686 ARCHITECTS

May 4, 2022

Mr. Nicholas Moreno – Executive Director
City of Boston Conservation Commission
1 City Hall Square, Room 709
Boston, MA 02201

Re: 6-8 Ford Street Project Narrative
East Boston, MA 02128

Dear Mr. Moreno,

Per the requirements outlined in the City of Boston Conservation Commission Filing guidelines, 686 Architects is providing this project narrative for the proposed project at 6-8 Ford Street in East Boston, Massachusetts.

Scope
The project consists of construction of a new three story, three unit, R2 Residential building.

Site
The parcel at 6-8 Ford Street *"is in the F.E.M.A. 100 Year Flood Zone AE shown on Map 25025C0019 J. dated 03/16/2016."* per the civil and survey drawings prepared by Medford Engineering and Survey dated August 5, 2019.

Existing Conditions
The site is presently used for parking and is partially paved and partially grass and dirt.

Design
The project has been redesigned to raise the elevation of the lowest occupied floor of the building accordance with the requirements of the applicable flood related codes. The floor elevation of the habitable spaces has been raised to 21.5 in order for the supporting structure to be above the Design Flood Elevation. The project foundation structural design prepared by Bouley Consulting has been prepared to meet the applicable provisions of ASCE 7 and ASCE 24. Per ASCE 24 Flood Resistant Design and Construction, paragraph C2.7, *"Enclosures below the DFE (Design Flood Elevation) can be used only for parking of vehicles, building access, and storage provided the requirements of this standard and the authority having jurisdiction are satisfied."* There are no habitable spaces other than storage in the basement. To the best of our knowledge, the building design meets the requirements and intention of the building codes relative to flood zone construction.

List of Wetlands Resource Areas
The wetlands resource is the proximity to Boston Harbor.

Performance Standards Specific to those Resource Areas
All occupied areas and mechanical equipment are located above the Design Flood Elevation to prevent contamination of flood waters.

1156 Dorchester Avenue
Dorchester, Massachusetts 02125
Phone: 617-282-0030
Fax: 617-282-1080

Construction Equipment
Typical construction equipment for a three-story wood frame project of this size will be utilized including an excavator and some type of material lift such as a small crane or a fork lift.

How the Proposed Work will be Constructed
The site will be excavated for construction of the building's concrete foundation and then the upper floors will be wood frame construction.

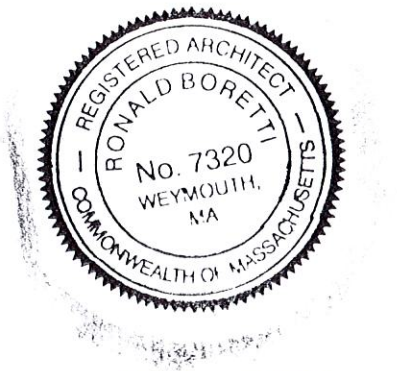
Measures to Protect the Wetlands Resource Areas.
The site will be protected from runoff of disturbed soils by silt fencing and protection of nearby catch basins with silt barriers.

ACEC Status
Per MassGIS Data: Areas of Critical Environmental Concern, April 2009 on the Mass.gov website, the project is not in an Area of Critical Environmental Concern.

Mass Clean Energy Center / Boston Zero Emissions
All appliances are energy star rated with high efficiency electric water heaters, cooking appliances and HVAC equipment. The roof is under redesign to support future installation of solar panels and the electrical service is under redesign design for the future installation of an electric car charger including installation of conduit and panel capacity.

Please let us know if there are any questions regarding the project.

Ronald P. Boretti
Architect
rboretti@686arch.com



5-4-2022

1156 Dorchester Avenue www.roche-christopher.com Phone: 617-282-0030
Dorchester, Massachusetts 02125 Fax: 617-282-1080

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

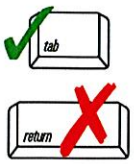
Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

a. Street Address	b. City/Town	c. Zip Code
6-7 Ford Street	East Boston	02128

Latitude and Longitude:

d. Latitude	e. Longitude
42.387510	-71.007010

f. Assessors Map/Plat Number	g. Parcel /Lot Number
	0101723000

2. Applicant:

a. First Name	b. Last Name
James	Christopher

c. Organization: 686 Architects

d. Street Address: 1156 Dorchester Avenue

e. City/Town	f. State	g. Zip Code
Dorchester	MA	02125

h. Phone Number	i. Fax Number	j. Email Address
617.282.0030	617.282.1080	jchristopher@686arch.com

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name	b. Last Name
Reginaldo	Piccinato

c. Organization:

d. Street Address: 153 Court Road

e. City/Town	f. State	g. Zip Code
Winthrop	MA	02152

h. Phone Number	i. Fax Number	j. Email address
617.895.9410		reginaldo.nelsongc@gmail.com

4. Representative (if any):

a. First Name	b. Last Name

c. Company

d. Street Address

e. City/Town	f. State	g. Zip Code

h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid

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A. General Information (continued)

6. General Project Description:

New 3 story 3 unit building on undeveloped site in East Boston. Project is in AE flood Zone.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

1. ☐ Single Family Home
2. ☐ Residential Subdivision
3. ☒ Commercial/Industrial
4. ☐ Dock/Pier
5. ☐ Utilities
6. ☐ Coastal engineering Structure
7. ☐ Agriculture (e.g., cranberries, forestry)
8. ☐ Transportation
9. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Suffolk	n/a
a. County	b. Certificate # (if registered land)
59005	150
c. Book	d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☒ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. ☐ Riverfront Area	1. Name of Waterway (if available) - **specify coastal or inland**	

2. Width of Riverfront Area (check one):

   ☐ 25 ft. - Designated Densely Developed Areas only

   ☐ 100 ft. - New agricultural projects only

   ☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

   a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☐ Yes ☐ No

3. ☒ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f**. above.

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☒ Land Subject to Coastal Storm Flowage	4,055 1. square feet	

4. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

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Provided by MassDEP:

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

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C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

   a. ☐ Yes ☒ No **If yes, include proof of mailing or hand delivery of NOI to:**

   Natural Heritage and Endangered Species Program
   Division of Fisheries and Wildlife
   1 Rabbit Hill Road
   Westborough, MA 01581

   b. Date of map

   If *yes*, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

   c. Submit Supplemental Information for Endangered Species Review*

      1. ☐ Percentage/acreage of property to be altered:

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

      2. ☐ Assessor's Map or right-of-way plan of site

2. ☒ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

   (a) ☒ Project description (including description of impacts outside of wetland resource area & buffer zone)

   (b) ☒ Photographs representative of the site

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* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see https://www.mass.gov/ma-endangered-species-act-mesa-regulatory-review).
Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

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C. Other Applicable Standards and Requirements (cont'd)

(c) ☐ MESA filing fee (fee information available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review).
Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

*Projects altering **10 or more acres** of land, also submit:*

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # b. Date submitted to NHESP

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☐ Not applicable – project is in inland resource area only b. ☐ Yes ☒ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

c. ☐ Is this an aquaculture project? d. ☐ Yes ☒ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).

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C. Other Applicable Standards and Requirements (cont'd)

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☐ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☐ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☒ No. Check why the project is exempt:

      1. ☐ Single-family house

      2. ☐ Emergency road repair

      3. ☒ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

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D. Additional Information (cont'd)

3. ☐ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☐ List the titles and dates for all plans and other materials submitted with this NOI.

see attached
a. Plan Title

b. Prepared By

c. Signed and Stamped by

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☐ Attach NOI Wetland Fee Transmittal Form

9. ☐ Attach Stormwater Report, if needed.

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

2. Date: 4.5.2022

3. Signature of Property Owner (if different)

4. Date: 4.5.2022

5. Signature of Representative (if any)

6. Date

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

686 ARCHITECTS

6-8 Ford Street
East Boston, MA 02128
Conservation Commission - Notice of Intent

Drawing List

Drawing C-1: BWSC Site Plan (1 drawing) prepared by the Columbia Design Group, signed and stamped by Peter Gammie, P.E., latest revision 11.9.2020.

Drawings T1-T3; L1; and A1-A8 (12 drawings): Architectural Drawings prepared by 686 Architects, signed and stamped by Ronald P. Boretti, Architect, latest revision 4/29/2022.

Drawings FP1-4, P1-6; and H1-6 (16 drawings): MEP Drawings prepared by Zade Associated, signed and stamped by Mohamed Zade, PE, latest revision 6-4-18.

Drawings S1.0-S1.3 (4 drawings): Structural Drawings prepared by Boulay Consulting, signed and stamped by Jamie L. Boulay, latest revision 3.31.2020.

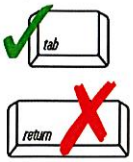
1156 Dorchester Avenue
Dorchester, Massachusetts 02125
Phone: 617-282-0030
Fax: 617-282-1080

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

6-8 Ford Street	East Boston
a. Street Address	b. City/Town
c. Check number	d. Fee amount

2. Applicant Mailing Address:

James		Christopher
a. First Name		b. Last Name

686 Architects
c. Organization

1056 Dorchester Avenue
d. Mailing Address

Dorchester		MA	02125
e. City/Town		f. State	g. Zip Code

617.282.0030	617.282.1080	jchristopher@686Architects.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

Reginaldo		Piccinato
a. First Name		b. Last Name

c. Organization

153 Court Road
d. Mailing Address

Wintrhrop		MA	02152
e. City/Town		f. State	g. Zip Code

617.895.9410	n/a	reginaldo.nelsongc@gmail.com
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee

Step 5/Total Project Fee: _____

Step 6/Fee Payments:

Total Project Fee:	_____ a. Total Fee from Step 5
State share of filing Fee:	_____ b. 1/2 Total Fee **less** $12.50
City/Town share of filling Fee:	_____ c. 1/2 Total Fee **plus** $12.50

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

City of Boston Environment

NOTICE OF INTENT APPLICATION FORM
Boston Wetlands Ordinance
City of Boston Code, Ordinances, Chapter 7-1.4

Boston File Number

MassDEP File Number

A. GENERAL INFORMATION

1. Project Location

6-8 FORD STREET — a. Street Address
EAST BOSTON — b. City/Town
02128 — c. Zip Code

f. Assessors Map/Plat Number
0101723000 — g. Parcel /Lot Number

2. Applicant

JAMES — a. First Name
CHRISTOPHER — b. Last Name
686 ARCHITECTS — c. Company

1156 DORCHESTER AVENUE — d. Mailing Address

DORCHESTER — e. City/Town
MA — f. State
02125 — g. Zip Code

617.282.0030 — h. Phone Number
617.282.1080 — i. Fax Number
JCHRISTOPHER@686ARCH.COM — j. Email address

3. Property Owner

REGINALDO — a. First Name
PICCINATO — b. Last Name
c. Company

153 COURT ROAD — d. Mailing Address

WINTHROP — e. City/Town
MA — f. State
02152 — g. Zip Code

617.895.9410 — h. Phone Number
i. Fax Number
REGINALDO.NELSONGC@GMAIL.COM — j. Email address

☐ Check if more than one owner

(If there is more than one property owner, please attach a list of these property owners to this form.)

4. Representative (if any) N/A

a. First Name
b. Last Name
c. Company

d. Mailing Address

e. City/Town
f. State
g. Zip Code

h. Phone Number
i. Fax Number
j. Email address

5. Is any portion of the proposed project jurisdictional under the Massachusetts Wetlands Protection Act M.G.L. c. 131 §40?

❑ Yes ❑ No

If yes, please file the WPA Form 3 - Notice of Intent with this form

6. General Information

PROJECT IS IN AE FLOOD ZONE

7. Project Type Checklist

a. ❑ Single Family Home
b. ❑ Residential Subdivision
c. ❑ Limited Project Driveway Crossing
d. ☒ Commercial/Industrial
e. ❑ Dock/Pier
f. ❑ Utilities
g. ❑ Coastal Engineering Structure
h. ❑ Agriculture – cranberries, forestry
i. ❑ Transportation
j. ❑ Other

8. Property recorded at the Registry of Deeds

SUFFOLK	150
a. County	b. Page Number
59005	N/A
c. Book	d. Certificate # (if registered land)

9. Total Fee Paid

a. Total Fee Paid	b. State Fee Paid	c. City Fee Paid

B. BUFFER ZONE & RESOURCE AREA IMPACTS

Buffer Zone Only - Is the project located only in the Buffer Zone of a resource area protected by the Boston Wetlands Ordinance?

❑ Yes ❑ No

1. Coastal Resource Areas

Resource Area	Resource Area Size	Proposed Alteration*	Proposed Migitation
☒ Coastal Flood Resilience Zone	4,055 Square feet	1,123 Square feet	471.8 CF Square feet
☐ 25-foot Waterfront Area	LOT SIZE Square feet	BLDG FOOTPRINT Square feet	CHAMBER STORAGE Square feet
☐ 100-foot Salt Marsh Area	Square feet	Square feet	Square feet
☐ Riverfront Area	Square feet	Square feet	Square feet

2. Inland Resource Areas

Resource Area	Resource Area Size	Proposed Alteration*	Proposed Migitation
☐ Inland Flood Resilience Zone	Square feet	Square feet	Square feet
☐ Isolated Wetlands	Square feet	Square feet	Square feet
☐ Vernal Pool	Square feet	Square feet	Square feet
☐ Vernal Pool Habitat (vernal pool + 100 ft. upland area)	Square feet	Square feet	Square feet
☐ 25-foot Waterfront Area	Square feet	Square feet	Square feet
☐ Riverfront Area	Square feet	Square feet	Square feet

C. OTHER APPLICABLE STANDARDS & REQUIREMENTS

1. What other permits, variances, or approvals are required for the proposed activity described herein and what is the status of such permits, variances, or approvals?

BUILDING PERMIT

OCCUPANCY PERMIT UPON COMPLETION

2. Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the Massachusetts Natural Heritage Atlas or go to http://www.mass.gov/dfwele/dfw/nhesp/nhregmap.htm.

❑ Yes ☒ No

If *yes*, the project is subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18).

A. Submit Supplemental Information for Endangered Species Review

☐ Percentage/acreage of property to be altered:

(1) within wetland Resource Area _____ percentage/acreage

(2) outside Resource Area _____ percentage/acreage

☐ Assessor's Map or right-of-way plan of site

3. Is any portion of the proposed project within an Area of Critical Environmental Concern?

❑ Yes ☒ No

If yes, provide the name of the ACEC: _____

4. Is the proposed project subject to provisions of the Massachusetts Stormwater Management Standards?

❑ *Yes. Attach a copy of the Stormwater Checklist & Stormwater Report as required.*
- ❑ *Applying for a Low Impact Development (LID) site design credits*
- ❑ *A portion of the site constitutes redevelopment*
- ❑ *Proprietary BMPs are included in the Stormwater Management System*

☒ *No. Check below & include a narrative as to why the project is exempt*
- ❑ *Single-family house*
- ❑ *Emergency road repair*
- ☒ *Small Residential Subdivision (less than or equal to 4 single family houses or less than or equal to 4 units in a multifamily housing projects) with no discharge to Critical Areas*

5. Is the proposed project subject to Boston Water and Sewer Commission Review?

☒ Yes ❑ No

D. SIGNATURES AND SUBMITTAL REQUIREMENTS

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the Wetlands Protection Ordinance.

Signature of Applicant — Date: 5/4/22

Signature of Property Owner (if different) — Date: 5-4-2022

N/A
Signature of Representative (if any) — Date

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

BUILDING CODE ANALYSIS

APPLICABLE CODES
CMR 780 MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION
CMR 521 ARCHITECTURAL ACCESS BOARD
INTERNATIONAL BUILDING CODE 2015 (IBC 2015)
INTERNATIONAL ENERGY CONSERVATION CODE 2015 (IECC 2015)

BUILDING AREA

BASEMENT:	1,123 GROSS SQ.FT.
FIRST FLOOR:	1,123 GROSS SQ.FT.
SECOND FLOOR:	1,123 GROSS SQ. FT.
THIRD FLOOR:	1,123 GROSS SQ. FT.
BUILDING TOTAL	4,492 GROSS SQ. FT.

OCCUPANCY
R-2 RESIDENTIAL (THREE UNITS)

ALLOWABLE BUILDING AREA
ALLOWABLE BUILDING AREA PER STORY: 21,000 S.F. ALLOWABLE PER STORY PER TABLE 506.2 FOR R-2, TYPE VB CONSTRUCTION :THE MAXIMUM AREA PER STORY IS 1,123 S.F.
THE MAXIMUM NUMBER OF STORIES ABOVE GRADE PLANE PER TABLE 504.4 IS 3.

ACTUAL STORIES ABOVE GRADE IS 3 STORIES

CONSTRUCTION TYPE
TYPE VB

EXTERIOR WALLS
FIRE RESISTANCE RATING REQUIRED FOR ELEMENTS IN TYPE VB CONSTRUCTION PER TABLE 601.
EXTERIOR BEARING WALLS 0 HOURS
FIRE RESISTANCE RATING FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE PER TABLE 602.
R OCCUPANCIES LESS THAN 10' 1 HOUR (ELEVATION 1,2 AND 4)

TABLE 602 FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE - RESIDENTIAL OCCUPANCIES WITHIN 10' OF A PROPERTY LINE REQUIRE A 1 HOUR FIRE RATING.

1 HOUR FIRE-RATING FROM EXTERIOR AND 2 HOUR FIRE-RATING FROM INTERIOR PROVIDED. SUBMIT PROPOSED EXTERIOR WALL ASSEMBLY DETAILS TO ARCHITECT FOR APPROVAL PRIOR TO ANY CONSTRUCTION.

SEPARATION WALLS
SEPARATION WALLS PER SECTION 420.2 OF THE IBC 2015: " WALLS SEPARATING DWELLING UNITS IN THE SAME BUILDING, WALLS SEPARATING SLEEPING UNITS IN THE SAME BUILDING AND WALLS SEPARATING DWELLING UNITS AND SLEEPING UNITS FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN THE SAME BUILDING SHALL BE CONSTRUCTED AS FIRE PARTITIONS IN ACCORDANCE WITH SECTION 708."

708.3.2 "DWELLING UNIT AND SLEEPING UNIT SEPARATIONS IN BUILDINGS OF TYPE IIB, IIIB, AND VB CONSTRUCTION SHALL HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN ½ HOUR IN BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1.

HORIZONTAL SEPARATION
HORIZONTAL SEPARATION PER SECTION 420.3 OF THE IBC 2015: " FLOOR ASSEMBLIES SEPARATING DWELLING UNITS IN THE SAME BUILDING, FLOOR ASSEMBLIES SEPARATING SLEEPING UNITS IN THE SAME BUILDING AND FLOOR ASSEMBLIES SEPARATING DWELLING UNITS AND SLEEPING UNITS FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN THE SAME BUILDING SHALL BE CONSTRUCTED AS FIRE PARTITIONS IN ACCORDANCE WITH SECTION 711"

SECTION 711 OF THE IBC 2015:
"HORIZONTAL ASSEMBLIES SEPARATING DWELLING UNITS AND SLEEPING UNITS SHALL BE NOT LESS THAN 1/2 - HOUR FIRE-RESISTANCE-RATED CONSTRUCTION IN A BUILDING OF TYPE IIB, IIIB AND VB CONSTRUCTION, WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1."
1 HOUR SEPARATION PROVIDED.

OCCUPANT LOAD PER TABLE 1004.1.2 :

BASEMENT FLOOR :		
MECHANICAL / STORAGE	1,123 GROSS SQ. FT.	DIVIDE BY 300 = 4
FIRST FLOOR:		
RESIDENTIAL USE	1,123 GROSS SQ. FT.	DIVIDE BY 200 = 6
SECOND FLOOR:		
RESIDENTIAL USE	1,123 GROSS SQ. FT.	DIVIDE BY 200 = 6
THIRD FLOOR:		
RESIDENTIAL USE	1,123 GROSS SQ. FT.	DIVIDE BY 200 = 6
TOTAL BUILDING OCCUPANT LOAD		= 22

EGRESS
PER SECTION 1006.2.1.1 OF IBC 2015: "IN GROUP R-2 OCCUPANCIES, ONE MEANS OF EGRESS IS PERMITTED WITHIN AND FROM INDIVIDUAL DWELLING UNITS WITH A MAXIMUM OCCUPANT LOAD OF 20 (LESS THEN 4,000 S.F.) WHERE THE UNIT IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM." ALL UNITS ARE LESS THAN 4,000 S.F.

MINIMUM WIDTH FOR EGRESS STAIRS PER 1011.2: 36 INCHES WITH

MAXIMUM LENGTH OF EXIT TRAVEL PER TABLE 1006.3.2(1): 125 FEET

HANDICAP LIFT NOTES:
1. PROVIDE ADA COMPLIANT HANDICAP LIFT FOR ACCESS INTO THE FIRST FLOOR UNIT.
2. CONTRACTOR SHALL VERIFY ALL GRADES AND CONFIRM THAT SLOPED PATH TO THE HANDICAP LIFT DOES NOT EXCEED 1:20 SLOPE PRIOR TO SETTING THE EXACT ELEVATION OF THE EXTERIOR ENTRANCE TO THE HANDICAP LIFT..
3. OWNER AND CONTRACTOR SHALL SELECT LIFT AND PROVIDE DETAILED PROJECT SPECIFIC SHOP DRAWINGS PRIOR TO THE START OF CONSTRUCTION SHOWING THE FOLLOWING:
   - SPACE REQUIREMENTS
   - POWER REQUIREMENTS
   - DOOR CONFIGURATION
   - FLOOR RECESS IF REQUIRED
   - ANY OTHER PERTINENT COORDINATION ITEMS

SPRINKLER
BUILDING IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM

FIRE EXTINGUISHERS
FIRE EXTINGUISHERS ARE REQUIRED IN NEW R-2 OCCUPANCIES PER 906.1 OF IBC 2015.

TYPE 2 - A FIRE EXTINGUISHERS ARE REQUIRED AND THE MAXIMUM TRAVEL DISTANCE TO AN EXTINGUISHER SHALL NOT EXCEED 75 FEET PER TABLE 906.3 (1) OF IBC 2015.

ACCESSIBILITY - 521 CMR ARCHITECTURAL ACCESS BOARD
IN MULTIPLE DWELLINGS, THAT ARE FOR RENT,HIRE, OR SALE BUT ARE NOT EQUIPPED WITH AN ELEVATOR, ONLY THE GROUND FLOOR MUST BE CONSTRUCTED AS GROUP 1 DWELLING UNITS.

INTERIOR FINISH REQUIREMENTS PER IBC

SECTION 803.11 INTERIOR FINISH REQUIREMENTS BASED ON GROUP
TABLE 803.11 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY
OCCUPANCY: R-2 RESIDENTIAL. SPRINKLERED
-INTERIOR EXIT STAIRWAYS, RAMPS AND EXIT PASSAGEWAYS: CLASS C.
-CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAY AND RAMPS: CLASS C
-ROOMS AND ENCLOSED SPACES: CLASS C.

803.1.1 CLASS C: FLAMESPREAD INDEX: 76-200; SMOKED DEVELOPED INDEX: 0-450.

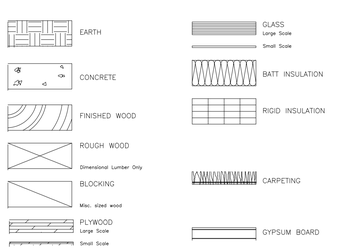
804.4.2 INTERIOR FLOOR FINISH REQUIREMENTS
INTERIOR FLOOR FINISHES IN CORRIDORS, EXIT ENCLOSURES AND EXIT PASSAGEWAYS SHALL BE NOT LESS THAN CLASS II MATERIALS PER NFPA 253.

LIST OF DRAWINGS

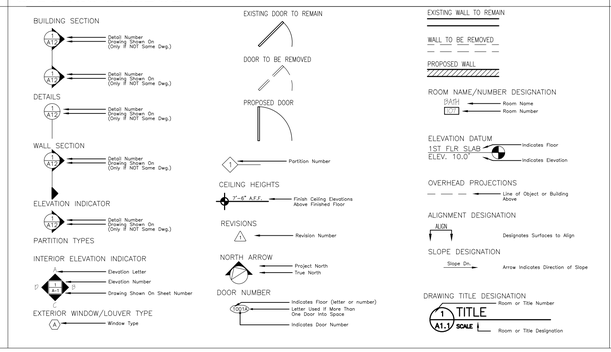
T1	TITLE SHEET AND BUILDING CODE ANALYSIS
T2	BUILDING CODE ANALYSIS
T3	BUILDING CODE ANALYSIS
L1	LANDSCAPE PLAN
A1	FLOOR PLANS
A2	FLOOR AND ROOF PLAN
A3	ELEVATIONS
A4	BUILDING SECTION AND WALL SECTION
A5	FLOOR AND WALL ASSEMBLIES
A6	ENLARGE STAIR PLANS AND DETAILS
A7	ENLARGE KITCHEN AND BATHROOM PLANS
A8	DOOR, WINDOW AND ROOM FINISH SCHEDULES

GENERAL NOTE: ANY UNIT OR BUILDING SQUARE FOOTAGE REFERENCED ON THE PLANS IS AN APPROXIMATE AND MUST BE FIELD VERIFIED POST CONSTRUCTION FOR AN ACCURACY

MATERIAL SYMBOLS



GRAPHIC SYMBOLS



GENERAL NOTES

1. THIS PROJECT IS DESIGNED UPON THE BASIS OF THE MASSACHUSETTS STATE BUILDING CODE, LATEST EDITION AND CURRENT REGULATIONS AS WELL AS LOCAL, STATE AND FEDERAL REGULATIONS REGARDING HEALTH AND SAFETY IN THE WORKPLACE.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND POSTING ALL NECESSARY VALID CONSTRUCTION/DEMOLITION PERMITS FROM ALL LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION PRIOR TO THE START OF ON-SITE CONSTRUCTION.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION ACTIVITIES, MATERIALS, MEANS AND METHODS. THE CONTRACTOR IS TO COORDINATE ALL SEPARATE SUBCONTRACTORS TO COMPLETE THE FULL SCOPE OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
4. THE CONTRACTOR SHALL KEEP ALL BUILDING MEANS OF EGRESS CLEAR OF ANY OBSTRUCTIONS AT ALL TIMES.
5. THE CONTRACTOR SHALL NOT OBSTRUCT TRAFFIC OUTSIDE OF THE AUTHORIZED CONSTRUCTION SITE OR ANY ADJACENT RIGHT OF WAY DURING CONSTRUCTION, UNLESS PRIOR APPROVAL IS OBTAINED FROM THE NECESSARY LOCAL GOVERNING AUTHORITIES.
6. ALL CONSTRUCTION MATERIALS AND EQUIPMENT ARE TO BE STORED NEATLY WITHIN THE SCOPE OF WORK AREA ONLY.
7. ACCESS TO THE WORK AREA IS TO BE RESTRICTED BY THE CONTRACTOR. ENTRANCES ARE NOT TO BE LEFT UNATTENDED AT ANY TIME. DOORS/GATES ARE NOT TO BE LEFT OPEN OR UNLOCKED. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE AREA AND EQUIPMENT WITHIN THE LIMIT OF WORK AND SITE OF THE BUILDING AS REQUIRED.
8. ALL DEBRIS IS TO BE PROPERLY REMOVED FROM THE WORK AREAS, LEAVING THE WORK AREAS BROOM CLEAN. ALL DEBRIS IS TO BE STORED ON SITE IN REFUSE DUMPSTERS, REMOVED PERIODICALLY, AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES AND LAWS.
9. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY TEMPORARY WEATHER PROTECTION FOR THE BUILDING DURING THE FULL SCOPE OF CONSTRUCTION ACTIVITY ON THE PROJECT.
10. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE REMOVAL OF SNOW, RAINWATER, ICE AND MUD FROM THE CONSTRUCTION SITE DURING THE FULL SCOPE OF CONSTRUCTION ACTIVITY ON THE PROJECT.
11. ALL INTERIOR/EXTERIOR FINISHES, COLORS, TILES, FIXTURES, ETC... ARE TO BE SELECTED AND/OR APPROVED BY OWNER PRIOR TO PURCHASE AND CONSTRUCTION.
12. PLUMBING/MECHANICAL/ELECTRICAL/HVAC INTERIOR WORK SHALL BE SEPARATELY PERMITTED.
13. THE BUILDING DESIGN BY RCA DOES NOT INCLUDE THE DESIGN OF ANY ROOF TOP POOL, HOT TUB OR OTHER WATER FEATURE. THE OWNER SHALL COORDINATE ANY ADDED ROOFTOP WATER FEATURE WITH THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

REGISTERED ARCHITECT
RICHARD P. BUTT
No. 7320
COMMONWEALTH OF VIRGINIA

RCA, LLC
1156 Dorchester Avenue www.rcallc-christopher.com
Dorchester, Massachusetts 02125
Telephone: 617-262-0030
Fax: 617-282-1060

Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: NONE
DRAWN BY: CD
CHECKED BY: R.P.B.

TITLE SHEET AND BUILDING CODE ANALYSIS

T1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

ENERGY REQUIREMENTS

ENERGY REQUIREMENTS

THE BUILDING IS REQUIRED TO MEET CHAPTER 4 COMMERCIAL ENERGY EFFICIENCY.

IECC 2015 - CHAPTER 4 COMMERCIAL ENERGY EFFICIENCY
CLIMATE ZONE: 5A PER TABLE 301.1

TABLE 402.4 BUILDING ENVELOPE REQUIREMENTS: FENESTRATION
FENESTRATION U FACTOR:
U=0.38 MAXIMUM FIXED WINDOWS
U=0.45 OPERABLE WINDOWS
U=.77 ENTRANCE DOORS
U=.50 SKYLIGHTS
FENESTRATION SHGC: 040

TABLE 402.1.3 - BUILDING ENVELOPE REQUIREMENTS - OPAQUE ASSEMBLIES

NEW ROOF/CEILING R-VALUE: R=20 CONTINUOUS WITH R=29 MIN IN CAVITY R=49 MINIMUM TOTAL

NEW WALLS:
BASIS OF DESIGN:
R=20 MINIMUM INSULATION IN CAVITY WITH
R=3.8 MINIMUM CONTINUOUS RIGID INSULATION (USE R=5)

ALTERNATIVE:

R=13 MINIMUM BATT INSULATION IN CAVITY WITH
R=7.5 CONTINUOUS RIGID INSULATION

BASEMENT WALLS:
R=7.5 CONTINUOUS RIGID INSULATION

NEW FLOOR R-VALUE OVER EXTERIOR SOFFIT: R=30 MINIMUM

ACOUSTICAL REQUIREMENTS

SOUND ISOLATION

NOISE CONTROL OF TYPICAL FLOOR-CEILING ASSEMBLIES

- IN CEILING ASSEMBLIES WITH MULTIPLE LAYERS OF GYPSUM BOARD, THE RESILIENT CHANNELS SHOULD ALWAYS BE INSTALLED BETWEEN THE BOTTOM CHORD OF THE TRUSS AND THE GYPSUM BOARD.
- RESILIENT CHANNELS USED IN WALL ASSEMBLIES SHOULD BE INSTALLED WITH THE PERFORATION ON THE TOP.
- UTILIZE SURFACE MOUNTED LIGHT FIXTURES TO THE EXTENT POSSIBLE TO MINIMIZE FLANKING TRANSMISSION.
- FLOOR DEFLECTION SHALL BE LIMITED TO L/540 TO ACHIEVE BETTER AND MORE EFFECTIVE IMPACT NOISE CONTROL.
- IN ACOUSTICAL UNDERLAYMENT AND GYPSUM FLOOR TOPPING FLOOR SYSTEMS, VERIFY THAT ALL SEAMS IN THE ACOUSTICAL UNDERLAYMENT ARE THOROUGHLY TAPED SO THERE IS NO POSSIBILITY OF GYPSUM CONCRETE TOPPING DRIPPING THROUGH TO THE SUB-FLOOR. USE TAPE RECOMMENDED BY GYPSUM CONCRETE FLOOR TOPPING MANUFACTURER.
- LEAVE $\frac{1}{8}$" GAP AND USE ACOUSTICAL CAULK TO PREVENT DIRECT CONNECTIONS WHERE FINISHED FLOORING SUCH AS WOOD, LAMINATED WOOD, VINYL, CERAMIC TILE, ETC. MEET CABINETS, WALL PARTITIONS AND BUILT-IN FURNITURE. USE PERIMETER WALL STRIPS TO ISOLATE FINISHED FLOOR FLOORING FROM THE WALL PARTITIONS AT ALL LOCATIONS.
- DO NOT ATTACH OR FRAME THE CEILING GYPSUM BOARD TO THE PERIMETER WALL PARTITION. PREVENT THE CEILING GYPSUM BOARD FROM COMING IN DIRECT CONNECTION WITH THE WALL GYPSUM BOARD OR FRAMING. FILL THE GAP BETWEEN THE CEILING GYPSUM BOARD AND THE WALL PARTITION WITH SPONGE ELASTOMER AND SEAL IT WITH NON-HARDENING ACOUSTICAL CAULK.
- NAILERS USED IN THE WOOD FRAME FLOOR-CEILING ASSEMBLY SHALL NOT TOUCH THE UNDERSIDE OF THE SUB-FLOOR OR THE RESILIENT CHANNELS.
- EXTEND THE DEMISING WALL TO THE OUTER LAYER OF THE EXTERIOR WALL. AVOID ANY GAPS BY PLACING THE STUDS CLOSE TO THE DEMISING WALL.

ALL LAYERS OF THE DEMISING AND CORRIDOR WALL PARTITIONS SHALL BE COMPLETELY SEALED WITH ACOUSTICAL SEALANT AND TAPED ALONG THE PERIMETERS TO REDUCE SOUND LEAKS.

- DO NOT CONNECT TOILETS TO THE UNIT-SEPARATION WALLS. PROVIDE FLOOR-MOUNTED TOILETS AT THE UNIT-SEPARATION WALL PARTITIONS.
- ELECTRICAL BOXES FOR POWER, TV, PHONE, ETC. IN DEMISING WALLS SHOULD BE SEPARATED BY MINIMUM 24" OR ONE STUD SPACE.
- SEAL ALL THE ELECTRICAL BOXES INSTALLED IN UNIT SEPARATION AND UNIT-CORRIDOR PARTITIONS WITH OUTLET PUTTY PADS.
- ALL ENTRY DOORS TO ALL THE DWELLING UNITS SHALL BE PROVIDED WITH ACOUSTICAL GASKETS ALONG THE JAMB.
- CONDENSING UNITS SHALL BE LOCATED OVER THE CORRIDORS TO THE MAXIMUM EXTENT POSSIBLE.

HVAC SYSTEM SOUND NOISE CONTROL

- INSTALL SUPPLY AIR DUCTS IN THE CENTER OF THE TRUSSES AND SUPPORT THEM WITH STRAPS TO AVOID CONTACT WITH THE CEILING OR WALL FRAMING.
- PROVIDE A $\frac{1}{2}$" CLEARANCE AROUND THE HVAC AND TOILET EXHAUST DUCTS WITHIN DWELLING UNITS.
- SEAL AND TAPE ALL DUCTS AND PIPE PENETRATIONS THRU WALL PARTITIONS WITH ACOUSTICAL CAULK. AVOID UNNECESSARY PENETRATIONS IN THE DEMISING PARTITIONS.
- BATHROOM EXHAUST FANS SHALL MEET LOW NOISE LEVEL (≤3.0 SONES) REQUIREMENTS.

PLUMBING SYSTEM NOISE CONTROL

- ALL DRAIN PIPING SHALL BE WRAPPED WITH FIBERGLASS INSULATION.
- PIPING SHALL NOT COME IN DIRECT CONTACT WITH ANY PARTITION, WALL, CEILING OR STRUCTURAL ELEMENT SUCH AS FLOOR TRUSSES.
- ALL SUPPLY PIPING SHALL BE ISOLATED FROM THE BUILDING STRUCTURE WITH RESILIENT MATERIAL SUCH AS NEOPRENE FOAM PADS OR FIBERGLASS SLEEVES.
- SUPPLY WATER PIPE RISERS SHALL BE ISOLATED WITH $\frac{3}{4}$" NEOPRENE PAD UNDER THE PIPE CLAMPS. THE NEOPRENE PADS SHALL BE SIZED TO 50lbs/in^2 AND HAVE A $\frac{1}{4}$" THICK METAL BEARING PLATE BETWEEN PAD AND PIPE CLAMP. PROVIDE A GROMMET AT ALL STUDS, PLATES, BLOCKS AND FRAMING MEMBERS.
- SUPPLY WATER PIPING SHALL BE ISOLATED HORIZONTALLY AND VERTICALLY BY GROMMETS AT ALL STUDS, PLATES AND FRAMING MEMBERS.
- WATER HAMMER ARRESTORS SHALL BE PROVIDED AT THE WASHING MACHINE CONNECTION.
- COMPLETELY SEAL ALL PIPE PENETRATIONS OF WALLS AND FLOOR-CEILING ASSEMBLIES SEPARATING DWELLING UNITS AND BETWEEN DWELLING UNITS AND COMMON AREAS, INCLUDING THE TOILET PIPE PENETRATION OF THE FLOOR. PROVIDE A SLEEVE AROUND THE PIPES PENETRATING THE FLOOR OR WALL AND COMPLETELY FILL THE GAP WITH ROCK WOOL AND FIRE SEALANT.
- CONDUIT PIPE RISERS RUNNING THROUGH DWELLING UNITS SHALL BE ISOLATED FROM THE FLOOR. ALL PIPES, CABLES AND WIRES PENETRATING THE DEMISING WALL SHALL BE CAULKED.

ELEVATOR NOISE CONTROL

- ELEVATOR MOTOR AND DRIVE ASSEMBLIES SHALL BE SUPPORTED ON 1" THICK NEOPRENE PADS TO REDUCE NOISE AND VIBRATION.
- THE EXHAUST FAN MOUNTED TO THE CAR CANOPY SHALL BE ISOLATED BY RUBBER GROMMETS AND SHALL INCLUDE A BAFFLE TO DIFFUSE AUDIBLE NOISE.
- THE SPEED OF THE CAR DOORS SHALL BE REGULATED TO PREVENT BANGING.

RAILINGS AND GUARDRAILS

RAILING AND GUARDRAIL REQUIREMENTS

A. PROVIDE RAILINGS CAPABLE OF WITHSTANDING THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED:

1. HANDRAILS:
a. UNIFORM LOAD OF 50 LBF/FT APPLIED IN ANY DIRECTION.
b. CONCENTRATED LOAD OF 200 LBF APPLIED IN ANY DIRECTION.
c. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

2. TOP OF GUARDS:
a. UNIFORM LOAD OF 50 LBF/FT APPLIED IN ANY DIRECTION.
b. CONCENTRATED LOAD OF 200 LBF APPLIED IN ANY DIRECTION.
c. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

3. INFILL OF GUARDS:
a. CONCENTRATED LOAD OF 50 LBF APPLIED HORIZONTALLY ON AN AREA OF 1 SF.
b. UNIFORM LOAD OF 25 LBF/SQ. FT. APPLIED HORIZONTALLY.
c. INFILL LOAD AND OTHER LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

B. RAILING PROFILES: RAILING PROFILES SHALL MEET THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT GUIDELINES FOR BUILDINGS. PREPARE SHOP DRAWINGS INDICATING THE RAILING ELEVATIONS, PROFILES, MOUNTING, AND ATTACHMENT TO STRUCTURE. ALL CONNECTIONS SHALL BE FORMED OR MITERED WITH ALL EDGES SMOOTH.

C. CONTROL OF CORROSION: PREVENT GALVANIC ACTION AND OTHER FORMS OF CORROSION BY INSULATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS.

D. FINAL SITE INSPECTION: COORDINATE FINAL INSPECTION OF HANDRAIL INSTALLATION AND MOUNTING WITH PROJECT STRUCTURAL ENGINEER PRIOR TO STRUCTURAL CONNECTIONS BEING COVERED BY FINISH WORK.

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

REGISTERED ARCHITECT
RONALD PAUL BATT
No. 7320
STATE OF VIRGINIA

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PROJECT # 19-116

DATE: 4-29-22
REV:

SCALE: NONE

DRAWN BY: CD

CHECKED BY: R.P.B.

BUILDING CODE ANALYSIS

T2

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

WINDOWS AND DOORS SAFETY

SAFETY GLAZING

2406.4 PROVIDE SAFETY GLAZING IN LOCATIONS LISTED IN "HAZARDOUS LOCATIONS". THE LOCATIONS SPECIFIED IN SECTIONS 2406.4.1 THROUGH 2406.4.7 SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS REQUIRING SAFETY GLAZING MATERIALS.

2406.4.1 GLAZING IN DOORS. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
1. GLAZING OPENINGS OF A SIZE THROUGH WHICH A 3-INCH DIAMETER SPHERE IS UNABLE TO PASS.
2. DECORATIVE GLAZING.
3. GLAZING MATERIALS USED AS CURVED GLAZING PANELS IN REVOLVING DOORS.
4.COMMERCIAL REFRIGERATED CABINET GLAZED DOORS.

2406.4.2 GLAZING ADJACENT TO DOORS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
1. DECORATIVE GLAZING.
2. WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND GLAZING.
3. WHERE ACCESS THROUGH THE DOOR IS TO A CLOSET OR STORAGE AREA 3 FEET OR LESS IN DEPTH. GLAZING IN THIS APPLICATION SHALL COMPLY WITH SECTION 2406.4.3.
4. GLAZING IN WALLS ON THE LATCH SIDE OF AND PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION IN ONE AND TWO-FAMILY DWELLINGS OR WITHIN DWELLING UNITS IN GROUP R-2.

2406.4.3 GLAZING IN WINDOWS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED A HAZARDOUS LOCATION:
1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQUARE FEET.
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR.
3. THE TOP EDGE OF THE GLAZING IS GREATER THAN 36 INCHES ABOVE THE FLOOR.
4. ONE OR MORE WALKING SURFACE(S) ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.

EXCEPTIONS:
1. DECORATIVE GLAZING
2. WHERE A HORIZONTAL RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES ABOVE THE WALKING SURFACE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1 1/2 INCHES IN CROSS-SECTIONAL HEIGHT.
3. OUTBOARD PANES IN INSULATING GLASS UNITS OR MULTIPLE GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLASS IS 25 FEET OR MORE ABOVE ANY GRADE, ROOF, WALKING SURFACE OR OTHER HORIZONTAL OR SLOPED (WITHIN 45 DEGREES OF HORIZONTAL RADIUS) SURFACE ADJACENT TO THE GLASS EXTERIOR.

2406.4.4 GLAZING IN GUARDS AND RAILINGS. GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF THE AREA OR HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

2406.4.5 GLAZING AND WET SURFACES. GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBES, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE APPLY TO SINGLE GLAZING AND ALL PANES IN MULTIPLE GLAZING.

EXCEPTIONS:
GLAZING THAT IS MORE THAN 60 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, FROM THE WATERS EDGE OF THE BATHTUB, HOT TUB, SPA, WHIRLPOOL OR SWIMMING POOL.

2406.4.6 GLAZING ADJACENT TO STAIRWAYS AND RAMPS. GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
1. THE SIDE OF A STAIRWAY, LANDING OR RAMP THAT HAS A GUARD COMPLYING WITH THE PROVISIONS OF SECTIONS 1015 AND 1607.8, AND THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE RAILING.
2.GLAZING 36 INCHES OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACE.

2406.4.7 GLAZING ADJACENT TO THE BOTTOM STAIRWAY LANDING. GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 60 INCHES ABOVE THE LANDING AND WITHIN A 60-INCH HORIZONTAL ARC THAT IS LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
GLAZING THAT IS PROTECTED BY A GUARD COMPLYING WITH SECTIONS 1015 AND 1607.8 WHERE THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE GUARD.

2406.5 FIRE DEPARTMENT ACCESS PANELS. FIRE DEPARTMENT GLASS ACCESS PANELS SHALL BE OF TEMPERED GLASS. FOR INSULATING GLASS UNITS, ALL PANES SHALL BE TEMPERED GLASS.

SASH LIMITERS

ALL WINDOWS ABOVE THE FIRST FLOOR LEVEL SHALL BE EQUIPPED WITH SASH LIMITING DEVICES WHICH LIMIT THE WINDOWS SASH OPERATION SO THAT A 4" SPHERE CANNOT PASS THOUGHT ANY PART OF THE WINDOW OPENING.

EMERGENCY ESCAPE AND RESCUE

1030.1 GENERAL. IN ADDITION TO THE MEANS OF EGRESS REQUIRED BY THIS CHAPTER, PROVISIONS SHALL BE MADE FOR EMERGENCY ESCAPE AND RESCUE OPENINGS IN GROUP R-2 OCCUPANCIES IN ACCORDANCE WITH TABLES 1006.3.2(2) AND GROUP R-3 OCCUPANCIES. BASEMENTS AND SLEEPING ROOMS BELOW THE FOURTH STORY ABOVE GRADE PLANE SHALL HAVE AT LEAST ONE EXTERIOR EMERGENCY ESCAPE AND RESCUE OPENING IN ACCORDANCE WITH THIS SECTION. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE REQUIRED IN EACH SLEEPING ROOM, BUT SHALL NOT BE REQUIRED IN ADJOINING AREAS OF THE BASEMENT. SUCH OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

EXCEPTIONS:
1.BASEMENTS WITH A CEILING HEIGHT LESS THAN 80 INCHES SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.
2. EMERGENCY ESCAPE AND RESCUE OPENINGS ARE NOT REQUIRED FROM BASEMENTS OR SLEEPING ROOMS THAT HAVE AN EXIT DOOR OR EXIT ACCESS DOOR THAT OPENS DIRECTLY INTO A PUBLIC WAY OR TO A YARD, COURT OR EXTERIOR EXIT BALCONY THAT OPENS TO A PUBLIC WAY.
3.BASEMENTS WITHOUT HABITABLE SPACES AND HAVING NOT MORE THAN 200 SQUARE FEET IN FLOOR AREA SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.

1030.2 MINIMUM SIZE. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET.
EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR GRADE-FLOOR EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE 5 SQUARE FEET.

1030.2.1 MINIMUM DIMENSIONS. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24 INCHES. THE MINIMUM NET CLEAR WIDTH DIMENSION SHALL BE 20 INCHES. THE NET CLEAR OPENING DIMENSIONS SHALL BE THE RESULT OF NORMAL OPERATION OF THE OPENING.

1030.3 MAXIMUM HEIGHT FROM FLOOR. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44 INCHES MEASURED FROM THE FLOOR.

1030.4 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS OR TOOLS. BARS, GRATES OR SIMILAR DEVICES ARE PERMITTED TO BE PLACED OVER THE EMERGENCY ESCAPE AND RESCUE OPENINGS PROVIDED THE MINIMUM NET CLEAR OPENING SIZE COMPLIES WITH SECTION 1030.2 AND SUCH DEVICES SHALL BE RELEASABLE OR REMOVABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, TOOL OR FORCE GREATER THAN WHICH IS REQUIRED FOR NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE SUCH BARS, GRILLES, GRATES OR SIMILAR DEVICES ARE INSTALLED IN ACCORDANCE WITH SECTION 907.2.11 REGARDLESS OF THE VALUATION OF THE ALTERATION.

1030.5 WINDOW WELLS. AN EMERGENCY ESCAPE AND RESCUE OPENING WITH A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND LEVEL SHALL BE PROVIDED WITH A WINDOW WELL IN ACCORDANCE WITH SECTIONS 1030.5.1 AND 10305.2.

1030.5.1 MINIMUM SIZE. THE MINIMUM HORIZONTAL AREA OF THE WINDOW WELL SHALL BE 9 SQUARE FEET, WITH A MINIMUM DIMENSION OF 36 INCHES. THE AREA OF THE WINDOW WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.

10305.2 LADDER OR STEPS. WINDOW WELLS WITH A VERTICAL DEPTH OF MORE THAN 44 INCHES SHALL BE EQUIPPED WITH AN APPROVED PERMANENTLY AFFIXED LADDER OR STEPS. LADDERS OR RUNGS SHALL HAVE AN INSIDE WIDTH OF AT LEAST 12 INCHES, SHALL PROJECT A LEAST 3 INCHES FROM THE WALL AND SHALL BE SPACED NOT MORE THAN 18 INCHES ON CENTER VERTICALLY FOR THE FULL HEIGHT OF THE WINDOW WELL. THE LADDER OR STEPS SHALL NOT ENCROACH INTO THE REQUIRED DIMENSIONS OF THE WINDOW WELL BY MORE THAN 6 INCHES. THE LADDER OR STEPS SHALL NOT BE OBSTRUCTED BY THE EMERGENCY ESCAPE AND RESCUE OPENING. LADDERS OR STEPS REQUIRED BY THIS SECTION ARE EXEMPT FROM STAIRWAY REQUIREMENTS OF SECTION 1011.

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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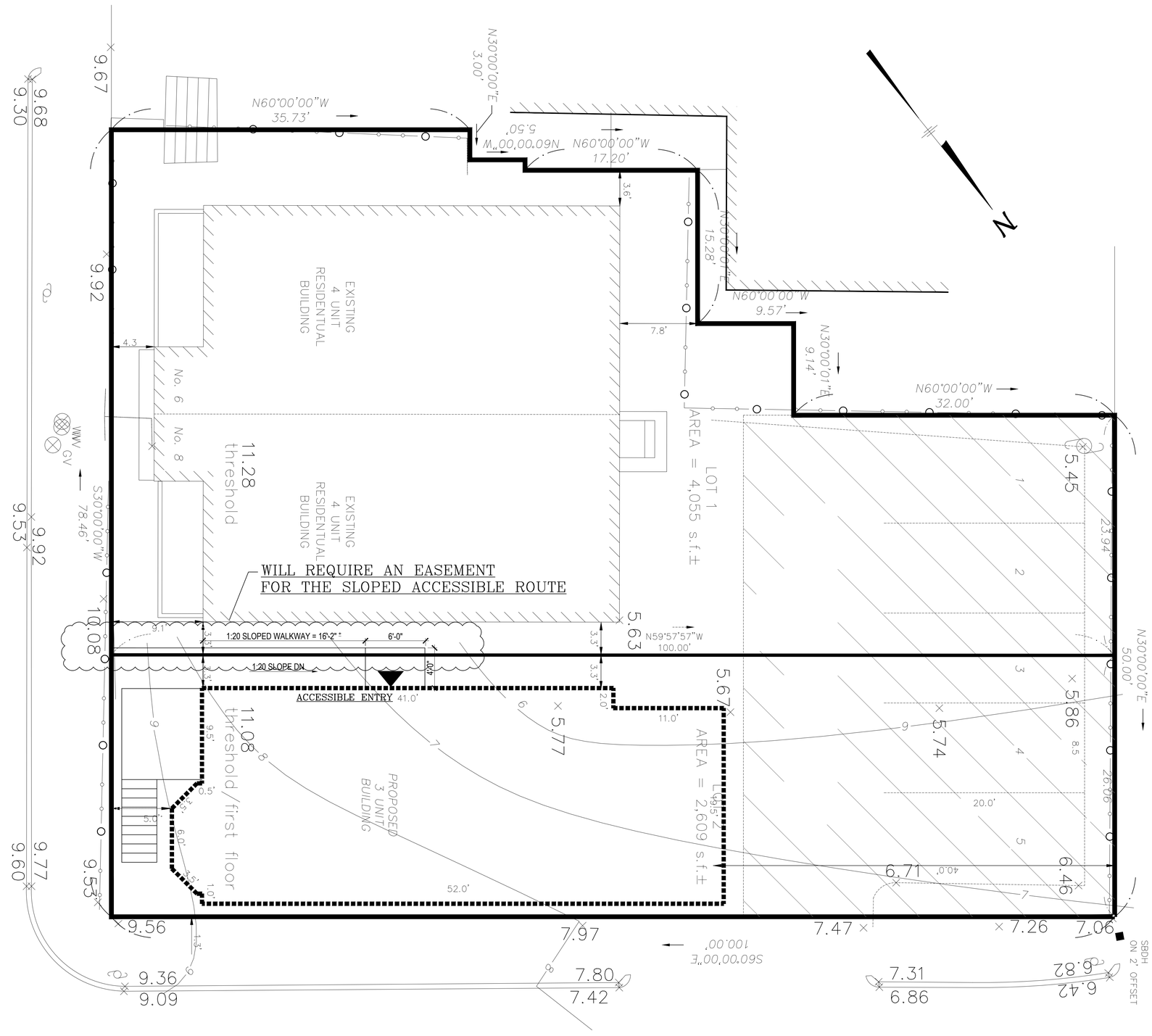
PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: NONE
DRAWN BY: CD
CHECKED BY: R.P.B.

BUILDING CODE ANALYSIS

T3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



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PROJECT # 19-116
DATE: 4-29-22 REV:
SCALE: 3/16" = 1'-0"
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LANDSCAPE PLAN

L1

GENERAL NOTE:

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REV.	DATE	DESCRIPTION
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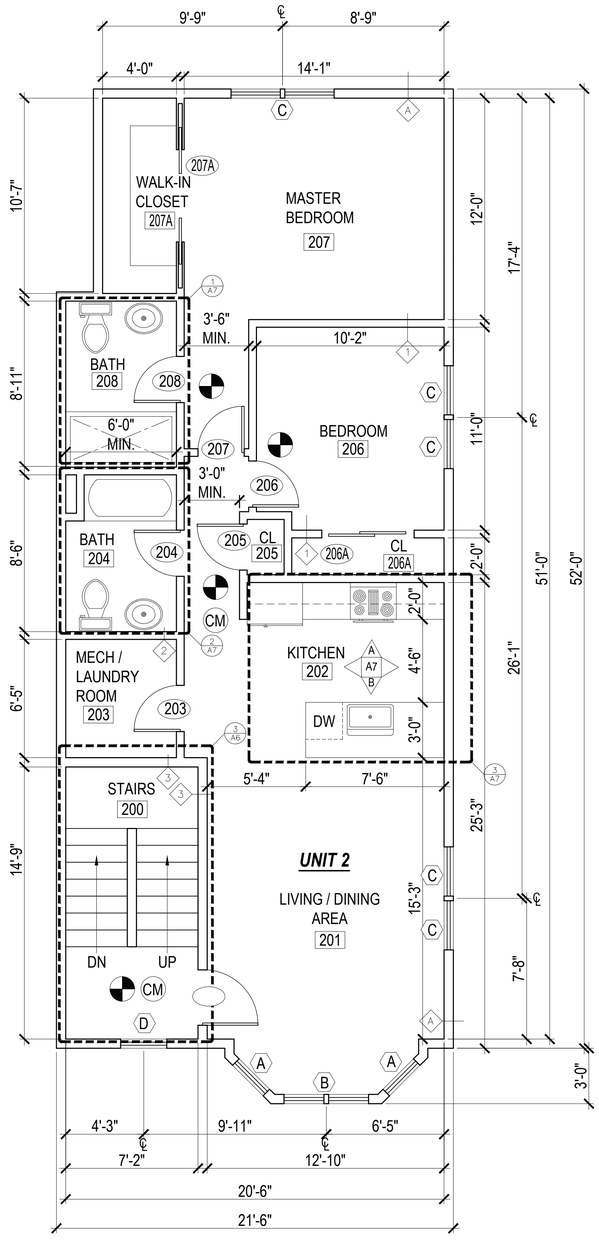
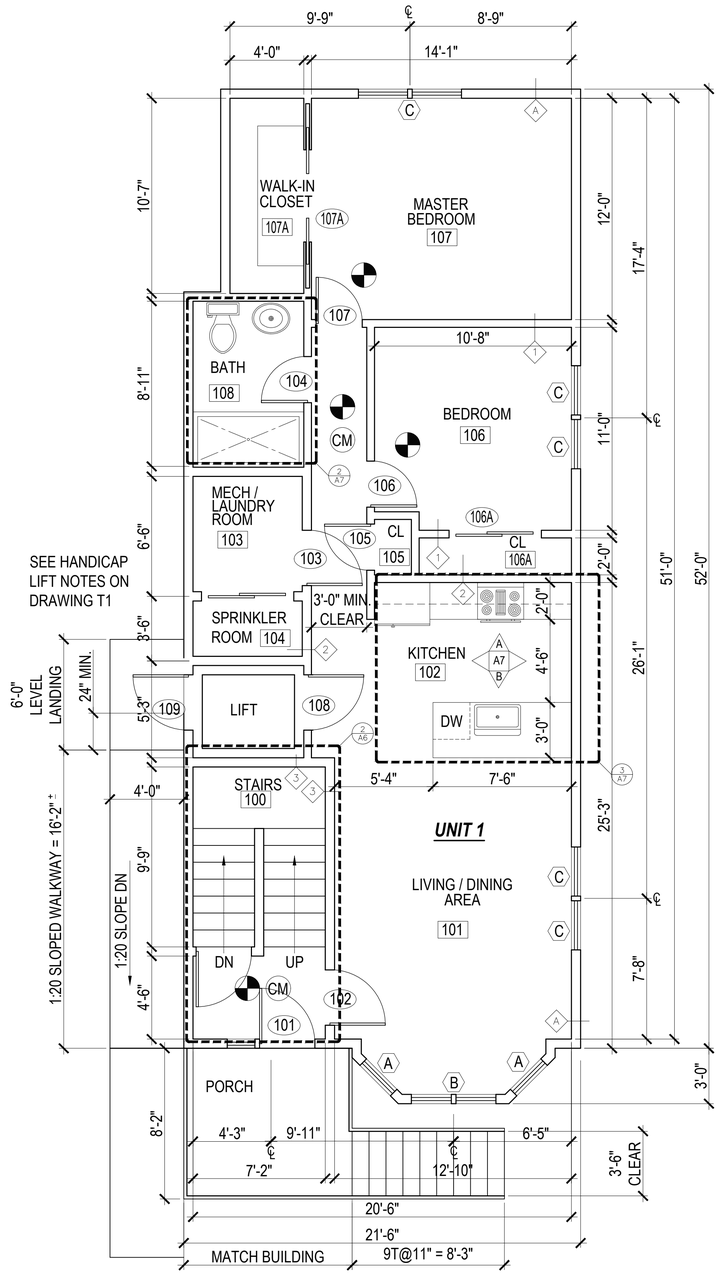
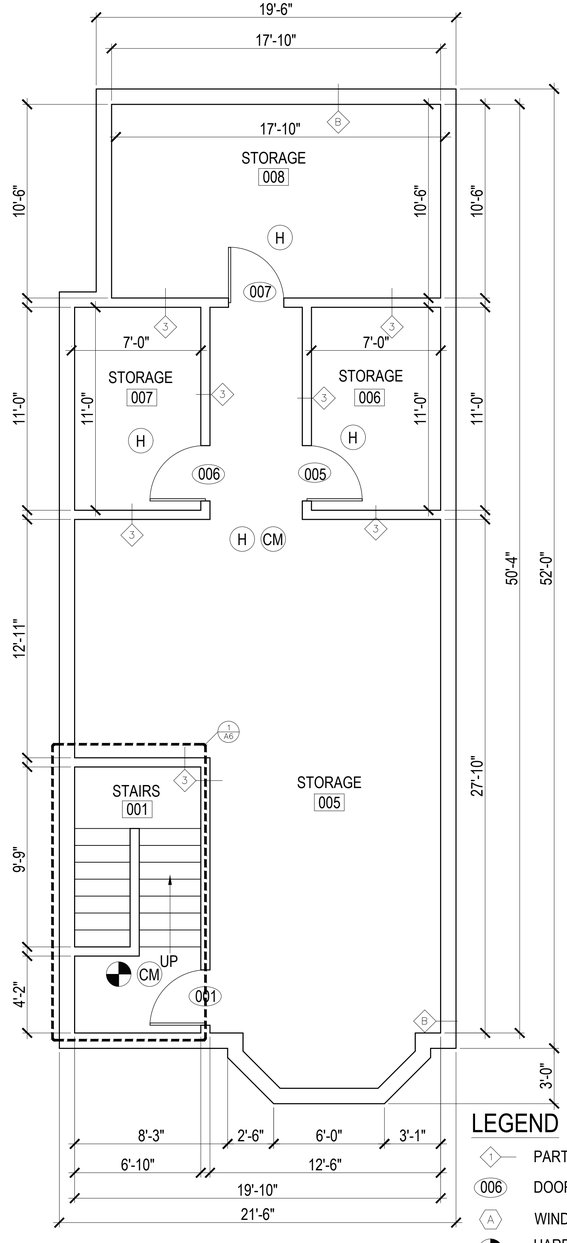


SECOND FLOOR PLAN



FIRST FLOOR PLAN



BASEMENT PLAN

NOTE: UNIT 1 TO BE CONSTRUCTED AS A GROUP 1 ACCESSIBLE UNIT. SEE DRAWING A7 FOR GROUP 1 UNIT ACCESSIBILITY REQUIREMENTS.

LEGEND

- 1 — PARTITION TYPE - SEE DRAWING A5
- 006 — DOOR NUMBER - SEE DRAWING A8
- A — WINDOW TYPE - SEE DRAWING A8
- HARDWIRED & INTERCONNECTED SMOKE DETECTOR
- H — HARDWIRED & INTERCONNECTED HEAT DETECTOR
- CM — HARDWIRED & INTERCONNECTED CARBON MONOXIDE DETECTOR

1' 0 1' 5' 10'

GENERAL NOTE:

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FLOOR PLANS

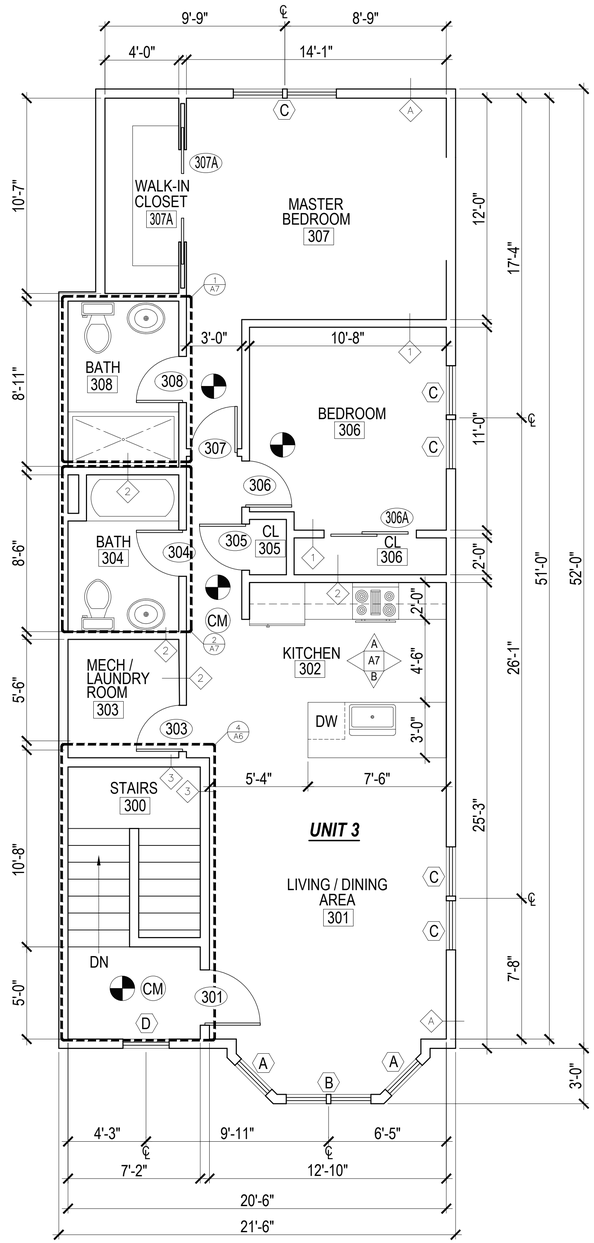
A1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

ROOF NOTES:

1. EPDM ROOF SYSTEM SEE TYPICAL ROOF ASSEMBLY DETAILS ON DRAWING A5
2. SEE MECHANICAL DRAWINGS FOR ROOF TOP HAUL EQUIPMENT. SEE DRAWING A5 FOR EQUIPMENT CURB FLASHING DETAIL.
3. SEE PLUMBING DRAWING FOR PLUMBING VENT LOCATIONS. SEE DRAWING A5 FOR PLUMBING VENTS FLASHING DETAIL.
4. COORDINATE ROOF DRAIN LOCATIONS WITH PLUMBING

ROOF PLAN



THIRD FLOOR PLAN

LEGEND

- 1 — PARTITION TYPE - SEE DRAWING A5
- 006 — DOOR NUMBER - SEE DRAWING A8
- A — WINDOW TYPE - SEE DRAWING A8
- HARDWIRED & INTERCONNECTED SMOKE DETECTOR
- H — HARDWIRED & INTERCONNECTED HEAT DETECTOR
- CM — HARDWIRED & INTERCONNECTED CARBON MONOXIDE DETECTOR

1' 0 1' 5' 10'

GENERAL NOTE:

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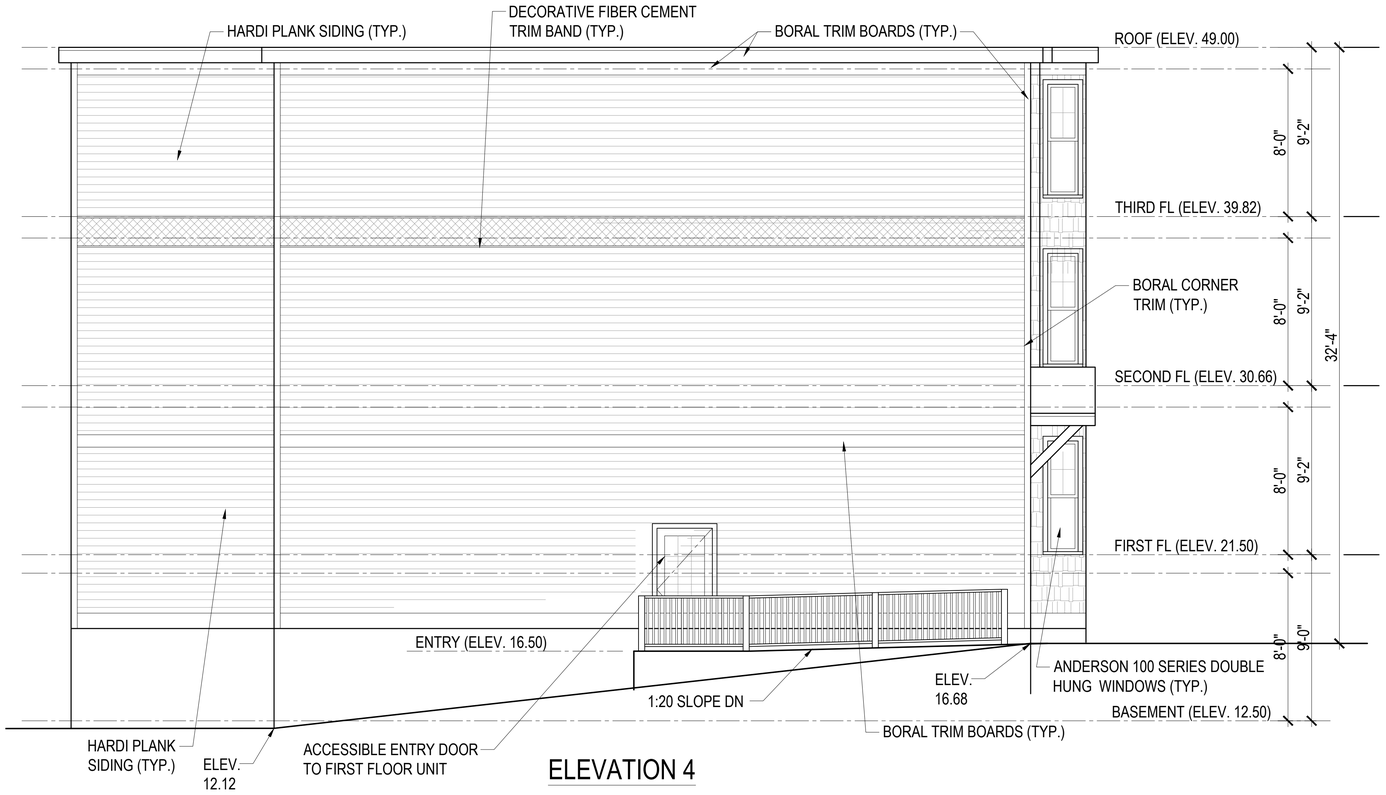
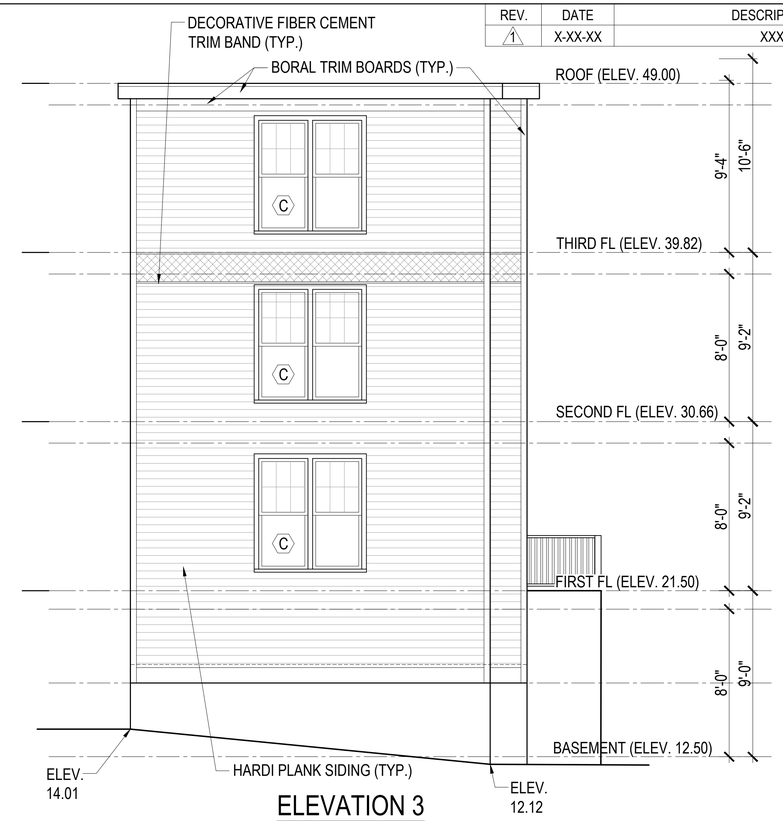
FLOOR AND ROOF PLAN

A2

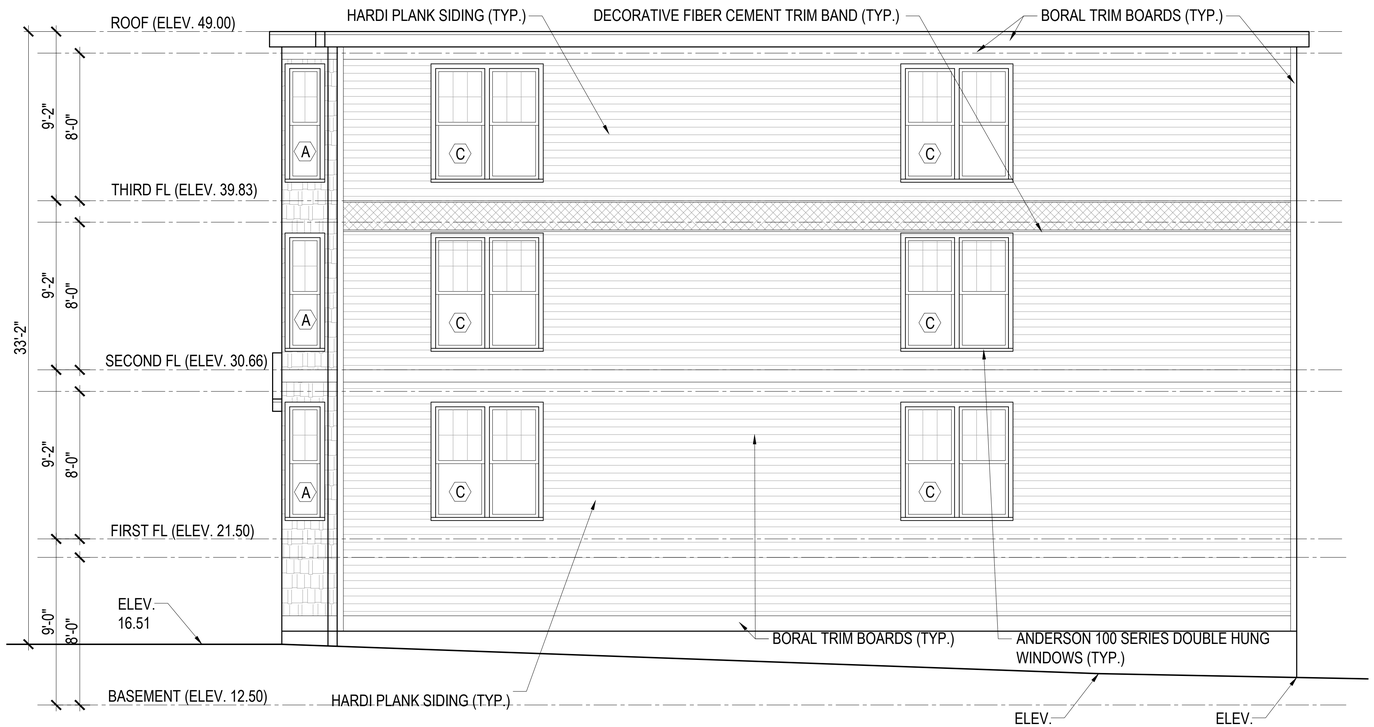
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



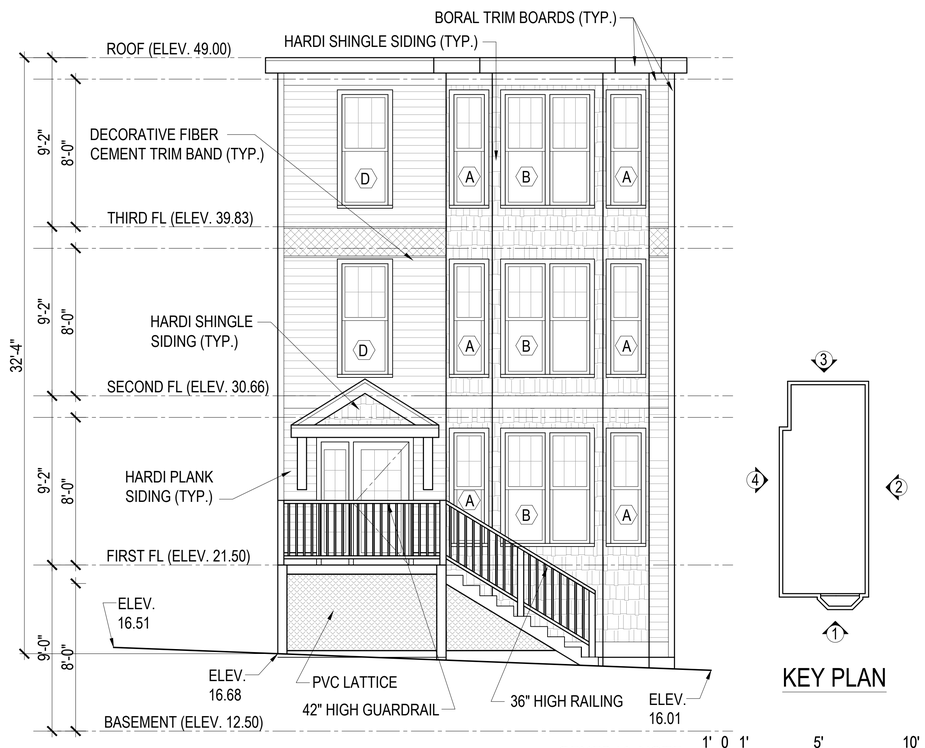
ELEVATION 4



ELEVATION 3



ELEVATION 2



ELEVATION 1

KEY PLAN

GENERAL NOTE:

1' 0 1' 5' 10'

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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ELEVATIONS

A3

REV.	DATE	DESCRIPTION
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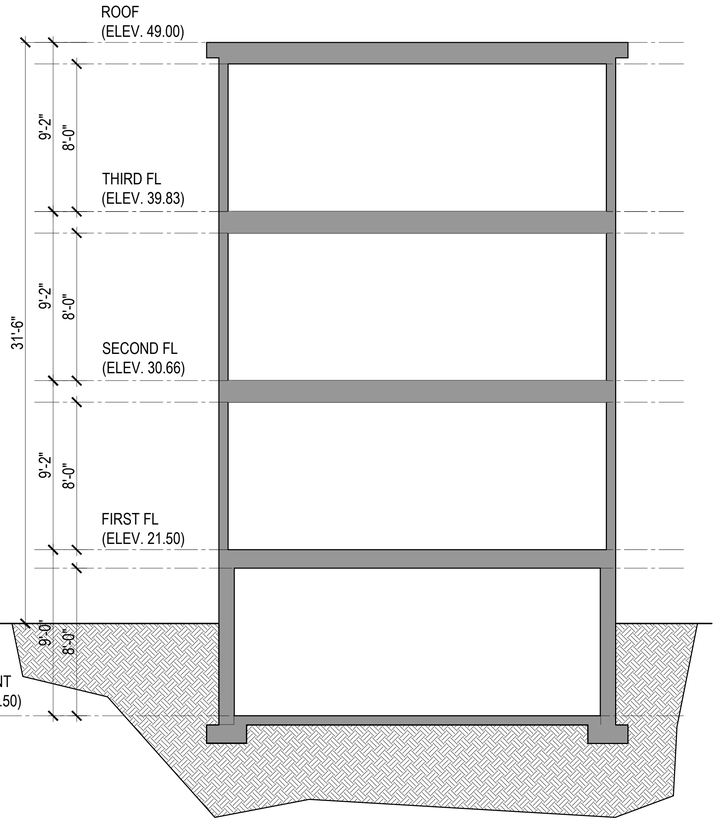
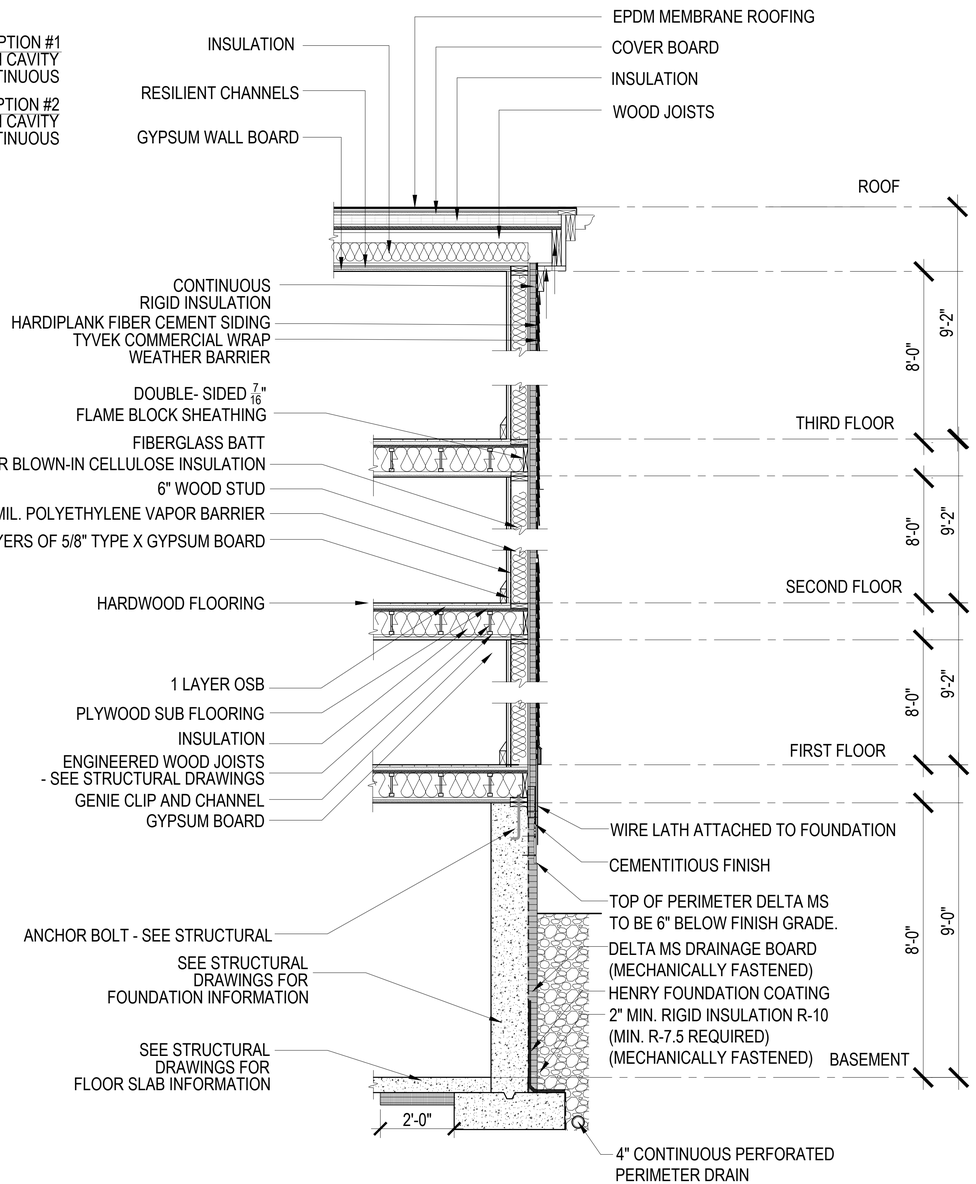


BUILDING SECTION

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

INSULATION OPTION #1
R=20 IN CAVITY
R=5 CONTINUOUS

INSULATION OPTION #2
R=13 IN CAVITY
R=7.5 CONTINUOUS



1 TYPICAL WALL SECTION

SCALE: 1/2" = 1'-0"

GENERAL NOTE:

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1' 0 1' 5' 10'

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DATE: 4-29-22 REV:
SCALE: AS NOTED
DRAWN BY: CD
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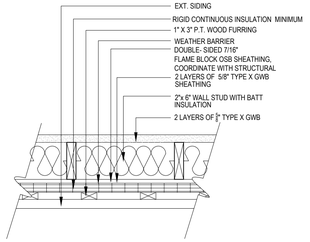
BUILDING SECTION AND WALL SECTION

A4

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

NOTE:
HEADERS, BLOCKING AND ALL FRAMING AND SHEATHING AT ALL EXTERIOR WALLS TO BE FIRE RETARDANT TREATED MATERIALS

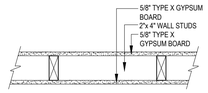


A EXTERIOR WALL
SCALE: 1" = 1'-0"

FIRE RATING
REQUIRED: 1 HOUR FROM EXTERIOR
PROVIDED: 2 HOUR FROM INTERIOR
DESIGN: UL W408

EXTERIOR WALL TYPES

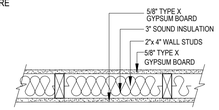
NOTE: SEAL TOP AND BOTTOM OF PARTITION AND ALL OTHER OPENINGS WITH FIRE RATED SEALANT



1 INTERIOR PARTITION
SCALE: 1" = 1'-0"

TYPICAL AT ALL INTERIOR PARTITIONS
USE MOISTURE RESISTIVE GYPSUM BOARD AT TOILET ROOMS
USE 1/2" CEMENT BOARD AT ALL TILE LOCATIONS

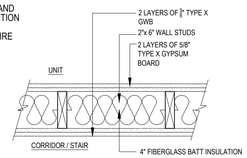
NOTE: SEAL TOP AND BOTTOM OF PARTITION AND ALL OTHER OPENINGS WITH FIRE RATED SEALANT



INTERIOR PARTITION
- INSULATED
BATHROOMS, MECHANICAL CLOSETS, LAUNDRY CLOSETS
2 SCALE: 1" = 1'-0"

TYPICAL AT ALL INTERIOR PARTITIONS
USE MOISTURE RESISTIVE GYPSUM BOARD AT TOILET ROOMS
USE 1/2" CEMENT BOARD AT ALL TILE LOCATIONS

NOTE: SEAL TOP AND BOTTOM OF PARTITION AND ALL OTHER OPENINGS WITH FIRE RATED SEALANT

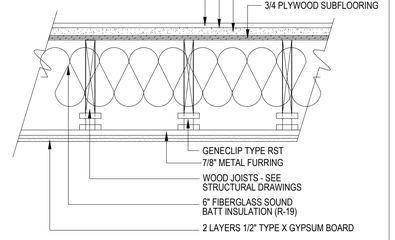


INTERIOR WALLS
AT CORRIDORS AND STAIRWAYS.
3 SCALE: 1" = 1'-0"

FIRE RATING
REQUIRED: 2 HOUR
PROVIDED: 2 HOUR
STC RATING:52
DESIGN: UL U301

INTERIOR WALL TYPES

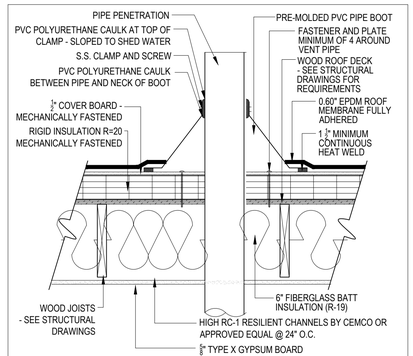
SOUND CONTROL CRITERIA
STC = 50 MINIMUM
IIC = 50 MINIMUM
NOTE: ASSEMBLY MEETS SOUND CRITERIA PER MANUFACTURER'S DATA



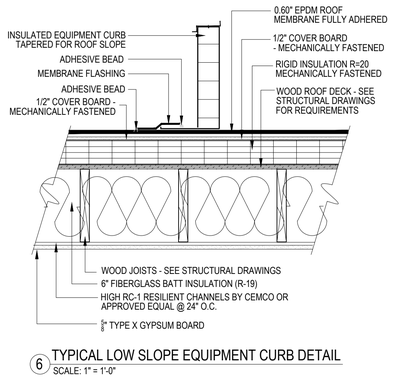
4 TYPICAL FLOOR/CEILING ASSEMBLIES
SCALE: 1" = 1'-0"

FIRE RATING: 1 HOUR
STC RATING: 62
IIC RATING: 59
DESIGN: UL L570

FLOOR ASSEMBLIES

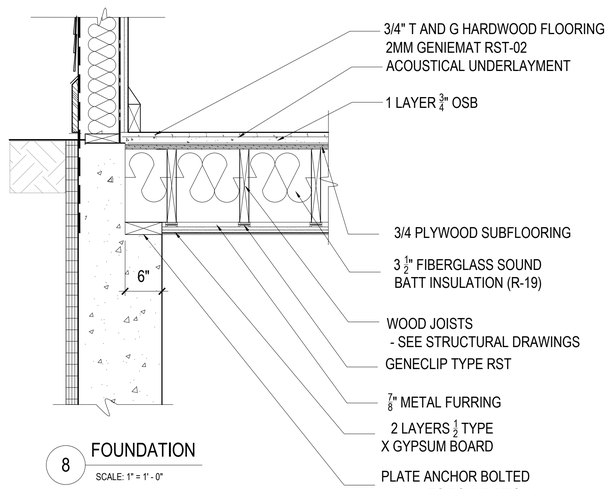


5 TYPICAL LOW SLOPE VENT DETAIL
SCALE: 1" = 1'-0"



6 TYPICAL LOW SLOPE EQUIPMENT CURB DETAIL
SCALE: 1" = 1'-0"

ROOF ASSEMBLIES & DETAILS



8 FOUNDATION
SCALE: 1" = 1' - 0"

GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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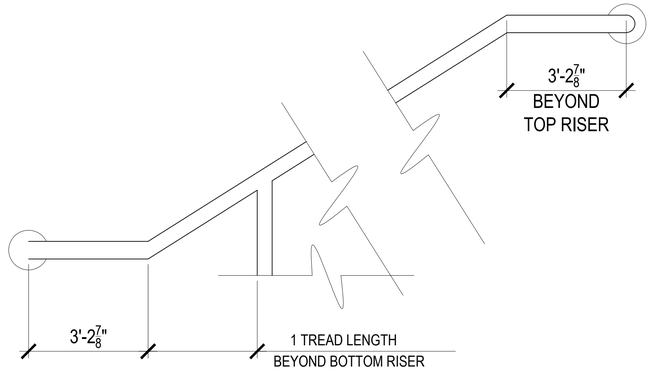
Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: 1"=1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

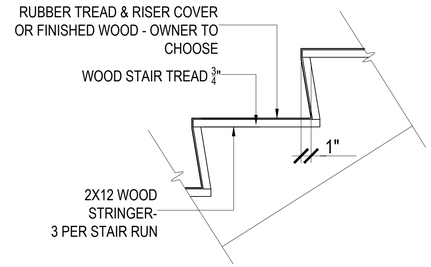
FLOOR AND WALL ASSEMBLIES

A5

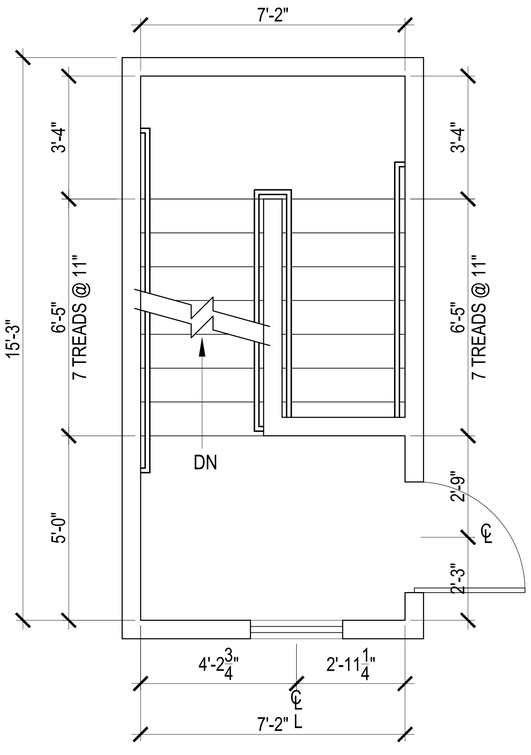
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



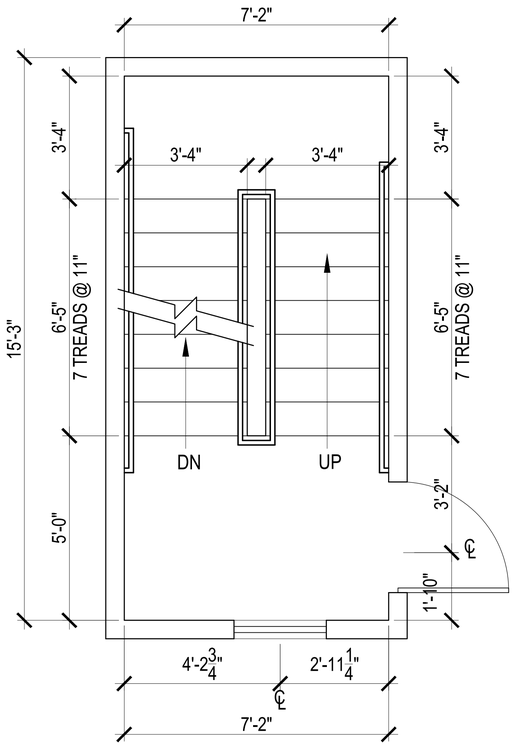
2 WALL HAND RAIL EXTENSION DETAIL (TYP.)



