TOWN OF BOXFORD

HVAC, Exterior Repairs, Library Renovation
Town Hall/Library
7A Spofford Road
Boxford, MA

ADDENDUM NO. 1
AUGUST 13, 2020

1

The attention of bidders submitting proposals for the subject project at the Town Hall / Library at 7A Spofford Road, Boxford, MA, is called to the following addendum to the contract. 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 ENTERED IN THE APPROPRIATE SPACE B ON THE CONTRACT FORM ENTITLED "FORM OF GENERAL BID" AND IN SPACE B OF THE "FORM FOR SUB-BID".

As a reminder, bids are due to the Boxford Police Station at 285 Ipswich Road in Boxford, MA. Do not submit bids to the Town Hall or Library.

A. SPECIFICATION CHANGES:

1. **<u>Section 01 5000 TEMPORARY FACILITIES AND CONTROLS</u>**

1.1. ADD 1.3 as follows:

"1.3 USE CHARGES

A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.

B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges except if used for temporary heating, which requires metering. Provide connections and extensions of services and metering as required for construction operations.

2. **<u>Section 01 7300 EXECUTION</u>**

2.1. ADD 1.4 as follows:

"1.4 CUTTING, CORING, AND PATCHING

A. Cutting and patching through existing or new construction using core drill and measuring equal to or larger than 6 inches in diameter, or 6 inches by 6 inches shall be performed by Trades specializing in the specific surfaces affected, e.g.,

gypsum board, etc., except where noted otherwise. Notify the specific Trade(s) of exact locations and sizes for openings required. It is the Contractor's responsibility to coordinate the Work (including coordination with sub-contractors) to use the existing openings to the greatest extent possible.

B. Cutting and patching through existing or new construction using core drill and measuring less than 6 inches in diameter, or 6 inches by 6 inches, shall be performed by the Trade(s) installing the work.

C. All cutting shall conform to the requirements of Section 01 7300 "Execution".

D. Firestopping shall conform to the requirements of Section 07 8413 "Penetration Firestopping"."

The above paragraph "CUTTING, CORING, AND PATCHING" and sub-items shall also be added to or replace the following:

1. ADD as 1.6 to **Section 09 2100 GYPSUM BOARD ASSEMBLIES**.
2. REPLACE 1.03 in **Section 21 0000 FIRE PROTECTION**.
3. REPLACE 3.06 in **Section 21 0000 FIRE PROTECTION**.
4. REPLACE 1.16 in **Section 22 0001 PLUMBING**.
5. REPLACE 3.19 in **Section 22 0001 PLUMBING**.
6. ADD as 1.25.B in **Section 23 0001 HEATING, VENTILATION, AIR CONDITIONING**.
7. REPLACE 1.19.A in **Section 26 0000 ELECTRICAL**.

3. **Section 04 2000 MASONRY**

3.1. ADD 1.3.A.7 and 8 as follows:

"7. Replacement brick. Assume 10% of brick being removed will be damaged and therefore, require replacement.

8. Removal of existing mortar in the vertical joints in pre-cast stone."

3.2. ADD 1.3.C. as follows:

C. Items to be Installed Only: Provide labor to install materials not provided in this Section including, but not limited to, the following:

1. Backer rod, sealant, and sand in vertical joints in pre-cast stone from Section 07 9200 JOINT SEALANTS."

3.3. REPLACE 2.2 Brick with the following:

2.2 BRICK

A. Basis-of-Design Product: Subject to compliance with requirements, provide Cushwa Brick as manufactured by Glen-Gery or an approved equal.

B. Face Brick: Facing brick complying with ASTM C216.

1. Color: Two colors, one "light" and one "dark". It is the intent to match the finish of the existing brick.
2. Style: Molded. It is the intent to match the finish of the existing brick.
3. Grade: SW
4. Type: FBS
5. Size: Modular. It is the intent to match the existing brick.

4. **Section 04 7200 CAST STONE MASONRY**

4.1. ADD the following to the end of 1.2.A.2:
"Assume 10% of cast stone being removed will be damaged and therefore, require replacement. This includes all profiles."

5. **Section 07 9200 JOINT SEALANTS**

5.1. OMIT 1.2.A.5.

5.2. ADD 1.2.B. as follows:
"B. Items to be Furnished Only: Furnish the following items for installation by the designed Sections:
1. Sealant, sand, and backer rod for use in vertical joints in pre-cast stone to Section 04 2000 MASONRY."

6. **Section 23 0001 HVAC**

6.1. OMIT 1.26.B "3. Dust Control" and 1.26.E "Dust Control".

6.2. OMIT 1.26.B "4. Ventilation Requirements" and 1.26.F "Ventilation Requirements".

6.3. OMIT 1.26.B "5. Noise Control" and 1.26.G "Noise Control".

6.4. ADD the following at the beginning of 1.26.A:
"A. The existing boilers pumps Boiler Room controls are to remain and become part of the building permanent heating system. The existing heating and cooling systems provide heating, cooling and ventilation to the building as follows:

AC-1 and AC-2 serve the First Floor.
AC-3 serves the Lobby of the First Floor and Main Corridor Second Floor.
AC-4 serves the large Meeting Room.
AC-5 and AC-7 serve the Second Floor.
AC-6 serves Conference Room 202 and 208.

The HVAC contractor may use the existing air handlers and duct distribution system for temporary heat."

6.5. OMIT 1.26.H "Enclosures".

6.6. OMIT all references to "cooling" from 1.27.A through G.

6.7. ADD the following to 1.27:
"H. The HVAC contractor shall pay for costs of temporary heating including but not limited to work required by the Electrical contractor associated with any necessary temporary wiring, and controls for the operation of the temporary heat. The HVAC contractor shall also pay cost of gas and electrical power consumed by the existing hot water heating system, supplemental electrical heating devices, and the new Variable Refrigerant Flow system."

B. DRAWING CHANGES:

1. General / Various Locations

1.1. In the Ceiling Legend that appears on multiple drawing sheets, REPLACE the note at the end with the following:
"Note:
For existing ceiling tiles at the second floor that are shown to be removed and reinstalled, assume replacement of 10% of existing tiles due to damage during construction (09 5123)."

2. Drawing A111 FIRST FLOOR PLAN

2.1. REPLACE detail 2 with enclosed 1/SKA-1 Addendum #1.

2.2. REPLACE detail 3 with enclosed 1/SKA-2 Addendum #1.

3. Drawing A141 ROOF PLAN & DETAILS

3.1. ADD, REPLACE, and OMIT notes as indicated on enclosed A141.

4. Drawing A201 NORTH AND SOUTH ELEVATION

4.1. ADD, REPLACE, and OMIT notes as indicated on enclosed A201.

5. Drawing A202 EAST AND WEST ELEVATION

5.1. ADD, REPLACE, and OMIT notes as indicated on enclosed A202.

6. Drawing A300 EXTERIOR BUILDING DETAILS

6.1. ADD, REPLACE, and OMIT notes as indicated on enclosed A300.

7. Drawing A501 INTERIOR ELEVATIONS AND ENLARGED PLANS

7.1. ADD, REPLACE, and OMIT notes as indicated on enclosed A501.

8. Drawing H-0

8.1. ADD sheet "H-0" as enclosed.

9. Drawing H-3

9.1. ADD the note at the drawing at FCU-4 to read as follows:
"Connect a 12x6 supply air branch with volume damper from the 16x10 supply air duct main from ERV-2 to horizontal return duct at FCU-4."

10. Drawing E0-2 ELECTRICAL SCHEDULES AND POWER RISER

10.1. ADD Fixture Type "B" and Fixture Type "C" to the "Lighting Fixture Schedule" as shown on the enclosed E0-2.

10.2. ADD "Fire Alarm Riser Diagram" as shown on the enclosed E0-2.

11. Drawing E-1 ELECTRICAL NEW WORK PLANS

11.1. ADD fixtures in the "Queuing Space" (identified on the plans adjacent to "Entry Lobby") as shown on the enclosed E-1.

C. BIDDER QUESTIONS: The following is intended to provide responses to those questions that are best answered via direct written response as opposed to merely in the language of drawing and specification notes. Other question responses are addressed in the SPECIFICATION CHANGES and DRAWING CHANGES sections of this addendum.

Q1: *Who is to provide temporary heating?*
A1: The responsibility of temporary heating are as follows:

1. Interior heating while HVAC work is ongoing.
   a. Interior heating is to be furnished and installed by the HVAC contractor.
   b. Interior heating use charges are to be by the General contractor.
   c. Interior heating may utilize the existing HVAC system when available with the protections indicated in the Project Manual.
   d. Requirements for interior heating (i.e. acceptable temperatures) are listed in Section 23 0001 HVAC.
3. Exterior heating for masonry work is to be by the Masonry contractor. This includes furnishing, installing, and use charges.
4. Heating shall not use the building's electrical utility unless able to be metered and tracked separately.

Q2: *Was the pre-bid walkthrough mandatory?*
A2: The pre-bid walkthrough was not mandatory; however, a site visit is highly recommended. A list of bidders who attended the pre-bid walkthrough are attached.

D. ATTACHMENTS:

1. SKA-1
2. SKA-2
3. A141
4. A201
5. A202
6. A300
7. A501
8. H-0
9. E0-2
10. E-1
11. List of Pre-Bid Walkthough Attendees

END OF ADDENDUM #1

IF THIS SHEET IS NOT 11 X 17 IT IS A REDUCED SCALE PRINT - SCALE ACCORDINGLY

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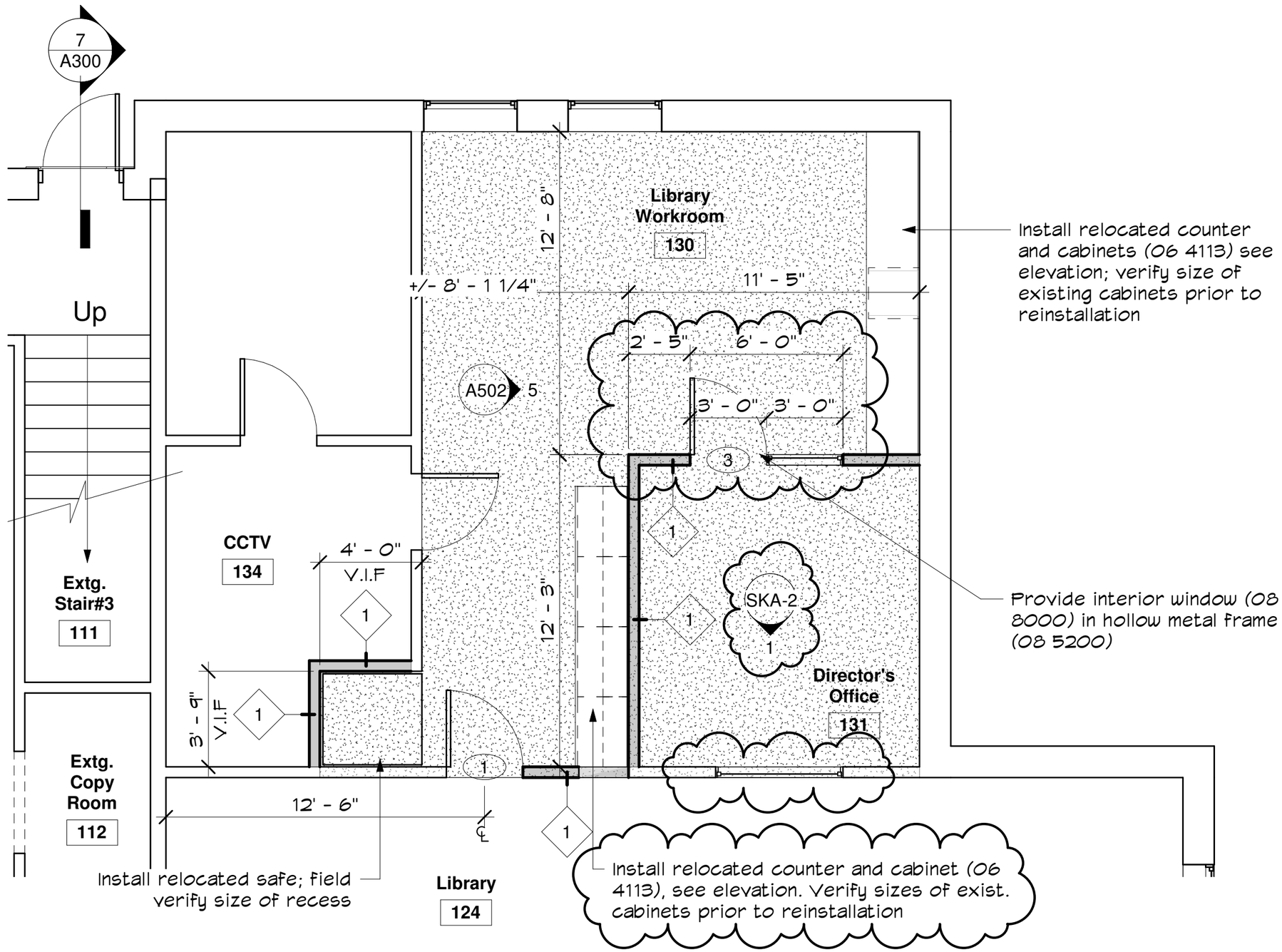
SCALE 1/4"=1'-0" 0 2 4 8 12

