CITY OF CAMBRIDGE
MASSACHUSETTS
BOARD OF ZONING APPEAL
831 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02139
617 349-6100

2017 SEP -5 PM 2:53
OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

BZA APPLICATION FORM

Plan No: BZA-014340-2017

GENERAL INFORMATION

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit : _____ **Variance :** √ **Appeal :** _____

PETITIONER : Everett & Hollie Briggs C/O Kyle Sheffield, LDa Architecture & Interiors

PETITIONER'S ADDRESS : 222 Third Street, Suite 3212 Cambridge, MA 02142

LOCATION OF PROPERTY : 148 Coolidge Hill Cambridge, MA

TYPE OF OCCUPANCY : Single Family **ZONING DISTRICT :** Residence A-1 Zone

REASON FOR PETITION :

Additions

DESCRIPTION OF PETITIONER'S PROPOSAL :

1. Interpretation of need of relief for the construction a new, non-dimensionally conforming exterior stair/bicycle ramp areaway for basement egress on the west side of an existing single family detached dwelling that is conforming to current side yard setbacks.
2. Construction of a new dimensionally conforming addition to the east side of an existing single family detached dwelling that is conforming to current side yard setbacks.

SECTIONS OF ZONING ORDINANCE CITED :

Article 5.000 Section 5.22.1 (Private Open Space).
Article 5.000 Section 5.31 (Dimensional Requirements).
Article 5.000 Section 5.24.2 (Yards).

Original Signature(s) : Everett B. Briggs
(Petitioner(s) / Owner)
Everett B. Briggs
(Print Name)

Address : 148 Coolidge Hill
Cambridge, MA 02138

Tel. No. : (617) 968-2205

E-Mail Address : briggs.everett@gmail.com

Date : September 1, 2017

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

I/We Everett Barnard Briggs
(OWNER)

Address: 148 Coolidge Hill, Cambridge, MA

State that I/We own the property located at 148 Coolidge Hill, Cambridge, MA,
which is the subject of this zoning application.

The record title of this property is in the name of
Everett Barnard Briggs

*Pursuant to a deed of duly recorded in the date January 1, 2005 Middlesex South County Registry of Deeds at Book 12623, Page 636; or Middlesex Registry District of Land Court, Certificate No. _____
Book _____ Page _____.

SIGNATURE BY LAND OWNER OR AUTHORIZED TRUSTEE, OFFICER OR AGENT*

Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Middlesex

The above-name Everett Barnard Briggs personally appeared before me, this 1st of September, 2017, and made oath that the above statement is true.

Notary

My commission expires 4/29/22 (Notary Seal).

TRACY ANDRADE KENNEY
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS
MY COMMISSION EXPIRES APR. 29, 2022

- If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

BZA APPLICATION FORM

SUPPORTING STATEMENT FOR A VARIANCE

EACH OF THE FOLLOWING REQUIREMENTS FOR A VARIANCE MUST BE ESTABLISHED AND SET FORTH IN COMPLETE DETAIL BY THE APPLICANT IN ACCORDANCE WITH MGL 40A, SECTION 10:

A) A Literal enforcement of the provisions of this Ordinance would involve a substantial hardship, financial or otherwise, to the petitioner or appellant for the following reasons:

1. (Egress Stair): The Owner would not be able to gain a direct means of egress out of the existing basement.
2. (Garage Addition): The Owner would not be able to build a dimensionally conforming addition with regard to FAR and setbacks.

B) The hardship is owing to the following circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located for the following reasons:

1. (Egress Stair): The hardship arises from the shape and existing topography of an old lot; where the existing house is located at the very front of a property, and the grade drops off precipitously from the middle to the back of the lot. The existing garage slab limits direct access to the basement on the east side of the house, a front yard setback to the north, and a steeply sloping grade to the south.
2. (Garage Addition): The hardship arises from the shape and existing topography of an old lot; where the existing house is located at the very front of a property, and the grade drops off precipitously from the middle to the back of the lot. The percentage of the steep grade on the lot limits the buildable area on the remaining portion of the lot that is less than a 10% grade.

C) ***DESIRABLE RELIEF MAY BE GRANTED WITHOUT EITHER:***

1) Substantial detriment to the public good for the following reasons:

1. (Egress Stair): The basement egress stair/ramp access provides the most direct access to/from the basement, and to/from the street without impacting the visual appearance of added pathways and/or surface bicycle storage rack/shed on the site.
2. (Garage Addition): The proposed addition is built on the existing footprint of the house as well as the existing driveway. The steeply sloping wooded area of the site remains as a buffer between the house and the abutting properties.

2) Relief may be granted without nullifying or substantially derogating from the intent or purpose of this Ordinance for the following reasons:

This will not create a precedent because it's a unique, preexisting, naturally occurring topographical condition that is unique to only a few properties in the City.

* **If You have any questions as to whether you can establish all of the applicable legal requirements, you should consult with your own attorney.**

BZA APPLICATION FORM

DIMENSIONAL INFORMATION

APPLICANT: LDa Architecture & Interiors **PRESENT USE/OCCUPANCY:** Single Family w/Accessory Apt.