1 TREAD AND RISER DETAIL

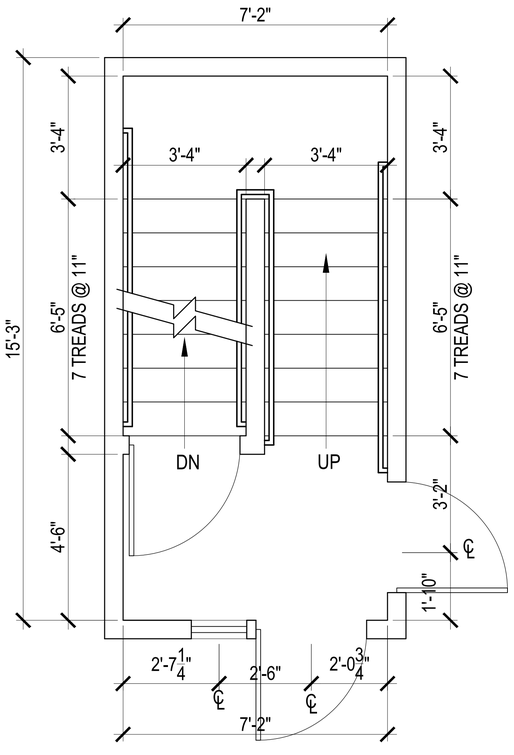


3RD FLOOR 4 A6



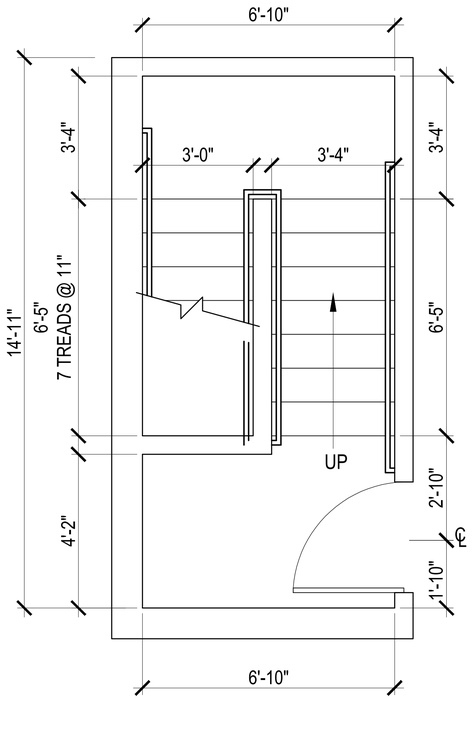
2ND FLOOR 3 A6

NOTE:
2ND FLOOR TO 3RD FLOOR
HEIGHT = 9'-2"
PROVIDE 16 EQUAL RISERS @ 7"



1ST FLOOR 2 A6

NOTE:
1ST FLOOR TO 2ND FLOOR
HEIGHT = 9'-2"
PROVIDE 16 EQUAL RISERS @ 7"



BASEMENT FLOOR 1 A6

NOTE:
BASEMENT FLOOR TO 1ST FLOOR
HEIGHT = 9'-0"
PROVIDE 16 EQUAL RISERS @ 6 3/4"

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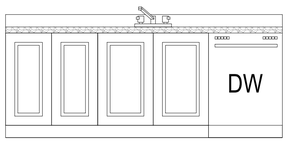
PROJECT # 19-116
DATE: 4-29-22 REV:
SCALE: 1/2" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

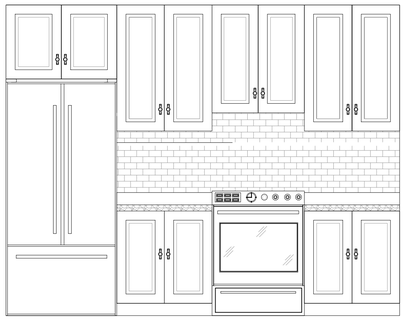
ENLARGED STAIR PLANS AND DETAILS

A6

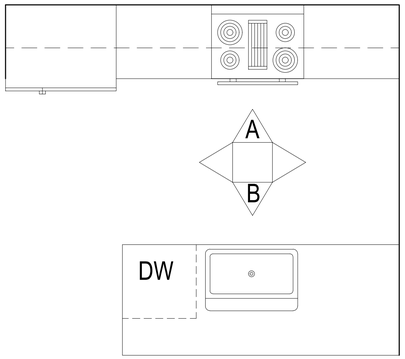
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



KTICHEN ELEVATION "B"

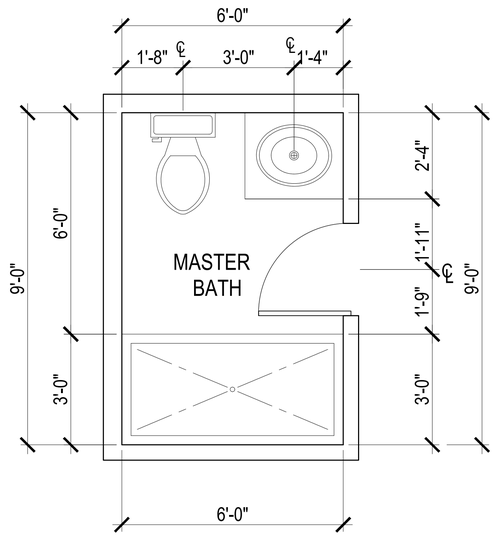


KTICHEN ELEVATION "A"

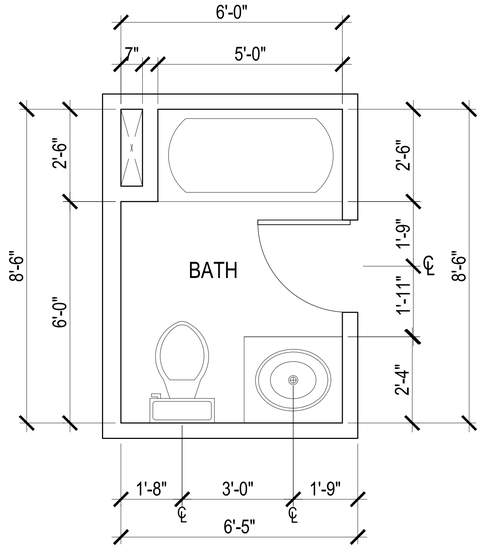


KEY PLAN 3/A7

NOTE:
KITCHEN DESIGN AND CABINET SIZES, ETC... TO BE DESIGNED BY OTHERS



ENLARGED FLOOR PLAN
MASTER BATHROOM 1/A7



ENLARGED FLOOR PLAN
BATHROOM 2/A7

KITCHEN NOTES:

1. PROVIDE CABINETRY SHOP DRAWINGS FOR EACH KITCHEN LAYOUT. CONFIRM FINISH DIMENSIONS OF APPLIANCES TO BE INSTALLED IN THE CABINETRY.
2. PROVIDE FINISHED END AND BACK PANELS AT ALL EXPOSED LOCATIONS FOR A COMPLETELY FINISHED INSTALLATION.
3. RETURN CROWN MOLDING TRIM AT SIDES AND ENDS OF CABINETRY.
4. PROVIDE ALL NECESSARY FILLER PANELS AND TRIM FOR A COMPLETELY FINISHED INSTALLATION.
5. COUNTERTOPS SHALL BE SELECTED BY OWNER.
6. CABINETRY STYLE AND COLOR TO BE SELECTED BY THE OWNER.

ACCESSIBILITY - 521 CMR ARCHITECTURAL ACCESS BOARD

GROUP 1 UNITS - FIRST FLOOR UNIT - GENERAL

1. SINK BASE CABINETS SHALL BE 30" WIDE MINIMUM.
2. COOKTOP BASE CABINETS (IF USED) SHALL BE 30" WIDE MINIMUM.
3. IF A WALL OVEN IS PROVIDED, THE FLOOR OF THE WALL OVEN SHALL BE LOCATED 30" ABOVE THE FLOOR.
4. WALLS SHALL BE CAPABLE OF STRUCTURALLY SUPPORTING WALL CABINETS AT ANY LOCATION FROM 42" TO 54" FROM THE FLOOR TO THE BOTTOM INSIDE OF THE CABINET.

BATHROOM NOTES:

1. PROVIDE MIRROR/MEDICINE CABINET, 30" HIGH x 24" WIDE, ABOVE EACH VANITY AND LAVATORY. MOUNT 40" ABOVE THE FLOOR.
2. PROVIDE TOILET TISSUE DISPENSER AT EACH WATERCLOSET.
3. PROVIDE FULL HEIGHT CERAMIC WALL TILE AT TUB ENCLOSURES (3 SIDES). PROVIDE BULL NOSE TILE AT EDGES. SUBMIT SAMPLES TO THE OWNER FOR FINAL WALL TILE SELECTION.
4. PROVIDE CERAMIC TILE SOAP HOLDERS AT TUBS.
5. BATHROOMS SHALL RECEIVE CERAMIC FLOOR TILE AND MATCHING CERAMIC BASE INSTALLED BY THIN SET METHOD. SUBMIT SAMPLES TO THE OWNER FOR FINAL FLOOR TILE AND BASE SELECTION.
6. PROVIDE CRACK SUPPRESSION MEMBRANE AT ALL FLOOR LOCATIONS TO RECEIVE CERAMIC TILE.
7. PROVIDE $\frac{1}{2}$" THICK MARBLE THRESHOLDS AT BATHROOM DOORS. COORDINATE MARBLE COLOR WITH TILE COLOR. SUBMIT MARBLE SAMPLES TO THE OWNER FOR FINAL SELECTION.
8. USE MOISTURE RESISTIVE GYPSUM WALL BOARD AT BATHROOM WALLS, EXCEPT USE DENSGUARD TILE BACKER BOARD AT TUB SURROUNDS AND SHOWERS

ACCESSIBILITY - 521 CMR ARCHITECTURAL ACCESS BOARD

GROUP 1 UNITS - FIRST FLOOR UNIT

1. PROVIDE BLOCKING IN WALL FOR FUTURE GRAB BAR INSTALLATION AT TOILET, TUB AND SHOWER.
2. PROVIDE BLOCKING IN WALL FOR FUTURE INSTALLATION OF ADA COMPLIANT LAVATORY.
3. SHOWER CURB SHALL NOT EXCEED 4" IN HEIGHT.

GROUP 1 UNITS - FIRST FLOOR UNIT - GENERAL

1. PROVIDE A PEEPHOLE IN THE UNIT ENTRY DOOR MOUNTED AT 60 INCHES ABOVE THE FLOOR.
2. WASHER OR DRYER SHALL BE FRONT LOADING TYPE.
3. ELECTRICAL OUTLETS SHALL BE LOCATED BETWEEN 15" AND 48" ABOVE THE FLOOR

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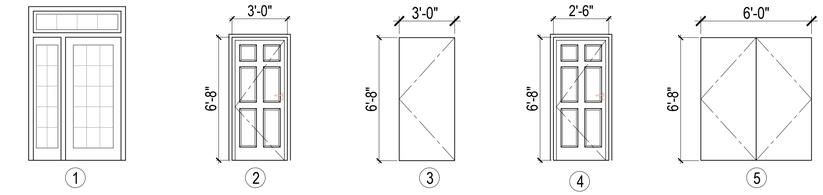
East Boston, MA 02128

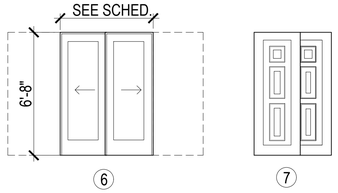
PROJECT # 19-116
DATE: 4-29-22 REV:
SCALE: 1/2" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

ENLARGED KITCHEN AND BATHROOM PLANS

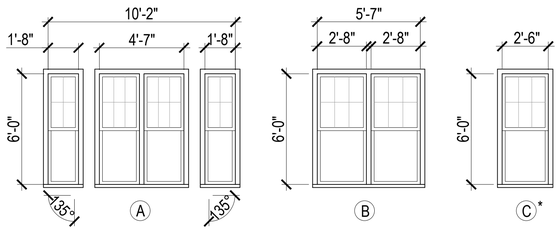
A7

DOOR TYPES:





WINDOWS TYPES:



*BEDROOM EMERGENCY ESCAPE WINDOW- SEE REQUIREMENTS ON DRAWING T3. G.C. CONFIRM BEDROOM WINDOWS MEET THE EMERGENCY ESCAPE AND RESCUE CRITERIA PRIOR TO ORDERING AND INSTALLING BEDROOM WINDOWS

WINDOW SCHEDULE

	SIZE		ROUGH OPENING		TYPE	MODEL NUMBER	MFG.	REMARKS
	WIDTH	HEIGHT	WIDTH	HEIGHT				
A	10'-1¾"	6'-0"	10'-5¾"	6'-4"	BAY 4'-8"/1'-8			
B	5'-7"	6'-0"	5'-7"	6'-4"	DOUBLE HUNG			SINGLE MULLION
C	2'-6"	6'-0"	2'-6"	6'-4"	DOUBLE HUNG			

ROOM SCHEDULE

		WALLS		CEILING		FLOORS
ROOM #	ROOM NAME	FINISH	MATERIAL	MATERIAL	HEIGHT	MATERIAL
	BASEMENT					
001	STAIRS	PAINT	CONCRETE	G.W.B.		CONCRETE
002	NUMBER NOT USED					
003	NUMBER NOT USED					
004	NUMBER NOT USED					
005	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
006	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
107	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
108	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
	1ST FLOOR					
100	STAIRS	PAINT	G.W.B.	G.W.B.		VINYL TILE
101	LIVING ROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
102	KTICHEN	PAINT	G.W.B.	G.W.B.		HARDWOOD
103	MECH / LAUNDRY ROOM	PAINT	G.W.B.	G.W.B.		TILE
104	SPRINKLER ROOM	PAINT	G.W.B.	G.W.B.		TILE
105	HALL CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
106	BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
106A	BEDROOM CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
107	MASTER BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
107A	MASTER CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
108	BATHROOM	PAINT	G.W.B.	G.W.B.		TILE

DOOR SCHEDULE

	DOOR			DOOR SIZE			FRAME		LBL	
	ROOM	MAT.	TYPE	WIDTH	HEIGHT	THICK	MATERIAL	TYPE		REMARKS :
					BASEMENT					
001	STAIRS	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
002	SPRINKLER ROOM	HM	5	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
003	ELECTRICAL ROOM	HM	5	6'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
004	MECHANICAL ROOM	HM	5	6'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
005	STORAGE	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
006	STORAGE	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
007	STORAGE	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
					1ST FLOOR					
101	COMMON ENTRY	FIBERGLASS	1	3'-0"	6'- 8"	1 3/4"	WOOD			FIBERGLASS EXTERIOR DOOR
102	UNIT ENTRY	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD		1HR FR	WOOD PANEL DOOR
103	MECHANICAL ROOM	WOOD	2	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
104	BATHROOM	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
105	HALL CLOSET	WOOD	2	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
106	BEDROOM	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
106A	BEDROOM CLOSET	WOOD	7	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
107	MASTER BEDROOM	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
107A	MASTER BEDROOM CLOSET	WOOD	6	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
108	LIFT (INTERIOR DOOR)	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
108	LIFT (EXTERIOR DOOR)	FIBERGLASS	2	3'-0"	6'- 8"	1 3/4"	WOOD			FIBERGLASS EXTERIOR DOOR
					2ND FLOOR					
200	STAIRS	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD			FLUSH WOOD DOOR
201	UNIT ENTRY	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD		1HR FR	WOOD PANEL DOOR
203	MECHANICAL ROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
204	BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
205	HALL CLOSET	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
206	BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
206A	BEDROOM CLOSET	WOOD	7	3'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
207	MASTER BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
207A	MASTER BEDROOM CLOSET	WOOD	6	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
208	MASTER BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
					3RD FLOOR					
001	STAIRS	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD			FLUSH WOOD DOOR
002	UNIT ENTRY	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD		1HR FR	WOOD PANEL DOOR
003	MECHANICAL ROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
004	BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
005	HALL CLOSET	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
306	BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
306A	BEDROOM CLOSET	WOOD	7	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
307	MASTER BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
307A	MASTER BEDROOM CLOSET	WOOD	6	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
308	MASTER BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR

ROOM SCHEDULE (CONTINUED)

		WALLS		CEILING		FLOORS
ROOM #	ROOM NAME	FINISH	MATERIAL	MATERIAL	HEIGHT	MATERIAL
	2ND FLOOR					
200	STAIRS	PAINT	G.W.B.	G.W.B.		VINYLTILE
201	LIVING ROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
202	KTICHEN	PAINT	G.W.B.	G.W.B.		HARDWOOD
203	MECH. / LAUNDRY ROOM	PAINT	G.W.B.	G.W.B.		TILE
204	BATHROOM	PAINT	G.W.B.	G.W.B.		TILE
205	HALL CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
206	BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
206A	BEDROOM CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
207	MASTER BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
207A	MASTER CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
208	MASTER BATHROOM	PAINT	G.W.B.	G.W.B.		TILE
	3RD FLOOR					
300	STAIRS	PAINT	G.W.B.	G.W.B.		VINYLTILE
301	LIVING ROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
302	KTICHEN	PAINT	G.W.B.	G.W.B.		HARDWOOD
303	MECH. / LAUNDRY ROOM	PAINT	G.W.B.	G.W.B.		TILE
304	BATHROOM	PAINT	G.W.B.	G.W.B.		TILE
305	HALL CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
306	BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
306A	BEDROOM CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
307	MASTER BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
307A	MASTER CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
308	MASTER BATHROOM	PAINT	G.W.B.	G.W.B.		TILE

GENERAL NOTE: 1' 0 1' 5' 10'

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RCA, LLC
1156 Dorchester Avenue www.rocke-christopher.com
Dorchester, Massachusetts 02125
Telephone: 617-282-0020
Fax: 617-282-1080

Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: 1/4" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

DOOR, WINDOW AND ROOM FINISH SCHEDULES

A8

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

CONDENSING UNITS SERVING APARTMENTS, COORDINATE UNIT LOCATIONS BASED ON SPACES SERVED AND REFRIGERANT LENGTHS REQUIRED, PROVIDE SLEEPER AND VIBRATION ISOLATORS AS SHOWN ON DETAILS.
PROVIDE SUN/WEATHER PROTECTION FOR ALL EXPOSED REFRIGERANT PIPING.

CU-2.0 CU-2.0 CU-2.0

ALL DRYERS MORE THAN 15FT EXHAUST DUCT SHALL HAVE BOOSTER FANS LOCATED IN DRYER ROOM AND INTERLOCKED WITH DRYER OPERATION, ALL DRYERS SHALL HAVE DRYER ELL AT CEILING TURNS, SEE DETAIL
ALL TAPES FOR DRYER EXHAUST SHALL BE RATED FOR DRYER DUCT USE

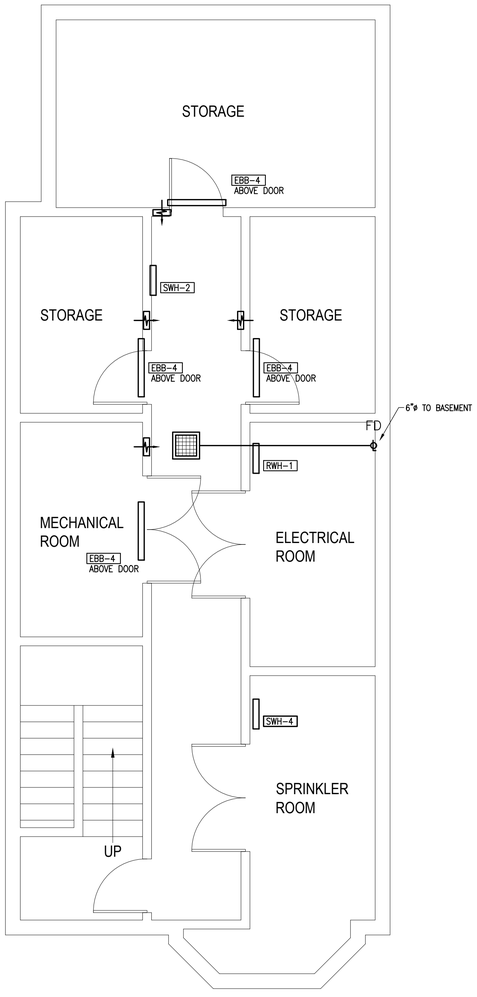
ALL CEILING DIFFUSERS SHALL HAVE RADIATION DAMPERS, ALL CEILING RETURNS AND TRANSFER RETURNS SHALL HAVE RADIATION DAMPERS

PROVIDE FRESH AIR TO EACH UNIT CONSISTING OF, FRESH AIR INTAKE WALL CAP, MOTORIZED DAMPER, FAMCO ADC524 (24V) INTERLOCKED WITH THE UNIT, 6" INSULATED DUCT AND VOLUME DAMPER.
PROVIDE PANASONIC FV-15NFLS1 ADJUSTABLE SUPPLY FAN WITH EACH FRESH AIR DUCT

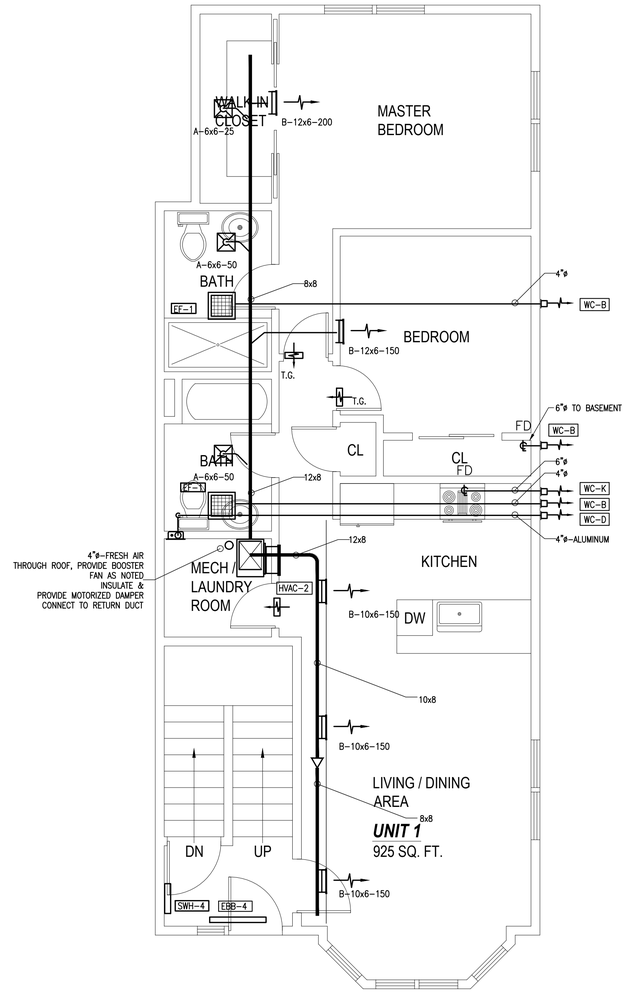
OFFSET DUCTWORK AT UNIT DISCHARGE TO GO INTO CEILING SPACE AND INTO JOIST SPACE, PROVIDE FIRE DAMPER AT CEILING PENETRATION

FOR BRANCH DUCT SIZING SEE DUCT SCHEDULE
100 CFM ø6"
150 CFM ø7"
200 CFM ø8"

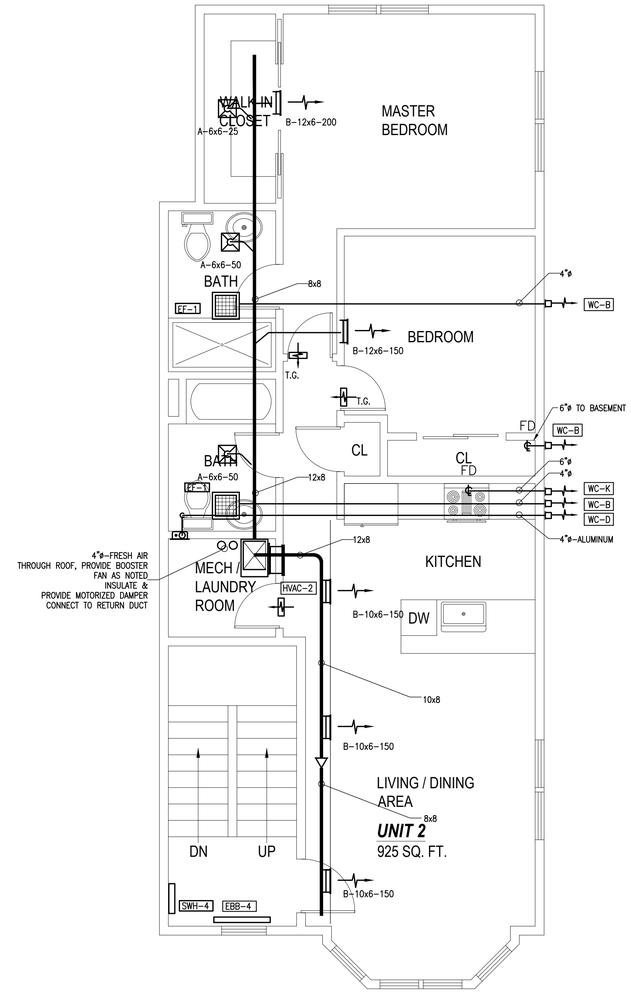
INDICATES JOIST DIRECTION
12" DEEP TJI, 16" ON CENTER



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

RCA, LLC
415 Neponset Ave. Dorchester, Massachusetts 02122
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Telephone: 617-282-0030
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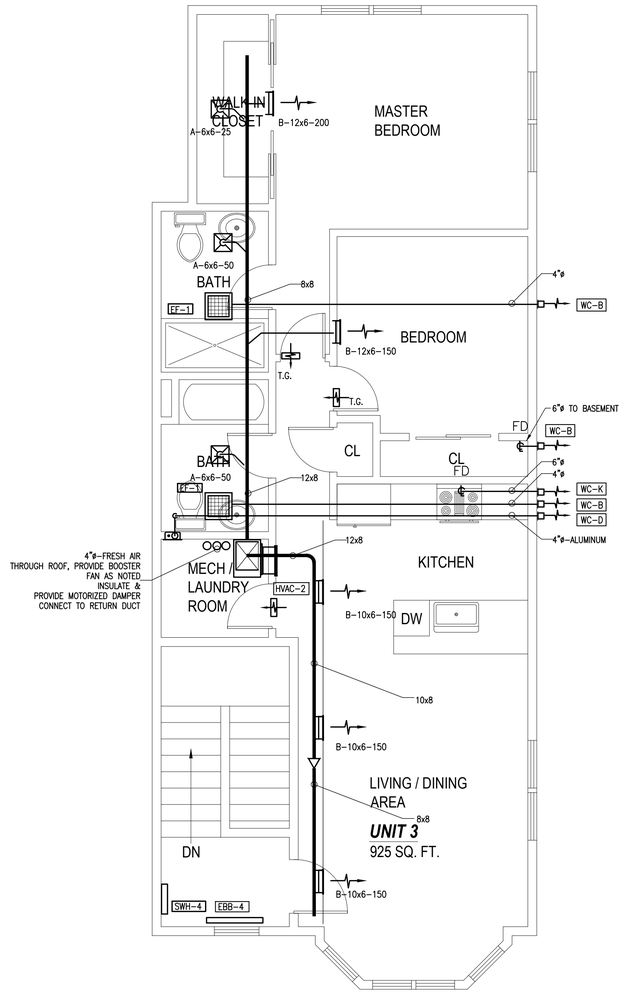
Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT #	18-040
DATE:	6-4-18
REV:	
SCALE:	¼"=1'-0"
DRAWN BY:	RC
CHECKED BY:	MM

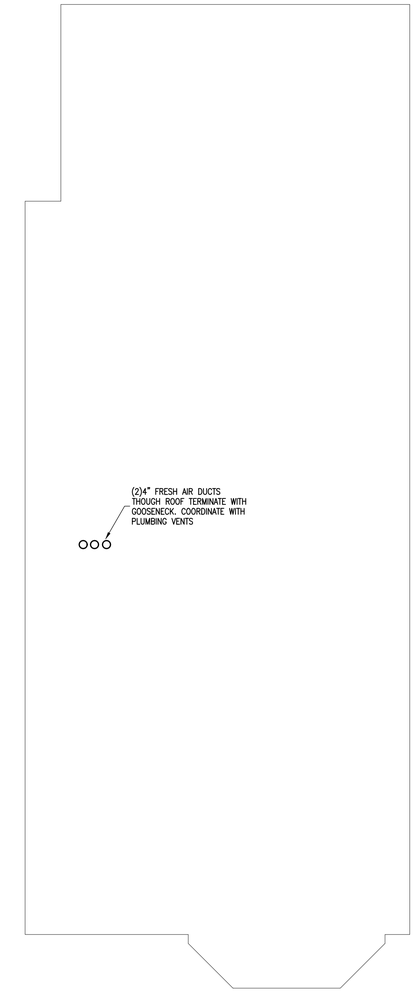
PROPOSED HVAC PLANS

H1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



THIRD FLOOR PLAN



ROOF PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18 REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

PROPOSED HVAC PLANS

H2

GENERAL NOTES

1. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED. INSTALLATION OF MATERIALS SHALL MEET ALL APPLICABLE STATE, FEDERAL AND MUNICIPAL REQUIREMENTS.
2. OBTAIN PERMITS AND PAY ALL FEES FOR WORK AND REQUIRED INSPECTIONS.
3. MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER'S COMPENSATION ACT.
4. THE DRAWINGS SHALL CONSIDERED DIAGRAMMATIC ONLY. ALL MEASUREMENTS SHALL BE TAKEN FROM BUILDING SITE AND ARCHITECT'S DRAWINGS.
5. PROVIDE TEMPORARY MATERIAL STORAGE AS REQUIRED AND BE RESPONSIBLE FOR ANY LOSS OR DAMAGE THERETO.
6. SUBMIT DIGITAL COPIES OF SHOP DRAWINGS FOR REVIEW COVERING MAJOR MANUFACTURED ITEMS, IE. AIR HANDLING UNITS, REGISTERS & DIFFUSERS, WIRING DIAGRAMS, ETC.
7. KEEP ACCURATE RECORD OF "AS-BUILT" DRAWINGS AND SUBMIT THESE BEFORE FINAL CERTIFICATE OF COMPLETION.
8. ON COMPLETION OF THE WORK, REMOVE FROM THE PREMISES ALL TOOLS, DEBRIS, SURPLUS AND WASTE MATERIALS RESULTING FROM OPERATIONS UNDER THIS SECTION. CLEAN ALL EQUIPMENT AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
9. AFTER ACCEPTANCE, INSTRUCT OWNER IN EQUIPMENT OPERATION AND PROVIDE HIM WITH OPERATING AND MAINTENANCE MANUALS STANDARDS AND EXTENDED WARRANTY DOCUMENTS, INSPECTION CERTIFICATES AND COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT.
10. THE CONTRACTOR SHALL, BEFORE FINAL PAYMENT IS MADE, GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER SUCH DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
11. SUPPLY AND INSTALL DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST ASHRAE & SMACNA STANDARDS AND SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE.
12. ADJUST ALL FAN SPEEDS TO DELIVER SHOWN AIR QUANTITIES. BALANCE ALL AIR SYSTEMS AND SUPPLY WRITTEN AIR BALANCING REPORTS IN TRIPLICATE. INCLUDE NECESSARY SPARE BELTS AND PULLEYS FOR FIELD ADJUSTMENT.
13. ALL VALVES AND FITTINGS SHALL BE SUITABLE FOR THIS PARTICULAR PIPING APPLICATION AND MINIMUM 150LBS PRESSURE RATING.
14. ALL DUCTWORK SHALL BE: 24 GAUGE UP TO 36 INCHES WIDE, 22 GAUGE 31 INCHES WIDE TO 60 INCHES WIDE, ROUND DUCT SHALL BE 24 GAUGE UO TO 10 INCHES DIAMETER, 22 GAUGE 11 TO 20 INCHES DIAMETER, 20 GAUGE ABOVE 20 INCHJES DIAMETER; ALL GALVINIZED SHEETMETAL. SEAL ALL JOINTS AND SLIPS WITH EC 800 OR OTHER SUITABLE SEALANT. ALL LONGITUDINAL SEAMS SHALL BE PITTSBURG LOCKING TAPE. ALL SLIPS SHALL BE REINFORCED BAR TYPE. FABRICATE AND INSTALL ALL DUCTS IN COMPLIANCE WITH SMACNA STANDARDS FOR LOW PRESURE DUCT CONSTRUCTION.
15. ALL DUCT CONNECTIONS TO FAN DRIVEN UNITS SHALL BE MADE WITH A FIREPROOF FLEXIBLE DUCT CONNECTOR.
16. BEFORE THE H.V.A.C. SYSTEM IS OPERATED, ALL DUCTS SHALL BE BLOWN OUT & THOUGHLY CLEANED. SYSTEM SHALL BE TEST AT FULL PRESSURE & ALL LEAKS & FAULTS CORRECTED.
17. INSTALL ALL PIPING AND VALVES AS HIGH AS POSSIBLE.
18. BALANCE THE AIR SYSTEM AS PER ASSOCIATED AIR BALANCING COUNCILS LATEST STANDARDS. SUBMIT BALANCING REPORT FOR ENGINEERS APPROVAL.
19. THESE DRAWINGS ARE DIAGRAMMATIC. FIELD CONDITIONS SHALL DETERMINE ACTUAL LOCATION OF ALL PIPING AND DUCTWORK.
20. ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS.
21. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL MECHANICAL CODE AND THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION DUCT CONSTRUCTION STANDARDS UNLESS OTHERWISE INDICATED IN THESE DRAWINGS OR IN THE SPECIFICATIONS.
22. ALL DUCT SUPPORTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS UNLESS OTHERWISE NOTED.

GENERAL NOTES

SHOULD ANY CONTRADICTION, AMBIGUITY, ERROR, INCONSISTENCY, OMISSION OR INCOMPLETE SYSTEM APPEAR IN OR BETWEEN ANY OF CONTRACT DOCUMENTS THE CONTRACTOR SHALL, BEFORE SUBMITTING THE FINAL BID AND SIGNING THE CONTRACT FOR CONSTRUCTION, NOTIFY THE ARCHITECT AND REQUEST A WRITTEN RESOLUTION AS TO WHICH METHODS OR MATERIALS WILL BE REQUIRED. IN THE EVENT OF CONFLICTING REQUIREMENTS OF STANDARDS , DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL COMPLY WITH THE MORE STRINGENT REQUIREMENTS. BEFORE SUBMITTING THE FINAL BID AND THE SIGNING THE CONTRACT FOR THE CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION FROM THE ARCHITECT, IN NO CASE SHALL THE CONTRACTOR PROCEED WITH THE AFFECTED WORK UNTIL ADVISED BY THE ARCHITECT.

IF THE CONTRACTOR FAILS TO MAKE A REQUEST FOR INTERPRETATION OR RESOLUTION NO EXCUSE WILL BE ACCEPTED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER, AS INTERPRETED BY THE ARCHITECT. THIS GENERALLY MEANS THE USE OF THE HIGHEST QUALITY MATERIAL, MOST EXPENSIVE WAY OF PERFORMING WORK AND PROVIDING COMPLETE FUNCTIONING SYSTEM FOR PROPER OPERATION.

EACH AND EVERY TRADE OR SUBCONTRACTOR WILL BE DEEMED TO HAVE FAMILIARIZED THEMSELVES WITH ALL THE CONTRACT DOCUMENTS OF THIS PROJECT, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND SITE WORK, AND TO HAVE VISITED THE SITE, SO AS TO AVOID ERROR, OMISSIONS AND MISINTERPRETATIONS. RELATED INFORMATION MAY BE PROVIDED ON CONTRACT DOCUMENTS OTHER THAN THOSE ASSOCIATED WITH THE SUBCONTRACTOR'S TRADE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RELATED WORK OF ALL THE CONTRACT DOCUMENTS. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR ALLEGED ERRORS, OMISSIONS AND MISINTERPRETATIONS WHETHER THEY ARE A RESULT OF FAILURE TO OBSERVE THIS REQUIREMENT OR NOT.

CEILING RADIATION DAMPERS

CEILING RADIATION DAMPERS SHALL BE AS MANUFACTURED BY GREENHECK
MODEL CRD-1WT FOR SIDE INLET
MODEL CRD-2WT FOR TOP INLET

CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE UL LISTED DAMPER WITH THE UL LISTING OF THE CEILING

APPROVED CEILING RATINGS ARE
L-528,546,558,562,574,576,581,583,585,592
M-501,503,508
P-533,538,545,547,548,554

ENERGY CODE 2015 REQUIREMENTS

APPLICABILITY (CONTRACTOR SHALL PROVIDE ALL ITEMS LISTED BELOW)

RESIDENTIAL BUILDING. FOR THIS CODE, INCLUDES DETACHED ONE- AND TWO-FAMILY DWELLINGS AND MULTIPLE SINGLE-FAMILY DWELLINGS (TOWNHOUSES) AS WELL AS GROUP R-2, R-3 AND R-4 BUILDINGS THREE STORIES OR LESS IN HEIGHT ABOVE GRADE PLANE.

R401.2 COMPLIANCE.
PROJECTS SHALL COMPLY WITH SECTIONS IDENTIFIED AS "MANDATORY" AND WITH EITHER SECTIONS IDENTIFIED AS "PRESCRIPTIVE" OR THE PERFORMANCE APPROACH IN SECTION R405. (PRESCRIPTIVE METHOD IS CHOSEN)

R403.1.1 PROGRAMMABLE THERMOSTAT.

PROVIDE, AT LEAST ONE THERMOSTAT PER DWELLING UNIT. THERMOSTAT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THIS THERMOSTAT SHALL INCLUDE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C). THE THERMOSTAT SHALL INITIALLY BE PROGRAMMED WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70°F (21°C) AND A COOLING TEMPERATURE SET POINT NO LOWER THAN 78°F (26°C).

PROVIDE PER R403.2.1 INSULATION (PRESCRIPTIVE).
ANY SUPPLY DUCT IN ATTIC SHALL BE INSULATED TO A MINIMUM OF R-12. ALL OTHER DUCTS SHALL BE INSULATED TO A MINIMUM OF R-6.

PROVIDE PER R403.2.2 SEALING (MANDATORY).
ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE.

DO NOT USE BUILDING CAVITIES PER R403.2.3. (MANDATORY).
BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.

PROVIDE VENTILATION R403.5 AS SHOWN (MANDATORY).
THE BUILDING SHALL BE PROVIDED WITH VENTILATION THAT MEETS THE REQUIREMENTS OF THE INTERNATIONAL RESIDENTIAL CODE OR INTERNATIONAL MECHANICAL CODE, AS APPLICABLE, OR WITH OTHER APPROVED MEANS OF VENTILATION. OUTDOOR AIR INTAKES AND EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN THE VENTILATION SYSTEM IS NOT OPERATING.

R403.2 HOT WATER BOILER OUTDOOR TEMPERATURE SETBACK.
HOT WATER BOILERS THAT SUPPLY HEAT TO THE BUILDING THROUGH ONE- OR TWO-PIPE HEATING SYSTEMS SHALL HAVE AN OUTDOOR SETBACK CONTROLL THAT LOWERS THE BOILER WATER TEMPERATURE BASED ON THE OUTDOOR TEMP.

R403.3.2 SEALING (MANDATORY)
DUCTS, AT HANDLERS AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR IRC, AS APPLICABLE

EXCEPTIONS:
1. AIR-IMPERMEABLE SPRAY FOAM PRODUCTS SHALL BE PERMITTED TO BE APPLIED WITHOUT ADDITONAL JOINT SEALS
2. FOR DUCTS HAVING A STATIC PRESSURE CLASSIFICATION OF LESS THAN 2 INCHES OF WATER COLUMN (500 PA) , ADDITIONAL CLOSURE SYSTEMS SHALL NOT BE REQUIRED TO CONTINUOUSLY WELDED JOINTS AND SEAMS, LOCKING TYPE JOINTS AND SEAMS OF OTHER THAN THE SNAP-LOCK AND BUTTON-LOCK TYPES.

403.3.2.1- SEALED AIR HANDLER
AIR HANDLERS SHALL HAVE A MANUFACTURERS DESIGNATION OF AIR LEAKAGE OF NO MORE THAN 2 PERCENT OF THE DESIGN AIR FLOW RATE WHEN TESTED IN ACCORDANCE WITH ASHRAE 193.

R403.3.3 DUCT TESTING
DUCRS SHALL BE PRESSURE TESTED THROUGH ROUGH IN TEST, POST CONSTRUCTION TEST

EXCEPTION- NOT REQUIRED WHERE DUCTS AND AIR HANDLERS ARE LOCATED ENITRLEY THROUGH THE BUILING THERMAL ENVELOPE

LOW RISE ESTAR REQUIREMENTS FOR MEP TRADES

(CONTRACTOR SHALL COMPLY WITH ALL ITEMS BELOW)

PROGRAMMABLE THERMOSTAT REQUIRED
(IF HEAT PUMP HAS AUXILIARY ELECTRIC HEATER, THAN THERMOSTAT WILL HAVE "ADAPTIVE USE TECHNOLOGY"

INSULATION IN THE UNCONDITIONED ATTIC R-8 OR BETTER
ALL OTHER DUCTS IN CONDITIONED SPACE R-6 OR BETTER
DUCT LEAKAGE TO INTERIOR SHALL BE LESS THAN 8 CFM25 PER 100 SQF OF CONDITIONED SPACE
DUCT LEAKAGE TO OUTSIDE SHALL BE LESS THAN 4CFM25 PER 100 SQF OF CONDITIONED SPACE

ALL APPLIANCES SHALL BE ESTAR RATED
80% OF ALL BULBS SHALL BE ESTAR RATED.

HVAC SYSTEM REQUIREMENTS

1-VENTILATION SHALL COMPLY WITH ASRAE 62.2-2010 (EXHAUST ONLY)
KITCHEN 5ACH CONTINUOUS OR 100 CFM INTERMITTENT
BATHROOM 20 CFM CONSTANT OR 50 CFM INTERMITTENT
CONTINUOUS FANS 1SONE, INTERMITTENT MAXIMUM 3 SONES

2-IF INTAKE IS CONNECTED TO RETURN OF THE DUCT THAN MOTORIZED DAMPER TO BE USED.

3-FOR HVAC MAXIMUM 115% OF HVAC LOAD OR NEXT NOMINAL SIZE.

4-FORE HEAT PUMP MAXIMUM 140% OF HEATING LOAD OR NEXT NOMINAL SIZE

5-TOTAL SYSTEM AIR FLOW WITHIN 15% OF CALCULATED AIR.

6-SYSTEM TO BE BALANCED WITHIN 25% OF CALCULATED AIR OR 25 CFM

7-CORROSION RESISTANT DRAIN PAN IS PROVIDED. (galvanized or plastic)

8-PROVIDE MINIMUM MERV 6 FILTER (MINI SPLITS ARE EXEMPTED)

9-IF HVAC HAS FRESH AIR INTAKE THAN MOTOR WILL BE ECM WITH SMART CYCLER THAT WILL SHUT DOWN THE INTAKE. (17)

INSTALLATION

1-THERE WILL BE NO KINKS OR SHARP TURNS IN DUCTWORK
2-FLEXIBLE DUCTS SUPPORTED AT MAXIMUM 5FT INTERVALS
3-PROVIDE RETURN GRILL 1 SQ. INCH NET PER 1 CFM AIR.
4-CONTINUOSLY OPERATED EXHAUST FANS SHALL HAVE READILY ACCESSIBLE CONTROLS.
5-VENTILATION INTAKES SHALL BE 4FT ABOVE ROOF OR GRADE.
6-PROVIDE INSECT SCREEN 0.5 INCH MESH
7-FRESH AIR MUST PASS THRU FILTER
8-PROVIDE DUCT LEAKAGE TEST, LEAKAGE TO BE LIMITED TO ESTAR REQUIREMENTS

MAIN/BRANCH DUCT SCHEDULE

SIZE	MAX. CFM
6" DIA	100
7" DIA	150
8" DIA	200
9" DIA	300
10" DIA	400
8x6	200
8x8	250
10x8	300
12x8	350
12x8	400
12x8	450
14x8	500
16x8	600
18x8 OR 16x10	700
20x8 OR 18x10	800
24x8 OR 20x10	1000
30x8 OR 24x10	1200

NOTE: MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 4' USE INSULATED SEMI RIGID BUCK DUCT.

MINIMUM RETURN DUCT PER HERS

CAPACITY	RETURN	FILTER
1.5 TON	ø16"	500 INCH2
2.0 TON	ø18"	600 INCH2
2.5 TON	ø20"	500 INCH2

MAXIMUM RETURN DUCT 30FT

INSULATION NOTES

CONTRACTOR SHALL FOLLOW THE MOST STRINGENT INSULATION REQUIREMENT FOR EACH ITEM

THE FOLLOWING SYSTEMS SHALL BE INSULATED.
DUCT LINER SHALL BE CLOSED CELL TYPE, GERM PROOF

IECC 2015 REQUIREMENTS:

1. HEATING HOT WATER MAINS AND BRANCHES:
   PIPING < 1" REQUIRES 1 1/2" INSULATION
   PIPING > 1½" REQUIRES 2" INSULATION
2. SUPPLY & RETURN DUCTWORK FROM HVAC UNITS:
   1 1/2" INSULATION MIN. R-6

LEED/ASHRAE 2013 REQUIREMENTS:

1. HEATING HOT WATER MAINS AND BRANCHES:
   PIPING < 1 1/2" REQUIRES 1½" INSULATION
   PIPING > 1½" REQUIRES 2" INSULATION
2. SUPPLY & RETURN DUCTWORK FROM HVAC UNITS:
   1" INSULATION MIN. R-6

GENERAL INSULATION REQUIREMENTS:

1: ALL LINED SUPPLY, RETURN AND TRANSFER DUCTWORK SHALL BE 1" DUCT LINER
   -DUCT INSUALTION SHALL CONTINUE OVER DUCT AT LINED POINT
   -FIRST 10' OF SUPPLY AND RETURN FOR ALL ERU'S AND HVAC UNITS
2. CONDENSATE DRAIN: 1"
3. ALL DUCTWORK IN CEILING SPACE SHALL HAVE R-6 INSULATION,
4. REFRIGERANT PIPING ¾" ARMFLEX

ALL DUCTWORK ON ROOF OR UNCONDITIONED SPACE SHALL BE INSULATED WITH R-12 INSULATION AND COVERED WITH EPDM ROOFING MATERIAL FOR WATER TIGHT INSTALLATION.

DIFFUSER/REGISTER SCHEDULE

LEGEND: (N)- #x# - ### (CFM / DIMENSIONS / TYPE)

TYPE	DESCRIPTION	MODEL (BASED ON TITUS)
A	LOUVER FACE CEILING DIFFUSER FOR SHEET ROCK CEILING INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR. WITH OPPOSIBLE BLADE DAMPER	TITUS TDCA, BORDER 1
A1	LOUVER FACE CEILING DIFFUSER FOR 2'x2' LAY-IN CEILING INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR. WITH OPPOSIBLE BLADE DAMPER	TITUS TDCA, BORDER 3
B	DOUBLE DEFLECTION REGISTER FOR SHEET ROCK INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR.	TITUS 272RS
E	DOUBLE DEFLECTION GRILLE FOR SHEET ROCK NSTALLATION. WITH OPPOSIBLE BLADE DAMPER	TITUS 25 RS
E1	DOUBLE DEFLECTION GRILLE FOR SHEET ROCK NSTALLATION. WITH OPPOSIBLE BLADE DAMPER ALUMINUM TYPE	TITUS 25 RS
F	PERFORATED SIGHT PROOF EGGCRATE GRILLE FOR SHEET ROCK CEILING INSTALLATION.	TITUS 45F
G	LINEAR DIFFUSER, LINEAR STYLE 1 1/2" SLOT SPACING WIDTH, 4 SLOT FOR SHEET ROCK CEILING INSTALLATION. 100 CFM/FT WITH DAMPER, INSULATED PLENUM	TITUS MLR-40, BORDER TYPE 22

APARTMENT EXHAUST NOTES

I) EACH APARTMENT SHALL BE PROVIDED WITH A CONNECTION POINT FOR A CLOTHES WASHER VENT.
ii) PROVIDE AND INSTALL THEDRYERBOX ®, SIZED TO THE WALL THICKNESS, SHALL BE PROVIDED AT EACH SCHEDULED DRYER LOCATION
III) DRYER VENT PIPE SHALL BE MINIMUM 28 GAUGE RIGID METAL, WITH NO SCREWS FOR ATTACHMENT, AND CONSTRUCTED AND INSTALLED PER SMACNA STANDARDS.
IV) DRYER VENTING SHALL USE THE DRYER ELL FOR THE FIRST ELBOW, LOCATED AND COORDINATED TO MINIMIZE ANY ADDITIONAL BENDS. DUCTWORK SHALL HAVE THE LAST (5) FEET MINIMUM PITCHED TO THE EXTERIOR EXHAUST POINT.
V) DUCTWORK SHALL EXHAUST TO THE EXTERIOR TO A NON-SCREENED VINYL SIDEWALL HOOD PROVIDED UNDER THIS SCOPE AND COLORED TO MATCH THE ADJACENT EXTERIOR FINISH.
VI)INSULATE WITH R-4 MINIMUM LAST 10' OF EXHAUST SEAL AGAINST EXTERIOR WALL
VII)LAUNDRY VENT DUCT SHALL BE ALUMINUM TYPE TO PREVENT CORROSION AND TAPE SHALL BE IN COMPLIANCE WITH UL FOR DRYER DUCT CONNECTIONS

KITCHEN EXHAUST
I) EACH APARTMENT SHALL BE PROVIDED WITH A CONNECTION POINT FOR EXHAUSTING A RANGE HOOD.
II) COORDINATE SIZE AND CONNECTION POINT WITH THE GENERAL CONTRACTOR, APPLIANCE SUPPLIER AND CABINET SUPPLIER.
III) EXHAUST PIPE SHALL BE MINIMUM 26 GAUGE RIGID METAL, WITH NO SCREWS FOR ATTACHMENT, AND CONSTRUCTED AND INSTALLED PER SMACNA STANDARDS. DUCTWORK SHALL HAVE THE LAST (5) FEET MINIMUM PITCHED TO THE EXTERIOR EXHAUST POINT.
IV) DUCTWORK SHALL EXHAUST TO THE EXTERIOR TO A SCREENED VINYL SIDEWALL HOOD PROVIDED UNDER THIS SCOPE AND COLORED TO MATCH THE ADJACENT EXTERIOR FINISH.
V)INSULATE WITH R-4 MINIMUM LAST 10' OF EXHAUST SEAL AGAINST EXTERIOR WALL

BATHROOM EXHAUST
I) EACH APARTMENT SHALL BE PROVIDED WITH A CONNECTION POINT FOR EXHAUSTING A BATHROOM
II) COORDINATE SIZE AND LOCATION WITH THE GENERAL CONTRACTOR AND ARCHITECT
I) EXHAUST PIPE SHALL BE MINIMUM 26 GAUGE RIGID METAL, CONSTRUCTED AND INSTALLED PER SMACNA STANDARDS. DUCTWORK SHALL HAVE THE LAST (5) FEET MINIMUM PITCHED TO THE EXTERIOR EXHAUST POINT.
IV) DUCTWORK SHALL EXHAUST TO THE EXTERIOR TO A SCREENED VINYL SIDEWALL HOOD PROVIDED UNDER THIS SCOPE AND COLORED TO MATCH THE ADJACENT EXTERIOR FINISH.
V)INSULATE WITH R-4 MINIMUM LAST 10' OF EXHAUST SEAL AGAINST EXTERIOR WALL

LOUVER NOTES

LOUVER DIMENSIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS
LOUVERS SHALL BE AMCA CERTIFIED FOR WIND DRIVEN RAINS
BLADES SHALL BE 4" DEEP MOUNTED BETWEEN 35-45 DEGREES WITH DRAINABLE BLADE AND DRAINABLE HEAD
PROVIDE BIRD SCREENS IN COMPLIANCE WITH IMC 401
PROVIDE CLOR ANODIZED LOUVER PER ARCHITECTS DIRECTION
LOUVERS SHALL BE AS MANUFACTURED BY GREENHECK MODEL EHH 401 SERIES

FIRE RATED CEILING NOTES:

WHEN DUCT PENETRATE RATED CEILING:

-ALL RECESSED DIFFUSERS AND REGISTERS SHALL HAVE RADIATION DAMPERS.
-ALL UNITS DUCTED TO PLENUM SPACE SHALL HAVE CEILING FIRE DAMPERS TO MEET UL 555C
-ALL RETURN DUCTS SHALL BE BELOW THE RATED CEILING, DROPPED CEILING AREAS SHALL NOT BE RATED CEILING UNLESS SHOWN OTHERWISE
-ALL RETURN AIR GRILLES IN RATED CEILING SHALL HAVE CEILING FIRE DAMPERS
-ALL UNIT DISCHARGES SHALL BE OFFSET TO GET INTO PROPER JOIST SPACES, CARRY TRANSITION PIECE AS NEEDED
-ALL DUCTS LARGER THAN 4"ø DIAMETER SHALL HAVE FIRE DAMPERS AT CEILING PENETRATIONS

FIRE/SMOKE DAMPER REQUIREMENTS

IMC 607.5.5 REQUIRES FIRE/SMOKE DAMPER AT ALL SHAFT PENETRATIONS

IMC 607.6.1. REQUIRES DAMPER EXCEPT
-DUCT CAN PENETRATE UP TO THREE FLOORS IF, 26 GAUGE, OPEN FROM ONE UNIT TO OUTSIDE, 4" ROUND AND SEALED AROUND AND CEILING GRILLES HAVE RADIATION DAMPERS

IMC 607.5.3 REQUIRES FIRE PARTITION PENETRATIONS TO HAVE FIRE DAMPERS EXCEPT
-BUILDING IS SPRINKLED OR
-DUCT IS MINIMUM 26 GAUGE, LESS THAN 100 SQ-INCH AND
-DUCT IS ABOVE CEILING AND,
-DUCT IS NOT TERMINATED AT FIRE RATED WALL AND
-MINIMUM 12" SLEEVE IS PROVIDED

CONSTRUCTION NOTES

-ALL CEILING MOUNTED HVAC UNITS SHALL BE HUNG FROM STRUCTURAL STEEL WITH SPRING ISOLATORS,
-PROVIDE FLEXIBLE DUCT CONNECTIONS AT HVAC UNIT, AND ALL FANS
-PROVIDE ISOLATION VALVES, CONTROL VALVES, DRAIN AND STRAINER FOR ALL WATER BASED HVAC UNITS.
-PROVIDE SECONDARY DRAIN PAN WITH LEAK DETECTOR TO SHUT DOWN HVAC UNIT.
-MAINTAIN ACCESS DOORS AND CODE REQUIRED CLEARANCES FOR ALL FILTER REPLACEMENT, EQUIPMENT REPAIR AND ELECTRICAL CONTROLS,
-PRIOR TO ANY INSTALLATION, COORDINATE CLEARANCES WITH ALL TRADES.
-ALL CONDENSATE DRAINS SHALL RUN TO NEAREST STORM CONNECTION PROVIDED BY P.C. REFER TO PLUMBING DRAWINGS
-ALL CONDENSING UNITS SHALL BE MOUNTED ON CONCRETE PAD ON VIBRATION PADS, OR MOUNTED ON SLEEPERS ANCHORED TO ROOF.
-ALL SPLIT SYSTEM CONDENSER UNITS IF LOCATED AWAY FROM THE BUILDING SHALL BE PIPED UNDERGROUND UP TO BUILDING, PROVIDE MINIMUM 18" COVER.
-PROVIDE MAINTENANCE PADS MINIMUM 4" HIGH FOR ALL FLOOR-MOUNTED EQUIPMENT PUMPS AND BOILERS.
-PROVIDE 13 FILTERS FOR ALL INDOOR UNITS, MERV 8 FOR ESTAR/LEED BUILDINGS
-PROVIDE 11 FILTERS FOR ALL OUTSIDE AIR UNITS, MERV 8 FOR ESTAR/LEED BUILDINGS
-ALL PIPING CONNECTED TO VIBRATION-ISOLATED EQUIPMENT TO BE ISOLATED BY MEANS OF VIBRATION ISOLATORS, RESILIENT LATERAL SUPPORTS AND RESILIENT PENETRATION SLEEVE /SEALS. THIS APPLIES TO FIRST 50 FEET OF TOTAL PIPE LENGTH OR THE ENTIRE PIPE WITHIN MECH. ROOM (WHICHEVER IS LONGER). PIPES THAT ARE 4" DIAMETER OR LARGER TO BE ISOLATED THROUGHT THE BUILDING REFER TO SPEC SECTION 230548 FOR ADDITIONAL INFORMATION
-PROVIDE EXPANSION LOOPS AS REQUIRED
-ALL FRESH AIR DUCTS SHALL HAVE MOTORIZED DAMPERS INTERLOCKED WITH UNIT AND HAVE VOLUME DAMPERS

FIRE SAFE THROUGH FLOORS

TYPE	SIZE	HILTI	MATERIAL	RATING	BOTTOM	TOP	CHASE WALL
STEEL/CAST COPPER/EMT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
STEEL/CAST 4" EMT/ 2" FLEX	MAX 6" -	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
STEEL/CAST COPPER/EMT	MAX 4"	CP-620	FIRE FOAM	1HRS	FIRE STOP	FIRE STOP	REQUIRED
PEX	MAX 1"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	BOTH SIDES	BOTH SIDES	NOT REQUIRED
PVC PIPE	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
PVC PIPE	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
PVC PIPE	MAX 4"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	COLLAR	FIRE STOP	NOT REQUIRED
REFRIGERANT	-	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
4" DUCT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
INSULATED COPPER/STEEL	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
CABLES	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED

REV.	DATE	DESCRIPTION
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PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

HVAC NOTES

H3

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LEGEND

SUPPLY AIR DUCT UP	HOT WATER RETURN PIPE (HWR)
SUPPLY AIR DUCT DOWN	HOT WATER SUPPLY PIPE (HWS)
RETURN AIR DUCT UP	CONDENSATE DRAIN PIPE (D)
RETURN AIR DUCT DOWN	PIPE UP
VOLUME DAMPER	PIPE DOWN
MOTORIZED DAMPER	BALL VALVE
FIRE DAMPER (FD)	GATE VALVE
1" LINED DUCTWORK	CHECK VALVE
SUPPLY AIR REGISTER	STRAINER
RETURN OR EXHAUST AIR REGISTER	UNION
SUPPLY AIR DIFFUSER	3-WAY CONTROL VALVE
	2-WAY CONTROL VALVE
CEILING TRANSFER GRILL	BALANCING VALVE
ACCESS DOOR (AD)	THERMOMETER
SELF BALANCING AIR VALVE	PRESSURE GAUGE
CEILING FIRE DAMPER (CFD)	FLEXIBLE PIPE CONNECTION

EQUIPMENT TAG NUMBERS

EF-#	EXHAUST FAN
CU-#	CONDENSING UNIT
AC-#	SPLIT SYSTEM AC UNIT
HVAC-#	AIR HANDLER UNIT
UH-#	UNIT HEATER UNIT

E = EXHAUST RISER
# = REFERS TO RISER DIAGRAM

VS = SUPPLY VENTILATION RISER
# = REFERS TO RISER DIAGRAM

VS = RETURN VENTILATION RISER
# = REFERS TO RISER DIAGRAM

R = CONDENSER WATER RISER
# = REFERS TO RISER DIAGRAM

AIR OUTLET + INLET DESIGNATION

EXAMPLE:
TYPE OF GRILLE, DIFFUSER SEE SCHEDULE FOR SPECIFIC INFORMATION ABOUT THIS OUTLET/INLET TYPE — A-6x6-50 — SIZE OF GRILLE, DIFFUSER — AIRFLOW

NOTE:
THIS DESIGNATION FORMAT IS TYPICAL FOR ALL DIFFUSERS, GRILLES, AND REGISTERS, LAY-IN OR SURFACE MOUNTED, FOR SUPPLY, RETURN OR EXH.

EQUIPMENT SYMBOLS

- ROOFTOP UNIT
- ROOFTOP UPBLAST EXHAUST FAN
- EXHAUST CONTROL VALVE
- ROOFTOP UPBLAST EXHAUST FAN
- CONSTANT AIRFLOW REGULATOR DEVICE
- FIRE AND SMOKE DAMPER
- VOLUME DAMPERS (VD)
- CABINET UNIT HEATER IN CEILING
- HORIZONTAL HVAC UNIT
- VERTICAL HVAC UNIT
- ROOF MOUNTED CONDENSING UNIT

CONTROL SYMBOLS

- (T) (TS) WALL MOUNTED THERMOSTAT/SENSOR
- (H) (HS) HUMIDISTAT/SENSOR
- LP LOCAL CONTROL PANEL

SPLIT SYSTEM WITH WATER COIL VERTICAL HVAC UNIT SCHEDULE(VARIABLE DRIVE)

INDOOR SECTION											CONDENSING SECTION							
TAG	NOM. CAP. TON	CFM	ESP IN	FAN HP	TOT. MBH	SENS. MBH	HTG. COIL EAT	HTG. COIL LAT	HTG. COIL BTUH	V/ø	TAG	MCA	MOCP	V/ø	EER/SEER	DB IN/OUT	MODEL (ASPEN/ CARRIER)	INDOOR	OUTDOOR	REMARKS
HVAC-2	2	800	.5	1/2	24	21	70	90	33.5	115/1	CU-2	14	20	208/1	13/17	60/74	AFM24/24ACB7-24-3 AND MATCHING COIL	15"WX22"DX44"H+12" COIL	31"LX31WDX40"H-250 LBS	W/HW PUMP/TIMER

NOTE: PROVIDE ESTAR RATED THERMOSTAT, ANTI CYCLING PROTECTION, DISCONNECT SWITCH.
HEATING COILS SUPPLIED W/ 140 DEG. HOT WATER.
CONDENSATE DRAINS SHALL BE TYPE "L" COPPER WITH ½" FIBERGLASS INSULATION RUN TO INDIRECT WASTE DRAIN REFER TO RISER DIAGRAM
PROVIDE ZONE CONTROL AS REQUIRED TO MATCH NUMBER OF MOTORIZED DAMPERS
PROVIDE REFRIGERANT LINES BETWEEN INDOOR AND OUTDOOR UNITS AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS.
PROVIDE MERV 11 FILTERS
PROVIDE HIGH HEAD PUMP
PROVIDE PUMP RATED FOR MINIMUM OF 3½ GPM AT 30FT OF HEAD

CEILING MOUNTED EXHAUST FAN

TAG	LOCATION	TYPE	DRIVE	CFM	V/ø	LAMP	SP	NOISE SONES	DIMENSIONS	PANASONIC MODEL	ESTAR	CONTROLS
EF-1	BATHROOM	CEILING	DIRECT	110	120/1	(2)PL18	0.1"	0.3	14.5"X17"X11.5"H-16LBS-6" DUCT	FV-05-11VKSL1	YES	HIGH/LOW FAN REQUIRES TWO WALL SWITCHES (HAS LIGHT)

PROVIDE PANASONIC FIRE DAMPER ENCLOSURE FOR ALL CEILING BATHROOM FANS.

WALL CAP SCHEDULE

TAG	BRAND	SIZE	DIMENSIONS	LOCATION	DUCT
WC-B	X-VENT THVB	4" VENT	7.5"X7.5"X1.5"	BATHROOM EXHAUST	ø4"-NO FLEX
WC-K	X-VENT THVB	6" VENT	10"x9"X5"	KITCHEN EXHAUST	ø6" W/FD AT CEILING PENETRATION
WC-D	X-VENT THVB	4" VENT	7.5"X7.5"X1.5"	DRYER EXHAUST-REMOVE SCREEN	ø4" AL WITH HARD ELBOW
WC-FA	X-VENT TEVB	6" VENT	7.5"X7.5"X1.5"	FRESH AIR INTAKE	ø6"-INSULATED

VYNIL COLOR TO MATCH SIDING,
MATCH DUCT SIZE CONNECTED TO UNIT.
ALL EXHAUST DUCTS SHALL HAVE R-6 INSULATION FIRST 10FT FROM EXTERIOR WALL IN
ALL FRESH AIR INTAKE DUCTS SHALL HAVE MOTORIZED DAMPER AT ENVELOPE PENETRATION WITH ACCESS PANEL.
DAMPER SHALL BE INTERLOCKED WITH HVAC UNIT
FOR COMBINED BATHROOMS, USE 6" DUCT AFTER COMBINE AND USE WC-K WALL CAP
COMBINE EXHAUST TO ONE WALL CAP WITH SEPARATE DUCT CONNECTIONS IF LOCATED NEXT TO EACH OTHER COORDINATE WITH ARCHITECT

ELECTRIC HEATER SCHEDULE

TYPE	KW	VOLT/PH	DIMENSIONS	MODEL NUMBER-COLOR BY ARCH
RWH-1	1	120/1		Q'MARK#CRA 1512-T2
RWH-2	2	120/1	19"HX16"WX4"D	Q'MARK# MCSSARWH1802/HTWHS1
RWH-4	4	208/1	19"HX16"WX4"D	Q'MARK# MCSSARWH4808/HTWHS1
SWH-4	4	208/1	19"HX16"WX4"D	Q'MARK# MCSSARWH4808/HTWHSM
EBB-2	0.4	120/1		Q'MARK#QMK-2512W-W/T'STAT
EBB-3	0.75	120/1		Q'MARK#QMK-2513W-W/T'STAT
EBB-4	1	120/1		Q'MARK#QMK-2514W-W/T'STAT
EBB-6	1.5	120/1		Q'MARK#QMK-2516W-W/T'STAT
UH-5	5	208/1		Q'MARK#MUH-35-W/T'STAT
CCH-4	4	208/1		Q'MARK#CDF548-W/T'STAT

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HVAC SCHEDULES

H4

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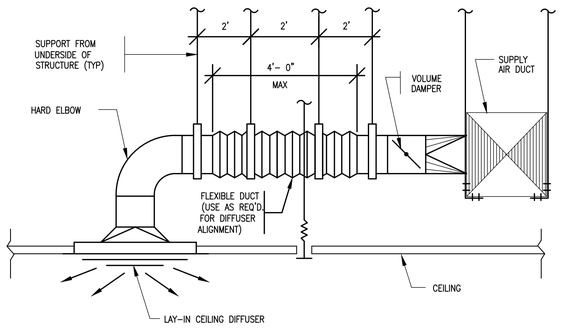
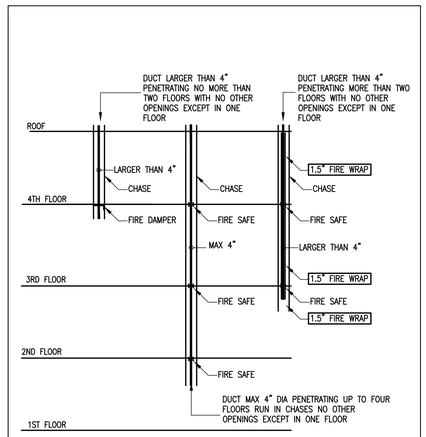


NOTES:

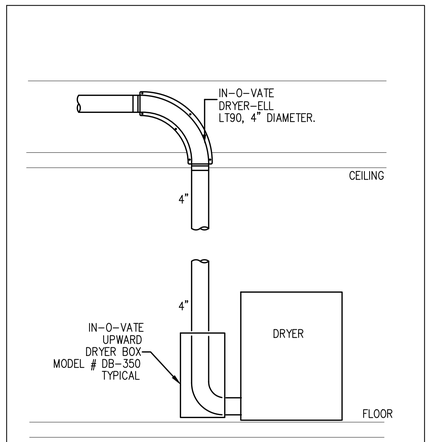
① MAXIMUM SAG 1/2" PER FOOT.

CEILING DIFFUSER BRANCH DUCTS — N.T.S.

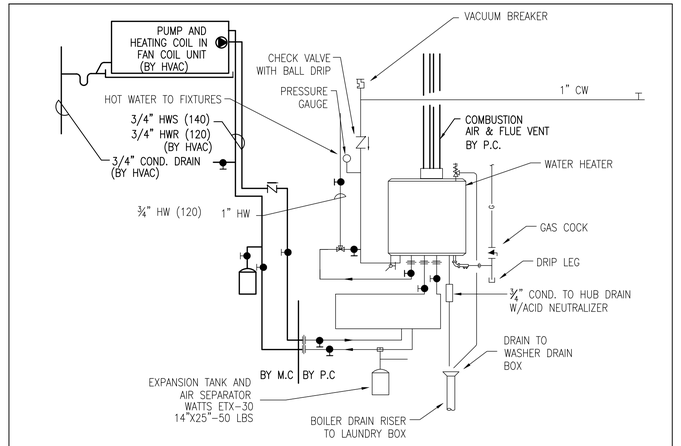


PER IMC 2015 FIGURE 607.6.1(2)

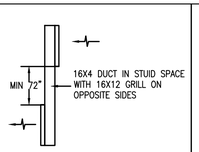
DUCT RISER THROUGH FLOORS — NTS



TYPICAL DRYER BOX AND DRYER ELL DETAIL — NTS

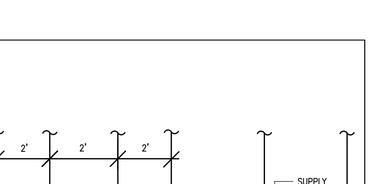


INSTANTANEOUS WATER HEATER DETAIL — N.T.S.



BEDROOM WALL TRANSFER GRILL

LAUNDRY ROOM WALL TRANSFER GRILL

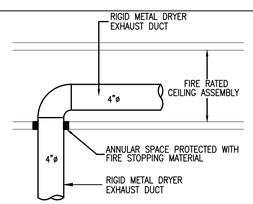


CEILING TRANSFER GRILL

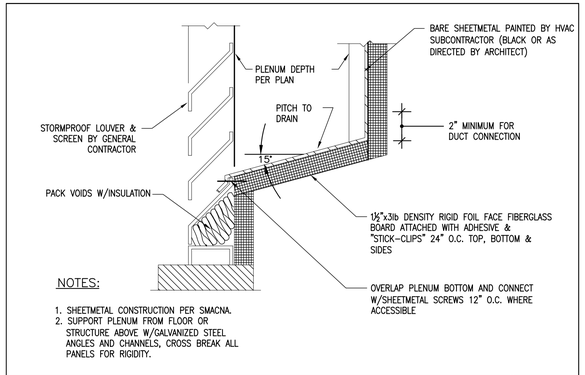
NOTES:

① TRANSFER DUCTS TO BE SUPPORTED FROM STRUCTURE ABOVE.
② FIRE DAMPER WHERE APPLICABLE, SEE PLANS FOR LOCATION.
③ OPEN END DUCT WxH.

CEILING AND WALL TRANSFER DUCT DETAIL — N.T.S.



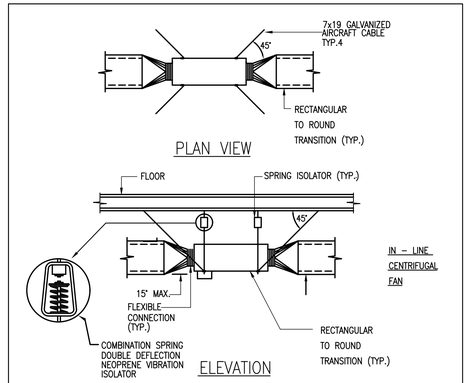
FLOOR/CEILING DUCT PROTECTION DETAIL — NTS



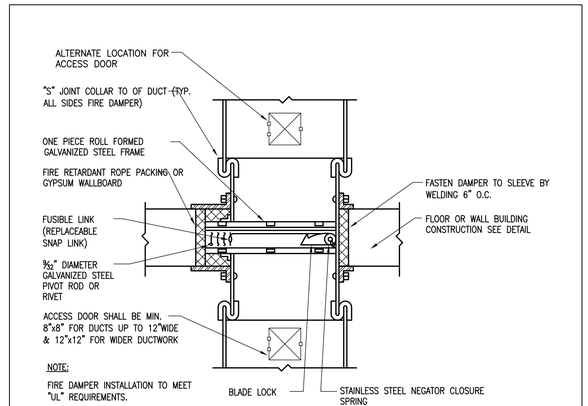
NOTES:

1. SHEETMETAL CONSTRUCTION PER SMACNA.
2. SUPPORT PLENUM FROM FLOOR OR STRUCTURE ABOVE W/GALVANIZED STEEL ANGLES AND CHANNELS, CROSS BREAK ALL PANELS FOR RIGIDITY.

PLENUM AT LOUVER DETAIL — N.T.S.



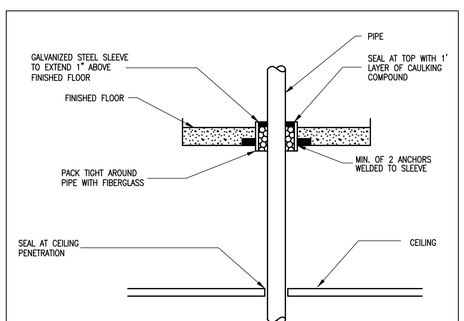
IN LINE FAN HANGER DETAIL — NTS



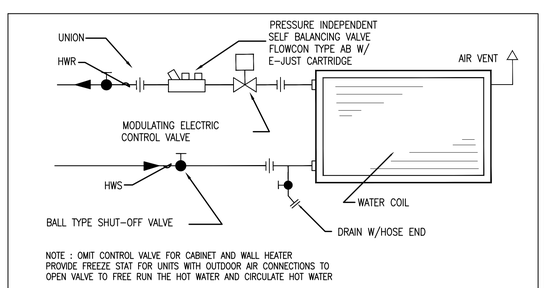
NOTE:

FIRE DAMPER INSTALLATION TO MEET "UL" REQUIREMENTS.

FIRE DAMPER W/BLADES OUTSIDE THE AIR STREAM — N.T.S.

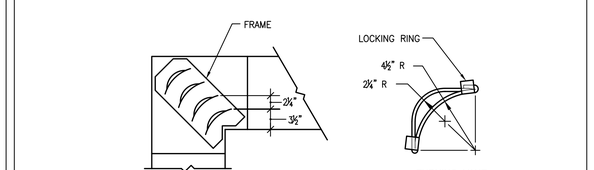


PIPE SLEEVE THRU FLOOR PENTRATION DETAIL — NTS



NOTE : OMIT CONTROL VALVE FOR CABINET AND WALL HEATER PROVIDE FREEZE STAT FOR UNITS WITH OUTDOOR AIR CONNECTIONS TO OPEN VALVE TO FREE RUN THE HOT WATER AND CIRCULATE HOT WATER

WATER COIL PIPING DETAIL — NTS



NOTES:

1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 48".
3. FRAMES-BOLTED OR RIVETED TO ELBOW.
4. VANES AND FRAMES-SAME GAUGE AS ELBOW.

DOUBLE THICKNESS TURNING VANES FOR SQUARE ELBOW — N.T.S.

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HVAC DETAILS

H5

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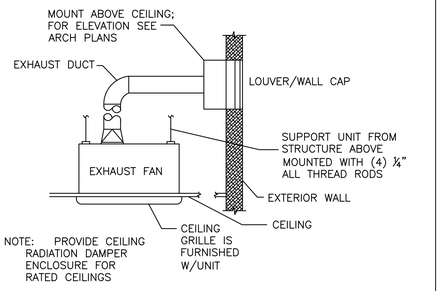
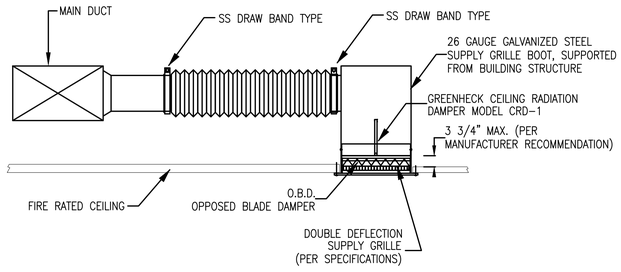
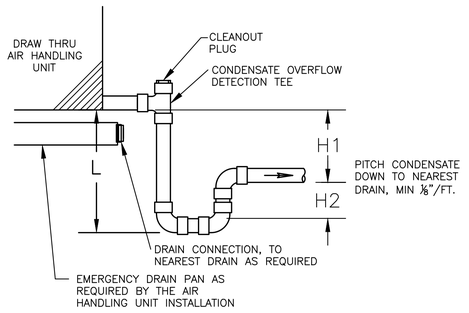


CEILING EXHAUST FAN DETAIL | NTS

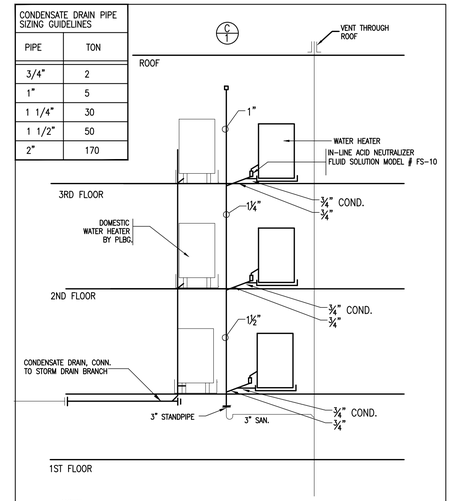


SUPPLY GRILLE/CRD INSTALLATION DETAIL | NTS



CONDENSATE DRAIN DETAIL | NTS

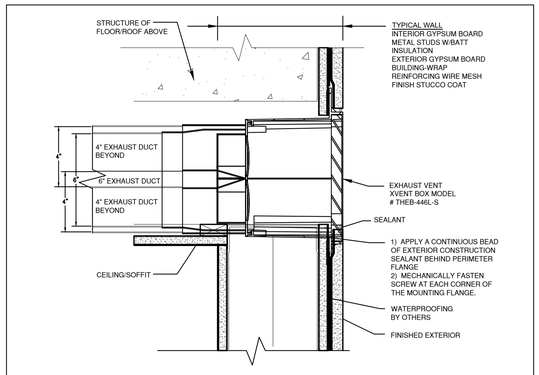
CONDENSATE DRAIN PIPE SIZING GUIDELINES	
PIPE	TON
3/4"	2
1"	5
1 1/4"	30
1 1/2"	50
2"	170



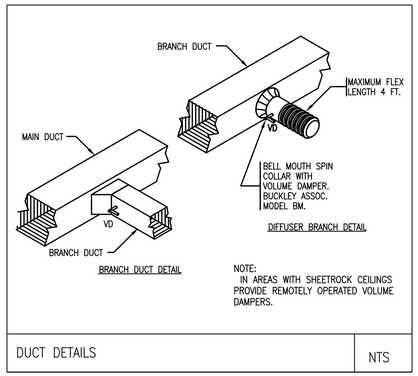
NOTE:
ALL ACID NEUTRALIZERS, DRAIN PIPING FROM FURNACES, AND CONDENSATE DRAIN SHALL BE BY HVAC CONTRACTOR. SANITARY PIPING SHALL BE BY PLUMBING CONTRACTOR.

NOTE:
PROVIDE CONDENSATE RISER IN EACH APARTMENT MECH ROOM AS SHOWN ON THIS DIAGRAM

MECHANICAL ROOM DRAIN RISER DIAGRAM | N.T.S.

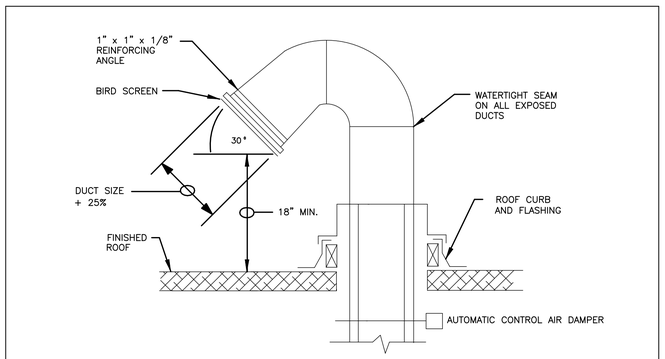


TYPICAL WALL CAP PENETRATION XVENT BOX | NTS

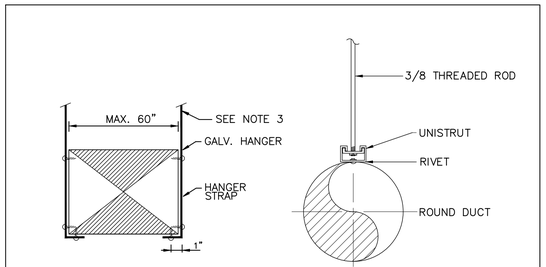


NOTE:
IN AREAS WITH SHEETROCK CEILINGS PROVIDE REMOTELY OPERATED VOLUME DAMPERS.