SCALE 1/8"=1'-0" 0 5 10 20



1 First Floor Plan (2/A111)
1/4" = 1'-0"

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HVAC, Exterior Repairs, Library Renovations
7 Spofford Rd, Boxford, MA 01921

Project:	699.1
Drawn by:	IB
Check by:	IB
Date:	8/12/2020
Scale:	1/4" = 1'-0"

First Floor Plan

SKA-1
Addendum #1

IF THIS SHEET IS NOT 11 X 17 IT IS A REDUCED SCALE PRINT - SCALE ACCORDINGLY

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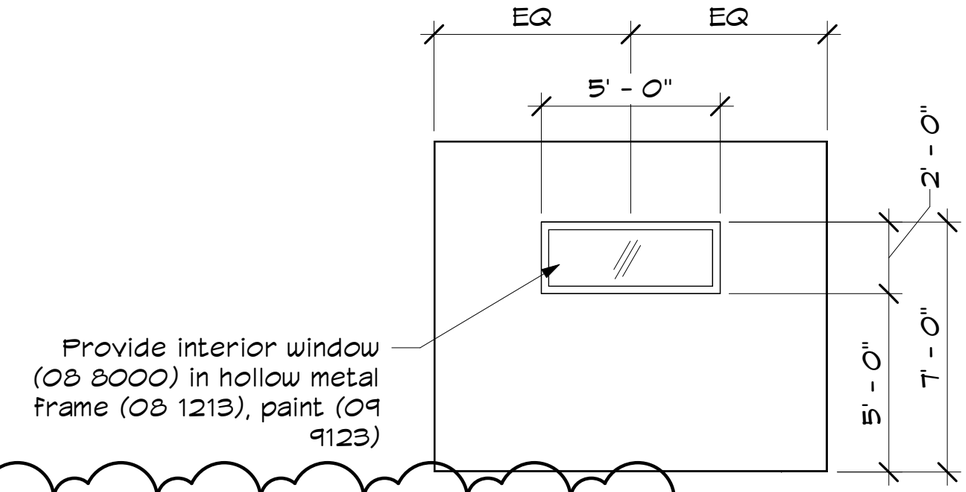
SCALE 0 2 4 8 12 1/4"=1'-0"

SCALE 0 1' 2' 3' 6' 1/2"=1'-0"



1 Elevation at Director's Office (3/A111)
1/4" = 1'-0"

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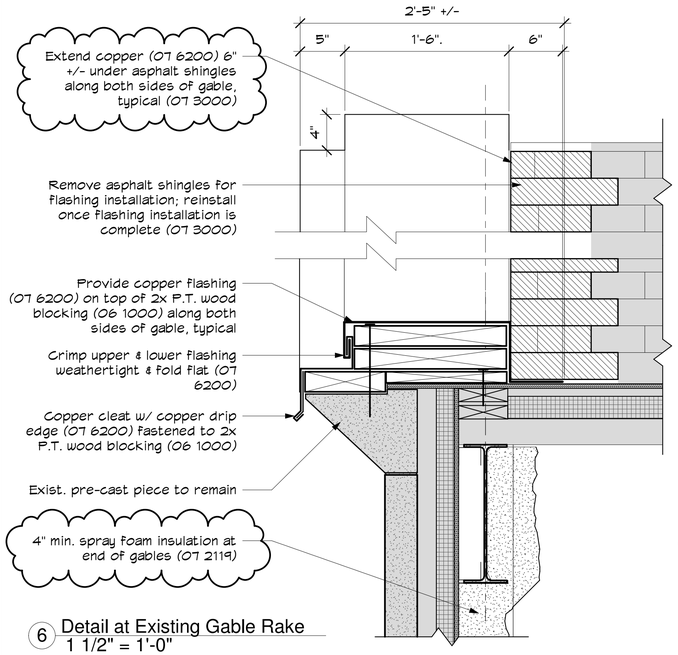
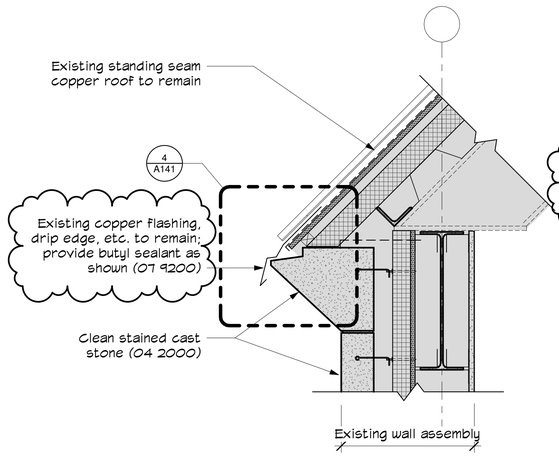
Elevation at Director's Office

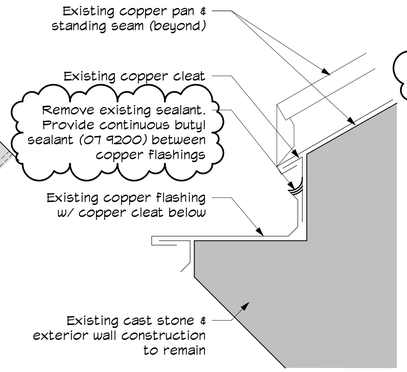
SKA-2
Addendum #1



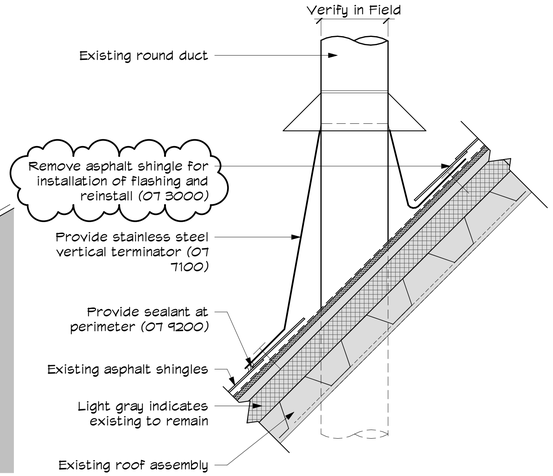
6 Detail at Existing Gable Rake
1 1/2" = 1'-0"



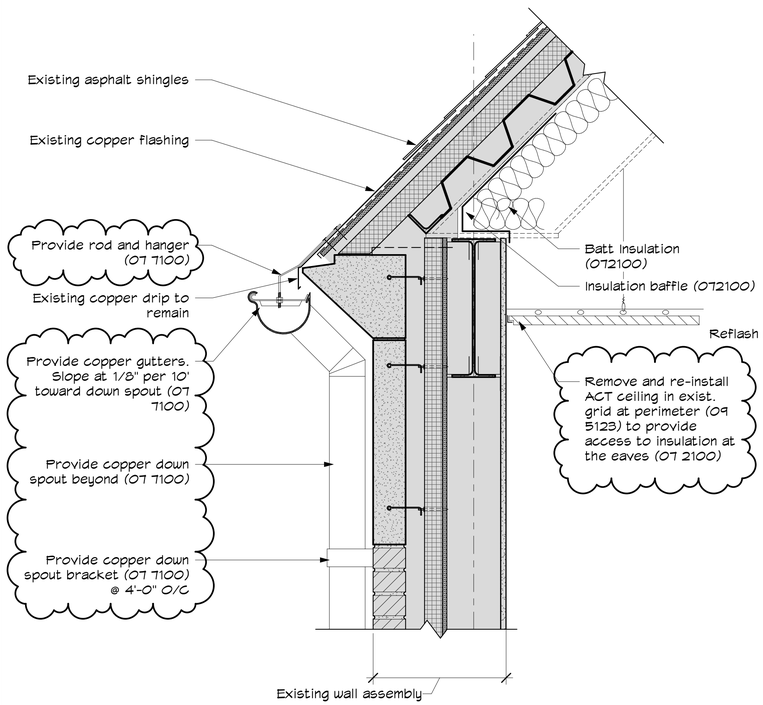
5 Detail at Metal Roof Drip Edge
1 1/2" = 1'-0"



4 Detail at Mtl Roof Flashing
6" = 1'-0"



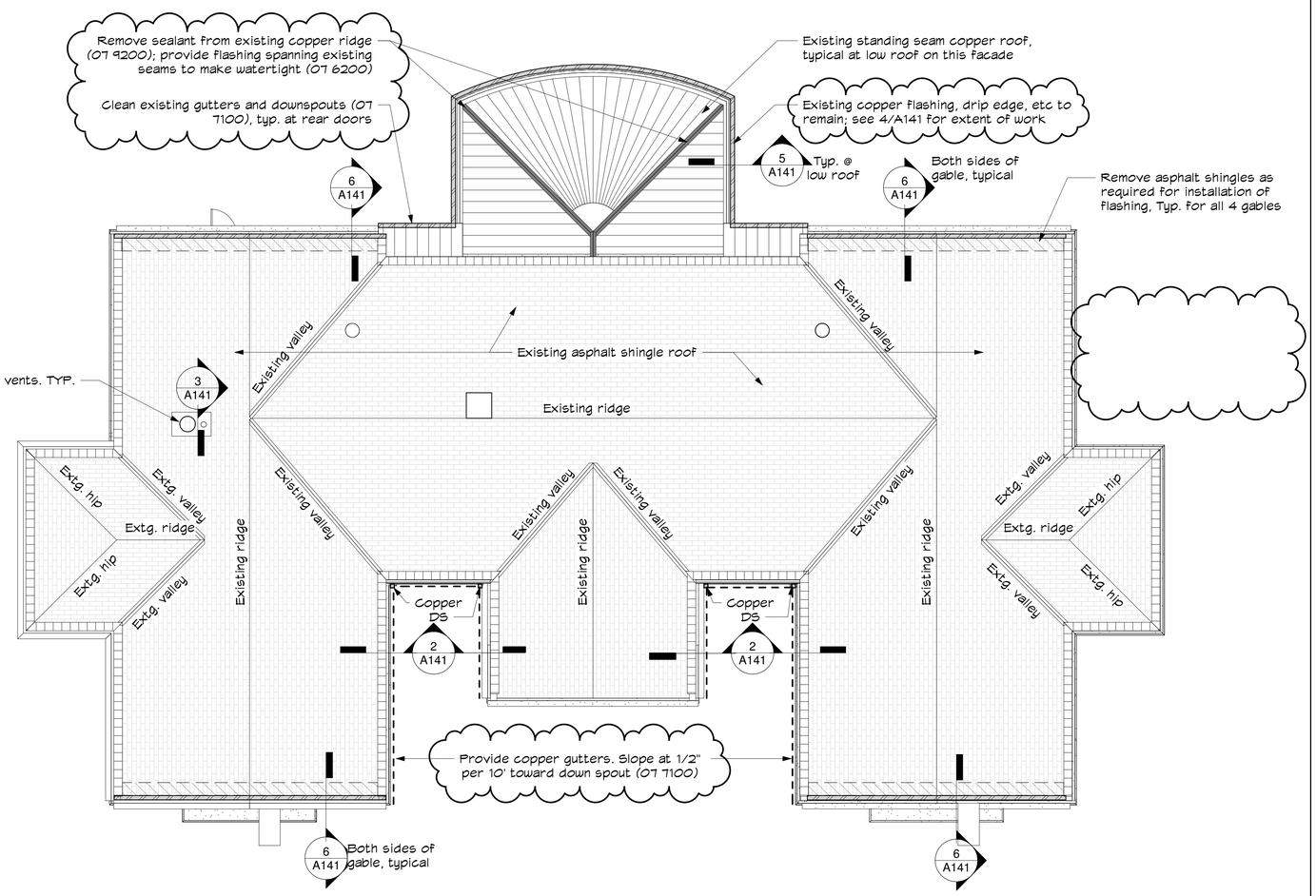
3 Detail at Roof Duct Penetration Flashing Detail
1 1/2" = 1'-0"



2 Detail at Eave and Gutter
1 1/2" = 1'-0"

Typical Exterior Detail Notes

1. Light Gray "poche" indicates existing construction to remain, unless noted specifically otherwise.
2. Paint coating shall extend from room corner to room corner, and from floor to 12" above finish ceiling (09 9123.)
3. For GWB work, see plans and details.
4. Provide backer rod and sealant at dissimilar material intersections to maintain weathertight building envelope (07 9200.)
5. Interior wood trim to match existing (06 2023, 09 9300)



1 Roof Plan
1/8" = 1'-0"

N

0' 2' 4' 8' 12' 20'

