom Unit Recess mounted with 2 push buttons (One shown)

CITY MULTI[®] S-Series Building Comfort Solutions

CITY MULTI

S-Series Solutions for the home or small office

The CITY MULTI S-Series offers all the features and benefits of our large commercial CITY MULTI Y-Series. The S-Series Solution features a single-phase outdoor unit with Variable Refrigerant Flow Zoning (VRFZ) technology and CITY MULTI Controls Network (CMCN) to cool or heat all zones with a variety of indoor unit styles. The compact outdoor unit utilizes R410A refrigerant and an INVERTER-driven compressor to use energy effectively. A maximum of eight CITY MULTI indoor units can be connected with up to 13096 connected capacity, depending on diversity. CITY MULTI Controls Network intelligently manages the CITY MULTI building comfort solution through zone controllers and system controllers and optionally through a networked PC to manage individual comfort and to provide the ultimate building comfort solution.

Easy, flexible installation

The S-Series outdoor unit is easy to install and can be accessed for service through both a front and side panel. The unit's compact dimensions and easy accessibility allow multiple units to be stacked side by side in tight areas, saving valuable space and resources.



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Roof Top Mech. Equipment

MITSUBISHI

INVERTER #10

Available indoor units

Capacity Code	Wall-mounted PKFY-P-N*MU-E	Celing-recessed Cassette PLFY-P-N*MU-E	Ceiling-recessed Cassette PMFY-P-NBMU-E	Ceiling-suspended PCFY-P-NGMU-E	Ceiling-concealed (ducted) PDFY-P-NMU-E	Ceiling-concealed (ducted low-profile) PEPY-P-NMLU-E	Ceiling-concealed (ducted alternate high-static) PEFY-P-NMHU-E	Floor-standing (exposed/concealed) PFFY-P-NEMU/NRMU-E
Nominal Btu/h		~	-	-				
	6,000-30,000	8,000-36,000	6,000-15,000	15,000-36,000	6,000-48,000	6,000-12,000	15,000-54,000	6,000-24,000

Ahi



Roof Top Mechanical Equipment

Indoor Unit				PLA-A24EA7	PLA-A30EA7	PLA-A36EA7	PLA-A42EA7
Outdoor Unit				PUZ-HA24NHA1	PUZ-HA30NKA	PUZ-HA36NKA	PUZ-HA42NKA1
	Capacity	Rated ¹	BTU/H	24,000	30,000	36,000	42,000
	Capacity Range	Min-Max	BTU/H	10,000-24,000	14,600-30,000	14,800-36,000	18,800-42,000
Cooling	Power Input	Rated ¹	٤	1,710	2,120	2,750	3,920
	Moisture Removal	Pints/h		3.0	5.4	5.5	4.5
	Sensible Heat Factor			0.860	0.800	0.830	0.880
	Capacity at 47°F	Rated ²	BTU/H	26,000	32,000	38,000	48,000
	Capacity Range	Min-Max	BTU/H	10,000-28,000	14,200–34,000	16,700-40,000	17,000-54,000
	Power Input at 47°F	Rated ²	8	1,700	2,260	2,650	4,210
Heating	Constitute 1700	Rated ³	BTU/H	17,300	20,600	24,200	40,500
	Capacity at 177	Max	BTU/H	26,000	32,000	38,000	48,000
	Capacity at 5°F	Max ⁴	BTU/H	26,000	32,000	38,000	48,000
	Capacity at -5°F	Max	BTU/H	1	I]	1
	SEER			21.5	20.2	20.0	16.3
	EER			14.0	14.1	13.0	10.7
Efficiency	HSPF			11.3	9.8	10.4	9.8
	СОР			4.5	4.1	4.2	3.3
	ENERGY STAR® Certified			Yes	Yes	Yes	No
	Air Flow Rate - Cooling (Quiet-Lo-Med-Hi-SHi)	Dry	CFM	530-640-710-810	570-670-780-880	670-850-1020-1200	740-920-1060-1200
	Air Flow Rate - Cooling (Ouiet-Lo-Med-Hi-SHi)	Wet	CFM	490-600-670-770	530-630-740-840	630-810-980-1160	700-880-1020-1160
	Air Flow Rate - Heating (Quiet-Lo-Med-Hi-SHi)	Dry	CFM	530-640-710-810	570-670-780-880	670-850-1020-1200	740-920-1060-1200
	Sound Pressure Level (Quiet-Lo-Med-Hi-SHi)	Cooling	dB(A)	28-30-33-36	28-32-35-38	32-37-41-44	34-38-42-45
Indoor Unit	Sound Pressure Level (Quiet- Lo-Med-Hi-SHi)	Heating	dB(A)	28-30-33-36	28-32-35-38	32-37-41-44	34-38-42-45
	External Static Pressure		In. W.G.	T	F	1	I
	Condensate Lift Mechanism	Max Distance	e In. [mm]	33-7/16 [849]	33-7/16 [849]	33-7/16 [849]	33-7/16 [849]
		I	In. [mm]	11-3/4 // 1-9/16 [298 // 40]	11-3/4 // 1-9/16 [298 // 40]	11-3/4 // 1-9/16 [298 // 40]	11-3/4 // 1-9/16 [298 // 40]
	Dimensions	W	In. [mm]	33-1/16 // 37-13/32 [840 // 950]	33-1/16 // 37-13/32 [840 // 950]	33-1/16 // 37-13/32 [840 // 950] 33-1/16 // 37-13/32 [840 // 950] 33-1/16 // 37-13/32 [840 // 950]	33-1/16 // 37-13/32 [840
		D	In. [mm]	33-1/16 // 37-13/32 [840 // 950]	33-1/16 // 37-13/32 [840 // 950]	33-1/16 // 37-13/32 [840 // 950]	33-1/16 // 37-13/32 [840 // 950]
	Weight	lbs [kg]		56 // 11 [25 // 5]	56 // 11 [25 // 5]	56 // 11 [25 // 5]	56 // 11 [25 // 5]
	MCA	A		17.0	24.0	26.0	36.0
	MOCP	A	9	27	40	42	44
		I	In. [mm]	37-1/8 [943]	52-11/16 [1338]	52-11/16 [1338]	52-11/16 [1338]
	Dimensions	×	In. [mm]	37-13/32 [950]	41-5/16 [1050]	41-5/16 [1050]	41-5/16 [1050]
Outdoor Unit		D	In. [mm]	14-3/16 [360]	14-3/16 [360]	14-3/16 [360]	14-3/16 [360]
	Weight	lbs [kg]		190 [86]	261 [118]	261 [118]	283 [128]
	Air Flow Rate (Cooling/ Heating)	CFM		1940/1940	3880/3880	3880/3880	3319/3319
	Cound Drogs into Louol	Cooling	dB(A)	52	52	52	49
	Sound Fressure Level	Heating	dB(A)	53	53	53	51