LOCATION: 148 Coolidge Hill Cambridge, MA **ZONE:** Residence A-1 Zone

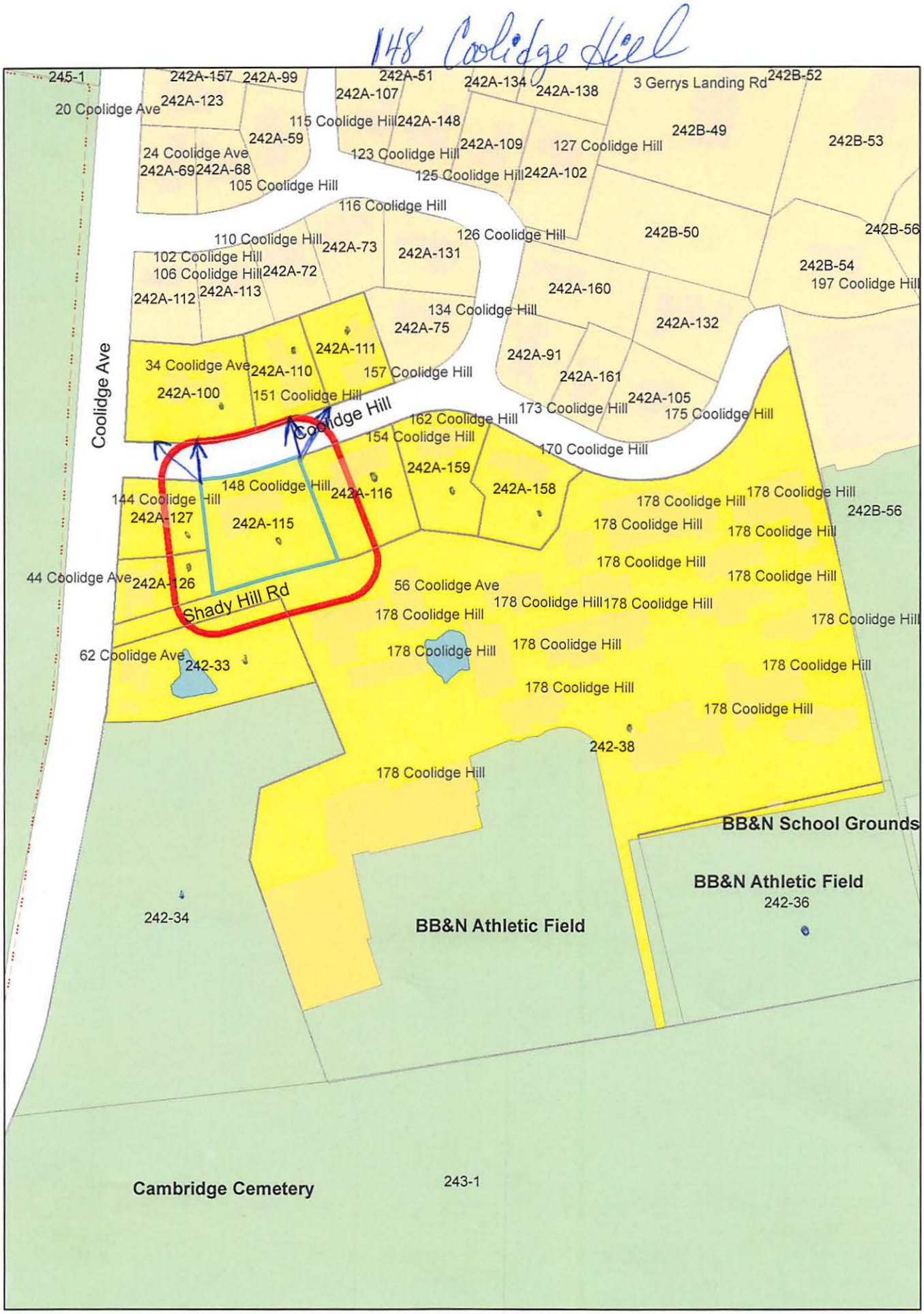
PHONE: _____ **REQUESTED USE/OCCUPANCY:** Single Family w/Accessory Apt.

		EXISTING CONDITIONS	*REQUESTED CONDITIONS*	*ORDINANCE REQUIREMENTS* [1]	
TOTAL GROSS FLOOR AREA:		5,648sf	6,685sf	10,357.5sf	(max.)
LOT AREA:		20,715sf	n/a	8,000sf	(min.)
RATIO OF GROSS FLOOR AREA TO LOT AREA: [2]		.38	.44	.5	(max.)
LOT AREA FOR EACH DWELLING UNIT:		2,926sf	no change	6,000sf	(min.)
SIZE OF LOT:	WIDTH	109.31'	no change	80.0'	(min.)
	DEPTH	144.57'	no change	n/a	
SETBACKS IN FEET:	FRONT	27.5'	no change	25.0'	(min.)
	REAR	67.7'	no change	25.0'	(min.)
	LEFT SIDE	15.0'	11.4'	15.0 sum 35'	(min.)
	RIGHT SIDE	39.63'	20.1'	15.0 sum 35'	(min.)
SIZE OF BLDG.:	HEIGHT	32.5'	no change	35.0'	(max.)
	LENGTH	81.0'	101.7'	n/a	
	WIDTH	52.2'	no change	n/a	
RATIO OF USABLE OPEN SPACE TO LOT AREA: [3]		40%	37%	50%	(min.)
NO. OF DWELLING UNITS:		2	2	1-2	(max.)
NO. OF PARKING SPACES:		2	1	2	(min./max)
NO. OF LOADING AREAS:		n/a	n/a	n/a	(min.)
DISTANCE TO NEAREST BLDG. ON SAME LOT:		n/a	no change	10.0'	(min.)

Describe where applicable, other occupancies on same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g.; wood frame, concrete, brick, steel, etc.

The existing accessory apartment is to remain.
1: (Egress Stair): Construct a sub-grade exterior masonry stair/ramp for access to the basement.
2: (Garage Addition): Construct a dimensionally conforming wood framed garage addition on the east side of the house.

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.