IF THIS SHEET IS NOT 24 X 36 IT IS A REDUCED SCALE PRINT - SCALE ACCORDINGLY

SCALE 3" = 1'-0" · 1-1/2" = 1'-0" · 1" = 1'-0" · 1/2" = 1'-0" · 1/4" = 1'-0" · 1/8" = 1'-0"

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No.	Date	Description
B	8/12/2020	Addendum #1
A	7/15/2020	Bid Set

Project:	699.1
Drawn by:	RK
Check by:	IB
Date:	8/12/2020
Scale:	As indicated

Roof Plan & Details

A141

F:\699.1\700699.1 Boxford Town Hall Library HVAC & Ex-Repair\699.1 DRAWINGS AND SPECIFICATIONS\699.1 Working Set\699.1 Boxford Town Hall Repairs 8-12-20.rvt

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General Elevation Notes

A. All exterior masonry, precast concrete, etc. to be cleaned. Keep masonry cleaned during renovations (04 2000).

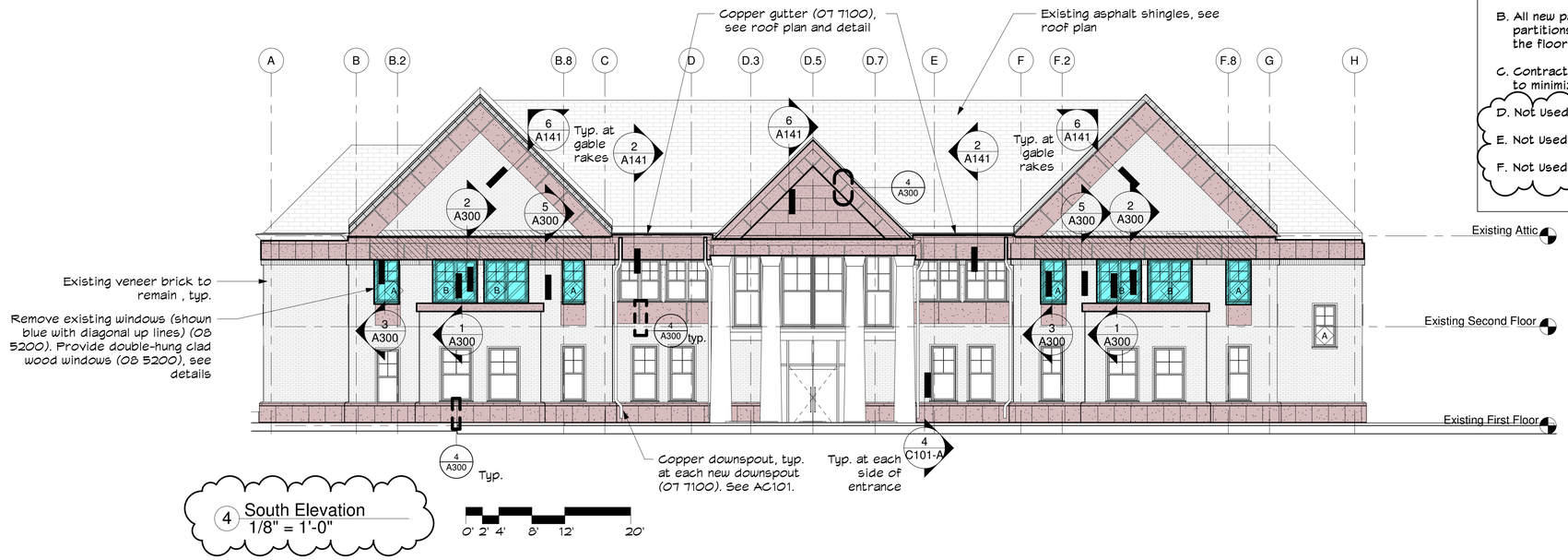
B. All new partitions, resurfaced partitions, and patched/repaired partitions to be painted from room corner to room corner, and from the floor to 12" above ceilings (09 9123).

C. Contractor shall schedule window removal and replacement with owner to minimize the time where temporary protection is needed.

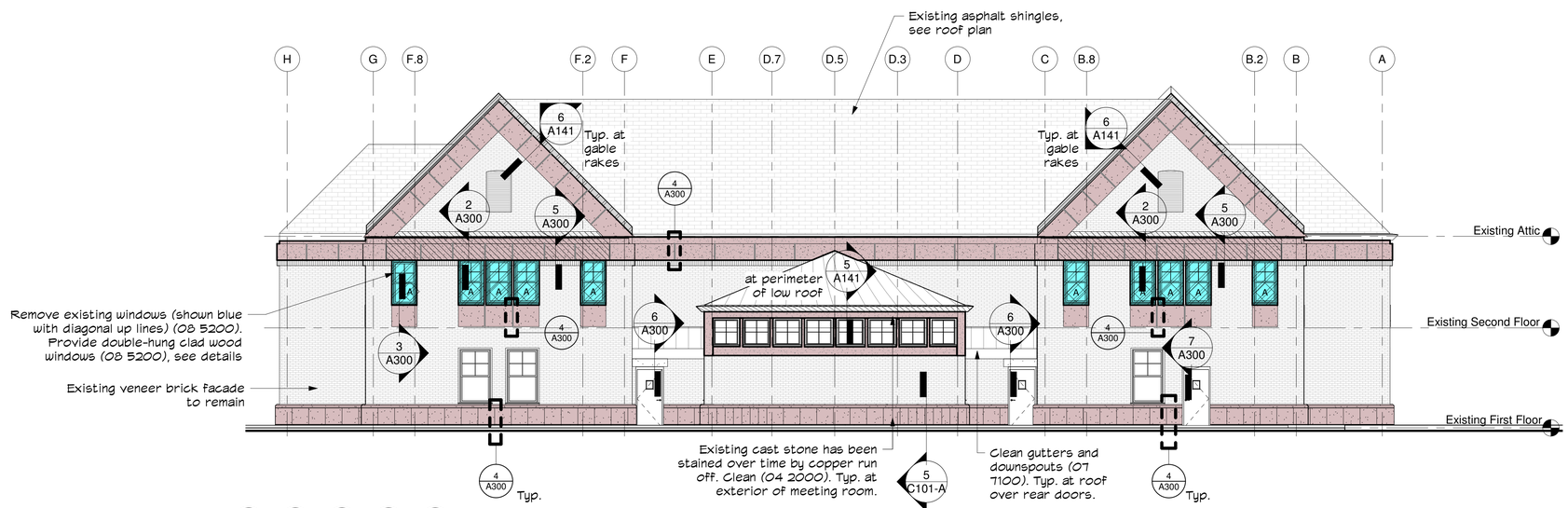
D. Not Used

E. Not Used

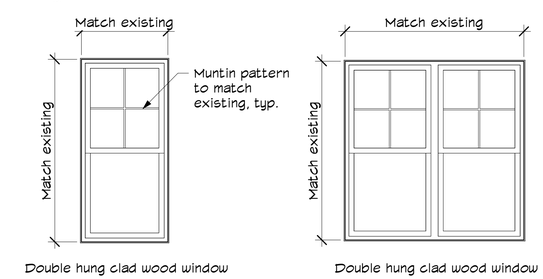
F. Not Used



4 South Elevation
1/8" = 1'-0"

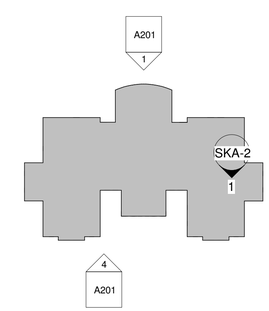


1 North Elevation
1/8" = 1'-0"



A B

Window Types



A Key Plan

Elevation Legend

Remove, salvage, and reinstall pre-cast stone and brick (04 2000), see detail

Pre-cast stone. At all existing vertical joints, remove mortar (04 2000). At existing and new vertical joints, provide backer rod, sealant, and broadcast sand (furnish by 07 9200, install by 04 2000.)

See details for work at windows.

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Project:	699.1
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Scale:	As indicated

North and South Elevation

A201

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General Elevation Notes

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B. All new partitions, resurfaced partitions, and patched/repaired partitions to be painted from room corner to room corner, and from the floor to 12" above ceilings (09 9123).

C. Contractor shall schedule window removal and replacement with owner to minimize the time where temporary protection is needed.

D. Not Used

E. Not Used

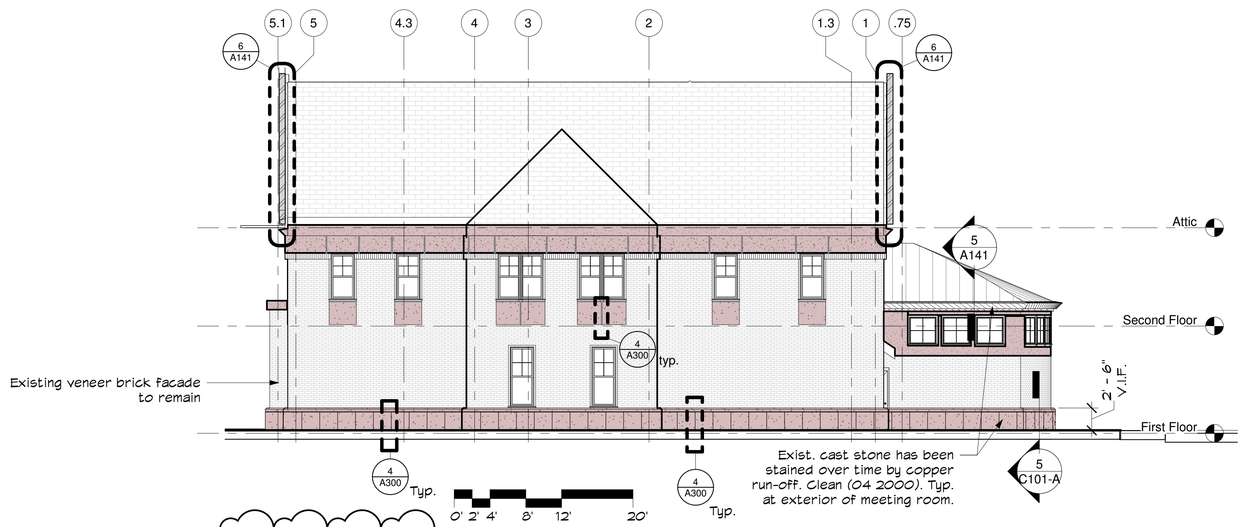
F. Not Used

Elevation Legend

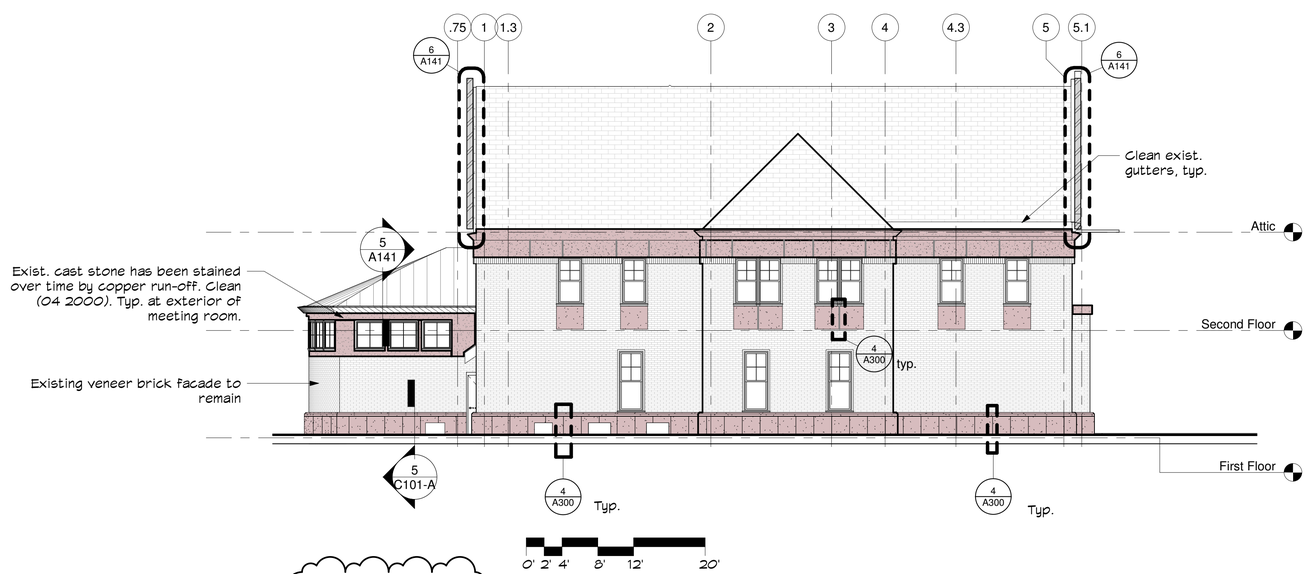
Remove, salvage, and reinstall pre-cast stone and brick (04 2000), see detail

Pre-cast stone. At all existing vertical joints, remove mortar (04 2000). At existing and new vertical joints, provide backer rod, sealant, and broadcast sand (furnish by 07 9200, install by 04 2000.)