SECTION 04500

MASONRY RESTORATION AND CLEANING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of contract, including general and supplementary conditions and Division-1 specifications sections, apply to work of this section.

1.02 DESCRIPTION OF WORK

- A. Extent of masonry restoration work is indicated on drawings and in schedules.
- B. Masonry Restoration Work Includes the Following:
 - 1. Chemical cleaning of exposed exterior masonry surfaces.
 - 2. Repairing and rebuilding damaged stonework.
 - 3. Stonework restoration.
 - 4. Re-pointing of masonry joints as required.

NOTE: The chemical cleaning of exterior surfaces should be accomplished before new windows are installed.

- C. Masonry construction is specified in other Division 4 sections.
- D. Joint sealers are specified in a Division 7 section.

1.03 QUALITY ASSURANCE

A. Restoration Specialist: Work must be performed by a firm with not less than 5 years successful experience in masonry restoration projects employing skilled personnel for execution of the work.

- B. Job Mock-Ups: Prior to start of general masonry restoration, conduct the following procedures. Obtain Architect's acceptance of visual qualities before proceeding with the work.
 - 1. Cleaning: Prepare a 4 ft. by 6 ft. sample area on the building where directed by architect, showing materials and methods to be used for cleaning exterior masonry surfaces.

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- 2. Re-pointing: Prepare a 4 ft. by 6 ft. sample area on the building where directed by architect, showing routing and repointing including mortar, type of joint, and workmanship for masonry in project.
- 3. Stonework Restoration: Prepare a 2' x 2' sample area on the building, where directed by Architect for stonework restoration. Use anchorage, bonding, mortar and workmanship expected in completed work. The restoration patching mix shall match the existing brownstone in texture and color. Acceptable panel shall be used as a standard for judging completed work.
- C. Source of Materials: Obtain materials for masonry restoration from a single source for each type material required (face brick, cement, sand, etc.) to ensure match quality, color, pattern, and texture.