148 Coolidge Hill
245-1
20 Coolidge Ave
242A-157
242A-99
242A-123
242A-51
242A-107
242A-134
242A-138
3 Gerrys Landing Rd
242B-52
115 Coolidge Hill
242A-148
242A-59
24 Coolidge Ave
242A-69
242A-68
105 Coolidge Hill
123 Coolidge Hill
242A-109
127 Coolidge Hill
242B-49
242B-53
125 Coolidge Hill
242A-102
116 Coolidge Hill
110 Coolidge Hill
242A-73
126 Coolidge Hill
242B-50
242B-56
102 Coolidge Hill
106 Coolidge Hill
242A-72
242A-131
242B-54
197 Coolidge Hill
242A-112
242A-113
242A-160
134 Coolidge Hill
242A-75
242A-132
242A-111
242A-91
34 Coolidge Ave
242A-110
157 Coolidge Hill
242A-161
242A-100
151 Coolidge Hill
242A-105
173 Coolidge Hill
175 Coolidge Hill
Coolidge Ave
Coolidge Hill
162 Coolidge Hill
154 Coolidge Hill
170 Coolidge Hill
242A-159
242A-158
148 Coolidge Hill
242A-116
144 Coolidge Hill
242A-127
242A-115
178 Coolidge Hill
242B-56
44 Coolidge Ave
242A-126
Shady Hill Rd
56 Coolidge Ave
62 Coolidge Ave
242-33
242-38
242-34
BB&N School Grounds
BB&N Athletic Field
242-36
BB&N Athletic Field
Cambridge Cemetery
243-1

148 Coolidge Hill

Petitioner

242A-100
ATKINS, CHESTER G. & JESSICA S. STERN
141 COOLIDGE HILL
CAMBRIDGE, MA 02138

242A-110
CHERINGTON, CHARLES R. & ASHLEY S. PETTUS
151 COOLIDGE HILL
CAMBRIDGE, MA 02138

242A-115
BRIGGS, EVERETT BARNARD
148 COOLIDGE HILL
CAMBRIDGE, MA 02138

242-36
BUCKINGHAM BROWNE AND NICHOLS SCHOOL
80 GERRYS LANDING ROAD
CAMBRIDGE, MA 02138

242A-116
FARKAS, CHARLES M. LORA E. SPERBER
154 COOLIDGE HILL
CAMBRIDGE, MA 02138

242A-126 / 242-33-38
SHADY HILL SCHOOL
178 COOLIDGE HILL
CAMBRIDGE, MA 02138

242A-127
SPEKTOR, SAMUEL S., JR. & ANN E. BERMAN
144 COOLIDGE HILL
CAMBRIDGE, MA 02138

242A-158
JONI, SAJ-NICOLE
TR. OF SAJ-NICOLE A. JONI REVOCABLE TR.
170 COOLIDGE HILL
CAMBRIDGE, MA 02138

242A-159
HARRIMAN, RICHARD A. &
KRISTEN WAINWRIGHT
162 COOLIDGE HILL RD.
CAMBRIDGE, MA 02138

242-34
CITY OF CAMBRIDGE
C/O LOUIE DePASQUALE
CITY MANAGER

242-34
CAMBRIDGE CITY OF PWD
147 THORNDIKE ST
CAMBRIDGE, MA 02139

CITY OF CAMBRIDGE
C/O NANCY GLOWA
CITY SOLICITOR

242A-111
RODAT, ROBERT K. & MARY D. MILLER
157 COOLIDGE HILL
CAMBRIDGE, MA 02138

Briggs Residence

148 Coolidge Hill
Cambridge, MA 02138

BZA SUBMISSION SET

08/18/2017

LDa
ARCHITECTURE & INTERIORS

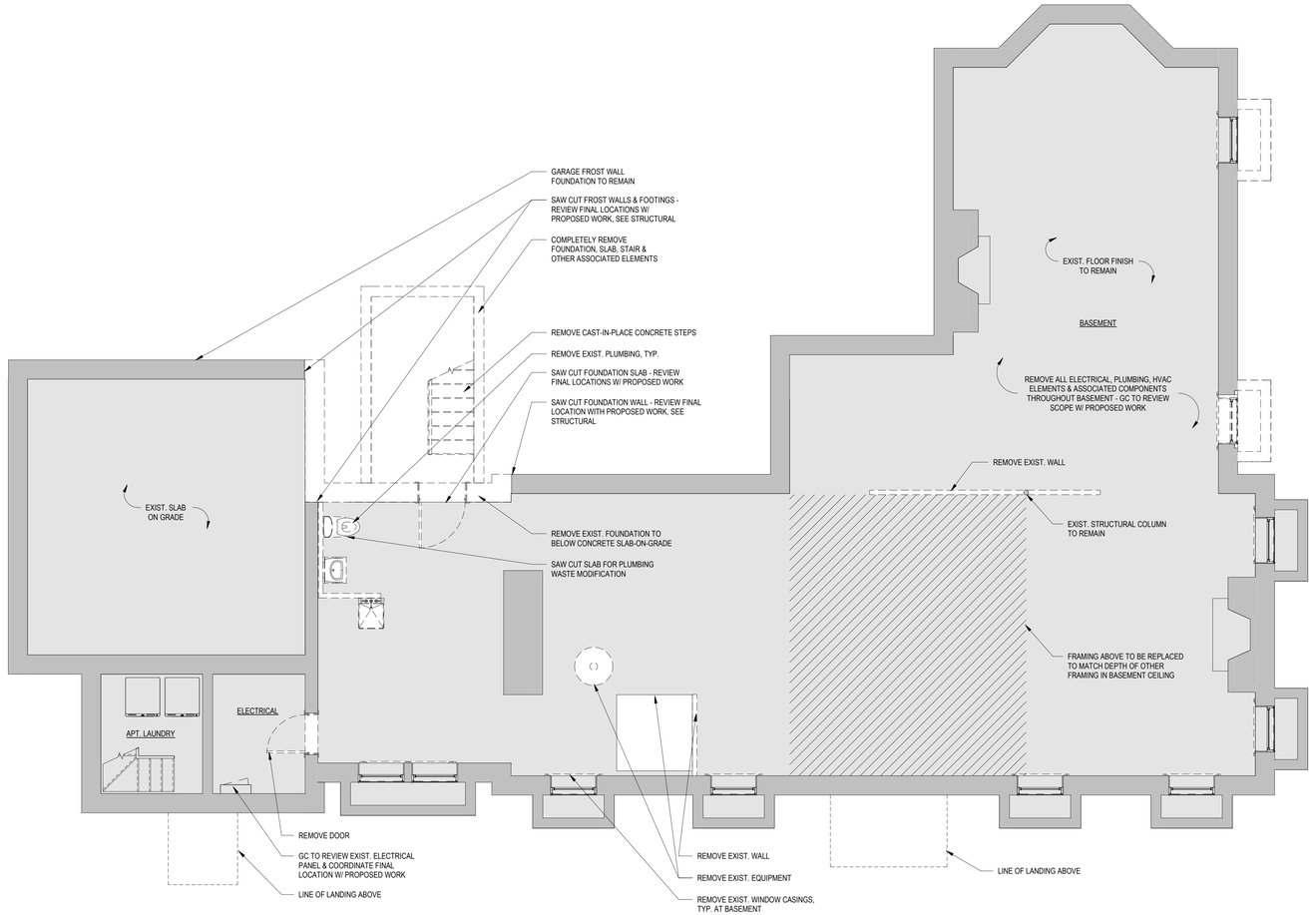
222 Third Street, Suite 3212 tel: 617 621-1455
Cambridge, MA 02142 fax 617 621-1477
www.LDa-Architects.com