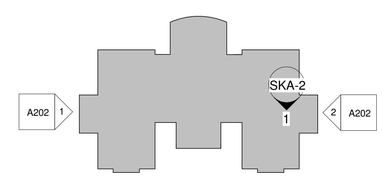
See details for work at windows.



1 East Elevation
1/8" = 1'-0"



2 West Elevation
1/8" = 1'-0"



A Key Plan

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Scale:	As indicated

East and West Elevation

A202

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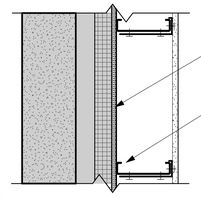
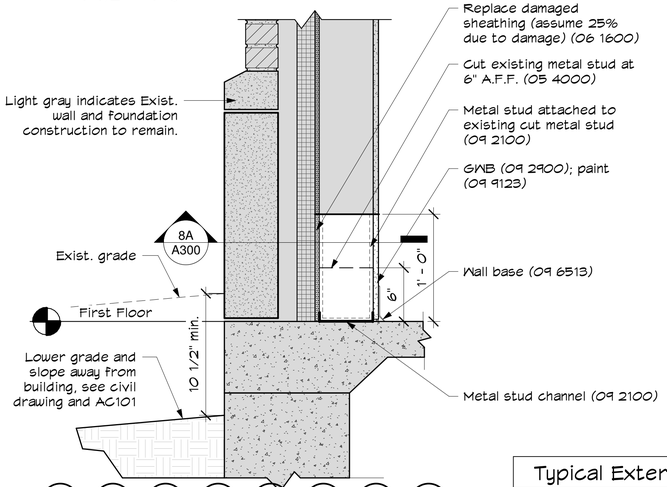
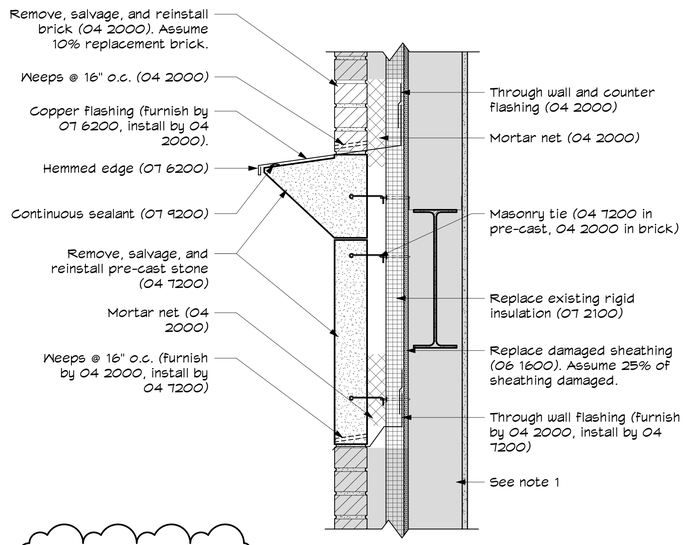


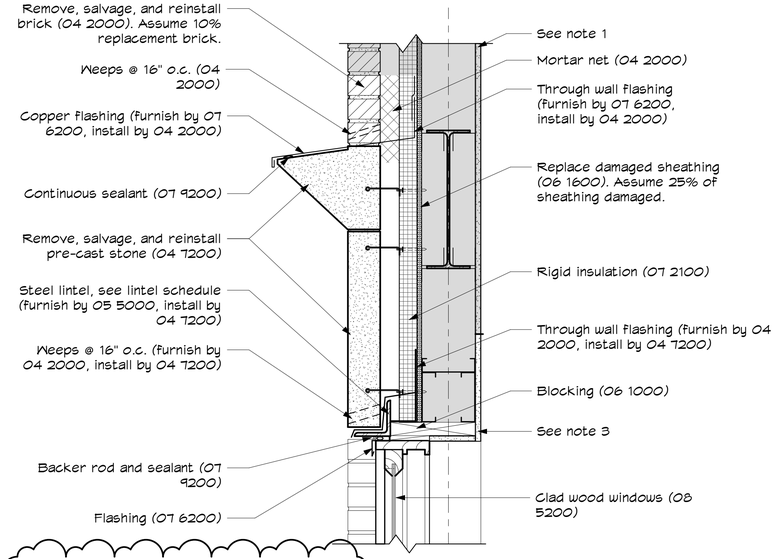
8A Plan View
1 1/2" = 1'-0"



8 Detail at Replacement Metal Stud Wall
1 1/2" = 1'-0"



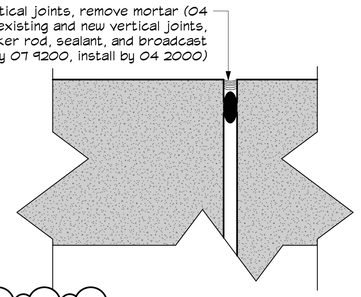
5 Detail at Cornice
1 1/2" = 1'-0"



2 Detail at Cornice and Window Head
1 1/2" = 1'-0"

Typical Exterior Detail Notes

1. Light Gray "poche" indicates existing construction to remain, unless noted specifically otherwise.
2. Paint coating shall extend from room corner to room corner, and from floor to 12" above finish ceiling (09 9123.)
3. For GWB work, see plans and details.
4. Provide backer rod and sealant at dissimilar material intersections to maintain weathertight building envelope (07 9200.)
5. Interior wood trim to match existing (06 2023, 09 9300)

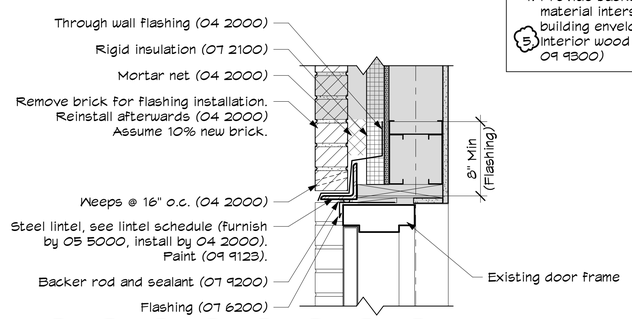


4 Vertical Joint Detail
6" = 1'-0"

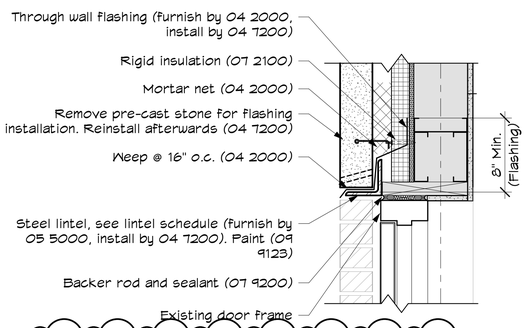
Lintel Schedule

MASONRY OPENING	LINTEL SIZE
UP TO 3'-0"	L 3 1/2" X 3 1/2" X 5/16"
3'-1" TO 4'-6"	L 4" X 3 1/2" X 5/16" (4" leg vertical)
4'-7" to 6'-0"	L 5" x 3 1/2" x 5/16" (5" leg vertical)
6'-1" to 8'-0"	L 6" x 3 1/2" x 5/16" (6" leg vertical)

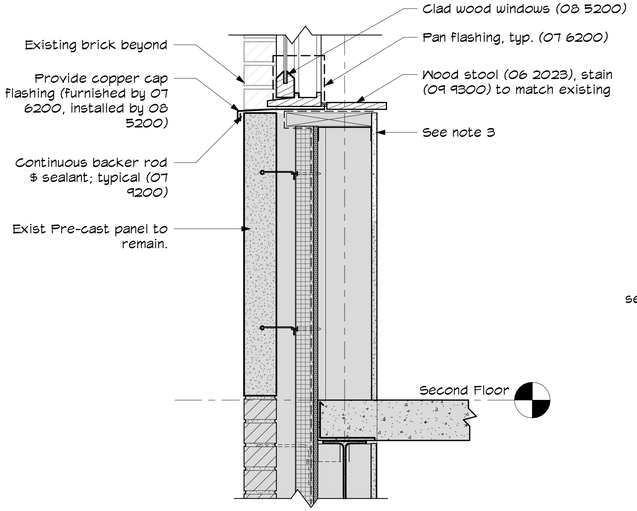
1. Provide metal lintels over all openings except where lintel blocks are provided and except where called for in the drawings.
2. Provide one angle for each 4" of wall thickness. For 6" walls, provide tee or built-up section with properties equal to or greater than 1 1/2 times the angle properties for a 4" wall thickness.
3. Provide 8" of bearing each end of all lintels.
4. Lintels shall be galvanized.



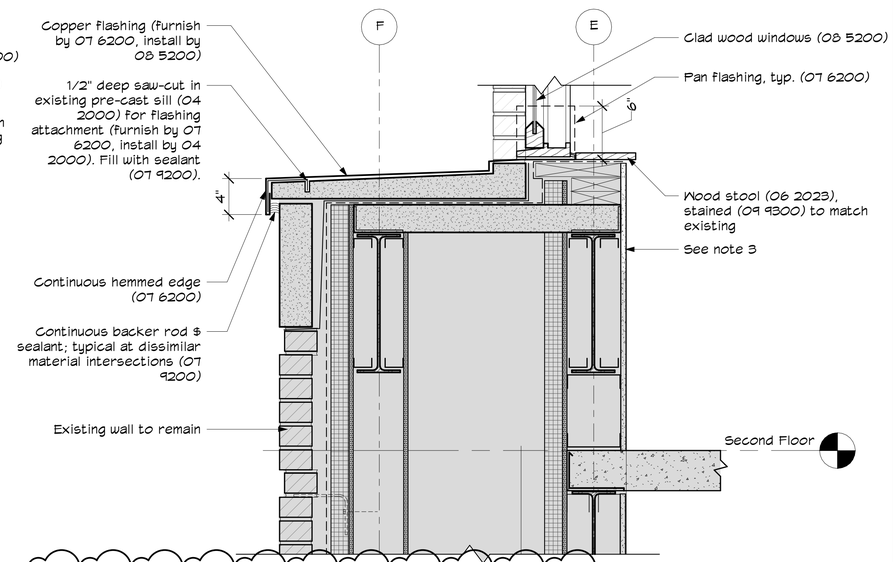
7 Detail at Exterior Door Head
1 1/2" = 1'-0"



6 Detail at Exterior Door Head- Precast
1 1/2" = 1'-0"



3 Detail at Window Sill
1 1/2" = 1'-0"



1 Detail at Window Sill Above Precast Concrete Projected Bay
1 1/2" = 1'-0"

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Boxford Town Hall

HVAC, Exterior Repairs, Library Renovations

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Plot Date:8/12/2020 3:35:31 PM

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No.	Date	Description
B	8/12/2020	Addendum #1
A	7/15/2020	Bid Set

Project:	699.1
Drawn by:	RK
Check by:	IB
Date:	8/12/2020
Scale:	As indicated

Exterior Building Details

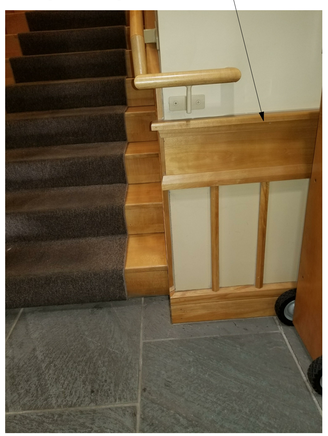
A300

IF THIS SHEET IS NOT 24 X 36 IT IS A REDUCED SCALE PRINT - SCALE ACCORDINGLY

F:\699.1\699\699.1 Boxford Town Hall Library HVAC & Ev-Repair\699.1 DRAWINGS AND SPECIFICATIONS\699.1 Working\Sht\699.1 Boxford Town Hall Repairs B-12-20.rvt

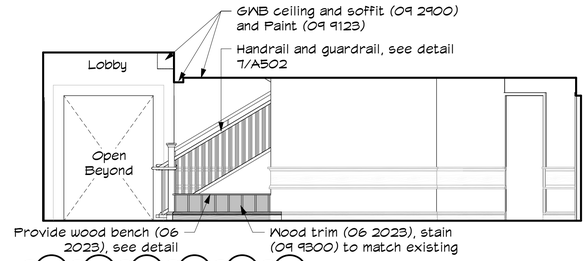
IF THIS SHEET IS NOT 24 X 36 IT IS A REDUCED SCALE PRINT - SCALE ACCORDINGLY

General Notes
1. Photos are shown for reference to show type of wainscotting to be used at proposed circulation desk.