DUCT DETAILS | NTS



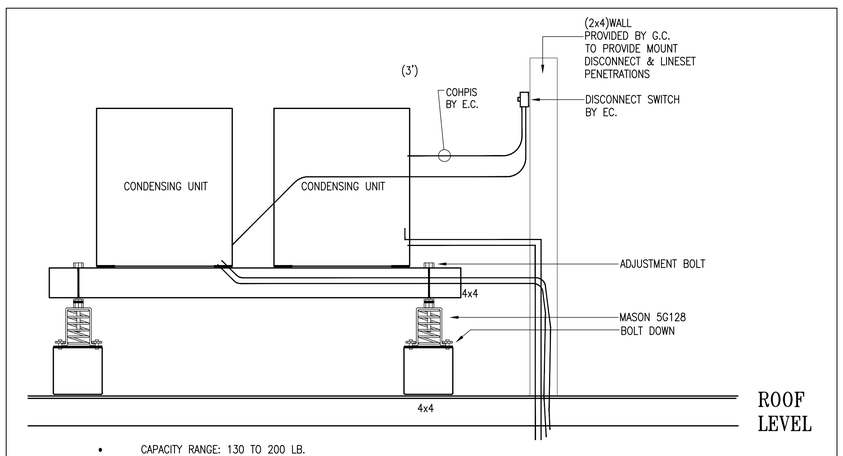
ROOF GOOSENECK DETAIL | NTS



NOTES:
1. ON DUCTS OVER 48" WIDE, BOTTOM SHALL BE BRACED BY ANGLE. FOR CROSS SECTION AREA MORE THAN 8 SQ FT, DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.

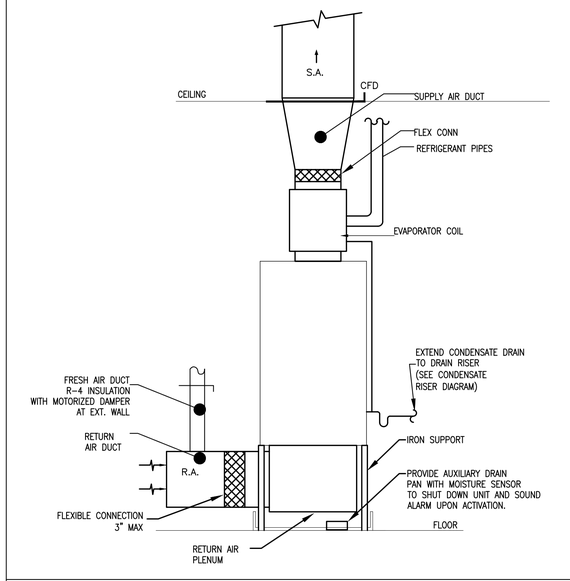
2. CUTTING AND PATCHING SHALL BE LIMITED TO A MINIMUM AS REQUIRED FOR PROPER INSTALLATION.
3. SUPPORTS SHALL BE SPACED AND SIZED AS PER SMACNA.

DUCT HANGER SUPPORT | NTS



- CAPACITY RANGE: 130 TO 200 LB.
- ISOLATOR TYPE: SPRING
- BOLT SIZE: 3/8~~x4"~~ 3/8"x10" BOLT

CONDENSING UNIT MOUNTING DETAIL | N.T.S.



VERTICAL UNIT DETAIL WITH BOTTOM AIR RETURN | N.T.S.

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

RCA, LLC
415 Neponset Ave. Dorchester, Massachusetts 02122
www.roche-christopher.com
Telephone: 617-282-0030
Fax: 617-282-1080

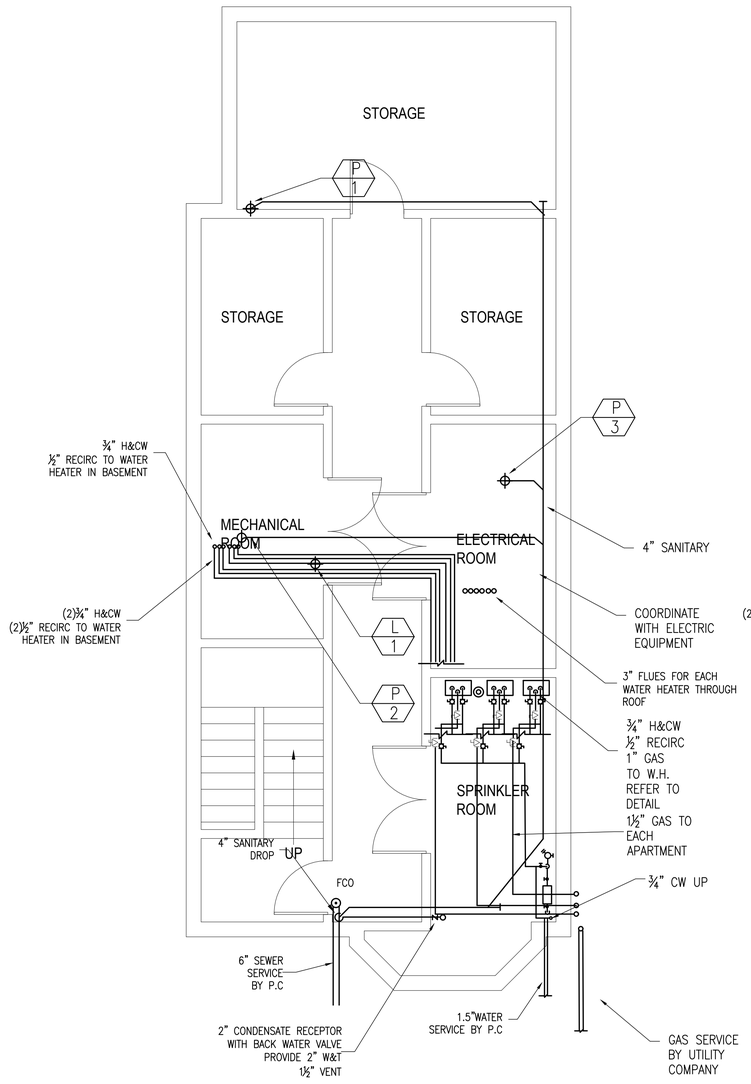
Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

HVAC DETAILS

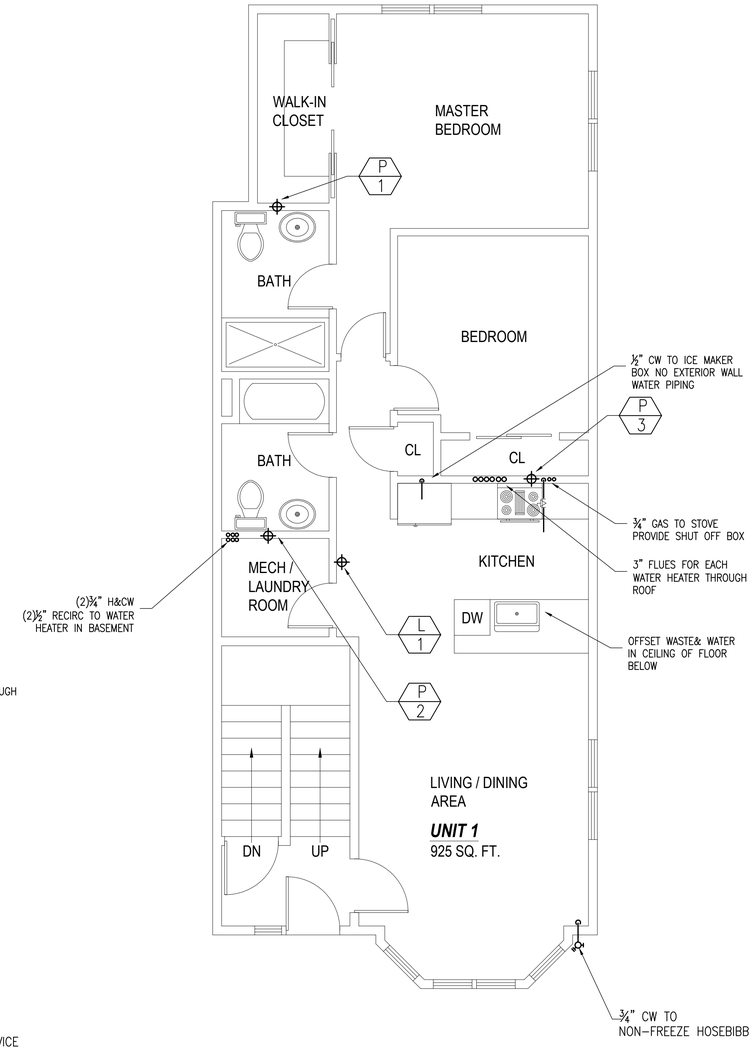
PROJECT # 18-040
DATE: 6-4-18 REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

H6

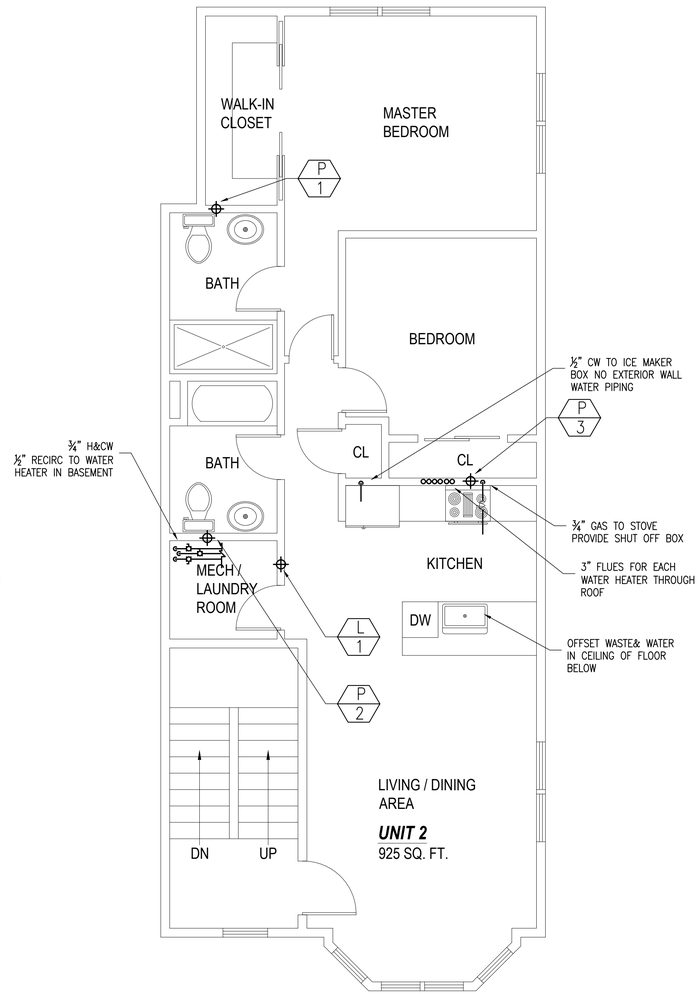
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

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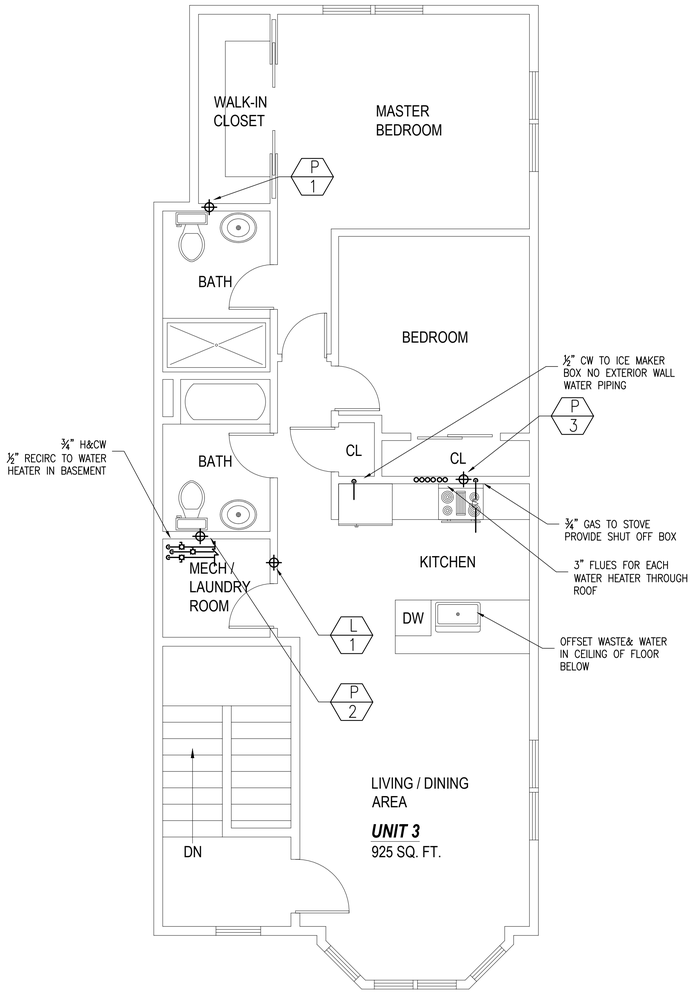
PROJECT #	18-040
DATE:	6-4-18
REV:	
SCALE:	¼"=1'-0"
DRAWN BY:	RC
CHECKED BY:	MM

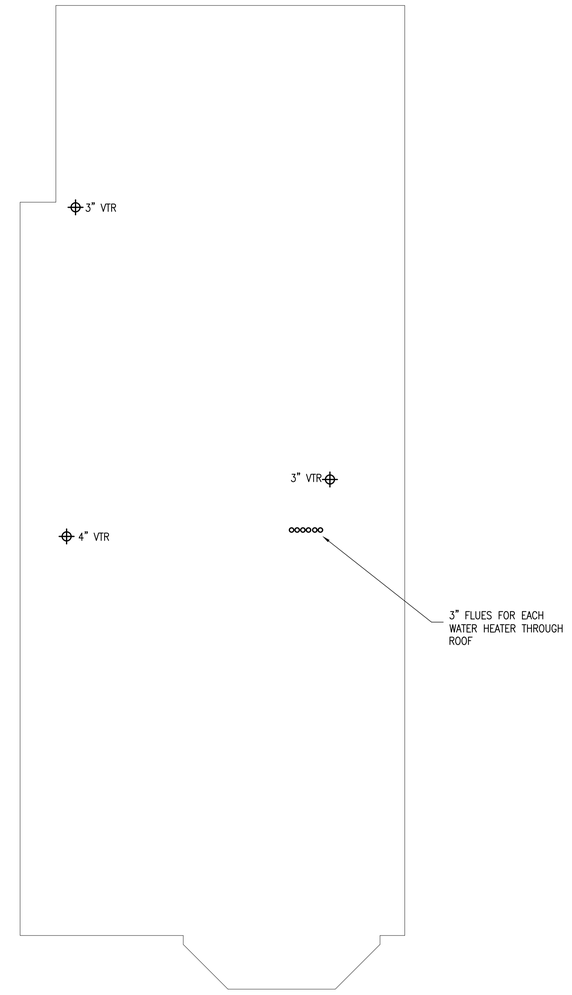
PROPOSED PLUMBING PLANS

P1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



THIRD FLOOR PLAN



ROOF PLAN

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PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

PROPOSED PLUMBING PLANS

P2

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

BASIC PLUMBING REQUIREMENTS

PART 1. – GENERAL

1.1 RELATED DOCUMENTS

ALL APPLICABLE REQUIREMENTS OF OTHER PORTIONS OF THE CONTRACT DOCUMENTS APPLY TO THE WORK OF THIS SECTION INCLUDING, BUT NOT LIMITED TO, ALL DRAWINGS, ALL SPECIFICATIONS, GENERAL CONDITIONS, AND GENERAL REQUIREMENTS INCLUDING SUBMITTALS.

1.2 APPLICABLE CODES AND STANDARDS

APPLICABLE CODES: ALL LOCAL AND STATE BUILDING CODES, INCLUDING THE INTERNATIONAL PLUMBING CODE MASSACHUSETTS STATE PLUMBING CODE AND THE MASSACHUSETTS STATE BUILDING CODE.
APPLICABILITY OF STANDARDS: EXCEPT WHERE THE CONTRACT DOCUMENTS INCLUDE MORE STRINGENT REQUIREMENTS, APPLICABLE CONSTRUCTION INDUSTRY STANDARDS HAVE THE SAME FORCE AND EFFECT AS IF BOUND OR COPIED DIRECTLY INTO THE CONTRACT DOCUMENTS. SUCH STANDARDS ARE MADE A PART OF THE CONTRACT DOCUMENTS BY REFERENCE.

CONFLICTING REQUIREMENTS: WHERE COMPLIANCE WITH TWO OR MORE STANDARDS IS SPECIFIED, AND THE STANDARDS ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, REFER REQUIREMENTS THAT ARE DIFFERENT, BUT APPARENTLY EQUAL, AND UNCERTAINTIES TO THE ARCHITECT FOR A DECISION BEFORE PROCEEDING.

PUBLICATION DATES: WHERE THE DATE OF ISSUE OF A REFERENCED STANDARD IS NOT SPECIFIED, COMPLY WITH THE STANDARD IN EFFECT AS OF DATE OF CONTRACT DOCUMENTS.

ABBREVIATIONS AND NAMES: TRADE ASSOCIATION NAMES AND TITLES OF GENERAL STANDARDS ARE FREQUENTLY ABBREVIATED. THE FOLLOWING ACRONYMS OR ABBREVIATIONS AS REFERENCED IN CONTRACT DOCUMENTS ARE DEFINED TO MEAN THE ASSOCIATED NAMES. NAMES AND ADDRESSES ARE SUBJECT TO CHANGE AND ARE BELIEVED TO BE BUT ARE NOT ASSURED TO BE ACCURATE AND UP TO DATE AS OF DATE OF CONTRACT DOCUMENTS.

AGA – AMERICAN GAS ASSOCIATION
ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE
ARI – AIR CONDITIONING AND REFRIGERATION INSTITUTE
ASHRAE – AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASME – AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSE – AMERICAN SOCIETY OF SANITARY ENGINEERING
ASTM – AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS – AMERICAN WELDING SOCIETY
AWWA – AMERICAN WATER WORKS ASSOCIATION
CISPI – CAST IRON SOIL PIPE INSTITUTE
NEC – NATIONAL ELECTRIC CODE
NFPA – NATIONAL FIRE PROTECTION ASSOCIATION
NSF – NATIONAL SANITATION FOUNDATION
PDI – PLUMBING AND DRAINAGE INSTITUTE
UL – UNDERWRITERS LABORATORIES
DOT – DEPARTMENT OF TRANSPORTATION
EPA – ENVIRONMENTAL PROTECTION AGENCY
OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

1.3 SUBMITTALS

PRIOR TO THE PERFORMANCE OF ANY WORK OR INSTALLATION OF ANY MATERIALS, OBTAIN APPROVAL FROM THE ARCHITECT BY SUBMITTING SHOP DRAWINGS AND DATA SHEETS.

SUBMITTAL OF SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES WILL BE ACCEPTED ONLY WHEN SUBMITTED BY THE GENERAL CONTRACTOR. DATA SUBMITTED FROM SUBCONTRACTORS AND MATERIAL SUPPLIERS DIRECTLY TO THE ARCHITECT WILL NOT BE PROCESSED. CERTIFIED DRAWINGS AND CATALOG DATA SHEETS SHALL SHOW:
1. SPECIFICALLY WHAT ITEMS AND FEATURES ARE TO BE PROVIDED.
2. APPLICABLE SPECIFICATION SECTION NUMBER AND EQUIPMENT TAG NUMBER.
3. PRINCIPAL DIMENSIONS AND DETAILS OF CONSTRUCTION.
4. WEIGHTS: INFORMATION REQUIRED FOR THE DESIGN OF SUPPORTS AND FOUNDATIONS.
5. SIZES AND LOCATIONS OF PIPING AND CONNECTIONS.
6. PERFORMANCE DATA CERTIFIED BY THE MANUFACTURER.
7. SUBMIT SCHEDULE OF PROPOSED PIPING, VALVES, SPECIALTIES, ETC.
8. ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE SEPERATLY IDENTIFIED.

PLUMBING SUBMITTALS SHALL BE PROVIDED FOR THE FOLLOWING ITEMS:
1. PIPING AND FITTING MATERIALS.
2. PLUMBING VALVES AND SPECIALTIES.
3. PIPING HANGER AND ATTACHMENT ASSEMBLIES.
4. PIPING INSULATION.
5. ALL SCHEDULED PLUMBING FIXTURES, DRAINS, AND CLEANOUTS.
6. UTILITY CONNECTION DETAILS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

APPROVAL OF SHOP DRAWINGS DOES NOT RELEASE RESPONSIBILITY OF COORDINATING HIS WORK AT JOBSITE AND TAKING FIELD MEASUREMENTS. IN CASES WHERE INTERFERENCES BECOME APPARENT, NOTIFY ARCHITECT SO THAT SUCH INTERFERENCES MAY BE RESOLVED PRIOR TO PROCEEDING WITH SHOP WORK. NO CLAIM WILL BE ALLOWED FOR WORK THAT MIGHT HAVE TO BE MOVED OR REPLACED BASED ON A CLAIM THAT WORK WAS PLACED IN ACCORDANCE WITH DIMENSIONS INDICATED ON AN APPROVED SHOP DRAWING.

1.4 COORDINATION

COORDINATE WITH THE BUILDING TRADES:
1. STRUCTURAL MEMBERS, PADS, AND BUILDING OPENINGS FOR FIXTURES, EQUIPMENT, PIPING, ETC., FOR USE BY THIS INDICATED ON THE ARCHITECTURAL AND STRUCTURAL PLANS ARE THE COORDINATION RESPONSIBILITY OF THIS INSTALLER. PAY FOR ANY CHANGES IN THE ABOVE REQUIREMENTS AFTER LETTING AND ACCEPTING THE CONTRACT.
2. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT, DIRECTIONS AND SIZES OF EQUIPMENT, PIPING, ETC. IT IS NOT INTENDED TO SHOW EVERY OFFSET AND FITTING OF EVERY SITE DIFFICULTY THAT MAY BE ENCOUNTERED. PROVIDE ALL MATERIALS AND PERFORM ALL LABOR NECESSARY TO MAKE COMPLETE WORKING SYSTEMS, READY FOR USE, WITHOUT EXTRA CHARGE. ALL MEASUREMENTS MUST BE VERIFIED ON THE JOBSITE.
3. EXAMINE THE SITE AND ALL DRAWINGS BEFORE PROCEEDING WITH THE LAYOUT AND INSTALLATION OF THIS TO SUIT ACTUAL CONDITIONS. CONFER AND COOPERATE WITH OTHER TRADES ON THE JOB SO THAT ALL WORK WILL BE INSTALLED IN PROPER RELATIONSHIP. COORDINATE PRECISE LOCATION OF PARTS WITH OTHER WORK. ALL SYSTEMS SHALL BE INSTALLED TO PROVIDE MAXIMUM HEADROOM, EXCEPT WHERE DIMENSIONED OTHERWISE ON THE DRAWINGS.

1.5 RECORD DOCUMENTS

RECORD DRAWINGS: MAINTAIN A CLEAN, UNDAMAGED SET OF PRINTS OF CONTRACT DRAWINGS AND SHOP DRAWINGS. MARK THE SET TO SHOW THE ACTUAL INSTALLATION WHERE THE INSTALLATION VARIES SUBSTANTIALLY FROM THE WORK AS ORIGINALLY SHOWN. MARK WHICHEVER DRAWING IS MOST CAPABLE OF SHOWING CONDITIONS FULLY AND ACCURATELY; WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE CONTRACT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD LATER.
1. MARK INFORMATION THAT IS IMPORTANT TO THE OWNER, BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS.
2. ORGANIZE RECORD DRAWING SHEETS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.
3. MAINS AND BRANCHES OF PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED, CONCEALED UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE LOCATED (I.E., TRAPS, STRAINERS, EXPANSION COMPENSATORS, TANKS, ETC.).
4. EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM AT LEAST TWO PROMINENT BUILDING LINES.
5. APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.
6. INCLUDE ALL "CORRECTED FOR RECORD" SHOP DRAWINGS TO REFLECT APPROVALS RECEIVED.

1.6 MAINTENANCE MANUALS

ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL HEAVY-DUTY 2-INCH, 3-RING VINYL-COVERED BINDERS, WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER. INCLUDE THE FOLLOWING TYPES OF INFORMATION:
1. COPIES OF WARRANTIES.
2. WIRING DIAGRAMS.
3. INSPECTION PROCEDURES.
4. APPROVED SHOP DRAWINGS AND PRODUCT DATA.
5. DESCRIPTION OF FUNCTION, NORMAL OPERATING CHARACTERISTICS AND LIMITATIONS, PERFORMANCE CURVES, ENGINEERING DATA AND TESTS, AND COMPLETE NOMENCLATURE AND COMMERCIAL NUMBERS OF REPLACEMENT PARTS.
6. MANUFACTURER'S PRINTED OPERATING PROCEDURES TO INCLUDE START-UP, BREAK-IN, AND ROUTINE AND NORMAL OPERATING INSTRUCTIONS; REGULATION, CONTROL, STOPPING, SHUTDOWN, AND EMERGENCY INSTRUCTIONS; AND SUMMER AND WINTER OPERATING INSTRUCTIONS.
7. MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING; DISASSEMBLY, REPAIR, AND REASSEMBLY; ALIGNING AND ADJUSTING INSTRUCTIONS.
8. SERVICING INSTRUCTIONS AND LUBRICATION CHARTS AND SCHEDULES.

1.7 REGULATIONS AND PERMITS
PROVIDE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION.

PAY FOR AND OBTAIN ALL REQUIRED PERMITS & SCHEDULE INSPECTIONS IN A TIMELY MANNER AS TO NOT DELAY THE PROJECT. OBTAIN ALL NECESSARY PERMITS INCLUDING BUT NOT LIMITED TO ENTERING MANHOLES, USE OF WATER FROM LOW PRESSURE HYDRANTS, DEMOLITION AND NEW WORK, ETC. PRIOR TO COMMENCE OF WORK.

PART 2. – PRODUCTS

2.1 GENERAL PRODUCT REQUIREMENTS

ALL EQUIPMENT AND MATERIALS, EXCEPT AS OTHERWISE SPECIFIED, SHALL BE NEW, OF CURRENT PRODUCTION, FIRST QUALITY AND OF THE BEST OF EACH CLASS SPECIFIED. MATERIALS, PRODUCTS, AND EQUIPMENT SHALL BE DELIVERED TO JOBSITE WITH FACTORY PACKAGING BEARING MANUFACTURER'S NAME OR LABEL, AND UNION LABEL WHENEVER PRACTICAL.

PART 3. – EXECUTION

3.1 PLUMBING INSTALLATIONS
GENERAL SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF PLUMBING SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:
1. COORDINATE SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
2. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
3. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION, TO ALLOW FOR MECHANICAL INSTALLATIONS.
4. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
5. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES.
6. INSTALL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS.
7. PROVIDE ACCESS PANELS OR DOORS WHERE UNITS ARE CONCEALED BEHIND FINISHED SURFACES.
8. COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS, TO THE EXTENT THAT THOSE INSTRUCTIONS AND RECOMMENDATIONS ARE MORE EXPLICIT OR STRINGENT THAN REQUIREMENTS CONTAINED IN CONTRACT DOCUMENTS.
9. INSPECT MATERIALS OR EQUIPMENT IMMEDIATELY UPON DELIVERY AND AGAIN PRIOR TO INSTALLATION. REJECT DAMAGED AND DEFECTIVE ITEMS.

3.2 FINAL INSPECTION
PRIOR TO FINAL ACCEPTANCE, ALL SYSTEMS SHALL BE OPERATED TO TEST PERFORMANCE TO THE SATISFACTION OF THE ARCHITECT.
1. WATER SHALL CIRCULATE THROUGHOUT SYSTEMS WITHOUT NOISE, WATER HAMMER, LEAKS, TRAPPING, OR AIR-BINDING.
2. MOTORS AND OTHER EQUIPMENT SHALL OPERATE WITHOUT EXCESSIVE NOISE OR VIBRATION.
3. DRAINS SHALL FLOW FREELY, WITHOUT EXCESSIVE NOISE, LEAKS OR STOPPAGES.

CORRECT DEFECTS DEMONSTRATED BY INSPECTIONS AND TESTS TO THE SATISFACTION OF THE ARCHITECT.

3.3 CLEANING OF SYSTEMS AND PREMISES

ALL EQUIPMENT AND FIXTURES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS AT THE COMPLETION OF THE PROJECT AND PRIOR TO ACCEPTANCE BY THE OWNER.

3.4 PROTECTION

GUARDS, BARRICADES, LIGHTS, SERVICES, ETC., NECESSARY FOR THE PROTECTION OF PERSONS AND PROPERTY SHALL BE FURNISHED AND MAINTAINED.

EXISTING WORK SUCH AS PAVEMENTS, LAWNS, SIDEWALKS, FLOORS, CURBS, AND OTHER STRUCTURES AND UTILITIES WHICH ARE DAMAGED OR DISTURBED DUE TO MAKING CONNECTIONS OR ANY PHASE OF OPERATIONS SHALL BE RESTORED TO THE SATISFACTION OF THE OWNER AND THE GOVERNING AUTHORITIES.

GENERAL NOTES

NOTE FOLLOWING LINE ITEMS ARE LISTED FOR QUALITY PURPOSES AND APPLICABLE WHERE COMPONENTS PRESENT IN THE PROJECT.

REGARDLESS HOW THE DETAILS ARE SHOWN, CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS.

CONTRACTOR SHALL PAY ATTENTION TO GAS FIRED EQUIPMENT DISCHARGE LOCATIONS RELATIVE TO AIR INTAKES BEFORE ANY INSTALLATION AND MAINTAIN CODE REQUIRED OR MANUFACTURER REQUIRED CLERANCES.

1–ALL HOT WATER PIPING IN RECIRCULATION TYPE SYSTEMS SHALL BE INSULATED, INCLUDING TAKE OFFS FROM RE–CIRCULATION LINE.
ALL HORIZONTAL COLD WATER MAINS OR BRANCH LINES ABOVE CEILINGS SHALL BE INSULATED.
ALL HORIZONTAL STORM DRAINS SHALL BE INSULATED. INSULATE 3 FT PIPING ABOVE AND BELOW THE OFFSET. INSULATE ROOF DRAIN BODIES UNDER DECK AND 3 FT PIPING IF NO OFFSET.

2–HOT WATER PIPING IN SYSTEMS WITHOUT RECIRCULATION SHALL BE FULLY INSULATED TO MAINTAIN TEMPERATURE (IECC 2014)

3–ALL TRAPS SHALL HAVE CLEAN OUTS

4–ALL COMMON AREA FAUCETS SHALL HAVE POINT OF USE MIXING VALVES, ZURN LEAD FREE SERIES LFUSG–B OR EQUAL

5–ALL ADA SINKS AND LAVATORIES SHALL HAVE LAVGUARD PROTECTION COVERS, COMPLETE

6–ALL FIXTURES SHALL HAVE MULTI TURN LEAD FREE WATER STOPS AS MANUFACTURED BY ZURN LF SERIES.

7–ALL PREFABRICATED SHOWERS AND TUB SURROUNDS SHALL HAVE BUILT IN GRAB BAR RE–INFORCEMENTS, OR

8–WALLS BEHIND THE WATER CLOSETS, TUBS, SHOWERS SHALL BE RE–INFORCED FOR FUTURE GRAB BAR INSTALLATION

9–ALL KITCHEN SINKS SHALL HAVE 30" CLEAR KNEE SPACE UNDER

10–IN ALL ELEVATOR BUILDINGS OR GROUP 2 UNITS, SINKS SHALL BE NO DEEPER THAN 6 ½"

11–WATER CLOSET CONTROLS FOR ADA UNITS SHALL BE ON THE ACCESSIBLE SIDE

12–GROUP 2 TUBS SHALL BE 60" LONG WITH RIM 16–18" AFF.

13–FOR GROUP 2 APARTMENTS, ALL TUBS AND SHOWERS SHALL HAVE HOT/COLD WATER PIPING CAPPED BEHIND TO LONGER DIMENSION OF THE STALL

14–A HAND HELD SHOWER HEAD WITH FLOW REGULATOR ATTACHED TO 60" LONG FLEXIBLE HOSE AND AN ADJUSTABLE MOUNTING BAR SHALL BE PROVIDED OR BE CAPABLE OF BEING INSTALLED ON THE LONG WALL OF THE TUB.

15–ALL VENT THROUGH THE ROOF LOCATIONS SHALL BE FIELD COORDINATED WITH HVAC EQUIPMENT INTAKES AND IF NECESSARY SHALL BE EXTENDED 3FT ABOVE THE EQUIPMENT WITHIN 10FT OF THE VENT.

16–ALL FLOOR DRAINS SHALL HAVE TRAP PRIMERS.

17–ALL PUBLIC TOILETS SHALL HAVE HOSE BIBS AND FLOOR DRAINS, FLOOR DRAINS SHALL BE WITHIN 3FT OF THE URINALS.

18–ALL FLOOR PENETRATIONS SHALL BE FIRE RATED WITH FIRE STOP MATERIAL OR INTUMESCENT TYPE COLLARS AS REQUIRED.

19–UNLESS NOTED OTHERWISE PVC MAY BE USED FOR RESIDENTIAL TYPE BUILDINGS UP TO TEN FLOORS FOR DRAINAGE. CPVC MAY BE USED FOR DOMESTIC HOT/COLD WATER IN RESIDENTIAL TYPE BUILDINGS UP TO 60 FT, OR 6 STORY BUILDINGS. PROVIDE SOUND INSULATION ON ALL PVC VERTICAL DRAIN LINES

20–PROVIDE DRAIN PAN FOR ALL STORAGE TYPE WATER HEATERS AND WASHING MACHINES W/DRAINS CONNECTED TO SEWER DRAIN, PROVIDE TRAP PRIMERS..

21–PROVIDE COMPLETE PIPING FOR DISHWASHER AND DISPOSAL CONNECTIONS, OBSERVE CLEARANCE REQUIREMENTS UNDER KITCHEN SINKS.

22–ALL DRAINS LOCATED BELOW THE STREET GRADE SHALL HAVE LOCAL OR CENTRAL TYPE BACK WATER VALVES. DRAINS FROM UPPER FLOORS WILL CONNECT AT EXIT

23–ALL PLUMBING FIXTURES SHALL BE APPROVED TYPE IN THE STATE OF PROJECT BEING USED, SPECIFICATIONS ARE FOR QUALITY, LOOK AND PERFORMANCE PURPOSES ONLY. IF SPECIFIED EQUIPMENT IS NOT THE APPROVED TYPE. CONTRACTOR SHALL PROVIDE SIMILAR APPROVED FIXTURE.

24–ALL FLOOR DRAINS IN BOILER ROOMS SHALL BE COORDINATED WITH BOILER PLACEMENTS SO THAT CONDENSATE DRAINS WILL BE DRAINED TO FLOOR DRAIN.

25–ALL PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS SHALL BE FIRE SAFED.
USE FIRE PUDDY WITH FIRE WOOL FILLING FOR 2" AND SMALL PIPES,
USE INTUMESCENT COLLAR FOR LARGER PIPES.

26–ALL LAUNDRY DRAINS FOR BUILDINGS 4 STORIES AND HIGHER SHALL HAVE DEDICATED DRAIN LINES CONNECTED TO SEWER LINES AT BUILDING DISCHARGE.

27–ALL BASEMENT DRAINS WILL HAVE BACK WATER VALVES AND AND UPPER FLOORS WILL BE CONNECTED TO SEWER DISCHARGE SEPERATELY FROM BASEMENT DRAIN

28– PROVIDE BALL TYPE SHUT OFF VALVES FOR ALL RIZERS AND WATER BRANCHES OFF THE MAIN PIPES. RISERS SHALL HAVE DRAIN VALVES WITH CAP AND CHAIN

1. GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND GENERAL REQUIREMENTS, APPLY TO WORK SPECIFIED ON THESE DRAWINGS.
2. COORDINATE WORK WITH THAT OF OTHER TRADES AFFECTING OR AFFECTED BY WORK OF THIS SECTION AND COOPERATE WITH SUCH TRADES TO ASSURE THE STEADY PROGRESS OF THE WORK.
3. ALL WORK AND MATERIALS SHALL COMPLY WITH THE STATE PLUMBING AND GAS CODES AND THE LOCAL CODES.
4. FURNISH AND INSTALL A COMPLETE, SANITARY DRAINAGE AND VENT SYSTEM THROUGHOUT THE BUILDING FOR CONNECTION TO EVERY FIXTURE OR PIECE OF EQUIPMENT REQUIRING DRAINAGE. THE NEW WORK SHALL EXTEND AND CONNECT TO THE EXTERIOR SANITARY SYSTEM AS INDICATED.
5. FURNISH AND INSTALL A COMPLETE HOT WATER AND COLD WATER SYSTEM THROUGHOUT THE BUILDING, CONNECTING TO ALL FIXTURES AND EQUIPMENT REQUIRING HOT AND/OR COLD WATER. THE COLD WATER SYSTEM WORK SHALL EXTEND AND CONNECT TO THE EXTERIOR COLD WATER SYSTEM AS INDICATED. THE HOT WATER SYSTEM WORK SHALL BEGIN AT EACH NEW WATER HEATER WHERE INDICATED.
6. FURNISH AND INSTALL A COMPLETE GAS SYSTEM THROUGHOUT THE BUILDING, CONNECTING TO ALL EQUIPMENT REQUIRING GAS. THE GAS SYSTEM WORK SHALL EXTEND AND CONNECT TO THE GAS METERS SUPPLIED BY GAS COMPANY.
7. FURNISH TO OWNER A WRITTEN GUARANTEE OF THE GENERAL CONTRACTOR AND THIS SUBCONTRACTOR JOINTLY AND SEVERALLY, AGAINST ANY DEFECTS IN MATERIALS AND WORKMANSHIP IN WORK OF THIS SECTION FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
8. SUBMIT SHOP DRAWINGS ON PLUMBING FIXTURES AND VALVES SPECIFIED.
9. FURNISH AND INSTALL ALL PIPE OPENINGS, PIPE HANGERS AND HANGER RODS, AND FIXTURE SUPPORTS. PROPERLY SECURE HANGER RODS TO BUILDING STRUCTURE. SEAL ALL PIPE OPENINGS THROUGH FLOORS AND ROOF WATER TIGHT.
10. BURIED STORM, SANITARY AND VENT PIPING SHALL BE CAST IRON PIPE AND DRAINAGE FITTINGS. ABOVE GROUND SANITARY AND VENT PIPING SHALL BE CAST IRON PIPE AND DRAINAGE FITTINGS/PVC SCHED. 40 SOLID. PROVIDE FIRE STOPPING AND SHEET METAL SLEEVES AS REQUIRED BY CODE WHERE ALL PVC PIPING PASSES THROUGH FIRE RATED WALLS AND FLOORS.
11. HOT AND COLD WATER PIPING SHALL BE TYPE L SEAMLESS COPPER TUBING AND FITTINGS WITH 95-5 SOLDER JOINTS, FLOWGUARD PIPING SYSTEM, SEEK APPROVAL FROM ARCHITECT AND BUILDING OWNER REPRESENTATIVE BEFORE SUBMITTING FOR APPROVAL TO ENGINEER. ALL PIPING SHALL BE INSULATED AND MARKED AS HOT WATER (HW) OR COLD WATER (CW)
12. GAS PIPING SHALL BE SCHEDULE 40 STEEL WITH MALLEABLE IRON FITTINGS AND THREADED JOINTS.
13. VALVES FOR HOT AND COLD WATER SHALL BE GATE VALVE, BRONZE BODY AND TRIM, NON-RISING STEM, 200 PSIG, SOLDER END, SIMILAR TO JENKINS 1240 OR APPROVED EQUAL. VALVES FOR GAS SHALL BE IRON BODY, PLUG TYPE, WITH SQUARE KEY AND THREADED ENDS.
14. COLD WATER AND HOT WATER PIPING INSULATION SHALL BE 1/2" THICK, WITH FACTORY APPLIED FIBERGLASS CLOTH WITH INTEGRAL VAPOR BARRIER AND SELF-SEALING LAP. FITTINGS AND VALVES SHALL BE COVERERD WITH PRE-CUT FIBERGLASS INSERTS AND FITTED WITH MOULDED PVC COVERS, SECURED WITH GLASS FABRIC TAPE WITH MASTIC. INSULATION SHALL BE FIBERGLASS 25 ASJ OR EQUAL, AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS TO CONFORM TO THE AUL NON-COMBUSTIBLE RATING.
15. PLUMBING FIXTURES: (TO BE APPROVED BY BUILDING OWNER REPRESENTATIVE BEFORE SUBMISSION FOR APPROVAL TO ENGINEER)
16. WH – WALL HYDRANT – WOODFORD MODEL 25 FREEZE RESISTANT, WITH INTEGRAL VACUUM BREAKER. (PROVIDE EVERY 150', WHERE DIRECTED BY BUILDING OWNER)
17. WATER HEATERS – FURNISH AND INSTALL WATER HEATERS WHERE INDICATED. (TO BE APPROVED BY BUILDING OWNER REPRESENTATIVE BEFORE SUBMISSION FOR APPROVAL TO ENGINEER)
18. TEST ALL NEW PLUMBING WORK IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS.
19. PROVIDE HEAT TRACE ON ALL TRAPS LOCATED IN GARAGE, COLD WATER PIPING LOCATED IN GARAGE, AND ANY PIPING SUBJECT TO FREEZING.

GENERAL NOTES | NTS

PLUMBING NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF ALL FIRE WALLS. ANY PENETRATION THROUGH FIRE FLOORS SHALL BE FIRE STOPPED . ANY PENETRATION THROUGH FIRE WALL SHALL BE FIRE CAULKED. REFER TO SECTION 7275 FOR PROCEDURE.
2. WITHOUT LIMITATION PAY ATTENTION TO THE FOLLOWING ITEMS:
   A. CHASES BEHIND BATHROOM (WALL BETWEEN CORRIDOR AND BATHROOM) AND WALLS BETWEEN UNITS ARE FIRE RATED. FIRE CAULK ALL PENETRATIONS.
   B. TOP AND BOTTOM WALL PLATES AT CEILING AND AT FLOOR IS PART OF FIRE SEPARATION. FIRE STOP ALL PENETRATIONS THROUGH PLATES.

FIXTURE CONNECTIONS

TYPE	FIXTURE	WASTE	VENT	CW	HW	TEMP
P–X	LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	HC–LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	TOILET	3"	2"	1/2"		
P–X	HC–TOILET	3"	2"	1/2"		
P–X	SINK	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	HC–SINK	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	SHOWER	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	HC–SHOWER	1 1/2"	1 1/2"	1/2"	1/2"	110

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E-MAIL Zade@ZadeEngineering.com

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PLUMBING NOTES

P3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

PLUMBING FIXTURE SPECIFICATION SCHEDULE

DESIGNATION	FIXTURE SYMBOL	SYMBOL	MANUFACTURER	FIXTURE			FITTING				CARRIER	LOCATION	REMARKS
				MODEL	TYPE	SIZE	MANUF/MODEL#	TYPE	SUPPLY	TRAP			
REFER TO ARCITECTURAL SPECIFICATION FOR PLUMBING FIXTURES													
TRAP PRIMER	P-6	T.P.	PRECISION PLUMBING PRODUCTS	PR-500	-	-	-	-	½" CW SUPPLY	-	-	AS SHOWN	PROVIDE DU-4 FOR MULTIPLE TRAP PRIMERS

NOTE: ALL WASHER MACHINES TO BE PROVIDED WITH AQUA MANAGERS "FLOODSTOP" (FS 3/4-H) AUTOMATIC FLOOD PROTECTION KIT

GENERAL NOTES

1) FOR EXACT LOCATION OF PLUMBING FIXTURES SEE ARCHITECTURAL DRAWINGS.
2) EXAMINE ALL CONTRACT DRAWINGS, GERNERAL CONDITIONS AND SPECIFICATIONS WHICH MAY AFFECT THE WORK.
3) ALL PLUMBING WORK MUST BE COORDINATED WITH ALL OTHER TRADES BEFORE PROCEEDING WITH INSTALLATION.
4) CHECK INVERT ELEVATIONS AND EXACT LOCATIONS OF ALL OUTSIDE UTILITIES BEFORE INSTALLING ANY UNDERGROUND.
5) NO CHANGES ARE TO BE MADE IN PLUMBING LAYOUT WITHOUT WRITTEN PERMISSION OF THE ARCHITECT.
6) NO PIPING SHALL RUN EXPOSED IN FINISHED AREAS.
7) ALL PLUMBING SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL AND STATE PLUMBING CODES.
8) ROUGHING DIMENSIONS OF TOILET FIXTURES MUST BE COORDINATED WITH GENERAL CONTRACTOR.
9) INSTALL ALL HOT AND COLD WATER PIPING AS PER SPECIFICATIONS.
10) INSTALL SHUTOFF GATE VALVES ON ALL BRANCH SUPPLY LINES AND AT THE BASE OF HOT AND COLD WATER RISERS.
11) PLUMBING CONTRACT SHALL REQUIRES PANELS TO ACCESS THE CONCEALED PLUMBING CLEANOUTS, DRAINS, DEVICES AND CONTROLS. ACCESS PANELS SHALL BE FIRE RATED TO MATCH THE PENETRATING PARTITION OR CEILING TYPE. GENERAL CONTRACTOR SHALL INSTALL THE ACCESS PANELS.
12) INSTALL ALL FLOOR CLEANOUTS TO CLEAR EQUIPMENT.
13) PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES AND CHARGES IN CONNECTION WITH THE WORK.
14) PLUMBING CONTRACTOR SHALL PROVIDE WATERTIGHT SLEEVES FOR ALL PIPES PASSING THRU BASEMENT WALLS.
15) INSTALL CLEANOUTS AT THE BASE OF ALL SANITARY STACKS.
16) INSTALL ALL HORIZONTAL RUNS OF PIPING AS HIGH AS POSSIBLE, PITCH ALL WATER PIPING TO DRAIN, DRAW OFFS AT ALL POINTS.
17) PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO OUTSIDE UTILITIES.
18) FOR PIPE SIZES NOT SHOWN ON PLANS SEE DETAILS & RISER DIAGRAMS.

SCHEDULE OF WATER HEATER

DESIGNATION	NAME	LOCATION	DESCRIPTION
WH-1	APARTMENT HOT WATER HEATER	APARTMENT MECH. ROOM	NAVIEN NCB-240A, COMBI-GAS FIRED WATER HEATER, 199 MBH INPUT, 120V/1Ø, AFUE 91%, 4.5 GPM @70° RISE. PROVIDE (2) 3" FLUES THROUGH ROOF FOR EACH UNIT.

GENERAL NOTES:

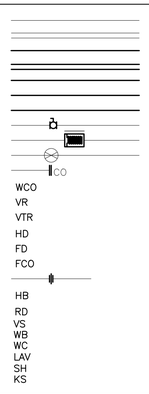
1. SHOULD ANY CONTRADICTION, AMBIGUITY, ERROR, INCONSISTENCY, OMISSION OR INCOMPLETE SYSTEM APPEAR IN OR BETWEEN ANY OF CONTRACT DOCUMENTS THE CONTRACTOR SHALL, BEFORE SUBMITTING THE FINAL BID AND SIGNING THE CONTRACT FOR CONSTRUCTION, NOTIFY THE ARCHITECT AND REQUEST A WRITTEN RESOLUTION AS TO WHICH METHODS OR MATERIALS WILL BE REQUIRED. IN THE EVENT OF CONFLICTING REQUIREMENTS OF STANDARDS , DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL COMPLY WITH THE MORE STRINGENT REQUIREMENTS. BEFORE SUBMITTING THE FINAL BID AND THE SIGNING THE CONTRACT FOR THE CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION FROM THE ARCHITECT. IN NO CASE SHALL THE CONTRACTOR PROCEED WITH THE AFFECTED WORK UNTIL ADVISED BY THE ARCHITECT.

IF THE CONTRACTOR FAILS TO MAKE A REQUEST FOR INTERPRETATION OR RESOLUTION NO EXCUSE WILL BE ACCEPTED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER, AS INTERPRETED BY THE ARCHITECT. THIS GENERALLY MEANS THE USE OF THE HIGHEST QUALITY MATERIAL, MOST EXPENSIVE WAY OF PERFORMING WORK AND PROVIDING COMPLETE FUNCTIONING SYSTEM FOR PROPER OPERATION.

EACH AND EVERY TRADE OR SUBCONTRACTOR WILL BE DEEMED TO HAVE FAMILIARIZED THEMSELVES WITH ALL THE CONTRACT DOCUMENTS OF THIS PROJECT, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND SITE WORK, AND TO HAVE VISITED THE SITE, SO AS TO AVOID ERROR, OMISSIONS AND MISINTERPRETATIONS. RELATED INFORMATION MAY BE PROVIDED ON CONTRACT DOCUMENTS OTHER THAN THOSE ASSOCIATED WITH THE SUBCONTRACTOR'S TRADE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RELATED WORK OF ALL THE CONTRACT DOCUMENTS. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR ALLEGED ERRORS, OMISSIONS AND MISINTERPRETATIONS WHETHER THEY ARE A RESULT OF FAILURE TO OBSERVE THIS REQUIREMENT OR NOT.

2. ALL PENETRATIONS OF ASSEMBLIES EXPOSED TO THE EXTERIOR ENVIRONMENT SHALL BE SEALED WITH FOAM SEALANT OR EQUIVALENT SEALER TO PROVIDE ZERO AIR INFILTRATION. COORDINATE WITH FIRE STOPPING REQUIREMENTS.

3. NO COMPONENT OF ANY SYSTEM SHALL RUN THROUGH THE STAIR ENCLOSURE THAT DOES NOT RELATE TO OR SERVE THE STAIR ENCLOSURE.



	SANITARY ABOVE FLOOR
	SANITARY UNDER FLOOR
	VENT
	VENT BURIED
	COLD WATER
	HOT WATER
	HOT WATER CIRCULATION
	SHUT OFF VALVE
	CHECK VALVE
	FLOOR CLEANOUT
	CLEANOUT
WCO	WALL CLEANOUT
VR	VENT RISER
VTR	VENT THRU ROOF
HD	HUB DRAIN
FD	FLOOR DRAIN
FCO	FLOOR CLEANOUT
	UNION
HB	HOSE BIBB
RD	ROOF DRAIN
VS	VENT STACK
WB	WASHER BOX
WC	WATER CLOSET
LAV	LAVATORY SINK
SH	SHOWER
KS	KITCHEN SINK

– PLUMBING LEGEND N.T.S.

INSULATION NOTES

THE FOLLOWING SYSTEMS SHALL BE INSULATED.
DUCT LINER SHALL BE CLOSED CELL TYPE, GERM PROOF

ESTAR REQUIREMENTS:

1. DOMESTIC HOT WATER & RECIRCULATION MAINS AND BRANCHES:
   PIPING < 1" REQUIRES 1" INSULATION
   PIPING > 1½" REQUIRES 1½" INSULATION

IECC 2009 REQUIREMENTS:

1. DOMESTIC HOT WATER MAINS AND BRANCHES:
   PIPING < 1" REQUIRES 1" INSULATION
   PIPING > 1½" REQUIRES 2" INSULATION

GENERAL INSUALTION REQUIREMENTS:

CW PIPING: ½" INSULATION
HORIZONTAL STORM: ½" INSULATION

THIS BUILDING WILL SHALL BE QUALIFIED FOR ESTAR, STRETCH CODE, AND LEED SILVER. PROVIDE THE MOST STRINGENT LEVELS OF INSULATION FOR QUALIFICATION

PIPING MATERIAL NOTES

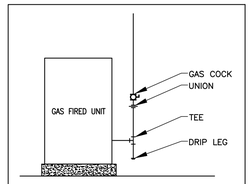
SANITARY AND VENT: BELOW GROUND: SCH.40 PVC WITH SOLVENT JOINTS
ABOVE GROUND:
-SCH.40 PVC WITH SOLVENT JOINTS

WATER PIPING: TYPE "L" COPPER & CPVC

GAS PIPING: SCHEDULE 40 ER/ERW BLACK STEEL WITH THREADED JOINTS OR WELDED.

FIRE SAFE THROUGH WOOD FLOORS

TYPE	SIZE	HILTI	MATERIAL	RATING	BOTTOM	TOP	CHASE WALL
STEEL/CAST COPPER/EMT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
STEEL/CAST 4" EMT/ 2" FLEX	MAX 6" –	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
STEEL/CAST COPPER/EMT	MAX 4"	CP-620	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	REQUIRED
PEX	MAX 1"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	BOTH SIDES	BOTH SIDES	NOT REQUIRED
PVC PIPE	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
PVC PIPE	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
PVC PIPE	MAX 4"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	COLLAR	FIRE STOP	NOT REQUIRED
REFRIGERANT	–	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
4" DUCT	MAX 4"	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
INSULATED COPPER/STEEL	MAX 2"	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
CABLES	MAX 2"	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED



GAS FIRED EQUIPMENT PIPING DETAIL

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

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Dorchester, Massachusetts 02122 Fax: 617-282-1080
www.roche-christopher.com

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East Boston, MA 02128

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PLUMBING SCHEDULES

P4

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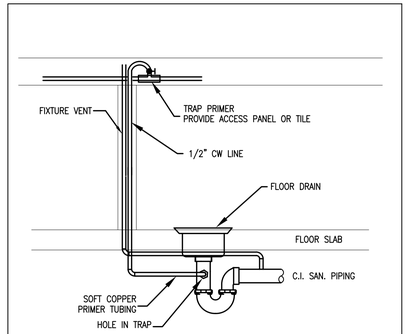
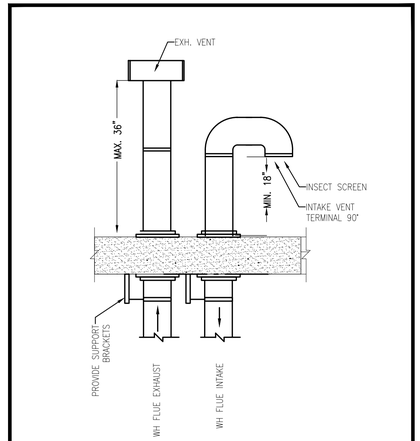
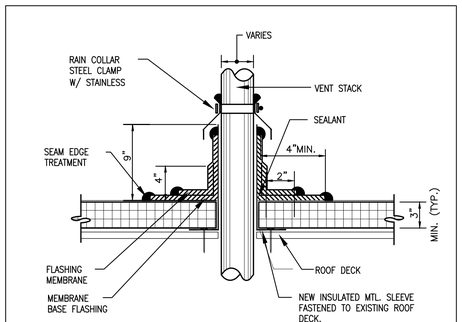


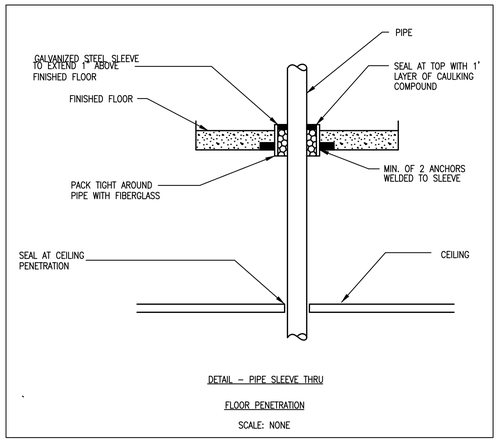
TRAP PRIMER DETAIL | N.T.S.



WH FLUE FLUE DETAILS



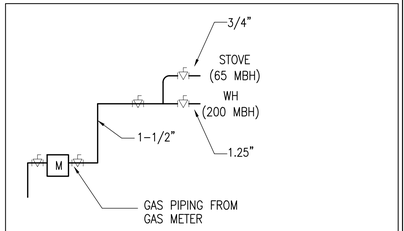
VENT TERMINAL | N.T.S.



DETAIL – PIPE SLEEVE THRU

FLOOR PENETRATION

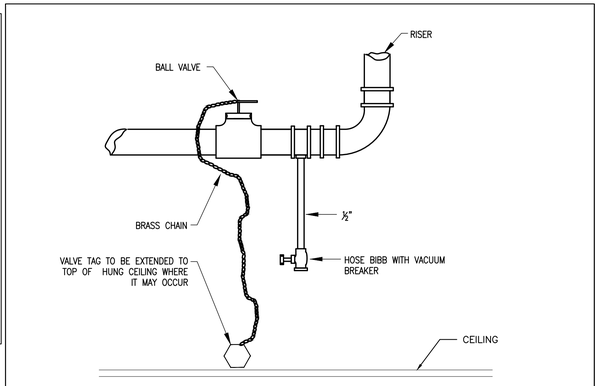
SCALE: NONE



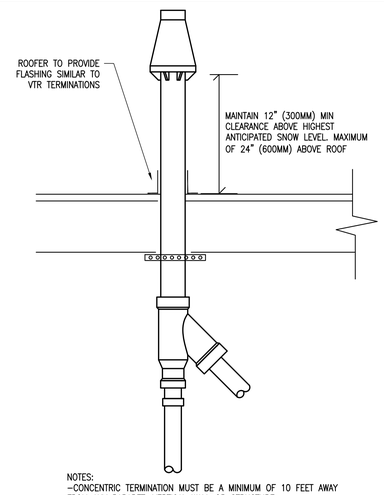
GAS RISER DIAGRAM

N.T.S.

NOTE: RISER DIAGRAMS DO NOT SHOW EVERY OFFSET

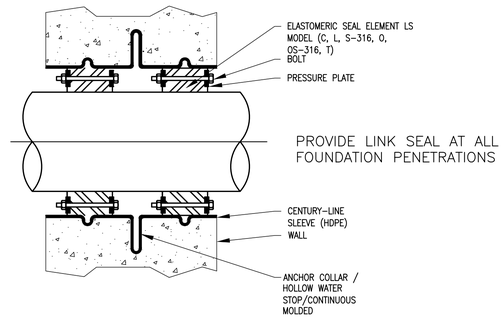


TYPICAL CONNECTION AT BASE OF WATER RISER | N.T.S.



NOTES:
–CONCENTRIC TERMINATION MUST BE A MINIMUM OF 10 FEET AWAY FROM ANY PARAPET, VERTICAL WALL OR STRUCTURE

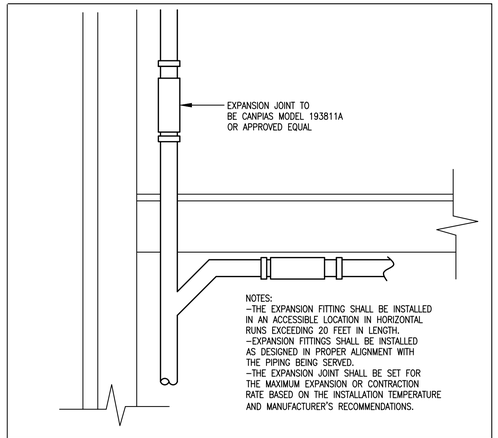
4 INCH CONCENTRIC TERMINATION FLAT ROOF CLEARANCE | N.T.S.



LS Model	Seal Element	Bolts/Nuts	Pressure Plate
C Polymer	EPDM (Black)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon

Sleeve Model	Description	Material
CS	Century–Line Sleeve	HDPE

LINK SEAL DETAIL | N.T.S.



NOTES:
–THE EXPANSION FITTING SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION IN HORIZONTAL RUNS EXCEEDING 20 FEET IN LENGTH.
–EXPANSION FITTINGS SHALL BE INSTALLED AS DESIGNED IN PROPER ALIGNMENT WITH THE PIPING BEING SERVED.
–THE EXPANSION JOINT SHALL BE SET FOR THE MAXIMUM EXPANSION OR CONTRACTION RATE BASED ON THE INSTALLATION TEMPERATURE AND MANUFACTURER'S RECOMMENDATIONS.

P.V.C. EXPANSION JOINT FITTING | N.T.S.

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PLUMBING DETAILS

P5

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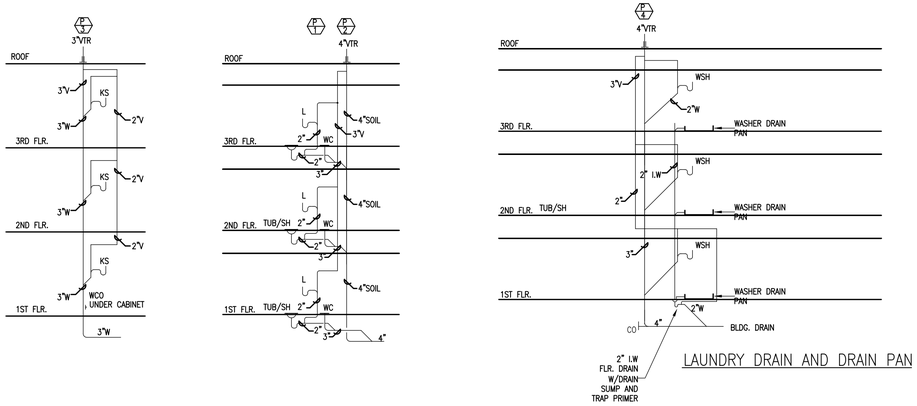
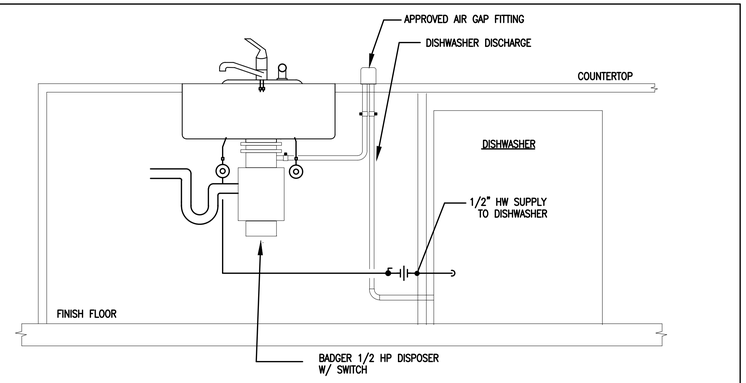


LAUNDRY DRAIN AND DRAIN PAN

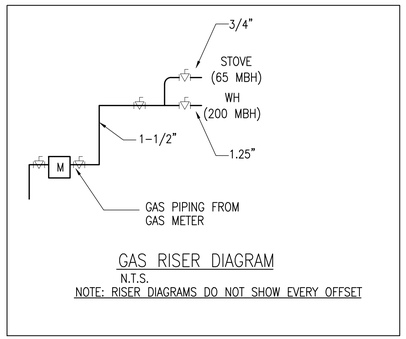
TYPICAL SANITARY RISER DIAGRAMS

N.T.S.

RISER DIAGRAMS DO NOT SHOW OFFSETS.



KITCHEN AND DISHWASHER DETAIL — N.T.S.



GAS RISER DIAGRAM

N.T.S.

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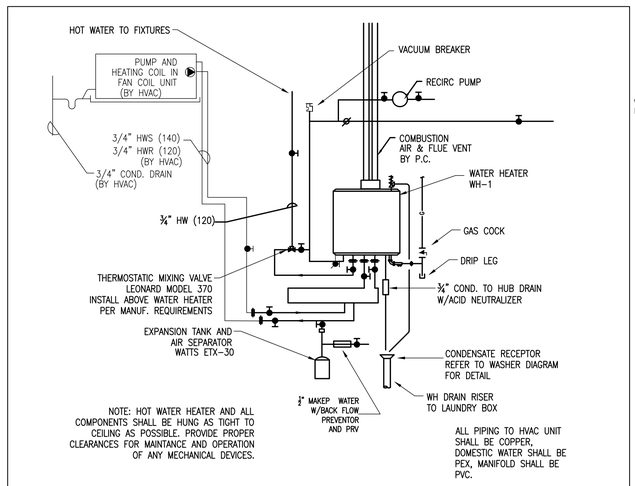
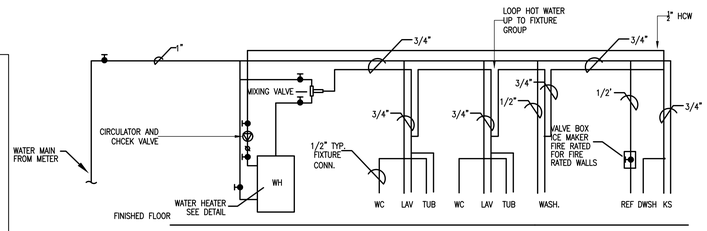


INSTANTANEOUS WATER HEATER DETAIL — N.T.S.



TYPICAL WATER PIPING DIAGRAM

N.T.S.

SEE FLOOR PLANS FOR ACTUAL LOCATION OF FIXTURES

CODE REQUIRES HOT WATER RECIRC. LOOP TO EVERY FIXTURE AT A DISTANCE 20' AND MORE. LOOP HOT WATER THROUGH ALL THE FIXTURES AND THE CHASES AND RETURN ¾" HCW TO WATER HEATER FROM THE MOST DISTANT FIXTURE.

PC SHALL PROVIDE ON DEMAND HOT WATER RECIRCULATION PUMP AS MFG BY TACO, MODEL GENIE, STAINLESS STEEL PUMP, COMPLETE WITH ALL COMPONENTS FOR PROPER INSTALLATION AND OPERATION.
PROVIDE ROUND MOTION SENSOR AT EACH FIXTURE LOCATION, WIRELESS TRANSMITTER AND HARD WIRED TRANSMITTER AT PUMP LOCATION, LOCATE PUMP AT REMOTEST FIXTURE LOCATION

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

RCA, LLC
415 Neponset Ave. Dorchester, Massachusetts 02122
www.roche-christopher.com
Telephone: 617-282-0030
Fax: 617-282-1080

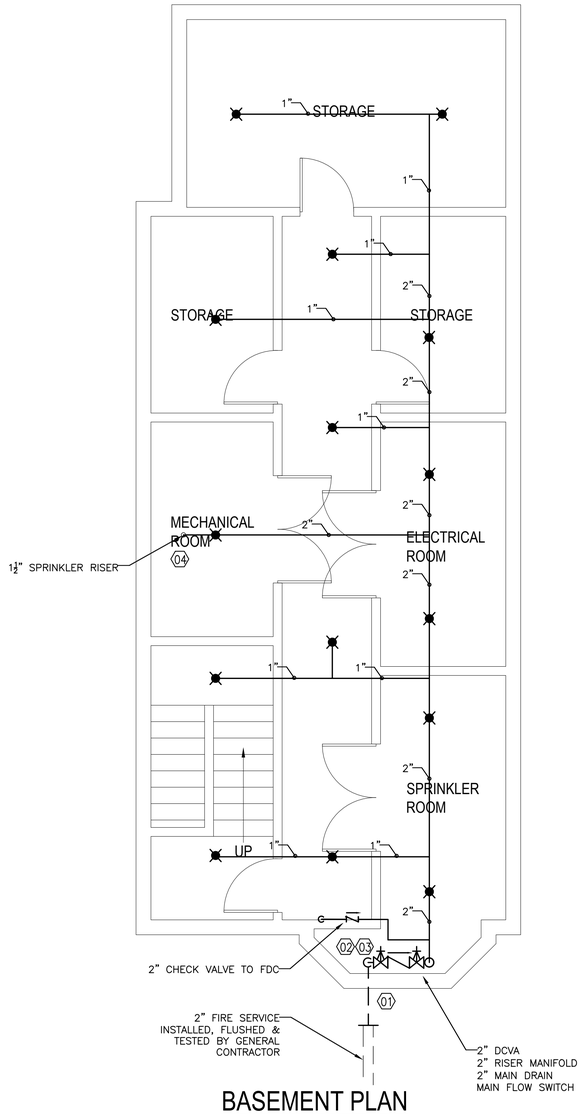
Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18 REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

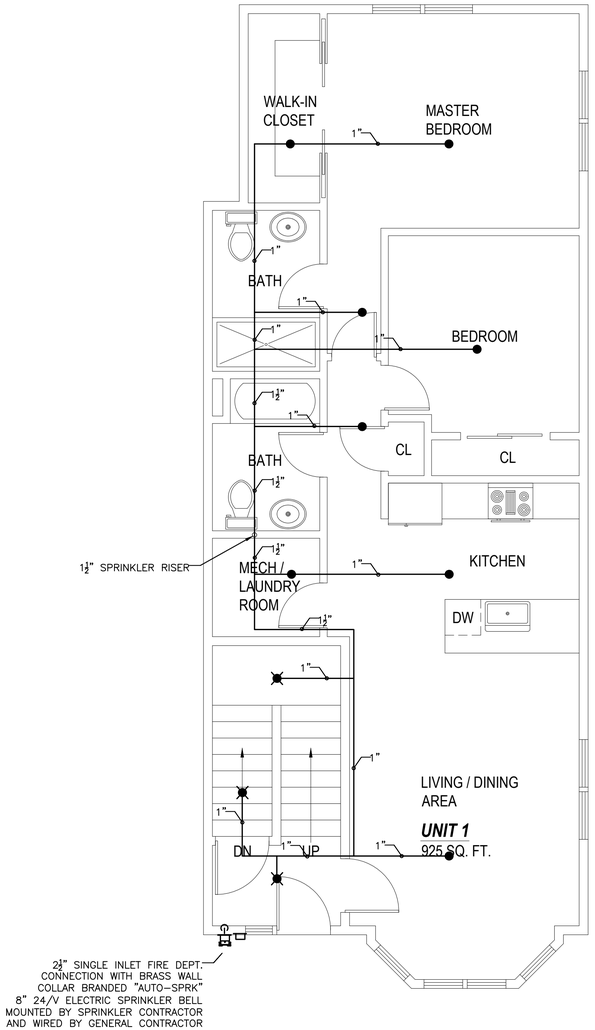
PLUMBING DETAILS

P6

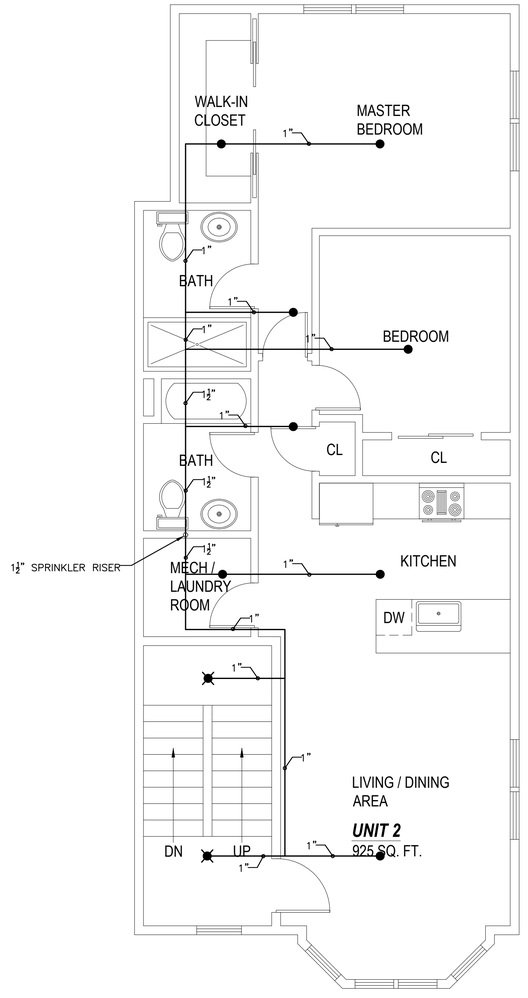
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL (617) 338-4406
FAX (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

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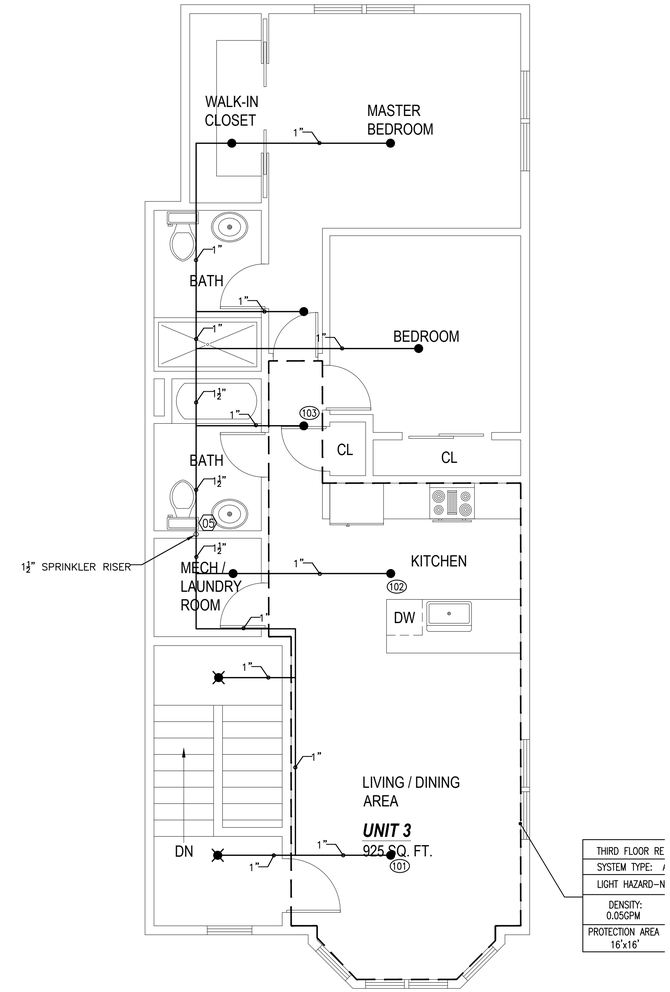
Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT #	18-040
DATE:	6-4-18
REV:	
SCALE:	AS NOTED
DRAWN BY:	JD
CHECKED BY:	MM

PROPOSED FIRE PROTECTION PLANS

FP1

REV.	DATE	DESCRIPTION
X	X-XX-XX	XXX



THIRD FLOOR PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
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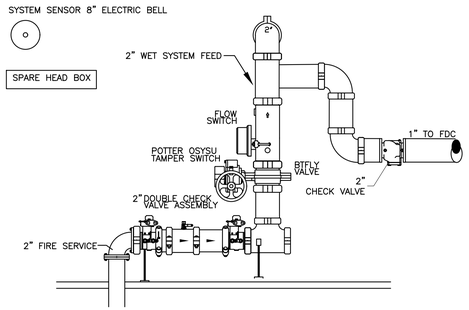
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18 REV:
SCALE: AS NOTED
DRAWN BY: JD
CHECKED BY: MM

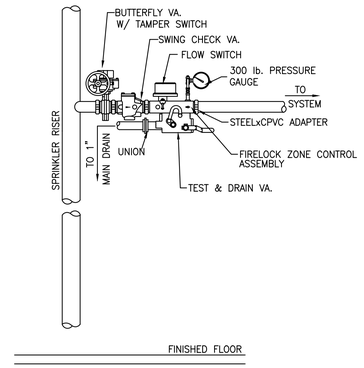
PROPOSED FIRE PROTECTION PLANS

FP2

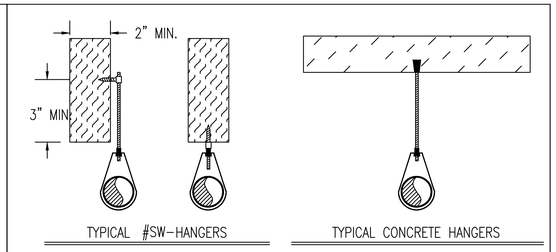
REV.	DATE	DESCRIPTION
X	X-XX-XX	XXX



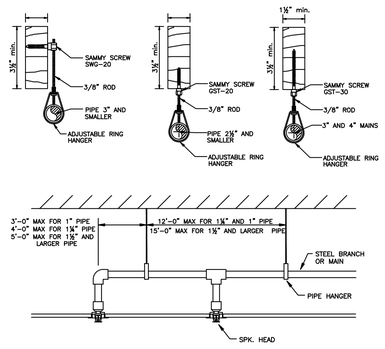
SPRINKLER SUPPLY MANIFOLD | NTS



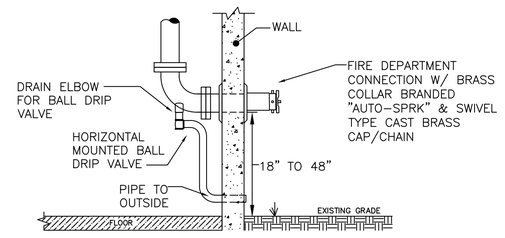
FIRE PROTECTION RISER | NTS



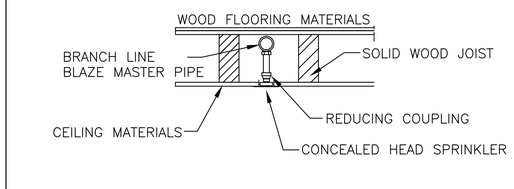
TYPICAL HANGER DETAILS | NTS



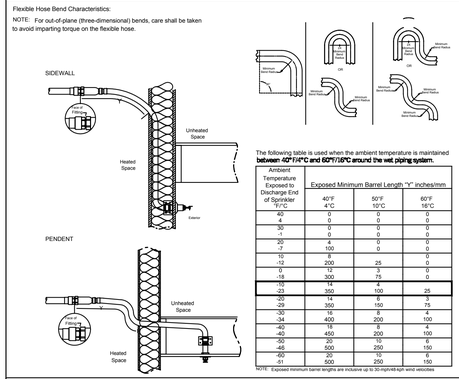
PIPE HANGER SPACING | NTS



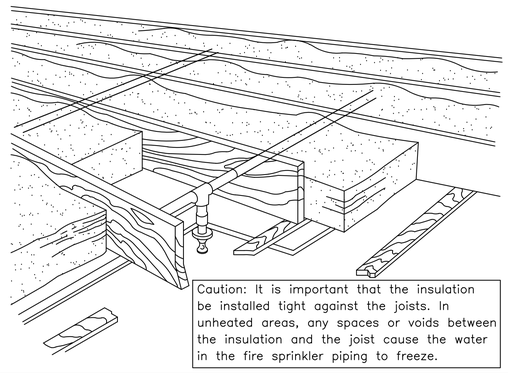
FIRE DEPARTMENT CONNECTION | NTS



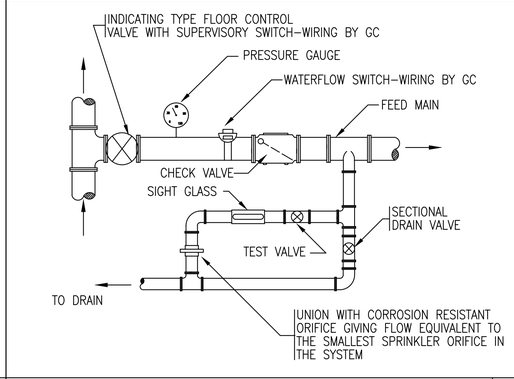
SPRINKLER PIPING AT CEILING PLENUM | NTS



DRY SIDEWALL SPRINKLER DETAIL | NTS



INSULATION DETAIL | NTS



FLOOR CONTROL VALVE ASSEMBLY | NTS

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PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: AS NOTED
DRAWN BY: JD
CHECKED BY: MM

FIRE PROTECTION DETAILS

FP3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DESIGN CRITERIA

1. THE AUTOMATIC FIRE SUPPRESSION SYSTEM HAS BEEN HYDRAULICALLY SIZED PER NFPA–13R 2013, CMR 780 (9TH) WITH AMENDMENTS

2. SPRINKLER COVERAGE SHALL BE REQUIRED IN AREAS OF THE BUILDING PER NFPA–13R

PIPE, FITTINGS AND JOINTS

1. PIPE AND FITTINGS SHALL CONFORM TO THE LATEST ANSI, ASTM, NFPA AND AWWA STANDARDS INCLUDING LATEST AMENDMENTS.

2. SPRINKLER MAINS AND BRANCHES MAY BE LIGHT WALL BLACK STEEL PIPE WITH ROLLED GROOVE TYPE MALLEABLE IRON PIPE COUPLINGS AND FITTINGS WITH GASKETS AND BOLTS AS APPROVED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND THE UNDERWRITERS' LABORATORIES. SCHEDULE 40 BLACK STEEL PIPE WITH STANDARD WEIGHT MALLEABLE IRON FITTINGS AS APPROVED BY NFPA AND UL MAY BE USED WITH, OR IN LIEU OF, THE SYSTEM DESCRIBED ABOVE. CPVC PIPING MAY BE USED WHERE ALLOWED BY LOCAL & NATIONAL LIFE SAFETY CODES

HANGERS AND SUPPORTS

1. HANGERS AND SWAY BRACING WHERE REQUIRED , SHALL BE INSTALLED TO MEET NFPA AND LOCAL STATE BUILDING CODE COMPLIANCE AS TO LOCATION, SPACING, AND MAXIMUM LOADS.

2. HANGER MATERIAL SHALL BE COMPATIBLE WITH PIPING MATERIALS WITH WHICH IT COMES INTO CONTACT.

3. HANGERS SHALL BE INSTALLED, IN ADDITION TO THE ABOVE, AT ALL CHANGES OF DIRECTION (HORIZONTAL AND VERTICAL), VALVES AND EQUIPMENT CONNECTIONS. HANGERS SHALL BE LOCATED SO THAT THEIR REMOVAL IS NOT REQUIRED TO SERVICE, ASSEMBLE OR REMOVE EQUIPMENT.

4. HORIZONTAL RUNS MAY USE BAND HANGERS UP TO 4" SIZE. PIPING LARGER THAN 4" SHALL BE PROVIDED WITH CLEVIS TYPE.

5. ALL RODS, CLAMPS, NUTS, WASHERS, SHIELDS AND HANGERS IN ALL AREAS SHALL BE ELECTRO–GALVANIZED COATED STEEL.

VALVES AND SUNDRIES

1. SHUTOFF VALVES ON THE ABOVEGROUND FIRE PROTECTION SYSTEM SHALL BE UL, FM BUTTERFLY OR OS&Y GATE VALVES, AS INDICATED, ON SIZES 2–1/2" AND LARGER, VALVES UP TO 2" SHALL BE UL, FM BALL VALVES. ALL ISOLATION / CONTROL VALVES SHALL BE MONITORED.

2. CHECK VALVES SHALL BE 175–POUND CLASS FOR FIRE PROTECTION.

3. VALVES SHALL BE PROVIDED WITH SEATS SUITABLE FOR THE SERVICE INTENDED.

4. VALVES SHALL BE AS MANUFACTURED BY NIBCO, VICTAULIC, WALLWORTH, MILWAUKEE OR APPROVED EQUAL. MANUFACTURERS MODEL NUMBERS REFERENCED BELOW ARE USED TO INDICATE A TYPE, MATERIAL AND QUALITY TO BE PROVIDED.

5. ALL VALVES SPECIFIED HEREIN SHALL BE UL/FM APPROVED, 175 PSI MINIMUM WORKING PRESSURE. ALL CONTROL VALVES SHALL BE PROVIDED WITH TAMPER SWITCH.

AUTOMATIC SPRINKLERS

1. SPRINKLER HEADS: QUICK RESPONSE, BULB TYPE, AND STYLE AS INDICATED OR REQUIRED BY THE APPLICATION. UNLESS OTHERWISE INDICATED.

2. IN ALL OPEN AREAS, WHERE ELECTRICAL EQUIPMENT IS LOCATED, AN APPROVED TYPE SHIELD, TO KEEP WATER OFF THE ELECTRICAL EQUIPMENT, SHALL BE PROVIDED.

3. PROVIDE ALL SPRINKLER HEADS WITH PROTECTIVE CAGE.

4. PROVIDE IN THE VALVE ROOM, A FINISHED STEEL CABINET SUITABLE FOR WALL MOUNTING, WITH HINGED COVER AND SPACE FOR 6 SPARE SPRINKLER HEADS PLUS SPRINKLER HEAD WRENCH.

SPRINKLER SHOP DRAWINGS

1. CONTRACTOR SHALL SUBMIT ENGINEERED TIER II SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE DETAILED PER NFPA–13R REQUIREMENTS FOR WORKING DRAWINGS–FINAL AFFIDAVITS CANNOT BE ISSUED WITHOUT APPROVED SHOP DRAWINGS

2. HYDRAULIC CALCULATIONS SHALL ACCOUNT FOR ALL OFFSETS IN THE SYSTEM BASED ON A 100% COORDINATED SET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL STRUCTURAL AND ARCHITECTURAL FEATURES PRESENT

FLUSHING AND TESTING

1. ALL LABOR, MATERIALS, INSTRUMENTS, DEVICES AND POWER REQUIRED FOR TESTING SHALL BE PROVIDED BY THIS CONTRACTOR. THE TESTS SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF THE ENGINEER, GENERAL CONTRACTOR AND THE LOCAL FIRE DEPARTMENT AND SUCH OTHER PARTIES, AS MAY HAVE LEGAL JURISDICTION. NO PIPING IN ANY LOCATION SHALL BE CLOSED UP, FURRED IN, OR COVERED BEFORE TESTING.

2. WHERE PORTIONS OF PIPING SYSTEMS ARE TO BE COVERED OR CONCEALED BEFORE COMPLETION OF THE PROJECT, THOSE PORTIONS SHALL BE TESTED SEPARATELY IN THE MANNER SPECIFIED HEREIN FOR THE RESPECTIVE ENTIRE SYSTEM.

3. ANY PIPING OR EQUIPMENT THAT HAS BEEN LEFT UNPROTECTED AND SUBJECT TO MECHANICAL OR OTHER INJURY IN THE OPINION OF THE GENERAL CONTRACTOR SHALL BE RE TESTED IN PART OR IN WHOLE AS DIRECTED.

4. THE ENGINEER RETAINS THE RIGHT TO REQUEST A RECHECK OR RESETTING OF ANY PUMP OR INSTRUMENT BY THIS CONTRACTOR DURING THE GUARANTEE PERIOD AT NO ADDITIONAL COST TO THE CONTRACTOR.