GENERAL DEMOLITION NOTES

1. TAKE CARE TO PROTECT AREAS OUTSIDE THE SCOPE OF WORK FROM DAMAGE OR CONTAMINATION BY CONSTRUCTION DUST & DEBRIS

DEMOLITION KEY

- EXISTING WALLS TO REMAIN
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED



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ISSUANCE:
BZA SUBMISSION SET

REVISION:

DATE: 08/18/2017
SCALE: 1/4" = 1'-0"
DRAWN: VO
CHECKED: TJKS

SHEET INFO:
BASEMENT DEMO PLAN

D100

GENERAL DEMOLITION NOTES

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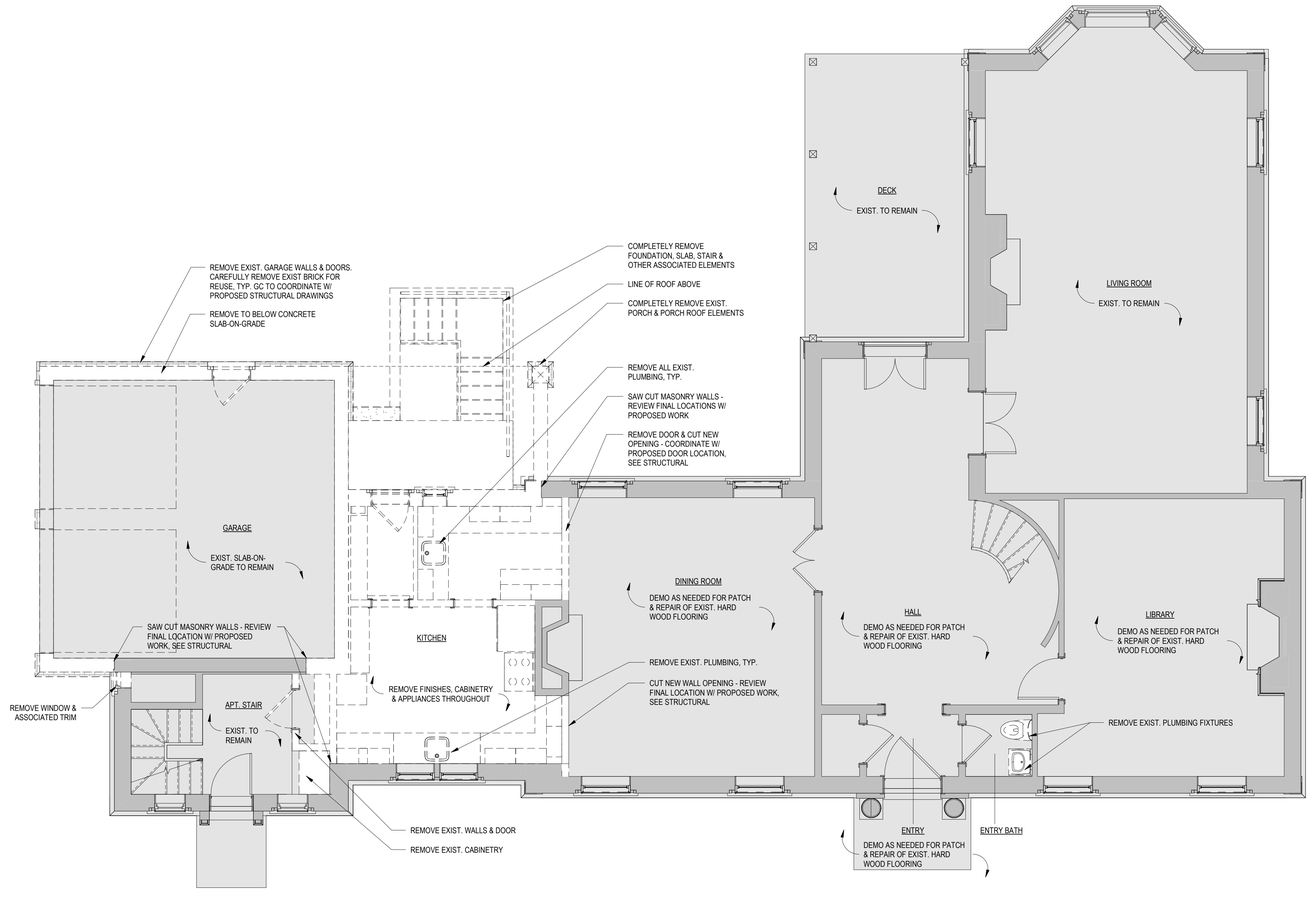

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SHEET INFO:
FIRST FLOOR DEMO PLAN