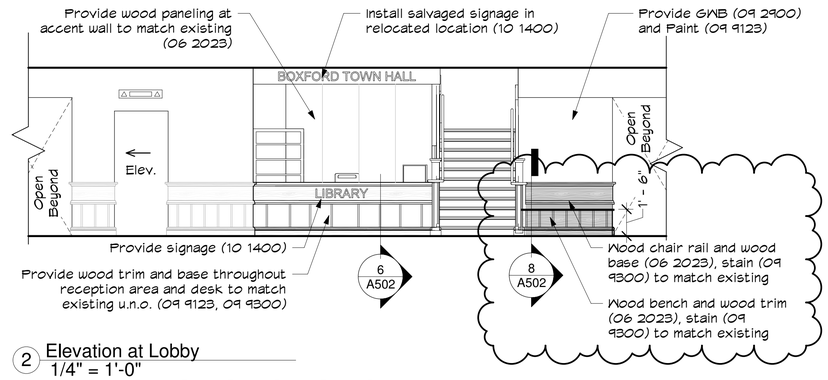


5 Existing Entry Lobby
1/2" = 1'-0"

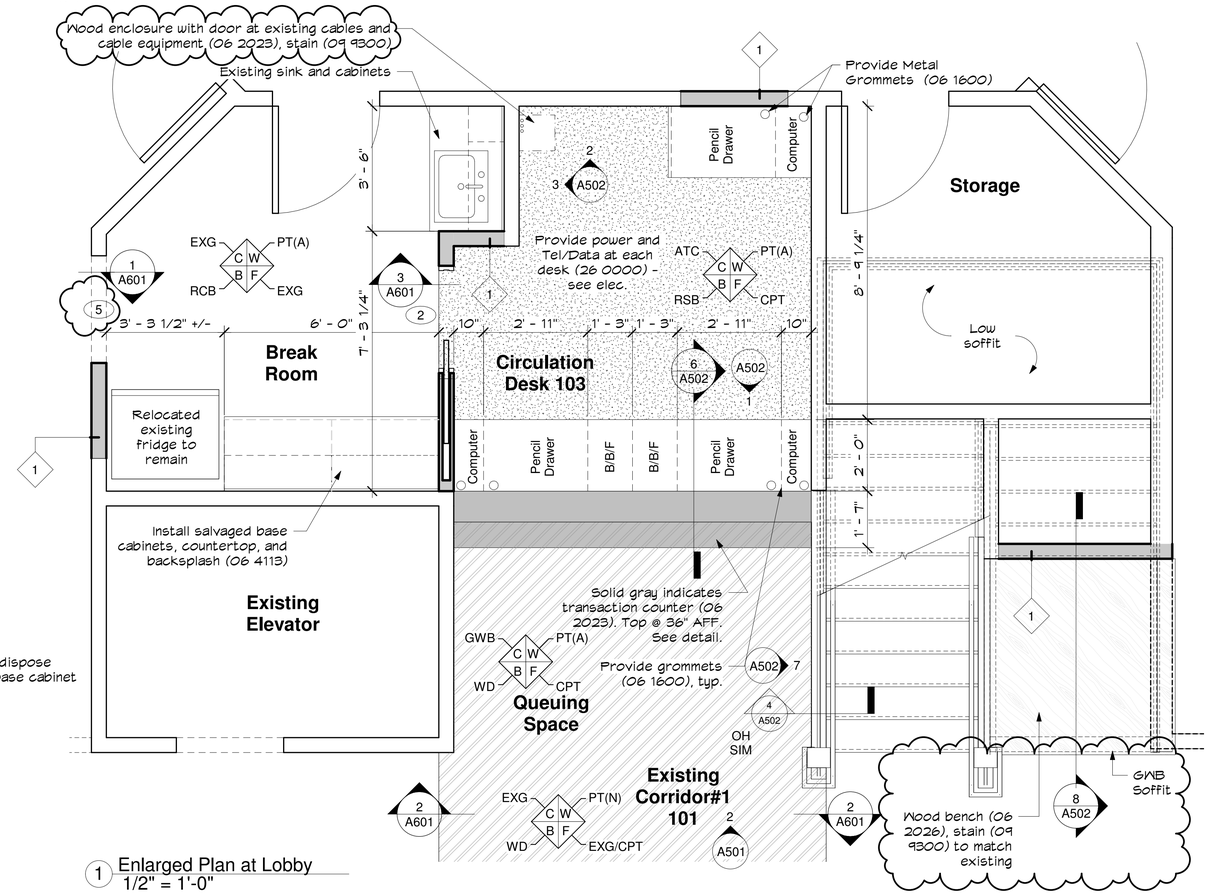
4 Existing Break Room #107
1/2" = 1'-0"



3 Elevation at Stairs Corridor
1/4" = 1'-0"

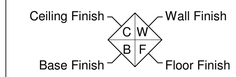


2 Elevation at Lobby
1/4" = 1'-0"



1 Enlarged Plan at Lobby
1/2" = 1'-0"

Finish Legend



Finish Abbreviations

ATC	Acoustical tile ceiling - see RCPs
CPT	Carpet - see Flooring Legend
GWB	Gypsum white board, paint
PT(A)	Paint all walls
PT(N)	Paint new GWB and hosting wall from room corner to room corner
RCB	Resilient cove base
RSB	Resilient straight base
ST	Stain wood
WD	Wood, stain to match

Notes:
1. See floor plan for patterns.
2. See ceiling plan for patterns.
3. In general, when a surface receives paint, it is intended to be from room corner to room corner.
4. If a room does not have a finish tag (as shown above) it indicates existing to remain unless noted otherwise.

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No.	Date	Description
B	8/12/2020	Addendum #1
A	7/15/2020	Bid Set

Project:	699.1
Drawn by:	RK
Check by:	IB
Date:	8/12/2020
Scale:	As indicated

Interior Elevations and Enlarged Plans

A501

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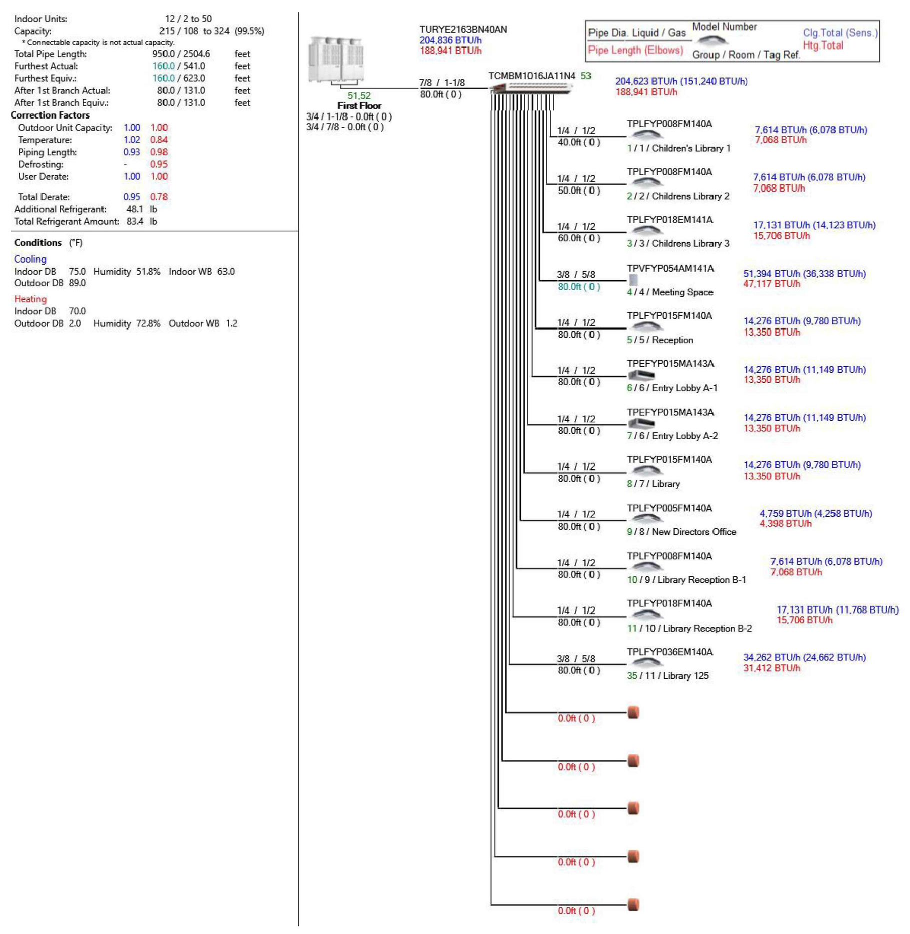
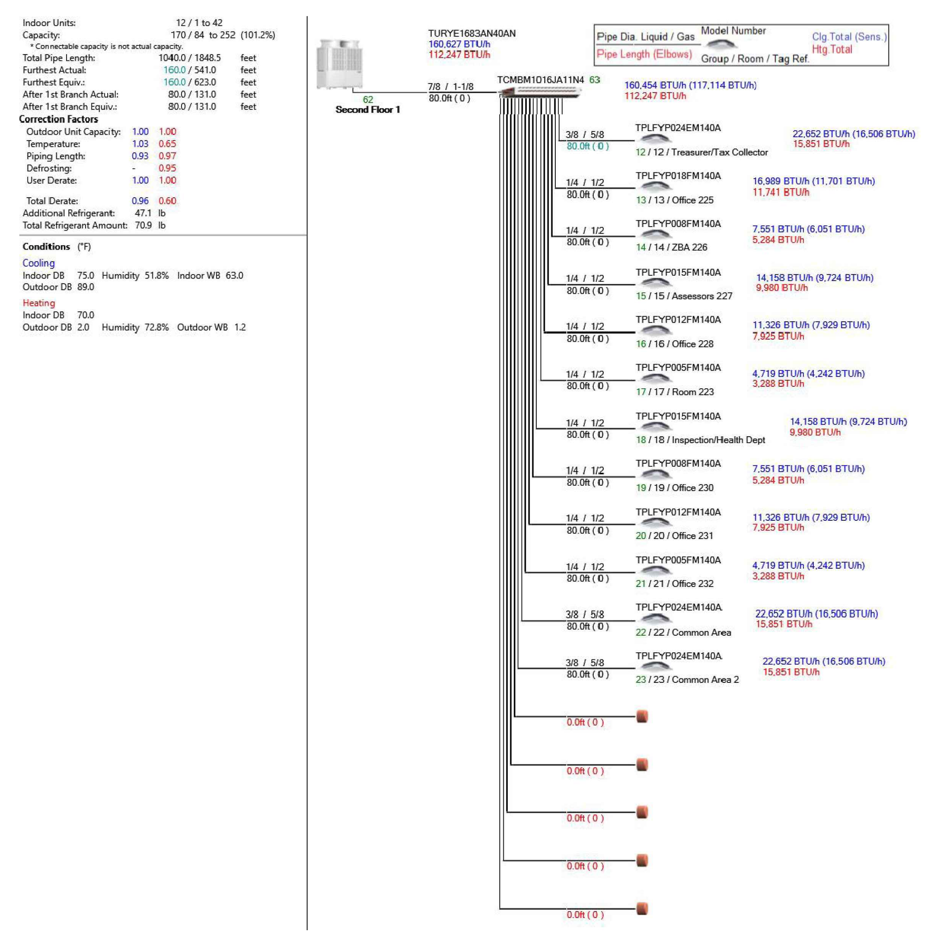
IF THIS SHEET IS NOT 24 X 36 IT IS A REDUCED SCALE PRINT - SCALE ACCORDINGLY

3"=1'-0" SCALE 0 1
1-1/2"=1'-0" SCALE 0 1 2
1"=1'-0" SCALE 0 1 2 3
1/2"=1'-0" SCALE 0 1' 2' 3' 6'
1/4"=1'-0" SCALE 0 2 4 8 12
1/8"=1'-0" SCALE 0 5 10 20





CALL OUT SYMBOLS

Symbol	Meaning
(circle symbol)	CONNECT NEW TO EXISTING
1 / H-1	SECTION DESIGNATION / SHEET NUMBER
(box symbol)	LIMIT OF DEMOLITION OF EXISTING
P / 1	EQUIPMENT TYPE / TAG NUMBER
1 (triangle)	REVISION NUMBER
(valve symbol)	PLUG VALVE OR BALL VALVE

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
ARCH	ARCHITECT
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
CLG	CEILING
CTE	CONNECT TO EXISTING
CONT	CONTINUATION
DIA	DIAMETER
DWG	DRAWING
EL	ELEVATION
EX	EXISTING
ETBR	EXISTING TO BE REMOVED
ETR	EXISTING TO REMAIN
FD	FLOOR DRAIN
FLR	FLOOR
FOIC	FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
GC	GENERAL CONTRACTOR
MD	MOTORIZED DAMPER
MS	MOTION SENSOR
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
SD	DUCT MOUNTED SMOKE DETECTOR
SPEC	SPECIFICATION
TS	TEMPERATURE SENSOR
TYP	TYPICAL
VD	VOLUME DAMPER