5. REPAIR, OR IF DIRECTED, REPLACE ANY DEFECTIVE WORK WITH NEW WORK WITHOUT EXTRA CHARGE TO THE CONTRACT. REPEAT TESTS AS DIRECTED, UNTIL THE WORK IS PROVEN TO MEET THE REQUIREMENTS SPECIFIED HEREIN.

6. RESTORE TO ITS FINISHED CONDITION ANY WORK, DAMAGED OR DISTURBED, PROVIDED BY OTHER CONTRACTORS AND ENGAGE THE ORIGINAL CONTRACTOR TO DO THE WORK OF RESTORATION TO THE DAMAGED OR DISTURBED WORK.

7. THIS CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND ANY INSPECTORS HAVING JURISDICTION, A MINIMUM OF 48 HOURS IN ADVANCE OF MAKING ANY REQUIRED TESTS SO THAT ARRANGEMENTS MAY BE MADE FOR THEIR PRESENCE TO WITNESS HIS SCHEDULED TESTS.

8. TESTING SHALL BE IN ACCORDANCE WITH NFPA–13R "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS".

9. EACH SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSI FOR TWO HOURS.

10. FLUSHING OF ALL BURIED SUPPLY PIPING SHALL BE PERFORMED AT A MINIMUM RATE OF 680 GPM FOR SYSTEMS WITH A 4" SERVICE.

11. ALL WATER FLOW DETECTING DEVICES AND CIRCUITS SHALL BE FLOW TESTED THROUGH THE INSPECTOR'S TEST CONNECTION AND ACTIVATE WITHIN FIVE MINUTES OF INITIATION.

12. FIRE PROTECTION CONTRACTOR SHALL OBTAIN RECENT HYDRANT FLOW TEST RESULTS FOR THE USE OF PREPARING WORKING DRAWINGS PER NFPA–13R

13. SPRINKLER FLOW TEST DISCHARGE AND FLUSHING WATER DISCHARGE SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND THE LOCAL FIRE DEPARTMENT OR PUBLIC WORKS AS TO ACCEPTABLE DISCHARGE POINTS PRIOR TO SCHEDULING OF FLUSHING AND TESTS. THIS CONTRACTOR SHALL PROVIDE ALL HOSE AND EQUIPMENT NECESSARY TO PERFORM THE REQUIRED TESTING AND FLUSHING.

AS BUILT DRAWINGS AND CONTRACTOR CERTIFICATES

1. CONTRACTOR SHALL HAVE, ON HAND, AT TIME OF FINAL INSPECTION BY THE AUTHORITY HAVING JURISDICTION, FOR TEMPORARY / FINAL CERTIFICATE OF OCCUPANCY, ALL COMPLETED CERTIFICATES OF MATERIAL AND TESTING FOR ABOVEGROUND AND UNDERGROUND PIPING AS WELL AS THE AS– BUILT DRAWINGS OF THE FIRE PROTECTION INSTALLATION.

PATCHING, REPLACEMENT AND MODIFICATION OF EXISTING WORK

1. AFTER INSTALLATION OF PIPELINES, THE CONTRACTOR SHALL NEATLY PATCH, REPAIR, AND/OR REPLACE EXISTING WORK WHERE DAMAGED, REMOVED OR ALTERED FOR PIPE LINE INSTALLATION. THIS WORK SHALL BE SIMILAR AND EQUAL IN QUALITY TO THE WORK REMOVED OR DAMAGED, UNLESS OTHERWISE SHOWN OR SPECIFIED. SUCH WORK SHALL INCLUDE PATCHING AND REPLACEMENT OF EXISTING PIPING AT POINTS OF CONNECTION TO NEW PIPING, PATCHING OF INSULATION, AND WHEREVER ANY SUCH PATCHING WORK IS INDICATED ON THE DRAWINGS OR OTHERWISE REQUIRED.

INSTALLATION

1. GENERAL: INSTALL FIRE PROTECTION SPECIALTY VALVES, FITTINGS, AND SPECIALTIES IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, NFPA 13 AND 14, AND THE AUTHORITY HAVING JURISDICTION.

2. USE PROPER TOOLS TO PREVENT DAMAGE DURING INSTALLATIONS.

3. ALL PENDENT MOUNTED SPRINKLERS SHALL BE INSTALLED ON RETURN BENDS.

4. ALL SPRINKLERS INSTALLED IN ACOUSTICAL CEILING TILES SHALL BE CENTERED IN TILES WHERE APPLICABLE.

5. COORDINATE AND VERIFY DRAFT CURTAINS ARE INSTALLED AS REQUIRED BY SPRINKLER HEAD SPECIFICATIONS

FIRE PROTECTION SPECIFICATION

FIRE PROTECTION SPECIFICATION

1. BEFORE BIDDING THE JOB, CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING CONDITIONS. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT.

2. SPRINKLER PIPING SHALL BE SCH.10/40 BLACK STEEL WITH 125 LB. CAST IRON THREADED/GROOVED JOINTS WHERE EXPOSED. BLAZE–MASTER TYPE CPVC FOR FIRE PROTECTION SHALL BE INSTALLED CONCEALED AND PER MANUFACTURERS INSTRUCTIONS.

3. SPRINKLER HEADS IN COMMON AREAS SHALL BE QUICK RESPONSE CONCEALED TYPE MANUFACTURED BY VIKING OR EQUAL. WITHIN UNITS THEY WILL BE RESIDENTIAL CONCEALED TYPE.

4. APPLY AND OBTAIN PERMIT AND APPROVAL FROM LANDLORD'S INSURANCE COMPANY, FIRE DEPARTMENT AND STATE AND LOCAL AUTHORITIES.

5. COORDINATE WITH ARCHITECT AND ARCHITECTURAL REFLECTED CEILING PLAN FOR THE LOCATION OF SPRINKLER HEADS.

6. COORDINATE SPRINKLER WORK WITH OTHER DISCIPLINES. SINCE PERFORMANCE OF SPRINKLER SYSTEM IS AFFECTED BY OBSTRUCTIONS AND NOT OTHER WAY AROUND, THIS CONTRACTOR SHALL COORDINATE ALL LIGHTING FIXTURE LOCATIONS AND TYPES AND OTHER OBSTRUCTIONS PRIOR TO ANY WORK DONE.

7. THE SYSTEM SHALL BE HYDROSTATICALLY TESTED AT NOT LESS THAN 200 PSI PRESSURE FOR 2 HOURS. THERE WILL BE NO VISIBLE LEAKAGE WHEN THE SYSTEM IS SUBJECTED TO THE HYDROSTATIC PRESSURE TEST.

8. GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR FROM THE DATE OF ACCEPTANCE.

PREPARATION OF SHOP DRAWINGS:

PER 780CMR 901.2.1
SPRINKLER CONTRACTOR SHALL PREPARE TIER ii SHOP DRAWINGS INCLUDING PIPING & HYDRAULIC CALCULATIONS, AND SHALL SUBMIT TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF WORK. ENGINEER SHALL CERTIFY SYSTEM INSTALLATION FOR CODE COMPLIANCE AT PROJECT COMPLETION.

FLOW TEST DATA

STATIC ----- 72
RESIDUAL ----- 58
FLOW ----- 2004

NOTE:
DATE: 7/14/2020
LOCATION: 16–18 PLAYSTEAD RD.
BY: BWSC

FIRE PROTECTION ABBREVIATIONS

DSW	DRY SIDEWALL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DIA	DIAMETER
DR	DRAIN
ETR	EXISTING TO REMAIN
FHV	FIRE HOSE VALVE
IT	INTERMEDIATE TEMPERATURE
FP	FIRE PROTECTION
FS	FLOW SWITCH
SP	STANDPIPE
GV	GATE VALVE
GAL	GALLONS
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
DN	PIPE DROP
PSI	POUNDS PER SQUARE INCH
PRV	PRESSURE REDUCING VALVE
RV	RELIEF VALVE
SPK	SPRINKLER
TS	TAMPER SWITCH
UP	PIPE RISE
VIF	VERIFY IN FIELD

FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	SUPERVISED BUTTERFLY VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	SUPERVISED OS&Y GATE VALVE
FS	FLOW ALARM SWITCH
	SPRINKLER ZONE CONTROL ASSEMBLY (SEE DETAIL)
	PUMP (FIRE OR JOCKEY)
	DRY ALARM VALVE
	WET ALARM VALVE
	CHECK VALVE
	DRAIN VALVE
	FIRE VALVE ASSEMBLY 2–1/2"W X 2–1/2" X 1–1/2"
	U/L LISTED PIPE HANGER
XX	HYDRAULIC JUNCTION POINT
XXX	HYDRAULIC DISCHARGE NODE

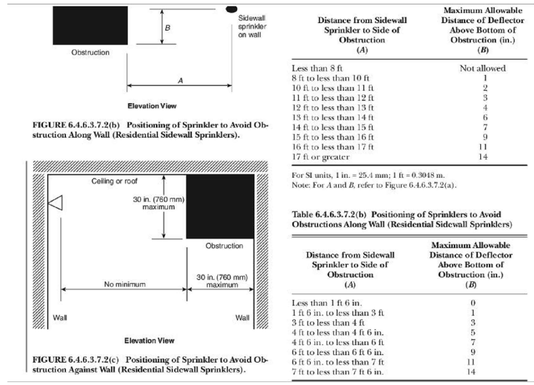

FIGURE 6.4.6.3.7.2(b) Positioning of Sprinkler to Avoid Obstruction Along Wall (Residential Sidewall Sprinklers).

FIGURE 6.4.6.3.7.2(c) Positioning of Sprinkler to Avoid Obstruction Against Wall (Residential Sidewall Sprinklers).

Distance from Sidewall Sprinkler to Side of Obstruction (A)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (in.) (B)
Less than 8 ft	Not allowed
8 ft to less than 10 ft	1
10 ft to less than 11 ft	2
11 ft to less than 12 ft	3
12 ft to less than 13 ft	4
13 ft to less than 14 ft	6
14 ft to less than 15 ft	7
15 ft to less than 16 ft	9
16 ft to less than 17 ft	11
17 ft or greater	14

For SI units, 1 in. = 25.4 mm; 1 ft = 0.3048 m.
Note: For *A* and *B*, refer to Figure 6.4.6.3.7.2(a).

Table 6.4.6.3.7.2(b) Positioning of Sprinklers to Avoid Obstructions Along Wall (Residential Sidewall Sprinklers)

Distance from Sidewall Sprinkler to Side of Obstruction (A)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (in.) (B)
Less than 1 ft 6 in.	0
1 ft 6 in. to less than 3 ft	1
3 ft to less than 4 ft	3
4 ft to less than 4 ft 6 in.	5
4 ft 6 in. to less than 6 ft	7
6 ft to less than 6 ft 6 in.	9
6 ft 6 in. to less than 7 ft	11
7 ft to less than 7 ft 6 in.	14

Table 6.4.6.3.6.2 Positioning of Sprinklers to Avoid Obstructions to Discharge (Residential Upright and Pendent Spray Sprinklers)

Distance from Sprinklers to Side of Obstruction (A)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (in.) (B)
Less than 1 ft	0
1 ft to less than 1 ft 6 in.	0
1 ft 6 in. to less than 2 ft	1
2 ft to less than 2 ft 6 in.	1
2 ft 6 in. to less than 3 ft	1
3 ft to less than 3 ft 6 in.	3
3 ft 6 in. to less than 4 ft	3
4 ft to less than 4 ft 6 in.	5
4 ft 6 in. to less than 5 ft	7
5 ft to less than 5 ft 6 in.	7
5 ft 6 in. to less than 6 ft	7
6 ft to less than 6 ft 6 in.	9
6 ft 6 in. to less than 7 ft	11
7 ft and greater	14

For SI units, 1 in. = 25.4 mm; 1 ft = 0.3048 m.
Note: For *A* and *B*, refer to Figure 6.4.6.3.6.2.

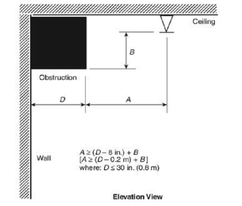

FIGURE 6.4.6.3.6.3 Positioning of Sprinkler to Avoid Obstruction Against Wall (Residential Upright and Pendent Spray Sprinklers).

NFPA–13R OBSTRUCTION CHART

SCALE:N.T.S.

FIRE SPRINKLER HEAD LEGEND

SYM	POSITION	FINISH	TEMP	K	NPT	SIN
◎	UPRIGHT	BRASS	155°	5.60	1/2"	EQ
⊠	UPRIGHT	BRASS	200°	5.60	1/2"	EQ
◉	PENDENT	CONCEALED	155°	5.60	1/2"	EQ
●	RES PENDENT	CONCEALED	155°	4.90	1/2"	EQ
⊙	DRY PENDENT	CONCEALED	155°	5.60	1/2"	EQ
A▶	STD SIDEWALL	CONCEALED	200°	5.60	1/2"	EQ
▶	RES SIDEWALL	CONCEALED	155°	4.00	1/2"	VK480
▷	DRY SIDEWALL	CONCEALED	155°	5.60	1/2"	VS–1

NFPA–13R 2013 DESIGN CRITERIA

THE SPRINKLER SYSTEM SHALL PROVIDE AT LEAST THE FLOW REQUIRED TO PRODUCE A MINIMUM DENSITY OF 0.05 pgm/sf OR THE LISTING OF THE SPRINKLER HEAD WHICHEVER IS GREATER, TO THE DESIGN SPRINKLERS.
THE NUMBER OF SPRINKLERS IN THE DESIGN AREA SHALL BE ALL OF THE SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF FOUR SPRINKLERS, THAT REQUIRE THE GREATEST HYDRAULIC DEMAND.

SPRINKLER HEADS IN KITCHENS AND W/D ROOMS TO BE 175°F

RESIDENTIAL SPRINKLERS SPACED MAXIMUM 8' FROM ANY WALL

SPRINKLER COVERAGE REQUIREMENTS

BASED ON NFPA–13R

1) SPRINKLER SHALL NOT BE REQUIRED IN BATHROOMS OF 55 SF AND LESS.
2) SPRINKLER SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRY THAT MEET THE FOLLOWING CONDITIONS:
   A) THE AREA OF THE SPACE DOES NOT EXCEED 24 SF.
   B) THE SHORTEST DIMENSION DOES NOT EXCEED 3 FT.
   C) THE WALLS AND CEILINGS ARE SURFACED WITH NON–COMBUSTIBLE OR LIMITED COMBUSTIBLE AS DEFINED BY NFPA–220.
3) SPRINKLER SHALL NOT BE REQUIRED IN COVERED, UNHEATED PROJECTIONS OF THE BUILDING AT ENTRANCE/EXITS AS LONG AS THE DWELLING UNIT HAS ANOTHER MEANS OF EGRESS.
4) SPRINKLER SHALL NOT BE REQUIRED IN CLOSETS IN GARAGE AND EXTERIOR CLOSETS (REGARDLESS OF SIZE) LOCATED ON EXTERIOR BALCONIES, EXTERIOR BREEZEWAY/CORRIDORS, OR ACCESSED FROM OUTDOOR WHERE THE CLOSET DOES NOT HAVE DOORS OR UNPROTECTED PENETRATIONS DIRECTLY INTO THE DWELLING UNIT.
5) SPRINKLER SHALL BE INSTALLED IN ANY CLOSET USED FOR HEATING AND/OR AIR–CONDINONING EQUIPMENT, WASHERS AND/OR DRYERS, OR WATER HEATERS EXCEPT AS AS ALLOWED BY 8.3.8. (SEE NOTE #4 ABOVE)
6) SPRINKLERS SHALL NOT BE REQUIRED IN COMBUSTIBLE FLOOR/CEILING ASSEMBLIES

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338–4406
FAX. (617) 451–2540
E–MAIL Zade@ZadeEngineering.com

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: AS NOTED
DRAWN BY: JD
CHECKED BY: MM

FIRE PROTECTION NOTES

FP4

I. GENERAL

1. ALL WORK SHALL CONFORM TO THE MASSACHUSETTS STATE BUILDING CODE (780 CMR, 9TH EDITION, WITH IBC 2015 OR IRC 2015, AS APPLICABLE) AND ITS APPLICABLE REFERENCED STANDARDS.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AS THEY RELATE TO NEW CONSTRUCTION. REPORT TO THE ARCHITECT/ENGINEER ALL OBSERVATIONS AND ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
3. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE FOR A SAFE AND EFFICIENT METHOD OF SHORING AND/OR BRACING THE STRUCTURE DURING ALL CONSTRUCTION PHASES. SUBMIT AN OUTLINE OF PROPOSED PROCEDURE TO THE ARCHITECT/ENGINEER BEFORE CONSTRUCTION COMMENCES.
4. THIS STRUCTURAL DRAWING SET IS BASED ON ARCHITECTURAL AUTOCAD FILES DATED 06/04/2018. THIS STRUCTURAL DRAWING SET HAS BEEN PREPARED USING ONLY THESE ARCHITECTURAL DRAWINGS AND ANY INFORMATION REGARDING OTHER TRADES THAT HAS BEEN REFLECTED ON THESE ARCHITECTURAL DRAWINGS.

II. DESIGN LOADS

1. FLOOR LIVE LOAD
   - a. DWELLING AREAS ..... 40 PSF
   - b. SLEEPING AREAS ..... 30 PSF
   - c. HABITABLE ATTICS (WALK-UP)..... 30 PSF
   - d. UNINHABITABLE ATTICS w/LIMITED STORAGE ..... 20 PSF
   - e. UNINHABITABLE ATTICS WITHOUT STORAGE ..... 10 PSF
2. ROOF LIVE LOAD (PER 780 CMR, 9TH EDITION)
   - a. GROUND SNOW LOAD, Pg ..... 40 PSF*
   - b. BUILDING OCCUPANCY RISK CATEGORY II
   - c. SNOW EXPOSURE FACTOR, Ce 1.0
   - d. SNOW LOAD IMPORTANCE FACTOR, Is 1.0
   - e. THERMAL FACTOR, Ct 1.1

   * - MODIFIED FOR SNOW DRIFT PER 780 CMR, 9TH EDITION
3. WIND LOAD (PER 780 CMR, 9TH EDITION)
   - a. BASIC WINDSPEED (V) ..... 128 MPH
   - b. BUILDING OCCUPANCY RISK CATEGORY II
   - c. WIND LOAD IMPORTANCE FACTOR, Iw 1.00
   - d. WIND EXPOSURE CATEGORY ..... B
   - e. MAIN WIND FORCE RESISTING:
     - SYSTEM DESIGN METHOD ..... METHOD 2 (PER ASCE 7-10)
   - f. COMPONENTS AND CLADDING LOADS ..... PER IBC 2015

III. CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 AND 301 REQUIREMENTS. THIS SHALL INCLUDE PROPORTIONING OF CONCRETE MIX, CONCRETE TESTING, PLACEMENT OF CONCRETE, AND CURING PROCEDURES.
2. CONCRETE SHALL HAVE THE FOLLOWING 28 DAY COMPRESSIVE STRENGTH:
   - a. FOOTINGS ..... 3000 PSI
   - b. ALL OTHER CONCRETE..... 4000 PSI
3. PROVIDE TOTAL AIR ENTRAINMENT OF 6% (±) FOR ALL CONCRETE EXPOSED TO WEATHER.
4. MAXIMUM WATER/CEMENT RATIO FOR 4000 PSI CONCRETE - W/C = 0.45. PROVIDE A HIGH-RANGE WATER REDUCING ADMIXTURE IF REQUIRED TO INCREASE WORKABILITY OF THE CONCRETE.
5. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 AND HAVE A MINIMUM YIELD STRENGTH OF 60 KSI.
6. WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185.
7. UNLESS NOTED OTHERWISE, PROVIDE THE FOLLOWING MINIMUM REINFORCING COVER:
   - a. FOOTINGS ..... 3 INCHES
   - b. SLABS ON GRADE (WWF) ..... SEE TYPICAL DETAILS
8. REINFORCING LAP SPLICES SHALL BE IN ACCORDANCE WITH ACI-318 FOR TENSION LAP SPLICES, CLASS B, UNLESS NOTED OTHERWISE. HORIZONTAL REINFORCING IN PERIMETER WALLS SHALL BE LAPPED 24" MINIMUM.
9. PROVIDE CORNER BARS AT ALL WALL CORNERS AND INTERSECTIONS MATCHING HORIZONTAL REINFORCEMENT WITH 2'-6" MINIMUM LAPS.
10. SUBMIT SHOP DRAWINGS FOR REVIEW (SEE SECTION "I. GENERAL").

IV. FOUNDATIONS

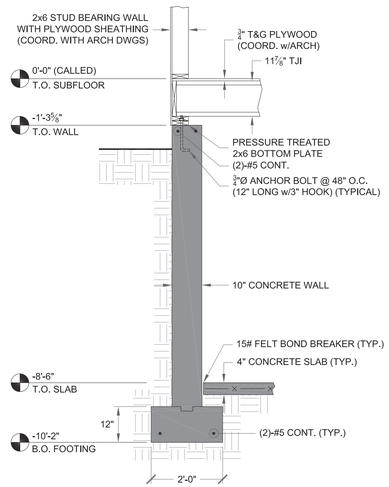
1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AS WELL AS ALL APPROPRIATE AGENCIES AND MUNICIPALITIES TO AVOID DAMAGE TO UNDERGROUND UTILITIES PRIOR TO THE START OF ANY SITE WORK.
2. BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 4'-0" BELOW FINISH GRADE.
3. ALL SOIL PREPARATION UNDER THE BUILDING STRUCTURE SHALL BE AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. THIS INCLUDES ALL REMOVAL OF UNSUITABLE SOILS, COMPACTION OF EXISTING SOILS, SPECIFICATIONS AND PLACEMENT OF ENGINEERED FILL, AND ANY ADDITIONAL REQUIREMENTS. REFER TO THE GEOTECHNICAL ENGINEER FOR MORE INFORMATION REGARDING SUBSURFACE PREPARATION.
4. ALL BOTTOMS OF FOOTINGS SHALL BEAR ON VIRGIN SOIL WITH A MINIMUM BEARING CAPACITY OF 4000 PSF (TO BE VERIFIED BY A P.E. DURING CONSTRUCTION), OR SHALL BEAR ON ENGINEERED FILL. THE ENGINEERED FILL SHALL BE COMPACTED IN 8" LOOSE LAYERS TO 95% OF THE SPECIFIED MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557-78, METHOD D. THE COMPACTION SHALL BE DETERMINED BY ASTM DESIGNATION D1556-82, D2167-66, D2922-81, OR OTHER APPROVED NUCLEAR DENSITY TESTING DEVICE.
5. ENGINEERED FILL UNDER SLABS AND FOOTINGS SHALL CONSIST OF GRANULAR SOIL FREE OF ORGANIC MATTER AND CONFORMING TO THE FOLLOWING LIMITATIONS ON GRADATION:
   - a. MAXIMUM SIZE OF PARTICLES ..... 3 INCHES
   - b. RETAINED ON ¾" SIEVE ..... 30% MAXIMUM
   - c. PASSING NO. 100 SIEVE ..... 45% MAXIMUM
   - d. PASSING NO. 200 SIEVE ..... 8% MAXIMUM
6. DURING BACKFILL OPERATIONS OF ALL FOUNDATION WALLS, THE FILL ON EITHER SIDE OF THE WALL SHALL NOT EXCEED A 2'-0" DIFFERENTIAL, UNLESS THE WALL IS DESIGNED FOR RETAINING ACTION.

V. STRUCTURAL STEEL

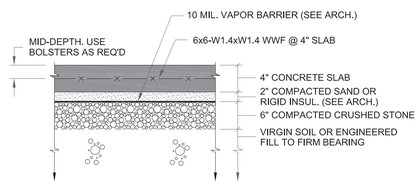
1. ALL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS AND ITS CODE OF STANDARD PRACTICE.
2. MATERIAL SPECIFICATIONS:
   - PIPE COLUMNS ..... ASTM A53, GRADE B (35 KSI)
   - L SHAPES, MISC. PLATES & BARS..... ASTM A36
   - THREADED RODS, THREADED FASTENERS ..... ASTM A36
   - BOLTS ..... ASTM A325 OR A490
   - ANCHOR RODS ..... ASTM F1554, GRADE 36
   - SHEAR STUD CONNECTORS ..... ASTM A108
3. ALL WELDING OPERATIONS SHALL BE PERFORMED BY AWS CERTIFIED WELDERS IN CONFORMANCE WITH ALL APPLICABLE REQUIREMENTS. USE E-70XX WELDING ELECTRODES.
4. ALL NEW STRUCTURAL STEEL SHALL BE GIVEN ONE COAT OF AN APPROVED SHOP PRIMER APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, UNLESS NOTED OTHERWISE. SURFACE PREPARATION OF STEEL PRIOR TO SHOP PAINTING SHALL CONFORM TO SSPC SP6.
5. AFTER ERECTION IS COMPLETE, TOUCH-UP ALL SHOP PRIMED COATS DAMAGED DURING TRANSPORTATION AND ERECTION, AND PRIME ALL FIELD WELDS USING THE SAME PAINT USED FOR SHOP PRIMING.

VI. STRUCTURAL LUMBER

1. ALL WORK SHALL BE IN CONFORMANCE WITH THE AMERICAN FOREST & PAPER ASSOCIATION STANDARDS AND SPECIFICATIONS.
2. ALL LUMBER USED IN A STRUCTURAL CAPACITY SHALL BE S-P-F NO.1/NO. 2 K.D.
3. ALL PRESSURE-PRESERVATIVE TREATED LUMBER USED IN A STRUCTURAL CAPACITY SHALL BE SP #2.
4. ANY WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY, EXPOSED TO UNHEATED BASEMENT AND CRAWL SPACES, OR EXPOSED TO THE EXTERIOR SHALL BE PRESSURE TREATED.
5. ALL FASTENERS SHALL BE IN CONFORMANCE WITH THE FASTENING SCHEDULE IN THE APPLICABLE STATE BUILDING CODE, UNLESS NOTED OTHERWISE. FASTENERS EXPOSED TO THE WEATHER SHALL BE GALVANIZED "SIMPSON'S Z-MAX" OR STAINLESS STEEL.
6. ALL BEAM TO BEAM CONNECTIONS SHALL BE APPROVED GALVANIZED TOP FLANGE HANGERS. SUBMIT SHOP DRAWINGS FOR REVIEW.
7. ALL WOOD POST CAPS AND BASE CONNECTIONS SHALL BE APPROVED GALVANIZED "SIMPSON'S" POST CAP AND BASE PREFABRICATED ASSEMBLIES. SUBMIT SHOP DRAWINGS FOR REVIEW.
8. "TJI" JOISTS, "LVL" (LAMINATED VENEERED LUMBER) AND "PSL" (PARALLEL STRAND LUMBER) FRAMING INDICATED ON DRAWINGS ARE DESIGNED AND MANUFACTURED BY "TRUS-JOIST" OF BOISE, IDAHO.

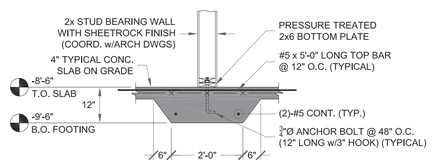


SECTION 1/S1.0
SCALE: ½" = 1'-0"



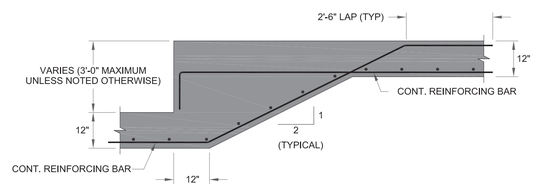
(TYPICAL, UNLESS NOTED OTHERWISE)

TYP. CONC. SLAB ON GRADE DETAIL
NO SCALE



TYPICAL THICKENED SLAB WALL FOOTING

TYP. THICKENED SLAB BEARING WALL DETAIL
SCALE: ½" = 1'-0"



TYPICAL STEPPED FOOTING DETAIL
NO SCALE

REV.	DATE	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
JAMIE L. BOULAY
CIVIL
No. 50330
REGISTERED PROFESSIONAL ENGINEER

BOULAY Consulting
Structural Engineering & Project Management Services
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East Boston, MA 02128

PROJECT # 18-040
DATE:03-31-20 REV:
SCALE: AS NOTED
DRAWN BY: JLB
CHECKED BY: JLB

STRUCTURAL COVER SHEET

S1.0

REV.	DATE	DESCRIPTION

BOULAY Consulting
JAMIE L. BOULAY CIVIL No. 50330
COMMONWEALTH OF MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER
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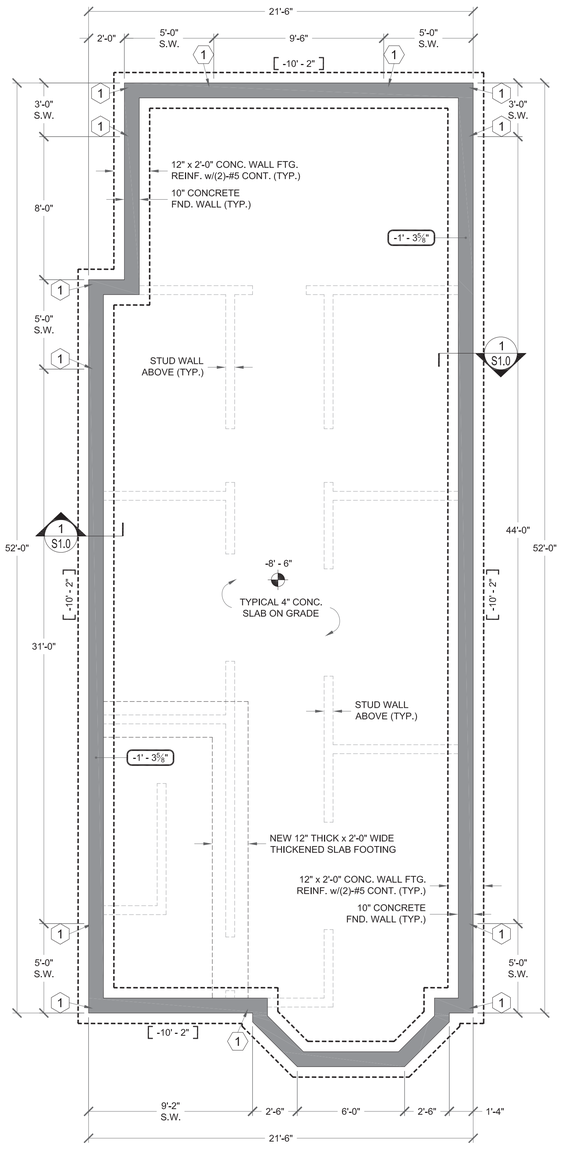
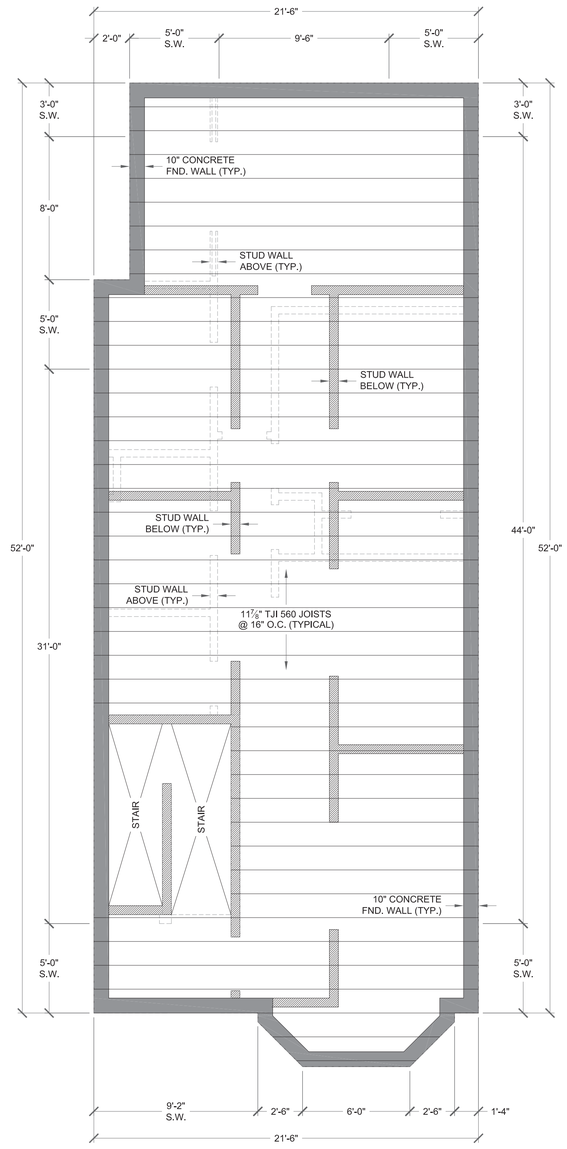


FOUNDATION PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. BOTTOM OF ALL NEW EXTERIOR FOOTINGS SHALL BE LOCATED A MINIMUM 4'-0" BELOW FINISH GRADE.
5. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
6. S.W. - INDICATES SHEAR WALL LOCATION.
7. - INDICATES FINISH SLAB REFERENCE ELEVATION.
8. - INDICATES TOP OF NEW CONCRETE FOUNDATION WALL.
9. [-] - INDICATES BOTTOM OF NEW CONCRETE FOOTING ELEVATION.
10. (1) - INDICATES SIMPSON STRONG-TIE "HDU5-SDS2.5" HOLDOWNS w/"SSTB16" ANCHOR BOLTS (OR APPROVED EQUAL). (SEE TYPICAL SHEAR WALL ELEVATION DETAILS)

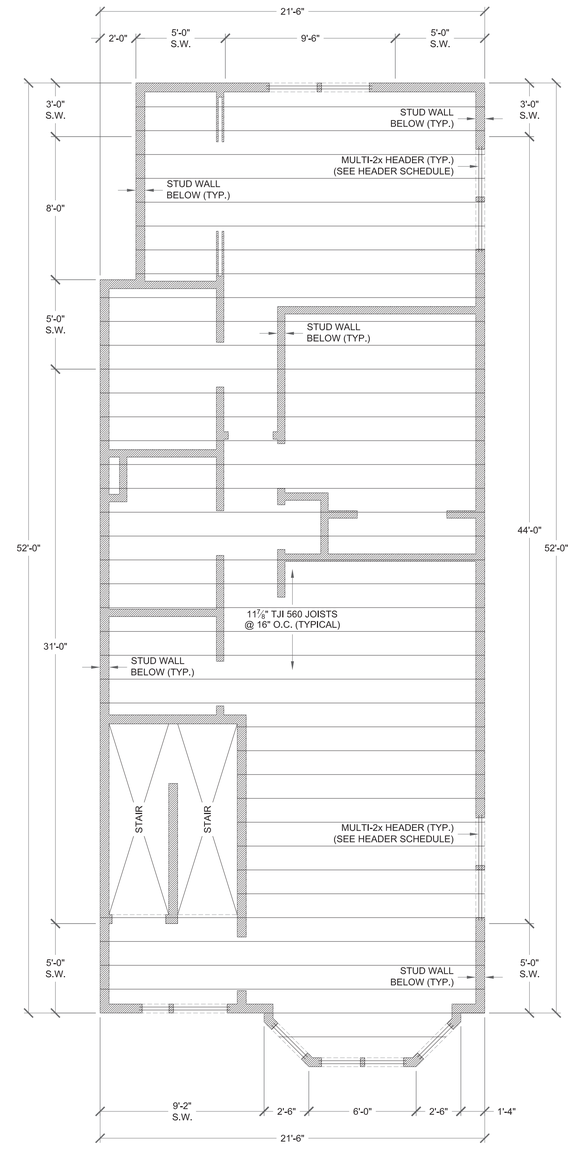


FIRST FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.
8. (1) - INDICATES SIMPSON STRONG-TIE "HDU5-SDS2.5" HOLDOWNS w/"SSTB16" ANCHOR BOLTS (OR APPROVED EQUAL). (SEE TYPICAL SHEAR WALL ELEVATION DETAILS)

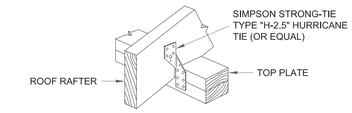


SECOND FLOOR FRAMING PLAN

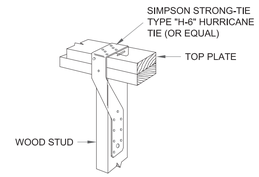
SCALE: ¼" = 1'-0"

NOTES:

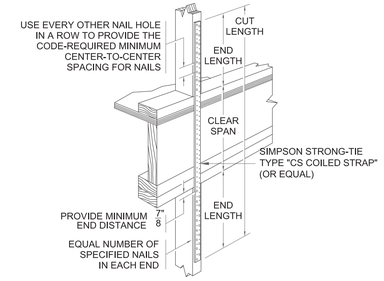
1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.



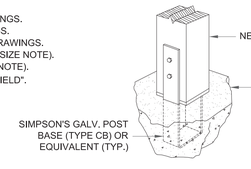
TYPICAL "H-2.5 HURRICANE TIE"
(TYPICAL AT ALL ROOF RAFTERS)



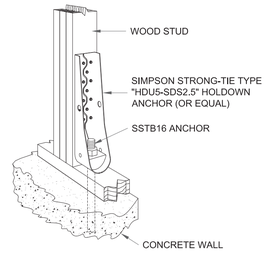
TYPICAL "H-6 HURRICANE TIE"
(TYPICAL AT 4'-0" O.C. SPACING
AT TOP OF ALL EXTERIOR WALLS)



TYPICAL "CS COILED STRAP"
(TYPICAL AT 4'-0" O.C. SPACING AT ALL EXTERIOR WALLS)



TYPICAL POST BASE
(TYPICAL AT ALL PARALLAM POSTS
BEARING ON NEW CONCRETE)



TYPICAL "HDU5-SDS2.5"
WITH SSTB16 ANCHOR
(TYPICAL AT AT ALL SHEAR WALLS)

TYP. SIMPSON STRONG TIE CONNECTION DETAILS

NO SCALE

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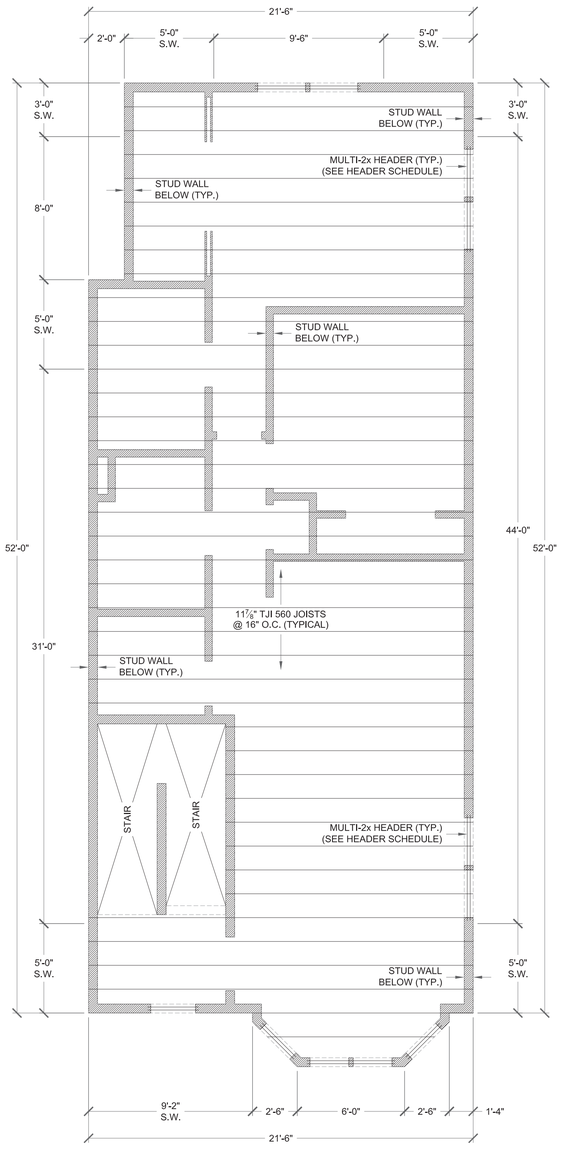
PROJECT # 18-040
DATE:03-31-20 REV:
SCALE: AS NOTED
DRAWN BY: JLB
CHECKED BY: JLB

FOUNDATION & FLOOR FRAMING PLANS

S1.1

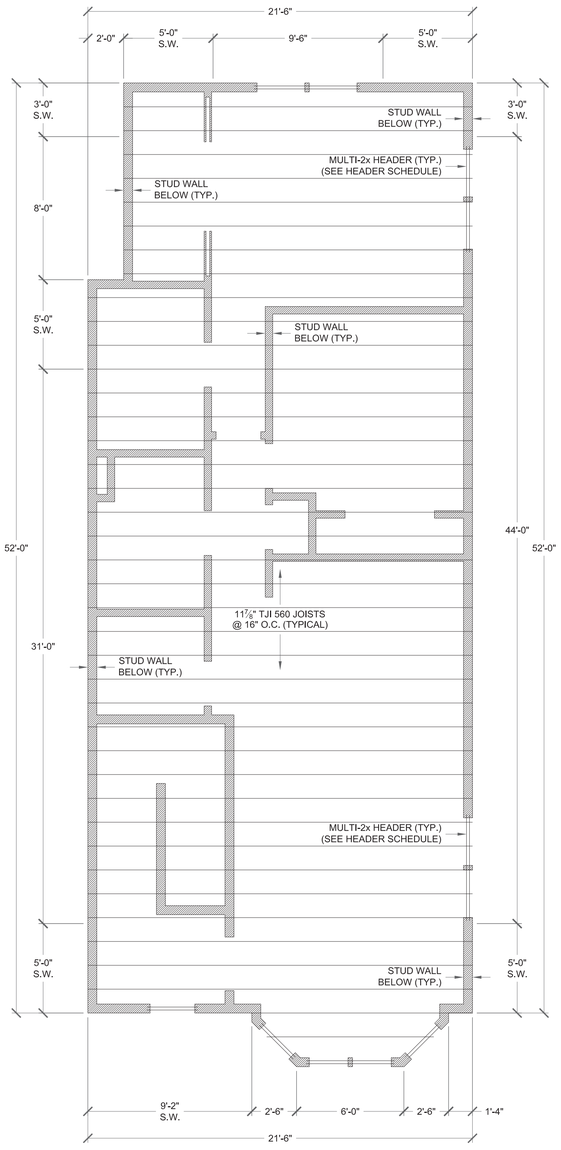


THIRD FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.



ROOF FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.

FLOOR SHEATHING

FLOOR SHEATHING SHALL BE ¾" T&G "STURD-I-FLOOR" STRUCTURAL-1 GRADE PLYWOOD. PROVIDE 10d NAILS @ 6" O.C. AT ALL PANEL EDGES & 10d NAILS @ 12" O.C. IN FIELD. (MINIMUM FASTENING, COORD. w/MANUFACTURER'S REQ.)

2x4 WALL HEADER SCHEDULE

(WOOD HEADER)

ROUGH OPENING	WOOD HEADER
UP TO 3'-6" WIDE	(2)-2x8 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 3'-7" UP TO 5'-0" WIDE	(2)-2x10 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 5'-1" UP TO 6'-6" WIDE	(2)-2x12 WITH TRIPLE JACK STUD BRG. @ EA. JAMB

NOTES: 1. SEE DRAWINGS FOR SPECIAL DOOR/WINDOW HEADER SIZES, OTHERWISE USE SCHEDULE.
2. USE 1/2" PLYWOOD SPACERS BETWEEN HEADER MEMBERS TO MATCH WALL WIDTH.
3. FOR OPENING WIDTHS GREATER THAN SHOWN, CONSULT STRUCTURAL ENGINEER.

2x6 WALL HEADER SCHEDULE

(WOOD HEADER)

ROUGH OPENING	WOOD HEADER
UP TO 3'-6" WIDE	(3)-2x8 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 3'-7" UP TO 5'-0" WIDE	(3)-2x10 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 5'-1" UP TO 6'-6" WIDE	(3)-2x12 WITH TRIPLE JACK STUD BRG. @ EA. JAMB

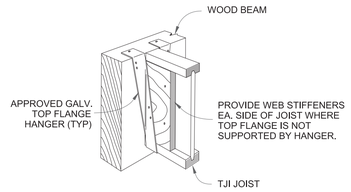
NOTES: 1. SEE DRAWINGS FOR SPECIAL DOOR/WINDOW HEADER SIZES, OTHERWISE USE SCHEDULE.
2. USE 1/2" PLYWOOD SPACERS BETWEEN HEADER MEMBERS TO MATCH WALL WIDTH.
3. FOR OPENING WIDTHS GREATER THAN SHOWN, CONSULT STRUCTURAL ENGINEER.

POST SIZE NOTE:
ALL POSTS SHOWN ON THIS PLAN SHALL BE PSL POSTS OR MULTIPLE 2x STUDS NAILED TOGETHER USING 16d COMMON NAILS @ 6" O.C. MINIMUM FASTENING, UNLESS OTHERWISE NOTED ON PLAN. POST CROSS SECTION DIMENSION SHALL EQUAL WALL DEPTH AND SUPPORTED BEAM WIDTH MINIMUM.

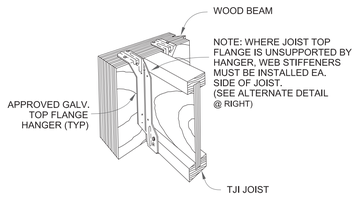
REV.	DATE	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
JAMIE L. BOULAY
CIVIL
No. 50330
REGISTERED PROFESSIONAL ENGINEER

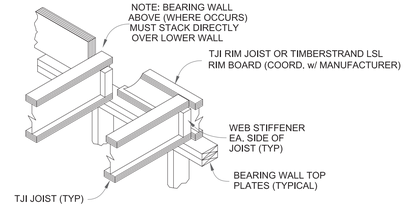
BOULAY
Consulting
Structural Engineering & Project Management Services
Nineteen Grove Street * Fall River, MA 02720
Ph: (508) 567-0113 * www.boulayconsulting.com



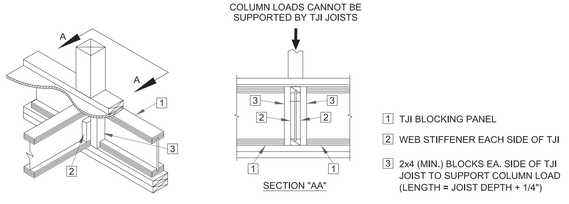
TJI JOIST/WOOD BEAM CONNECTION
(ALTERNATE)



TJI JOIST/WOOD BEAM CONNECTION
(SIMILAR AT LEDGER)



TJI JOIST BEARING @ EXTERIOR WALL



SECTION "AA"

WOOD POST @ BEARING WALL

TYPICAL TJI JOIST FRAMING DETAILS

NO SCALE

NOTE:
TYPICAL TJI JOIST ISOMETRIC FRAMING DETAILS AND MANUFACTURER REQUIREMENTS AND MUST BE FOLLOWED AS THEY IMPACT WORK SHOWN. CONTRACTOR MUST REVIEW DETAILS AND CONFORM TO THEM AS REQUIRED.

RCA, LLC
415 Neponset Ave.
Dorchester, Massachusetts 02122
Telephone: 617-282-0030
Fax: 617-282-1080
www.roche-christopher.com

Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

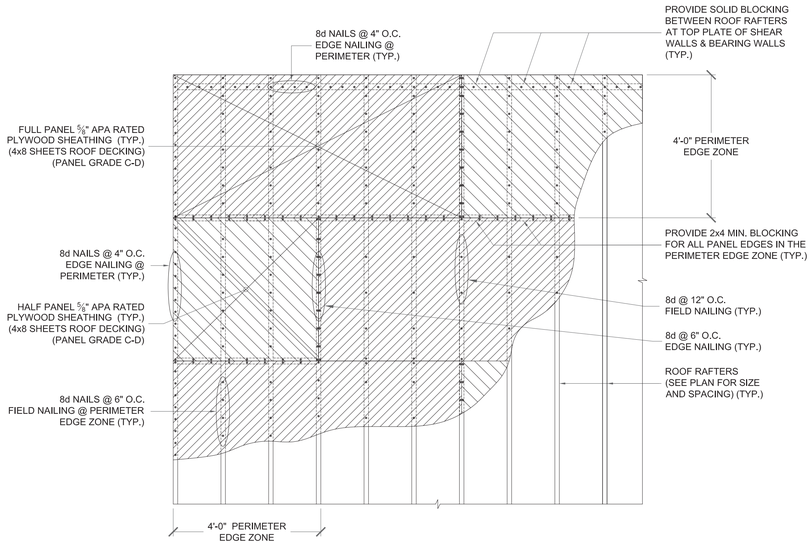
PROJECT # 18-040
DATE:03-31-20 REV:
SCALE: AS NOTED
DRAWN BY: JLB
CHECKED BY: JLB

THIRD FLOOR AND ROOF FRAMING PLANS

S1.2

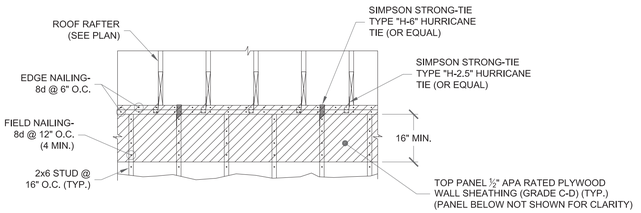
REV.	DATE	DESCRIPTION

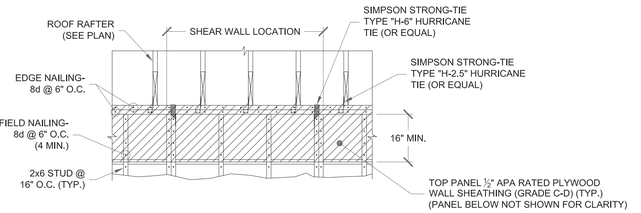
BOULAY
Consulting
JAMIE L. BOULAY CIVIL No. 50330 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
Structural Engineering & Project Management Services
Nineteen Grove Street * Fall River, MA 02720
Ph: (508) 567-0113 * www.boulayconsulting.com

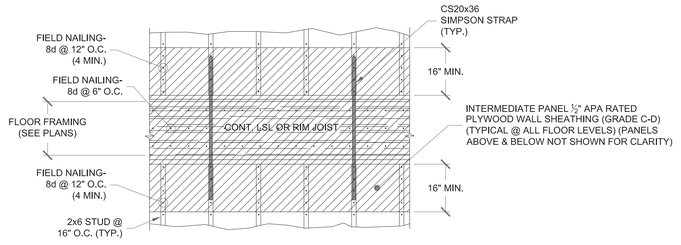


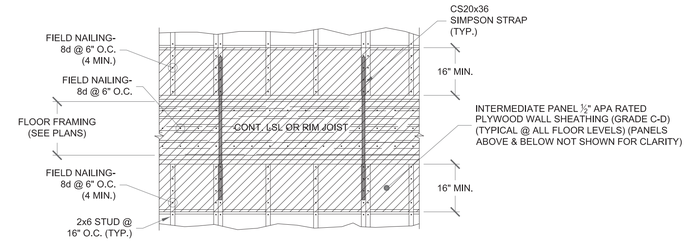
TYPICAL ROOF DIAPHRAGM DETAIL

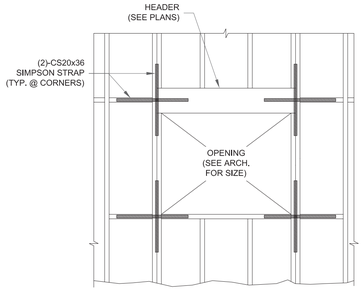
NO SCALE









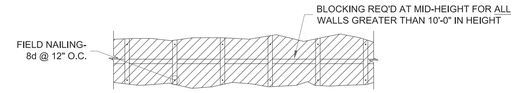


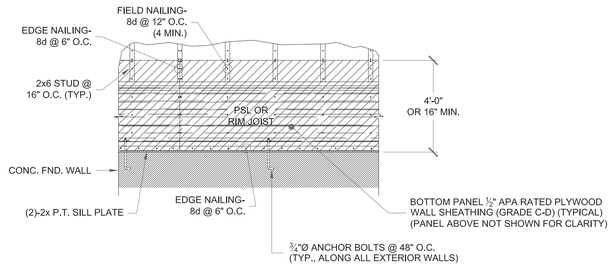
TYPICAL OPENING IN SHEAR WALL DETAIL

NO SCALE

NOTES:

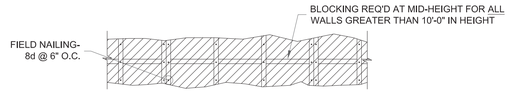
1. SEE TYPICAL SHEAR WALL ELEVATION DETAILS FOR FASTENING & SHEATHING REQUIREMENTS.

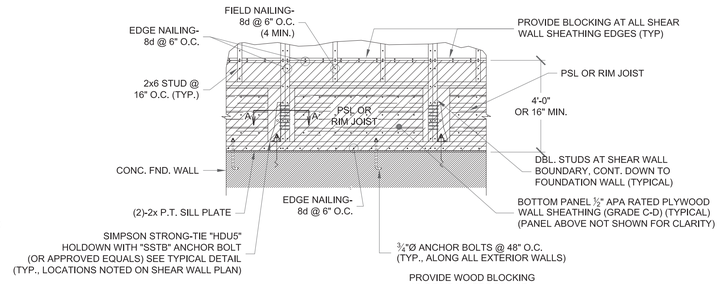


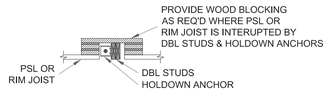


TYPICAL EXTERIOR WALL ELEVATION DETAILS

NO SCALE







DETAIL A-A

TYPICAL SHEAR WALL ELEVATION DETAILS

NO SCALE

NOTES:

1. SEE PLANS FOR SHEARWALL & HOLDOWN LOCATIONS.
2. MINIMUM FASTENING REQUIREMENTS: 8d @ 6" O.C. EDGE NAILING
   8d @ 6" O.C. FIELDING NAILING
   SEE ABOVE DETAIL FOR ADD'L FASTENING & SHEATHING REQ.
3. PROVIDE BLOCKING @ ALL SHEATHING EDGE LOCATIONS.
4. PROVIDE DOUBLE STUD @ ENDS OF ALL SHEAR WALLS.

RCA, LLC
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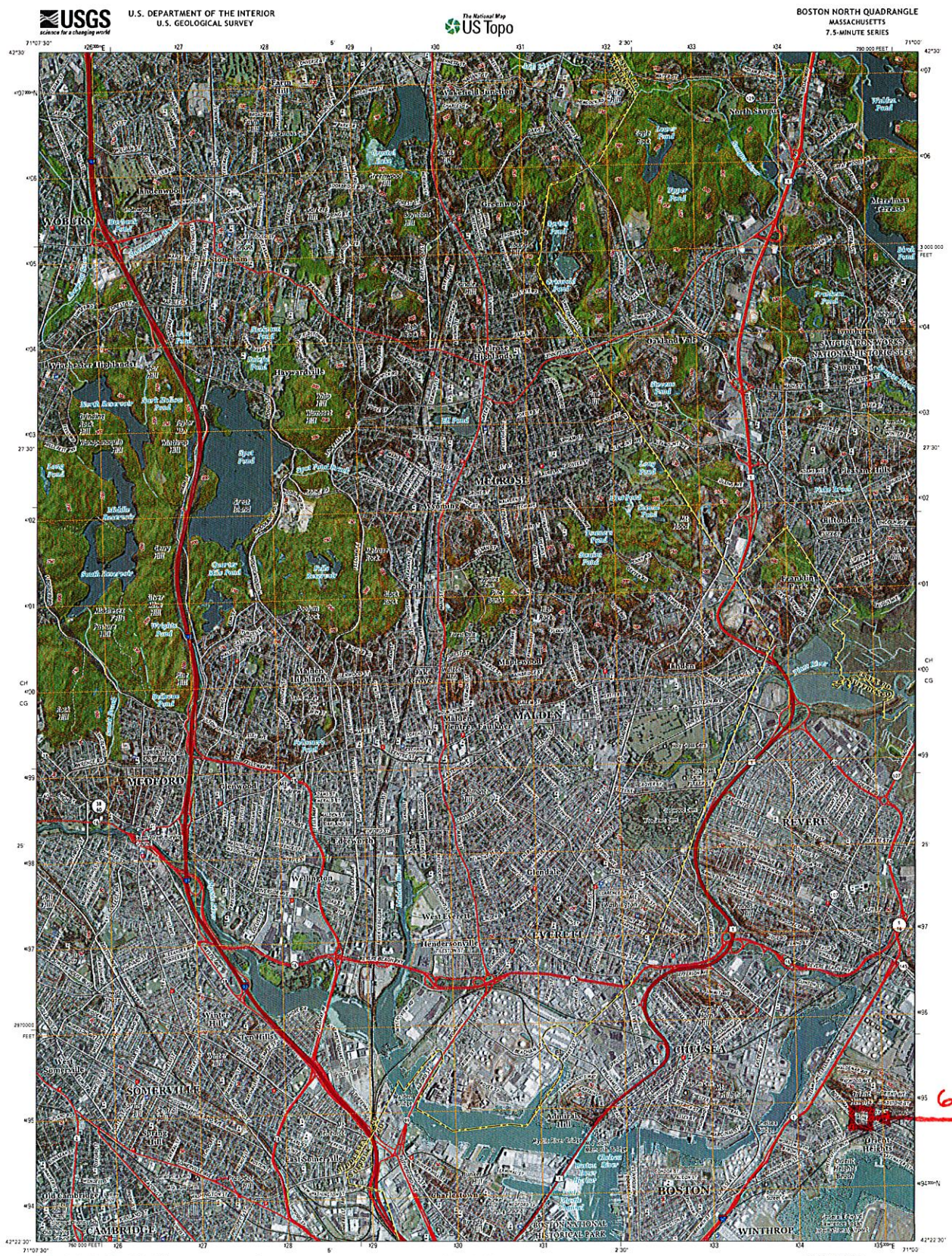
Fax: 617-282-1080

Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT #	18-040
DATE:	03-31-20
REV:	
SCALE:	AS NOTED
DRAWN BY:	JLB
CHECKED BY:	JLB

WALL AND ROOF DIAPHRAGM DETAILS

S1.3


USGS
science for a changing world
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
The National Map
US Topo
BOSTON NORTH QUADRANGLE
MASSACHUSETTS
7.5-MINUTE SERIES
6-8 FORD ST.
PROJECT
LOCATION
Produced by the United States Geological Survey
SCALE 1:24 000
CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
ROAD CLASSIFICATION
BOSTON NORTH, MA
2015

boston planning & development agency

Climate Resiliency Checklist

NOT FOR FILING

NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

A.1 - Project Information

Project Name:	8 Ford Street			
Project Address:	8 Ford Street, East Boston, Massachusetts 02128			
Project Address Additional:				
Filing Type (*select*)	*Conservation Commission - Notice of Intent*			
Filing Contact	*Name: James Christopher*	*Company: RCA, LLC*	*Email: jchristopher@roche-christopher.com*	*Phone: 617.282.0030*
Is MEPA approval required	*No*		*Date: 7/2/2021 - Draft*	

A.3 - Project Team

Owner / Developer:	Reginaldo Piccinato
Architect:	RCA, LLC
Engineer:	Medford Engineering & Survey (civil and survey); Boulay Consulting (Structural); Zade Engineering LLC (MEP)
Sustainability / LEED:	-
Permitting:	-
Construction Management:	to be determined

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Multi-Family Residential
List the First Floor Uses:	Residential (3 units)
List any Critical Site Infrastructure and or Building Uses:	-

Site and Building:

Site Area:	*4,055 SF*	Building Area:	*4,495 SF (total)*
Building Height:	*32.33 Ft*	Building Height:	*3 Stories*
Existing Site Elevation – Low:	*5.67 Ft BCB (NAVD 1988)*	Existing Site Elevation – High:	*9.55 Ft BCB (NAVD 1988)*
Proposed Site Elevation – Low:	*5.67 Ft BCB (NAVD 1988)*	Proposed Site Elevation – High:	*9.55 Ft BCB (NAVD 1988)*
Proposed First Floor Elevation:	*11.08 Ft BCB*	Below grade levels:	*1 Story*

Article 37 Green Building:

LEED Version - Rating System :	none	LEED Certification:	*No*

Whitby St
Whitby St
Whitby St
Ford St
Ford St
Ford St


Google

686 | ARCHITECTS

May 11, 2022

Mr. Nicholas Moreno – Executive Director
City of Boston Conservation Commission
1 City Hall Square, Room 709
Boston, MA 02201

Re: 6-8 Ford Street Project Narrative
East Boston, MA 02128

Dear Mr. Moreno,

Per the requirements outlined in the City of Boston Conservation Commission Filing guidelines, 686 Architects is providing this project narrative for the proposed project at 6-8 Ford Street in East Boston, Massachusetts.

Scope
The project consists of construction of a new three story, three unit, R2 Residential building.

Site
The parcel at 6-8 Ford Street *"is in the F.E.M.A. 100 Year Flood Zone AE shown on Map 25025C0019 J. dated 03/16/2016."* per the civil and survey drawings prepared by Medford Engineering and Survey dated August 5, 2019.

Existing Conditions
The site is presently used for parking and is partially paved and partially grass and dirt.

Design
The project has been redesigned to raise the elevation of the lowest occupied floor of the building accordance with the requirements of the applicable flood related codes. The floor elevation of the habitable spaces has been raised to 21.5 in order for the supporting structure to be above the Design Flood Elevation. The project foundation structural design prepared by Bouley Consulting has been prepared to meet the applicable provisions of ASCE 7 and ASCE 24. Per ASCE 24 Flood Resistant Design and Construction, paragraph C2.7, *"Enclosures below the DFE (Design Flood Elevation) can be used only for parking of vehicles, building access, and storage provided the requirements of this standard and the authority having jurisdiction are satisfied."* There are no habitable spaces other than storage in the basement. To the best of our knowledge, the building design meets the requirements and intention of the building codes relative to flood zone construction.

List of Wetlands Resource Areas
The wetlands resource is the proximity to Boston Harbor.

Performance Standards Specific to those Resource Areas
All occupied areas and mechanical equipment are located above the Design Flood Elevation to prevent contamination of flood waters.

1156 Dorchester Avenue
Dorchester, Massachusetts 02125
Phone: 617-282-0030
Fax: 617-282-1080

686 ARCHITECTS

ACEC Status

Per MassGIS Data: Areas of Critical Environmental Concern, April 2009 on the Mass.gov website, the project is not in an Area of Critical Environmental Concern.

Mass Clean Energy Center / Boston Zero Emissions

All appliances are energy star rated with high efficiency electric water heaters, cooking appliances and HVAC equipment. The roof is under redesign to support future installation of solar panels and the electrical service is under redesign design for the future installation of an electric car charger including installation of conduit and panel capacity.

The urban heat island effect will be addressed through the use of low reflectance roofing and maintaining the existing trees.

Please let us know if there are any questions regarding the project.

Ronald P. Boretti
Architect
rboretti@686arch.com

5-11-2022

1156 Dorchester Avenue www.roche-christopher.com Phone: 617-282-0030
Dorchester, Massachusetts 02125 Fax: 617-282-1080

686 ARCHITECTS

6-8 Ford Street
Construction Means and Methods

General

The project consists of construction of a new three story, three unit, R2 Residential building. The parcel at 6-8 Ford Street *"is in the F.E.M.A. 100 Year Flood Zone AE shown on Map 25025C0019 J. dated 03/16/2016."* per the civil and survey drawings prepared by Medford Engineering and Survey dated August 5, 2019. The site is in a residential neighborhood and is presently used for parking and is partially paved and partially grass and dirt.

Risk Mitigation

The two most significant risks during construction unique to this project have been identified as contamination of the watershed, either during construction or in the future, and a possible flood event during construction. Each risk will be responded to as follows:

Protection of the Watershed

Contamination of the watershed by construction activities and contaminants that enter the soil possesses both an immediate and future adverse and unhealthy environmental condition. Oily wastes from construction activities such as parking of vehicles, lubricating equipment and refueling gas powered equipment will be strictly controlled. Signage will be posted by the General Contractor on the site the clearly indicates:

6-8 FORD STREET
CONTROLLED CONSTRUCTION AREA
WATERSHED PROTECTION REQUIREMENTS

1. No refueling of gas-powered equipment or on-site storage of gasoline or petroleum products shall be allowed at any time.
2. All Contractor and Subcontractor vehicles and equipment utilized during construction shall be maintained in good working order, particularly in regards to oil or gasoline leakage. The General Contractor shall monitor all parking and vehicle storage areas to assure that there is no contamination. Any leakage detected shall be addressed immediately to remove the contamination from the project site.
3. There shall be no onsite storage of building products known to contain chemicals or properties adverse to the health of the marine ecosystem.
4. A spill containment kit shall be kept at the site while heavy equipment is operating.
5. Any construction waste containing pressure preservative treated wood products shall not be allowed to accumulate in the building or site and shall be removed from the project area daily.

Please advise us if there are other conditions or requirements the Conservation Commission would like to see added to this list.

1156 Dorchester Avenue
Dorchester, Massachusetts 02125
Phone: 617-282-0030
Fax: 617-282-1080

Flood Event Preparedness

The possibility of a flood event during construction is a statistical reality and the General Contractor will be required to have a plan in place to be prepared for such an event. The plan will be developed in detail by the General Contractor or Construction Manager, who will assign duties to specific project team members. The following will be included:

6-8 FORD STREET
FLOOD EVENT PREPAREDNESS PLAN

1. Removal of all equipment and vehicles from the property.
2. Removal of all materials stored on the project site or relocating them to the upper levels of the project construction.
3. Rake clean the project site prior to the event.
4. Removal of the project portable toilet facilities.

Please advise us if there are other actions or requirements the Conservation Commission would like to see added to this list.

Site Mobilization

Erosion control measure will be implemented at the entire site perimeter prior to beginning excavation. The entrance to the site will be graded with crushed stone to prevent tracking dirt onto the pavement. All catch basins will be protected with silt screening measures.

Excavation

A backhoe will be utilized to excavate for the building footings and foundations. Sediment control measures will be required for all excavation dewatering. The site will be protected during construction from runoff of disturbed soils by silt fencing and protection of nearby catch basins with silt barriers.

Foundation Formwork and Reinforcement

The formwork and reinforcement will likely be installed by a relatively small crew and all workers will be encouraged to arrive in a single car that can be parked on the site or by public transportation. Delivery of these items needs to be coordinated so as not create dust or track dirt beyond the limits of the site.

Placing Concrete

The concrete pump truck will require dedicated staging area along the street for several different placements of concrete. Each placement should be a relatively short time duration. The GC shall coordinate with the AHJ each time there is placement of concrete which requires staging a pump truck.

Stripping the Forms

Stripping the formwork will likely be performed by a relatively small crew and all workers will be encouraged to arrive in a single car that can be parked on the site or by public

transportation. Removal of the formwork needs to be coordinated so as not create dust or track dirt beyond the limits of the site.

Construction of Wood Frame

The construction crew that frames the building will likely require more than one vehicle in proximity to the site so their tools and materials are easily accessible. Some type of material lift such as a small crane or a fork lift will be required on site from time to time to lift the wood lumber and sheathing materials to the upper project levels.

Rough-In of MEP Systems

A variety of subcontractors will be in the building during this phase and site access and parking will need to be coordinated so as not to adversely impact the neighborhood.

Insulation and Finishing of Walls and Ceilings

The insulation and gypsum board subcontractors will likely use relatively small crews and will most likely not be at the site at the same time. All workers for each trade will be encouraged to arrive in a single car that can be parked on the site or by public transportation. If blow-In insulation that requires a truck or van connected to a hose, then the parking of such a vehicle shall be coordinated with the AHJ and the work shall be performed so as not create dust or debris in the surrounding area.

Installation of Cabinetry, Appliances and Equipment

The cabinetry, appliance and equipment will likely be installed by a relatively small crew and the workers will likely arrive in a van along with the equipment to be installed.

Site Paving and Landscaping

The last phase of the project will involve final grading and paving of the parking area and landscape the remaining portions of the site. This phase will involve careful removal of the silt and erosion control measures once the landscaping areas have been stabilized.

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Dorchester, Massachusetts 02125
Phone: 617-282-0030
Fax: 617-282-1080

boston planning & development agency

Climate Resiliency Checklist

NOT FOR FILING

NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

A.1 - Project Information

Project Name:	8 Ford Street			
Project Address:	8 Ford Street, East Boston, Massachusetts 02128			
Project Address Additional:				
Filing Type (*select*)	*Conservation Commission - Notice of Intent / Design /Building Permit(prior to final design approval)*			
Filing Contact	*Name: James Christopher*	*Company: RCA, LLC*	*Email: jchristopher@roche-christopher.com*	*Phone: 617.282.0030*
Is MEPA approval required	*No*		*Date: revised 5/11/2022*	

A.3 - Project Team

Owner / Developer:	Reginaldo Piccinato
Architect:	RCA, LLC
Engineer:	Medford Engineering & Survey (civil and survey); Boulay Consulting (Structural); Zade Engineering LLC (MEP)
Sustainability / LEED:	n/a
Permitting:	n/a
Construction Management:	to be determined

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Multi-Family Residential
List the First Floor Uses:	Residential (3 units)
List any Critical Site Infrastructure and or Building Uses:	n/a

Site and Building:

Site Area:	*4,055 SF*	Building Area:	*4,495 SF (total)*
Building Height:	*32.33 Ft*	Building Height:	*3 Stories*
Existing Site Elevation – Low:	*12.12 Ft BCB*	Existing Site Elevation – High:	*16.54 Ft BCB*
Proposed Site Elevation – Low:	*12.12 Ft BCB*	Proposed Site Elevation – High:	*16.68 Ft BCB*
Proposed First Floor Elevation:	*21.50 Ft BCB*	Below grade levels:	*1 Story*

Article 37 Green Building:

LEED Version - Rating System :	none	LEED Certification:	*No*
Proposed LEED rating:	*not applicable*	Proposed LEED point score:	*not applicable*

Building Envelope

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	*R=29 & R=20 c.i.*	Exposed Floor:	*not applicable*
Foundation Wall:	*R=10*	Slab Edge (at or below grade):	*R=10*

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	*0 %*	Wall & Spandrel Assembly Value:	*not applicable*
Area of Framed & Insulated / Standard Wall:	*83 %*	Wall Value	*R=20 & R=5 c.i.*
Area of Vision Window:	*15 %*	Window Glazing Assembly Value:	*U=0.38*
		Window Glazing SHGC:	*SHGC=0.40*
Area of Doors:	*2 %*	Door Assembly Value:	*U=0.77*

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	Building Specific Engineering Analysis by MacRitchie Engineering Incorporated.		
Annual Electric:	14,939 *(kWh)*	Peak Electric:	52 *(kW)*
Annual Heating:	193.46 *MMbtu/hr*	Peak Heating:	0.5 *(MMbtu)*
Annual Cooling:	6,600 *(Tons/hr)*	Peak Cooling:	6.0 *(Tons)*
Energy Use - Below ASHRAE 90.1 - 2013:	18.9 %	Have the local utilities reviewed the building energy performance?:	*No*
Energy Use - Below Mass. Code:	42 %	Energy Use Intensity:	75 *(kBtu/SF)*

Back-up / Emergency Power System

Electrical Generation Output:	0 *(kW)*	Number of Power Units:	0
System Type:	*0 (kW)*	Fuel Source:	n/a

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	0 *(kW)*	Heating:	0 *(MMbtu/hr)*
		Cooling:	*0 (Tons/hr)*

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: 12.08 *(Tons)*

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

Building Mechanical systems have been designed to meet the requirements of 2018 International Energy Conservation Code. The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code. The roofing membrane will be white to reduce the heat island effect.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

Building Mechanical systems and controls have been designed to meet the energy conservation requirements of 2018 International Energy Conservation Code. All appliances are to be Energy Star rated.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

All appliances are to be Energy Star rated. All plumbing fixture are designed for low flow water usage.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

n/a

Describe any energy efficiency assistance or support provided or to be provided to the project:

n/a

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

To be determined by Technological Advances.

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 – Extreme Heat - Design Conditions

Temperature Range - Low:	68 *Deg.*	Temperature Range - High:	86 *Deg.*
Annual Heating Degree Days:	5350	Annual Cooling Degree Days	1200

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	10	Days – Above 100°:	3
Number of Heatwaves / Year:	3	Average Duration of Heatwave (Days):	3

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

The building is designed with a highly reflective (white) roofing membrane.

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code. The roofing membrane will be white to reduce the heat island effect.1

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

The high-performance thermal envelop will keep the building cooler longer and the operable windows will allow the occupants to control the ventilation and capture the prevailing winds.

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

D.1 – Extreme Precipitation - Design Conditions

10 Year, 24 Hour Design Storm	*1 In.*

Describe all building and site measures for reducing storm water run-off:

An onsite underground infiltration system has been included in the project design with a storage capacity of 471.8 cubic feet which exceeds the capacity required (377 c.f.) by 94.8 c.f. and can completely store the precipitation of a 1" 24-hour storm event over the impervious area of the projects three contiguous lots.

D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

The design currently includes on-site storm water retention.

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, sea levels in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA SFHA?	*Yes*	What Zone:	AE
Current FEMA SFHA Zone Base Flood Elevation:			*16.46 Ft BCB or 10.0 Ft (NAVD 1988)*

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online BPDA SLR-FHA Mapping Tool to assess the susceptibility of the project site.	*Yes*

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E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online BPDA SLR-FHA Mapping Tool to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24" of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12" of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:	*16.46 Ft BCB or 10.0 Ft (NAVD 1988)*		
Sea Level Rise - Design Flood Elevation:	*16.46 Ft BCB*	First Floor Elevation:	*21.50 Ft BCB*
Site Elevations at Building:	*12.12 to 16.68 Ft BCB*	Accessible Route Elevation:	*16.50 Ft BCB*

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

The basement is for storage only.

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

All equipment will be located on the first floor level, which is above the Base Flood Elevation.

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Occupied floors are above the Base flood Elevation.

Describe any strategies that would support rapid recovery after a weather event:

Foundation pressure relief valves will limit structural damage and basement may reoccupied when it has dried out. Occupied floors should be above the flood damage.

E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

n/a

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

To be determined as technology and the City's plans for the neighborhood evolve.

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boston planning & development agency

Climate Resiliency Checklist

NOT FOR FILING

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A.1 - Project Information

Project Name:	8 Ford Street			
Project Address:	8 Ford Street, East Boston, Massachusetts 02128			
Project Address Additional:				
Filing Type (*select*)	*Conservation Commission - Notice of Intent / Design /Building Permit(prior to final design approval)*			
Filing Contact	*Name: James Christopher*	*Company: RCA, LLC*	*Email: jchristopher@roche-christopher.com*	*Phone: 617.282.0030*
Is MEPA approval required	*No*		*Date: revised 5/11/2022*	

A.3 - Project Team

Owner / Developer:	Reginaldo Piccinato
Architect:	RCA, LLC
Engineer:	Medford Engineering & Survey (civil and survey); Boulay Consulting (Structural); Zade Engineering LLC (MEP)
Sustainability / LEED:	n/a
Permitting:	n/a
Construction Management:	to be determined

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Multi-Family Residential
List the First Floor Uses:	Residential (3 units)
List any Critical Site Infrastructure and or Building Uses:	n/a

Site and Building:

Site Area:	*4,055 SF*	Building Area:	*4,495 SF (total)*
Building Height:	*32.33 Ft*	Building Height:	*3 Stories*
Existing Site Elevation – Low:	*12.09 Ft BCB*	Existing Site Elevation – High:	*16.54 Ft BCB*
Proposed Site Elevation – Low:	*12.09 Ft BCB*	Proposed Site Elevation – High:	*16.54 Ft BCB*
Proposed First Floor Elevation:	*21.50 Ft BCB*	Below grade levels:	*1 Story*

Article 37 Green Building:

LEED Version - Rating System :	none	LEED Certification:	*No*
Proposed LEED rating:	*not applicable*	Proposed LEED point score:	*not applicable*

Building Envelope

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	*R=29 & R=20 c.i.*	Exposed Floor:	*not applicable*
Foundation Wall:	*R=10*	Slab Edge (at or below grade):	*R=10*

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	*0 %*	Wall & Spandrel Assembly Value:	*not applicable*
Area of Framed & Insulated / Standard Wall:	*83 %*	Wall Value	*R=20 & R=5 c.i.*
Area of Vision Window:	*15 %*	Window Glazing Assembly Value:	*U=0.38*
		Window Glazing SHGC:	*SHGC=0.40*
Area of Doors:	*2 %*	Door Assembly Value:	*U=0.77*

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	Building Specific Engineering Analysis by MacRitchie Engineering Incorporated.		
Annual Electric:	14,939 *(kWh)*	Peak Electric:	52 *(kW)*
Annual Heating:	193.46 *MMbtu/hr*	Peak Heating:	0.5 *(MMbtu)*
Annual Cooling:	6,600 *(Tons/hr)*	Peak Cooling:	6.0 *(Tons)*
Energy Use - Below ASHRAE 90.1 - 2013:	18.9 %	Have the local utilities reviewed the building energy performance?:	*No*
Energy Use - Below Mass. Code:	42 %	Energy Use Intensity:	75 *(kBtu/SF)*

Back-up / Emergency Power System

Electrical Generation Output:	0 *(kW)*	Number of Power Units:	0
System Type:	*0 (kW)*	Fuel Source:	n/a

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	0 *(kW)*	Heating:	0 *(MMbtu/hr)*
		Cooling:	*0 (Tons/hr)*

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: 12.08 *(Tons)*

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

Building Mechanical systems have been designed to meet the requirements of 2018 International Energy Conservation Code. The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code. The roofing membrane will be white to reduce the heat island effect.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

Building Mechanical systems and controls have been designed to meet the energy conservation requirements of 2018 International Energy Conservation Code. All appliances are to be Energy Star rated.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

All appliances are to be Energy Star rated. All plumbing fixture are designed for low flow water usage.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

n/a

Describe any energy efficiency assistance or support provided or to be provided to the project:

n/a

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

To be determined by Technological Advances.

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 – Extreme Heat - Design Conditions

Temperature Range - Low:	68 *Deg.*	Temperature Range - High:	86 *Deg.*
Annual Heating Degree Days:	5350	Annual Cooling Degree Days	1200

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	10	Days – Above 100°:	3
Number of Heatwaves / Year:	3	Average Duration of Heatwave (Days):	3

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

The building is designed with a highly reflective (white) roofing membrane.

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code. The roofing membrane will be white to reduce the heat island effect.1

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

The high-performance thermal envelop will keep the building cooler longer and the operable windows will allow the occupants to control the ventilation and capture the prevailing winds.

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

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Filing Type (*select*)	*Conservation Commission - Notice of Intent / Design /Building Permit(prior to final design approval)*			
Filing Contact	*Name: James Christopher*	*Company: RCA, LLC*	*Email: jchristopher@roche-christopher.com*	*Phone: 617.282.0030*
Is MEPA approval required	*No*		*Date: revised 5/11/2022*	

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Owner / Developer:	Reginaldo Piccinato
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Article 37 Green Building:

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Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

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For questions or comments about this checklist or Climate Change best practices, please contact: John.Dalzell@boston.gov

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

BUILDING CODE ANALYSIS

APPLICABLE CODES
CMR 780 MASSACHUSETTS STATE BUILDING CODE, NINTH EDITION
CMR 521 ARCHITECTURAL ACCESS BOARD
INTERNATIONAL BUILDING CODE 2015 (IBC 2015)
INTERNATIONAL ENERGY CONSERVATION CODE 2015 (IECC 2015)

BUILDING AREA

BASEMENT:	1,123 GROSS SQ.FT.
FIRST FLOOR:	1,123 GROSS SQ.FT.
SECOND FLOOR:	1,123 GROSS SQ. FT.
THIRD FLOOR:	1,123 GROSS SQ. FT.
BUILDING TOTAL	4,492 GROSS SQ. FT.

OCCUPANCY
R-2 RESIDENTIAL (THREE UNITS)

ALLOWABLE BUILDING AREA
ALLOWABLE BUILDING AREA PER STORY: 21,000 S.F. ALLOWABLE PER STORY PER TABLE 506.2 FOR R-2, TYPE VB CONSTRUCTION :THE MAXIMUM AREA PER STORY IS 1,123 S.F.
THE MAXIMUM NUMBER OF STORIES ABOVE GRADE PLANE PER TABLE 504.4 IS 3.

ACTUAL STORIES ABOVE GRADE IS 3 STORIES

CONSTRUCTION TYPE
TYPE VB

EXTERIOR WALLS
FIRE RESISTANCE RATING REQUIRED FOR ELEMENTS IN TYPE VB CONSTRUCTION PER TABLE 601.
EXTERIOR BEARING WALLS 0 HOURS
FIRE RESISTANCE RATING FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE PER TABLE 602.
R OCCUPANCIES LESS THAN 10' 1 HOUR (ELEVATION 1,2 AND 4)

TABLE 602 FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE - RESIDENTIAL OCCUPANCIES WITHIN 10' OF A PROPERTY LINE REQUIRE A 1 HOUR FIRE RATING.

1 HOUR FIRE-RATING FROM EXTERIOR AND 2 HOUR FIRE-RATING FROM INTERIOR PROVIDED. SUBMIT PROPOSED EXTERIOR WALL ASSEMBLY DETAILS TO ARCHITECT FOR APPROVAL PRIOR TO ANY CONSTRUCTION.

SEPARATION WALLS
SEPARATION WALLS PER SECTION 420.2 OF THE IBC 2015: " WALLS SEPARATING DWELLING UNITS IN THE SAME BUILDING, WALLS SEPARATING SLEEPING UNITS IN THE SAME BUILDING AND WALLS SEPARATING DWELLING UNITS AND SLEEPING UNITS FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN THE SAME BUILDING SHALL BE CONSTRUCTED AS FIRE PARTITIONS IN ACCORDANCE WITH SECTION 708."

708.3.2 "DWELLING UNIT AND SLEEPING UNIT SEPARATIONS IN BUILDINGS OF TYPE IIB, IIIB, AND VB CONSTRUCTION SHALL HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN ½ HOUR IN BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1.

HORIZONTAL SEPARATION
HORIZONTAL SEPARATION PER SECTION 420.3 OF THE IBC 2015: " FLOOR ASSEMBLIES SEPARATING DWELLING UNITS IN THE SAME BUILDING, FLOOR ASSEMBLIES SEPARATING SLEEPING UNITS IN THE SAME BUILDING AND FLOOR ASSEMBLIES SEPARATING DWELLING UNITS AND SLEEPING UNITS FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN THE SAME BUILDING SHALL BE CONSTRUCTED AS FIRE PARTITIONS IN ACCORDANCE WITH SECTION 711"

SECTION 711 OF THE IBC 2015:
"HORIZONTAL ASSEMBLIES SEPARATING DWELLING UNITS AND SLEEPING UNITS SHALL BE NOT LESS THAN 1/2 - HOUR FIRE-RESISTANCE-RATED CONSTRUCTION IN A BUILDING OF TYPE IIB, IIIB AND VB CONSTRUCTION, WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1."
1 HOUR SEPARATION PROVIDED.

OCCUPANT LOAD PER TABLE 1004.1.2 :

BASEMENT FLOOR :		
MECHANICAL / STORAGE	1,123 GROSS SQ. FT.	DIVIDE BY 300 = 4
FIRST FLOOR:		
RESIDENTIAL USE	1,123 GROSS SQ. FT.	DIVIDE BY 200 = 6
SECOND FLOOR:		
RESIDENTIAL USE	1,123 GROSS SQ. FT.	DIVIDE BY 200 = 6
THIRD FLOOR:		
RESIDENTIAL USE	1,123 GROSS SQ. FT.	DIVIDE BY 200 = 6
TOTAL BUILDING OCCUPANT LOAD		= 22

EGRESS
PER SECTION 1006.2.1.1 OF IBC 2015: "IN GROUP R-2 OCCUPANCIES, ONE MEANS OF EGRESS IS PERMITTED WITHIN AND FROM INDIVIDUAL DWELLING UNITS WITH A MAXIMUM OCCUPANT LOAD OF 20 (LESS THEN 4,000 S.F.) WHERE THE UNIT IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM." ALL UNITS ARE LESS THAN 4,000 S.F.

MINIMUM WIDTH FOR EGRESS STAIRS PER 1011.2: 36 INCHES WITH

MAXIMUM LENGTH OF EXIT TRAVEL PER TABLE 1006.3.2(1): 125 FEET

HANDICAP LIFT NOTES:
1. PROVIDE ADA COMPLIANT HANDICAP LIFT FOR ACCESS INTO THE FIRST FLOOR UNIT.
2. CONTRACTOR SHALL VERIFY ALL GRADES AND CONFIRM THAT SLOPED PATH TO THE HANDICAP LIFT DOES NOT EXCEED 1:20 SLOPE PRIOR TO SETTING THE EXACT ELEVATION OF THE EXTERIOR ENTRANCE TO THE HANDICAP LIFT..
3. OWNER AND CONTRACTOR SHALL SELECT LIFT AND PROVIDE DETAILED PROJECT SPECIFIC SHOP DRAWINGS PRIOR TO THE START OF CONSTRUCTION SHOWING THE FOLLOWING:
   - SPACE REQUIREMENTS
   - POWER REQUIREMENTS
   - DOOR CONFIGURATION
   - FLOOR RECESS IF REQUIRED
   - ANY OTHER PERTINENT COORDINATION ITEMS

SPRINKLER
BUILDING IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM

FIRE EXTINGUISHERS
FIRE EXTINGUISHERS ARE REQUIRED IN NEW R-2 OCCUPANCIES PER 906.1 OF IBC 2015.

TYPE 2 - A FIRE EXTINGUISHERS ARE REQUIRED AND THE MAXIMUM TRAVEL DISTANCE TO AN EXTINGUISHER SHALL NOT EXCEED 75 FEET PER TABLE 906.3 (1) OF IBC 2015.