1.04 SUBMITTALS:

- A. Product Data: Submit manufacturer's specifications and other data for each manufactured product, including certification that each product complies with specified requirements. Include instructions for handling, storage, installation and protection of each product.
- B. Samples: Sample areas shall be used to exhibit the cleaning performance of the restoration cleaner on brick work. Test areas shall be selected by Architect and shall be approximately 20 sq. ft. Multiple tests of varying concentrations shall determine composition of cleaning solution required. Provide written certification by manufacturer that restoration cleaner is compatible with brownstone.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Protect masonry materials during storage and construction from wetting by rain, snow or ground water, and from staining or intermixture with earth or other types of materials.
- B. Protect grout and mortar materials from deterioration by moisture and temperature. Store in a dry location or in waterproof containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

1.06 JOB CONDITIONS

- A. Materials Protection: Do not use metal reinforcing or ties having loose rust or other coatings, including ice, which will reduce or destroy bond.
- B. Protection of Work: During restoration cover wall with heavy waterproof sheeting at end of each day's work, if precipitation is expected.

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- C. Staining: Prevent grout or mortar from staining face of masonry to be left exposed. Remove immediately grout or mortar in contact with masonry.
- D. Protect sills, ledges and projections from droppings of mortar.
- E. Cold Weather Protection:
 - 1. Remove ice or snow formed on masonry bed by carefully applying heat until top surface is dry to the touch.
 - 2. Remove masonry determined to be frozen or damaged by freezing conditions.
- F. Perform the following construction procedures while the work is in progress:
 - 1. When air temperature is from 40 deg. F (4 C) to 32 Deg. F (0 C), heat sand or mixing water to produce mortar temperatures between 40 deg. F (4 C) and 120 deg. F (49 C).
 - 2. When air temperature is below freezing, do not undertake tuckpointing or stone restoration.
- G. Perform the following protections for completed masonry and masonry not being worked on:
 - 1. Protect masonry from rain or snow for at least 24 hours by covering with water-resistive membrane.

PART 2 PRODUCTS

2.01 BRICK:

A. Rebuild and/or repair existing masonry to be exposed, using bricks salvaged from selective demolition or new bricks to match existing.

2.02 MORTAR MATERIALS

- A. Mortar for Face Brick and Accessories: Provide mortar for face brick and accessories to match original mortar in texture, color, strength, and hardness (density and porosity).
 - 1. Determining existing mortar mix constituents and ratios by analysis. Review laboratory evaluations with Architect before proceeding with the work.
 - 2. Match color of existing mortar by use of aggregates matching original aggregate color where possible. Use inorganic coloring pigments if satisfactory color match cannot be attained with natural materials.
 - 3. Mortar mix to be in accordance with New York City Landmarks Preservation Commission Row House Manual – page 44 – 1 part Portland cement, 2 parts lime, 8 parts sand – mix, then add pigments and water- (Type O).

2.03 MASONRY CLEANING (BRICKWORK)

- A. A sample patch of cleaning must be reviewed and approved by architect before work is begun.
- B. Cleaning Agent: Blended organic and inorganic acids combined with special wetting systems and inhibitors; as manufactured by ProSoCo, Inc., Type 1 Restoration cleaner or approved equal for the removal of atmospheric carbon and dirt, paint oxidation, and embedded clay and mud stains from brick and other masonry surfaces.

2.04 RESTORATION MATERIALS

- A. Epoxy Mortar: Conproco "mimic" trowel applied color matched, or approved equal.
- B. Primer: Conproco "mimic" bonding agent or approved equal.
- C. Stone Restoration Mix: Mix as per mortar manufacture's recommendations.

PART 3 EXECUTION

3.01 CLEANING EXISTING MASONRY:

A. Preparation of Surfaces: Cleaners specified herein are highly concentrated products, and to the extent established by job site tests, shall be diluted with clean water before application.

- 1. Cleaners specified herein are harmful to glass, aluminum, painted, surfaces, foliage, and human skin and eyes.
- 2. Protect all surrounding areas as recommended by the literature of the manufacturer and as requested by the architect.
- 3. Windows shall be protected from contact with materials by masking with polyethylene, or by using Sure Klean Acid Stop, as manufactured by ProSoCo, Inc. South Plainfield, NJ or approved equal.
- 4. All polished stone, metal or non-masonry surfaces shall be protected from contact with the material by masking with polyethylene or approved protective material.
- 5. Adjacent shrubs, lawn, plants and sidewalks should be covered with polyethylene and protected from direct contact with the material.
- 6. Necessary routing of joints and replacement of damaged masonry units shall have been completed, with exception of final pointing, prior to beginning cleaning operation.
- 7. Adequate water supply shall be made available to assure thorough pre-soaking and thorough rinsing of the wall before undertaking general cleaning. All surfaces shall be thoroughly pre-soaked with clean water to prevent the absorption of the cleaning solution within the pores of the masonry.