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE

System Tag	Room Name	Tag Reference	Model	Type	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Design Entering Temp DB/WB (°F) / [Water in temp]	Heating Design Entering Temp DB/WB (°F) / [Water in temp]	Corrected Capacity: Cooling Diversity Full/Partial (See Note 5, 6)	Corrected Capacity: Cooling Total Capacity (BTU/h)	Corrected Capacity: Cooling Sensible Capacity (BTU/h)	Corrected Capacity: Heating Diversity Full/Partial (See Note 5, 6)	Corrected Capacity: Heating Capacity (BTU/h)	Estimated Cooling Coil LAT (°F) / [LWT]	Estimated Heating Coil LAT (°F) / [LWT]	Refrig Pipe Dim Liquid/Suction (inch)	Peak Fan Airflow (cfm) / [Design gpm G(US)/min]	Max Fan ESP Setting 208V/230V (IN WG)	Voltage / Phase	Electrical MCA/MFS	Notes / Options
First Floor	Children's Library 1	FCU-1	TPLFYP008FM140A	Ceiling cassette (4-way airflow) type	8,000.0	9,000.0	75.0/63.0	70.0	FULL DEMAND	7,613.9	6,078.0	FULL DEMAND	7,067.6	56.9	90.8	1/4 / 1/2	315		208/230V/1-phase	0.28/0.28/15	1, 2, 3, 4, 5, 6
First Floor	Childrens Library 2	FCU-2	TPLFYP008FM140A	Ceiling cassette (4-way airflow) type	8,000.0	9,000.0	75.0/63.0	70.0	FULL DEMAND	7,613.9	6,078.0	FULL DEMAND	7,067.6	56.9	90.8	1/4 / 1/2	315		208/230V/1-phase	0.28/0.28/15	1, 2, 3, 4, 5, 6
First Floor	Childrens Library 3	FCU-3	TPLFYP018EM141A	Ceiling cassette (4-way airflow) type	18,000.0	20,000.0	75.0/63.0	70.0	FULL DEMAND	17,131.2	14,122.5	FULL DEMAND	15,705.8	58.7	87.9	1/4 / 1/2	812		208/230V/1-phase	0.54/0.43/15	1, 2, 3, 4, 5, 6
First Floor	Meeting Space	FCU-4	TPVFYP054AM141A	Vertical type	54,000.0	60,000.0	75.0/63.0	70.0	FULL DEMAND	51,393.6	36,337.9	FULL DEMAND	47,117.4	52.1	99.4	3/8 / 5/8	1485	0.3/0.5/0.8	208/230V/1-phase	5.63/5.63/15	1, 2, 3, 4, 5, 6
First Floor	Reception	FCU-5	TPLFYP015FM140A	Ceiling cassette (4-way airflow) type	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,276.0	9,779.8	FULL DEMAND	13,349.9	51.5	101.7	1/4 / 1/2	390		208/230V/1-phase	0.35/0.35/15	1, 2, 3, 4, 5, 6
First Floor	Entry Lobby A-1	FCU-6	TPEFYP015MA143A	Ceiling concealed type (ducted)	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,276.0	11,148.9	FULL DEMAND	13,349.9	53.9	95.1	1/4 / 1/2	494	0.6/0.6	208/230V/1-phase	1.45(208V)/1.45(230V)/15	1, 2, 3, 4, 5, 6
First Floor	Entry Lobby A-2	FCU-7	TPEFYP015MA143A	Ceiling concealed type (ducted)	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,276.0	11,148.9	FULL DEMAND	13,349.9	53.9	95.1	1/4 / 1/2	494	0.6/0.6	208/230V/1-phase	1.45(208V)/1.45(230V)/15	1, 2, 3, 4, 5, 6
First Floor	Library	FCU-8	TPLFYP015FM140A	Ceiling cassette (4-way airflow) type	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,276.0	9,779.8	FULL DEMAND	13,349.9	51.5	101.7	1/4 / 1/2	390		208/230V/1-phase	0.35/0.35/15	1, 2, 3, 4, 5, 6
First Floor	New Directors Office	FCU-9	TPLFYP005FM140A	Ceiling cassette (4-way airflow) type	5,000.0	5,600.0	75.0/63.0	70.0	FULL DEMAND	4,758.7	4,258.0	FULL DEMAND	4,397.6	60.8	84.6	1/4 / 1/2	280		208/230V/1-phase	0.24/0.24/15	1, 2, 3, 4, 5, 6
First Floor	Library Reception B-1	FCU-10	TPLFYP008FM140A	Ceiling cassette (4-way airflow) type	8,000.0	9,000.0	75.0/63.0	70.0	FULL DEMAND	7,613.9	6,078.0	FULL DEMAND	7,067.6	56.9	90.8	1/4 / 1/2	315		208/230V/1-phase	0.28/0.28/15	1, 2, 3, 4, 5, 6
First Floor	Library Reception B-2	FCU-11	TPLFYP018FM140A	Ceiling cassette (4-way airflow) type	18,000.0	20,000.0	75.0/63.0	70.0	FULL DEMAND	17,131.2	11,767.7	FULL DEMAND	15,705.8	51.1	101.7	1/4 / 1/2	460		208/230V/1-phase	0.5/0.5/15	1, 2, 3, 4, 5, 6
First Floor	Library 125	FCU-12	TPLFYP036EM140A	Ceiling cassette (4-way airflow) type	36,000.0	40,000.0	75.0/63.0	70.0	FULL DEMAND	34,262.4	24,662.2	FULL DEMAND	31,411.6	53.9	96.6	3/8 / 5/8	1095		208/230V/1-phase	0.92/0.92/15	1, 2, 3, 4, 5, 6
Second Floor 1	Treasurer/Tax Collector	FCU-13	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,652.3	16,506.3	FULL DEMAND	15,850.7	56.0	88.1	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 1	Office 225	FCU-14	TPLFYP018FM140A	Ceiling cassette (4-way airflow) type	18,000.0	20,000.0	75.0/63.0	70.0	FULL DEMAND	16,989.2	11,701.2	FULL DEMAND	11,741.3	51.2	93.7	1/4 / 1/2	460		208/230V/1-phase	0.5/0.5/15	1, 2, 3, 4, 5, 6
Second Floor 1	ZBA 226	FCU-15	TPLFYP008FM140A	Ceiling cassette (4-way airflow) type	8,000.0	9,000.0	75.0/63.0	70.0	FULL DEMAND	7,550.8	6,051.3	FULL DEMAND	5,283.6	57.0	85.5	1/4 / 1/2	315		208/230V/1-phase	0.28/0.28/15	1, 2, 3, 4, 5, 6
Second Floor 1	Assessors 227	FCU-16	TPLFYP015FM140A	Ceiling cassette (4-way airflow) type	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,157.7	9,724.2	FULL DEMAND	9,980.1	51.7	93.7	1/4 / 1/2	390		208/230V/1-phase	0.35/0.35/15	1, 2, 3, 4, 5, 6
Second Floor 1	Office 228	FCU-17	TPLFYP012FM140A	Ceiling cassette (4-way airflow) type	12,000.0	13,500.0	75.0/63.0	70.0	FULL DEMAND	11,326.1	7,929.4	FULL DEMAND	7,925.4	52.9	91.9	1/4 / 1/2	335		208/230V/1-phase	0.29/0.29/15	1, 2, 3, 4, 5, 6
Second Floor 1	Room 223	FCU-18	TPLFYP005FM140A	Ceiling cassette (4-way airflow) type	5,000.0	5,600.0	75.0/63.0	70.0	FULL DEMAND	4,719.2	4,242.1	FULL DEMAND	3,287.6	60.8	80.9	1/4 / 1/2	280		208/230V/1-phase	0.24/0.24/15	1, 2, 3, 4, 5, 6
Second Floor 1	Inspection/Health Dept	FCU-19	TPLFYP015FM140A	Ceiling cassette (4-way airflow) type	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,157.7	9,724.2	FULL DEMAND	9,980.1	51.7	93.7	1/4 / 1/2	390		208/230V/1-phase	0.35/0.35/15	1, 2, 3, 4, 5, 6
Second Floor 1	Office 230	FCU-20	TPLFYP008FM140A	Ceiling cassette (4-way airflow) type	8,000.0	9,000.0	75.0/63.0	70.0	FULL DEMAND	7,550.8	6,051.3	FULL DEMAND	5,283.6	57.0	85.5	1/4 / 1/2	315		208/230V/1-phase	0.28/0.28/15	1, 2, 3, 4, 5, 6
Second Floor 1	Office 231	FCU-21	TPLFYP012FM140A	Ceiling cassette (4-way airflow) type	12,000.0	13,500.0	75.0/63.0	70.0	FULL DEMAND	11,326.1	7,929.4	FULL DEMAND	7,925.4	52.9	91.9	1/4 / 1/2	335		208/230V/1-phase	0.29/0.29/15	1, 2, 3, 4, 5, 6
Second Floor 1	Office 232	FCU-22	TPLFYP005FM140A	Ceiling cassette (4-way airflow) type	5,000.0	5,600.0	75.0/63.0	70.0	FULL DEMAND	4,719.2	4,242.1	FULL DEMAND	3,287.6	60.8	80.9	1/4 / 1/2	280		208/230V/1-phase	0.24/0.24/15	1, 2, 3, 4, 5, 6
Second Floor 1	Common Area	FCU-23	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,652.3	16,506.3	FULL DEMAND	15,850.7	56.0	88.1	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 1	Common Area 2	FCU-24	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,652.3	16,506.3	FULL DEMAND	15,850.7	56.0	88.1	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 2	Conference room	FCU-25	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,841.6	16,590.9	FULL DEMAND	22,066.6	55.9	95.2	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 2	Small Meeting Room	FCU-26	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,841.6	16,590.9	FULL DEMAND	22,066.6	55.9	95.2	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 2	Office 216	FCU-27	TPLFYP008FM140A	Ceiling cassette (4-way airflow) type	8,000.0	9,000.0	75.0/63.0	70.0	FULL DEMAND	7,613.9	6,078.0	FULL DEMAND	7,355.5	56.9	91.6	1/4 / 1/2	315		208/230V/1-phase	0.28/0.28/15	1, 2, 3, 4, 5, 6
Second Floor 2	Office 217	FCU-28	TPLFYP008FM140A	Ceiling cassette (4-way airflow) type	8,000.0	9,000.0	75.0/63.0	70.0	FULL DEMAND	7,613.9	6,078.0	FULL DEMAND	7,355.5	56.9	91.6	1/4 / 1/2	315		208/230V/1-phase	0.28/0.28/15	1, 2, 3, 4, 5, 6
Second Floor 2	Accounting/Finance 1	FCU-29	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,841.6	16,590.9	FULL DEMAND	22,066.6	55.9	95.2	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 2	Accounting/Finance 2	FCU-30	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,841.6	16,590.9	FULL DEMAND	22,066.6	55.9	95.2	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 2	Room 214	FCU-31	TPLFYP015FM140A	Ceiling cassette (4-way airflow) type	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,276.0	9,779.8	FULL DEMAND	13,893.8	51.5	103.0	1/4 / 1/2	390		208/230V/1-phase	0.35/0.35/15	1, 2, 3, 4, 5, 6
Second Floor 2	Room 221A	FCU-32	TPLFYP015FM140A	Ceiling cassette (4-way airflow) type	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,276.0	9,779.8	FULL DEMAND	13,893.8	51.5	103.0	1/4 / 1/2	390		208/230V/1-phase	0.35/0.35/15	1, 2, 3, 4, 5, 6
Second Floor 2	Town Clerk 221A	FCU-33	TPLFYP015FM140A	Ceiling cassette (4-way airflow) type	15,000.0	17,000.0	75.0/63.0	70.0	FULL DEMAND	14,276.0	9,779.8	FULL DEMAND	13,893.8	51.5	103.0	1/4 / 1/2	390		208/230V/1-phase	0.35/0.35/15	1, 2, 3, 4, 5, 6
Second Floor 2	Selectman	FCU-34	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,841.6	16,590.9	FULL DEMAND	22,066.6	55.9	95.2	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6
Second Floor 2	Town Admin	FCU-35	TPLFYP024EM140A	Ceiling cassette (4-way airflow) type	24,000.0	27,000.0	75.0/63.0	70.0	FULL DEMAND	22,841.6	16,590.9	FULL DEMAND	22,066.6	55.9	95.2	3/8 / 5/8	812		208/230V/1-phase	0.54/0.54/15	1, 2, 3, 4, 5, 6

Notes & Options:

1. Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2. Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3. See outdoor unit schedule for outdoor ambient conditions, connected capacity, and other factors associated with corrected
4. See schematic piping/control diagram for indication of required indoor unit remote controllers, system controllers, and integration devices.
5. Full demand corrected capacity includes de-rate associated with indoor vs. outdoor connected capacity indicated on outdoor unit schedule for associated system. Partial corrected capacity assumes sufficient diversity exists such that the connected capacity de-rate does not apply. It is the designer's responsibility to ensure "Diamond System Builder" is set in the appropriate output capacity setting (full demand/partial demand) prior to generating this schedule.
6. It is recommended to always base heating corrected capacity on full demand.