ACCESSIBILITY - 521 CMR ARCHITECTURAL ACCESS BOARD
IN MULTIPLE DWELLINGS, THAT ARE FOR RENT,HIRE, OR SALE BUT ARE NOT EQUIPPED WITH AN ELEVATOR, ONLY THE GROUND FLOOR MUST BE CONSTRUCTED AS GROUP 1 DWELLING UNITS.

INTERIOR FINISH REQUIREMENTS PER IBC

SECTION 803.11 INTERIOR FINISH REQUIREMENTS BASED ON GROUP
TABLE 803.11 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY
OCCUPANCY: R-2 RESIDENTIAL. SPRINKLERED
-INTERIOR EXIT STAIRWAYS, RAMPS AND EXIT PASSAGEWAYS: CLASS C.
-CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAY AND RAMPS: CLASS C
-ROOMS AND ENCLOSED SPACES: CLASS C.

803.1.1 CLASS C: FLAMESPREAD INDEX: 76-200; SMOKED DEVELOPED INDEX: 0-450.

804.4.2 INTERIOR FLOOR FINISH REQUIREMENTS
INTERIOR FLOOR FINISHES IN CORRIDORS, EXIT ENCLOSURES AND EXIT PASSAGEWAYS SHALL BE NOT LESS THAN CLASS II MATERIALS PER NFPA 253.

LIST OF DRAWINGS

T1	TITLE SHEET AND BUILDING CODE ANALYSIS
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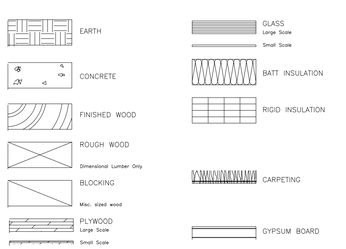
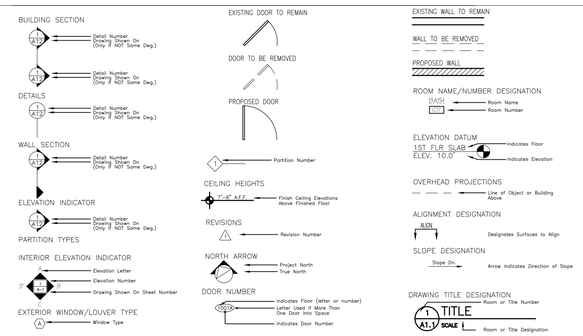
T3	BUILDING CODE ANALYSIS
EX1	EXISTING CONDITIONS
L1	LANDSCAPE PLAN
A1	FLOOR PLANS
A2	FLOOR AND ROOF PLAN
A3	ELEVATIONS
A4	BUILDING SECTION AND WALL SECTION
A5	FLOOR AND WALL ASSEMBLIES
A6	ENLARGE STAIR PLANS AND DETAILS
A7	ENLARGE KITCHEN AND BATHROOM PLANS
A8	DOOR, WINDOW AND ROOM FINISH SCHEDULES

GENERAL NOTE: ANY UNIT OR BUILDING SQUARE FOOTAGE REFERENCED ON THE PLANS IS AN APPROXIMATE AND MUST BE FIELD VERIFIED POST CONSTRUCTION FOR AN ACCURACY

MATERIAL SYMBOLS



GRAPHIC SYMBOLS



GENERAL NOTES

1. THIS PROJECT IS DESIGNED UPON THE BASIS OF THE MASSACHUSETTS STATE BUILDING CODE, LATEST EDITION AND CURRENT REGULATIONS AS WELL AS LOCAL, STATE AND FEDERAL REGULATIONS REGARDING HEALTH AND SAFETY IN THE WORKPLACE.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND POSTING ALL NECESSARY VALID CONSTRUCTION/DEMOLITION PERMITS FROM ALL LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION PRIOR TO THE START OF ON-SITE CONSTRUCTION.
3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION ACTIVITIES, MATERIALS, MEANS AND METHODS. THE CONTRACTOR IS TO COORDINATE ALL SEPARATE SUBCONTRACTORS TO COMPLETE THE FULL SCOPE OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
4. THE CONTRACTOR SHALL KEEP ALL BUILDING MEANS OF EGRESS CLEAR OF ANY OBSTRUCTIONS AT ALL TIMES.
5. THE CONTRACTOR SHALL NOT OBSTRUCT TRAFFIC OUTSIDE OF THE AUTHORIZED CONSTRUCTION SITE OR ANY ADJACENT RIGHT OF WAY DURING CONSTRUCTION, UNLESS PRIOR APPROVAL IS OBTAINED FROM THE NECESSARY LOCAL GOVERNING AUTHORITIES.
6. ALL CONSTRUCTION MATERIALS AND EQUIPMENT ARE TO BE STORED NEATLY WITHIN THE SCOPE OF WORK AREA ONLY.
7. ACCESS TO THE WORK AREA IS TO BE RESTRICTED BY THE CONTRACTOR. ENTRANCES ARE NOT TO BE LEFT UNATTENDED AT ANY TIME. DOORS/GATES ARE NOT TO BE LEFT OPEN OR UNLOCKED. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE AREA AND EQUIPMENT WITHIN THE LIMIT OF WORK AND SITE OF THE BUILDING AS REQUIRED.
8. ALL DEBRIS IS TO BE PROPERLY REMOVED FROM THE WORK AREAS, LEAVING THE WORK AREAS BROOM CLEAN. ALL DEBRIS IS TO BE STORED ON SITE IN REFUSE DUMPSTERS, REMOVED PERIODICALLY, AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES AND LAWS.
9. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY TEMPORARY WEATHER PROTECTION FOR THE BUILDING DURING THE FULL SCOPE OF CONSTRUCTION ACTIVITY ON THE PROJECT.
10. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE REMOVAL OF SNOW, RAINWATER, ICE AND MUD FROM THE CONSTRUCTION SITE DURING THE FULL SCOPE OF CONSTRUCTION ACTIVITY ON THE PROJECT.
11. ALL INTERIOR/EXTERIOR FINISHES, COLORS, TILES, FIXTURES, ETC... ARE TO BE SELECTED AND/OR APPROVED BY OWNER PRIOR TO PURCHASE AND CONSTRUCTION.
12. PLUMBING/MECHANICAL/ELECTRICAL/HVAC INTERIOR WORK SHALL BE SEPARATELY PERMITTED.
13. THE BUILDING DESIGN BY RCA DOES NOT INCLUDE THE DESIGN OF ANY ROOF TOP POOL, HOT TUB OR OTHER WATER FEATURE. THE OWNER SHALL COORDINATE ANY ADDED ROOFTOP WATER FEATURE WITH THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: NONE
DRAWN BY: CD
CHECKED BY: R.P.B.

TITLE SHEET AND BUILDING CODE ANALYSIS

T1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

ENERGY REQUIREMENTS

ENERGY REQUIREMENTS

THE BUILDING IS REQUIRED TO MEET CHAPTER 4 COMMERCIAL ENERGY EFFICIENCY.

IECC 2015 - CHAPTER 4 COMMERCIAL ENERGY EFFICIENCY
CLIMATE ZONE: 5A PER TABLE 301.1

TABLE 402.4 BUILDING ENVELOPE REQUIREMENTS: FENESTRATION
FENESTRATION U FACTOR:
U=0.38 MAXIMUM FIXED WINDOWS
U=0.45 OPERABLE WINDOWS
U=.77 ENTRANCE DOORS
U=.50 SKYLIGHTS
FENESTRATION SHGC: 040

TABLE 402.1.3 - BUILDING ENVELOPE REQUIREMENTS - OPAQUE ASSEMBLIES

NEW ROOF/CEILING R-VALUE: R=20 CONTINUOUS WITH R=29 MIN IN CAVITY R=49 MINIMUM TOTAL

NEW WALLS:
BASIS OF DESIGN:
R=20 MINIMUM INSULATION IN CAVITY WITH
R=3.8 MINIMUM CONTINUOUS RIGID INSULATION (USE R=5)

ALTERNATIVE:

R=13 MINIMUM BATT INSULATION IN CAVITY WITH
R=7.5 CONTINUOUS RIGID INSULATION

BASEMENT WALLS:
R=7.5 CONTINUOUS RIGID INSULATION

NEW FLOOR R-VALUE OVER EXTERIOR SOFFIT: R=30 MINIMUM

ACOUSTICAL REQUIREMENTS

SOUND ISOLATION

NOISE CONTROL OF TYPICAL FLOOR-CEILING ASSEMBLIES

- IN CEILING ASSEMBLIES WITH MULTIPLE LAYERS OF GYPSUM BOARD, THE RESILIENT CHANNELS SHOULD ALWAYS BE INSTALLED BETWEEN THE BOTTOM CHORD OF THE TRUSS AND THE GYPSUM BOARD.
- RESILIENT CHANNELS USED IN WALL ASSEMBLIES SHOULD BE INSTALLED WITH THE PERFORATION ON THE TOP.
- UTILIZE SURFACE MOUNTED LIGHT FIXTURES TO THE EXTENT POSSIBLE TO MINIMIZE FLANKING TRANSMISSION.
- FLOOR DEFLECTION SHALL BE LIMITED TO L/540 TO ACHIEVE BETTER AND MORE EFFECTIVE IMPACT NOISE CONTROL.
- IN ACOUSTICAL UNDERLAYMENT AND GYPSUM FLOOR TOPPING FLOOR SYSTEMS, VERIFY THAT ALL SEAMS IN THE ACOUSTICAL UNDERLAYMENT ARE THOROUGHLY TAPED SO THERE IS NO POSSIBILITY OF GYPSUM CONCRETE TOPPING DRIPPING THROUGH TO THE SUB-FLOOR. USE TAPE RECOMMENDED BY GYPSUM CONCRETE FLOOR TOPPING MANUFACTURER.
- LEAVE $\frac{1}{8}$" GAP AND USE ACOUSTICAL CAULK TO PREVENT DIRECT CONNECTIONS WHERE FINISHED FLOORING SUCH AS WOOD, LAMINATED WOOD, VINYL, CERAMIC TILE, ETC. MEET CABINETS, WALL PARTITIONS AND BUILT-IN FURNITURE. USE PERIMETER WALL STRIPS TO ISOLATE FINISHED FLOOR FLOORING FROM THE WALL PARTITIONS AT ALL LOCATIONS.
- DO NOT ATTACH OR FRAME THE CEILING GYPSUM BOARD TO THE PERIMETER WALL PARTITION. PREVENT THE CEILING GYPSUM BOARD FROM COMING IN DIRECT CONNECTION WITH THE WALL GYPSUM BOARD OR FRAMING. FILL THE GAP BETWEEN THE CEILING GYPSUM BOARD AND THE WALL PARTITION WITH SPONGE ELASTOMER AND SEAL IT WITH NON-HARDENING ACOUSTICAL CAULK.
- NAILERS USED IN THE WOOD FRAME FLOOR-CEILING ASSEMBLY SHALL NOT TOUCH THE UNDERSIDE OF THE SUB-FLOOR OR THE RESILIENT CHANNELS.
- EXTEND THE DEMISING WALL TO THE OUTER LAYER OF THE EXTERIOR WALL. AVOID ANY GAPS BY PLACING THE STUDS CLOSE TO THE DEMISING WALL.

ALL LAYERS OF THE DEMISING AND CORRIDOR WALL PARTITIONS SHALL BE COMPLETELY SEALED WITH ACOUSTICAL SEALANT AND TAPED ALONG THE PERIMETERS TO REDUCE SOUND LEAKS.

- DO NOT CONNECT TOILETS TO THE UNIT-SEPARATION WALLS. PROVIDE FLOOR-MOUNTED TOILETS AT THE UNIT-SEPARATION WALL PARTITIONS.
- ELECTRICAL BOXES FOR POWER, TV, PHONE, ETC. IN DEMISING WALLS SHOULD BE SEPARATED BY MINIMUM 24" OR ONE STUD SPACE.
- SEAL ALL THE ELECTRICAL BOXES INSTALLED IN UNIT SEPARATION AND UNIT-CORRIDOR PARTITIONS WITH OUTLET PUTTY PADS.
- ALL ENTRY DOORS TO ALL THE DWELLING UNITS SHALL BE PROVIDED WITH ACOUSTICAL GASKETS ALONG THE JAMB.
- CONDENSING UNITS SHALL BE LOCATED OVER THE CORRIDORS TO THE MAXIMUM EXTENT POSSIBLE.

HVAC SYSTEM SOUND NOISE CONTROL

- INSTALL SUPPLY AIR DUCTS IN THE CENTER OF THE TRUSSES AND SUPPORT THEM WITH STRAPS TO AVOID CONTACT WITH THE CEILING OR WALL FRAMING.
- PROVIDE A $\frac{1}{2}$" CLEARANCE AROUND THE HVAC AND TOILET EXHAUST DUCTS WITHIN DWELLING UNITS.
- SEAL AND TAPE ALL DUCTS AND PIPE PENETRATIONS THRU WALL PARTITIONS WITH ACOUSTICAL CAULK. AVOID UNNECESSARY PENETRATIONS IN THE DEMISING PARTITIONS.
- BATHROOM EXHAUST FANS SHALL MEET LOW NOISE LEVEL (≤3.0 SONES) REQUIREMENTS.

PLUMBING SYSTEM NOISE CONTROL

- ALL DRAIN PIPING SHALL BE WRAPPED WITH FIBERGLASS INSULATION.
- PIPING SHALL NOT COME IN DIRECT CONTACT WITH ANY PARTITION, WALL, CEILING OR STRUCTURAL ELEMENT SUCH AS FLOOR TRUSSES.
- ALL SUPPLY PIPING SHALL BE ISOLATED FROM THE BUILDING STRUCTURE WITH RESILIENT MATERIAL SUCH AS NEOPRENE FOAM PADS OR FIBERGLASS SLEEVES.
- SUPPLY WATER PIPE RISERS SHALL BE ISOLATED WITH $\frac{3}{4}$" NEOPRENE PAD UNDER THE PIPE CLAMPS. THE NEOPRENE PADS SHALL BE SIZED TO 50lbs/in^2 AND HAVE A $\frac{1}{4}$" THICK METAL BEARING PLATE BETWEEN PAD AND PIPE CLAMP. PROVIDE A GROMMET AT ALL STUDS, PLATES, BLOCKS AND FRAMING MEMBERS.
- SUPPLY WATER PIPING SHALL BE ISOLATED HORIZONTALLY AND VERTICALLY BY GROMMETS AT ALL STUDS, PLATES AND FRAMING MEMBERS.
- WATER HAMMER ARRESTORS SHALL BE PROVIDED AT THE WASHING MACHINE CONNECTION.
- COMPLETELY SEAL ALL PIPE PENETRATIONS OF WALLS AND FLOOR-CEILING ASSEMBLIES SEPARATING DWELLING UNITS AND BETWEEN DWELLING UNITS AND COMMON AREAS, INCLUDING THE TOILET PIPE PENETRATION OF THE FLOOR. PROVIDE A SLEEVE AROUND THE PIPES PENETRATING THE FLOOR OR WALL AND COMPLETELY FILL THE GAP WITH ROCK WOOL AND FIRE SEALANT.
- CONDUIT PIPE RISERS RUNNING THROUGH DWELLING UNITS SHALL BE ISOLATED FROM THE FLOOR. ALL PIPES, CABLES AND WIRES PENETRATING THE DEMISING WALL SHALL BE CAULKED.

ELEVATOR NOISE CONTROL

- ELEVATOR MOTOR AND DRIVE ASSEMBLIES SHALL BE SUPPORTED ON 1" THICK NEOPRENE PADS TO REDUCE NOISE AND VIBRATION.
- THE EXHAUST FAN MOUNTED TO THE CAR CANOPY SHALL BE ISOLATED BY RUBBER GROMMETS AND SHALL INCLUDE A BAFFLE TO DIFFUSE AUDIBLE NOISE.
- THE SPEED OF THE CAR DOORS SHALL BE REGULATED TO PREVENT BANGING.

RAILINGS AND GUARDRAILS

RAILING AND GUARDRAIL REQUIREMENTS

A. PROVIDE RAILINGS CAPABLE OF WITHSTANDING THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED:

1. HANDRAILS:
a. UNIFORM LOAD OF 50 LBF/FT APPLIED IN ANY DIRECTION.
b. CONCENTRATED LOAD OF 200 LBF APPLIED IN ANY DIRECTION.
c. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

2. TOP OF GUARDS:
a. UNIFORM LOAD OF 50 LBF/FT APPLIED IN ANY DIRECTION.
b. CONCENTRATED LOAD OF 200 LBF APPLIED IN ANY DIRECTION.
c. UNIFORM AND CONCENTRATED LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

3. INFILL OF GUARDS:
a. CONCENTRATED LOAD OF 50 LBF APPLIED HORIZONTALLY ON AN AREA OF 1 SF.
b. UNIFORM LOAD OF 25 LBF/SQ. FT. APPLIED HORIZONTALLY.
c. INFILL LOAD AND OTHER LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.

B. RAILING PROFILES: RAILING PROFILES SHALL MEET THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT GUIDELINES FOR BUILDINGS. PREPARE SHOP DRAWINGS INDICATING THE RAILING ELEVATIONS, PROFILES, MOUNTING, AND ATTACHMENT TO STRUCTURE. ALL CONNECTIONS SHALL BE FORMED OR MITERED WITH ALL EDGES SMOOTH.

C. CONTROL OF CORROSION: PREVENT GALVANIC ACTION AND OTHER FORMS OF CORROSION BY INSULATING METALS AND OTHER MATERIALS FROM DIRECT CONTACT WITH INCOMPATIBLE MATERIALS.

D. FINAL SITE INSPECTION: COORDINATE FINAL INSPECTION OF HANDRAIL INSTALLATION AND MOUNTING WITH PROJECT STRUCTURAL ENGINEER PRIOR TO STRUCTURAL CONNECTIONS BEING COVERED BY FINISH WORK.

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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PROJECT # 19-116

DATE: 4-29-22
REV:

SCALE: NONE

DRAWN BY: CD

CHECKED BY: R.P.B.

BUILDING CODE ANALYSIS

T2

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

WINDOWS AND DOORS SAFETY

SAFETY GLAZING

2406.4 PROVIDE SAFETY GLAZING IN LOCATIONS LISTED IN "HAZARDOUS LOCATIONS". THE LOCATIONS SPECIFIED IN SECTIONS 2406.4.1 THROUGH 2406.4.7 SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS REQUIRING SAFETY GLAZING MATERIALS.

2406.4.1 GLAZING IN DOORS. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
1. GLAZING OPENINGS OF A SIZE THROUGH WHICH A 3-INCH DIAMETER SPHERE IS UNABLE TO PASS.
2. DECORATIVE GLAZING.
3. GLAZING MATERIALS USED AS CURVED GLAZING PANELS IN REVOLVING DOORS.
4.COMMERCIAL REFRIGERATED CABINET GLAZED DOORS.

2406.4.2 GLAZING ADJACENT TO DOORS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
1. DECORATIVE GLAZING.
2. WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND GLAZING.
3. WHERE ACCESS THROUGH THE DOOR IS TO A CLOSET OR STORAGE AREA 3 FEET OR LESS IN DEPTH. GLAZING IN THIS APPLICATION SHALL COMPLY WITH SECTION 2406.4.3.
4. GLAZING IN WALLS ON THE LATCH SIDE OF AND PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION IN ONE AND TWO-FAMILY DWELLINGS OR WITHIN DWELLING UNITS IN GROUP R-2.

2406.4.3 GLAZING IN WINDOWS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS SHALL BE CONSIDERED A HAZARDOUS LOCATION:
1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQUARE FEET.
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR.
3. THE TOP EDGE OF THE GLAZING IS GREATER THAN 36 INCHES ABOVE THE FLOOR.
4. ONE OR MORE WALKING SURFACE(S) ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.

EXCEPTIONS:
1. DECORATIVE GLAZING
2. WHERE A HORIZONTAL RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES ABOVE THE WALKING SURFACE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1 1/2 INCHES IN CROSS-SECTIONAL HEIGHT.
3. OUTBOARD PANES IN INSULATING GLASS UNITS OR MULTIPLE GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLASS IS 25 FEET OR MORE ABOVE ANY GRADE, ROOF, WALKING SURFACE OR OTHER HORIZONTAL OR SLOPED (WITHIN 45 DEGREES OF HORIZONTAL RADIUS) SURFACE ADJACENT TO THE GLASS EXTERIOR.

2406.4.4 GLAZING IN GUARDS AND RAILINGS. GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF THE AREA OR HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.

2406.4.5 GLAZING AND WET SURFACES. GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBES, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE APPLY TO SINGLE GLAZING AND ALL PANES IN MULTIPLE GLAZING.

EXCEPTIONS:
GLAZING THAT IS MORE THAN 60 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, FROM THE WATERS EDGE OF THE BATHTUB, HOT TUB, SPA, WHIRLPOOL OR SWIMMING POOL.

2406.4.6 GLAZING ADJACENT TO STAIRWAYS AND RAMPS. GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
1. THE SIDE OF A STAIRWAY, LANDING OR RAMP THAT HAS A GUARD COMPLYING WITH THE PROVISIONS OF SECTIONS 1015 AND 1607.8, AND THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE RAILING.
2.GLAZING 36 INCHES OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACE.

2406.4.7 GLAZING ADJACENT TO THE BOTTOM STAIRWAY LANDING. GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 60 INCHES ABOVE THE LANDING AND WITHIN A 60-INCH HORIZONTAL ARC THAT IS LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING SHALL BE CONSIDERED A HAZARDOUS LOCATION.

EXCEPTIONS:
GLAZING THAT IS PROTECTED BY A GUARD COMPLYING WITH SECTIONS 1015 AND 1607.8 WHERE THE PLANE OF THE GLASS IS GREATER THAN 18 INCHES FROM THE GUARD.

2406.5 FIRE DEPARTMENT ACCESS PANELS. FIRE DEPARTMENT GLASS ACCESS PANELS SHALL BE OF TEMPERED GLASS. FOR INSULATING GLASS UNITS, ALL PANES SHALL BE TEMPERED GLASS.

SASH LIMITERS

ALL WINDOWS ABOVE THE FIRST FLOOR LEVEL SHALL BE EQUIPPED WITH SASH LIMITING DEVICES WHICH LIMIT THE WINDOWS SASH OPERATION SO THAT A 4" SPHERE CANNOT PASS THOUGHT ANY PART OF THE WINDOW OPENING.

EMERGENCY ESCAPE AND RESCUE

1030.1 GENERAL. IN ADDITION TO THE MEANS OF EGRESS REQUIRED BY THIS CHAPTER, PROVISIONS SHALL BE MADE FOR EMERGENCY ESCAPE AND RESCUE OPENINGS IN GROUP R-2 OCCUPANCIES IN ACCORDANCE WITH TABLES 1006.3.2(2) AND GROUP R-3 OCCUPANCIES. BASEMENTS AND SLEEPING ROOMS BELOW THE FOURTH STORY ABOVE GRADE PLANE SHALL HAVE AT LEAST ONE EXTERIOR EMERGENCY ESCAPE AND RESCUE OPENING IN ACCORDANCE WITH THIS SECTION. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE REQUIRED IN EACH SLEEPING ROOM, BUT SHALL NOT BE REQUIRED IN ADJOINING AREAS OF THE BASEMENT. SUCH OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

EXCEPTIONS:
1.BASEMENTS WITH A CEILING HEIGHT LESS THAN 80 INCHES SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.
2. EMERGENCY ESCAPE AND RESCUE OPENINGS ARE NOT REQUIRED FROM BASEMENTS OR SLEEPING ROOMS THAT HAVE AN EXIT DOOR OR EXIT ACCESS DOOR THAT OPENS DIRECTLY INTO A PUBLIC WAY OR TO A YARD, COURT OR EXTERIOR EXIT BALCONY THAT OPENS TO A PUBLIC WAY.
3.BASEMENTS WITHOUT HABITABLE SPACES AND HAVING NOT MORE THAN 200 SQUARE FEET IN FLOOR AREA SHALL NOT BE REQUIRED TO HAVE EMERGENCY ESCAPE AND RESCUE OPENINGS.

1030.2 MINIMUM SIZE. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET.
EXCEPTION: THE MINIMUM NET CLEAR OPENING FOR GRADE-FLOOR EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE 5 SQUARE FEET.

1030.2.1 MINIMUM DIMENSIONS. THE MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24 INCHES. THE MINIMUM NET CLEAR WIDTH DIMENSION SHALL BE 20 INCHES. THE NET CLEAR OPENING DIMENSIONS SHALL BE THE RESULT OF NORMAL OPERATION OF THE OPENING.

1030.3 MAXIMUM HEIGHT FROM FLOOR. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44 INCHES MEASURED FROM THE FLOOR.

1030.4 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS OR TOOLS. BARS, GRATES OR SIMILAR DEVICES ARE PERMITTED TO BE PLACED OVER THE EMERGENCY ESCAPE AND RESCUE OPENINGS PROVIDED THE MINIMUM NET CLEAR OPENING SIZE COMPLIES WITH SECTION 1030.2 AND SUCH DEVICES SHALL BE RELEASABLE OR REMOVABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, TOOL OR FORCE GREATER THAN WHICH IS REQUIRED FOR NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE SUCH BARS, GRILLES, GRATES OR SIMILAR DEVICES ARE INSTALLED IN ACCORDANCE WITH SECTION 907.2.11 REGARDLESS OF THE VALUATION OF THE ALTERATION.

1030.5 WINDOW WELLS. AN EMERGENCY ESCAPE AND RESCUE OPENING WITH A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND LEVEL SHALL BE PROVIDED WITH A WINDOW WELL IN ACCORDANCE WITH SECTIONS 1030.5.1 AND 10305.2.

1030.5.1 MINIMUM SIZE. THE MINIMUM HORIZONTAL AREA OF THE WINDOW WELL SHALL BE 9 SQUARE FEET, WITH A MINIMUM DIMENSION OF 36 INCHES. THE AREA OF THE WINDOW WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.

10305.2 LADDER OR STEPS. WINDOW WELLS WITH A VERTICAL DEPTH OF MORE THAN 44 INCHES SHALL BE EQUIPPED WITH AN APPROVED PERMANENTLY AFFIXED LADDER OR STEPS. LADDERS OR RUNGS SHALL HAVE AN INSIDE WIDTH OF AT LEAST 12 INCHES, SHALL PROJECT A LEAST 3 INCHES FROM THE WALL AND SHALL BE SPACED NOT MORE THAN 18 INCHES ON CENTER VERTICALLY FOR THE FULL HEIGHT OF THE WINDOW WELL. THE LADDER OR STEPS SHALL NOT ENCROACH INTO THE REQUIRED DIMENSIONS OF THE WINDOW WELL BY MORE THAN 6 INCHES. THE LADDER OR STEPS SHALL NOT BE OBSTRUCTED BY THE EMERGENCY ESCAPE AND RESCUE OPENING. LADDERS OR STEPS REQUIRED BY THIS SECTION ARE EXEMPT FROM STAIRWAY REQUIREMENTS OF SECTION 1011.

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: NONE
DRAWN BY: CD
CHECKED BY: R.P.B.

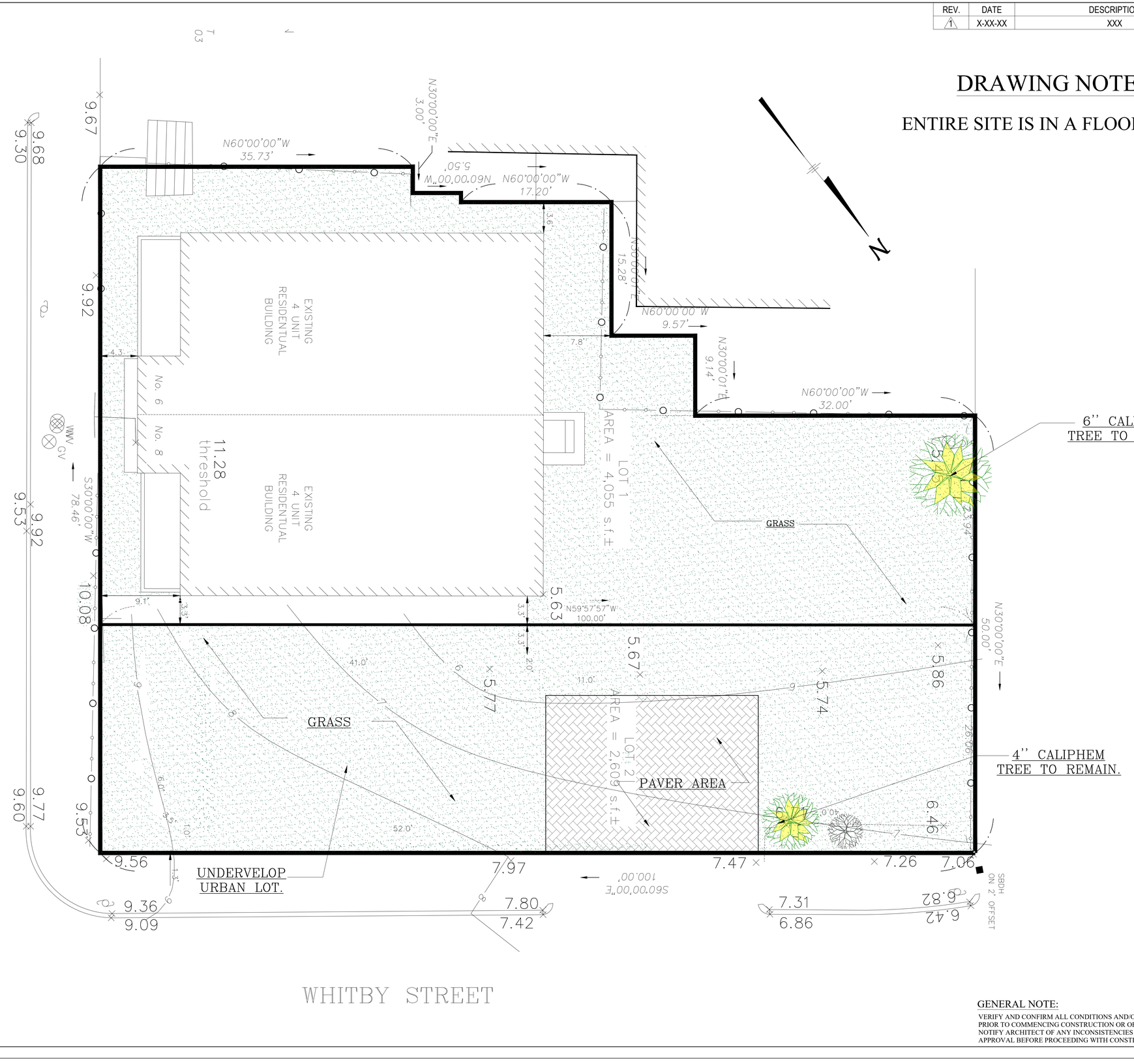
BUILDING CODE ANALYSIS

T3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

ENTIRE SITE IS IN A FLOOD ZONE



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Reginaldo Piccinato
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PROJECT # 19-116
DATE: 4-29-22 REV:
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

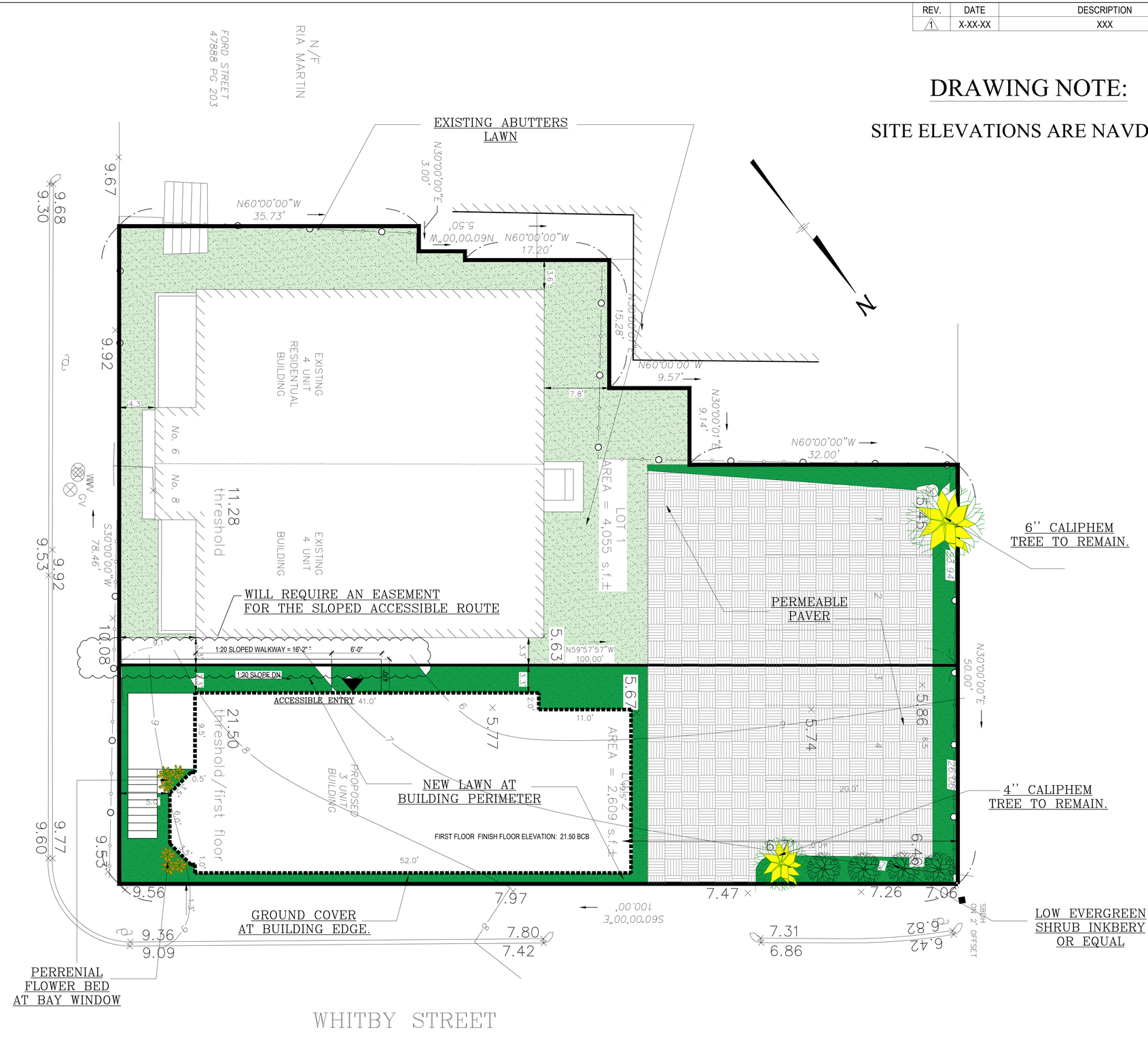
EXISTING CONDITIONS

EX1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

SITE ELEVATIONS ARE NAVD 88



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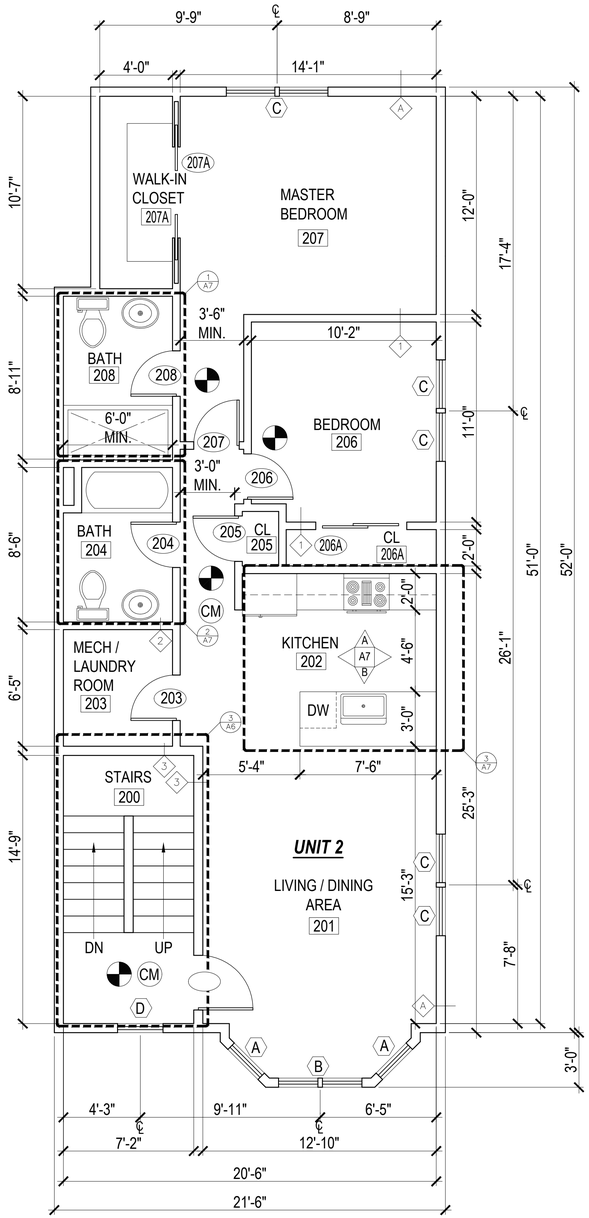
PROJECT # 19-116
DATE: 4-29-22 REV: 5-13-22
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

PROPOSED LANDSCAPE PLAN

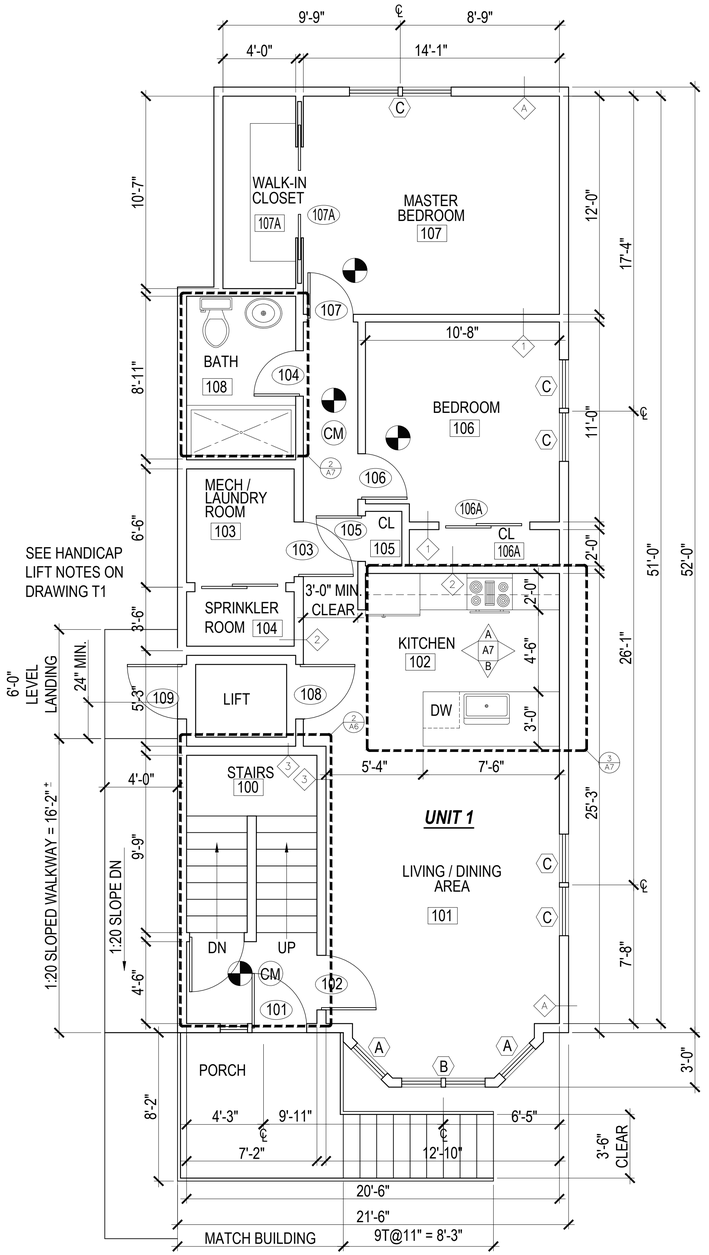
L1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



SECOND FLOOR PLAN

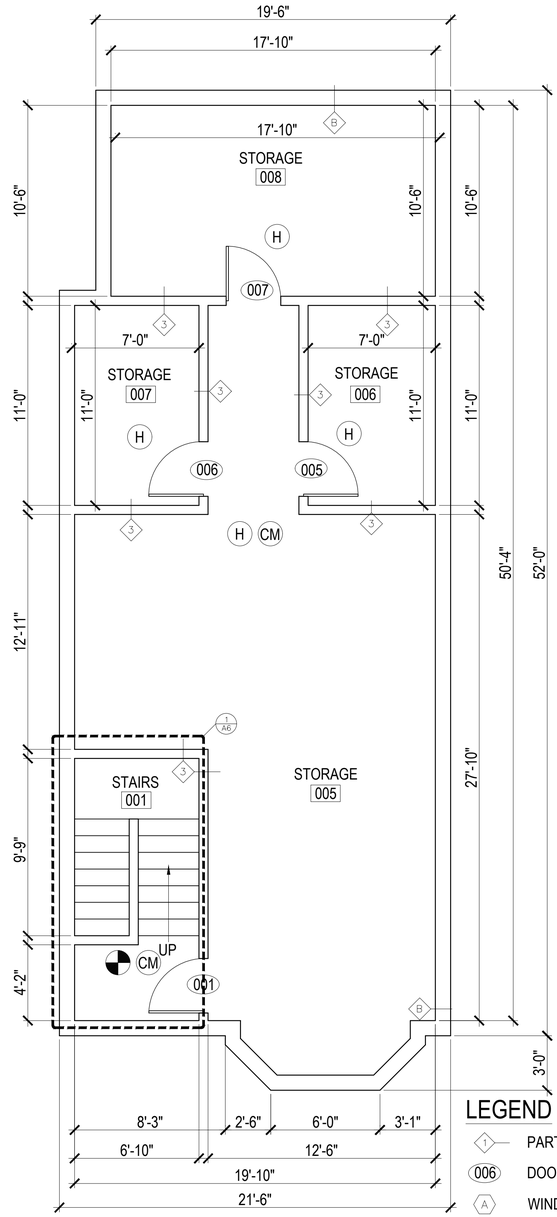
SECOND FLOOR FINISH FLOOR ELEVATION: 30.66 BCB



FIRST FLOOR PLAN

FIRST FLOOR FINISH FLOOR ELEVATION: 21.50 BCB

NOTE: UNIT 1 TO BE CONSTRUCTED AS A GROUP 1 ACCESSIBLE UNIT. SEE DRAWING A7 FOR GROUP 1 UNIT ACCESSIBILITY REQUIREMENTS.



BASEMENT PLAN

BASEMENT FINISH FLOOR ELEVATION: 12.50 BCB

LEGEND

- PARTITION TYPE - SEE DRAWING A5
- 006 DOOR NUMBER - SEE DRAWING A8
- A WINDOW TYPE - SEE DRAWING A8
- HARDWIRED & INTERCONNECTED SMOKE DETECTOR
- H HARDWIRED & INTERCONNECTED HEAT DETECTOR
- CM HARDWIRED & INTERCONNECTED CARBON MONOXIDE DETECTOR

1' 0 1' 5' 10'

GENERAL NOTE:

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PROJECT # 19-116
DATE: 4-29-22 REV: 5-13-22
SCALE: 1/4" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

FLOOR PLANS

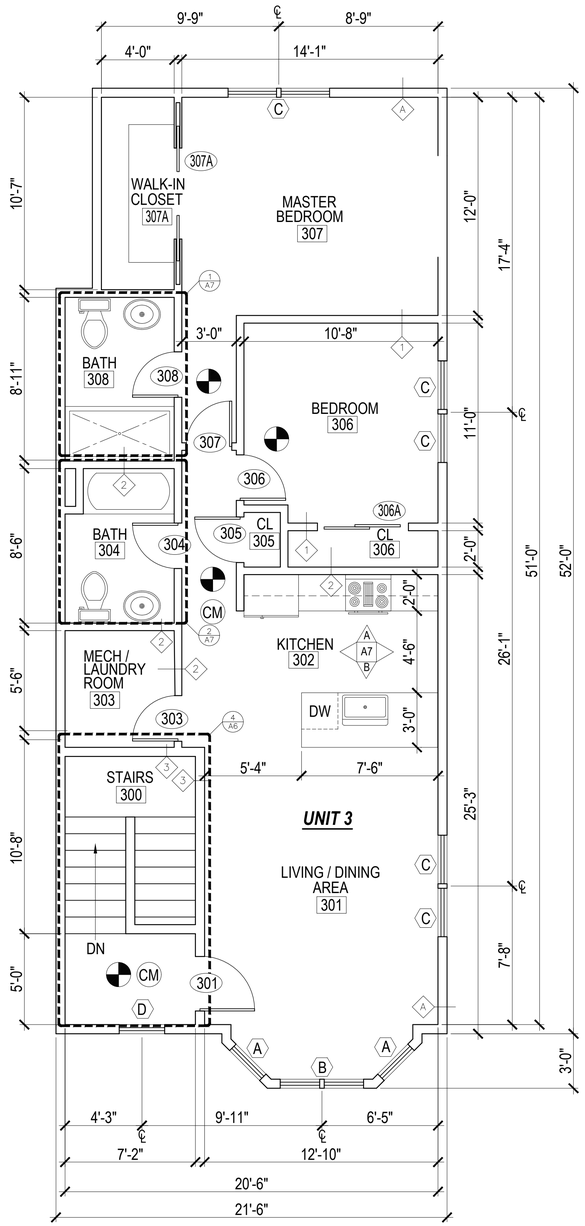
A1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

ROOF NOTES:

1. EPDM ROOF SYSTEM SEE TYPICAL ROOF ASSEMBLY DETAILS ON DRAWING A5
2. SEE MECHANICAL DRAWINGS FOR ROOF TOP HAUL EQUIPMENT. SEE DRAWING A5 FOR EQUIPMENT CURB FLASHING DETAIL.
3. SEE PLUMBING DRAWING FOR PLUMBING VENT LOCATIONS. SEE DRAWING A5 FOR PLUMBING VENTS FLASHING DETAIL.
4. COORDINATE ROOF DRAIN LOCATIONS WITH PLUMBING

ROOF PLAN



THIRD FLOOR PLAN

THIRD FLOOR FINISH FLOOR ELEVATION: 39.83 BCB

LEGEND

- PARTITION TYPE - SEE DRAWING A5
- 006 DOOR NUMBER - SEE DRAWING A8
- A WINDOW TYPE - SEE DRAWING A8
- HARDWIRED & INTERCONNECTED SMOKE DETECTOR
- H HARDWIRED & INTERCONNECTED HEAT DETECTOR
- CM HARDWIRED & INTERCONNECTED CARBON MONOXIDE DETECTOR

1' 0 1' 5' 10'

GENERAL NOTE:

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RONALD R. PIETRAFESA No. 7320 REGISTERED ARCHITECT COMMONWEALTH OF MASSACHUSETTS

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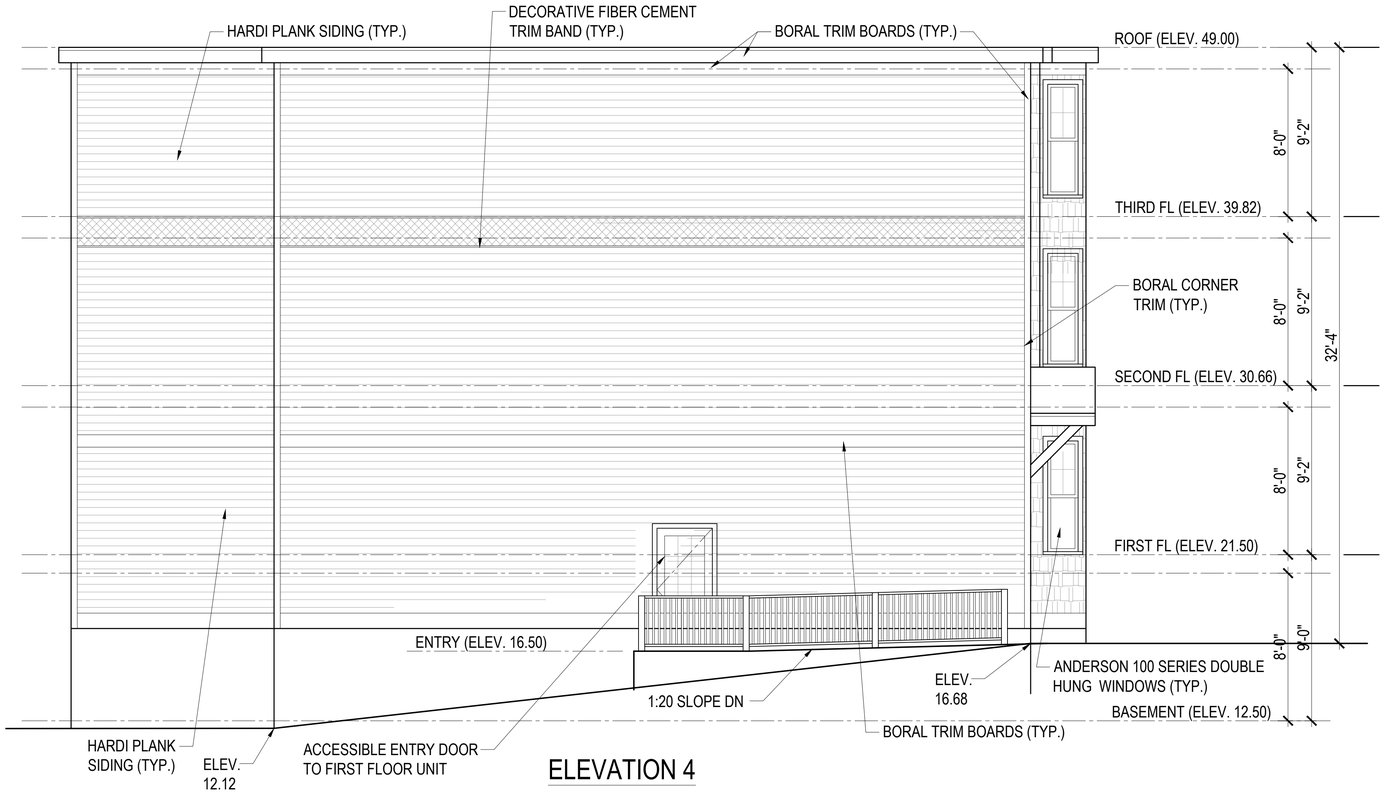
PROJECT # 19-116
DATE: 4-29-22 REV: 5-13-22
SCALE: 1/4" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

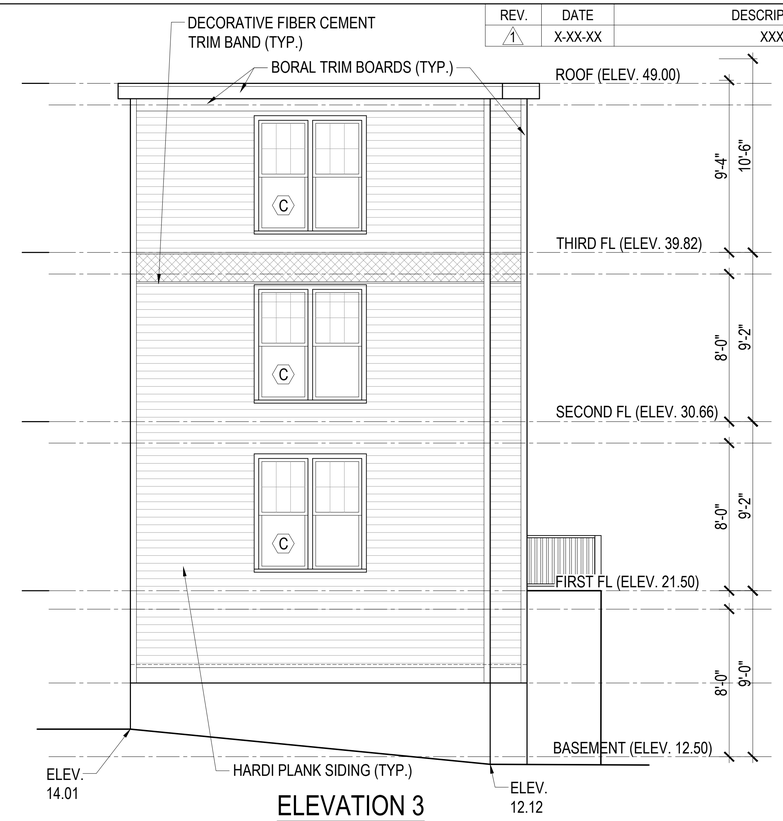
FLOOR AND ROOF PLAN

A2

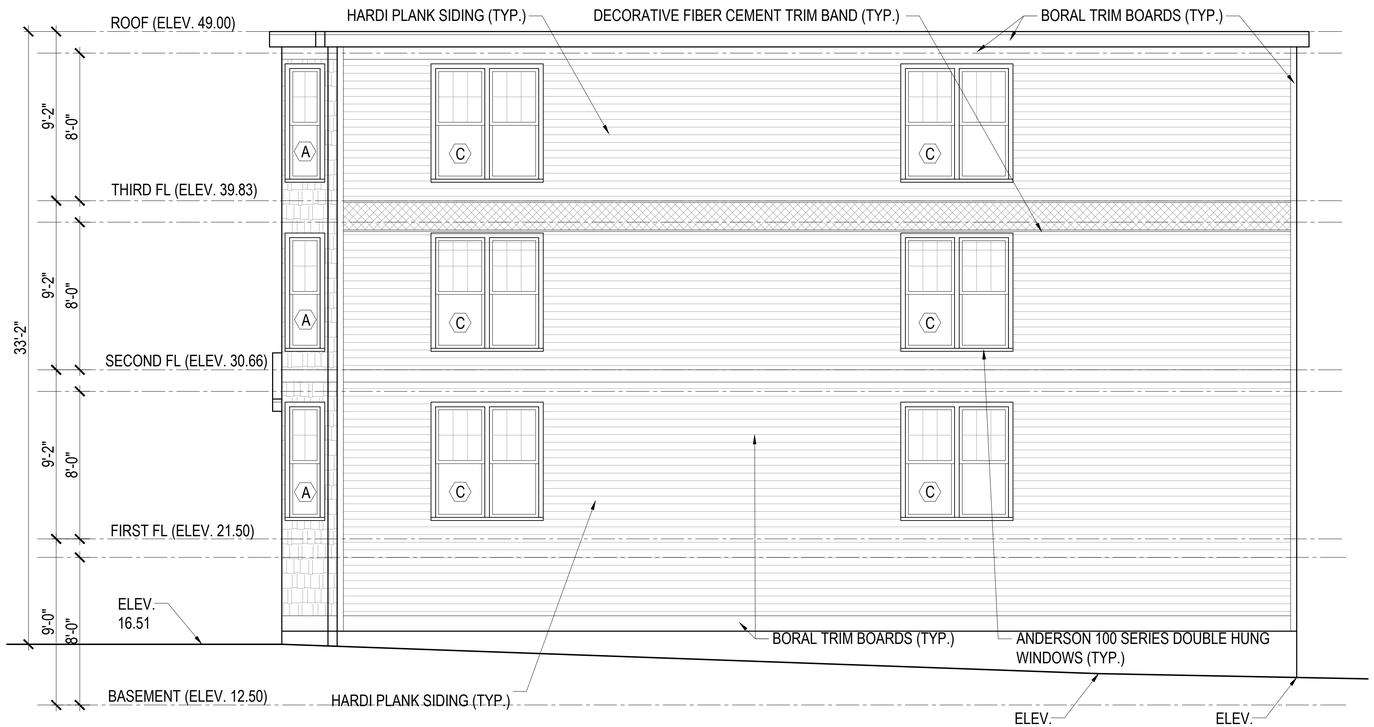
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



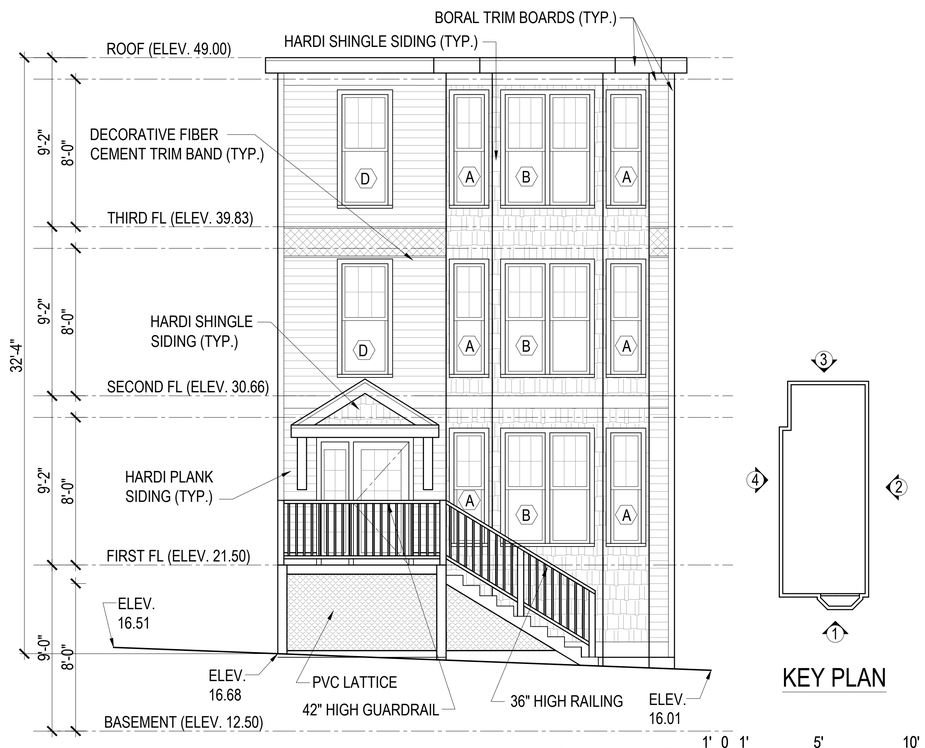
ELEVATION 4



ELEVATION 3



ELEVATION 2



ELEVATION 1

KEY PLAN

GENERAL NOTE:

1' 0 1' 5' 10'

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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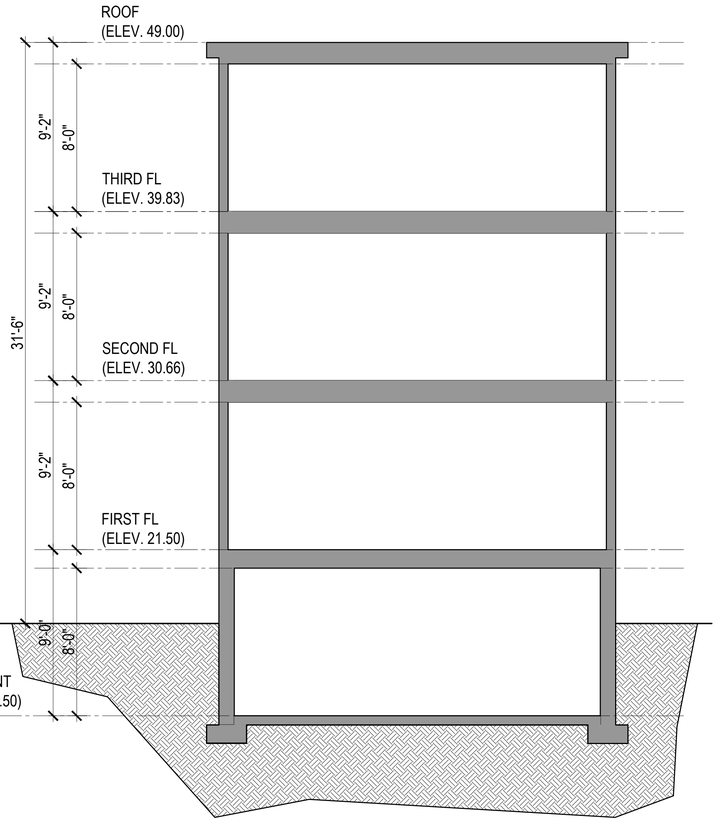
PROJECT # 19-116
DATE: 4-29-22 REV:
SCALE: 1/4" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

ELEVATIONS

A3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

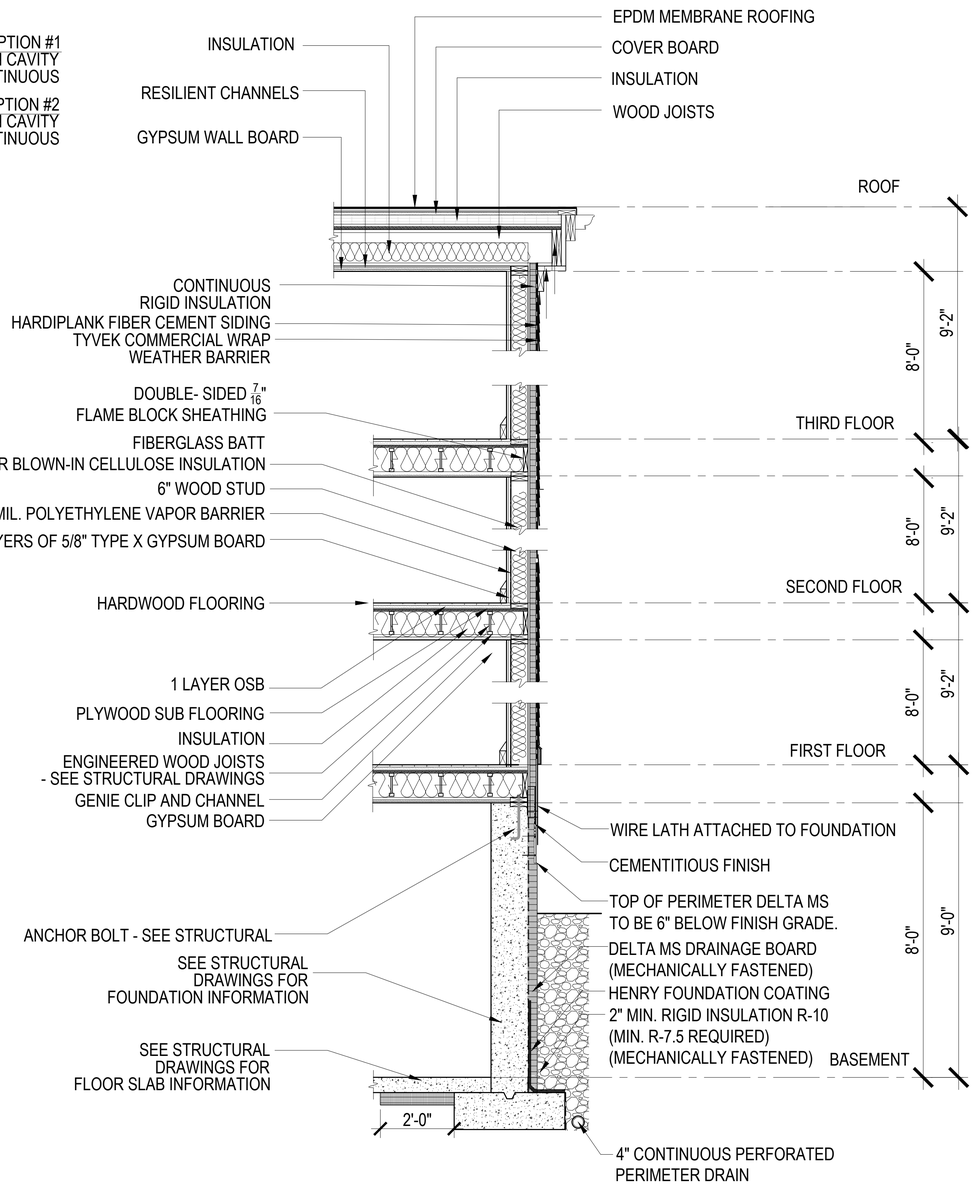


BUILDING SECTION

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

INSULATION OPTION #1
R=20 IN CAVITY
R=5 CONTINUOUS

INSULATION OPTION #2
R=13 IN CAVITY
R=7.5 CONTINUOUS



1 TYPICAL WALL SECTION

SCALE: 1/2" = 1'-0"

GENERAL NOTE:

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1' 0 1' 5' 10'

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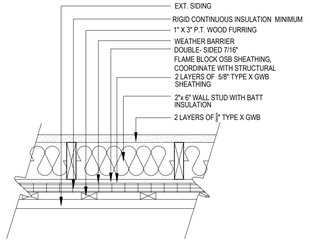
PROJECT # 19-116
DATE: 4-29-22 REV:
SCALE: AS NOTED
DRAWN BY: CD
CHECKED BY: R.P.B.

BUILDING SECTION AND WALL SECTION

A4

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

NOTE:
HEADERS, BLOCKING AND ALL FRAMING AND SHEATHING AT ALL EXTERIOR WALLS TO BE FIRE RETARDANT TREATED MATERIALS

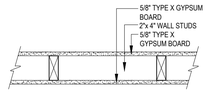


A EXTERIOR WALL
SCALE: 1" = 1'-0"

FIRE RATING
REQUIRED: 1 HOUR FROM EXTERIOR
PROVIDED: 2 HOUR FROM INTERIOR
DESIGN: UL W408

EXTERIOR WALL TYPES

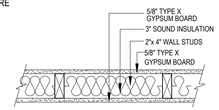
NOTE: SEAL TOP AND BOTTOM OF PARTITION AND ALL OTHER OPENINGS WITH FIRE RATED SEALANT



1 INTERIOR PARTITION
SCALE: 1" = 1'-0"

TYPICAL AT ALL INTERIOR PARTITIONS
USE MOISTURE RESISTIVE GYPSUM BOARD AT TOILET ROOMS
USE 1/2" CEMENT BOARD AT ALL TILE LOCATIONS

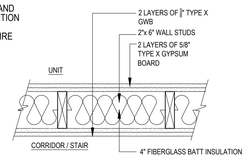
NOTE: SEAL TOP AND BOTTOM OF PARTITION AND ALL OTHER OPENINGS WITH FIRE RATED SEALANT



INTERIOR PARTITION
- INSULATED
BATHROOMS, MECHANICAL CLOSETS, LAUNDRY CLOSETS
2 SCALE: 1" = 1'-0"

TYPICAL AT ALL INTERIOR PARTITIONS
USE MOISTURE RESISTIVE GYPSUM BOARD AT TOILET ROOMS
USE 1/2" CEMENT BOARD AT ALL TILE LOCATIONS

NOTE: SEAL TOP AND BOTTOM OF PARTITION AND ALL OTHER OPENINGS WITH FIRE RATED SEALANT

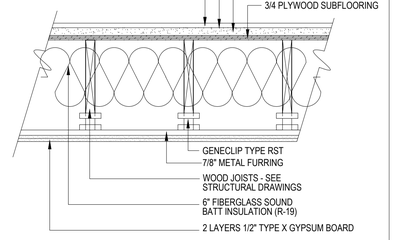


INTERIOR WALLS
AT CORRIDORS AND STAIRWAYS.
3 SCALE: 1" = 1'-0"

FIRE RATING
REQUIRED: 2 HOUR
PROVIDED: 2 HOUR
STC RATING:52
DESIGN: UL U301

INTERIOR WALL TYPES

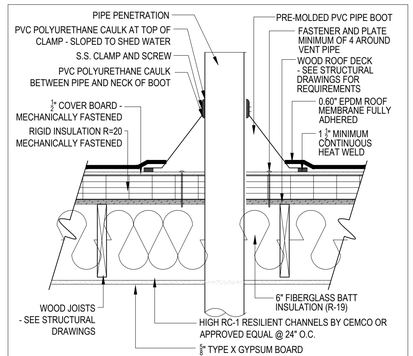
SOUND CONTROL CRITERIA
STC = 50 MINIMUM
IIC = 50 MINIMUM
NOTE: ASSEMBLY MEETS SOUND CRITERIA PER MANUFACTURER'S DATA



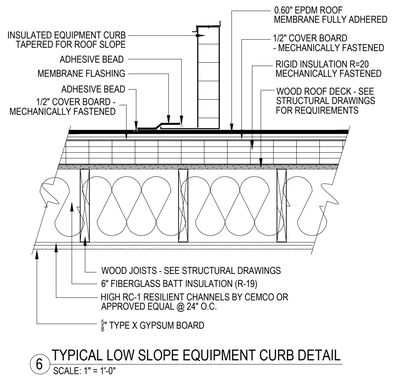
4 TYPICAL FLOOR/CEILING ASSEMBLIES
SCALE: 1" = 1'-0"

FIRE RATING: 1 HOUR
STC RATING: 62
IIC RATING: 59
DESIGN: UL L570

FLOOR ASSEMBLIES

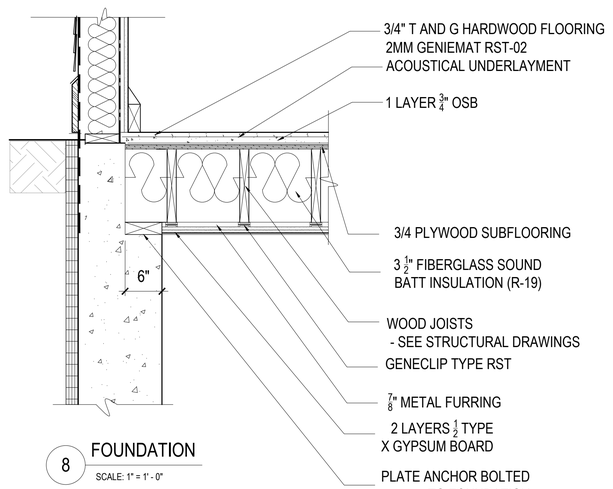


5 TYPICAL LOW SLOPE VENT DETAIL
SCALE: 1" = 1'-0"



6 TYPICAL LOW SLOPE EQUIPMENT CURB DETAIL
SCALE: 1" = 1'-0"

ROOF ASSEMBLIES & DETAILS



8 FOUNDATION
SCALE: 1" = 1' - 0"

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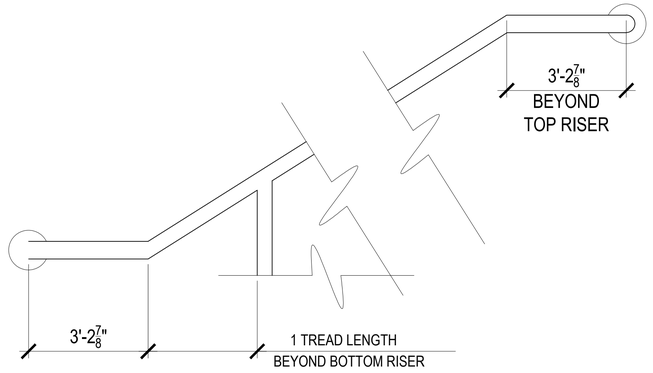
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: 1"=1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

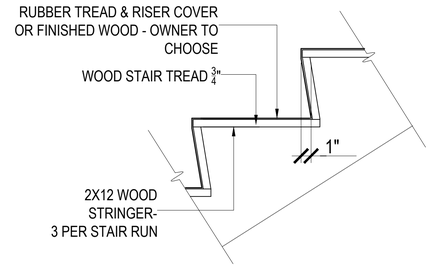
FLOOR AND WALL ASSEMBLIES

A5

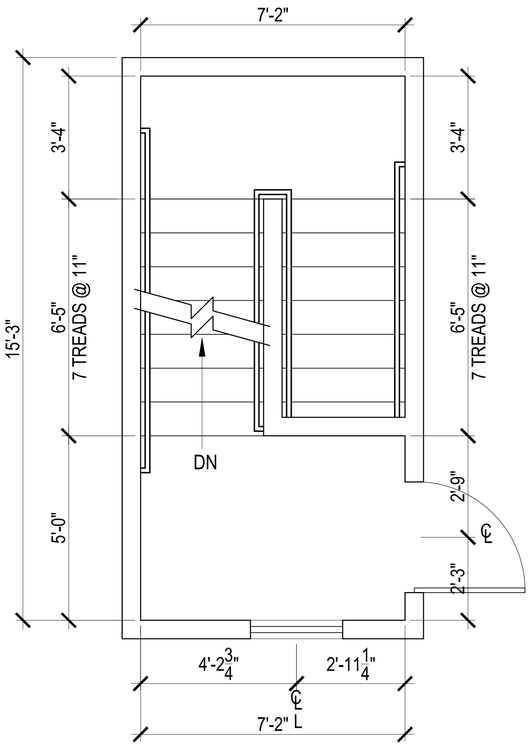
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



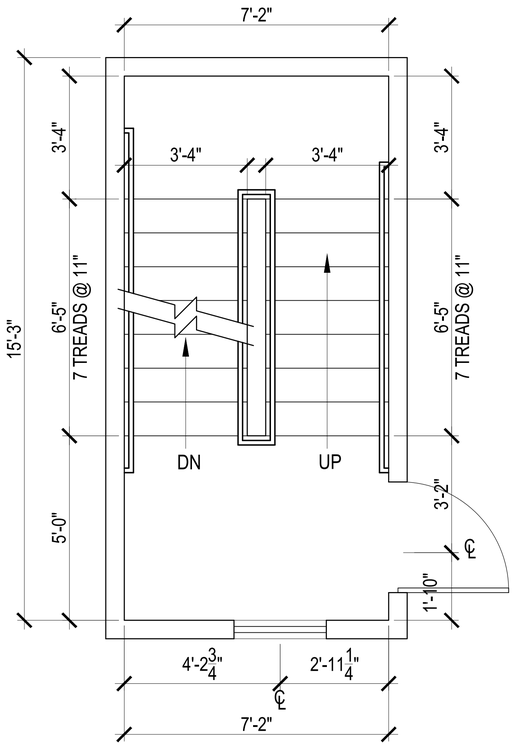
2 WALL HAND RAIL EXTENSION DETAIL (TYP.)



1 TREAD AND RISER DETAIL

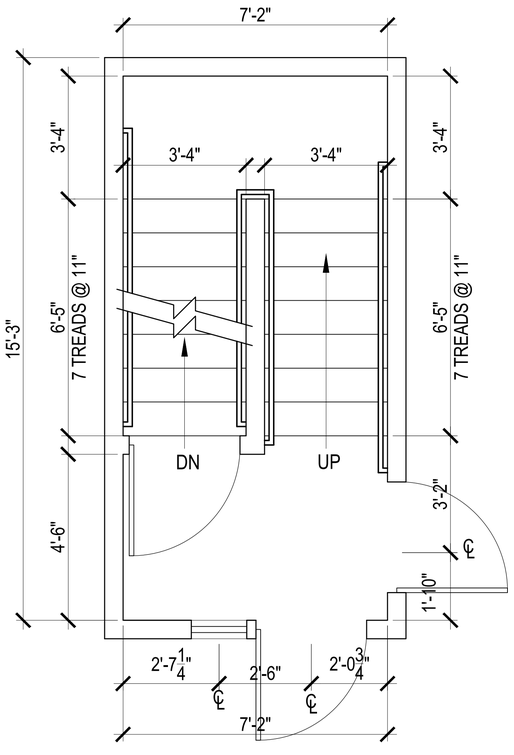


3RD FLOOR 4 A6



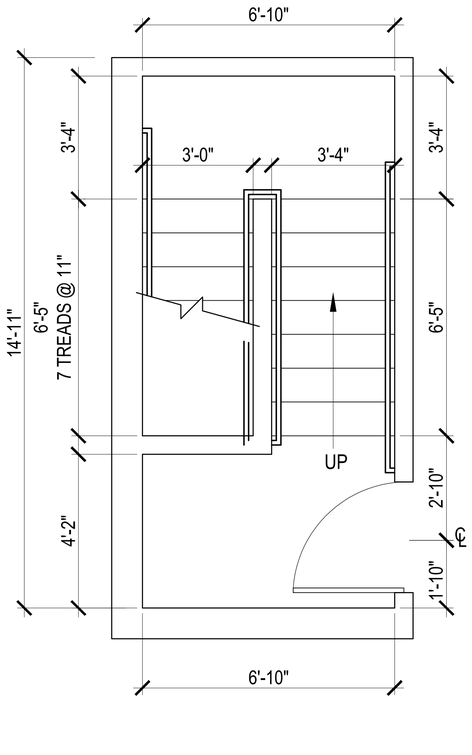
2ND FLOOR 3 A6

NOTE:
2ND FLOOR TO 3RD FLOOR
HEIGHT = 9'-2"
PROVIDE 16 EQUAL RISERS @ 7"



1ST FLOOR 2 A6

NOTE:
1ST FLOOR TO 2ND FLOOR
HEIGHT = 9'-2"
PROVIDE 16 EQUAL RISERS @ 7"



BASEMENT FLOOR 1 A6

NOTE:
BASEMENT FLOOR TO 1ST FLOOR
HEIGHT = 9'-0"
PROVIDE 16 EQUAL RISERS @ 6 3/4"

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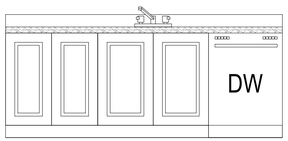
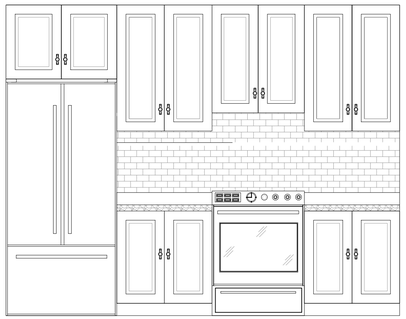
ENLARGED STAIR PLANS AND DETAILS

A6

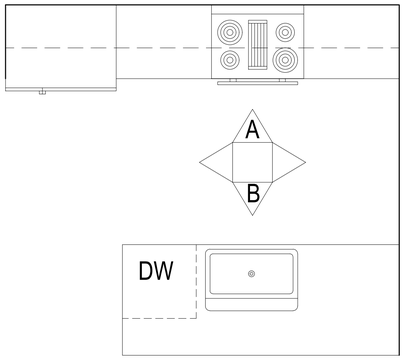
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



KTICHEN ELEVATION "B"

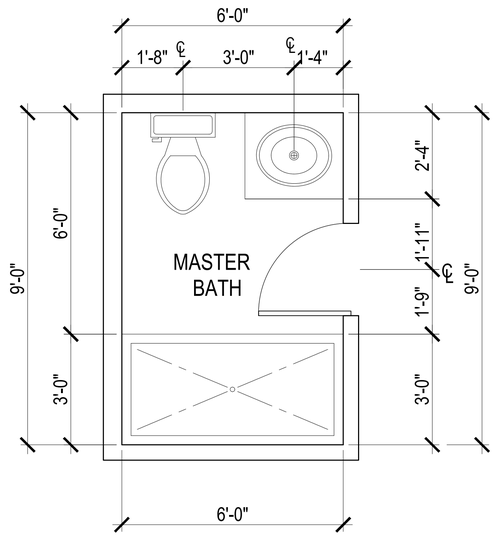


KTICHEN ELEVATION "A"

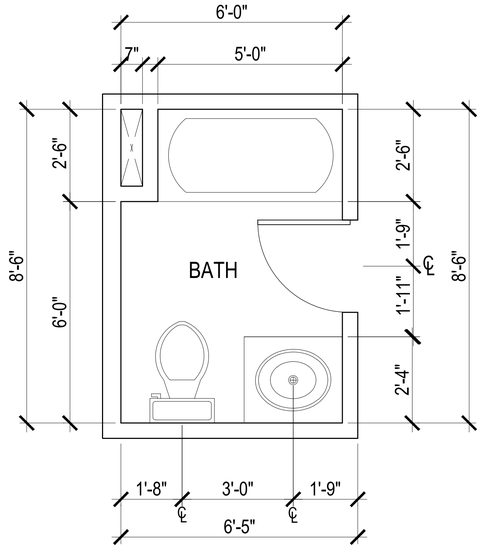


KEY PLAN 3/A7

NOTE:
KITCHEN DESIGN AND CABINET SIZES, ETC... TO BE DESIGNED BY OTHERS



ENLARGED FLOOR PLAN
MASTER BATHROOM 1/A7



ENLARGED FLOOR PLAN
BATHROOM 2/A7

KITCHEN NOTES:

1. PROVIDE CABINETRY SHOP DRAWINGS FOR EACH KITCHEN LAYOUT. CONFIRM FINISH DIMENSIONS OF APPLIANCES TO BE INSTALLED IN THE CABINETRY.
2. PROVIDE FINISHED END AND BACK PANELS AT ALL EXPOSED LOCATIONS FOR A COMPLETELY FINISHED INSTALLATION.
3. RETURN CROWN MOLDING TRIM AT SIDES AND ENDS OF CABINETRY.
4. PROVIDE ALL NECESSARY FILLER PANELS AND TRIM FOR A COMPLETELY FINISHED INSTALLATION.
5. COUNTERTOPS SHALL BE SELECTED BY OWNER.
6. CABINETRY STYLE AND COLOR TO BE SELECTED BY THE OWNER.

ACCESSIBILITY - 521 CMR ARCHITECTURAL ACCESS BOARD

GROUP 1 UNITS - FIRST FLOOR UNIT - GENERAL

1. SINK BASE CABINETS SHALL BE 30" WIDE MINIMUM.
2. COOKTOP BASE CABINETS (IF USED) SHALL BE 30" WIDE MINIMUM.
3. IF A WALL OVEN IS PROVIDED, THE FLOOR OF THE WALL OVEN SHALL BE LOCATED 30" ABOVE THE FLOOR.
4. WALLS SHALL BE CAPABLE OF STRUCTURALLY SUPPORTING WALL CABINETS AT ANY LOCATION FROM 42" TO 54" FROM THE FLOOR TO THE BOTTOM INSIDE OF THE CABINET.

BATHROOM NOTES:

1. PROVIDE MIRROR/MEDICINE CABINET, 30" HIGH x 24" WIDE, ABOVE EACH VANITY AND LAVATORY. MOUNT 40" ABOVE THE FLOOR.
2. PROVIDE TOILET TISSUE DISPENSER AT EACH WATERCLOSET.
3. PROVIDE FULL HEIGHT CERAMIC WALL TILE AT TUB ENCLOSURES (3 SIDES). PROVIDE BULL NOSE TILE AT EDGES. SUBMIT SAMPLES TO THE OWNER FOR FINAL WALL TILE SELECTION.
4. PROVIDE CERAMIC TILE SOAP HOLDERS AT TUBS.
5. BATHROOMS SHALL RECEIVE CERAMIC FLOOR TILE AND MATCHING CERAMIC BASE INSTALLED BY THIN SET METHOD. SUBMIT SAMPLES TO THE OWNER FOR FINAL FLOOR TILE AND BASE SELECTION.
6. PROVIDE CRACK SUPPRESSION MEMBRANE AT ALL FLOOR LOCATIONS TO RECEIVE CERAMIC TILE.
7. PROVIDE $\frac{1}{2}$" THICK MARBLE THRESHOLDS AT BATHROOM DOORS. COORDINATE MARBLE COLOR WITH TILE COLOR. SUBMIT MARBLE SAMPLES TO THE OWNER FOR FINAL SELECTION.
8. USE MOISTURE RESISTIVE GYPSUM WALL BOARD AT BATHROOM WALLS, EXCEPT USE DENSGUARD TILE BACKER BOARD AT TUB SURROUNDS AND SHOWERS

ACCESSIBILITY - 521 CMR ARCHITECTURAL ACCESS BOARD

GROUP 1 UNITS - FIRST FLOOR UNIT

1. PROVIDE BLOCKING IN WALL FOR FUTURE GRAB BAR INSTALLATION AT TOILET, TUB AND SHOWER.
2. PROVIDE BLOCKING IN WALL FOR FUTURE INSTALLATION OF ADA COMPLIANT LAVATORY.
3. SHOWER CURB SHALL NOT EXCEED 4" IN HEIGHT.