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Masonry Restoration and Cleaning

B. Cleaning Process: Brick, unpolished granite, sandstone, terra cotta and/or exposed aggregate shall be spray or brush coated with Type I restoration cleaner, and left on the surface two or three minutes. A second application shall follow if deemed necessary by preliminary tests. Coated area shall then be rinsed from bottom up with clear water using high pressure rinsing equipment. Equipment shall be adjusted so that rinse water, either warm or cold, is applied at a pressure not to exceed 500 P.S.I. Attempts shall be made during the testing stage to determine if effective cleaning can be achieved with rinse water applied at pressures not to exceed 500 P.S.I. Flow of water shall be 10 gallons per minute. Gun used to apply water shall be equipped with not less than a 15" spray tip. All tips shall be fan type.

3.02 REPAIRING EXISTING MASONRY

- A. Routing of Joints: Remove defective mortar joints to solid material or a depth of 1.0" whichever is greater, using hand tools. Take care to avoid damaging existing masonry or enlarging width of joints.
 - 1. A sample of pointing must be reviewed and approved by architect before work is begun.
 - 2. Mechanical tools will be permitted only on specific written approval of architect and demonstrated ability by operators to use without damage to masonry.
 - 3. Remove and repair damage to existing masonry by cutting, spalling and chipping as caused by routing operations.
 - 4. Thoroughly remove loose material from joints using a hose stream under normal pressure or by low pressure compressed air.
- B. Mortar Mixing: Add only enough water to dry mix ingredients to produce a damp, workable mix. Keep mortar in dampened condition for 1 to 2 hours, and then add sufficient to bring it to proper consistency.
- C. Replacing Brick: Lay brick and accessories to match existing bond, unless otherwise indicated.
 - 1. Match existing course height (one brick and one joint) for both face brick and backup brick.
 - 2. Provide bonding between face brick and back-up brick as indicated.
 - 3. Provide joints to match existing, unless otherwise indicated. Delay final tooling of joints until mortar is thumb print hard. Take care to not spread mortar over the edges of face brick onto exposed surfaces.
 - 4. Wet brick before laying. Do not use brick which are saturated with water, or which have been unduly exposed to moisture or rain at site, or which have been in contact with ground.
 - 5. Lay brick with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not slush head joints. Do not furrow bed joint; strike mortar flat with trowel.

04500-5 Masonry Restoration and Cleaning

- 6. Lay up brickwork with full or half brick, as required. Do not fill in concealed work with spalls, small bats, or excess mortar.
- 7. Lay up brickwork level and plumb, or as otherwise required to match existing.
- D. Re-pointing:
 - 1. After careful routing and cleaning joints, wet joints thoroughly and then apply fresh, pre-hydrated mortar. Allow water to soak into joints, but joints should not be visibly wet with standing water during tuckpointing.
 - 2. Fill mortar joints in layers not over 1/4" thick, with each layer applied with pressure as soon as previous layer has partially dried. Do not tool each layer smooth: Leave surface rough to help bond of subsequent layers. Compress the final packing as much as possible to completely fill joint. Compact joints solidly before final tooling.
 - 3. Tool joints to match existing work which has not been repointed, or oldest joints found, unless otherwise indicated. Take care to not spread mortar over edges of brick onto exposed surfaces. Do not featheredge mortar. Cure mortar by maintaining in a damp condition for 5 days.

3.03 FINAL CLEANING

- A. All mortar to fully harden for approximately 30 days after completion of work, then thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon or bristle brushes and clean water under normal pressure.
 - 1. Use of metal scrapers or brushes will not be permitted.
 - 2. Use of acid or alkali cleaning agents will not be permitted.

3.04 STONE RESTORATION-PATCH METHOD

- A. Carefully remove loose and friable stone, dust, dirt, oil and other contaminants.
- B. Saw cut edges with a diamond blade at a 90 degree angle to eliminate feather edges. Repair zone must be ¹/₂" deep min.
- C. Saturate surface of stone to be repaired.
- D. Prime the prepared substrate in accordance with manufacturers instructions, while wet.
- E. Mix mortar patch in accordance with mortar manufacturers instructions.
- F. Apply materials in lifts, ¹/₂" minimum, 2: maximum, forcing materials against edges.
- G. Cross hatch scratch each lift to prepare surface for next lift.
- H. Overbuild ¹/₄", and shave to final form with trowel edge.
- I. Entire method to be performed in accordance with manufacturers detailed instructions.

- END OF SECTION -

04500-7