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE

System Tag	Tag Reference	M-Net Address	Model Number	Modules	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Design Cooling Outdoor Temp DB (°F)	Design Heating Outdoor Temp WB (°F)	Corrected Cooling Total Capacity (BTU/h)	Corrected Heating Capacity (BTU/h)	Electrical-Per Module 208/230 or [460V]: Voltage / Phase	MCA 208/230 or [460V]	RFS	MOCP	Notes / Options
First Floor	ACCU-1	51, 52	TURYE2163BN40AN	P120, P96	216,000.0	243,000.0	89.0	1.2	204,835.8	188,940.7	208/230V / 3-phase 3-wire	41/38, 31/29	60/60, 45/45	60/60, 45/45	1, 2, 3, 4, 5
Second Floor 1	ACCU-2	62	TURYE1683AN40AN	P168	168,000.0	188,000.0	89.0	1.2	160,627.2	112,246.7	208/230V / 3-phase 3-wire	57/53	70/70	90/80	1, 2, 3, 4, 5
Second Floor 2	ACCU-3	74, 75	TURYE2163BN40AN	P120, P96	216,000.0	243,000.0	89.0	1.2	208,132.4	188,791.9	208/230V / 3-phase 3-wire	41/38, 31/29	60/60, 45/45	60/60, 45/45	1, 2, 3, 4, 5

Notes & Options:

1. Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
2. Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
3. Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
4. For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module
5. Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.
6. Provide 24" stand, Snow/Hail kit and Panel heater kit.

VRF HEAT RECOVERY BRANCH CIRCUIT CONTROLLER

System Tag	Tag Reference	M-Net Address	Model Number	Type (double / Main / Sub)	Number of Ports	Connected Capacity to BC	Voltage / Phase	MCA 208/230	Notes / Options
First Floor		53	TCMBM1016JA11N4	Main	16	215,000.0	208/230V/1-phase		1, 2
Second Floor 1		63	TCMBM1016JA11N4	Main	16	170,000.0	208/230V/1-phase		1, 2
Second Floor 2		76	TCMBM1016JA11N4	Main	16	205,000.0	208/230V/1-phase		1, 2

Notes & Options:

1. Include Diamondback Ball Valves BV-Series, 700PSIG working pressure, full port, 410A rated.
2. For sub BC controller CMB-P-NU-GB1 or -GB, the total connectable indoor unit capacity can be 126,000 BTUs or less. If two sub BC controllers are used, the total indoor unit capacity connected to BOTH sub BC controllers also cannot exceed 126,000 BTUs. For sub BC controller CMB-P1016NU-HB1 the total connectable indoor unit capacity can be 126,000 BTUs or less. However, if two sub controllers are used, and one of them is CMB-1016NU-HB1, the total indoor unit capacity connected to BOTH sub controllers must NOT exceed 168,000 BTUs.

UNIT HEATER SCHEDULE

TAG NO.	MANUF.	MODEL	HEATER POSITION TYPE	COIL TYPE	TOTAL AIRFLOW CFM	TOTAL MBH	WATER COIL EWT °F	WATER COIL TD °F	WATER COIL GPM	WATER COIL WPD FT	STEAM COIL STM PSI	STEAM COIL LBS/HR	MOTOR DATA NO	MOTOR DATA HP	MOTOR DATA AMPS	MOTOR DATA V	MOTOR DATA PH	MOTOR DATA HZ	ACCESSORIES	REMARKS
UH-1	STERLING	HS-60	HORIZONTAL	HOT WATER	900	43.6	180	20	4.4	0.17	–	–	1	1/20	1.4	115	1	60	① ② ③	–
UH-2		HS-72			1100	40.7			5.3	0.23	–	–								
UH-3											–	–								
UH-4											–	–								
UH-5	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	–	–	↓	↓	↓	↓	↓	↓	↓	↓

① BUILT-IN FAN CONTROLS
② STRAP ON AQUASTAT
③ WALL-MOUNTED 24 VOLT THERMOSTAT

HUMIDIFER SCHEDULE

MARK	OUTPUT LBS/HR	KW	CFM	DUCT SIZE	VOLTAGE	MFG	MODEL	REMARKS
HUM-1	55	--	1100	---	208/3/60	CAREL	UE025XW0U1	SEE NOTES BELOW
HUM-2	32	--	900	---			UE015XW0U1	
HUM-3	↓	↓	↓	---	↓	↓	↓	↓

HUMIDIFIERS SHALL EACH BE PROVIDED WITH 10 FOOT STEAM HOSE, DISTRIBUTION PIPES, 4 FOOT EXTRA STEAM HOSE, 26 FOOT CONDENSATE HOSE, 1 SPARE CYLINDERS, 1 INLET ADAPTER, 1 AIR PROVING SWITCH, HUMIDITY CONTROL SENSOR, 1 DUCT MOUNTED HIGH LIMIT HUMIDITY SENSOR, AND NETWORK INTERFACE. HUM-1 SHALL BE SUPPLIED WITH 2 DISTRIBUTION TUBES AND CAREL "Y" KIT (UEKY000000) PIPE ADAPTER.

Northeast Engineering & Commissioning
T: (978) 430-0565

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Begin Here. Finish Well.
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Danvers, MA 01923
978-750-9062
gienapparchitects.com

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Plot Date: 3/12/2020 10:20:04 AM

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No.	Date	Description

Project: 699.1
Drawn by: TMM
Check by: LTC
Date: 07/15/2020
Scale: AS NOTED

HVAC SCHEDULES

H-0

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IF THIS SHEET IS NOT 24 X 36 IT IS A REDUCED SCALE PRINT - SCALE ACCORDINGLY

EXISTING PANEL 'MP2A', 225 AMP, 120/208 VOLT, 3-PHASE, 4-WIRE & GND

INTERRUPTING CAPACITY: 10,000 AMPS RMS SYM — MAIN: 225A M.C.B. — MOUNTING: SURFACE

	LOAD DESCRIPTION	CB	CIRC NO.	KVA LOAD A	KVA LOAD B	KVA LOAD C	KVA LOAD A	KVA LOAD B	KVA LOAD C	CIRC NO.	CB	LOAD DESCRIPTION	
*	ERV-1	20A/3P	1	1.32			1.32			2	20A/3P	ERV-2	*
			3		1.32			1.32		4			
			5			1.32			1.32	6			
*	ERV-3	20A/3P	7	1.32			1.00			8	20A/3P	HUM-3	*
			9		1.32			1.00		10			
			11			1.32			1.00	12			
*	HUM-1	20A/3P	13	1.00						14	15A/3P	SPARE	
			15		1.00					16			
			17			1.00				18			
*	HUM-2	20A/3P	19	1.00						20	20A/1P	EXISTING	
			21		1.00					22	20A/1P	EXISTING	
			23			1.00				24	20A/1P	EXISTING	
	EXISTING	20A/1P	25							26	20A/1P	EXISTING	
*	FCU-4	20A/2P	27		0.10					28	20A/1P	EXISTING	
			29			0.10				30	20A/1P	EXISTING	

PHASE A 6.96 kVA
PHASE B 7.06 kVA
PHASE C 7.06 kVA

TOTAL LOAD 21.08 kVA

NOTES:

* - DENOTES NEW CIRCUIT BREAKER. REMOVE EXISTING TURN OVER TO OWNER AND PROVIDE NEW AS INDICATED

EXISTING PANEL 'MP2B', 225 AMP, 120/208 VOLT, 3-PHASE, 4-WIRE & GND

INTERRUPTING CAPACITY: 10,000 AMPS RMS SYM — MAIN: 225A M.C.B. — MOUNTING: SURFACE

	LOAD DESCRIPTION	CB	CIRC NO.	KVA LOAD A	KVA LOAD B	KVA LOAD C	KVA LOAD A	KVA LOAD B	KVA LOAD C	CIRC NO.	CB	LOAD DESCRIPTION	
*	BI-1, BI-2, BI-3, BI-4	20A/1P	1	0.50			0.20			2	20A/2P	BC-2 AND BC-3	*
*	ATTIC RECEPTACLES	20A/1P	3		0.36			0.20		4			
*	SPARE	20A/1P	5							6	20A/1P	SPARE	*
	SPARE	30A/3P	7							8	30A/3P	SPARE	
			9							10			
			11							12			
	EXISTING	20A/1P	13							14	20A/1P	EXISTING	
	EXISTING	20A/1P	15							16	20A/1P	EXISTING	
		20A/1P	17							18		SPACE	
	EXISTING	20A/1P	19				0.25			20	20A/2P	FCU-32,33,34,35	*
	EXISTING	20A/1P	21					0.25		22			
*	FCU-18,19,20,21,22	20A/2P	23			0.15			0.25	24	20A/2P	FCU-28,29,30,31	*
			25	0.15			0.25			26			
*	FCU-13,14,15,16,17	20A/2P	27		0.20			0.25		28	20A/2P	FCU-23,24,25,26,27	*
			29			0.20			0.25	30			

PHASE A 1.35 kVA
PHASE B 1.26 kVA
PHASE C 0.85 kVA

TOTAL LOAD 3.46 kVA

NOTES:

* - DENOTES NEW CIRCUIT BREAKER. REMOVE EXISTING TURN OVER TO OWNER AND PROVIDE NEW AS INDICATED

EXISTING PANEL 'PP1B', 225 AMP, 120/208 VOLT, 3-PHASE, 4-WIRE & GND

INTERRUPTING CAPACITY: 10,000 AMPS RMS SYM — MAIN: 100A M.C.B. — MOUNTING: SURFACE

	LOAD DESCRIPTION	CB	CIRC NO.	KVA LOAD A	KVA LOAD B	KVA LOAD C	KVA LOAD A	KVA LOAD B	KVA LOAD C	CIRC NO.	CB	LOAD DESCRIPTION	
	EXISTING	20A/1P	43							44	20A/1P	EXISTING	
	EXISTING	20A/1P	45							46	20A/1P	EXISTING	
	EXISTING	20A/1P	47							48	20A/1P	EXISTING	
	EXISTING	20A/1P	49							50	20A/1P	EXISTING	
	EXISTING	20A/1P	51							52	20A/1P	EXISTING	
	EXISTING	20A/1P	53							54	20A/1P	EXISTING	
	EXISTING	20A/1P	55							56	20A/1P	EXISTING	
	EXISTING	20A/1P	57							58	20A/1P	EXISTING	
	EXISTING	20A/1P	59							60	20A/1P	EXISTING	
	EXISTING	20A/1P	61							62	20A/1P	EXISTING	
	EXISTING	20A/1P	63							64	20A/1P	SPARE	
*	ACCU-4	20A/2P	65			1.25				66	20A/1P	EXISTING	
			67	1.25						68	20A/1P	SPARE	
*	ACCU-5	20A/2P	69		1.25					70	20A/1P	SPARE	
			71			1.25				72	20A/1P	SPARE	
*	BC-1	20A/2P	73	0.10			1.25			74	20A/2P	ACCU-6	*
			75		0.10			1.25		76			
*	FCU-7,8,9,10,11,12	20A/2P	77			0.39				78	20A/1P	EXISTING	
			79	0.39						80	20A/1P	EXISTING	
*	FCU-1,2,3,5,6	20A/2P	81		0.30					82	20A/1P	EXISTING	
			83			0.30				84	20A/1P	EXISTING	

PHASE A 2.99 kVA
PHASE B 2.90 kVA
PHASE C 3.19 kVA

TOTAL LOAD 9.08 kVA

NOTES:

* - DENOTES NEW CIRCUIT BREAKER. REMOVE EXISTING TURN OVER TO OWNER AND PROVIDE NEW AS INDICATED

PANEL 'MP1C', 250 AMP, 120/208 VOLT, 3-PHASE, 4-WIRE & GND

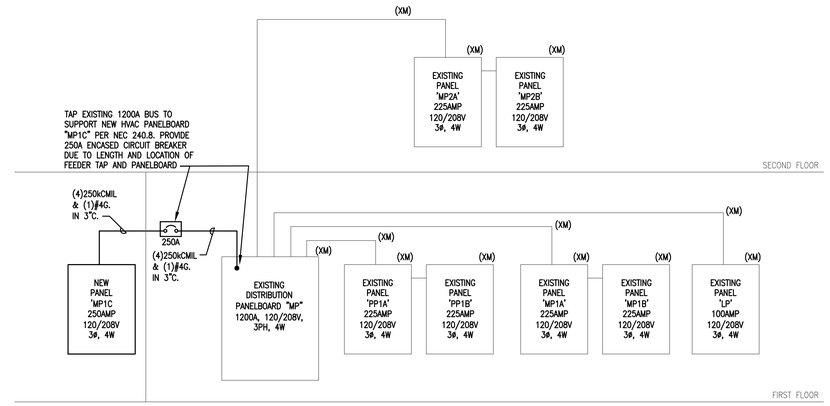
INTERRUPTING CAPACITY: 10,000 AMPS RMS SYM — MAIN: 250A M.C.B. — MOUNTING: SURFACE