D101

GENERAL DEMOLITION NOTES

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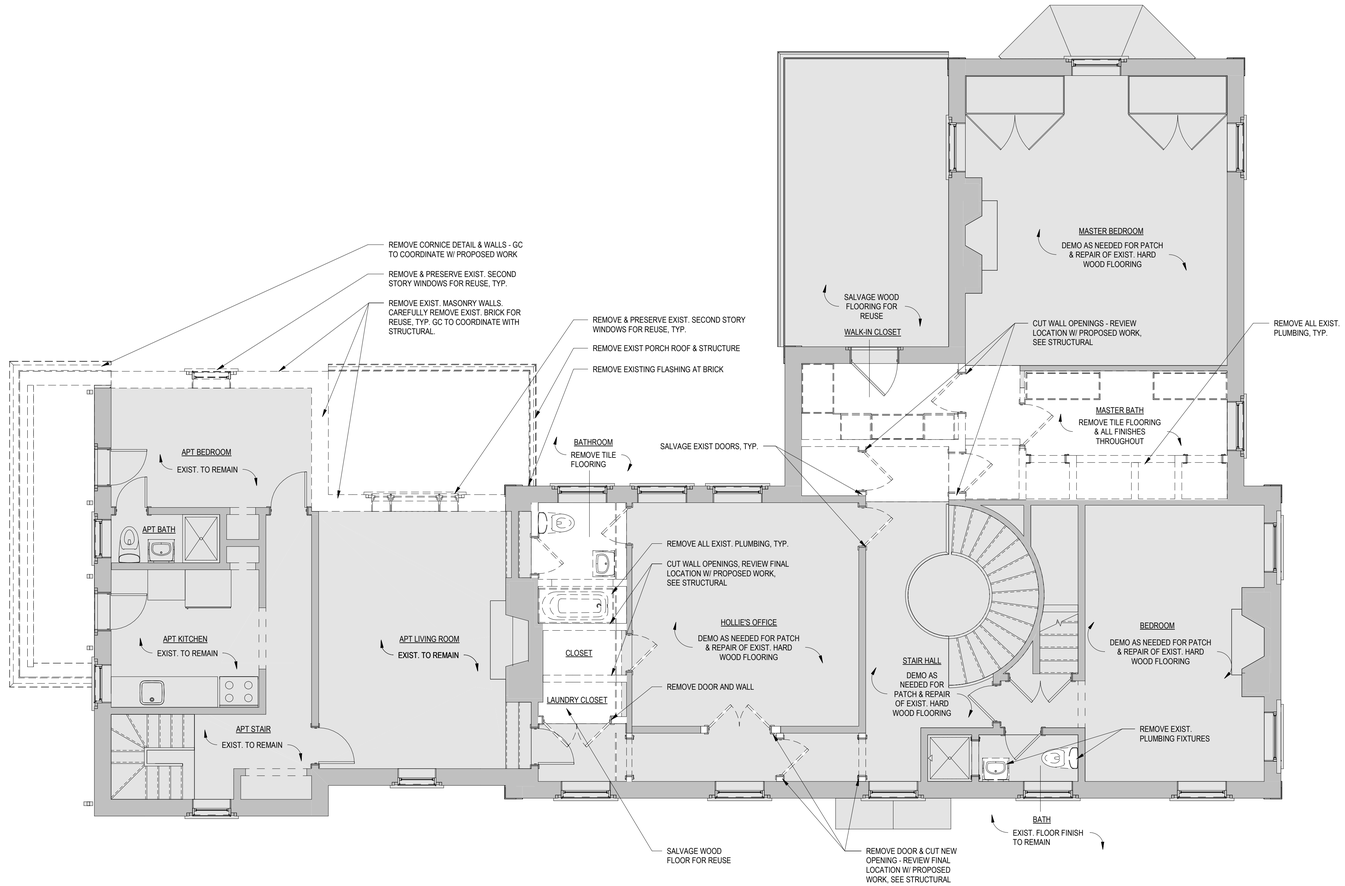

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SHEET INFO:
SECOND FLOOR DEMO PLAN