GROUP 1 UNITS - FIRST FLOOR UNIT - GENERAL

1. PROVIDE A PEEPHOLE IN THE UNIT ENTRY DOOR MOUNTED AT 60 INCHES ABOVE THE FLOOR.
2. WASHER OR DRYER SHALL BE FRONT LOADING TYPE.
3. ELECTRICAL OUTLETS SHALL BE LOCATED BETWEEN 15" AND 48" ABOVE THE FLOOR

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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Reginaldo Piccinato
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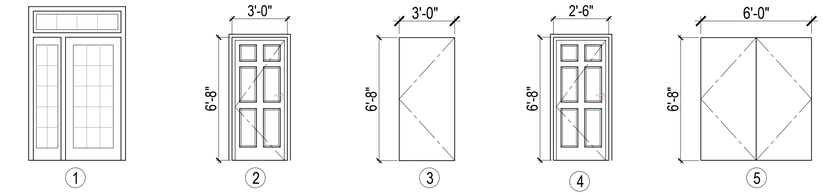
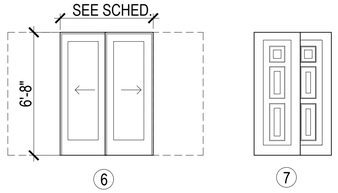
PROJECT # 19-116
DATE: 4-29-22 REV:
SCALE: 1/2" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

ENLARGED KITCHEN AND BATHROOM PLANS

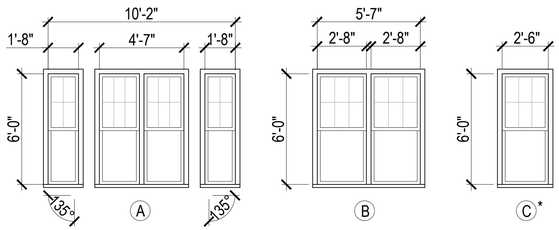
A7

DOOR TYPES:





WINDOWS TYPES:



*BEDROOM EMERGENCY ESCAPE WINDOW- SEE REQUIREMENTS ON DRAWING T3. G.C. CONFIRM BEDROOM WINDOWS MEET THE EMERGENCY ESCAPE AND RESCUE CRITERIA PRIOR TO ORDERING AND INSTALLING BEDROOM WINDOWS

WINDOW SCHEDULE

	SIZE		ROUGH OPENING		TYPE	MODEL NUMBER	MFG.	REMARKS
	WIDTH	HEIGHT	WIDTH	HEIGHT				
A	10'-1¾"	6'-0"	10'-5¾"	6'-4"	BAY 4'-8"/1'-8			
B	5'-7"	6'-0"	5'-7"	6'-4"	DOUBLE HUNG			SINGLE MULLION
C	2'-6"	6'-0"	2'-6"	6'-4"	DOUBLE HUNG			

ROOM SCHEDULE

		WALLS		CEILING		FLOORS
ROOM #	ROOM NAME	FINISH	MATERIAL	MATERIAL	HEIGHT	MATERIAL
	BASEMENT					
001	STAIRS	PAINT	CONCRETE	G.W.B.		CONCRETE
002	NUMBER NOT USED					
003	NUMBER NOT USED					
004	NUMBER NOT USED					
005	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
006	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
107	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
108	STORAGE	PAINT	CONCRETE	G.W.B.		CONCRETE
	1ST FLOOR					
100	STAIRS	PAINT	G.W.B.	G.W.B.		VINYL TILE
101	LIVING ROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
102	KTICHEN	PAINT	G.W.B.	G.W.B.		HARDWOOD
103	MECH / LAUNDRY ROOM	PAINT	G.W.B.	G.W.B.		TILE
104	SPRINKLER ROOM	PAINT	G.W.B.	G.W.B.		TILE
105	HALL CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
106	BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
106A	BEDROOM CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
107	MASTER BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
107A	MASTER CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
108	BATHROOM	PAINT	G.W.B.	G.W.B.		TILE

DOOR SCHEDULE

	DOOR			DOOR SIZE			FRAME		LBL	
	ROOM	MAT.	TYPE	WIDTH	HEIGHT	THICK	MATERIAL	TYPE		REMARKS :
					BASEMENT					
001	STAIRS	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
002	SPRINKLER ROOM	HM	5	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
003	ELECTRICAL ROOM	HM	5	6'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
004	MECHANICAL ROOM	HM	5	6'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
005	STORAGE	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
006	STORAGE	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
007	STORAGE	HM	3	3'-0"	6'- 8"	1 3/4"	METAL		1 1/2 HR FR	FLUSH METAL DOOR
					1ST FLOOR					
101	COMMON ENTRY	FIBERGLASS	1	3'-0"	6'- 8"	1 3/4"	WOOD			FIBERGLASS EXTERIOR DOOR
102	UNIT ENTRY	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD		1HR FR	WOOD PANEL DOOR
103	MECHANICAL ROOM	WOOD	2	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
104	BATHROOM	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
105	HALL CLOSET	WOOD	2	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
106	BEDROOM	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
106A	BEDROOM CLOSET	WOOD	7	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
107	MASTER BEDROOM	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
107A	MASTER BEDROOM CLOSET	WOOD	6	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
108	LIFT (INTERIOR DOOR)	WOOD	2	3'-0"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
108	LIFT (EXTERIOR DOOR)	FIBERGLASS	2	3'-0"	6'- 8"	1 3/4"	WOOD			FIBERGLASS EXTERIOR DOOR
					2ND FLOOR					
200	STAIRS	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD			FLUSH WOOD DOOR
201	UNIT ENTRY	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD		1HR FR	WOOD PANEL DOOR
203	MECHANICAL ROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
204	BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
205	HALL CLOSET	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
206	BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
206A	BEDROOM CLOSET	WOOD	7	3'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
207	MASTER BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
207A	MASTER BEDROOM CLOSET	WOOD	6	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
208	MASTER BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
					3RD FLOOR					
001	STAIRS	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD			FLUSH WOOD DOOR
002	UNIT ENTRY	WOOD	2	3'-0"	6'- 8"	1 3/4"	WOOD		1HR FR	WOOD PANEL DOOR
003	MECHANICAL ROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
004	BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
005	HALL CLOSET	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
306	BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
306A	BEDROOM CLOSET	WOOD	7	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
307	MASTER BEDROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR
307A	MASTER BEDROOM CLOSET	WOOD	6	5'-0"	6'- 8"	1 3/8"	WOOD			POCKET DOOR
308	MASTER BATHROOM	WOOD	4	2'-6"	6'- 8"	1 3/8"	WOOD			WOOD PANEL DOOR

ROOM SCHEDULE (CONTINUED)

		WALLS		CEILING		FLOORS
ROOM #	ROOM NAME	FINISH	MATERIAL	MATERIAL	HEIGHT	MATERIAL
	2ND FLOOR					
200	STAIRS	PAINT	G.W.B.	G.W.B.		VINYLTILE
201	LIVING ROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
202	KTICHEN	PAINT	G.W.B.	G.W.B.		HARDWOOD
203	MECH. / LAUNDRY ROOM	PAINT	G.W.B.	G.W.B.		TILE
204	BATHROOM	PAINT	G.W.B.	G.W.B.		TILE
205	HALL CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
206	BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
206A	BEDROOM CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
207	MASTER BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
207A	MASTER CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
208	MASTER BATHROOM	PAINT	G.W.B.	G.W.B.		TILE
	3RD FLOOR					
300	STAIRS	PAINT	G.W.B.	G.W.B.		VINYLTILE
301	LIVING ROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
302	KTICHEN	PAINT	G.W.B.	G.W.B.		HARDWOOD
303	MECH. / LAUNDRY ROOM	PAINT	G.W.B.	G.W.B.		TILE
304	BATHROOM	PAINT	G.W.B.	G.W.B.		TILE
305	HALL CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
306	BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
306A	BEDROOM CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
307	MASTER BEDROOM	PAINT	G.W.B.	G.W.B.		HARDWOOD
307A	MASTER CLOSET	PAINT	G.W.B.	G.W.B.		HARDWOOD
308	MASTER BATHROOM	PAINT	G.W.B.	G.W.B.		TILE

GENERAL NOTE: 1' 0 1' 5' 10'

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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1156 Dorchester Avenue www.rocke-christopher.com
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Telephone: 617-282-0020
Fax: 617-282-1080

Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22
REV:
SCALE: 1/4" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

DOOR, WINDOW AND ROOM FINISH SCHEDULES

A8

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

CONDENSING UNITS SERVING APARTMENTS, COORDINATE UNIT LOCATIONS BASED ON SPACES SERVED AND REFRIGERANT LENGTHS REQUIRED, PROVIDE SLEEPER AND VIBRATION ISOLATORS AS SHOWN ON DETAILS.
PROVIDE SUN/WEATHER PROTECTION FOR ALL EXPOSED REFRIGERANT PIPING.

CU-2.0 CU-2.0 CU-2.0

ALL DRYERS MORE THAN 15FT EXHAUST DUCT SHALL HAVE BOOSTER FANS LOCATED IN DRYER ROOM AND INTERLOCKED WITH DRYER OPERATION, ALL DRYERS SHALL HAVE DRYER ELL AT CEILING TURNS, SEE DETAIL
ALL TAPES FOR DRYER EXHAUST SHALL BE RATED FOR DRYER DUCT USE

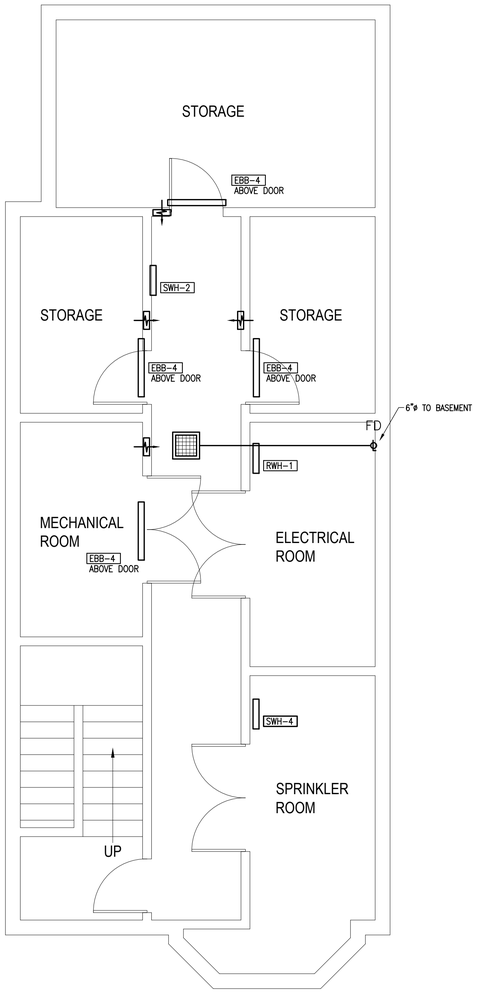
ALL CEILING DIFFUSERS SHALL HAVE RADIATION DAMPERS, ALL CEILING RETURNS AND TRANSFER RETURNS SHALL HAVE RADIATION DAMPERS

PROVIDE FRESH AIR TO EACH UNIT CONSISTING OF, FRESH AIR INTAKE WALL CAP, MOTORIZED DAMPER, FAMCO ADC524 (24V) INTERLOCKED WITH THE UNIT, 6" INSULATED DUCT AND VOLUME DAMPER.
PROVIDE PANASONIC FV-15NFLS1 ADJUSTABLE SUPPLY FAN WITH EACH FRESH AIR DUCT

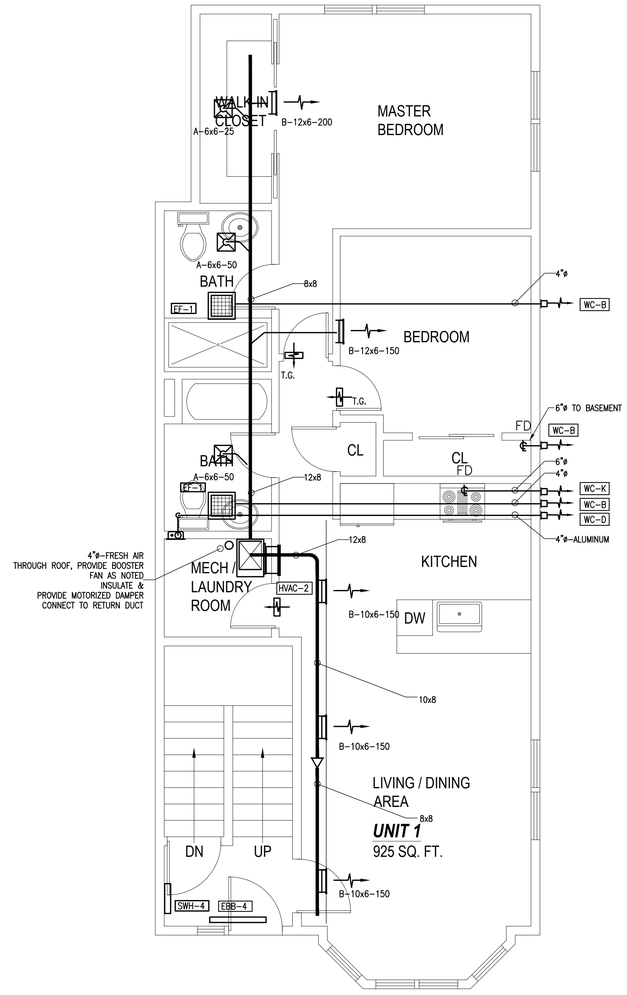
OFFSET DUCTWORK AT UNIT DISCHARGE TO GO INTO CEILING SPACE AND INTO JOIST SPACE, PROVIDE FIRE DAMPER AT CEILING PENETRATION

FOR BRANCH DUCT SIZING SEE DUCT SCHEDULE
100 CFM ø6"
150 CFM ø7"
200 CFM ø8"

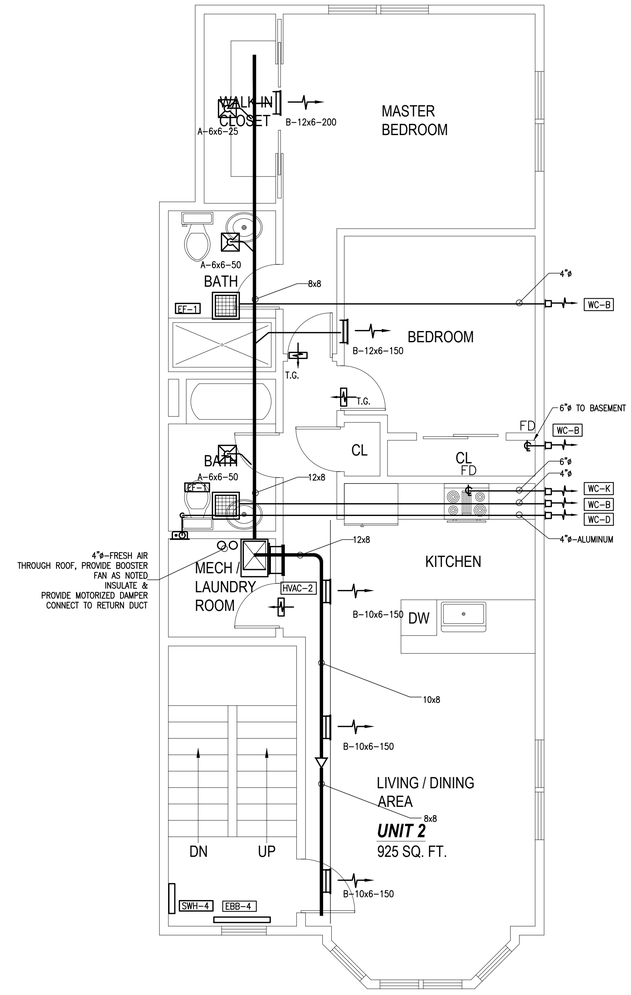
INDICATES JOIST DIRECTION
12" DEEP TJI, 16" ON CENTER



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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415 Neponset Ave. Dorchester, Massachusetts 02122
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Telephone: 617-282-0030
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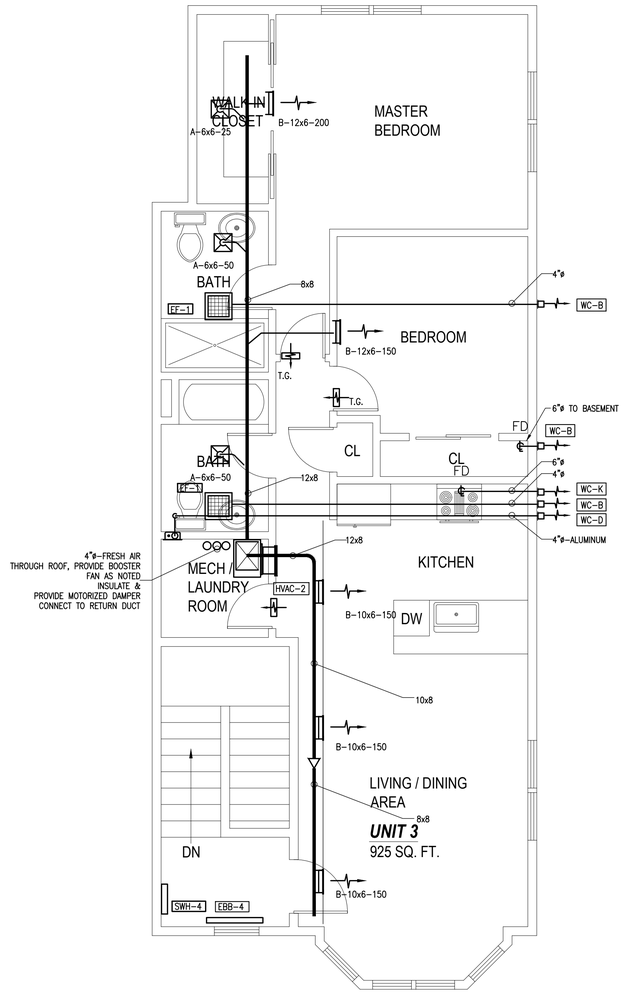
Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT #	18-040
DATE:	6-4-18
REV:	
SCALE:	¼"=1'-0"
DRAWN BY:	RC
CHECKED BY:	MM

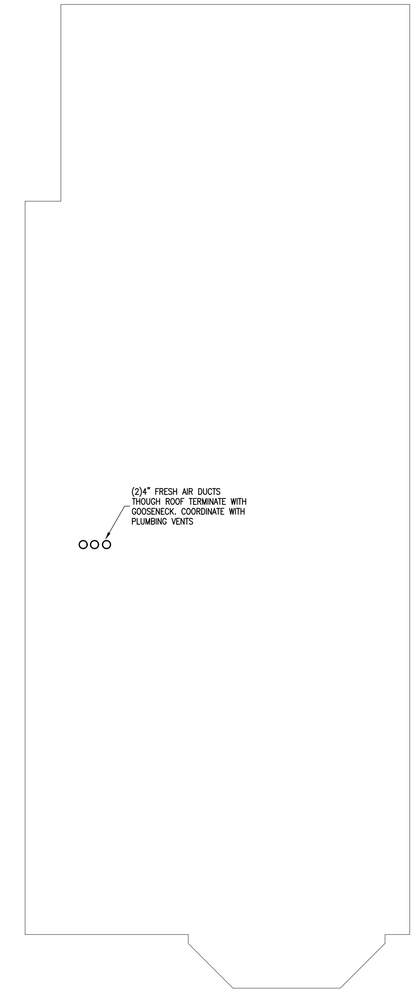
PROPOSED HVAC PLANS

H1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



THIRD FLOOR PLAN



ROOF PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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Fax: 617-282-1080

Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18 REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

PROPOSED HVAC PLANS

H2

GENERAL NOTES

1. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED. INSTALLATION OF MATERIALS SHALL MEET ALL APPLICABLE STATE, FEDERAL AND MUNICIPAL REQUIREMENTS.
2. OBTAIN PERMITS AND PAY ALL FEES FOR WORK AND REQUIRED INSPECTIONS.
3. MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER'S COMPENSATION ACT.
4. THE DRAWINGS SHALL CONSIDERED DIAGRAMMATIC ONLY. ALL MEASUREMENTS SHALL BE TAKEN FROM BUILDING SITE AND ARCHITECT'S DRAWINGS.
5. PROVIDE TEMPORARY MATERIAL STORAGE AS REQUIRED AND BE RESPONSIBLE FOR ANY LOSS OR DAMAGE THERETO.
6. SUBMIT DIGITAL COPIES OF SHOP DRAWINGS FOR REVIEW COVERING MAJOR MANUFACTURED ITEMS, IE. AIR HANDLING UNITS, REGISTERS & DIFFUSERS, WIRING DIAGRAMS, ETC.
7. KEEP ACCURATE RECORD OF "AS-BUILT" DRAWINGS AND SUBMIT THESE BEFORE FINAL CERTIFICATE OF COMPLETION.
8. ON COMPLETION OF THE WORK, REMOVE FROM THE PREMISES ALL TOOLS, DEBRIS, SURPLUS AND WASTE MATERIALS RESULTING FROM OPERATIONS UNDER THIS SECTION. CLEAN ALL EQUIPMENT AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
9. AFTER ACCEPTANCE, INSTRUCT OWNER IN EQUIPMENT OPERATION AND PROVIDE HIM WITH OPERATING AND MAINTENANCE MANUALS STANDARDS AND EXTENDED WARRANTY DOCUMENTS, INSPECTION CERTIFICATES AND COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT.
10. THE CONTRACTOR SHALL, BEFORE FINAL PAYMENT IS MADE, GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER SUCH DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
11. SUPPLY AND INSTALL DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST ASHRAE & SMACNA STANDARDS AND SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE.
12. ADJUST ALL FAN SPEEDS TO DELIVER SHOWN AIR QUANTITIES. BALANCE ALL AIR SYSTEMS AND SUPPLY WRITTEN AIR BALANCING REPORTS IN TRIPLICATE. INCLUDE NECESSARY SPARE BELTS AND PULLEYS FOR FIELD ADJUSTMENT.
13. ALL VALVES AND FITTINGS SHALL BE SUITABLE FOR THIS PARTICULAR PIPING APPLICATION AND MINIMUM 150LBS PRESSURE RATING.
14. ALL DUCTWORK SHALL BE: 24 GAUGE UP TO 36 INCHES WIDE, 22 GAUGE 31 INCHES WIDE TO 60 INCHES WIDE, ROUND DUCT SHALL BE 24 GAUGE UO TO 10 INCHES DIAMETER, 22 GAUGE 11 TO 20 INCHES DIAMETER, 20 GAUGE ABOVE 20 INCHJES DIAMETER; ALL GALVINIZED SHEETMETAL. SEAL ALL JOINTS AND SLIPS WITH EC 800 OR OTHER SUITABLE SEALANT. ALL LONGITUDINAL SEAMS SHALL BE PITTSBURG LOCKING TAPE. ALL SLIPS SHALL BE REINFORCED BAR TYPE. FABRICATE AND INSTALL ALL DUCTS IN COMPLIANCE WITH SMACNA STANDARDS FOR LOW PRESURE DUCT CONSTRUCTION.
15. ALL DUCT CONNECTIONS TO FAN DRIVEN UNITS SHALL BE MADE WITH A FIREPROOF FLEXIBLE DUCT CONNECTOR.
16. BEFORE THE H.V.A.C. SYSTEM IS OPERATED, ALL DUCTS SHALL BE BLOWN OUT & THOUGHLY CLEANED. SYSTEM SHALL BE TEST AT FULL PRESSURE & ALL LEAKS & FAULTS CORRECTED.
17. INSTALL ALL PIPING AND VALVES AS HIGH AS POSSIBLE.
18. BALANCE THE AIR SYSTEM AS PER ASSOCIATED AIR BALANCING COUNCILS LATEST STANDARDS. SUBMIT BALANCING REPORT FOR ENGINEERS APPROVAL.
19. THESE DRAWINGS ARE DIAGRAMMATIC. FIELD CONDITIONS SHALL DETERMINE ACTUAL LOCATION OF ALL PIPING AND DUCTWORK.
20. ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS.
21. DUCT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL MECHANICAL CODE AND THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION DUCT CONSTRUCTION STANDARDS UNLESS OTHERWISE INDICATED IN THESE DRAWINGS OR IN THE SPECIFICATIONS.
22. ALL DUCT SUPPORTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS UNLESS OTHERWISE NOTED.

GENERAL NOTES

SHOULD ANY CONTRADICTION, AMBIGUITY, ERROR, INCONSISTENCY, OMISSION OR INCOMPLETE SYSTEM APPEAR IN OR BETWEEN ANY OF CONTRACT DOCUMENTS THE CONTRACTOR SHALL, BEFORE SUBMITTING THE FINAL BID AND SIGNING THE CONTRACT FOR CONSTRUCTION, NOTIFY THE ARCHITECT AND REQUEST A WRITTEN RESOLUTION AS TO WHICH METHODS OR MATERIALS WILL BE REQUIRED. IN THE EVENT OF CONFLICTING REQUIREMENTS OF STANDARDS , DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL COMPLY WITH THE MORE STRINGENT REQUIREMENTS. BEFORE SUBMITTING THE FINAL BID AND THE SIGNING THE CONTRACT FOR THE CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION FROM THE ARCHITECT, IN NO CASE SHALL THE CONTRACTOR PROCEED WITH THE AFFECTED WORK UNTIL ADVISED BY THE ARCHITECT.

IF THE CONTRACTOR FAILS TO MAKE A REQUEST FOR INTERPRETATION OR RESOLUTION NO EXCUSE WILL BE ACCEPTED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER, AS INTERPRETED BY THE ARCHITECT. THIS GENERALLY MEANS THE USE OF THE HIGHEST QUALITY MATERIAL, MOST EXPENSIVE WAY OF PERFORMING WORK AND PROVIDING COMPLETE FUNCTIONING SYSTEM FOR PROPER OPERATION.

EACH AND EVERY TRADE OR SUBCONTRACTOR WILL BE DEEMED TO HAVE FAMILIARIZED THEMSELVES WITH ALL THE CONTRACT DOCUMENTS OF THIS PROJECT, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND SITE WORK, AND TO HAVE VISITED THE SITE, SO AS TO AVOID ERROR, OMISSIONS AND MISINTERPRETATIONS. RELATED INFORMATION MAY BE PROVIDED ON CONTRACT DOCUMENTS OTHER THAN THOSE ASSOCIATED WITH THE SUBCONTRACTOR'S TRADE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RELATED WORK OF ALL THE CONTRACT DOCUMENTS. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR ALLEGED ERRORS, OMISSIONS AND MISINTERPRETATIONS WHETHER THEY ARE A RESULT OF FAILURE TO OBSERVE THIS REQUIREMENT OR NOT.

CEILING RADIATION DAMPERS

CEILING RADIATION DAMPERS SHALL BE AS MANUFACTURED BY GREENHECK
MODEL CRD-1WT FOR SIDE INLET
MODEL CRD-2WT FOR TOP INLET

CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE UL LISTED DAMPER WITH THE UL LISTING OF THE CEILING

APPROVED CEILING RATINGS ARE
L-528,546,558,562,574,576,581,583,585,592
M-501,503,508
P-533,538,545,547,548,554

ENERGY CODE 2015 REQUIREMENTS

APPLICABILITY (CONTRACTOR SHALL PROVIDE ALL ITEMS LISTED BELOW)

RESIDENTIAL BUILDING. FOR THIS CODE, INCLUDES DETACHED ONE- AND TWO-FAMILY DWELLINGS AND MULTIPLE SINGLE-FAMILY DWELLINGS (TOWNHOUSES) AS WELL AS GROUP R-2, R-3 AND R-4 BUILDINGS THREE STORIES OR LESS IN HEIGHT ABOVE GRADE PLANE.

R401.2 COMPLIANCE.
PROJECTS SHALL COMPLY WITH SECTIONS IDENTIFIED AS "MANDATORY" AND WITH EITHER SECTIONS IDENTIFIED AS "PRESCRIPTIVE" OR THE PERFORMANCE APPROACH IN SECTION R405. (PRESCRIPTIVE METHOD IS CHOSEN)

R403.1.1 PROGRAMMABLE THERMOSTAT.

PROVIDE, AT LEAST ONE THERMOSTAT PER DWELLING UNIT. THERMOSTAT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THIS THERMOSTAT SHALL INCLUDE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C). THE THERMOSTAT SHALL INITIALLY BE PROGRAMMED WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70°F (21°C) AND A COOLING TEMPERATURE SET POINT NO LOWER THAN 78°F (26°C).

PROVIDE PER R403.2.1 INSULATION (PRESCRIPTIVE).
ANY SUPPLY DUCT IN ATTIC SHALL BE INSULATED TO A MINIMUM OF R-12. ALL OTHER DUCTS SHALL BE INSULATED TO A MINIMUM OF R-6.

PROVIDE PER R403.2.2 SEALING (MANDATORY).
ALL DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE.

DO NOT USE BUILDING CAVITIES PER R403.2.3. (MANDATORY).
BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.

PROVIDE VENTILATION R403.5 AS SHOWN (MANDATORY).
THE BUILDING SHALL BE PROVIDED WITH VENTILATION THAT MEETS THE REQUIREMENTS OF THE INTERNATIONAL RESIDENTIAL CODE OR INTERNATIONAL MECHANICAL CODE, AS APPLICABLE, OR WITH OTHER APPROVED MEANS OF VENTILATION. OUTDOOR AIR INTAKES AND EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN THE VENTILATION SYSTEM IS NOT OPERATING.

R403.2 HOT WATER BOILER OUTDOOR TEMPERATURE SETBACK.
HOT WATER BOILERS THAT SUPPLY HEAT TO THE BUILDING THROUGH ONE- OR TWO-PIPE HEATING SYSTEMS SHALL HAVE AN OUTDOOR SETBACK CONTROLL THAT LOWERS THE BOILER WATER TEMPERATURE BASED ON THE OUTDOOR TEMP.

R403.3.2 SEALING (MANDATORY)
DUCTS, AT HANDLERS AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR IRC, AS APPLICABLE

EXCEPTIONS:
1. AIR-IMPERMEABLE SPRAY FOAM PRODUCTS SHALL BE PERMITTED TO BE APPLIED WITHOUT ADDITONAL JOINT SEALS
2. FOR DUCTS HAVING A STATIC PRESSURE CLASSIFICATION OF LESS THAN 2 INCHES OF WATER COLUMN (500 PA) , ADDITIONAL CLOSURE SYSTEMS SHALL NOT BE REQUIRED TO CONTINUOUSLY WELDED JOINTS AND SEAMS, LOCKING TYPE JOINTS AND SEAMS OF OTHER THAN THE SNAP-LOCK AND BUTTON-LOCK TYPES.

403.3.2.1- SEALED AIR HANDLER
AIR HANDLERS SHALL HAVE A MANUFACTURERS DESIGNATION OF AIR LEAKAGE OF NO MORE THAN 2 PERCENT OF THE DESIGN AIR FLOW RATE WHEN TESTED IN ACCORDANCE WITH ASHRAE 193.

R403.3.3 DUCT TESTING
DUCRS SHALL BE PRESSURE TESTED THROUGH ROUGH IN TEST, POST CONSTRUCTION TEST

EXCEPTION- NOT REQUIRED WHERE DUCTS AND AIR HANDLERS ARE LOCATED ENITRLEY THROUGH THE BUILING THERMAL ENVELOPE

LOW RISE ESTAR REQUIREMENTS FOR MEP TRADES

(CONTRACTOR SHALL COMPLY WITH ALL ITEMS BELOW)

PROGRAMMABLE THERMOSTAT REQUIRED
(IF HEAT PUMP HAS AUXILIARY ELECTRIC HEATER, THAN THERMOSTAT WILL HAVE "ADAPTIVE USE TECHNOLOGY"

INSULATION IN THE UNCONDITIONED ATTIC R-8 OR BETTER
ALL OTHER DUCTS IN CONDITIONED SPACE R-6 OR BETTER
DUCT LEAKAGE TO INTERIOR SHALL BE LESS THAN 8 CFM25 PER 100 SQF OF CONDITIONED SPACE
DUCT LEAKAGE TO OUTSIDE SHALL BE LESS THAN 4CFM25 PER 100 SQF OF CONDITIONED SPACE

ALL APPLIANCES SHALL BE ESTAR RATED
80% OF ALL BULBS SHALL BE ESTAR RATED.

HVAC SYSTEM REQUIREMENTS

1-VENTILATION SHALL COMPLY WITH ASRAE 62.2-2010 (EXHAUST ONLY)
KITCHEN 5ACH CONTINUOUS OR 100 CFM INTERMITTENT
BATHROOM 20 CFM CONSTANT OR 50 CFM INTERMITTENT
CONTINUOUS FANS 1SONE, INTERMITTENT MAXIMUM 3 SONES

2-IF INTAKE IS CONNECTED TO RETURN OF THE DUCT THAN MOTORIZED DAMPER TO BE USED.

3-FOR HVAC MAXIMUM 115% OF HVAC LOAD OR NEXT NOMINAL SIZE.

4-FORE HEAT PUMP MAXIMUM 140% OF HEATING LOAD OR NEXT NOMINAL SIZE

5-TOTAL SYSTEM AIR FLOW WITHIN 15% OF CALCULATED AIR.

6-SYSTEM TO BE BALANCED WITHIN 25% OF CALCULATED AIR OR 25 CFM

7-CORROSION RESISTANT DRAIN PAN IS PROVIDED. (galvanized or plastic)

8-PROVIDE MINIMUM MERV 6 FILTER (MINI SPLITS ARE EXEMPTED)

9-IF HVAC HAS FRESH AIR INTAKE THAN MOTOR WILL BE ECM WITH SMART CYCLER THAT WILL SHUT DOWN THE INTAKE. (17)

INSTALLATION

1-THERE WILL BE NO KINKS OR SHARP TURNS IN DUCTWORK
2-FLEXIBLE DUCTS SUPPORTED AT MAXIMUM 5FT INTERVALS
3-PROVIDE RETURN GRILL 1 SQ. INCH NET PER 1 CFM AIR.
4-CONTINUOSLY OPERATED EXHAUST FANS SHALL HAVE READILY ACCESSIBLE CONTROLS.
5-VENTILATION INTAKES SHALL BE 4FT ABOVE ROOF OR GRADE.
6-PROVIDE INSECT SCREEN 0.5 INCH MESH
7-FRESH AIR MUST PASS THRU FILTER
8-PROVIDE DUCT LEAKAGE TEST, LEAKAGE TO BE LIMITED TO ESTAR REQUIREMENTS

MAIN/BRANCH DUCT SCHEDULE

SIZE	MAX. CFM
6" DIA	100
7" DIA	150
8" DIA	200
9" DIA	300
10" DIA	400
8x6	200
8x8	250
10x8	300
12x8	350
12x8	400
12x8	450
14x8	500
16x8	600
18x8 OR 16x10	700
20x8 OR 18x10	800
24x8 OR 20x10	1000
30x8 OR 24x10	1200

NOTE: MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 4' USE INSULATED SEMI RIGID BUCK DUCT.

MINIMUM RETURN DUCT PER HERS

CAPACITY	RETURN	FILTER
1.5 TON	ø16"	500 INCH2
2.0 TON	ø18"	600 INCH2
2.5 TON	ø20"	500 INCH2

MAXIMUM RETURN DUCT 30FT

INSULATION NOTES

CONTRACTOR SHALL FOLLOW THE MOST STRINGENT INSULATION REQUIREMENT FOR EACH ITEM

THE FOLLOWING SYSTEMS SHALL BE INSULATED.
DUCT LINER SHALL BE CLOSED CELL TYPE, GERM PROOF

IECC 2015 REQUIREMENTS:

1. HEATING HOT WATER MAINS AND BRANCHES:
   PIPING < 1" REQUIRES 1 1/2" INSULATION
   PIPING > 1½" REQUIRES 2" INSULATION
2. SUPPLY & RETURN DUCTWORK FROM HVAC UNITS:
   1 1/2" INSULATION MIN. R-6

LEED/ASHRAE 2013 REQUIREMENTS:

1. HEATING HOT WATER MAINS AND BRANCHES:
   PIPING < 1 1/2" REQUIRES 1½" INSULATION
   PIPING > 1½" REQUIRES 2" INSULATION
2. SUPPLY & RETURN DUCTWORK FROM HVAC UNITS:
   1" INSULATION MIN. R-6

GENERAL INSULATION REQUIREMENTS:

1: ALL LINED SUPPLY, RETURN AND TRANSFER DUCTWORK SHALL BE 1" DUCT LINER
   -DUCT INSUALTION SHALL CONTINUE OVER DUCT AT LINED POINT
   -FIRST 10' OF SUPPLY AND RETURN FOR ALL ERU'S AND HVAC UNITS
2. CONDENSATE DRAIN: 1"
3. ALL DUCTWORK IN CEILING SPACE SHALL HAVE R-6 INSULATION,
4. REFRIGERANT PIPING ¾" ARMFLEX

ALL DUCTWORK ON ROOF OR UNCONDITIONED SPACE SHALL BE INSULATED WITH R-12 INSULATION AND COVERED WITH EPDM ROOFING MATERIAL FOR WATER TIGHT INSTALLATION.

DIFFUSER/REGISTER SCHEDULE

LEGEND: (N)- #x# - ### (CFM / DIMENSIONS / TYPE)

TYPE	DESCRIPTION	MODEL (BASED ON TITUS)
A	LOUVER FACE CEILING DIFFUSER FOR SHEET ROCK CEILING INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR. WITH OPPOSIBLE BLADE DAMPER	TITUS TDCA, BORDER 1
A1	LOUVER FACE CEILING DIFFUSER FOR 2'x2' LAY-IN CEILING INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR. WITH OPPOSIBLE BLADE DAMPER	TITUS TDCA, BORDER 3
B	DOUBLE DEFLECTION REGISTER FOR SHEET ROCK INSTALLATION. PROVIDE ROUND TO SQUARE ADAPTOR.	TITUS 272RS
E	DOUBLE DEFLECTION GRILLE FOR SHEET ROCK NSTALLATION. WITH OPPOSIBLE BLADE DAMPER	TITUS 25 RS
E1	DOUBLE DEFLECTION GRILLE FOR SHEET ROCK NSTALLATION. WITH OPPOSIBLE BLADE DAMPER ALUMINUM TYPE	TITUS 25 RS
F	PERFORATED SIGHT PROOF EGGCRATE GRILLE FOR SHEET ROCK CEILING INSTALLATION.	TITUS 45F
G	LINEAR DIFFUSER, LINEAR STYLE 1 1/2" SLOT SPACING WIDTH, 4 SLOT FOR SHEET ROCK CEILING INSTALLATION. 100 CFM/FT WITH DAMPER, INSULATED PLENUM	TITUS MLR-40, BORDER TYPE 22

APARTMENT EXHAUST NOTES

I) EACH APARTMENT SHALL BE PROVIDED WITH A CONNECTION POINT FOR A CLOTHES WASHER VENT.
ii) PROVIDE AND INSTALL THEDRYERBOX ®, SIZED TO THE WALL THICKNESS, SHALL BE PROVIDED AT EACH SCHEDULED DRYER LOCATION
III) DRYER VENT PIPE SHALL BE MINIMUM 28 GAUGE RIGID METAL, WITH NO SCREWS FOR ATTACHMENT, AND CONSTRUCTED AND INSTALLED PER SMACNA STANDARDS.
IV) DRYER VENTING SHALL USE THE DRYER ELL FOR THE FIRST ELBOW, LOCATED AND COORDINATED TO MINIMIZE ANY ADDITIONAL BENDS. DUCTWORK SHALL HAVE THE LAST (5) FEET MINIMUM PITCHED TO THE EXTERIOR EXHAUST POINT.
V) DUCTWORK SHALL EXHAUST TO THE EXTERIOR TO A NON-SCREENED VINYL SIDEWALL HOOD PROVIDED UNDER THIS SCOPE AND COLORED TO MATCH THE ADJACENT EXTERIOR FINISH.
VI)INSULATE WITH R-4 MINIMUM LAST 10' OF EXHAUST SEAL AGAINST EXTERIOR WALL
VII)LAUNDRY VENT DUCT SHALL BE ALUMINUM TYPE TO PREVENT CORROSION AND TAPE SHALL BE IN COMPLIANCE WITH UL FOR DRYER DUCT CONNECTIONS

KITCHEN EXHAUST
I) EACH APARTMENT SHALL BE PROVIDED WITH A CONNECTION POINT FOR EXHAUSTING A RANGE HOOD.
II) COORDINATE SIZE AND CONNECTION POINT WITH THE GENERAL CONTRACTOR, APPLIANCE SUPPLIER AND CABINET SUPPLIER.
III) EXHAUST PIPE SHALL BE MINIMUM 26 GAUGE RIGID METAL, WITH NO SCREWS FOR ATTACHMENT, AND CONSTRUCTED AND INSTALLED PER SMACNA STANDARDS. DUCTWORK SHALL HAVE THE LAST (5) FEET MINIMUM PITCHED TO THE EXTERIOR EXHAUST POINT.
IV) DUCTWORK SHALL EXHAUST TO THE EXTERIOR TO A SCREENED VINYL SIDEWALL HOOD PROVIDED UNDER THIS SCOPE AND COLORED TO MATCH THE ADJACENT EXTERIOR FINISH.
V)INSULATE WITH R-4 MINIMUM LAST 10' OF EXHAUST SEAL AGAINST EXTERIOR WALL

BATHROOM EXHAUST
I) EACH APARTMENT SHALL BE PROVIDED WITH A CONNECTION POINT FOR EXHAUSTING A BATHROOM
II) COORDINATE SIZE AND LOCATION WITH THE GENERAL CONTRACTOR AND ARCHITECT
I) EXHAUST PIPE SHALL BE MINIMUM 26 GAUGE RIGID METAL, CONSTRUCTED AND INSTALLED PER SMACNA STANDARDS. DUCTWORK SHALL HAVE THE LAST (5) FEET MINIMUM PITCHED TO THE EXTERIOR EXHAUST POINT.
IV) DUCTWORK SHALL EXHAUST TO THE EXTERIOR TO A SCREENED VINYL SIDEWALL HOOD PROVIDED UNDER THIS SCOPE AND COLORED TO MATCH THE ADJACENT EXTERIOR FINISH.
V)INSULATE WITH R-4 MINIMUM LAST 10' OF EXHAUST SEAL AGAINST EXTERIOR WALL

LOUVER NOTES

LOUVER DIMENSIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS
LOUVERS SHALL BE AMCA CERTIFIED FOR WIND DRIVEN RAINS
BLADES SHALL BE 4" DEEP MOUNTED BETWEEN 35-45 DEGREES WITH DRAINABLE BLADE AND DRAINABLE HEAD
PROVIDE BIRD SCREENS IN COMPLIANCE WITH IMC 401
PROVIDE CLOR ANODIZED LOUVER PER ARCHITECTS DIRECTION
LOUVERS SHALL BE AS MANUFACTURED BY GREENHECK MODEL EHH 401 SERIES

FIRE RATED CEILING NOTES:

WHEN DUCT PENETRATE RATED CEILING:

-ALL RECESSED DIFFUSERS AND REGISTERS SHALL HAVE RADIATION DAMPERS.
-ALL UNITS DUCTED TO PLENUM SPACE SHALL HAVE CEILING FIRE DAMPERS TO MEET UL 555C
-ALL RETURN DUCTS SHALL BE BELOW THE RATED CEILING, DROPPED CEILING AREAS SHALL NOT BE RATED CEILING UNLESS SHOWN OTHERWISE
-ALL RETURN AIR GRILLES IN RATED CEILING SHALL HAVE CEILING FIRE DAMPERS
-ALL UNIT DISCHARGES SHALL BE OFFSET TO GET INTO PROPER JOIST SPACES, CARRY TRANSITION PIECE AS NEEDED
-ALL DUCTS LARGER THAN 4"ø DIAMETER SHALL HAVE FIRE DAMPERS AT CEILING PENETRATIONS

FIRE/SMOKE DAMPER REQUIREMENTS

IMC 607.5.5 REQUIRES FIRE/SMOKE DAMPER AT ALL SHAFT PENETRATIONS

IMC 607.6.1. REQUIRES DAMPER EXCEPT
-DUCT CAN PENETRATE UP TO THREE FLOORS IF, 26 GAUGE, OPEN FROM ONE UNIT TO OUTSIDE, 4" ROUND AND SEALED AROUND AND CEILING GRILLES HAVE RADIATION DAMPERS

IMC 607.5.3 REQUIRES FIRE PARTITION PENETRATIONS TO HAVE FIRE DAMPERS EXCEPT
-BUILDING IS SPRINKLED OR
-DUCT IS MINIMUM 26 GAUGE, LESS THAN 100 SQ-INCH AND
-DUCT IS ABOVE CEILING AND,
-DUCT IS NOT TERMINATED AT FIRE RATED WALL AND
-MINIMUM 12" SLEEVE IS PROVIDED

CONSTRUCTION NOTES

-ALL CEILING MOUNTED HVAC UNITS SHALL BE HUNG FROM STRUCTURAL STEEL WITH SPRING ISOLATORS,
-PROVIDE FLEXIBLE DUCT CONNECTIONS AT HVAC UNIT, AND ALL FANS
-PROVIDE ISOLATION VALVES, CONTROL VALVES, DRAIN AND STRAINER FOR ALL WATER BASED HVAC UNITS.
-PROVIDE SECONDARY DRAIN PAN WITH LEAK DETECTOR TO SHUT DOWN HVAC UNIT.
-MAINTAIN ACCESS DOORS AND CODE REQUIRED CLEARANCES FOR ALL FILTER REPLACEMENT, EQUIPMENT REPAIR AND ELECTRICAL CONTROLS,
-PRIOR TO ANY INSTALLATION, COORDINATE CLEARANCES WITH ALL TRADES.
-ALL CONDENSATE DRAINS SHALL RUN TO NEAREST STORM CONNECTION PROVIDED BY P.C. REFER TO PLUMBING DRAWINGS
-ALL CONDENSING UNITS SHALL BE MOUNTED ON CONCRETE PAD ON VIBRATION PADS, OR MOUNTED ON SLEEPERS ANCHORED TO ROOF.
-ALL SPLIT SYSTEM CONDENSER UNITS IF LOCATED AWAY FROM THE BUILDING SHALL BE PIPED UNDERGROUND UP TO BUILDING, PROVIDE MINIMUM 18" COVER.
-PROVIDE MAINTENANCE PADS MINIMUM 4" HIGH FOR ALL FLOOR-MOUNTED EQUIPMENT PUMPS AND BOILERS.
-PROVIDE 13 FILTERS FOR ALL INDOOR UNITS, MERV 8 FOR ESTAR/LEED BUILDINGS
-PROVIDE 11 FILTERS FOR ALL OUTSIDE AIR UNITS, MERV 8 FOR ESTAR/LEED BUILDINGS
-ALL PIPING CONNECTED TO VIBRATION-ISOLATED EQUIPMENT TO BE ISOLATED BY MEANS OF VIBRATION ISOLATORS, RESILIENT LATERAL SUPPORTS AND RESILIENT PENETRATION SLEEVE /SEALS. THIS APPLIES TO FIRST 50 FEET OF TOTAL PIPE LENGTH OR THE ENTIRE PIPE WITHIN MECH. ROOM (WHICHEVER IS LONGER). PIPES THAT ARE 4" DIAMETER OR LARGER TO BE ISOLATED THROUGHT THE BUILDING REFER TO SPEC SECTION 230548 FOR ADDITIONAL INFORMATION
-PROVIDE EXPANSION LOOPS AS REQUIRED
-ALL FRESH AIR DUCTS SHALL HAVE MOTORIZED DAMPERS INTERLOCKED WITH UNIT AND HAVE VOLUME DAMPERS

FIRE SAFE THROUGH FLOORS

TYPE	SIZE	HILTI	MATERIAL	RATING	BOTTOM	TOP	CHASE WALL
STEEL/CAST COPPER/EMT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
STEEL/CAST 4" EMT/ 2" FLEX	MAX 6" -	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
STEEL/CAST COPPER/EMT	MAX 4"	CP-620	FIRE FOAM	1HRS	FIRE STOP	FIRE STOP	REQUIRED
PEX	MAX 1"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	BOTH SIDES	BOTH SIDES	NOT REQUIRED
PVC PIPE	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
PVC PIPE	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
PVC PIPE	MAX 4"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	COLLAR	FIRE STOP	NOT REQUIRED
REFRIGERANT	-	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
4" DUCT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
INSULATED COPPER/STEEL	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
CABLES	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

RCA, LLC
415 Neponset Ave. Dorchester, Massachusetts 02122
www.roche-christopher.com
Telephone: 617-282-0030
Fax: 617-282-1060

Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

HVAC NOTES

H3

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

LEGEND

SUPPLY AIR DUCT UP	HOT WATER RETURN PIPE (HWR)
SUPPLY AIR DUCT DOWN	HOT WATER SUPPLY PIPE (HWS)
RETURN AIR DUCT UP	CONDENSATE DRAIN PIPE (D)
RETURN AIR DUCT DOWN	PIPE UP
VOLUME DAMPER	PIPE DOWN
MOTORIZED DAMPER	BALL VALVE
FIRE DAMPER (FD)	GATE VALVE
1" LINED DUCTWORK	CHECK VALVE
SUPPLY AIR REGISTER	STRAINER
RETURN OR EXHAUST AIR REGISTER	UNION
SUPPLY AIR DIFFUSER	3-WAY CONTROL VALVE
	2-WAY CONTROL VALVE
CEILING TRANSFER GRILL	BALANCING VALVE
ACCESS DOOR (AD)	THERMOMETER
SELF BALANCING AIR VALVE	PRESSURE GAUGE
CEILING FIRE DAMPER (CFD)	FLEXIBLE PIPE CONNECTION

EQUIPMENT TAG NUMBERS

EF-#	EXHAUST FAN
CU-#	CONDENSING UNIT
AC-#	SPLIT SYSTEM AC UNIT
HVAC-#	AIR HANDLER UNIT
UH-#	UNIT HEATER UNIT

E = EXHAUST RISER
# = REFERS TO RISER DIAGRAM

VS = SUPPLY VENTILATION RISER
# = REFERS TO RISER DIAGRAM

VS = RETURN VENTILATION RISER
# = REFERS TO RISER DIAGRAM

R = CONDENSER WATER RISER
# = REFERS TO RISER DIAGRAM

AIR OUTLET + INLET DESIGNATION

EXAMPLE:
TYPE OF GRILLE, DIFFUSER SEE SCHEDULE FOR SPECIFIC INFORMATION ABOUT THIS OUTLET/INLET TYPE — A-6x6-50 — SIZE OF GRILLE, DIFFUSER — AIRFLOW

NOTE:
THIS DESIGNATION FORMAT IS TYPICAL FOR ALL DIFFUSERS, GRILLES, AND REGISTERS, LAY-IN OR SURFACE MOUNTED, FOR SUPPLY, RETURN OR EXH.

EQUIPMENT SYMBOLS

- ROOFTOP UNIT
- ROOFTOP UPBLAST EXHAUST FAN
- EXHAUST CONTROL VALVE
- ROOFTOP UPBLAST EXHAUST FAN
- CONSTANT AIRFLOW REGULATOR DEVICE
- FIRE AND SMOKE DAMPER
- VOLUME DAMPERS (VD)
- CABINET UNIT HEATER IN CEILING
- HORIZONTAL HVAC UNIT
- VERTICAL HVAC UNIT
- ROOF MOUNTED CONDENSING UNIT

CONTROL SYMBOLS

- (T) (TS) WALL MOUNTED THERMOSTAT/SENSOR
- (H) (HS) HUMIDISTAT/SENSOR
- LP LOCAL CONTROL PANEL

SPLIT SYSTEM WITH WATER COIL VERTICAL HVAC UNIT SCHEDULE(VARIABLE DRIVE)

INDOOR SECTION											CONDENSING SECTION							
TAG	NOM. CAP. TON	CFM	ESP IN	FAN HP	TOT. MBH	SENS. MBH	HTG. COIL EAT	HTG. COIL LAT	HTG. COIL BTUH	V/ø	TAG	MCA	MOCP	V/ø	EER/SEER	DB IN/OUT	MODEL (ASPEN/ CARRIER)	INDOOR	OUTDOOR	REMARKS
HVAC-2	2	800	.5	1/2	24	21	70	90	33.5	115/1	CU-2	14	20	208/1	13/17	60/74	AFM24/24ACB7-24-3 AND MATCHING COIL	15"WX22"DX44"H+12" COIL	31"LX31WDX40"H-250 LBS	W/HW PUMP/TIMER

NOTE: PROVIDE ESTAR RATED THERMOSTAT, ANTI CYCLING PROTECTION, DISCONNECT SWITCH.
HEATING COILS SUPPLIED W/ 140 DEG. HOT WATER.
CONDENSATE DRAINS SHALL BE TYPE "L" COPPER WITH ½" FIBERGLASS INSULATION RUN TO INDIRECT WASTE DRAIN REFER TO RISER DIAGRAM
PROVIDE ZONE CONTROL AS REQUIRED TO MATCH NUMBER OF MOTORIZED DAMPERS
PROVIDE REFRIGERANT LINES BETWEEN INDOOR AND OUTDOOR UNITS AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS.
PROVIDE MERV 11 FILTERS
PROVIDE HIGH HEAD PUMP
PROVIDE PUMP RATED FOR MINIMUM OF 3½ GPM AT 30FT OF HEAD

CEILING MOUNTED EXHAUST FAN

TAG	LOCATION	TYPE	DRIVE	CFM	V/ø	LAMP	SP	NOISE SONES	DIMENSIONS	PANASONIC MODEL	ESTAR	CONTROLS
EF-1	BATHROOM	CEILING	DIRECT	110	120/1	(2)PL18	0.1"	0.3	14.5"X17"X11.5"H-16LBS-6" DUCT	FV-05-11VKSL1	YES	HIGH/LOW FAN REQUIRES TWO WALL SWITCHES (HAS LIGHT)

PROVIDE PANASONIC FIRE DAMPER ENCLOSURE FOR ALL CEILING BATHROOM FANS.

WALL CAP SCHEDULE

TAG	BRAND	SIZE	DIMENSIONS	LOCATION	DUCT
WC-B	X-VENT THVB	4" VENT	7.5"X7.5"X1.5"	BATHROOM EXHAUST	ø4"-NO FLEX
WC-K	X-VENT THVB	6" VENT	10"x9"X5"	KITCHEN EXHAUST	ø6" W/FD AT CEILING PENETRATION
WC-D	X-VENT THVB	4" VENT	7.5"X7.5"X1.5"	DRYER EXHAUST-REMOVE SCREEN	ø4" AL WITH HARD ELBOW
WC-FA	X-VENT TEVB	6" VENT	7.5"X7.5"X1.5"	FRESH AIR INTAKE	ø6"-INSULATED

VYNIL COLOR TO MATCH SIDING,
MATCH DUCT SIZE CONNECTED TO UNIT.
ALL EXHAUST DUCTS SHALL HAVE R-6 INSULATION FIRST 10FT FROM EXTERIOR WALL IN
ALL FRESH AIR INTAKE DUCTS SHALL HAVE MOTORIZED DAMPER AT ENVELOPE PENETRATION WITH ACCESS PANEL.
DAMPER SHALL BE INTERLOCKED WITH HVAC UNIT
FOR COMBINED BATHROOMS, USE 6" DUCT AFTER COMBINE AND USE WC-K WALL CAP
COMBINE EXHAUST TO ONE WALL CAP WITH SEPARATE DUCT CONNECTIONS IF LOCATED NEXT TO EACH OTHER COORDINATE WITH ARCHITECT

ELECTRIC HEATER SCHEDULE

TYPE	KW	VOLT/PH	DIMENSIONS	MODEL NUMBER-COLOR BY ARCH
RWH-1	1	120/1		Q'MARK#CRA 1512-T2
RWH-2	2	120/1	19"HX16"WX4"D	Q'MARK# MCSSARWH1802/HTWHS1
RWH-4	4	208/1	19"HX16"WX4"D	Q'MARK# MCSSARWH4808/HTWHS1
SWH-4	4	208/1	19"HX16"WX4"D	Q'MARK# MCSSARWH4808/HTWHSM
EBB-2	0.4	120/1		Q'MARK#QMK-2512W-W/T'STAT
EBB-3	0.75	120/1		Q'MARK#QMK-2513W-W/T'STAT
EBB-4	1	120/1		Q'MARK#QMK-2514W-W/T'STAT
EBB-6	1.5	120/1		Q'MARK#QMK-2516W-W/T'STAT
UH-5	5	208/1		Q'MARK#MUH-35-W/T'STAT
CCH-4	4	208/1		Q'MARK#CDF548-W/T'STAT

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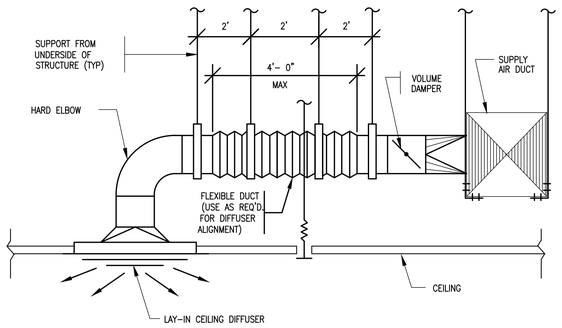
6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

HVAC SCHEDULES

H4

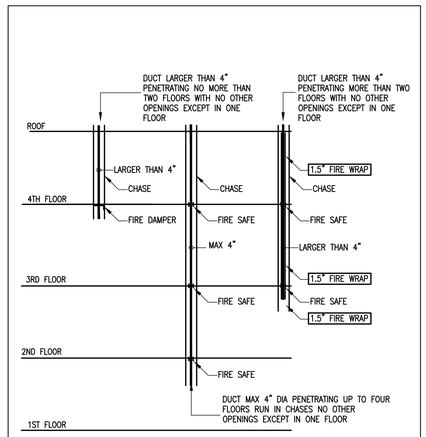
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



NOTES:

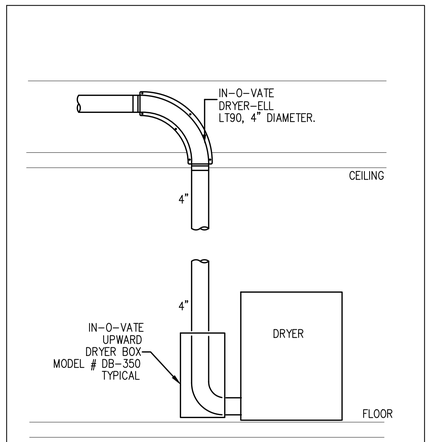
① MAXIMUM SAG 1/2" PER FOOT.

CEILING DIFFUSER BRANCH DUCTS — N.T.S.

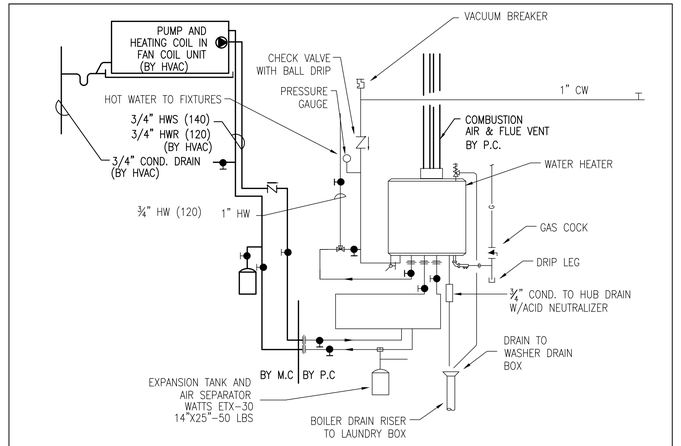


PER IMC 2015 FIGURE 607.6.1(2)

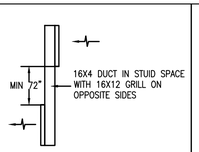
DUCT RISER THROUGH FLOORS — NTS



TYPICAL DRYER BOX AND DRYER ELL DETAIL — NTS

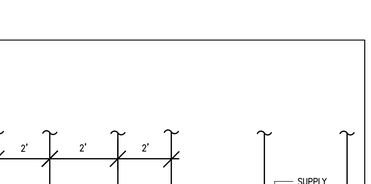


INSTANTANEOUS WATER HEATER DETAIL — N.T.S.



BEDROOM WALL TRANSFER GRILL

LAUNDRY ROOM WALL TRANSFER GRILL

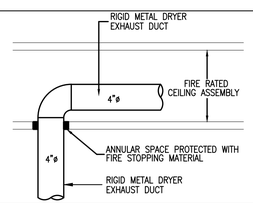


CEILING TRANSFER GRILL

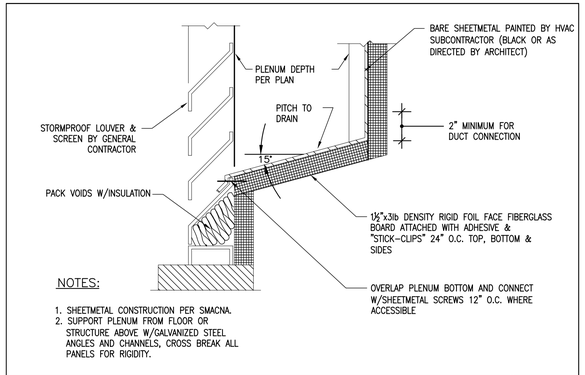
NOTES:

① TRANSFER DUCTS TO BE SUPPORTED FROM STRUCTURE ABOVE.
② FIRE DAMPER WHERE APPLICABLE, SEE PLANS FOR LOCATION.
③ OPEN END DUCT WxH.

CEILING AND WALL TRANSFER DUCT DETAIL — N.T.S.



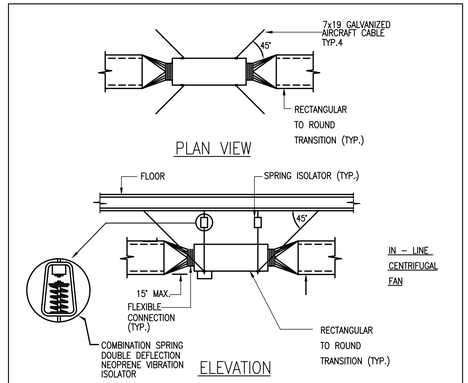
FLOOR/CEILING DUCT PROTECTION DETAIL — NTS



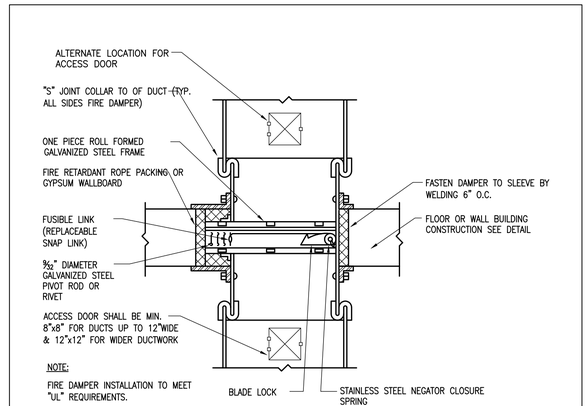
NOTES:

1. SHEETMETAL CONSTRUCTION PER SMACNA.
2. SUPPORT PLENUM FROM FLOOR OR STRUCTURE ABOVE W/GALVANIZED STEEL ANGLES AND CHANNELS, CROSS BREAK ALL PANELS FOR RIGIDITY.

PLENUM AT LOUVER DETAIL — N.T.S.



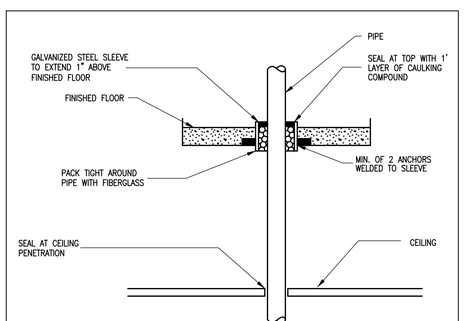
IN LINE FAN HANGER DETAIL — NTS



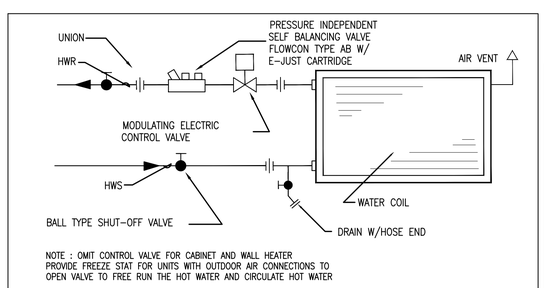
NOTE:

FIRE DAMPER INSTALLATION TO MEET "UL" REQUIREMENTS.

FIRE DAMPER W/BLADES OUTSIDE THE AIR STREAM — N.T.S.

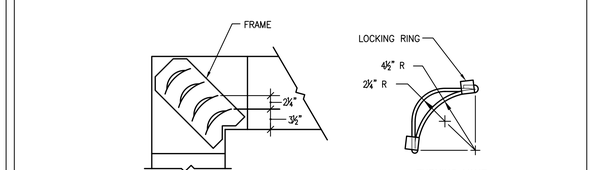


PIPE SLEEVE THRU FLOOR PENTRATION DETAIL — NTS



NOTE : OMIT CONTROL VALVE FOR CABINET AND WALL HEATER PROVIDE FREEZE STAT FOR UNITS WITH OUTDOOR AIR CONNECTIONS TO OPEN VALVE TO FREE RUN THE HOT WATER AND CIRCULATE HOT WATER

WATER COIL PIPING DETAIL — NTS



NOTES:

1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 48".
3. FRAMES-BOLTED OR RIVETED TO ELBOW.
4. VANES AND FRAMES-SAME GAUGE AS ELBOW.

DOUBLE THICKNESS TURNING VANES FOR SQUARE ELBOW — N.T.S.

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PROJECT # 18-040
DATE: 6-4-18 REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
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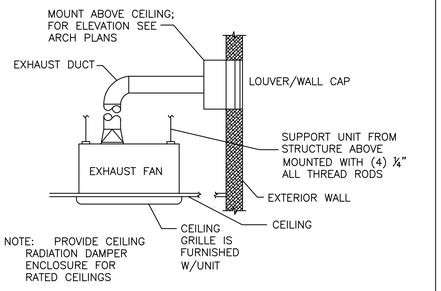
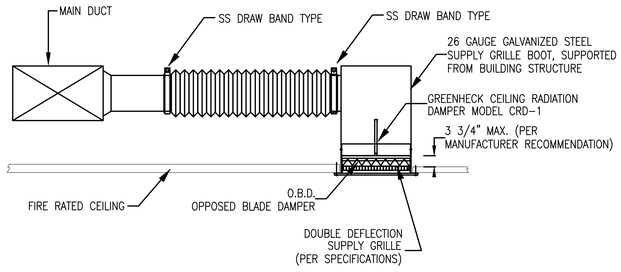
HVAC DETAILS

H5

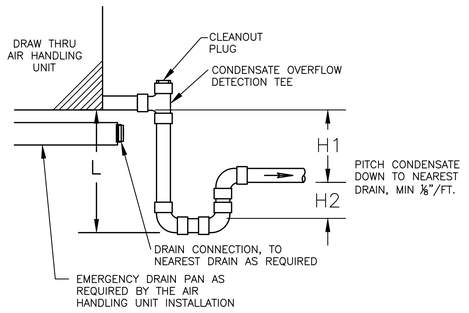
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



CEILING EXHAUST FAN DETAIL | NTS

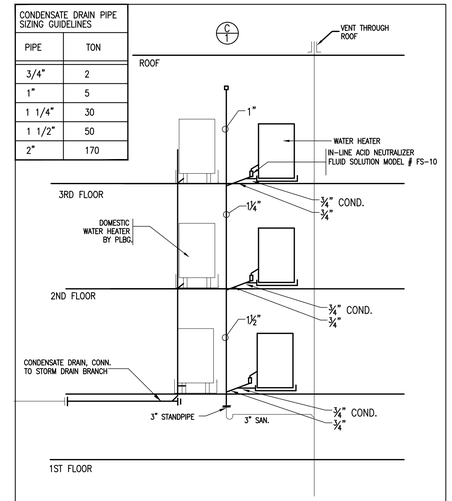


SUPPLY GRILLE/CRD INSTALLATION DETAIL | NTS



CONDENSATE DRAIN DETAIL | NTS

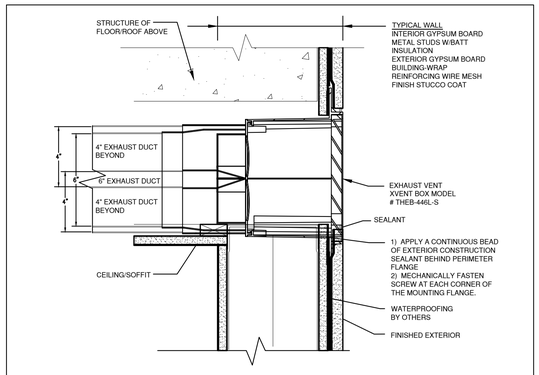
CONDENSATE DRAIN PIPE SIZING GUIDELINES	
PIPE	TON
3/4"	2
1"	5
1 1/4"	30
1 1/2"	50
2"	170



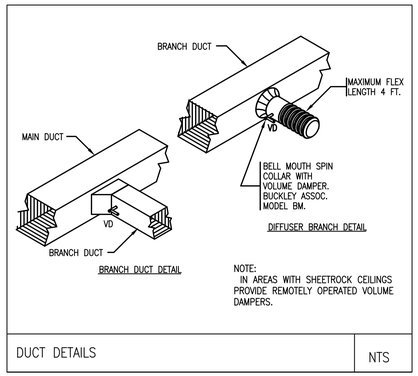
NOTE:
ALL ACID NEUTRALIZERS, DRAIN PIPING FROM FURNACES, AND CONDENSATE DRAIN SHALL BE BY HVAC CONTRACTOR. SANITARY PIPING SHALL BE BY PLUMBING CONTRACTOR.

NOTE:
PROVIDE CONDENSATE RISER IN EACH APARTMENT MECH ROOM AS SHOWN ON THIS DIAGRAM

MECHANICAL ROOM DRAIN RISER DIAGRAM | N.T.S.

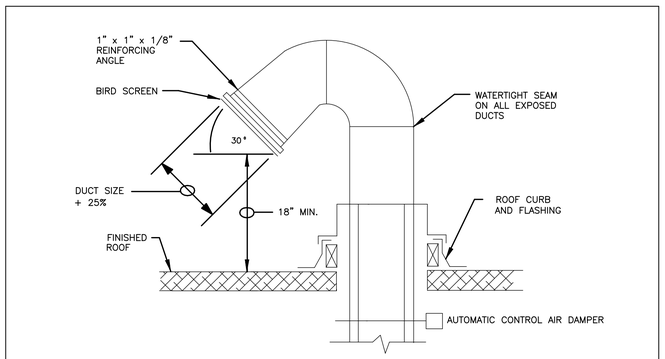


TYPICAL WALL CAP PENETRATION XVENT BOX | NTS

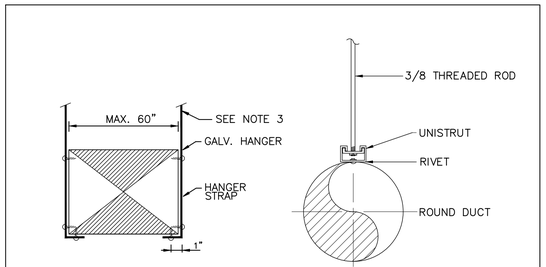


NOTE:
IN AREAS WITH SHEETROCK CEILINGS PROVIDE REMOTELY OPERATED VOLUME DAMPERS.

DUCT DETAILS | NTS



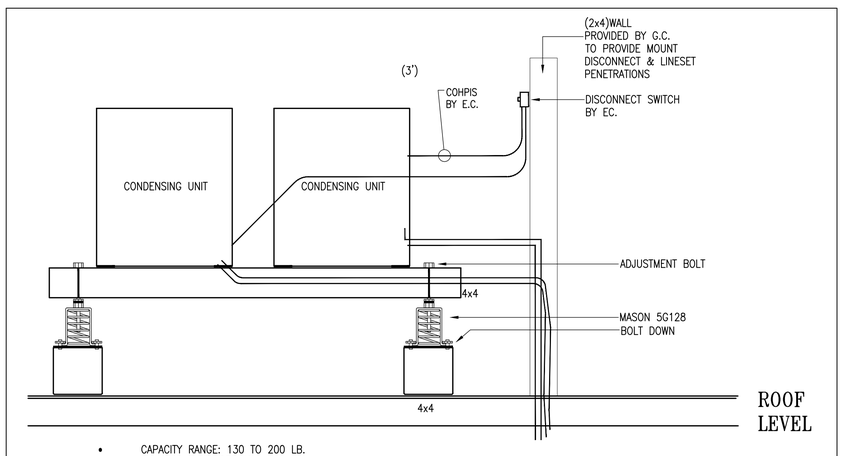
ROOF GOOSENECK DETAIL | NTS



NOTES:
1. ON DUCTS OVER 48" WIDE, BOTTOM SHALL BE BRACED BY ANGLE. FOR CROSS SECTION AREA MORE THAN 8 SQ FT, DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.

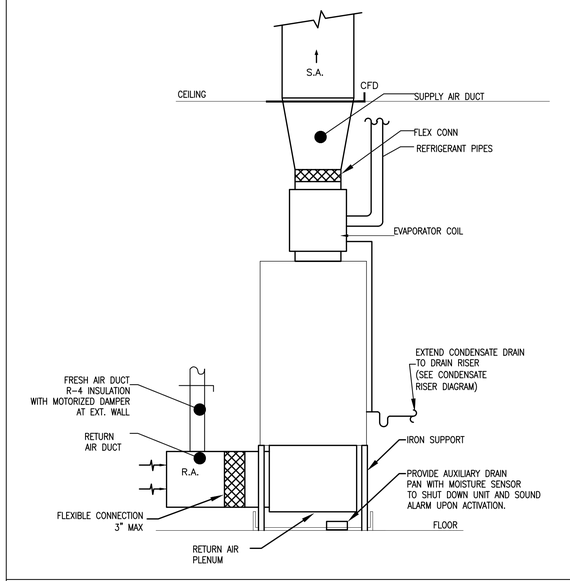
2. CUTTING AND PATCHING SHALL BE LIMITED TO A MINIMUM AS REQUIRED FOR PROPER INSTALLATION.
3. SUPPORTS SHALL BE SPACED AND SIZED AS PER SMACNA.

DUCT HANGER SUPPORT | NTS



- CAPACITY RANGE: 130 TO 200 LB.
- ISOLATOR TYPE: SPRING
- BOLT SIZE: 3/8~~x4"~~ 3/8"x10" BOLT

CONDENSING UNIT MOUNTING DETAIL | N.T.S.



VERTICAL UNIT DETAIL WITH BOTTOM AIR RETURN | N.T.S.

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Fax: 617-282-1080

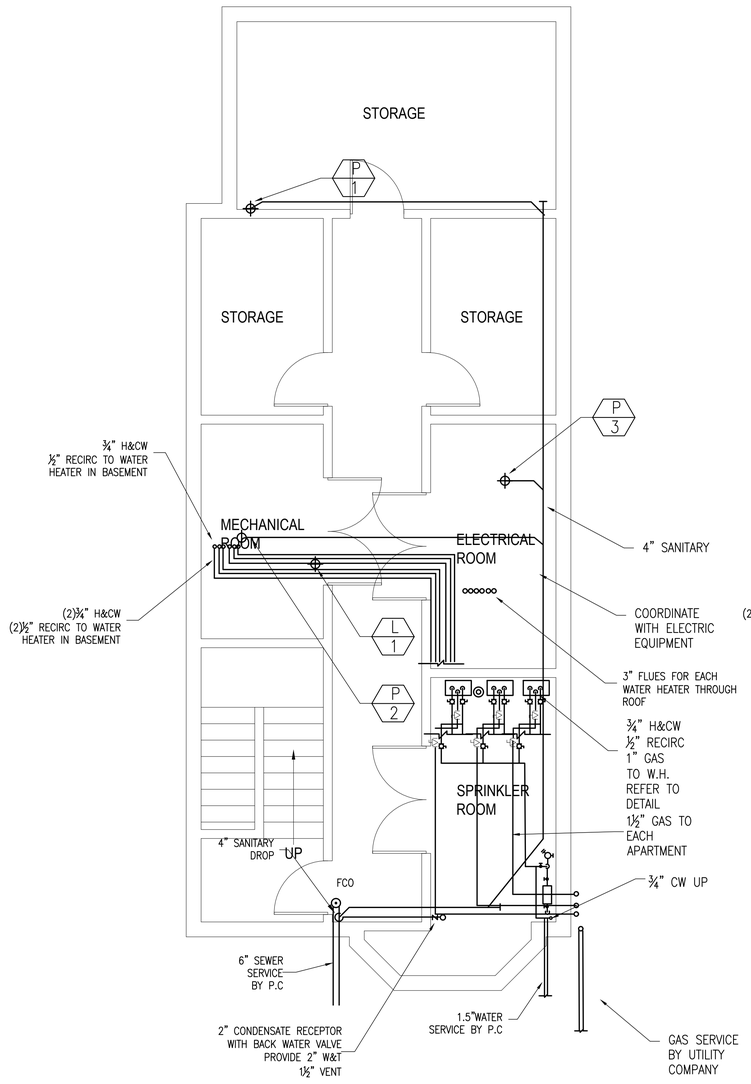
Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

HVAC DETAILS

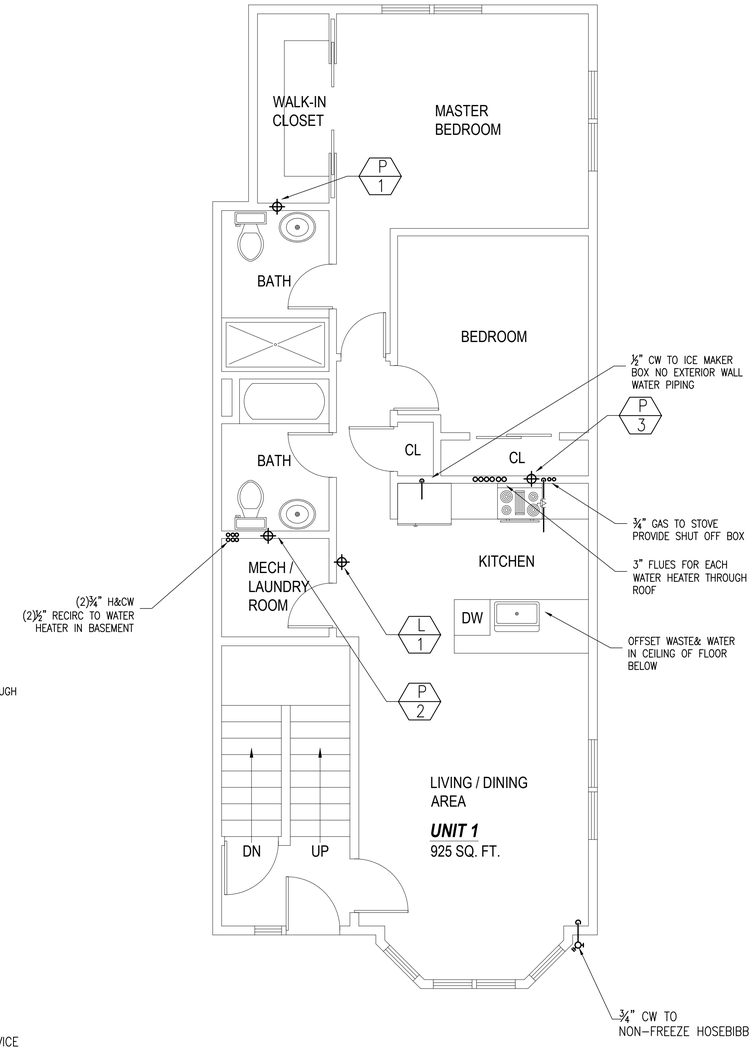
PROJECT # 18-040
DATE: 6-4-18 REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

H6

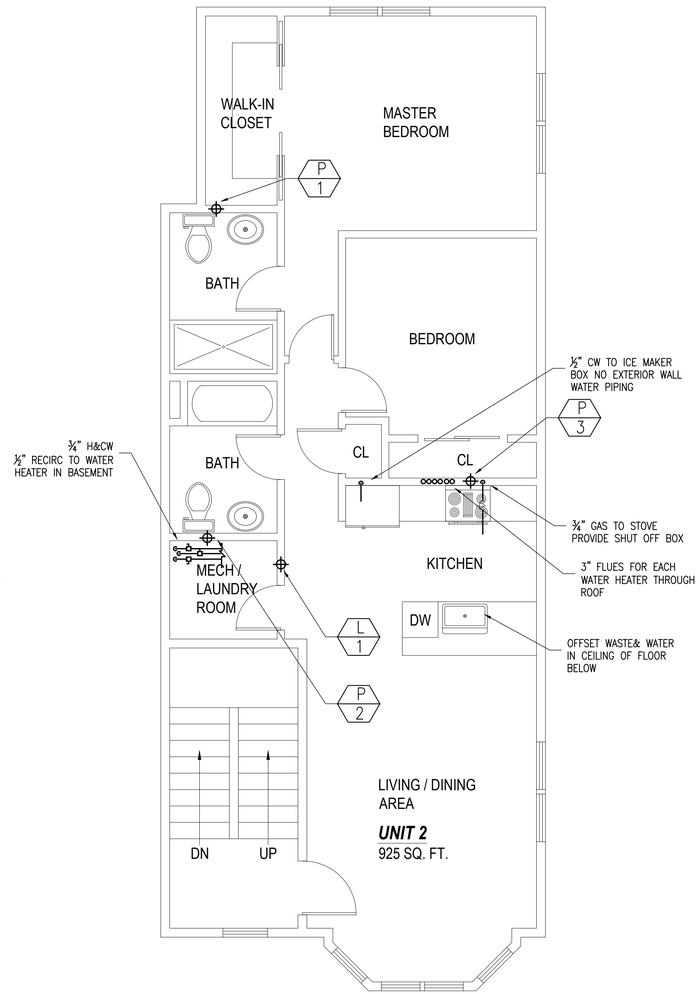
REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

ZADE ASSOCIATES LLC
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PROJECT #	18-040
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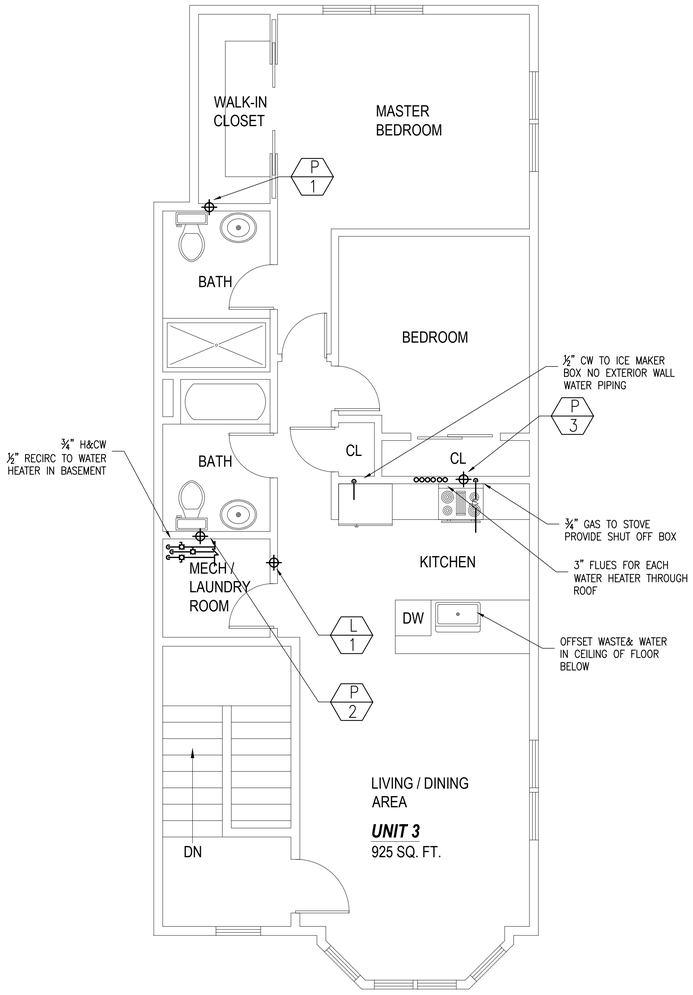
SCALE:	¼"=1'-0"
DRAWN BY:	RC
CHECKED BY:	MM

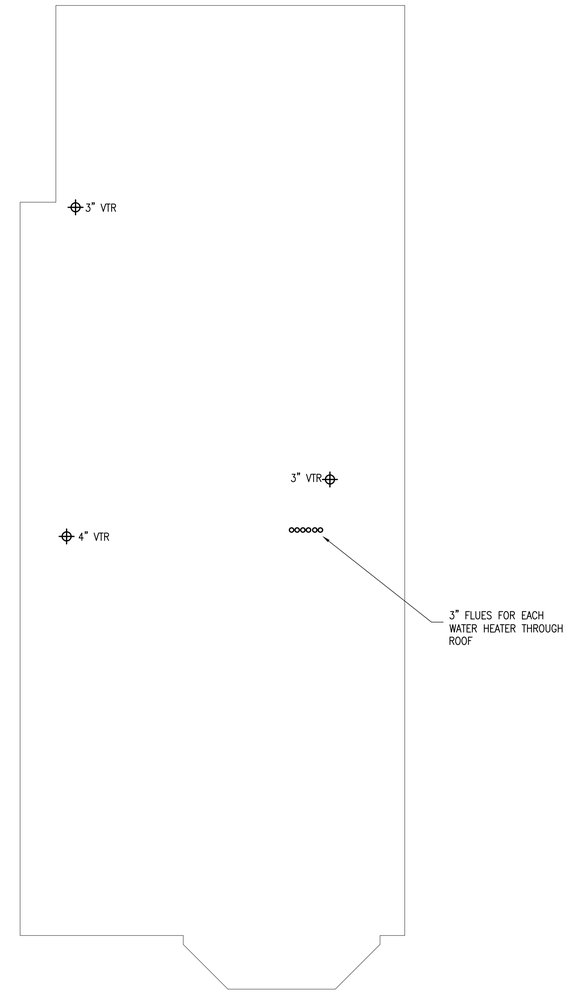
PROPOSED PLUMBING PLANS

P1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX



THIRD FLOOR PLAN



ROOF PLAN

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PROPOSED PLUMBING PLANS

P2

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

BASIC PLUMBING REQUIREMENTS

PART 1. – GENERAL

1.1 RELATED DOCUMENTS

ALL APPLICABLE REQUIREMENTS OF OTHER PORTIONS OF THE CONTRACT DOCUMENTS APPLY TO THE WORK OF THIS SECTION INCLUDING, BUT NOT LIMITED TO, ALL DRAWINGS, ALL SPECIFICATIONS, GENERAL CONDITIONS, AND GENERAL REQUIREMENTS INCLUDING SUBMITTALS.

1.2 APPLICABLE CODES AND STANDARDS

APPLICABLE CODES: ALL LOCAL AND STATE BUILDING CODES, INCLUDING THE INTERNATIONAL PLUMBING CODE MASSACHUSETTS STATE PLUMBING CODE AND THE MASSACHUSETTS STATE BUILDING CODE.
APPLICABILITY OF STANDARDS: EXCEPT WHERE THE CONTRACT DOCUMENTS INCLUDE MORE STRINGENT REQUIREMENTS, APPLICABLE CONSTRUCTION INDUSTRY STANDARDS HAVE THE SAME FORCE AND EFFECT AS IF BOUND OR COPIED DIRECTLY INTO THE CONTRACT DOCUMENTS. SUCH STANDARDS ARE MADE A PART OF THE CONTRACT DOCUMENTS BY REFERENCE.

CONFLICTING REQUIREMENTS: WHERE COMPLIANCE WITH TWO OR MORE STANDARDS IS SPECIFIED, AND THE STANDARDS ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, REFER REQUIREMENTS THAT ARE DIFFERENT, BUT APPARENTLY EQUAL, AND UNCERTAINTIES TO THE ARCHITECT FOR A DECISION BEFORE PROCEEDING.

PUBLICATION DATES: WHERE THE DATE OF ISSUE OF A REFERENCED STANDARD IS NOT SPECIFIED, COMPLY WITH THE STANDARD IN EFFECT AS OF DATE OF CONTRACT DOCUMENTS.