	LOAD DESCRIPTION	CB	CIRC NO.	KVA LOAD A	KVA LOAD B	KVA LOAD C	KVA LOAD A	KVA LOAD B	KVA LOAD C	CIRC NO.	CB	LOAD DESCRIPTION	
	ACCU-1 (SECTION-1)	60A/3P	1	4.92			4.92			2	60A/3P	ACCU-3 (SECTION-1)	
			3		4.92			4.92		4			
			5			4.92			4.92	6			
	ACCU-1 (SECTION-2)	60A/3P	7	3.72			3.72			8	60A/3P	ACCU-3 (SECTION-2)	
			9		3.72			3.72		10			
			11			3.72			3.72	12			
	ACCU-2	90A/3P	13	6.84						14		SPACE	
			15		6.84					16		SPACE	
			17			6.84				18		SPACE	
	SPACE		19							20		SPACE	
	SPACE		21							22		SPACE	
	SPACE		23							24		SPACE	
	SPACE		25							26		SPACE	
	EXTERIOR RECEPTACLE	20A/1P	27		0.18					28		SPACE	
	UH-1	20A/1P	29			0.20				30		SPACE	

PHASE A 24.12 kVA
PHASE B 24.30 kVA
PHASE C 24.32 kVA

TOTAL LOAD 72.74 kVA

NOTES:

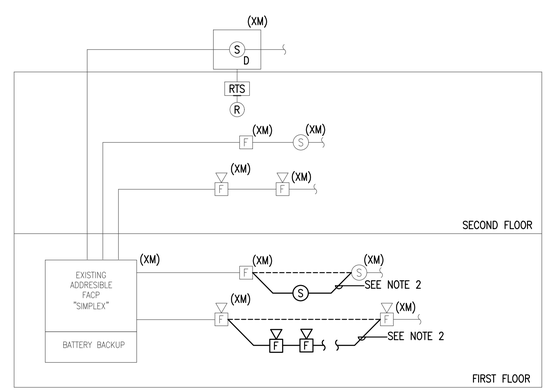


PARTIAL POWER RISER DIAGRAM

N.T.S.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	MANUFACTURER AND CATALOG NUMBER	LAMPS No.	LAMPS WATTAGE	LAMPS TYPE	VOLTAGE
A	2X2 LED BASKET TYPE GRID FIXTURE	LITHONIA 2BLT2-33L-ADP-MVOLT-EZ1-LP835	-	26	LED	MVOLT
AE	2X2 LED BASKET TYPE GRID FIXTURE WITH EMERGENCY	LITHONIA 2BLT2-33L-ADP-MVOLT-EZ1-LP835-EL14L	-	26	LED	MVOLT
B	4" LED DOWNLIGHT (W/WHITE BAFFLE)	LITHONIA LDN4-30/15-L04-WR-MVOLT-EZ1	-	12	LED	MVOLT
C	6" LED DOWNLIGHT (W/WHITE BAFFLE)	LITHONIA LDN6-30/15-L04-WR-MVOLT-EZ1	-	12	LED	MVOLT
	LED EXIT SIGN, SINGLE FACE, BATTERY BACK-UP, CEILING OR WALL MOUNTED	LITHONIA LQM-S-W-3R-120/277-ELN	-	4	LED	120/277
	LED EXIT SIGN, DOUBLE FACE, BATTERY BACK-UP, CEILING OR WALL MOUNTED	LITHONIA LQM-S-W-3R-120/277-ELN	-	4	LED	120/277



FIRE ALARM RISER DIAGRAM

N.T.S.

RISER DIAGRAM NOTES:

1. MINIMUM SIZE CONDUIT SHALL BE 3/4" UNLESS NOTED OTHERWISE.

BID SET 07/15/2020

BLW Engineers, Inc.
311 Great Road, Post Office Box 1551
Littleton, Massachusetts 01460
T: 978.486.4301 F: 978.428.0067
www.blwengineers.com
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Plot Date: 1/21/2020 11:15:47 AM

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No.	Date	Description

Project: 20049
Drawn by: SWD
Check by: JP
Date: 07/15/2020
Scale:

ELECTRICAL SCHEDULES AND POWER RISER

E0-2

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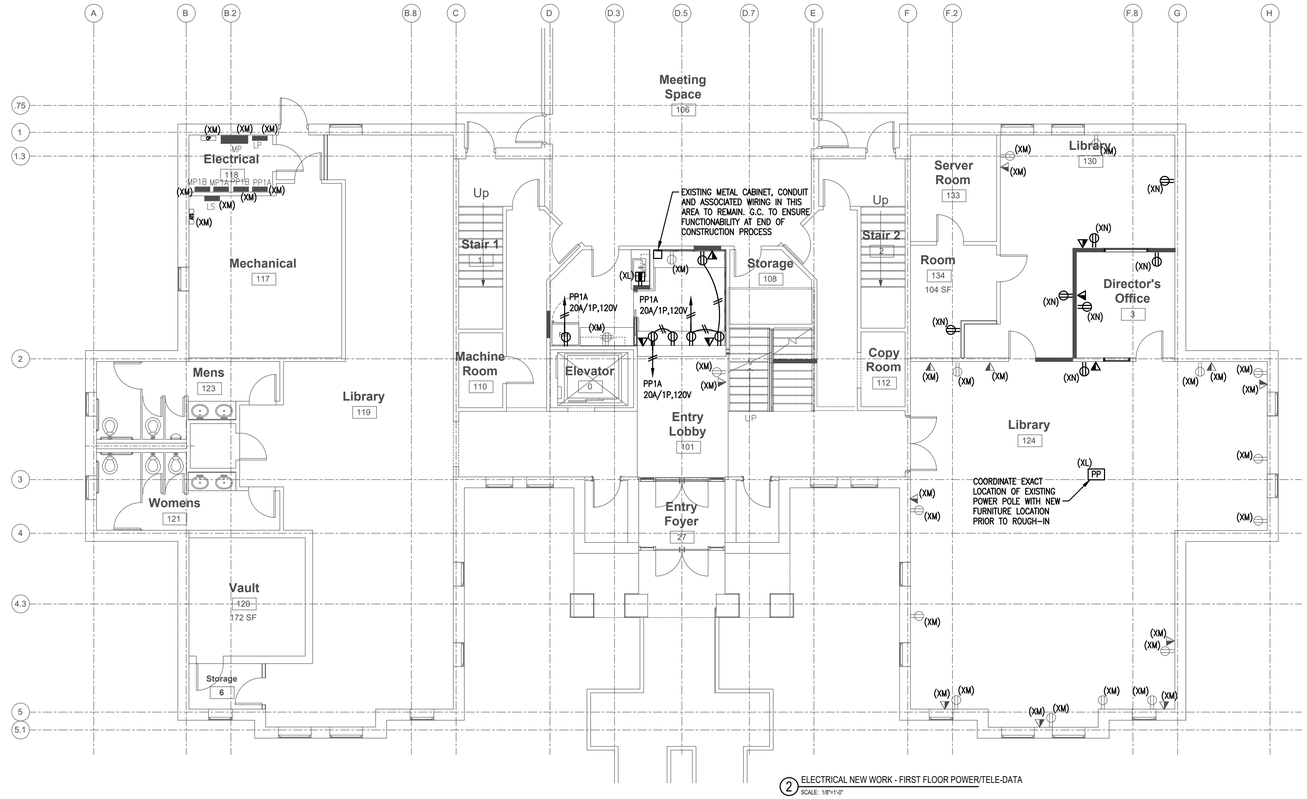
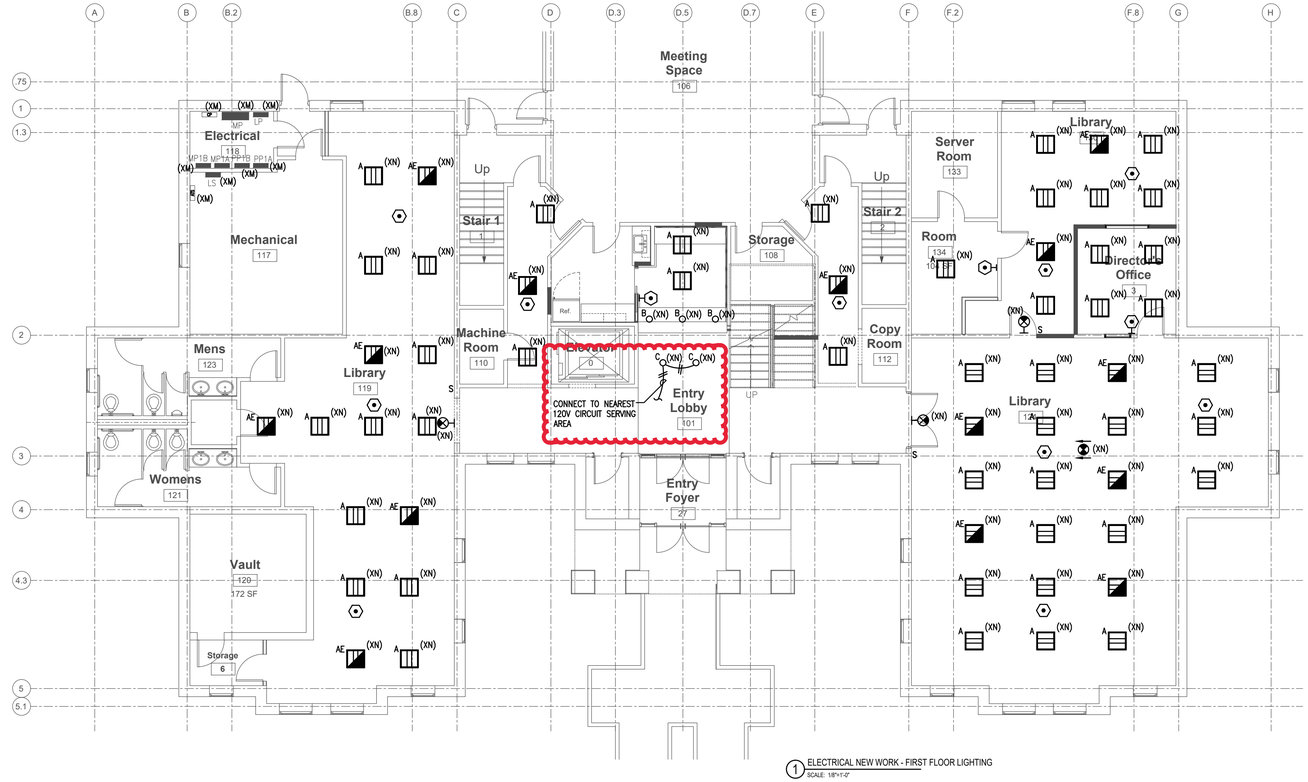


2 ELECTRICAL NEW WORK - FIRST FLOOR POWER/TELE-DATA
SCALE: 1/8"=1'-0"



1 ELECTRICAL NEW WORK - FIRST FLOOR LIGHTING
SCALE: 1/8"=1'-0"

BID SET
07/15/2020

BLW Engineers, Inc.
311 Great Road, Post Office Box 1551
Littleton, Massachusetts 01460
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Boxford Town Hall
HVAC, Exterior Repairs, Library Renovations
7 Spofford Rd, Boxford, MA 01921

Plot Date: 1/21/2020 11:15:47 AM

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No.	Date	Description

Project: 20049
Drawn by: SWD
Check by: JP
Date: 07/15/2020
Scale:

ELECTRICAL NEW WORK PLANS

E-1

C:\Users\Alex\Desktop\999 1 Boxford Town Hall Repairs Local.rvt

Boxford Town Hall
8/6/2020

Gienapp Architects
Prepared by: IB

Please note: due to COVID, business cards were collected instead of passing around a sign-in sheet. The following is a list of business cards received.

Pre-Bid Walkthrough Sign-In			
Name	**Company**	**Email**	**Phone Number**
Jared Burhoe	AB&R Architectural Building & Restoration	jared@abandr.net	781-395-2600
Greg Campbell	Campbell Construction Group, LLC	greg@cambellgroupllc.com	978-532-1998
Michael Wysocki	Fraser Engineering	mwysocki@fraserengineering.com	617-332-3700
James E. Marshall	Jupiter Electric, Inc.	jmjupiterelectric@comcast.net	978-499-7776
Nicholas Lambrianidis	Lambrian Construction	nlambrianidis@lambrian.com	781-461-1100
Michael A. Galasso	NEL Corporation	michaelg@nelcorporation.com	978-777-2085
Estimating Department	Northern Contracting Corp.	ncc@northerncontracting.com	781-821-4200
Richard (Nick) Nichols	Paul J. Rogan Co., Inc.	nickn@pauljroganco.com	781-843-1900
Karl Gonsiorowski	Systems Electrical Services	karl@systemselectricalservices.com	617-466-0920