D102

HATCH KEY

- EXISTING WALL TO REMAIN
- EXISTING FINISH TO REMAIN
- NEW CONSTRUCTION
- INSULATED FURRING CONSTRUCTION

GENERAL FLOOR PLAN NOTES

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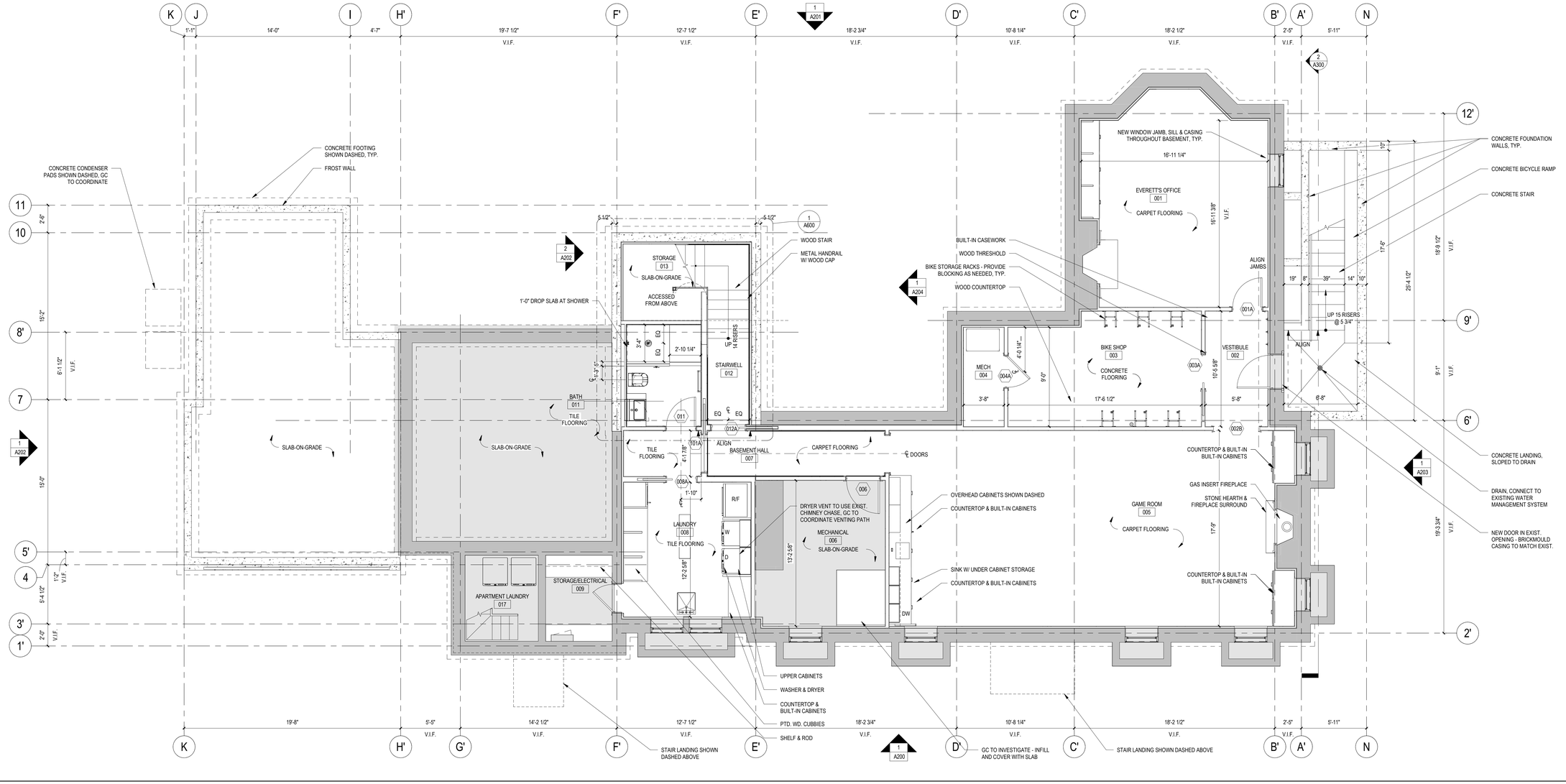
9. SEE ROOF PLAN FOR ROOF INFORMATION.
10. SEE DOOR SCHEDULE FOR DOOR INFORMATION.
11. SEE WINDOW SCHEDULE FOR WINDOW INFORMATION.



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BASEMENT PLAN

A100

HATCH KEY

- EXISTING WALL TO REMAIN
- EXISTING FINISH TO REMAIN
- NEW CONSTRUCTION
- INSULATED WALL CONSTRUCTION
- GARAGE SEPARATION WALL

GENERAL FLOOR PLAN NOTES

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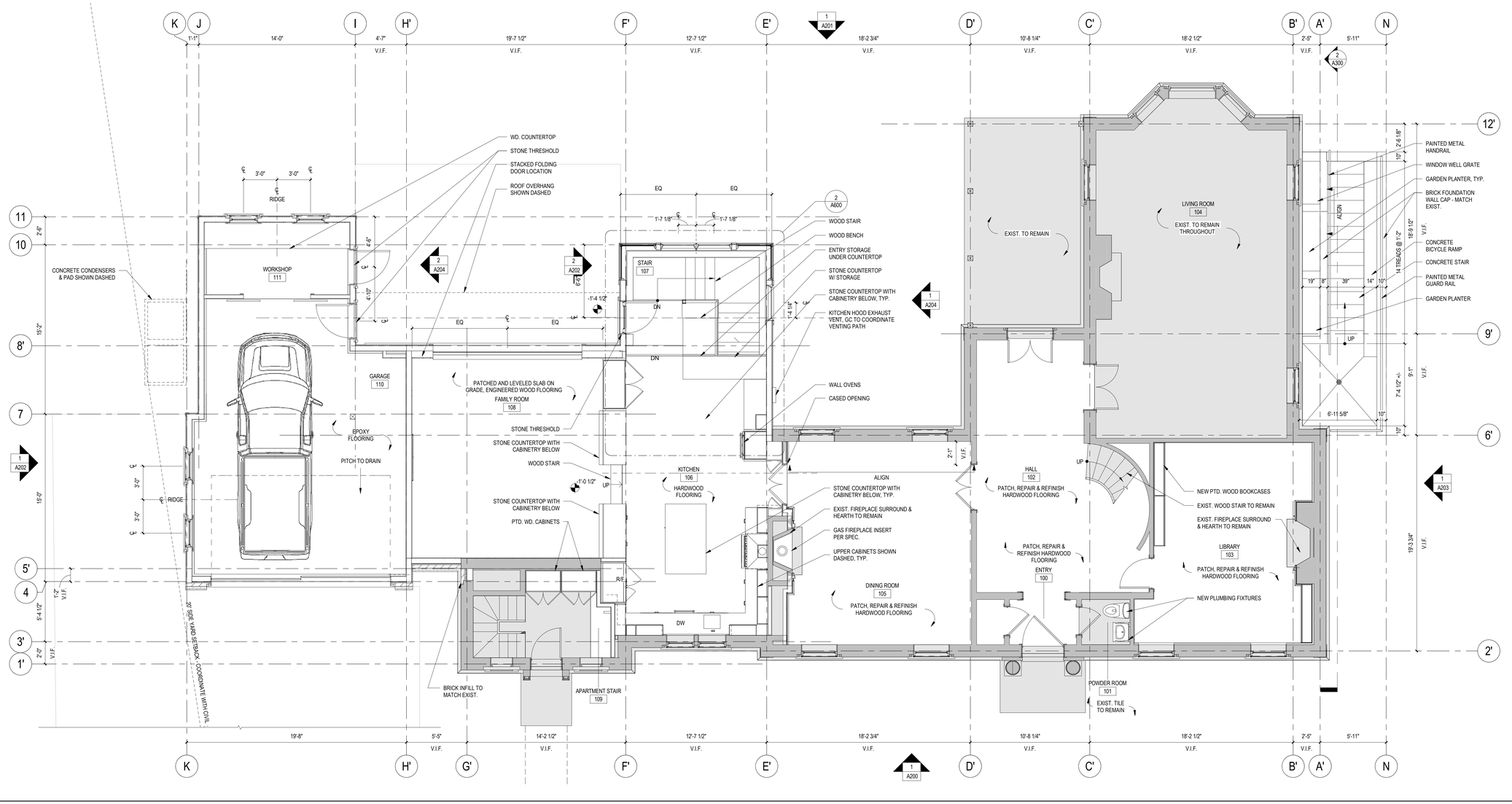