ABBREVIATIONS AND NAMES: TRADE ASSOCIATION NAMES AND TITLES OF GENERAL STANDARDS ARE FREQUENTLY ABBREVIATED. THE FOLLOWING ACRONYMS OR ABBREVIATIONS AS REFERENCED IN CONTRACT DOCUMENTS ARE DEFINED TO MEAN THE ASSOCIATED NAMES. NAMES AND ADDRESSES ARE SUBJECT TO CHANGE AND ARE BELIEVED TO BE BUT ARE NOT ASSURED TO BE ACCURATE AND UP TO DATE AS OF DATE OF CONTRACT DOCUMENTS.

AGA – AMERICAN GAS ASSOCIATION
ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE
ARI – AIR CONDITIONING AND REFRIGERATION INSTITUTE
ASHRAE – AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASME – AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSE – AMERICAN SOCIETY OF SANITARY ENGINEERING
ASTM – AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS – AMERICAN WELDING SOCIETY
AWWA – AMERICAN WATER WORKS ASSOCIATION
CISPI – CAST IRON SOIL PIPE INSTITUTE
NEC – NATIONAL ELECTRIC CODE
NFPA – NATIONAL FIRE PROTECTION ASSOCIATION
NSF – NATIONAL SANITATION FOUNDATION
PDI – PLUMBING AND DRAINAGE INSTITUTE
UL – UNDERWRITERS LABORATORIES
DOT – DEPARTMENT OF TRANSPORTATION
EPA – ENVIRONMENTAL PROTECTION AGENCY
OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

1.3 SUBMITTALS

PRIOR TO THE PERFORMANCE OF ANY WORK OR INSTALLATION OF ANY MATERIALS, OBTAIN APPROVAL FROM THE ARCHITECT BY SUBMITTING SHOP DRAWINGS AND DATA SHEETS.

SUBMITTAL OF SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES WILL BE ACCEPTED ONLY WHEN SUBMITTED BY THE GENERAL CONTRACTOR. DATA SUBMITTED FROM SUBCONTRACTORS AND MATERIAL SUPPLIERS DIRECTLY TO THE ARCHITECT WILL NOT BE PROCESSED. CERTIFIED DRAWINGS AND CATALOG DATA SHEETS SHALL SHOW:
1. SPECIFICALLY WHAT ITEMS AND FEATURES ARE TO BE PROVIDED.
2. APPLICABLE SPECIFICATION SECTION NUMBER AND EQUIPMENT TAG NUMBER.
3. PRINCIPAL DIMENSIONS AND DETAILS OF CONSTRUCTION.
4. WEIGHTS: INFORMATION REQUIRED FOR THE DESIGN OF SUPPORTS AND FOUNDATIONS.
5. SIZES AND LOCATIONS OF PIPING AND CONNECTIONS.
6. PERFORMANCE DATA CERTIFIED BY THE MANUFACTURER.
7. SUBMIT SCHEDULE OF PROPOSED PIPING, VALVES, SPECIALTIES, ETC.
8. ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE SEPERATLY IDENTIFIED.

PLUMBING SUBMITTALS SHALL BE PROVIDED FOR THE FOLLOWING ITEMS:
1. PIPING AND FITTING MATERIALS.
2. PLUMBING VALVES AND SPECIALTIES.
3. PIPING HANGER AND ATTACHMENT ASSEMBLIES.
4. PIPING INSULATION.
5. ALL SCHEDULED PLUMBING FIXTURES, DRAINS, AND CLEANOUTS.
6. UTILITY CONNECTION DETAILS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

APPROVAL OF SHOP DRAWINGS DOES NOT RELEASE RESPONSIBILITY OF COORDINATING HIS WORK AT JOBSITE AND TAKING FIELD MEASUREMENTS. IN CASES WHERE INTERFERENCES BECOME APPARENT, NOTIFY ARCHITECT SO THAT SUCH INTERFERENCES MAY BE RESOLVED PRIOR TO PROCEEDING WITH SHOP WORK. NO CLAIM WILL BE ALLOWED FOR WORK THAT MIGHT HAVE TO BE MOVED OR REPLACED BASED ON A CLAIM THAT WORK WAS PLACED IN ACCORDANCE WITH DIMENSIONS INDICATED ON AN APPROVED SHOP DRAWING.

1.4 COORDINATION

COORDINATE WITH THE BUILDING TRADES:
1. STRUCTURAL MEMBERS, PADS, AND BUILDING OPENINGS FOR FIXTURES, EQUIPMENT, PIPING, ETC., FOR USE BY THIS INDICATED ON THE ARCHITECTURAL AND STRUCTURAL PLANS ARE THE COORDINATION RESPONSIBILITY OF THIS INSTALLER. PAY FOR ANY CHANGES IN THE ABOVE REQUIREMENTS AFTER LETTING AND ACCEPTING THE CONTRACT.
2. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT, DIRECTIONS AND SIZES OF EQUIPMENT, PIPING, ETC. IT IS NOT INTENDED TO SHOW EVERY OFFSET AND FITTING OF EVERY SITE DIFFICULTY THAT MAY BE ENCOUNTERED. PROVIDE ALL MATERIALS AND PERFORM ALL LABOR NECESSARY TO MAKE COMPLETE WORKING SYSTEMS, READY FOR USE, WITHOUT EXTRA CHARGE. ALL MEASUREMENTS MUST BE VERIFIED ON THE JOBSITE.
3. EXAMINE THE SITE AND ALL DRAWINGS BEFORE PROCEEDING WITH THE LAYOUT AND INSTALLATION OF THIS TO SUIT ACTUAL CONDITIONS. CONFER AND COOPERATE WITH OTHER TRADES ON THE JOB SO THAT ALL WORK WILL BE INSTALLED IN PROPER RELATIONSHIP. COORDINATE PRECISE LOCATION OF PARTS WITH OTHER WORK. ALL SYSTEMS SHALL BE INSTALLED TO PROVIDE MAXIMUM HEADROOM, EXCEPT WHERE DIMENSIONED OTHERWISE ON THE DRAWINGS.

1.5 RECORD DOCUMENTS

RECORD DRAWINGS: MAINTAIN A CLEAN, UNDAMAGED SET OF PRINTS OF CONTRACT DRAWINGS AND SHOP DRAWINGS. MARK THE SET TO SHOW THE ACTUAL INSTALLATION WHERE THE INSTALLATION VARIES SUBSTANTIALLY FROM THE WORK AS ORIGINALLY SHOWN. MARK WHICHEVER DRAWING IS MOST CAPABLE OF SHOWING CONDITIONS FULLY AND ACCURATELY; WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE CONTRACT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD LATER.
1. MARK INFORMATION THAT IS IMPORTANT TO THE OWNER, BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS.
2. ORGANIZE RECORD DRAWING SHEETS INTO MANAGEABLE SETS, BIND WITH DURABLE PAPER COVER SHEETS, AND PRINT SUITABLE TITLES, DATES AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.
3. MAINS AND BRANCHES OF PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED, CONCEALED UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE LOCATED (I.E., TRAPS, STRAINERS, EXPANSION COMPENSATORS, TANKS, ETC.).
4. EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM AT LEAST TWO PROMINENT BUILDING LINES.
5. APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.
6. INCLUDE ALL "CORRECTED FOR RECORD" SHOP DRAWINGS TO REFLECT APPROVALS RECEIVED.

1.6 MAINTENANCE MANUALS

ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL HEAVY-DUTY 2-INCH, 3-RING VINYL-COVERED BINDERS, WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER. INCLUDE THE FOLLOWING TYPES OF INFORMATION:
1. COPIES OF WARRANTIES.
2. WIRING DIAGRAMS.
3. INSPECTION PROCEDURES.
4. APPROVED SHOP DRAWINGS AND PRODUCT DATA.
5. DESCRIPTION OF FUNCTION, NORMAL OPERATING CHARACTERISTICS AND LIMITATIONS, PERFORMANCE CURVES, ENGINEERING DATA AND TESTS, AND COMPLETE NOMENCLATURE AND COMMERCIAL NUMBERS OF REPLACEMENT PARTS.
6. MANUFACTURER'S PRINTED OPERATING PROCEDURES TO INCLUDE START-UP, BREAK-IN, AND ROUTINE AND NORMAL OPERATING INSTRUCTIONS; REGULATION, CONTROL, STOPPING, SHUTDOWN, AND EMERGENCY INSTRUCTIONS; AND SUMMER AND WINTER OPERATING INSTRUCTIONS.
7. MAINTENANCE PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING; DISASSEMBLY, REPAIR, AND REASSEMBLY; ALIGNING AND ADJUSTING INSTRUCTIONS.
8. SERVICING INSTRUCTIONS AND LUBRICATION CHARTS AND SCHEDULES.

1.7 REGULATIONS AND PERMITS
PROVIDE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION.

PAY FOR AND OBTAIN ALL REQUIRED PERMITS & SCHEDULE INSPECTIONS IN A TIMELY MANNER AS TO NOT DELAY THE PROJECT. OBTAIN ALL NECESSARY PERMITS INCLUDING BUT NOT LIMITED TO ENTERING MANHOLES, USE OF WATER FROM LOW PRESSURE HYDRANTS, DEMOLITION AND NEW WORK, ETC. PRIOR TO COMMENCE OF WORK.

PART 2. – PRODUCTS

2.1 GENERAL PRODUCT REQUIREMENTS

ALL EQUIPMENT AND MATERIALS, EXCEPT AS OTHERWISE SPECIFIED, SHALL BE NEW, OF CURRENT PRODUCTION, FIRST QUALITY AND OF THE BEST OF EACH CLASS SPECIFIED. MATERIALS, PRODUCTS, AND EQUIPMENT SHALL BE DELIVERED TO JOBSITE WITH FACTORY PACKAGING BEARING MANUFACTURER'S NAME OR LABEL, AND UNION LABEL WHENEVER PRACTICAL.

PART 3. – EXECUTION

3.1 PLUMBING INSTALLATIONS
GENERAL SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF PLUMBING SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:
1. COORDINATE SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
2. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
3. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION, TO ALLOW FOR MECHANICAL INSTALLATIONS.
4. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
5. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES.
6. INSTALL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS.
7. PROVIDE ACCESS PANELS OR DOORS WHERE UNITS ARE CONCEALED BEHIND FINISHED SURFACES.
8. COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS, TO THE EXTENT THAT THOSE INSTRUCTIONS AND RECOMMENDATIONS ARE MORE EXPLICIT OR STRINGENT THAN REQUIREMENTS CONTAINED IN CONTRACT DOCUMENTS.
9. INSPECT MATERIALS OR EQUIPMENT IMMEDIATELY UPON DELIVERY AND AGAIN PRIOR TO INSTALLATION. REJECT DAMAGED AND DEFECTIVE ITEMS.

3.2 FINAL INSPECTION
PRIOR TO FINAL ACCEPTANCE, ALL SYSTEMS SHALL BE OPERATED TO TEST PERFORMANCE TO THE SATISFACTION OF THE ARCHITECT.
1. WATER SHALL CIRCULATE THROUGHOUT SYSTEMS WITHOUT NOISE, WATER HAMMER, LEAKS, TRAPPING, OR AIR-BINDING.
2. MOTORS AND OTHER EQUIPMENT SHALL OPERATE WITHOUT EXCESSIVE NOISE OR VIBRATION.
3. DRAINS SHALL FLOW FREELY, WITHOUT EXCESSIVE NOISE, LEAKS OR STOPPAGES.

CORRECT DEFECTS DEMONSTRATED BY INSPECTIONS AND TESTS TO THE SATISFACTION OF THE ARCHITECT.

3.3 CLEANING OF SYSTEMS AND PREMISES

ALL EQUIPMENT AND FIXTURES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS AT THE COMPLETION OF THE PROJECT AND PRIOR TO ACCEPTANCE BY THE OWNER.

3.4 PROTECTION

GUARDS, BARRICADES, LIGHTS, SERVICES, ETC., NECESSARY FOR THE PROTECTION OF PERSONS AND PROPERTY SHALL BE FURNISHED AND MAINTAINED.

EXISTING WORK SUCH AS PAVEMENTS, LAWNS, SIDEWALKS, FLOORS, CURBS, AND OTHER STRUCTURES AND UTILITIES WHICH ARE DAMAGED OR DISTURBED DUE TO MAKING CONNECTIONS OR ANY PHASE OF OPERATIONS SHALL BE RESTORED TO THE SATISFACTION OF THE OWNER AND THE GOVERNING AUTHORITIES.

GENERAL NOTES

NOTE FOLLOWING LINE ITEMS ARE LISTED FOR QUALITY PURPOSES AND APPLICABLE WHERE COMPONENTS PRESENT IN THE PROJECT.

REGARDLESS HOW THE DETAILS ARE SHOWN, CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS.

CONTRACTOR SHALL PAY ATTENTION TO GAS FIRED EQUIPMENT DISCHARGE LOCATIONS RELATIVE TO AIR INTAKES BEFORE ANY INSTALLATION AND MAINTAIN CODE REQUIRED OR MANUFACTURER REQUIRED CLERANCES.

1–ALL HOT WATER PIPING IN RECIRCULATION TYPE SYSTEMS SHALL BE INSULATED, INCLUDING TAKE OFFS FROM RE–CIRCULATION LINE.
ALL HORIZONTAL COLD WATER MAINS OR BRANCH LINES ABOVE CEILINGS SHALL BE INSULATED.
ALL HORIZONTAL STORM DRAINS SHALL BE INSULATED. INSULATE 3 FT PIPING ABOVE AND BELOW THE OFFSET. INSULATE ROOF DRAIN BODIES UNDER DECK AND 3 FT PIPING IF NO OFFSET.

2–HOT WATER PIPING IN SYSTEMS WITHOUT RECIRCULATION SHALL BE FULLY INSULATED TO MAINTAIN TEMPERATURE (IECC 2014)

3–ALL TRAPS SHALL HAVE CLEAN OUTS

4–ALL COMMON AREA FAUCETS SHALL HAVE POINT OF USE MIXING VALVES, ZURN LEAD FREE SERIES LFUSG–B OR EQUAL

5–ALL ADA SINKS AND LAVATORIES SHALL HAVE LAVGUARD PROTECTION COVERS, COMPLETE

6–ALL FIXTURES SHALL HAVE MULTI TURN LEAD FREE WATER STOPS AS MANUFACTURED BY ZURN LF SERIES.

7–ALL PREFABRICATED SHOWERS AND TUB SURROUNDS SHALL HAVE BUILT IN GRAB BAR RE–INFORCEMENTS, OR

8–WALLS BEHIND THE WATER CLOSETS, TUBS, SHOWERS SHALL BE RE–INFORCED FOR FUTURE GRAB BAR INSTALLATION

9–ALL KITCHEN SINKS SHALL HAVE 30" CLEAR KNEE SPACE UNDER

10–IN ALL ELEVATOR BUILDINGS OR GROUP 2 UNITS, SINKS SHALL BE NO DEEPER THAN 6 ½"

11–WATER CLOSET CONTROLS FOR ADA UNITS SHALL BE ON THE ACCESSIBLE SIDE

12–GROUP 2 TUBS SHALL BE 60" LONG WITH RIM 16–18" AFF.

13–FOR GROUP 2 APARTMENTS, ALL TUBS AND SHOWERS SHALL HAVE HOT/COLD WATER PIPING CAPPED BEHIND TO LONGER DIMENSION OF THE STALL

14–A HAND HELD SHOWER HEAD WITH FLOW REGULATOR ATTACHED TO 60" LONG FLEXIBLE HOSE AND AN ADJUSTABLE MOUNTING BAR SHALL BE PROVIDED OR BE CAPABLE OF BEING INSTALLED ON THE LONG WALL OF THE TUB.

15–ALL VENT THROUGH THE ROOF LOCATIONS SHALL BE FIELD COORDINATED WITH HVAC EQUIPMENT INTAKES AND IF NECESSARY SHALL BE EXTENDED 3FT ABOVE THE EQUIPMENT WITHIN 10FT OF THE VENT.

16–ALL FLOOR DRAINS SHALL HAVE TRAP PRIMERS.

17–ALL PUBLIC TOILETS SHALL HAVE HOSE BIBS AND FLOOR DRAINS, FLOOR DRAINS SHALL BE WITHIN 3FT OF THE URINALS.

18–ALL FLOOR PENETRATIONS SHALL BE FIRE RATED WITH FIRE STOP MATERIAL OR INTUMESCENT TYPE COLLARS AS REQUIRED.

19–UNLESS NOTED OTHERWISE PVC MAY BE USED FOR RESIDENTIAL TYPE BUILDINGS UP TO TEN FLOORS FOR DRAINAGE. CPVC MAY BE USED FOR DOMESTIC HOT/COLD WATER IN RESIDENTIAL TYPE BUILDINGS UP TO 60 FT, OR 6 STORY BUILDINGS. PROVIDE SOUND INSULATION ON ALL PVC VERTICAL DRAIN LINES

20–PROVIDE DRAIN PAN FOR ALL STORAGE TYPE WATER HEATERS AND WASHING MACHINES W/DRAINS CONNECTED TO SEWER DRAIN, PROVIDE TRAP PRIMERS..

21–PROVIDE COMPLETE PIPING FOR DISHWASHER AND DISPOSAL CONNECTIONS, OBSERVE CLEARANCE REQUIREMENTS UNDER KITCHEN SINKS.

22–ALL DRAINS LOCATED BELOW THE STREET GRADE SHALL HAVE LOCAL OR CENTRAL TYPE BACK WATER VALVES. DRAINS FROM UPPER FLOORS WILL CONNECT AT EXIT

23–ALL PLUMBING FIXTURES SHALL BE APPROVED TYPE IN THE STATE OF PROJECT BEING USED, SPECIFICATIONS ARE FOR QUALITY, LOOK AND PERFORMANCE PURPOSES ONLY. IF SPECIFIED EQUIPMENT IS NOT THE APPROVED TYPE. CONTRACTOR SHALL PROVIDE SIMILAR APPROVED FIXTURE.

24–ALL FLOOR DRAINS IN BOILER ROOMS SHALL BE COORDINATED WITH BOILER PLACEMENTS SO THAT CONDENSATE DRAINS WILL BE DRAINED TO FLOOR DRAIN.

25–ALL PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS SHALL BE FIRE SAFED.
USE FIRE PUDDY WITH FIRE WOOL FILLING FOR 2" AND SMALL PIPES,
USE INTUMESCENT COLLAR FOR LARGER PIPES.

26–ALL LAUNDRY DRAINS FOR BUILDINGS 4 STORIES AND HIGHER SHALL HAVE DEDICATED DRAIN LINES CONNECTED TO SEWER LINES AT BUILDING DISCHARGE.

27–ALL BASEMENT DRAINS WILL HAVE BACK WATER VALVES AND AND UPPER FLOORS WILL BE CONNECTED TO SEWER DISCHARGE SEPERATELY FROM BASEMENT DRAIN

28– PROVIDE BALL TYPE SHUT OFF VALVES FOR ALL RIZERS AND WATER BRANCHES OFF THE MAIN PIPES. RISERS SHALL HAVE DRAIN VALVES WITH CAP AND CHAIN

1. GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND GENERAL REQUIREMENTS, APPLY TO WORK SPECIFIED ON THESE DRAWINGS.
2. COORDINATE WORK WITH THAT OF OTHER TRADES AFFECTING OR AFFECTED BY WORK OF THIS SECTION AND COOPERATE WITH SUCH TRADES TO ASSURE THE STEADY PROGRESS OF THE WORK.
3. ALL WORK AND MATERIALS SHALL COMPLY WITH THE STATE PLUMBING AND GAS CODES AND THE LOCAL CODES.
4. FURNISH AND INSTALL A COMPLETE, SANITARY DRAINAGE AND VENT SYSTEM THROUGHOUT THE BUILDING FOR CONNECTION TO EVERY FIXTURE OR PIECE OF EQUIPMENT REQUIRING DRAINAGE. THE NEW WORK SHALL EXTEND AND CONNECT TO THE EXTERIOR SANITARY SYSTEM AS INDICATED.
5. FURNISH AND INSTALL A COMPLETE HOT WATER AND COLD WATER SYSTEM THROUGHOUT THE BUILDING, CONNECTING TO ALL FIXTURES AND EQUIPMENT REQUIRING HOT AND/OR COLD WATER. THE COLD WATER SYSTEM WORK SHALL EXTEND AND CONNECT TO THE EXTERIOR COLD WATER SYSTEM AS INDICATED. THE HOT WATER SYSTEM WORK SHALL BEGIN AT EACH NEW WATER HEATER WHERE INDICATED.
6. FURNISH AND INSTALL A COMPLETE GAS SYSTEM THROUGHOUT THE BUILDING, CONNECTING TO ALL EQUIPMENT REQUIRING GAS. THE GAS SYSTEM WORK SHALL EXTEND AND CONNECT TO THE GAS METERS SUPPLIED BY GAS COMPANY.
7. FURNISH TO OWNER A WRITTEN GUARANTEE OF THE GENERAL CONTRACTOR AND THIS SUBCONTRACTOR JOINTLY AND SEVERALLY, AGAINST ANY DEFECTS IN MATERIALS AND WORKMANSHIP IN WORK OF THIS SECTION FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
8. SUBMIT SHOP DRAWINGS ON PLUMBING FIXTURES AND VALVES SPECIFIED.
9. FURNISH AND INSTALL ALL PIPE OPENINGS, PIPE HANGERS AND HANGER RODS, AND FIXTURE SUPPORTS. PROPERLY SECURE HANGER RODS TO BUILDING STRUCTURE. SEAL ALL PIPE OPENINGS THROUGH FLOORS AND ROOF WATER TIGHT.
10. BURIED STORM, SANITARY AND VENT PIPING SHALL BE CAST IRON PIPE AND DRAINAGE FITTINGS. ABOVE GROUND SANITARY AND VENT PIPING SHALL BE CAST IRON PIPE AND DRAINAGE FITTINGS/PVC SCHED. 40 SOLID. PROVIDE FIRE STOPPING AND SHEET METAL SLEEVES AS REQUIRED BY CODE WHERE ALL PVC PIPING PASSES THROUGH FIRE RATED WALLS AND FLOORS.
11. HOT AND COLD WATER PIPING SHALL BE TYPE L SEAMLESS COPPER TUBING AND FITTINGS WITH 95-5 SOLDER JOINTS, FLOWGUARD PIPING SYSTEM, SEEK APPROVAL FROM ARCHITECT AND BUILDING OWNER REPRESENTATIVE BEFORE SUBMITTING FOR APPROVAL TO ENGINEER. ALL PIPING SHALL BE INSULATED AND MARKED AS HOT WATER (HW) OR COLD WATER (CW)
12. GAS PIPING SHALL BE SCHEDULE 40 STEEL WITH MALLEABLE IRON FITTINGS AND THREADED JOINTS.
13. VALVES FOR HOT AND COLD WATER SHALL BE GATE VALVE, BRONZE BODY AND TRIM, NON-RISING STEM, 200 PSIG, SOLDER END, SIMILAR TO JENKINS 1240 OR APPROVED EQUAL. VALVES FOR GAS SHALL BE IRON BODY, PLUG TYPE, WITH SQUARE KEY AND THREADED ENDS.
14. COLD WATER AND HOT WATER PIPING INSULATION SHALL BE 1/2" THICK, WITH FACTORY APPLIED FIBERGLASS CLOTH WITH INTEGRAL VAPOR BARRIER AND SELF-SEALING LAP. FITTINGS AND VALVES SHALL BE COVERERD WITH PRE-CUT FIBERGLASS INSERTS AND FITTED WITH MOULDED PVC COVERS, SECURED WITH GLASS FABRIC TAPE WITH MASTIC. INSULATION SHALL BE FIBERGLASS 25 ASJ OR EQUAL, AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS TO CONFORM TO THE AUL NON-COMBUSTIBLE RATING.
15. PLUMBING FIXTURES: (TO BE APPROVED BY BUILDING OWNER REPRESENTATIVE BEFORE SUBMISSION FOR APPROVAL TO ENGINEER)
16. WH – WALL HYDRANT – WOODFORD MODEL 25 FREEZE RESISTANT, WITH INTEGRAL VACUUM BREAKER. (PROVIDE EVERY 150', WHERE DIRECTED BY BUILDING OWNER)
17. WATER HEATERS – FURNISH AND INSTALL WATER HEATERS WHERE INDICATED. (TO BE APPROVED BY BUILDING OWNER REPRESENTATIVE BEFORE SUBMISSION FOR APPROVAL TO ENGINEER)
18. TEST ALL NEW PLUMBING WORK IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS.
19. PROVIDE HEAT TRACE ON ALL TRAPS LOCATED IN GARAGE, COLD WATER PIPING LOCATED IN GARAGE, AND ANY PIPING SUBJECT TO FREEZING.

GENERAL NOTES | NTS

PLUMBING NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF ALL FIRE WALLS. ANY PENETRATION THROUGH FIRE FLOORS SHALL BE FIRE STOPPED . ANY PENETRATION THROUGH FIRE WALL SHALL BE FIRE CAULKED. REFER TO SECTION 7275 FOR PROCEDURE.
2. WITHOUT LIMITATION PAY ATTENTION TO THE FOLLOWING ITEMS:
   A. CHASES BEHIND BATHROOM (WALL BETWEEN CORRIDOR AND BATHROOM) AND WALLS BETWEEN UNITS ARE FIRE RATED. FIRE CAULK ALL PENETRATIONS.
   B. TOP AND BOTTOM WALL PLATES AT CEILING AND AT FLOOR IS PART OF FIRE SEPARATION. FIRE STOP ALL PENETRATIONS THROUGH PLATES.

FIXTURE CONNECTIONS

TYPE	FIXTURE	WASTE	VENT	CW	HW	TEMP
P–X	LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	HC–LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	TOILET	3"	2"	1/2"		
P–X	HC–TOILET	3"	2"	1/2"		
P–X	SINK	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	HC–SINK	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	SHOWER	1 1/2"	1 1/2"	1/2"	1/2"	110
P–X	HC–SHOWER	1 1/2"	1 1/2"	1/2"	1/2"	110

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
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GENERAL NOTE:
VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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Reginaldo Piccinate
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PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: ¼"=1'-0"
DRAWN BY: RC
CHECKED BY: MM

PLUMBING NOTES

P3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

PLUMBING FIXTURE SPECIFICATION SCHEDULE

DESIGNATION	FIXTURE SYMBOL	SYMBOL	MANUFACTURER	FIXTURE			FITTING				CARRIER	LOCATION	REMARKS
				MODEL	TYPE	SIZE	MANUF/MODEL#	TYPE	SUPPLY	TRAP			
REFER TO ARCITECTURAL SPECIFICATION FOR PLUMBING FIXTURES													
TRAP PRIMER	P-6	T.P.	PRECISION PLUMBING PRODUCTS	PR-500	-	-	-	-	½" CW SUPPLY	-	-	AS SHOWN	PROVIDE DU-4 FOR MULTIPLE TRAP PRIMERS

NOTE: ALL WASHER MACHINES TO BE PROVIDED WITH AQUA MANAGERS "FLOODSTOP" (FS 3/4-H) AUTOMATIC FLOOD PROTECTION KIT

GENERAL NOTES

1) FOR EXACT LOCATION OF PLUMBING FIXTURES SEE ARCHITECTURAL DRAWINGS.
2) EXAMINE ALL CONTRACT DRAWINGS, GERNERAL CONDITIONS AND SPECIFICATIONS WHICH MAY AFFECT THE WORK.
3) ALL PLUMBING WORK MUST BE COORDINATED WITH ALL OTHER TRADES BEFORE PROCEEDING WITH INSTALLATION.
4) CHECK INVERT ELEVATIONS AND EXACT LOCATIONS OF ALL OUTSIDE UTILITIES BEFORE INSTALLING ANY UNDERGROUND.
5) NO CHANGES ARE TO BE MADE IN PLUMBING LAYOUT WITHOUT WRITTEN PERMISSION OF THE ARCHITECT.
6) NO PIPING SHALL RUN EXPOSED IN FINISHED AREAS.
7) ALL PLUMBING SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL AND STATE PLUMBING CODES.
8) ROUGHING DIMENSIONS OF TOILET FIXTURES MUST BE COORDINATED WITH GENERAL CONTRACTOR.
9) INSTALL ALL HOT AND COLD WATER PIPING AS PER SPECIFICATIONS.
10) INSTALL SHUTOFF GATE VALVES ON ALL BRANCH SUPPLY LINES AND AT THE BASE OF HOT AND COLD WATER RISERS.
11) PLUMBING CONTRACT SHALL REQUIRES PANELS TO ACCESS THE CONCEALED PLUMBING CLEANOUTS, DRAINS, DEVICES AND CONTROLS. ACCESS PANELS SHALL BE FIRE RATED TO MATCH THE PENETRATING PARTITION OR CEILING TYPE. GENERAL CONTRACTOR SHALL INSTALL THE ACCESS PANELS.
12) INSTALL ALL FLOOR CLEANOUTS TO CLEAR EQUIPMENT.
13) PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES AND CHARGES IN CONNECTION WITH THE WORK.
14) PLUMBING CONTRACTOR SHALL PROVIDE WATERTIGHT SLEEVES FOR ALL PIPES PASSING THRU BASEMENT WALLS.
15) INSTALL CLEANOUTS AT THE BASE OF ALL SANITARY STACKS.
16) INSTALL ALL HORIZONTAL RUNS OF PIPING AS HIGH AS POSSIBLE, PITCH ALL WATER PIPING TO DRAIN, DRAW OFFS AT ALL POINTS.
17) PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO OUTSIDE UTILITIES.
18) FOR PIPE SIZES NOT SHOWN ON PLANS SEE DETAILS & RISER DIAGRAMS.

SCHEDULE OF WATER HEATER

DESIGNATION	NAME	LOCATION	DESCRIPTION
WH-1	APARTMENT HOT WATER HEATER	APARTMENT MECH. ROOM	NAVIEN NCB-240A, COMBI-GAS FIRED WATER HEATER, 199 MBH INPUT, 120V/1Ø, AFUE 91%, 4.5 GPM @70° RISE. PROVIDE (2) 3" FLUES THROUGH ROOF FOR EACH UNIT.

GENERAL NOTES:

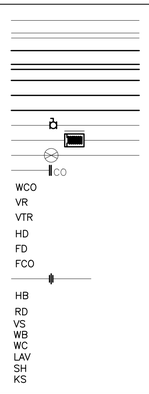
1. SHOULD ANY CONTRADICTION, AMBIGUITY, ERROR, INCONSISTENCY, OMISSION OR INCOMPLETE SYSTEM APPEAR IN OR BETWEEN ANY OF CONTRACT DOCUMENTS THE CONTRACTOR SHALL, BEFORE SUBMITTING THE FINAL BID AND SIGNING THE CONTRACT FOR CONSTRUCTION, NOTIFY THE ARCHITECT AND REQUEST A WRITTEN RESOLUTION AS TO WHICH METHODS OR MATERIALS WILL BE REQUIRED. IN THE EVENT OF CONFLICTING REQUIREMENTS OF STANDARDS , DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL COMPLY WITH THE MORE STRINGENT REQUIREMENTS. BEFORE SUBMITTING THE FINAL BID AND THE SIGNING THE CONTRACT FOR THE CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION FROM THE ARCHITECT. IN NO CASE SHALL THE CONTRACTOR PROCEED WITH THE AFFECTED WORK UNTIL ADVISED BY THE ARCHITECT.

IF THE CONTRACTOR FAILS TO MAKE A REQUEST FOR INTERPRETATION OR RESOLUTION NO EXCUSE WILL BE ACCEPTED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER, AS INTERPRETED BY THE ARCHITECT. THIS GENERALLY MEANS THE USE OF THE HIGHEST QUALITY MATERIAL, MOST EXPENSIVE WAY OF PERFORMING WORK AND PROVIDING COMPLETE FUNCTIONING SYSTEM FOR PROPER OPERATION.

EACH AND EVERY TRADE OR SUBCONTRACTOR WILL BE DEEMED TO HAVE FAMILIARIZED THEMSELVES WITH ALL THE CONTRACT DOCUMENTS OF THIS PROJECT, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND SITE WORK, AND TO HAVE VISITED THE SITE, SO AS TO AVOID ERROR, OMISSIONS AND MISINTERPRETATIONS. RELATED INFORMATION MAY BE PROVIDED ON CONTRACT DOCUMENTS OTHER THAN THOSE ASSOCIATED WITH THE SUBCONTRACTOR'S TRADE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RELATED WORK OF ALL THE CONTRACT DOCUMENTS. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR ALLEGED ERRORS, OMISSIONS AND MISINTERPRETATIONS WHETHER THEY ARE A RESULT OF FAILURE TO OBSERVE THIS REQUIREMENT OR NOT.

2. ALL PENETRATIONS OF ASSEMBLIES EXPOSED TO THE EXTERIOR ENVIRONMENT SHALL BE SEALED WITH FOAM SEALANT OR EQUIVALENT SEALER TO PROVIDE ZERO AIR INFILTRATION. COORDINATE WITH FIRE STOPPING REQUIREMENTS.

3. NO COMPONENT OF ANY SYSTEM SHALL RUN THROUGH THE STAIR ENCLOSURE THAT DOES NOT RELATE TO OR SERVE THE STAIR ENCLOSURE.



	SANITARY ABOVE FLOOR
	SANITARY UNDER FLOOR
	VENT
	VENT BURIED
	COLD WATER
	HOT WATER
	HOT WATER CIRCULATION
	SHUT OFF VALVE
	CHECK VALVE
	FLOOR CLEANOUT
	CLEANOUT
WCO	WALL CLEANOUT
VR	VENT RISER
VTR	VENT THRU ROOF
HD	HUB DRAIN
FD	FLOOR DRAIN
FCO	FLOOR CLEANOUT
	UNION
HB	HOSE BIBB
RD	ROOF DRAIN
VS	VENT STACK
WB	WASHER BOX
WC	WATER CLOSET
LAV	LAVATORY SINK
SH	SHOWER
KS	KITCHEN SINK

– PLUMBING LEGEND N.T.S.

INSULATION NOTES

THE FOLLOWING SYSTEMS SHALL BE INSULATED.
DUCT LINER SHALL BE CLOSED CELL TYPE, GERM PROOF

ESTAR REQUIREMENTS:

1. DOMESTIC HOT WATER & RECIRCULATION MAINS AND BRANCHES:
   PIPING < 1" REQUIRES 1" INSULATION
   PIPING > 1½" REQUIRES 1½" INSULATION

IECC 2009 REQUIREMENTS:

1. DOMESTIC HOT WATER MAINS AND BRANCHES:
   PIPING < 1" REQUIRES 1" INSULATION
   PIPING > 1½" REQUIRES 2" INSULATION

GENERAL INSUALTION REQUIREMENTS:

CW PIPING: ½" INSULATION
HORIZONTAL STORM: ½" INSULATION

THIS BUILDING WILL SHALL BE QUALIFIED FOR ESTAR, STRETCH CODE, AND LEED SILVER. PROVIDE THE MOST STRINGENT LEVELS OF INSULATION FOR QUALIFICATION

PIPING MATERIAL NOTES

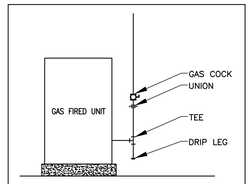
SANITARY AND VENT: BELOW GROUND: SCH.40 PVC WITH SOLVENT JOINTS
ABOVE GROUND:
-SCH.40 PVC WITH SOLVENT JOINTS

WATER PIPING: TYPE "L" COPPER & CPVC

GAS PIPING: SCHEDULE 40 ER/ERW BLACK STEEL WITH THREADED JOINTS OR WELDED.

FIRE SAFE THROUGH WOOD FLOORS

TYPE	SIZE	HILTI	MATERIAL	RATING	BOTTOM	TOP	CHASE WALL
STEEL/CAST COPPER/EMT	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
STEEL/CAST 4" EMT/ 2" FLEX	MAX 6" –	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
STEEL/CAST COPPER/EMT	MAX 4"	CP-620	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	REQUIRED
PEX	MAX 1"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	BOTH SIDES	BOTH SIDES	NOT REQUIRED
PVC PIPE	MAX 2"	FS-ONE	INTUMESCENT SEALANT	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
PVC PIPE	MAX 4"	FS-ONE	INTUMESCENT SEALANT	2HRS	FIRE STOP	FIRE STOP	REQUIRED
PVC PIPE	MAX 4"	CP 645	INTUMESCENT STRIP W/COLLAR	1HRS	COLLAR	FIRE STOP	NOT REQUIRED
REFRIGERANT	–	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
4" DUCT	MAX 4"	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
INSULATED COPPER/STEEL	MAX 2"	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED
CABLES	MAX 2"	FS-ONE	INTUMESCENT SEALANT –	1HRS	FIRE STOP	FIRE STOP	NOT REQUIRED



GAS FIRED EQUIPMENT PIPING DETAIL

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338-4406
FAX. (617) 451-2540
E-MAIL Zade@ZadeEngineering.com

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www.roche-christopher.com

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6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
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SCALE: ¼"=1'-0"
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CHECKED BY: MM

PLUMBING SCHEDULES

P4

REV.	DATE	DESCRIPTION
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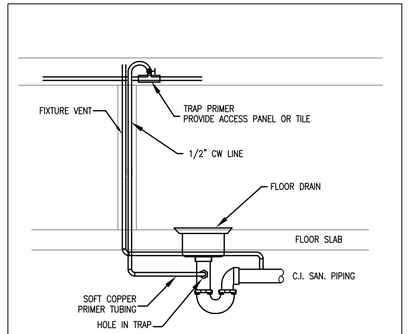
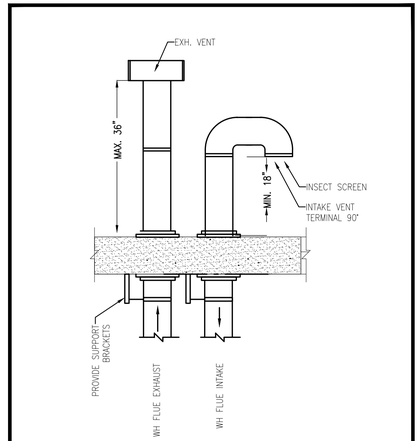
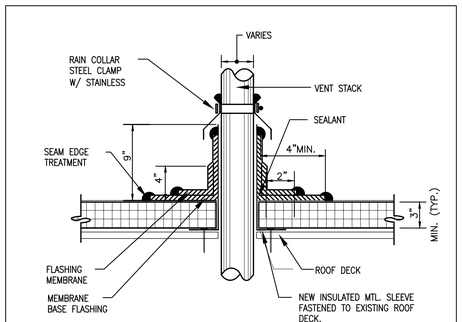


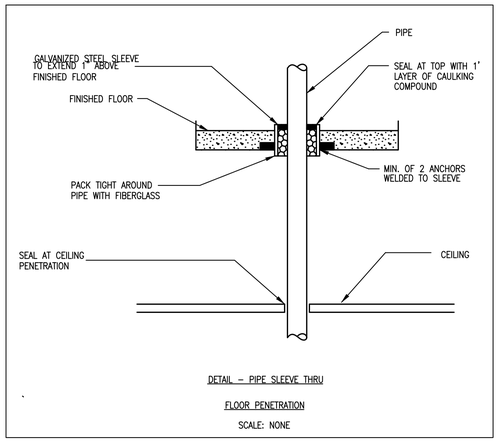
TRAP PRIMER DETAIL | N.T.S.



WH FLUE FLUE DETAILS



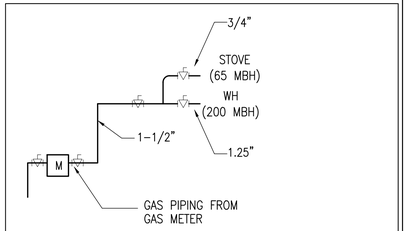
VENT TERMINAL | N.T.S.



DETAIL – PIPE SLEEVE THRU

FLOOR PENETRATION

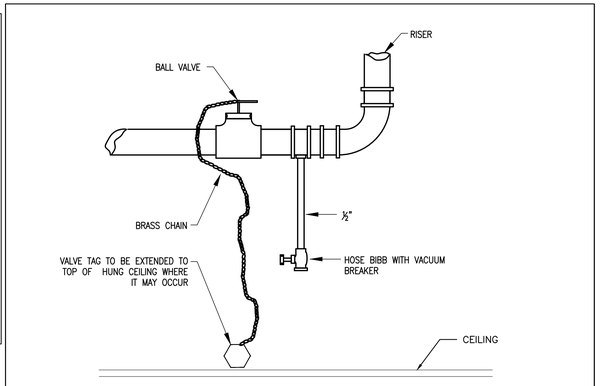
SCALE: NONE



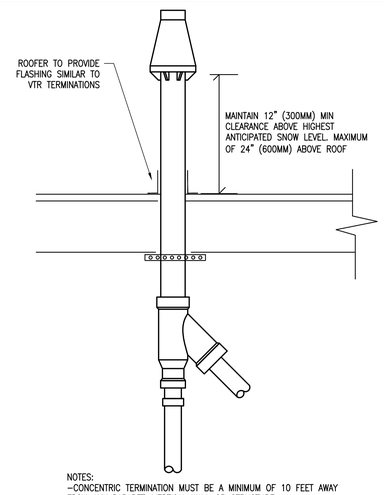
GAS RISER DIAGRAM

N.T.S.

NOTE: RISER DIAGRAMS DO NOT SHOW EVERY OFFSET

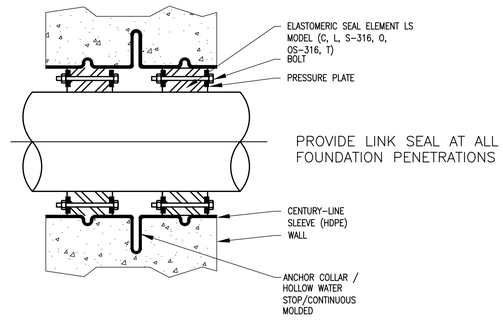


TYPICAL CONNECTION AT BASE OF WATER RISER | N.T.S.



NOTES:
–CONCENTRIC TERMINATION MUST BE A MINIMUM OF 10 FEET AWAY FROM ANY PARAPET, VERTICAL WALL OR STRUCTURE

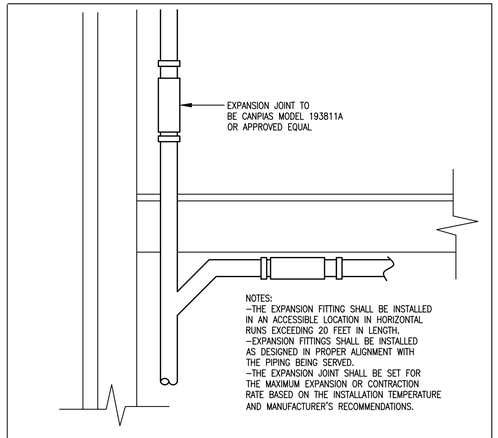
4 INCH CONCENTRIC TERMINATION FLAT ROOF CLEARANCE | N.T.S.



LS Model	Seal Element	Bolts/Nuts	Pressure Plate
C Polymer	EPDM (Black)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon

Sleeve Model	Description	Material
CS	Century–Line Sleeve	HDPE

LINK SEAL DETAIL | N.T.S.



NOTES:
–THE EXPANSION FITTING SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION IN HORIZONTAL RUNS EXCEEDING 20 FEET IN LENGTH.
–EXPANSION FITTINGS SHALL BE INSTALLED AS DESIGNED IN PROPER ALIGNMENT WITH THE PIPING BEING SERVED.
–THE EXPANSION JOINT SHALL BE SET FOR THE MAXIMUM EXPANSION OR CONTRACTION RATE BASED ON THE INSTALLATION TEMPERATURE AND MANUFACTURER'S RECOMMENDATIONS.

P.V.C. EXPANSION JOINT FITTING | N.T.S.

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
140 BEACH STREET, BOSTON, MA 02111
TEL. (617) 338–4406
FAX. (617) 451–2540
E–MAIL Zade@ZadeEngineering.com

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PLUMBING DETAILS

P5

REV.	DATE	DESCRIPTION
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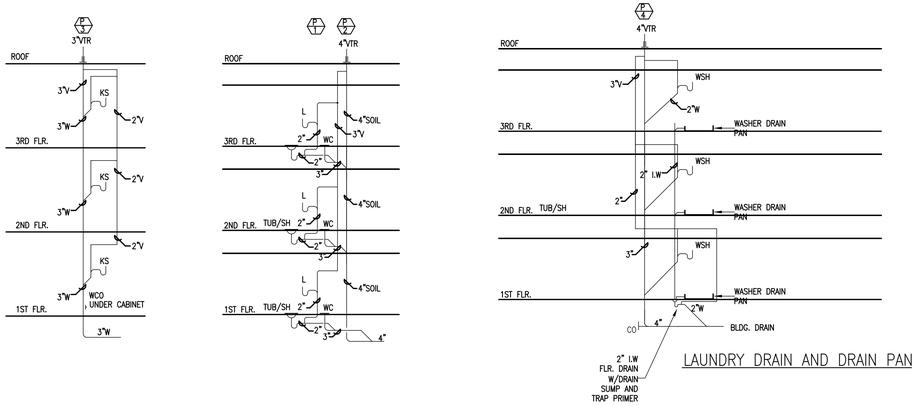
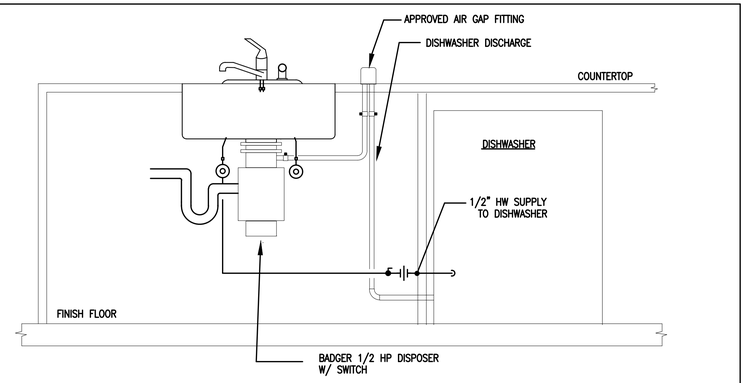


LAUNDRY DRAIN AND DRAIN PAN

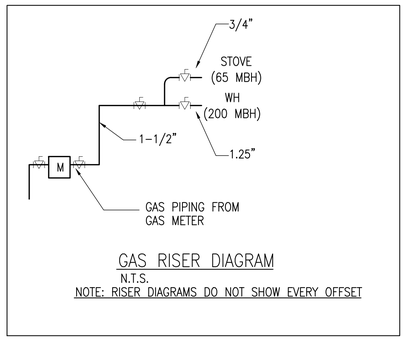
TYPICAL SANITARY RISER DIAGRAMS

N.T.S.

RISER DIAGRAMS DO NOT SHOW OFFSETS.



KITCHEN AND DISHWASHER DETAIL — N.T.S.



GAS RISER DIAGRAM

N.T.S.

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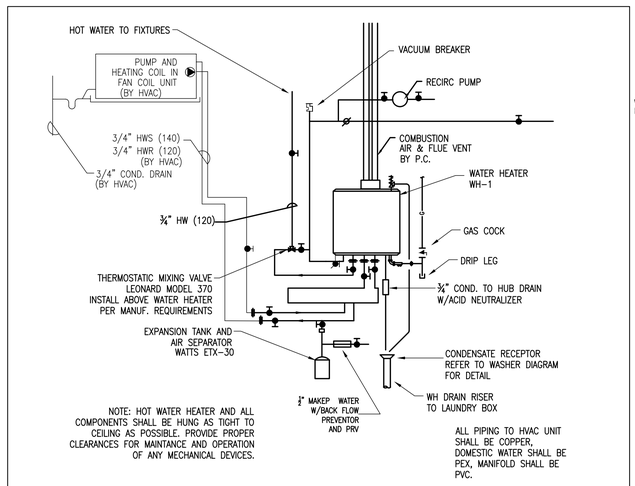
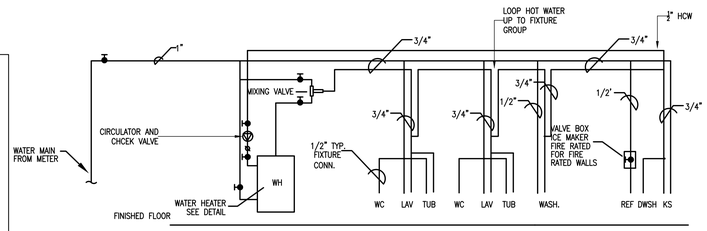


INSTANTANEOUS WATER HEATER DETAIL — N.T.S.



TYPICAL WATER PIPING DIAGRAM

N.T.S.

SEE FLOOR PLANS FOR ACTUAL LOCATION OF FIXTURES

CODE REQUIRES HOT WATER RECIRC. LOOP TO EVERY FIXTURE AT A DISTANCE 20' AND MORE. LOOP HOT WATER THROUGH ALL THE FIXTURES AND THE CHASES AND RETURN ¾" HCW TO WATER HEATER FROM THE MOST DISTANT FIXTURE.

PC SHALL PROVIDE ON DEMAND HOT WATER RECIRCULATION PUMP AS MFG BY TACO, MODEL GENIE, STAINLESS STEEL PUMP, COMPLETE WITH ALL COMPONENTS FOR PROPER INSTALLATION AND OPERATION.
PROVIDE ROUND MOTION SENSOR AT EACH FIXTURE LOCATION, WIRELESS TRANSMITTER AND HARD WIRED TRANSMITTER AT PUMP LOCATION, LOCATE PUMP AT REMOTEST FIXTURE LOCATION

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PLUMBING DETAILS

P6

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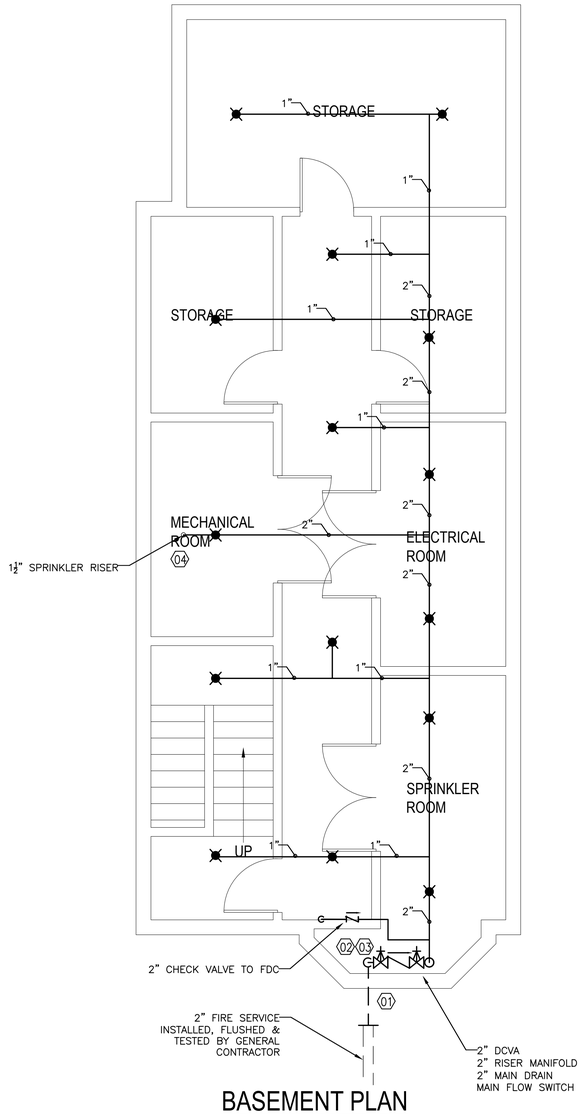
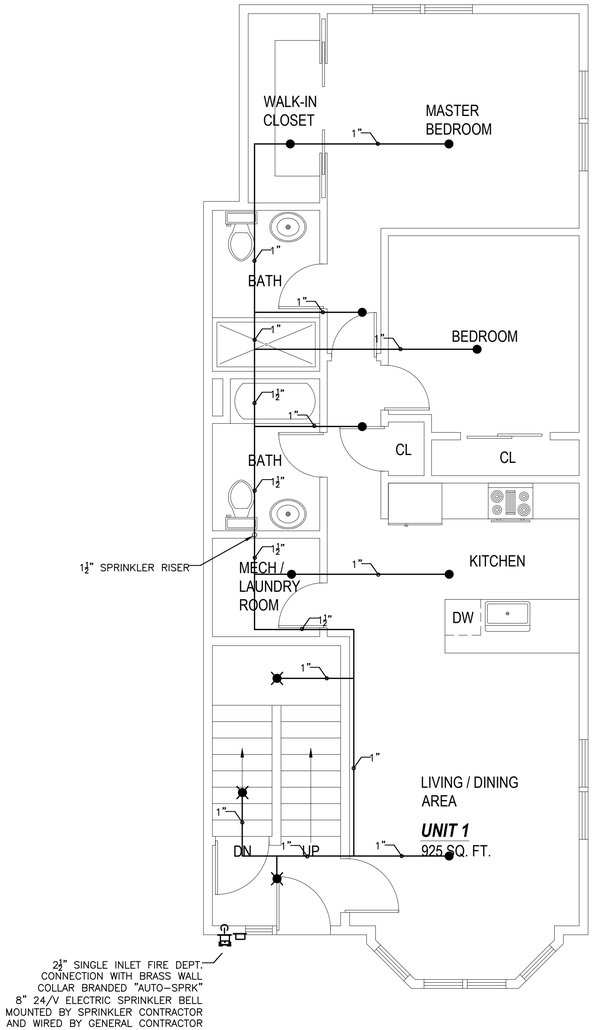
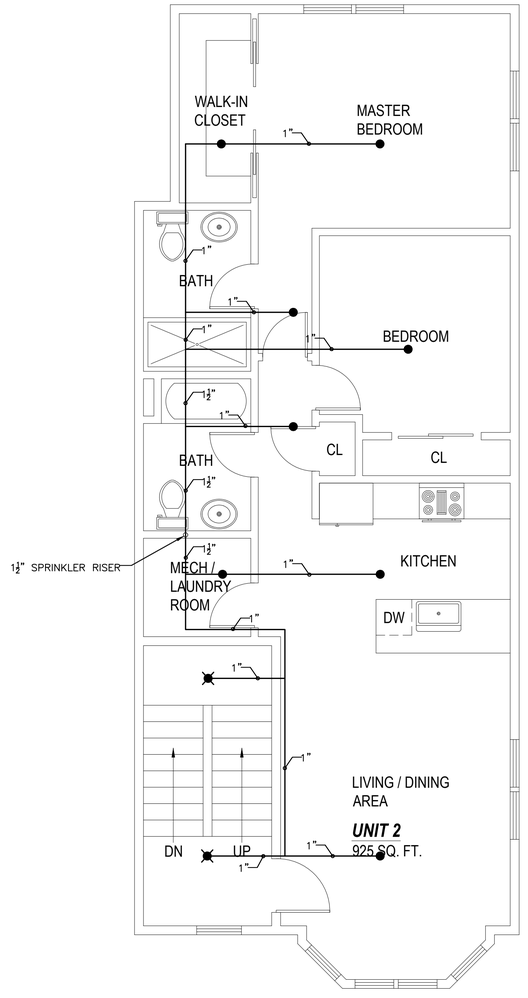


BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
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TEL (617) 338-4406
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PROJECT #	18-040
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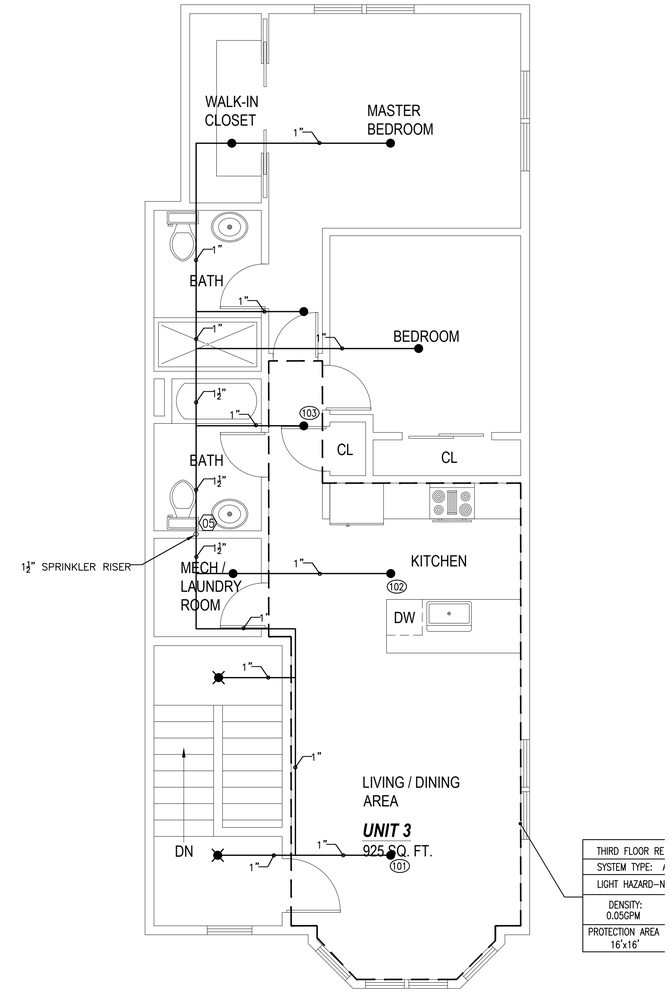
REV:	
SCALE:	AS NOTED
DRAWN BY:	JD
CHECKED BY:	MM

PROPOSED FIRE PROTECTION PLANS

FP1

REV.	DATE	DESCRIPTION
X	X-XX-XX	XXX



THIRD FLOOR PLAN

ZADE ASSOCIATES LLC
CONSULTING ENGINEERS
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TEL. (617) 338-4406
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CHECKED BY: MM

PROPOSED FIRE PROTECTION PLANS

FP2

REV.	DATE	DESCRIPTION
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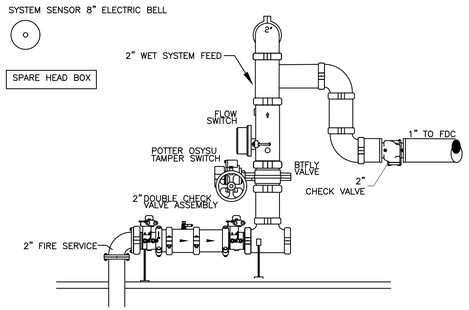
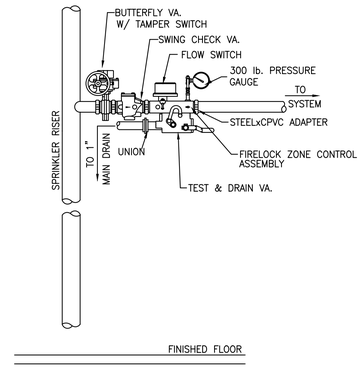
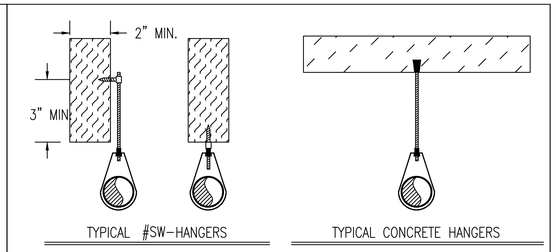


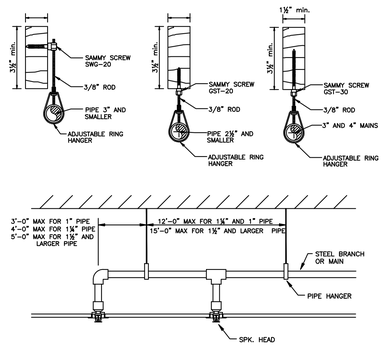
SPRINKLER SUPPLY MANIFOLD | NTS



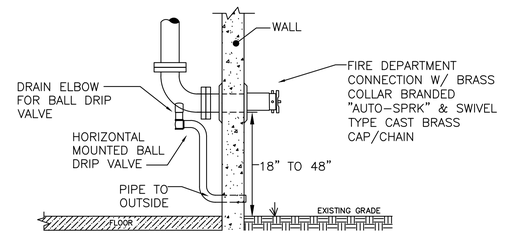
FIRE PROTECTION RISER | NTS



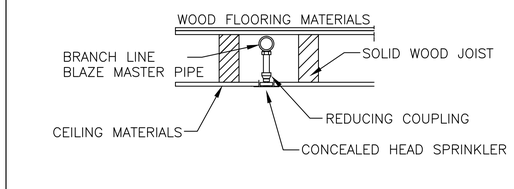
TYPICAL HANGER DETAILS | NTS



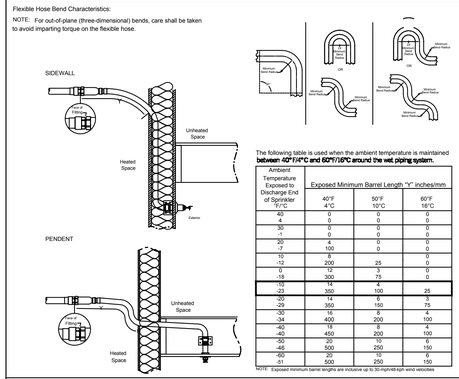
PIPE HANGER SPACING | NTS



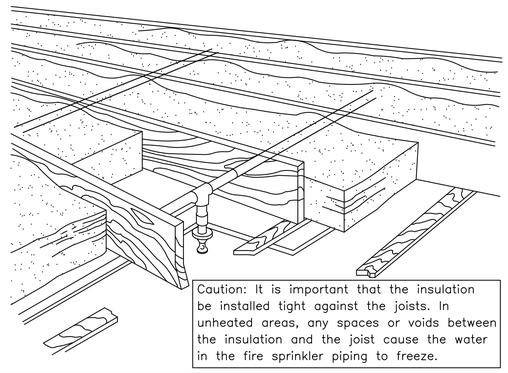
FIRE DEPARTMENT CONNECTION | NTS



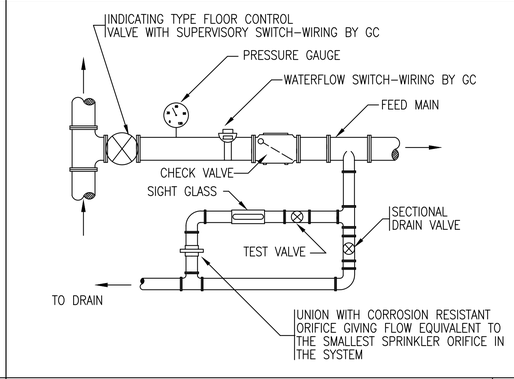
SPRINKLER PIPING AT CEILING PLENUM | NTS



DRY SIDEWALL SPRINKLER DETAIL | NTS



INSULATION DETAIL | NTS



FLOOR CONTROL VALVE ASSEMBLY | NTS

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GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: AS NOTED
DRAWN BY: JD
CHECKED BY: MM

FIRE PROTECTION DETAILS

FP3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DESIGN CRITERIA

1. THE AUTOMATIC FIRE SUPPRESSION SYSTEM HAS BEEN HYDRAULICALLY SIZED PER NFPA–13R 2013, CMR 780 (9TH) WITH AMENDMENTS

2. SPRINKLER COVERAGE SHALL BE REQUIRED IN AREAS OF THE BUILDING PER NFPA–13R

PIPE, FITTINGS AND JOINTS

1. PIPE AND FITTINGS SHALL CONFORM TO THE LATEST ANSI, ASTM, NFPA AND AWWA STANDARDS INCLUDING LATEST AMENDMENTS.

2. SPRINKLER MAINS AND BRANCHES MAY BE LIGHT WALL BLACK STEEL PIPE WITH ROLLED GROOVE TYPE MALLEABLE IRON PIPE COUPLINGS AND FITTINGS WITH GASKETS AND BOLTS AS APPROVED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND THE UNDERWRITERS' LABORATORIES. SCHEDULE 40 BLACK STEEL PIPE WITH STANDARD WEIGHT MALLEABLE IRON FITTINGS AS APPROVED BY NFPA AND UL MAY BE USED WITH, OR IN LIEU OF, THE SYSTEM DESCRIBED ABOVE. CPVC PIPING MAY BE USED WHERE ALLOWED BY LOCAL & NATIONAL LIFE SAFETY CODES

HANGERS AND SUPPORTS

1. HANGERS AND SWAY BRACING WHERE REQUIRED , SHALL BE INSTALLED TO MEET NFPA AND LOCAL STATE BUILDING CODE COMPLIANCE AS TO LOCATION, SPACING, AND MAXIMUM LOADS.

2. HANGER MATERIAL SHALL BE COMPATIBLE WITH PIPING MATERIALS WITH WHICH IT COMES INTO CONTACT.

3. HANGERS SHALL BE INSTALLED, IN ADDITION TO THE ABOVE, AT ALL CHANGES OF DIRECTION (HORIZONTAL AND VERTICAL), VALVES AND EQUIPMENT CONNECTIONS. HANGERS SHALL BE LOCATED SO THAT THEIR REMOVAL IS NOT REQUIRED TO SERVICE, ASSEMBLE OR REMOVE EQUIPMENT.

4. HORIZONTAL RUNS MAY USE BAND HANGERS UP TO 4" SIZE. PIPING LARGER THAN 4" SHALL BE PROVIDED WITH CLEVIS TYPE.

5. ALL RODS, CLAMPS, NUTS, WASHERS, SHIELDS AND HANGERS IN ALL AREAS SHALL BE ELECTRO–GALVANIZED COATED STEEL.

VALVES AND SUNDRIES

1. SHUTOFF VALVES ON THE ABOVEGROUND FIRE PROTECTION SYSTEM SHALL BE UL, FM BUTTERFLY OR OS&Y GATE VALVES, AS INDICATED, ON SIZES 2–1/2" AND LARGER, VALVES UP TO 2" SHALL BE UL, FM BALL VALVES. ALL ISOLATION / CONTROL VALVES SHALL BE MONITORED.

2. CHECK VALVES SHALL BE 175–POUND CLASS FOR FIRE PROTECTION.

3. VALVES SHALL BE PROVIDED WITH SEATS SUITABLE FOR THE SERVICE INTENDED.

4. VALVES SHALL BE AS MANUFACTURED BY NIBCO, VICTAULIC, WALLWORTH, MILWAUKEE OR APPROVED EQUAL. MANUFACTURERS MODEL NUMBERS REFERENCED BELOW ARE USED TO INDICATE A TYPE, MATERIAL AND QUALITY TO BE PROVIDED.

5. ALL VALVES SPECIFIED HEREIN SHALL BE UL/FM APPROVED, 175 PSI MINIMUM WORKING PRESSURE. ALL CONTROL VALVES SHALL BE PROVIDED WITH TAMPER SWITCH.

AUTOMATIC SPRINKLERS

1. SPRINKLER HEADS: QUICK RESPONSE, BULB TYPE, AND STYLE AS INDICATED OR REQUIRED BY THE APPLICATION. UNLESS OTHERWISE INDICATED.

2. IN ALL OPEN AREAS, WHERE ELECTRICAL EQUIPMENT IS LOCATED, AN APPROVED TYPE SHIELD, TO KEEP WATER OFF THE ELECTRICAL EQUIPMENT, SHALL BE PROVIDED.

3. PROVIDE ALL SPRINKLER HEADS WITH PROTECTIVE CAGE.

4. PROVIDE IN THE VALVE ROOM, A FINISHED STEEL CABINET SUITABLE FOR WALL MOUNTING, WITH HINGED COVER AND SPACE FOR 6 SPARE SPRINKLER HEADS PLUS SPRINKLER HEAD WRENCH.

SPRINKLER SHOP DRAWINGS

1. CONTRACTOR SHALL SUBMIT ENGINEERED TIER II SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE DETAILED PER NFPA–13R REQUIREMENTS FOR WORKING DRAWINGS–FINAL AFFIDAVITS CANNOT BE ISSUED WITHOUT APPROVED SHOP DRAWINGS

2. HYDRAULIC CALCULATIONS SHALL ACCOUNT FOR ALL OFFSETS IN THE SYSTEM BASED ON A 100% COORDINATED SET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL STRUCTURAL AND ARCHITECTURAL FEATURES PRESENT

FLUSHING AND TESTING

1. ALL LABOR, MATERIALS, INSTRUMENTS, DEVICES AND POWER REQUIRED FOR TESTING SHALL BE PROVIDED BY THIS CONTRACTOR. THE TESTS SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF THE ENGINEER, GENERAL CONTRACTOR AND THE LOCAL FIRE DEPARTMENT AND SUCH OTHER PARTIES, AS MAY HAVE LEGAL JURISDICTION. NO PIPING IN ANY LOCATION SHALL BE CLOSED UP, FURRED IN, OR COVERED BEFORE TESTING.

2. WHERE PORTIONS OF PIPING SYSTEMS ARE TO BE COVERED OR CONCEALED BEFORE COMPLETION OF THE PROJECT, THOSE PORTIONS SHALL BE TESTED SEPARATELY IN THE MANNER SPECIFIED HEREIN FOR THE RESPECTIVE ENTIRE SYSTEM.

3. ANY PIPING OR EQUIPMENT THAT HAS BEEN LEFT UNPROTECTED AND SUBJECT TO MECHANICAL OR OTHER INJURY IN THE OPINION OF THE GENERAL CONTRACTOR SHALL BE RE TESTED IN PART OR IN WHOLE AS DIRECTED.

4. THE ENGINEER RETAINS THE RIGHT TO REQUEST A RECHECK OR RESETTING OF ANY PUMP OR INSTRUMENT BY THIS CONTRACTOR DURING THE GUARANTEE PERIOD AT NO ADDITIONAL COST TO THE CONTRACTOR.

5. REPAIR, OR IF DIRECTED, REPLACE ANY DEFECTIVE WORK WITH NEW WORK WITHOUT EXTRA CHARGE TO THE CONTRACT. REPEAT TESTS AS DIRECTED, UNTIL THE WORK IS PROVEN TO MEET THE REQUIREMENTS SPECIFIED HEREIN.

6. RESTORE TO ITS FINISHED CONDITION ANY WORK, DAMAGED OR DISTURBED, PROVIDED BY OTHER CONTRACTORS AND ENGAGE THE ORIGINAL CONTRACTOR TO DO THE WORK OF RESTORATION TO THE DAMAGED OR DISTURBED WORK.

7. THIS CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND ANY INSPECTORS HAVING JURISDICTION, A MINIMUM OF 48 HOURS IN ADVANCE OF MAKING ANY REQUIRED TESTS SO THAT ARRANGEMENTS MAY BE MADE FOR THEIR PRESENCE TO WITNESS HIS SCHEDULED TESTS.

8. TESTING SHALL BE IN ACCORDANCE WITH NFPA–13R "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS".

9. EACH SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSI FOR TWO HOURS.

10. FLUSHING OF ALL BURIED SUPPLY PIPING SHALL BE PERFORMED AT A MINIMUM RATE OF 680 GPM FOR SYSTEMS WITH A 4" SERVICE.

11. ALL WATER FLOW DETECTING DEVICES AND CIRCUITS SHALL BE FLOW TESTED THROUGH THE INSPECTOR'S TEST CONNECTION AND ACTIVATE WITHIN FIVE MINUTES OF INITIATION.

12. FIRE PROTECTION CONTRACTOR SHALL OBTAIN RECENT HYDRANT FLOW TEST RESULTS FOR THE USE OF PREPARING WORKING DRAWINGS PER NFPA–13R

13. SPRINKLER FLOW TEST DISCHARGE AND FLUSHING WATER DISCHARGE SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND THE LOCAL FIRE DEPARTMENT OR PUBLIC WORKS AS TO ACCEPTABLE DISCHARGE POINTS PRIOR TO SCHEDULING OF FLUSHING AND TESTS. THIS CONTRACTOR SHALL PROVIDE ALL HOSE AND EQUIPMENT NECESSARY TO PERFORM THE REQUIRED TESTING AND FLUSHING.

AS BUILT DRAWINGS AND CONTRACTOR CERTIFICATES

1. CONTRACTOR SHALL HAVE, ON HAND, AT TIME OF FINAL INSPECTION BY THE AUTHORITY HAVING JURISDICTION, FOR TEMPORARY / FINAL CERTIFICATE OF OCCUPANCY, ALL COMPLETED CERTIFICATES OF MATERIAL AND TESTING FOR ABOVEGROUND AND UNDERGROUND PIPING AS WELL AS THE AS– BUILT DRAWINGS OF THE FIRE PROTECTION INSTALLATION.

PATCHING, REPLACEMENT AND MODIFICATION OF EXISTING WORK

1. AFTER INSTALLATION OF PIPELINES, THE CONTRACTOR SHALL NEATLY PATCH, REPAIR, AND/OR REPLACE EXISTING WORK WHERE DAMAGED, REMOVED OR ALTERED FOR PIPE LINE INSTALLATION. THIS WORK SHALL BE SIMILAR AND EQUAL IN QUALITY TO THE WORK REMOVED OR DAMAGED, UNLESS OTHERWISE SHOWN OR SPECIFIED. SUCH WORK SHALL INCLUDE PATCHING AND REPLACEMENT OF EXISTING PIPING AT POINTS OF CONNECTION TO NEW PIPING, PATCHING OF INSULATION, AND WHEREVER ANY SUCH PATCHING WORK IS INDICATED ON THE DRAWINGS OR OTHERWISE REQUIRED.

INSTALLATION

1. GENERAL: INSTALL FIRE PROTECTION SPECIALTY VALVES, FITTINGS, AND SPECIALTIES IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, NFPA 13 AND 14, AND THE AUTHORITY HAVING JURISDICTION.

2. USE PROPER TOOLS TO PREVENT DAMAGE DURING INSTALLATIONS.

3. ALL PENDENT MOUNTED SPRINKLERS SHALL BE INSTALLED ON RETURN BENDS.

4. ALL SPRINKLERS INSTALLED IN ACOUSTICAL CEILING TILES SHALL BE CENTERED IN TILES WHERE APPLICABLE.

5. COORDINATE AND VERIFY DRAFT CURTAINS ARE INSTALLED AS REQUIRED BY SPRINKLER HEAD SPECIFICATIONS

FIRE PROTECTION SPECIFICATION

FIRE PROTECTION SPECIFICATION

1. BEFORE BIDDING THE JOB, CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING CONDITIONS. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT.

2. SPRINKLER PIPING SHALL BE SCH.10/40 BLACK STEEL WITH 125 LB. CAST IRON THREADED/GROOVED JOINTS WHERE EXPOSED. BLAZE–MASTER TYPE CPVC FOR FIRE PROTECTION SHALL BE INSTALLED CONCEALED AND PER MANUFACTURERS INSTRUCTIONS.

3. SPRINKLER HEADS IN COMMON AREAS SHALL BE QUICK RESPONSE CONCEALED TYPE MANUFACTURED BY VIKING OR EQUAL. WITHIN UNITS THEY WILL BE RESIDENTIAL CONCEALED TYPE.

4. APPLY AND OBTAIN PERMIT AND APPROVAL FROM LANDLORD'S INSURANCE COMPANY, FIRE DEPARTMENT AND STATE AND LOCAL AUTHORITIES.

5. COORDINATE WITH ARCHITECT AND ARCHITECTURAL REFLECTED CEILING PLAN FOR THE LOCATION OF SPRINKLER HEADS.

6. COORDINATE SPRINKLER WORK WITH OTHER DISCIPLINES. SINCE PERFORMANCE OF SPRINKLER SYSTEM IS AFFECTED BY OBSTRUCTIONS AND NOT OTHER WAY AROUND, THIS CONTRACTOR SHALL COORDINATE ALL LIGHTING FIXTURE LOCATIONS AND TYPES AND OTHER OBSTRUCTIONS PRIOR TO ANY WORK DONE.

7. THE SYSTEM SHALL BE HYDROSTATICALLY TESTED AT NOT LESS THAN 200 PSI PRESSURE FOR 2 HOURS. THERE WILL BE NO VISIBLE LEAKAGE WHEN THE SYSTEM IS SUBJECTED TO THE HYDROSTATIC PRESSURE TEST.

8. GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR FROM THE DATE OF ACCEPTANCE.

PREPARATION OF SHOP DRAWINGS:

PER 780CMR 901.2.1
SPRINKLER CONTRACTOR SHALL PREPARE TIER ii SHOP DRAWINGS INCLUDING PIPING & HYDRAULIC CALCULATIONS, AND SHALL SUBMIT TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF WORK. ENGINEER SHALL CERTIFY SYSTEM INSTALLATION FOR CODE COMPLIANCE AT PROJECT COMPLETION.

FLOW TEST DATA

STATIC ----- 72
RESIDUAL ----- 58
FLOW ----- 2004

NOTE:
DATE: 7/14/2020
LOCATION: 16–18 PLAYSTEAD RD.
BY: BWSC

FIRE PROTECTION ABBREVIATIONS

DSW	DRY SIDEWALL
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DIA	DIAMETER
DR	DRAIN
ETR	EXISTING TO REMAIN
FHV	FIRE HOSE VALVE
IT	INTERMEDIATE TEMPERATURE
FP	FIRE PROTECTION
FS	FLOW SWITCH
SP	STANDPIPE
GV	GATE VALVE
GAL	GALLONS
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
DN	PIPE DROP
PSI	POUNDS PER SQUARE INCH
PRV	PRESSURE REDUCING VALVE
RV	RELIEF VALVE
SPK	SPRINKLER
TS	TAMPER SWITCH
UP	PIPE RISE
VIF	VERIFY IN FIELD

FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	SUPERVISED BUTTERFLY VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	SUPERVISED OS&Y GATE VALVE
FS	FLOW ALARM SWITCH
	SPRINKLER ZONE CONTROL ASSEMBLY (SEE DETAIL)
	PUMP (FIRE OR JOCKEY)
	DRY ALARM VALVE
	WET ALARM VALVE
	CHECK VALVE
	DRAIN VALVE
	FIRE VALVE ASSEMBLY 2–1/2"W X 2–1/2" X 1–1/2"
	U/L LISTED PIPE HANGER
XX	HYDRAULIC JUNCTION POINT
XXX	HYDRAULIC DISCHARGE NODE

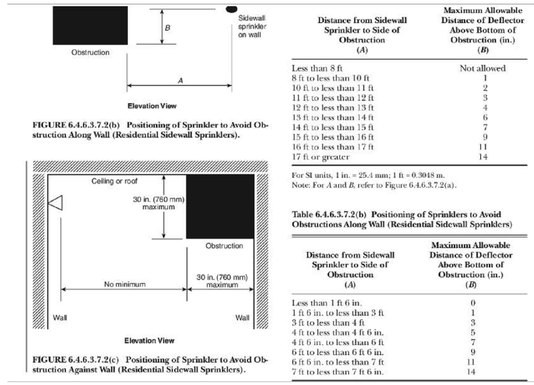

FIGURE 6.4.6.3.7.2(b) Positioning of Sprinkler to Avoid Obstruction Along Wall (Residential Sidewall Sprinklers).

FIGURE 6.4.6.3.7.2(c) Positioning of Sprinkler to Avoid Obstruction Against Wall (Residential Sidewall Sprinklers).

Distance from Sidewall Sprinkler to Side of Obstruction (A)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (in.) (B)
Less than 8 ft	Not allowed
8 ft to less than 10 ft	1
10 ft to less than 11 ft	2
11 ft to less than 12 ft	3
12 ft to less than 13 ft	4
13 ft to less than 14 ft	6
14 ft to less than 15 ft	7
15 ft to less than 16 ft	9
16 ft to less than 17 ft	11
17 ft or greater	14

For SI units, 1 in. = 25.4 mm; 1 ft = 0.3048 m.
Note: For *A* and *B*, refer to Figure 6.4.6.3.7.2(a).

Table 6.4.6.3.7.2(b) Positioning of Sprinklers to Avoid Obstructions Along Wall (Residential Sidewall Sprinklers)

Distance from Sidewall Sprinkler to Side of Obstruction (A)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (in.) (B)
Less than 1 ft 6 in.	0
1 ft 6 in. to less than 3 ft	1
3 ft to less than 4 ft	3
4 ft to less than 4 ft 6 in.	5
4 ft 6 in. to less than 6 ft	7
6 ft to less than 6 ft 6 in.	9
6 ft 6 in. to less than 7 ft	11
7 ft to less than 7 ft 6 in.	14

Table 6.4.6.3.6.2 Positioning of Sprinklers to Avoid Obstructions to Discharge (Residential Upright and Pendent Spray Sprinklers)

Distance from Sprinklers to Side of Obstruction (A)	Maximum Allowable Distance of Deflector Above Bottom of Obstruction (in.) (B)
Less than 1 ft	0
1 ft to less than 1 ft 6 in.	0
1 ft 6 in. to less than 2 ft	1
2 ft to less than 2 ft 6 in.	1
2 ft 6 in. to less than 3 ft	1
3 ft to less than 3 ft 6 in.	3
3 ft 6 in. to less than 4 ft	3
4 ft to less than 4 ft 6 in.	5
4 ft 6 in. to less than 5 ft	7
5 ft to less than 5 ft 6 in.	7
5 ft 6 in. to less than 6 ft	7
6 ft to less than 6 ft 6 in.	9
6 ft 6 in. to less than 7 ft	11
7 ft and greater	14

For SI units, 1 in. = 25.4 mm; 1 ft = 0.3048 m.
Note: For *A* and *B*, refer to Figure 6.4.6.3.6.2.

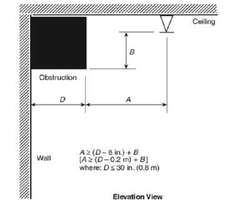

FIGURE 6.4.6.3.6.3 Positioning of Sprinkler to Avoid Obstruction Against Wall (Residential Upright and Pendent Spray Sprinklers).

NFPA–13R OBSTRUCTION CHART

SCALE:N.T.S.

FIRE SPRINKLER HEAD LEGEND

SYM	POSITION	FINISH	TEMP	K	NPT	SIN
◎	UPRIGHT	BRASS	155°	5.60	1/2"	EQ
⊠	UPRIGHT	BRASS	200°	5.60	1/2"	EQ
◉	PENDENT	CONCEALED	155°	5.60	1/2"	EQ
●	RES PENDENT	CONCEALED	155°	4.90	1/2"	EQ
⊙	DRY PENDENT	CONCEALED	155°	5.60	1/2"	EQ
A▶	STD SIDEWALL	CONCEALED	200°	5.60	1/2"	EQ
▶	RES SIDEWALL	CONCEALED	155°	4.00	1/2"	VK480
▷	DRY SIDEWALL	CONCEALED	155°	5.60	1/2"	VS–1

NFPA–13R 2013 DESIGN CRITERIA

THE SPRINKLER SYSTEM SHALL PROVIDE AT LEAST THE FLOW REQUIRED TO PRODUCE A MINIMUM DENSITY OF 0.05 pgm/sf OR THE LISTING OF THE SPRINKLER HEAD WHICHEVER IS GREATER, TO THE DESIGN SPRINKLERS.
THE NUMBER OF SPRINKLERS IN THE DESIGN AREA SHALL BE ALL OF THE SPRINKLERS WITHIN A COMPARTMENT, UP TO A MAXIMUM OF FOUR SPRINKLERS, THAT REQUIRE THE GREATEST HYDRAULIC DEMAND.

SPRINKLER HEADS IN KITCHENS AND W/D ROOMS TO BE 175°F

RESIDENTIAL SPRINKLERS SPACED MAXIMUM 8' FROM ANY WALL

SPRINKLER COVERAGE REQUIREMENTS

BASED ON NFPA–13R

1) SPRINKLER SHALL NOT BE REQUIRED IN BATHROOMS OF 55 SF AND LESS.
2) SPRINKLER SHALL NOT BE REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRY THAT MEET THE FOLLOWING CONDITIONS:
   A) THE AREA OF THE SPACE DOES NOT EXCEED 24 SF.
   B) THE SHORTEST DIMENSION DOES NOT EXCEED 3 FT.
   C) THE WALLS AND CEILINGS ARE SURFACED WITH NON–COMBUSTIBLE OR LIMITED COMBUSTIBLE AS DEFINED BY NFPA–220.
3) SPRINKLER SHALL NOT BE REQUIRED IN COVERED, UNHEATED PROJECTIONS OF THE BUILDING AT ENTRANCE/EXITS AS LONG AS THE DWELLING UNIT HAS ANOTHER MEANS OF EGRESS.
4) SPRINKLER SHALL NOT BE REQUIRED IN CLOSETS IN GARAGE AND EXTERIOR CLOSETS (REGARDLESS OF SIZE) LOCATED ON EXTERIOR BALCONIES, EXTERIOR BREEZEWAY/CORRIDORS, OR ACCESSED FROM OUTDOOR WHERE THE CLOSET DOES NOT HAVE DOORS OR UNPROTECTED PENETRATIONS DIRECTLY INTO THE DWELLING UNIT.
5) SPRINKLER SHALL BE INSTALLED IN ANY CLOSET USED FOR HEATING AND/OR AIR–CONDINONING EQUIPMENT, WASHERS AND/OR DRYERS, OR WATER HEATERS EXCEPT AS AS ALLOWED BY 8.3.8. (SEE NOTE #4 ABOVE)
6) SPRINKLERS SHALL NOT BE REQUIRED IN COMBUSTIBLE FLOOR/CEILING ASSEMBLIES

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140 BEACH STREET, BOSTON, MA 02111
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E–MAIL Zade@ZadeEngineering.com

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Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE: 6-4-18
REV:
SCALE: AS NOTED
DRAWN BY: JD
CHECKED BY: MM

FIRE PROTECTION NOTES

FP4

I. GENERAL

1. ALL WORK SHALL CONFORM TO THE MASSACHUSETTS STATE BUILDING CODE (780 CMR, 9TH EDITION, WITH IBC 2015 OR IRC 2015, AS APPLICABLE) AND ITS APPLICABLE REFERENCED STANDARDS.
2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AS THEY RELATE TO NEW CONSTRUCTION. REPORT TO THE ARCHITECT/ENGINEER ALL OBSERVATIONS AND ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
3. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE FOR A SAFE AND EFFICIENT METHOD OF SHORING AND/OR BRACING THE STRUCTURE DURING ALL CONSTRUCTION PHASES. SUBMIT AN OUTLINE OF PROPOSED PROCEDURE TO THE ARCHITECT/ENGINEER BEFORE CONSTRUCTION COMMENCES.
4. THIS STRUCTURAL DRAWING SET IS BASED ON ARCHITECTURAL AUTOCAD FILES DATED 06/04/2018. THIS STRUCTURAL DRAWING SET HAS BEEN PREPARED USING ONLY THESE ARCHITECTURAL DRAWINGS AND ANY INFORMATION REGARDING OTHER TRADES THAT HAS BEEN REFLECTED ON THESE ARCHITECTURAL DRAWINGS.