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FIRST FLOOR PLAN

A101

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- NEW CONSTRUCTION
- INSULATED WALL CONSTRUCTION
- GARAGE SEPARATION WALL

GENERAL FLOOR PLAN NOTES

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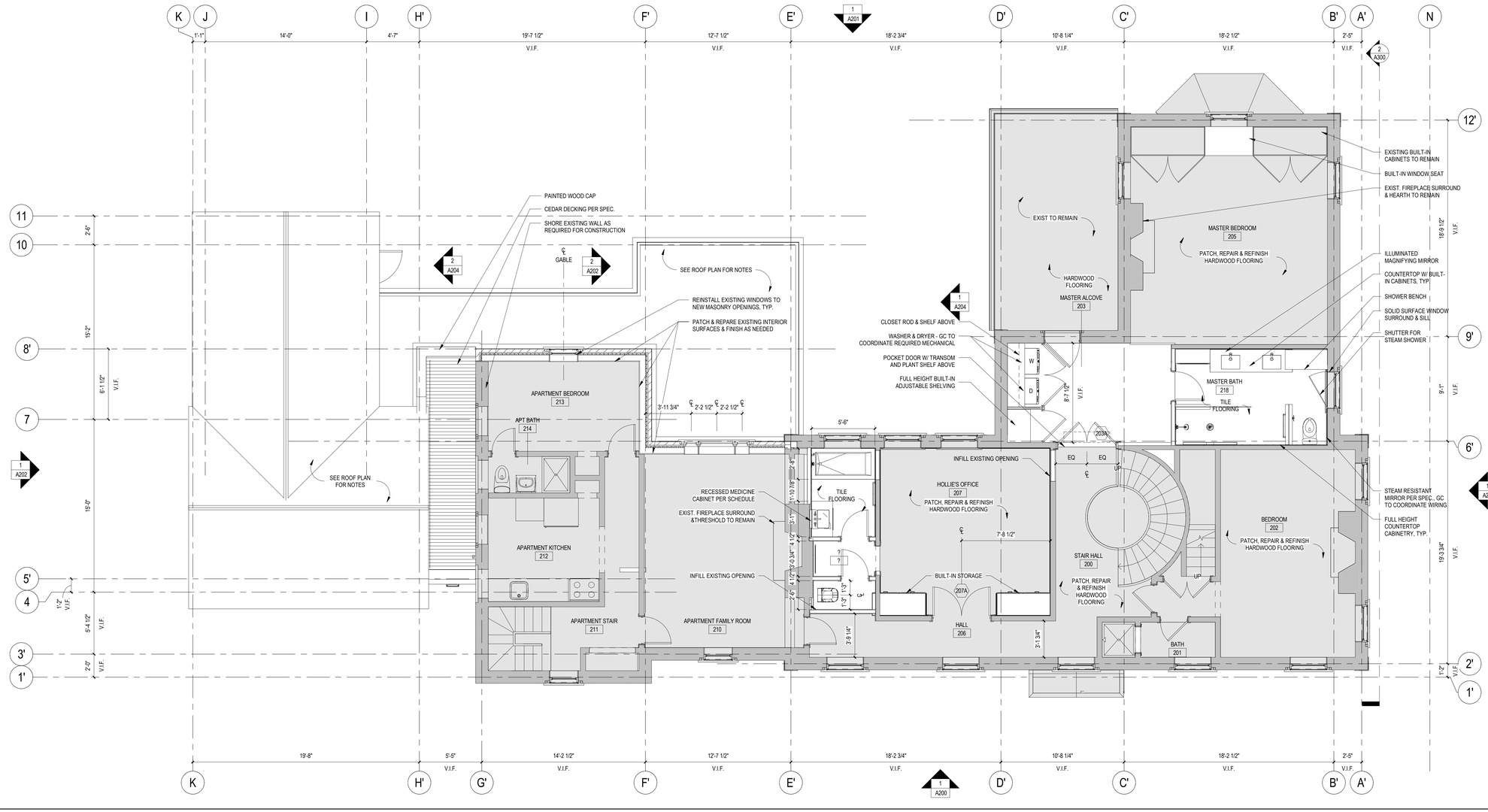

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SHEET INFO:
SECOND FLOOR PLAN

A102

GENERAL ELEVATION NOTES

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3. PROVIDE ROUGH OPENINGS PER WINDOW AND DOOR MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OR DETAILED OTHERWISE.
4. SEE SHEET G100 FOR WINDOW TYPE ELEVATIONS.
5. SEE ROOF PLAN FOR ROOF NOTES, GUTTER & DOWNSPOUT INFORMATION.