II. DESIGN LOADS

1. FLOOR LIVE LOAD
   - a. DWELLING AREAS ..... 40 PSF
   - b. SLEEPING AREAS ..... 30 PSF
   - c. HABITABLE ATTICS (WALK-UP)..... 30 PSF
   - d. UNINHABITABLE ATTICS w/LIMITED STORAGE ..... 20 PSF
   - e. UNINHABITABLE ATTICS WITHOUT STORAGE ..... 10 PSF
2. ROOF LIVE LOAD (PER 780 CMR, 9TH EDITION)
   - a. GROUND SNOW LOAD, Pg ..... 40 PSF*
   - b. BUILDING OCCUPANCY RISK CATEGORY II
   - c. SNOW EXPOSURE FACTOR, Ce 1.0
   - d. SNOW LOAD IMPORTANCE FACTOR, Is 1.0
   - e. THERMAL FACTOR, Ct 1.1

   * - MODIFIED FOR SNOW DRIFT PER 780 CMR, 9TH EDITION
3. WIND LOAD (PER 780 CMR, 9TH EDITION)
   - a. BASIC WINDSPEED (V) ..... 128 MPH
   - b. BUILDING OCCUPANCY RISK CATEGORY II
   - c. WIND LOAD IMPORTANCE FACTOR, Iw 1.00
   - d. WIND EXPOSURE CATEGORY ..... B
   - e. MAIN WIND FORCE RESISTING:
     - SYSTEM DESIGN METHOD ..... METHOD 2 (PER ASCE 7-10)
   - f. COMPONENTS AND CLADDING LOADS ..... PER IBC 2015

III. CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 AND 301 REQUIREMENTS. THIS SHALL INCLUDE PROPORTIONING OF CONCRETE MIX, CONCRETE TESTING, PLACEMENT OF CONCRETE, AND CURING PROCEDURES.
2. CONCRETE SHALL HAVE THE FOLLOWING 28 DAY COMPRESSIVE STRENGTH:
   - a. FOOTINGS ..... 3000 PSI
   - b. ALL OTHER CONCRETE..... 4000 PSI
3. PROVIDE TOTAL AIR ENTRAINMENT OF 6% (±) FOR ALL CONCRETE EXPOSED TO WEATHER.
4. MAXIMUM WATER/CEMENT RATIO FOR 4000 PSI CONCRETE - W/C = 0.45. PROVIDE A HIGH-RANGE WATER REDUCING ADMIXTURE IF REQUIRED TO INCREASE WORKABILITY OF THE CONCRETE.
5. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 AND HAVE A MINIMUM YIELD STRENGTH OF 60 KSI.
6. WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185.
7. UNLESS NOTED OTHERWISE, PROVIDE THE FOLLOWING MINIMUM REINFORCING COVER:
   - a. FOOTINGS ..... 3 INCHES
   - b. SLABS ON GRADE (WWF) ..... SEE TYPICAL DETAILS
8. REINFORCING LAP SPLICES SHALL BE IN ACCORDANCE WITH ACI-318 FOR TENSION LAP SPLICES, CLASS B, UNLESS NOTED OTHERWISE. HORIZONTAL REINFORCING IN PERIMETER WALLS SHALL BE LAPPED 24" MINIMUM.
9. PROVIDE CORNER BARS AT ALL WALL CORNERS AND INTERSECTIONS MATCHING HORIZONTAL REINFORCEMENT WITH 2'-6" MINIMUM LAPS.
10. SUBMIT SHOP DRAWINGS FOR REVIEW (SEE SECTION "I. GENERAL").

IV. FOUNDATIONS

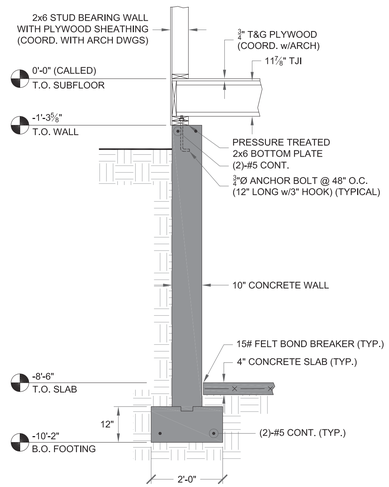
1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AS WELL AS ALL APPROPRIATE AGENCIES AND MUNICIPALITIES TO AVOID DAMAGE TO UNDERGROUND UTILITIES PRIOR TO THE START OF ANY SITE WORK.
2. BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 4'-0" BELOW FINISH GRADE.
3. ALL SOIL PREPARATION UNDER THE BUILDING STRUCTURE SHALL BE AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. THIS INCLUDES ALL REMOVAL OF UNSUITABLE SOILS, COMPACTION OF EXISTING SOILS, SPECIFICATIONS AND PLACEMENT OF ENGINEERED FILL, AND ANY ADDITIONAL REQUIREMENTS. REFER TO THE GEOTECHNICAL ENGINEER FOR MORE INFORMATION REGARDING SUBSURFACE PREPARATION.
4. ALL BOTTOMS OF FOOTINGS SHALL BEAR ON VIRGIN SOIL WITH A MINIMUM BEARING CAPACITY OF 4000 PSF (TO BE VERIFIED BY A P.E. DURING CONSTRUCTION), OR SHALL BEAR ON ENGINEERED FILL. THE ENGINEERED FILL SHALL BE COMPACTED IN 8" LOOSE LAYERS TO 95% OF THE SPECIFIED MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557-78, METHOD D. THE COMPACTION SHALL BE DETERMINED BY ASTM DESIGNATION D1556-82, D2167-66, D2922-81, OR OTHER APPROVED NUCLEAR DENSITY TESTING DEVICE.
5. ENGINEERED FILL UNDER SLABS AND FOOTINGS SHALL CONSIST OF GRANULAR SOIL FREE OF ORGANIC MATTER AND CONFORMING TO THE FOLLOWING LIMITATIONS ON GRADATION:
   - a. MAXIMUM SIZE OF PARTICLES ..... 3 INCHES
   - b. RETAINED ON ¾" SIEVE ..... 30% MAXIMUM
   - c. PASSING NO. 100 SIEVE ..... 45% MAXIMUM
   - d. PASSING NO. 200 SIEVE ..... 8% MAXIMUM
6. DURING BACKFILL OPERATIONS OF ALL FOUNDATION WALLS, THE FILL ON EITHER SIDE OF THE WALL SHALL NOT EXCEED A 2'-0" DIFFERENTIAL, UNLESS THE WALL IS DESIGNED FOR RETAINING ACTION.

V. STRUCTURAL STEEL

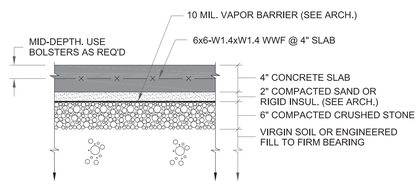
1. ALL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS AND ITS CODE OF STANDARD PRACTICE.
2. MATERIAL SPECIFICATIONS:
   - PIPE COLUMNS ..... ASTM A53, GRADE B (35 KSI)
   - L SHAPES, MISC. PLATES & BARS..... ASTM A36
   - THREADED RODS, THREADED FASTENERS ..... ASTM A36
   - BOLTS ..... ASTM A325 OR A490
   - ANCHOR RODS ..... ASTM F1554, GRADE 36
   - SHEAR STUD CONNECTORS ..... ASTM A108
3. ALL WELDING OPERATIONS SHALL BE PERFORMED BY AWS CERTIFIED WELDERS IN CONFORMANCE WITH ALL APPLICABLE REQUIREMENTS. USE E-70XX WELDING ELECTRODES.
4. ALL NEW STRUCTURAL STEEL SHALL BE GIVEN ONE COAT OF AN APPROVED SHOP PRIMER APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, UNLESS NOTED OTHERWISE. SURFACE PREPARATION OF STEEL PRIOR TO SHOP PAINTING SHALL CONFORM TO SSPC SP6.
5. AFTER ERECTION IS COMPLETE, TOUCH-UP ALL SHOP PRIMED COATS DAMAGED DURING TRANSPORTATION AND ERECTION, AND PRIME ALL FIELD WELDS USING THE SAME PAINT USED FOR SHOP PRIMING.

VI. STRUCTURAL LUMBER

1. ALL WORK SHALL BE IN CONFORMANCE WITH THE AMERICAN FOREST & PAPER ASSOCIATION STANDARDS AND SPECIFICATIONS.
2. ALL LUMBER USED IN A STRUCTURAL CAPACITY SHALL BE S-P-F NO.1/NO. 2 K.D.
3. ALL PRESSURE-PRESERVATIVE TREATED LUMBER USED IN A STRUCTURAL CAPACITY SHALL BE SP #2.
4. ANY WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY, EXPOSED TO UNHEATED BASEMENT AND CRAWL SPACES, OR EXPOSED TO THE EXTERIOR SHALL BE PRESSURE TREATED.
5. ALL FASTENERS SHALL BE IN CONFORMANCE WITH THE FASTENING SCHEDULE IN THE APPLICABLE STATE BUILDING CODE, UNLESS NOTED OTHERWISE. FASTENERS EXPOSED TO THE WEATHER SHALL BE GALVANIZED "SIMPSON'S Z-MAX" OR STAINLESS STEEL.
6. ALL BEAM TO BEAM CONNECTIONS SHALL BE APPROVED GALVANIZED TOP FLANGE HANGERS. SUBMIT SHOP DRAWINGS FOR REVIEW.
7. ALL WOOD POST CAPS AND BASE CONNECTIONS SHALL BE APPROVED GALVANIZED "SIMPSON'S" POST CAP AND BASE PREFABRICATED ASSEMBLIES. SUBMIT SHOP DRAWINGS FOR REVIEW.
8. "TJI" JOISTS, "LVL" (LAMINATED VENEERED LUMBER) AND "PSL" (PARALLEL STRAND LUMBER) FRAMING INDICATED ON DRAWINGS ARE DESIGNED AND MANUFACTURED BY "TRUS-JOIST" OF BOISE, IDAHO.

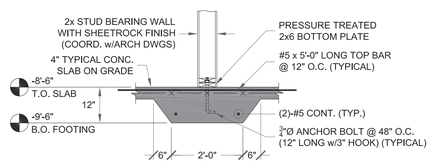


SECTION 1/S1.0
SCALE: ½" = 1'-0"



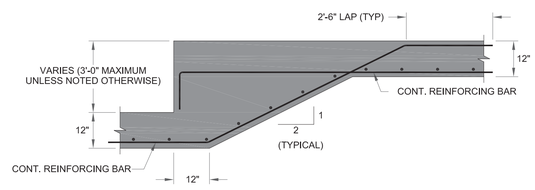
(TYPICAL, UNLESS NOTED OTHERWISE)

TYP. CONC. SLAB ON GRADE DETAIL
NO SCALE



TYPICAL THICKENED SLAB WALL FOOTING

TYP. THICKENED SLAB BEARING WALL DETAIL
SCALE: ½" = 1'-0"



TYPICAL STEPPED FOOTING DETAIL
NO SCALE

REV.	DATE	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
JAMIE L. BOULAY
CIVIL
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6-8 Ford Street
East Boston, MA 02128

PROJECT # 18-040
DATE:03-31-20 REV:
SCALE: AS NOTED
DRAWN BY: JLB
CHECKED BY: JLB

STRUCTURAL COVER SHEET

S1.0

REV.	DATE	DESCRIPTION

BOULAY Consulting
JAMIE L. BOULAY CIVIL No. 50330
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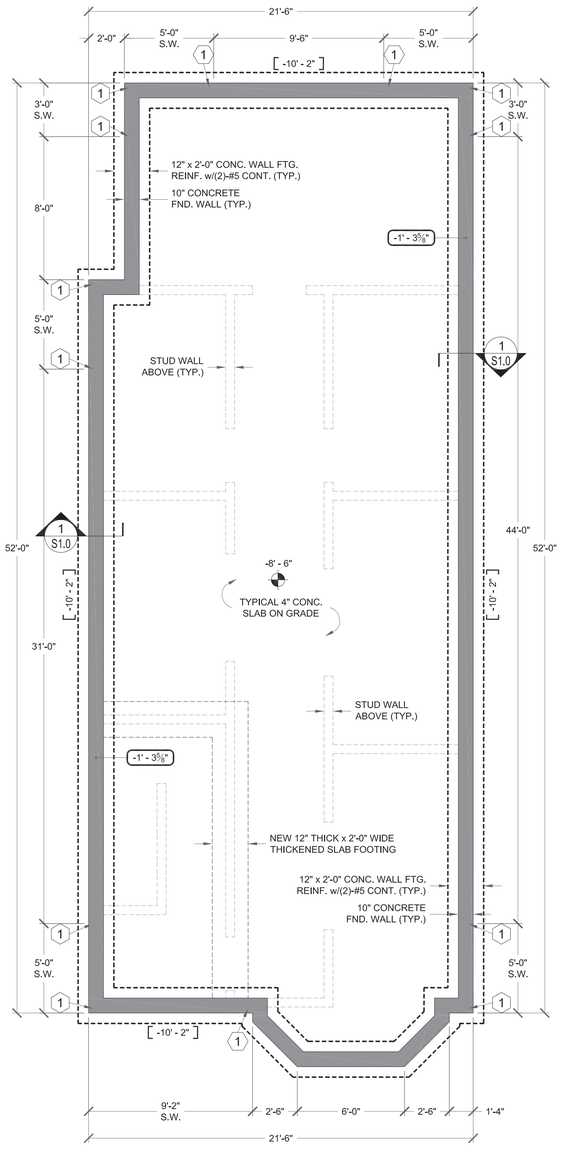
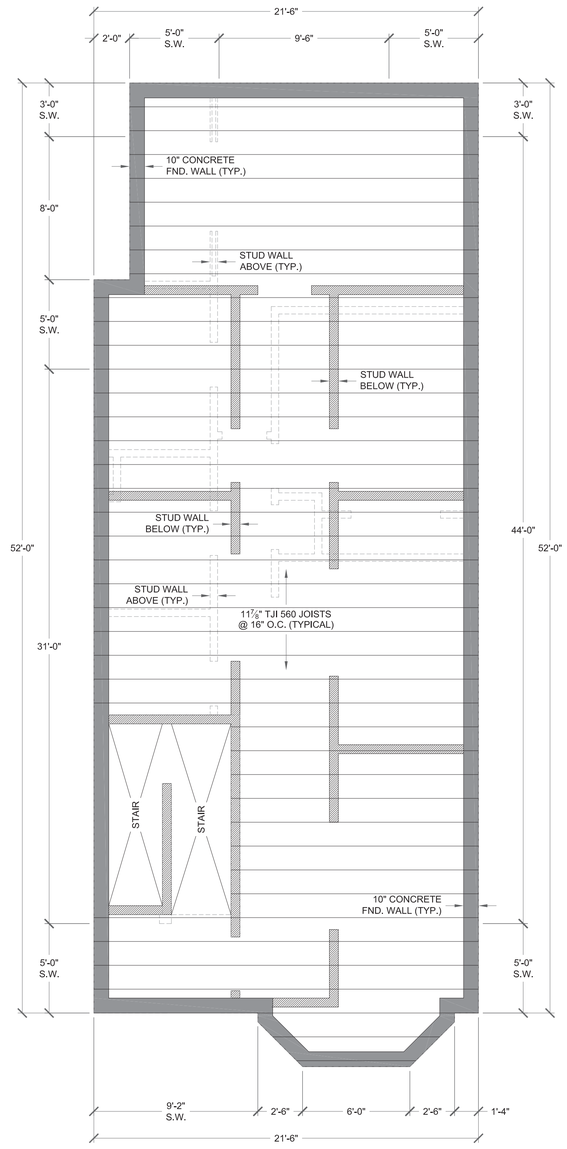


FOUNDATION PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. BOTTOM OF ALL NEW EXTERIOR FOOTINGS SHALL BE LOCATED A MINIMUM 4'-0" BELOW FINISH GRADE.
5. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
6. S.W. - INDICATES SHEAR WALL LOCATION.
7. - INDICATES FINISH SLAB REFERENCE ELEVATION.
8. - INDICATES TOP OF NEW CONCRETE FOUNDATION WALL.
9. [-] - INDICATES BOTTOM OF NEW CONCRETE FOOTING ELEVATION.
10. (1) - INDICATES SIMPSON STRONG-TIE "HDU5-SDS2.5" HOLDOWNS w/"SSTB16" ANCHOR BOLTS (OR APPROVED EQUAL). (SEE TYPICAL SHEAR WALL ELEVATION DETAILS)

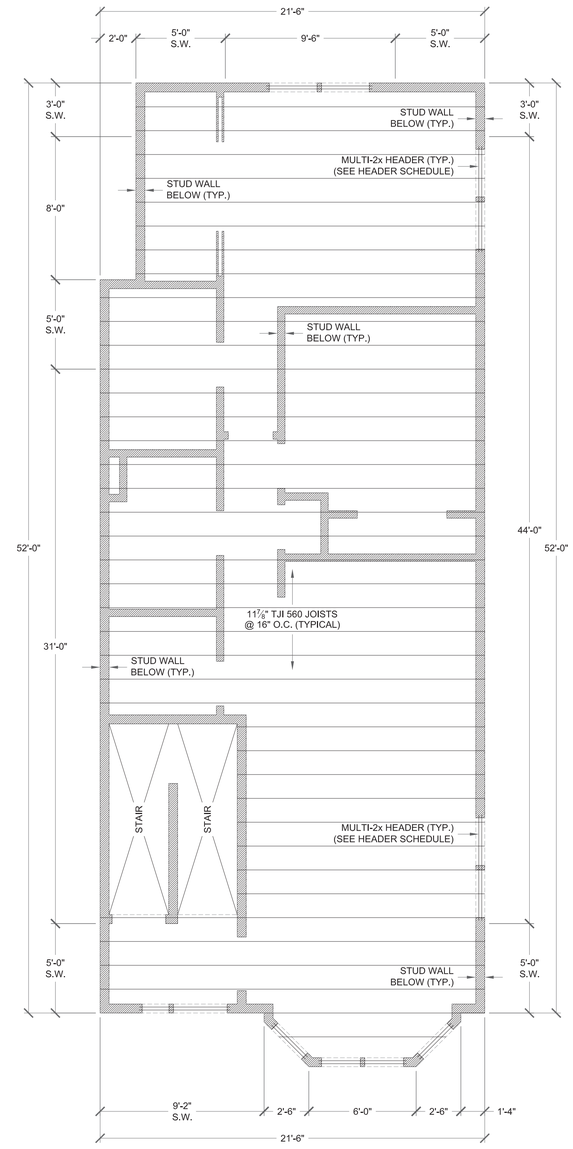


FIRST FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.
8. (1) - INDICATES SIMPSON STRONG-TIE "HDU5-SDS2.5" HOLDOWNS w/"SSTB16" ANCHOR BOLTS (OR APPROVED EQUAL). (SEE TYPICAL SHEAR WALL ELEVATION DETAILS)

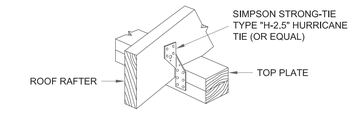


SECOND FLOOR FRAMING PLAN

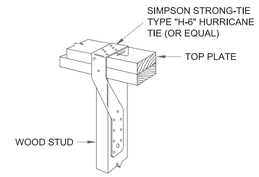
SCALE: ¼" = 1'-0"

NOTES:

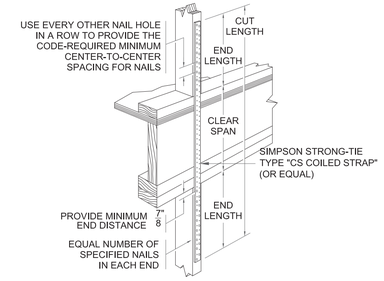
1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.



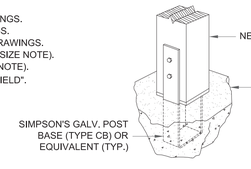
TYPICAL "H-2.5 HURRICANE TIE"
(TYPICAL AT ALL ROOF RAFTERS)



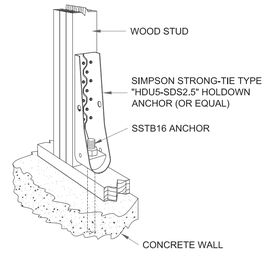
TYPICAL "H-6 HURRICANE TIE"
(TYPICAL AT 4'-0" O.C. SPACING
AT TOP OF ALL EXTERIOR WALLS)



TYPICAL "CS COILED STRAP"
(TYPICAL AT 4'-0" O.C. SPACING AT ALL EXTERIOR WALLS)



TYPICAL POST BASE
(TYPICAL AT ALL PARALLAM POSTS
BEARING ON NEW CONCRETE)



TYPICAL "HDU5-SDS2.5"
WITH SSTB16 ANCHOR
(TYPICAL AT AT ALL SHEAR WALLS)

TYP. SIMPSON STRONG TIE CONNECTION DETAILS

NO SCALE

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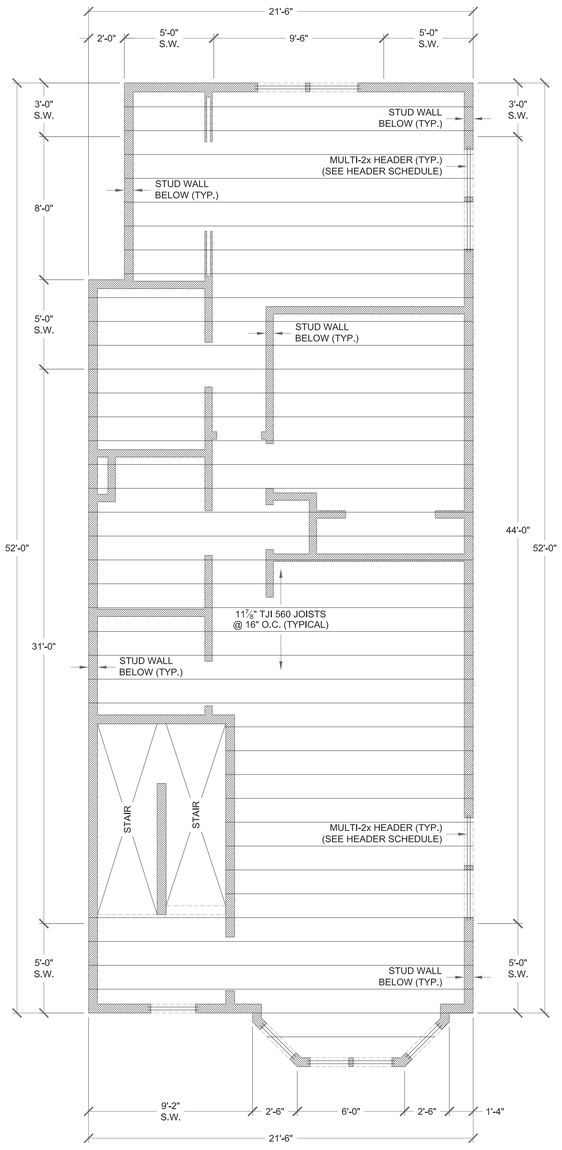
East Boston, MA 02128

PROJECT # 18-040
DATE:03-31-20 REV:
SCALE: AS NOTED
DRAWN BY: JLB
CHECKED BY: JLB

FOUNDATION & FLOOR FRAMING PLANS

S1.1

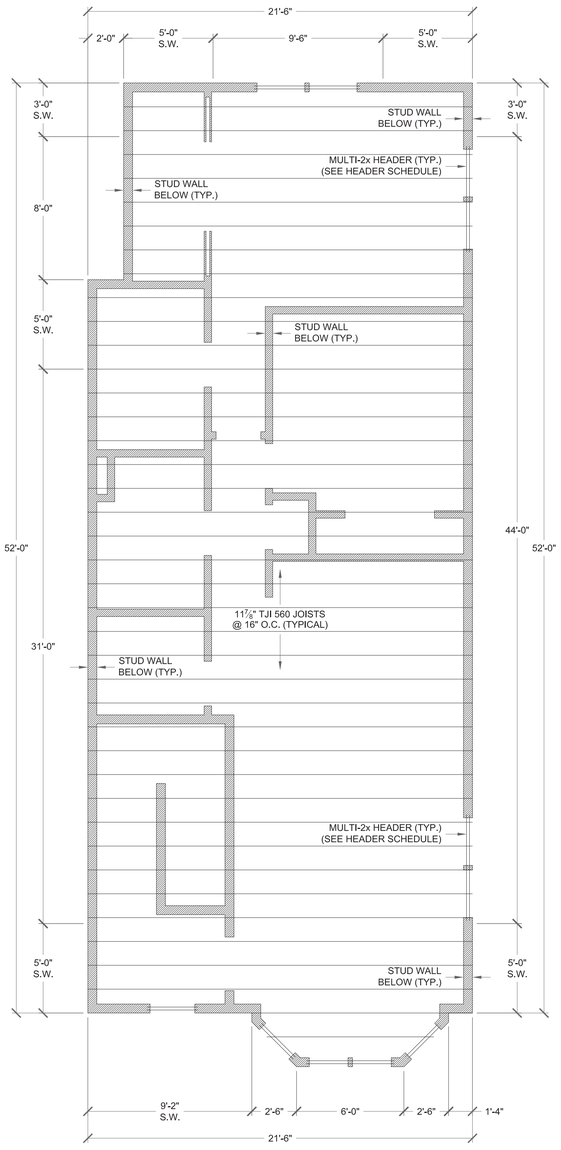


THIRD FLOOR FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.



ROOF FRAMING PLAN

SCALE: ¼" = 1'-0"

NOTES:

1. COORD. ALL FINISH DETAILS WITH ARCHITECTURAL DRAWINGS.
2. COORD. ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. COORD. ALL FLOOR ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
4. ■ - INDICATES POST DOWN TO LEVEL BELOW (SEE POST SIZE NOTE).
5. ⊡ - INDICATES POST UP TO NEXT LEVEL (SEE POST SIZE NOTE).
6. (V.I.F.) - INDICATES DIMENSION/CONDITION TO "VERIFY IN FIELD".
7. S.W. - INDICATES SHEAR WALL LOCATION.

FLOOR SHEATHING

FLOOR SHEATHING SHALL BE ¾" T&G "STURD-I-FLOOR" STRUCTURAL-1 GRADE PLYWOOD. PROVIDE 10d NAILS @ 6" O.C. AT ALL PANEL EDGES & 10d NAILS @ 12" O.C. IN FIELD. (MINIMUM FASTENING, COORD. w/MANUFACTURER'S REQ.)

2x4 WALL HEADER SCHEDULE

(WOOD HEADER)

ROUGH OPENING	WOOD HEADER
UP TO 3'-6" WIDE	(2)-2x8 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 3'-7" UP TO 5'-0" WIDE	(2)-2x10 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 5'-1" UP TO 6'-6" WIDE	(2)-2x12 WITH TRIPLE JACK STUD BRG. @ EA. JAMB

NOTES: 1. SEE DRAWINGS FOR SPECIAL DOOR/WINDOW HEADER SIZES, OTHERWISE USE SCHEDULE.
2. USE 1/2" PLYWOOD SPACERS BETWEEN HEADER MEMBERS TO MATCH WALL WIDTH.
3. FOR OPENING WIDTHS GREATER THAN SHOWN, CONSULT STRUCTURAL ENGINEER.

2x6 WALL HEADER SCHEDULE

(WOOD HEADER)

ROUGH OPENING	WOOD HEADER
UP TO 3'-6" WIDE	(3)-2x8 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 3'-7" UP TO 5'-0" WIDE	(3)-2x10 WITH DOUBLE JACK STUD BRG. @ EA. JAMB
OVER 5'-1" UP TO 6'-6" WIDE	(3)-2x12 WITH TRIPLE JACK STUD BRG. @ EA. JAMB

NOTES: 1. SEE DRAWINGS FOR SPECIAL DOOR/WINDOW HEADER SIZES, OTHERWISE USE SCHEDULE.
2. USE 1/2" PLYWOOD SPACERS BETWEEN HEADER MEMBERS TO MATCH WALL WIDTH.
3. FOR OPENING WIDTHS GREATER THAN SHOWN, CONSULT STRUCTURAL ENGINEER.

POST SIZE NOTE:
ALL POSTS SHOWN ON THIS PLAN SHALL BE PSL POSTS OR MULTIPLE 2x STUDS NAILED TOGETHER USING 16d COMMON NAILS @ 6" O.C. MINIMUM FASTENING, UNLESS OTHERWISE NOTED ON PLAN. POST CROSS SECTION DIMENSION SHALL EQUAL WALL DEPTH AND SUPPORTED BEAM WIDTH MINIMUM.

REV.	DATE	DESCRIPTION

COMMONWEALTH OF MASSACHUSETTS
JAMIE L. BOULAY
CIVIL
No. 50330
REGISTERED PROFESSIONAL ENGINEER

BOULAY
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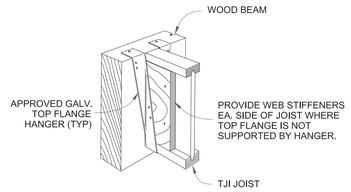
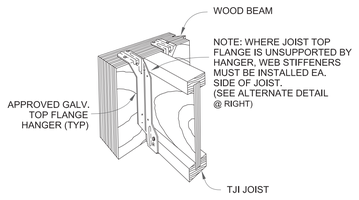
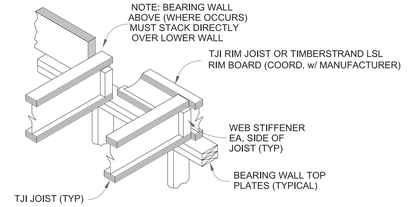


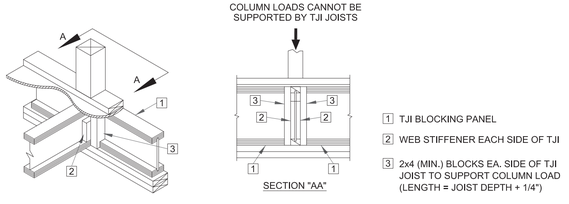
TJI JOIST/WOOD BEAM CONNECTION
(ALTERNATE)



TJI JOIST/WOOD BEAM CONNECTION
(SIMILAR AT LEDGER)



TJI JOIST BEARING @ EXTERIOR WALL



SECTION "AA"

WOOD POST @ BEARING WALL

TYPICAL TJI JOIST FRAMING DETAILS

NO SCALE

NOTE:
TYPICAL TJI JOIST ISOMETRIC FRAMING DETAILS AND MANUFACTURER REQUIREMENTS AND MUST BE FOLLOWED AS THEY IMPACT WORK SHOWN. CONTRACTOR MUST REVIEW DETAILS AND CONFORM TO THEM AS REQUIRED.

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East Boston, MA 02128

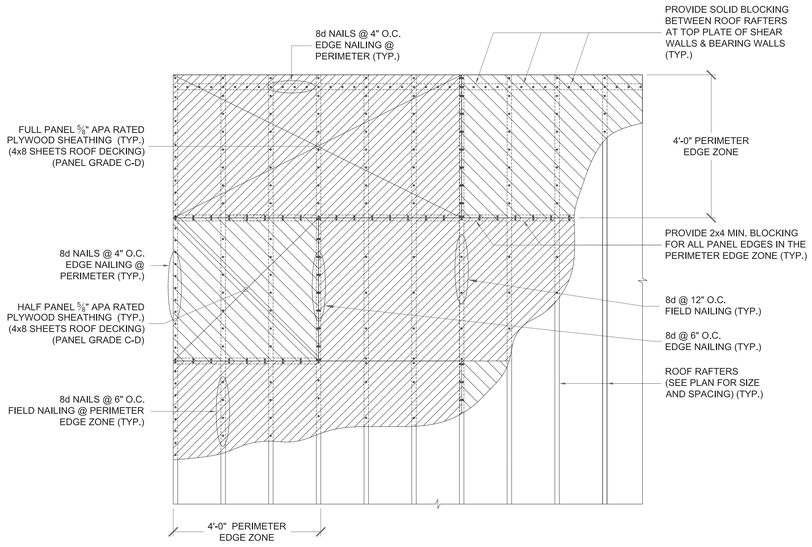
PROJECT # 18-040
DATE:03-31-20 REV:
SCALE: AS NOTED
DRAWN BY: JLB
CHECKED BY: JLB

THIRD FLOOR AND ROOF FRAMING PLANS

S1.2

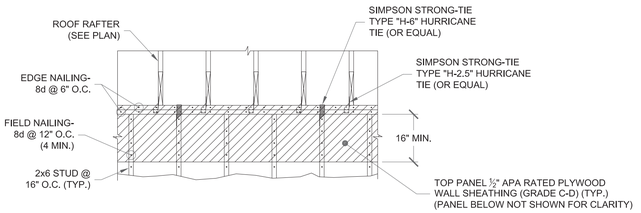
REV.	DATE	DESCRIPTION

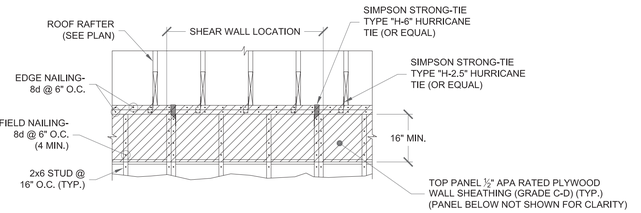
BOULAY
Consulting
JAMIE L. BOULAY CIVIL No. 50330 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
Structural Engineering & Project Management Services
Nineteen Grove Street * Fall River, MA 02720
Ph: (508) 567-0113 * www.boulayconsulting.com

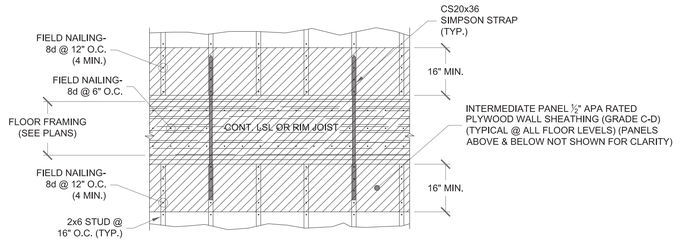


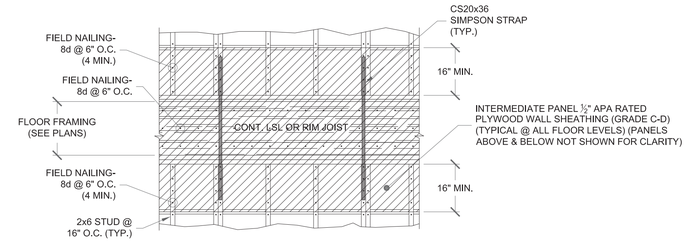
TYPICAL ROOF DIAPHRAGM DETAIL

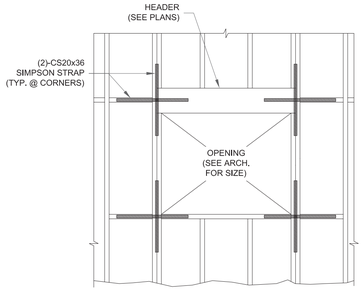
NO SCALE









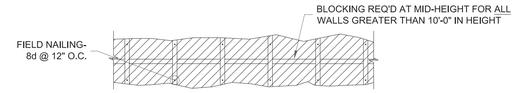


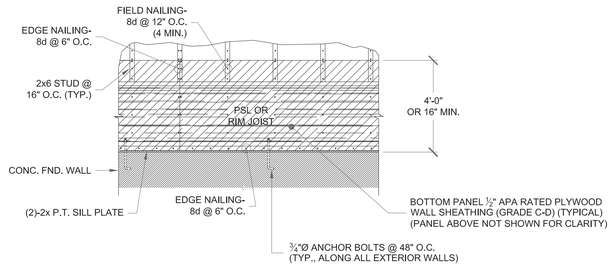
TYPICAL OPENING IN SHEAR WALL DETAIL

NO SCALE

NOTES:

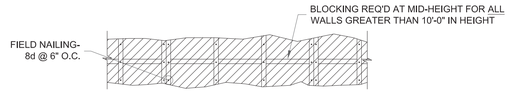
1. SEE TYPICAL SHEAR WALL ELEVATION DETAILS FOR FASTENING & SHEATHING REQUIREMENTS.

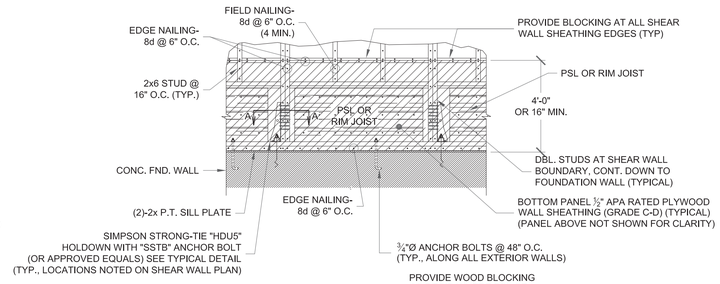


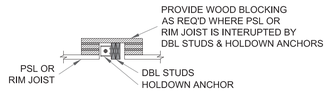


TYPICAL EXTERIOR WALL ELEVATION DETAILS

NO SCALE







DETAIL A-A

TYPICAL SHEAR WALL ELEVATION DETAILS

NO SCALE

NOTES:

1. SEE PLANS FOR SHEARWALL & HOLDOWN LOCATIONS.
2. MINIMUM FASTENING REQUIREMENTS: 8d @ 6" O.C. EDGE NAILING
   8d @ 6" O.C. FIELDING NAILING
   SEE ABOVE DETAIL FOR ADD'L FASTENING & SHEATHING REQ.
3. PROVIDE BLOCKING @ ALL SHEATHING EDGE LOCATIONS.
4. PROVIDE DOUBLE STUD @ ENDS OF ALL SHEAR WALLS.

RCA, LLC
415 Neponset Ave. Dorchester, Massachusetts 02122
www.roche-christopher.com
Telephone: 617-282-0030
Fax: 617-282-1080

Reginaldo Piccinate
6-8 Ford Street
East Boston, MA 02128

PROJECT #	18-040
DATE:	03-31-20
REV:	
SCALE:	AS NOTED
DRAWN BY:	JLB
CHECKED BY:	JLB

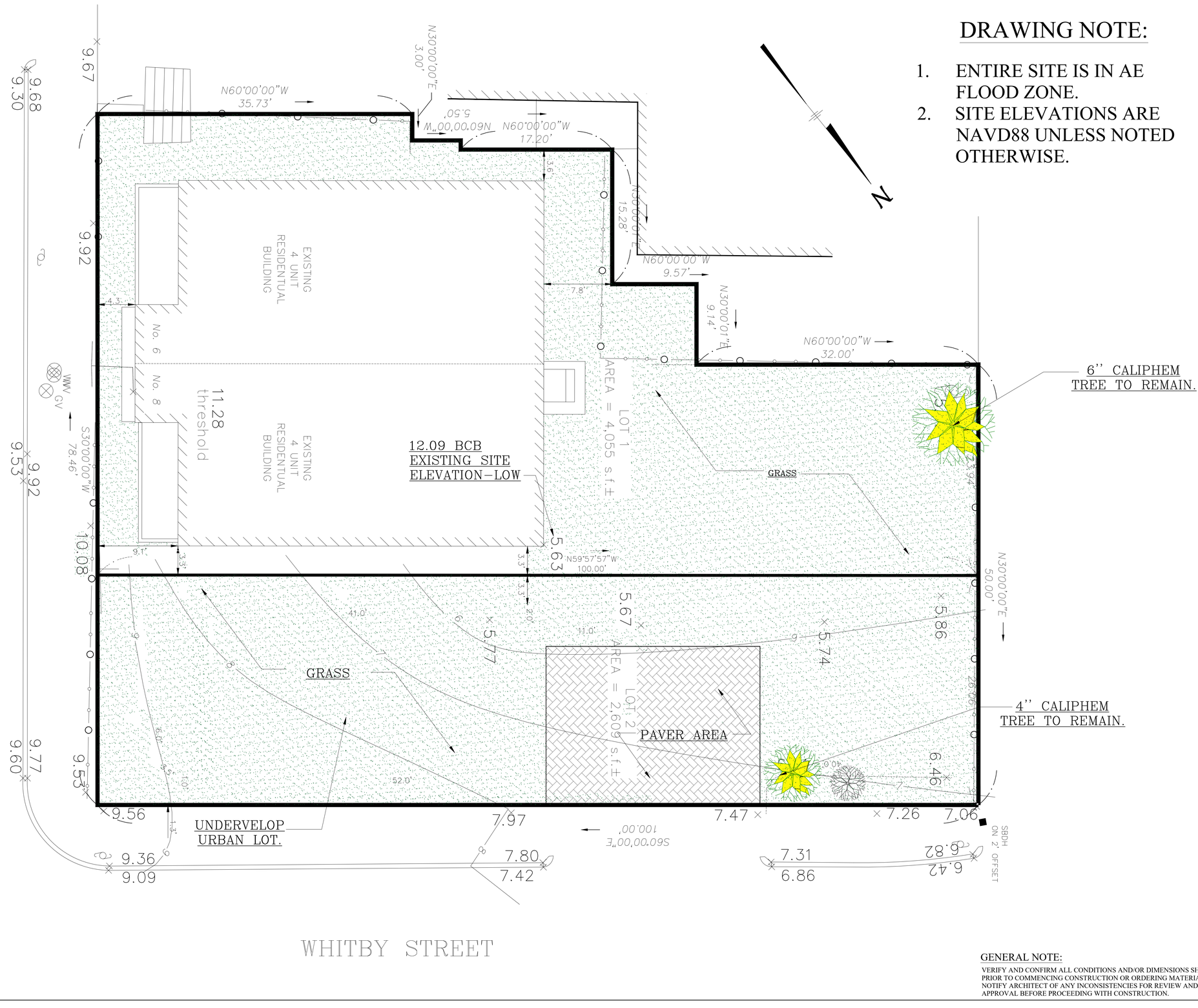
WALL AND ROOF DIAPHRAGM DETAILS

S1.3

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

1. ENTIRE SITE IS IN AE FLOOD ZONE.
2. SITE ELEVATIONS ARE NAVD88 UNLESS NOTED OTHERWISE.



GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

RCA, LLC
1156 Dorchester Avenue Dorchester, Massachusetts 02125
Telephone: 617-282-0030
Fax: 617-282-1080
www.rnchs-christopher.com

Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22 REV: 5-17-22
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

EXISTING CONDITIONS

EX1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

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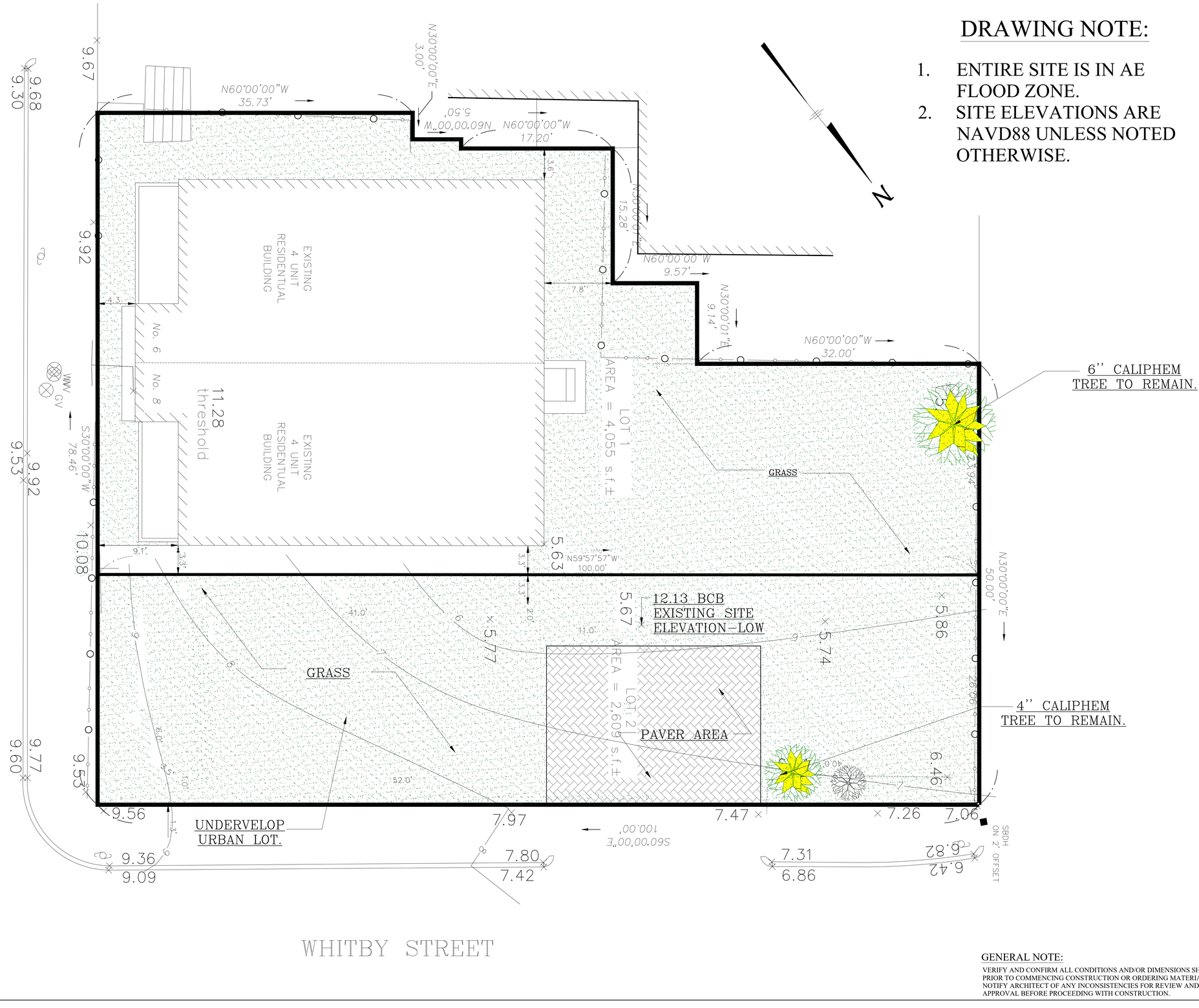

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8 Ford Street
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PROJECT # 19-116
DATE: 4-29-22 REV: 5-17-22
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

EXISTING CONDITIONS

EX1

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REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

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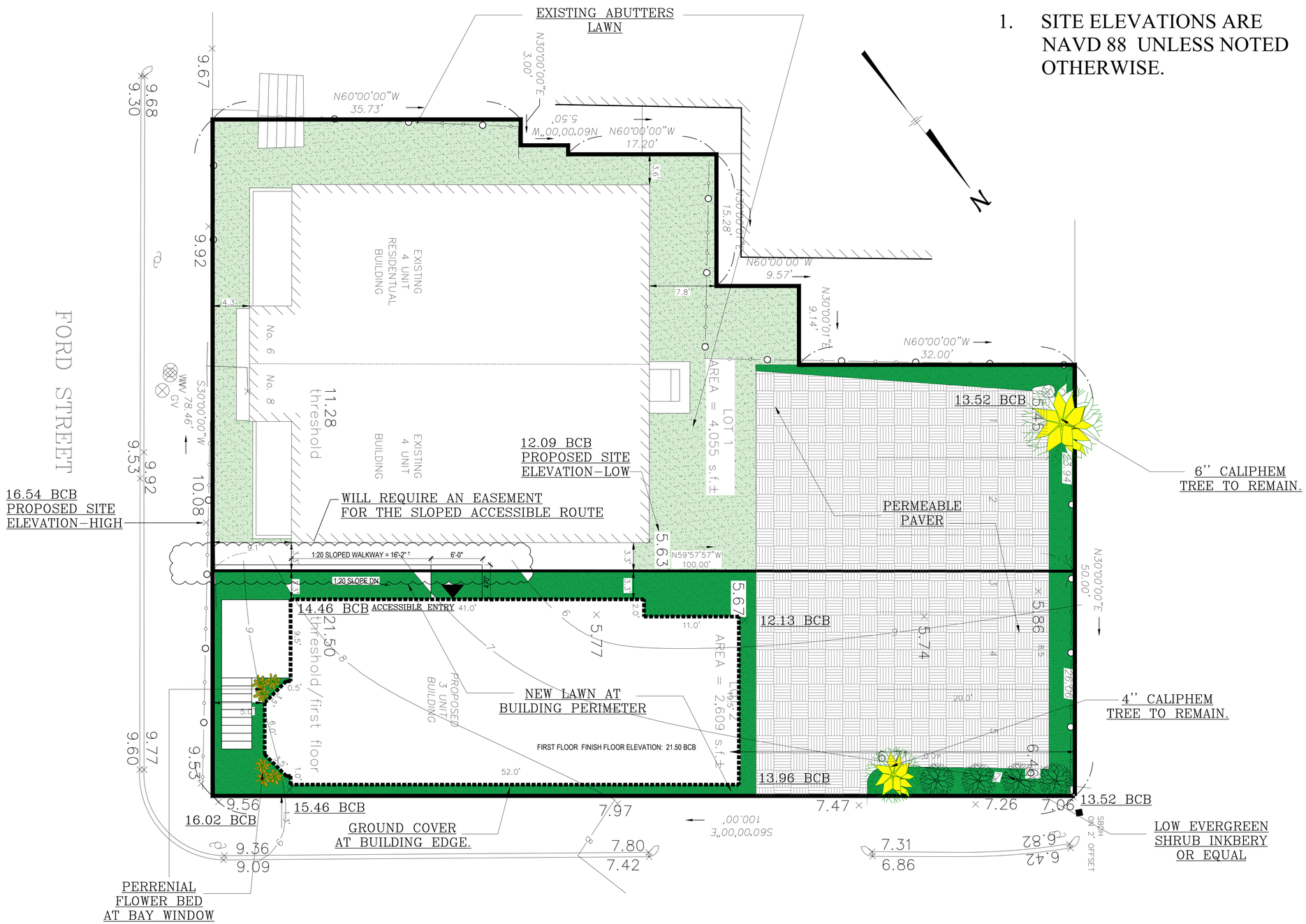

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Dorchester, Massachusetts 02125
Telephone: 617-282-6030
Fax: 617-282-1080
www.rnche-christopher.com

Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22 REV: 5-17-22
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

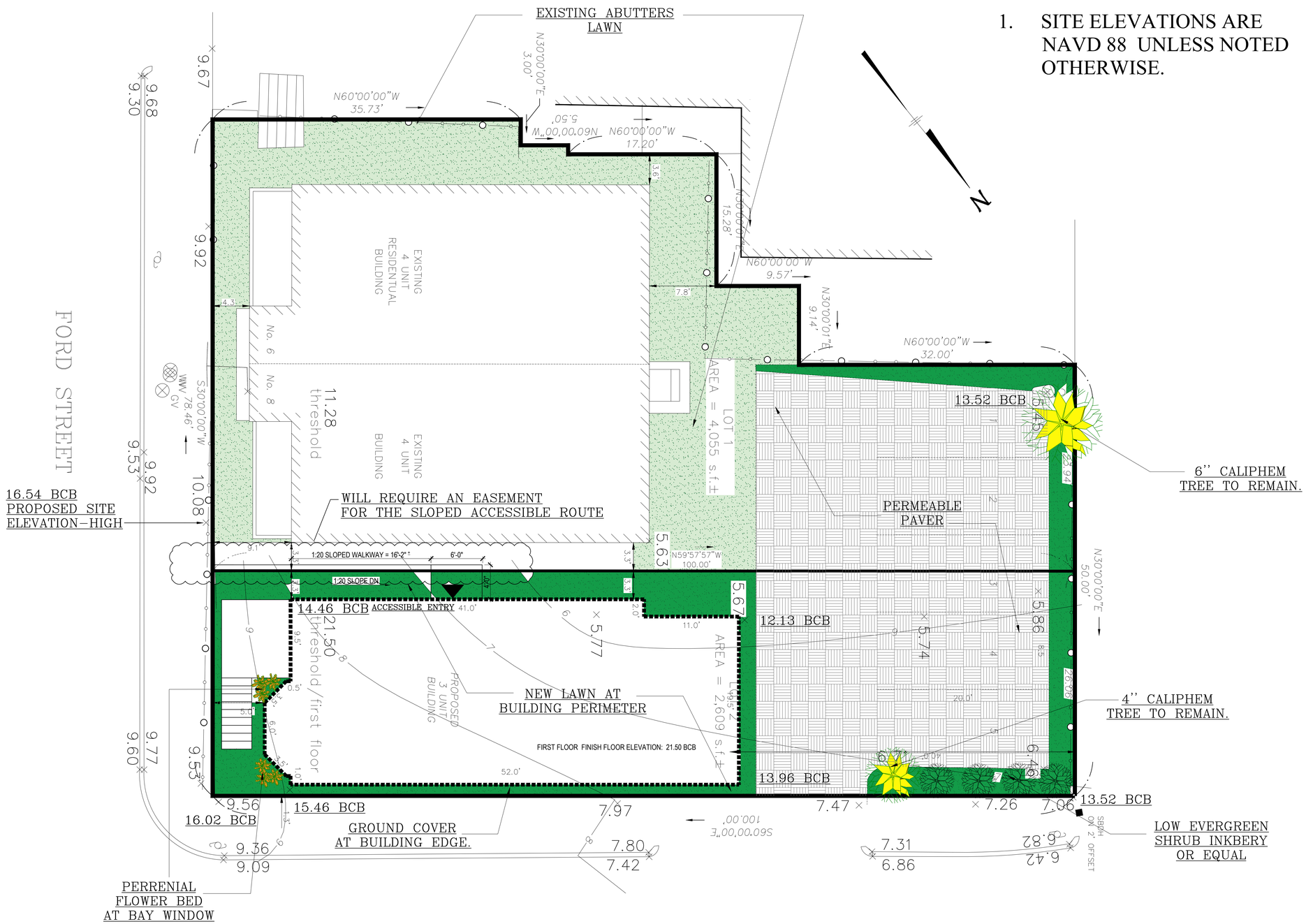
PROPOSED
LANDSCAPE PLAN

L1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

1. SITE ELEVATIONS ARE NAVD 88 UNLESS NOTED OTHERWISE.



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East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22 REV: 5-17-22
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

PROPOSED
LANDSCAPE PLAN

L1

GENERAL NOTE:

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6-8 Ford Street, East Boston, MA Abutter Mailing List

OWNER	MAIL_ADDRESS	MAIL_CS	STATE	MAIL_ZIPCODE
CHEN BIHUA	1 AVERY ST, UNIT PH2A	BOSTON	MA	02111
STORY JASOB	10 FORD ST	EAST BOSTON	MA	02128
JAMES & JUNE REALTY 1 LLC	10 OAK HILL RD	NATICK	MA	01760
OSCAR A HERNANDEZ	10 WHITBY ST	EAST BOSTON	MA	02128
ORIENT ARMS CONDO TRUST	1006 - 1010 BENNINGTON ST	EAST BOSTON	MA	02128
LONG BEACH REALTY II CORP	104-18 METROPOLITAN AVE	FOREST HILLS	NY	11375
LUCKY CORNER REALTY TRUST c/o				
XIAO DAN YU MEI	1057 WINTHROP AVE	REVERE	MA	02151
PHYLLIS F PIZZI	11 FORD ST	EAST BOSTON	MA	02128
ELVIS A MADRID	1112 BENNINGTON ST	EAST BOSTON	MA	02128
PHILIP PEDONE	12 FORD ST	EAST BOSTON	MA	02128
JOSEPH L RUGGIERO III	1225 BENNINGTON ST	EAST BOSTON	MA	02128
LU XIAOWEI	1320 CANTON AVE	MILTON	MA	02186
MICHAEL J TODESCA	14 BREED ST	EAST BOSTON	MA	02128
DIANE GRADOZZI	14 FORD ST	EAST BOSTON	MA	02128
FERNANDO DONIS	15 BOARDMAN ST	EAST BOSTON	MA	02128
16 WHITBY STREET LLC	15 CYPRESS ST STE 301	NEWTON	MA	02459
GAN YUTING	16 BOARDMAN ST #307	EAST BOSTON	MA	02128
16 BOARDMAN STREET CONDOMINIUM	16 BOARDMAN ST	EAST BOSTON	MA	02128
TIAN YANG	16 BOARDMAN ST, UNIT 101	EAST BOSTON	MA	02128
DURRANI SAMRA	16 BOARDMAN ST, UNIT 102	EAST BOSTON	MA	02128
WANG LIKE	16 BOARDMAN ST, UNIT 103	EAST BOSTON	MA	02128
JASON W HUMPHREY	16 BOARDMAN ST, UNIT 104	EAST BOSTON	MA	02128
JORDAN COLLERAN	16 BOARDMAN ST, UNIT 202	EAST BOSTON	MA	02128
LIU LIYUAN	16 BOARDMAN ST, UNIT 203	EAST BOSTON	MA	02128
PARRA JUAN CAMILO	16 BOARDMAN ST, UNIT 204	EAST BOSTON	MA	02128
YANG YAN	16 BOARDMAN ST, UNIT 205	EAST BOSTON	MA	02128
DE LOS SANTOS SAMANTHA M	16 BOARDMAN ST, UNIT 206	EAST BOSTON	MA	02128
TEP SOTHYA	16 BOARDMAN ST, UNIT 207	EAST BOSTON	MA	02128
REN HUILAN	16 BOARDMAN ST, UNIT 301	EAST BOSTON	MA	02128
SEAN CHEN	16 BOARDMAN ST, UNIT 302	EAST BOSTON	MA	02128
HUA YANG	16 BOARDMAN ST, UNIT 303	EAST BOSTON	MA	02128
NATHAN SUDENFIELD	16 BOARDMAN ST, UNIT 304	EAST BOSTON	MA	02128
RODRIGO M DOMINGUEZ	16 BOARDMAN ST, UNIT 305	EAST BOSTON	MA	02128
ANATOLIY FELDMAN	16 FORD ST	EAST BOSTON	MA	02128
6-8 FORD STREET LLC	164 COURT RD	WINTHROP	MA	02152
XEUNG BILLSON	18 FORD ST	EAST BOSTON	MA	02128
FREDY CUEVAS	184 COTTAGE ST #1-R	BOSTON	MA	02128
PETER J MARTINO JR	19 ENFIELD RD	WINTHROP	MA	02152
BROOK PROPERTY MANAGEMENT	193 HARVARD ST	BROOKLINE	MA	02446
DANIEL E JACOBSON	2 BRIGHAM ST UNIT 3	BOSTON	MA	02128
PHILIP ALDRICH	20 FORD ST	EAST BOSTON	MA	02128
CLAIRE SPAGNOLO TS	21 FORD ST	EAST BOSTON	MA	02128
PATRICE DESA	21 WHITBY ST	EAST BOSTON	MA	02128
DAVID MODICA	223 PURITAN RD	SWAMPSCOTT	MA	01907
RAFFO JOHN * GEORGE ETAL	23 BOARDMAN ST	EAST BOSTON	MA	02128
ISABEL MARIA MACHADO	24 BREED ST	EAST BOSTON	MA	02128
CAROL A SACCO	25 BOARDMAN ST	EAST BOSTON	MA	02128
JOHN A SCHETTINO	26 BREED ST	EAST BOSTON	MA	02128
ELIANA BUILES	26 BREED ST	EAST BOSTON	MA	02128
LYNNETTE GARCIA ACONE	30 WHITBY ST #30	EAST BOSTON	MA	02128
RAMIRO PIZZARO	32 WHITBY ST #32	EAST BOSTON	MA	02128
MARY ANN DIROCCO	34 WHITBY ST #34	EAST BOSTON	MA	02128
JIEYA ZHEN	36 WHITBY ST	EAST BOSTON	MA	02128

STACY OTOOLE	36 WHITBY ST	EAST BOSTON	MA	02128
SUSAN TAYLOR	38 WHITBY ST #38	EAST BOSTON	MA	02128
MARIA MARTINEZ	4 FORD ST	EAST BOSTON	MA	02128
JOSEPH M DISESSA	40 WHITBY ST #40	EAST BOSTON	MA	02128
CHARLES E DIPRIMA	440 SARAOGA ST	EAST BOSTON	MA	02128
JOSE A CALLEJAS	444 SUMNER ST	EAST BOSTON	MA	02128
MARVIN E GONZALEZ	483 POPLAR ST	ROSLINDALE	MA	02131
VINCENZO M GUARINO TRUST	49 STEVENS ST	REVERE	MA	02151
970 SARATOGA LLC	50 FRANKLIN ST SUITE 400	BOSTON	MA	02110
2F7B DEVELOPMENT LLC	50 FRANKLIN ST SUITE 400	BOSTON	MA	02110
EB WHITE DIAMOND LLC	50 FRANKLIN STREET SUITE 400	BOSTON	MA	02110
NOURI MENSOR	52 ASHLEY ST	EAST BOSTON	MA	02128
ROMAN CATH ARCH BOSTON	54 ASHLEY ST	EAST BOSTON	MA	02128
FRANK CIAMPA	8 LINDA LANE	NAHANT	MA	01908
PAUL SCAPICCHIO	85 MEREDITH CIRCLE	MILTON	MA	02186
STEPHEN W PORFIDO	9 BOARDMAN ST	EAST BOSTON	MA	02128
IRMAS LLC	915 CHESTNUT ST	NEWTON	MA	02468
RABEH JANOUDI	958 SARATOGA ST	EAST BOSTON	MA	02128
MARGARITA L HERRERA	959 SARATOGA ST	EAST BOSTON	MA	02128
STEVEN M BURRI	960 SARATOGA ST	EAST BOSTON	MA	02128
FLOR Y SALVADOR	961 SARATOGA ST	EAST BOSTON	MA	02128
ROCCO TALLUTO	963 SARATOGA ST	EAST BOSTON	MA	02128
ALTAMIRA BANQUETS LLC	964 SARATOGA ST	EAST BOSTON	MA	02128
PUERTA CARLOS	965 SARATOGA ST	EAST BOSTON	MA	02128
RICHARD P GALLUCCI	967 SARATOGA ST	EAST BOSTON	MA	02128
LUCY A BELLO	970 BENNINGTON ST	EAST BOSTON	MA	02128
ALICE CHRISTOPHER	972 BENNINGTON ST	EAST BOSTON	MA	02128
JAIRO LAMPREA	978 BENNINGTON ST	EAST BOSTON	MA	02128
DONNA MARQUARDO	980 SARATOGA ST	EAST BOSTON	MA	02128

AFFIDAVIT OF SERVICE
FOR ABUTTER NOTIFICATION

Under the Massachusetts Wetlands Protection Act and Boston Wetlands Ordinance

I, James Christopher, hereby certify under pains of and penalties of perjury that that at least one week prior to the public hearing, I gave notice to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, section 40 and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent was filed under the Massachusetts Wetlands Protection Act and/or the Boston Wetlands Ordinance by 6-8 Ford Street LLC for the project located at 6-8 Ford Street, East Boston, Massachusetts, 02128.

The Notification to Abutters, the list of Abutters to whom it was given, and their addresses, are attached to this Affidavit of Service.

James Christopher

5/11/22
Date

CERTIFICATE OF INTERPRETATION

I, Ana Glavin, hereby certify that I am competent in both the Spanish and English languages, and that I translated the required information and read the attached document, Notification to Abutters Boston Conservation Commission into Spanish. And that is true and accurate to the best of my abilities.

Date:
05/12/2022

Ana Glavin

Name:

Address: 496 Quarry ST.
Quincy, MA 02169

Contact:

Notification to Abutters
Boston Conservation Commission

In accordance with the Massachusetts Wetlands Protection Act, Massachusetts General Laws Chapter 131, Section 40, and the Boston Wetlands Ordinance, you are hereby notified as an abutter to a project filed with the Boston Conservation Commission.

A. 6-8 Ford Street LLC has filed a Notice of Intent with the Boston Conservation Commission seeking permission to alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, section 40) and Boston Wetlands Ordinance.

B. The address of the lot where the activity is proposed is 6-8 Ford Street, East Boston, Massachusetts 02128.

C. The project involves construction of a 3-story 3-unit multi-family residential building. The Project includes create landscaped green space and a new stormwater management system.

D. Copies of the Notice of Intent may be obtained by contacting the Boston Conservation Commission at CC@boston.gov.

E. Copies of the Notice of Intent may be obtained from 686 Architects, the Applicant's Representative, at 617. 282.0030 between the hours of 9:00 AM and 5:00 PM, Monday through Thursday and 9:00 AM and 1:00 PM on Friday.

F. In accordance with the Commonwealth of Massachusetts Executive Order Suspending Certain Provisions of the Open Meeting Law, the public hearing will take place virtually at https://zoom.us/j/6864582044. If you are unable to access the internet, you can call 929.205.6099, enter Meeting ID 686 458 2044 # and use # as your participant ID.

G. Information regarding the date and time of the public hearing may be obtained from the Boston Conservation Commission by emailing CC@boston.gov or calling 617. 635.3850 between the hours of 9:00 AM to 5:00 PM, Monday through Friday.

NOTES:

1. Notice of the public hearing, including its date, time, and place, will be published at least five days in advance in the Boston Herald.
2. Notice of the public hearing, including its date, time, and place, will be posted on www.boston.gov/public-notices and in Boston City Hall not less than forty-eight hours in advance.
3. If you would like to provide comments, you may attend the public hearing or send written comments to CC@boston.gov or Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201.
4. You also may contact the Boston Conservation Commission or the Department of Environmental Protection Northeast Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call: the Northeast Region: 978.694.3200.

Notificación a los Colindantes
Comisión de Conservación de Boston

En conformidad con la Ley de Protección de los Humedales de Massachusetts, Capítulo 131 de las Leyes Generales de Massachusetts, Sección 40, y con la Ordenanza de los Humedales de Boston, por la presente se le notifica a usted, en su calidad de colindante con un proyecto presentado ante la Comisión de Conservación de Boston.

A. 6-8 FordStreet LLC ha presentado una Notificación de Intención ante la Comisión de Conservación de Boston solicitando permiso para alterar una zona sujeta a protección en virtud de la Ley de Protección de los Humedales (Leyes Generales, Capítulo 131,Sección 40) y la Ordenanza de Humedales de Boston.

B. La dirección del terreno donde se propone la actividad es 6-8 Ford Street, East Boston, Massachusetts 02128.

C. El proyecto implica la construcción de un edificio de 3-plantas 3-unidad residencial multifamiliar. El proyecto creará un espacio verde ajardinado e instalará un sistema de gestión de aguas pluviales.

D. Pueden obtenerse copias de la Notificación de Intención poniéndose en contacto con la Comisión de Conservación de Boston en CC@boston.gov.

E. Pueden obtenerse copias de la Notificación de Intención llamando, 686 Architects, al representante del solicitante al 617. 282.0300 de lunes a jueves de 9:00 de la mañana a 5:00 de la tarde y de 9:00 de la mañana a 1:00 de la tarde.

F. De acuerdo a la Orden Ejecutiva del Estado de Massachusetts de Suspensión de Ciertas Disposiciones de la Ley de Reuniones Abiertas, la audiencia pública tendrá lugar virtualmente en https://zoom.us/j/6864582044. Si no puede acceder al internet, puede llamar al 929.205.6099, introducir el número de identificación de la reunión 686.458.2044 # y utilizar # como identificación de participante.

G. La Comisión de Conservación de Boston puede facilitarle información sobre la fecha y la hora de la audiencia pública enviando un correo electrónico a CC@boston.gov o llamando al 617. 635.3850 de lunes a viernes de 9:00 de la mañana a 5:00 de la tarde.

NOTA:

1. Aviso de la audiencia pública, incluyendo su fecha, hora y lugar, se publicará con al menos cinco días de antelación en el Boston Herald.
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3. Si desea aportar comentarios, puede asistir a la audiencia pública o enviarlos por escrito a CC@boston.gov o al Boston City Hall, Departamento de Medio Ambiente, Sala 709, 1 City Hall Square, Boston, MA 02201.
4. Usted tambien puede contactar a la Comisión de Conservación de Boston or al Departamento de Protección Ambiental de la Oficina (DEP) Regional del Noreste para mas información sobre esta aplicación o tambien a la Ley de Proteccion de los Humedales. Para contactar al DEP, llame a la Oficina Regional del Noreste a 978.694.3200.

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D. Pueden obtenerse copias de la Notificación de Intención poniéndose en contacto con la Comisión de Conservación de Boston en CC@boston.gov.

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686 | ARCHITECTS

May 17, 2022

Mr. Nicholas Moreno – Executive Director
City of Boston Conservation Commission
1 City Hall Square, Room 709
Boston, MA 02201

Re: Climate Resiliency Checklist Resubmission
6-8 Ford Street
East Boston, MA 02128

Dear Mr. Moreno,

Along with this letter are two copies of the following documents related to the Conservation Commission's review of the proposed project at 6-8 Ford Street in East Boston, Massachusetts.

Climate Resiliency Checklist – revised 5-17-2022
Drawing EX1 Existing Conditions – revised 5-17-2022
Drawing L1 Landscape Plan – revised 5-17-2022

The last remaining item you requested to be updated in your e-mail on 5/11/22 was the Climate Resiliency Checklist, specifically the "Existing Site Elevation - Low" and "Proposed Site Elevation - High". You said "The elevations (even when converted from NAVD88 to BCB) do not match between the Climate Resiliency Checklist and the plans provided."

I went through the drawings EX1 Existing Conditions, L1 Landscape Plan prepared by 686 Architects and C1 Site and converted the NAVD 88 elevations provided by the Surveyor/Civil Engineer into the BCB elevations, noted the "Existing Site Elevation - Low" on drawing EX1 and the "Proposed Site Elevation - High" on the L1 drawing, and modified the Climate Resiliency Checklist to agree with these elevations – see drawings attached.

I believe I have done all the math conversions correctly and have the correct figures for these last two items which you requested to be updated in your e-mail on 5/11/22.

Please let us know if there is any other information you need.

Ronald P. Boretti

REGISTERED ARCHITECT
RONALD BORETTI
No. 7320
WEYMOUTH, MA
5-17-22
COMMONWEALTH OF MASSACHUSETTS

Ronald P. Boretti
Architect
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boston planning & development agency

Climate Resiliency Checklist

NOT FOR FILING

NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

A.1 - Project Information

Project Name:	8 Ford Street			
Project Address:	8 Ford Street, East Boston, Massachusetts 02128			
Project Address Additional:				
Filing Type (*select*)	*Conservation Commission - Notice of Intent / Design /Building Permit(prior to final design approval)*			
Filing Contact	*Name: James Christopher*	*Company: RCA, LLC*	*Email: jchristopher@roche-christopher.com*	*Phone: 617.282.0030*
Is MEPA approval required	*No*		*Date: revised 5/11/2022*	

A.3 - Project Team

Owner / Developer:	Reginaldo Piccinato
Architect:	RCA, LLC
Engineer:	Medford Engineering & Survey (civil and survey); Boulay Consulting (Structural); Zade Engineering LLC (MEP)
Sustainability / LEED:	n/a
Permitting:	n/a
Construction Management:	to be determined

A.3 - Project Description and Design Conditions

List the principal Building Uses:	Multi-Family Residential
List the First Floor Uses:	Residential (3 units)
List any Critical Site Infrastructure and or Building Uses:	n/a

Site and Building:

Site Area:	*4,055 SF*	Building Area:	*4,495 SF (total)*
Building Height:	*32.33 Ft*	Building Height:	*3 Stories*
Existing Site Elevation – Low:	*12.09 Ft BCB*	Existing Site Elevation – High:	*16.54 Ft BCB*
Proposed Site Elevation – Low:	*12.09 Ft BCB*	Proposed Site Elevation – High:	*16.54 Ft BCB*
Proposed First Floor Elevation:	*21.50 Ft BCB*	Below grade levels:	*1 Story*

Article 37 Green Building:

LEED Version - Rating System :	none	LEED Certification:	*No*
Proposed LEED rating:	*not applicable*	Proposed LEED point score:	*not applicable*

Building Envelope

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	*R=29 & R=20 c.i.*	Exposed Floor:	*not applicable*
Foundation Wall:	*R=10*	Slab Edge (at or below grade):	*R=10*

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	*0 %*	Wall & Spandrel Assembly Value:	*not applicable*
Area of Framed & Insulated / Standard Wall:	*83 %*	Wall Value	*R=20 & R=5 c.i.*
Area of Vision Window:	*15 %*	Window Glazing Assembly Value:	*U=0.38*
		Window Glazing SHGC:	*SHGC=0.40*
Area of Doors:	*2 %*	Door Assembly Value:	*U=0.77*

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined	Building Specific Engineering Analysis by MacRitchie Engineering Incorporated.		
Annual Electric:	14,939 *(kWh)*	Peak Electric:	52 *(kW)*
Annual Heating:	193.46 *MMbtu/hr*	Peak Heating:	0.5 *(MMbtu)*
Annual Cooling:	6,600 *(Tons/hr)*	Peak Cooling:	6.0 *(Tons)*
Energy Use - Below ASHRAE 90.1 - 2013:	18.9 %	Have the local utilities reviewed the building energy performance?:	*No*
Energy Use - Below Mass. Code:	42 %	Energy Use Intensity:	75 *(kBtu/SF)*

Back-up / Emergency Power System

Electrical Generation Output:	0 *(kW)*	Number of Power Units:	0
System Type:	*0 (kW)*	Fuel Source:	n/a

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	0 *(kW)*	Heating:	0 *(MMbtu/hr)*
		Cooling:	*0 (Tons/hr)*

B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: 12.08 *(Tons)*

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

Building Mechanical systems have been designed to meet the requirements of 2018 International Energy Conservation Code. The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code. The roofing membrane will be white to reduce the heat island effect.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

Building Mechanical systems and controls have been designed to meet the energy conservation requirements of 2018 International Energy Conservation Code. All appliances are to be Energy Star rated.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

All appliances are to be Energy Star rated. All plumbing fixture are designed for low flow water usage.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

n/a

Describe any energy efficiency assistance or support provided or to be provided to the project:

n/a

B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

To be determined by Technological Advances.

C - Extreme Heat Events

Annual average temperature in Boston increased by about 2˚F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

C.1 – Extreme Heat - Design Conditions

Temperature Range - Low:	68 *Deg.*	Temperature Range - High:	86 *Deg.*
Annual Heating Degree Days:	5350	Annual Cooling Degree Days	1200

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	10	Days – Above 100°:	3
Number of Heatwaves / Year:	3	Average Duration of Heatwave (Days):	3

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

The building is designed with a highly reflective (white) roofing membrane.

C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

The building thermal envelope has been designed to exceed the insulation requirements of the 2018 International Energy Conservation Code. The roofing membrane will be white to reduce the heat island effect.1

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

The high-performance thermal envelop will keep the building cooler longer and the operable windows will allow the occupants to control the ventilation and capture the prevailing winds.

D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

D.1 – Extreme Precipitation - Design Conditions

10 Year, 24 Hour Design Storm	*1 In.*

Describe all building and site measures for reducing storm water run-off:

An onsite underground infiltration system has been included in the project design with a storage capacity of 471.8 cubic feet which exceeds the capacity required (377 c.f.) by 94.8 c.f. and can completely store the precipitation of a 1" 24-hour storm event over the impervious area of the projects three contiguous lots.

D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

The design currently includes on-site storm water retention.

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, sea levels in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA SFHA?	*Yes*	What Zone:	AE
Current FEMA SFHA Zone Base Flood Elevation:			*16.46 Ft BCB or 10.0 Ft (NAVD 1988)*

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online BPDA SLR-FHA Mapping Tool to assess the susceptibility of the project site.	*Yes*

If you answered YES to either of the above questions, please complete the following questions.
Otherwise you have completed the questionnaire; thank you!

E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online BPDA SLR-FHA Mapping Tool to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24" of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12" of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:	*16.46 Ft BCB or 10.0 Ft (NAVD 1988)*		
Sea Level Rise - Design Flood Elevation:	*16.46 Ft BCB*	First Floor Elevation:	*21.50 Ft BCB*
Site Elevations at Building:	*12.12 to 16.68 Ft BCB*	Accessible Route Elevation:	*16.50 Ft BCB*

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

The basement is for storage only.

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

All equipment will be located on the first floor level, which is above the Base Flood Elevation.

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Occupied floors are above the Base flood Elevation.

Describe any strategies that would support rapid recovery after a weather event:

Foundation pressure relief valves will limit structural damage and basement may reoccupied when it has dried out. Occupied floors should be above the flood damage.

E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

n/a

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

To be determined as technology and the City's plans for the neighborhood evolve.

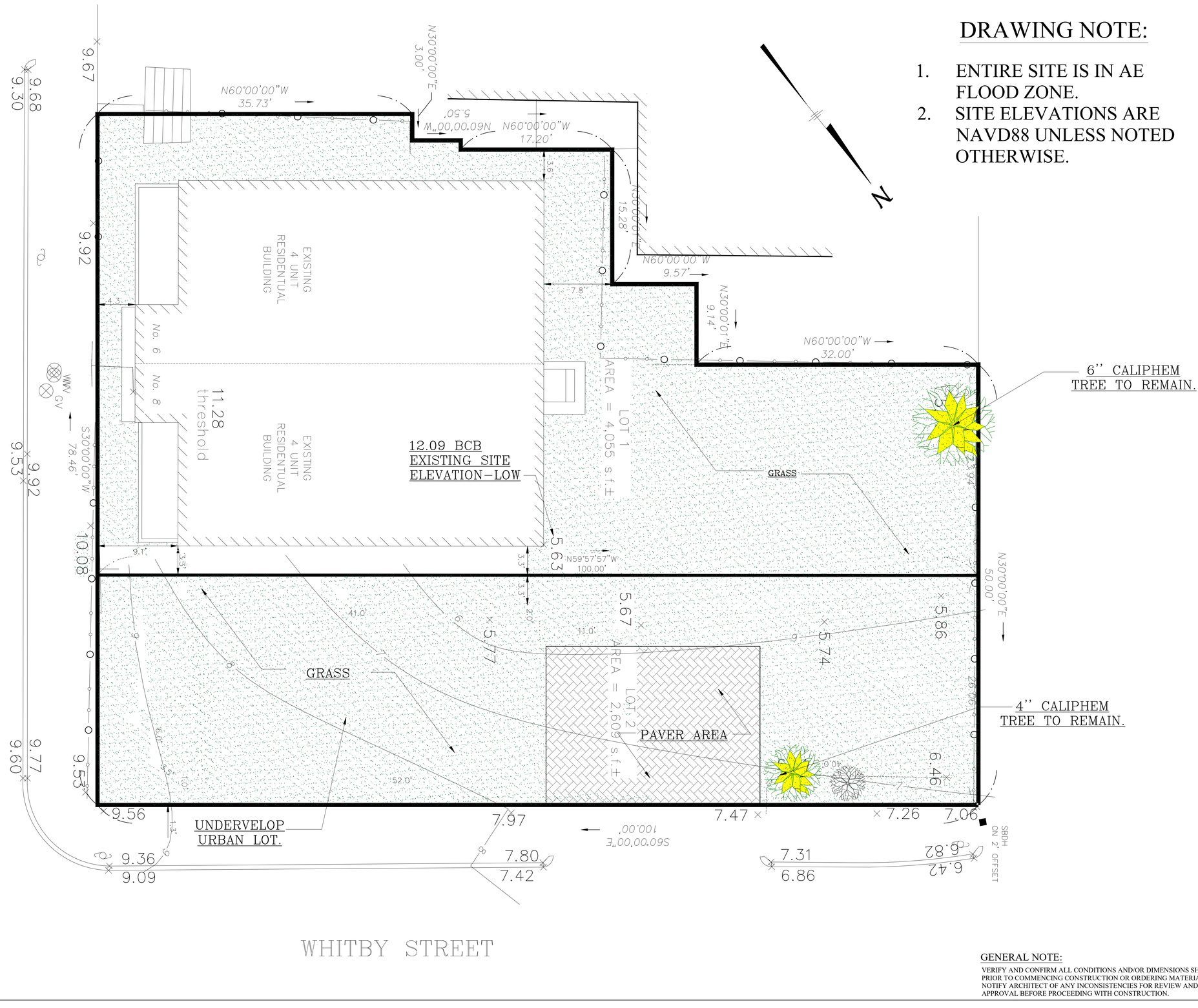
A pdf and word version of the Climate Resiliency Checklist is provided for informational use and off-line preparation of a project submission. NOTE: Project filings should be prepared and submitted using the online Climate Resiliency Checklist.

For questions or comments about this checklist or Climate Change best practices, please contact: John.Dalzell@boston.gov

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

1. ENTIRE SITE IS IN AE FLOOD ZONE.
2. SITE ELEVATIONS ARE NAVD88 UNLESS NOTED OTHERWISE.



GENERAL NOTE:

VERIFY AND CONFIRM ALL CONDITIONS AND/OR DIMENSIONS SHOWN PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. NOTIFY ARCHITECT OF ANY INCONSISTENCIES FOR REVIEW AND APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.

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Reginaldo Piccinato
8 Ford Street
East Boston, MA 02128

PROJECT # 19-116
DATE: 4-29-22 REV: 5-17-22
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
CHECKED BY: R.P.B.

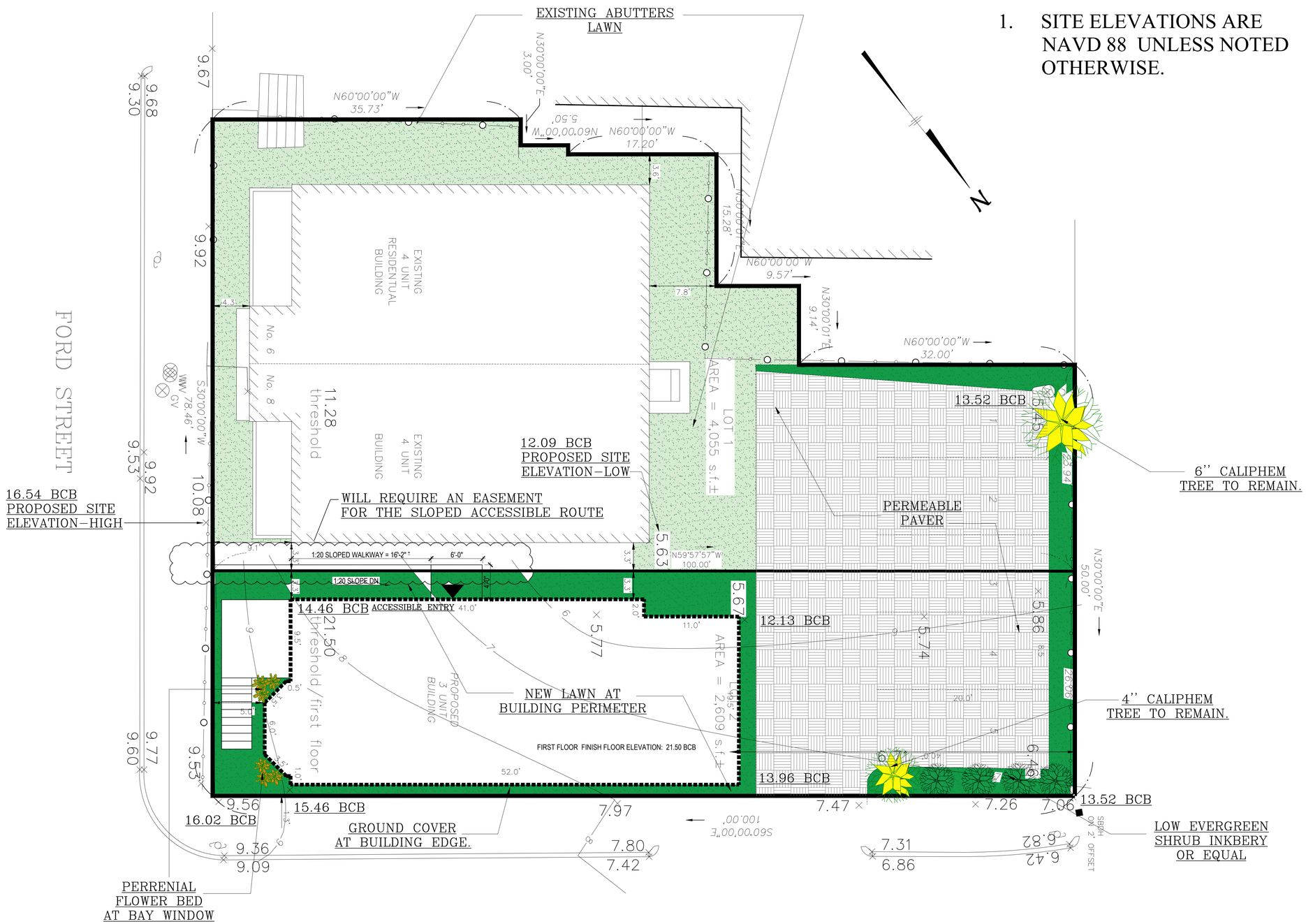
EXISTING CONDITIONS

EX1

REV.	DATE	DESCRIPTION
1	X-XX-XX	XXX

DRAWING NOTE:

1. SITE ELEVATIONS ARE NAVD 88 UNLESS NOTED OTHERWISE.



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PROJECT # 19-116
DATE: 4-29-22 REV: 5-17-22
SCALE: 3/16" = 1'-0"
DRAWN BY: CD
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PROPOSED
LANDSCAPE PLAN

L1