HATCH KEY

- NEW CONCRETE CONSTRUCTION
- EXISTING FINISH TO REMAIN
- EXISTING WALL TO REMAIN

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

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SHEET INFO:
EXTERIOR ELEVATIONS - NORTH

A200

GENERAL ELEVATION NOTES

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HATCH KEY

- NEW CONCRETE CONSTRUCTION
- EXISTING FINISH TO REMAIN
- EXISTING WALL TO REMAIN

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

LDa
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REVISION:

DATE: 08/18/2017
SCALE: 1/4" = 1'-0"
DRAWN: VO
CHECKED: TJ/KS

SHEET INFO:
EXTERIOR ELEVATIONS - SOUTH

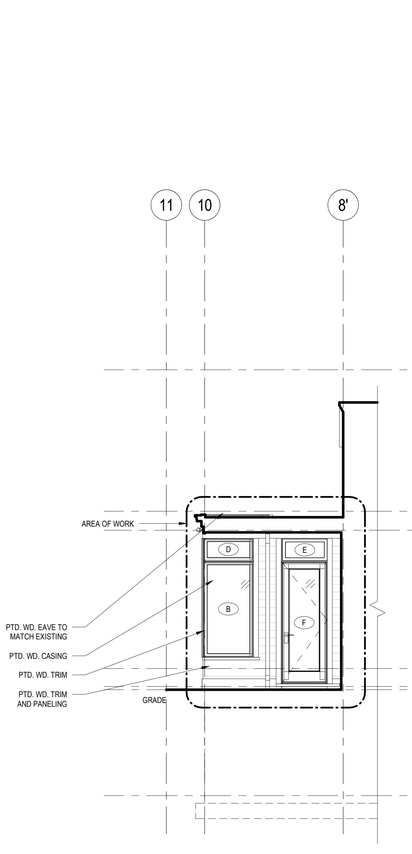
A201

GENERAL ELEVATION NOTES

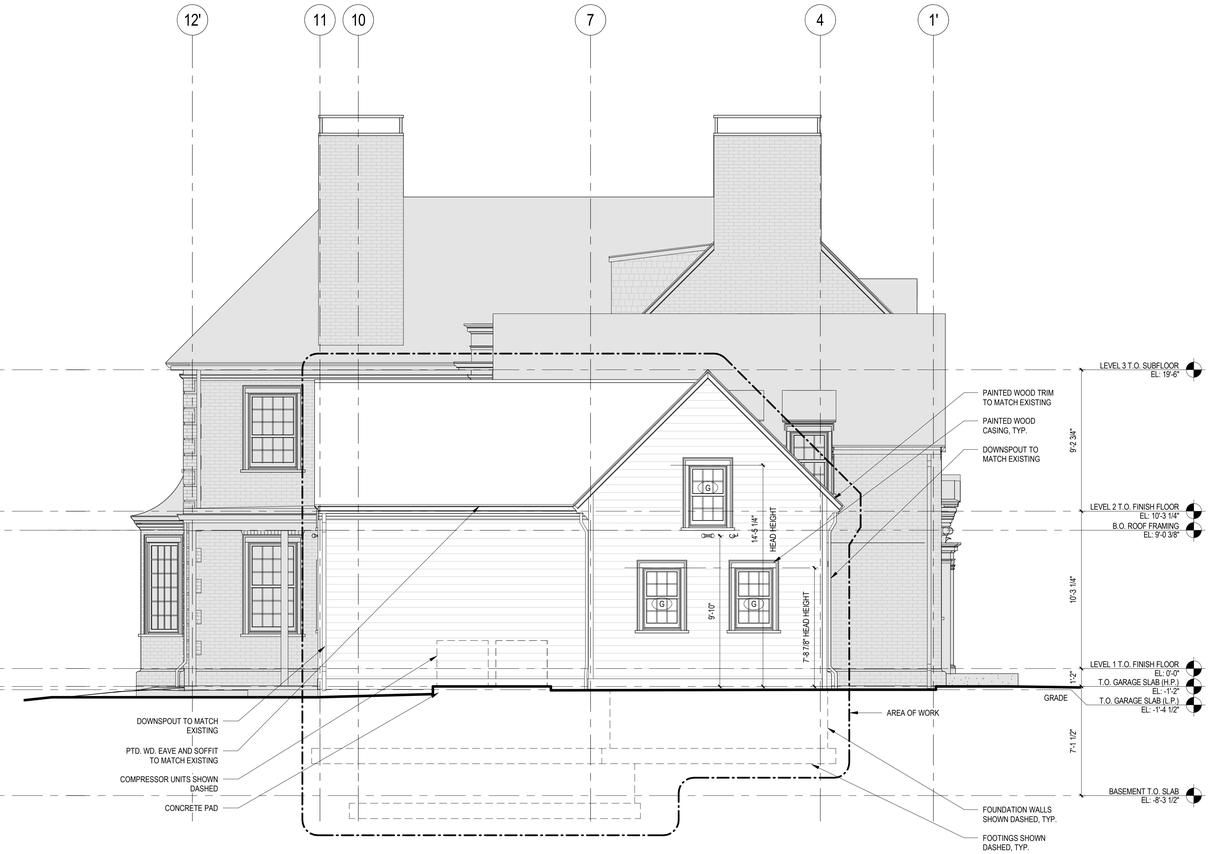
1. GRID AND GRID DIMENSIONS ARE TO FACE OF FOUNDATION, EXTERIOR FACE OF FRAMING OR AS NOTED.
2. EXTERIOR DIMENSIONS ARE TO FACE OF FRAMING AND CENTERLINE OF OPENINGS OR AS NOTED.
3. PROVIDE ROUGH OPENINGS PER WINDOW AND DOOR MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OR DETAILED OTHERWISE.
4. SEE SHEET G100 FOR WINDOW TYPE ELEVATIONS.
5. SEE ROOF PLAN FOR ROOF NOTES, GUTTER & DOWNSPOUT INFORMATION.

HATCH KEY

- NEW CONCRETE CONSTRUCTION
- EXISTING FINISH TO REMAIN
- EXISTING WALL TO REMAIN



2 KITCHEN ELEVATION - EAST
SCALE: 1/4" = 1'-0"



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

LDa
ARCHITECTURE & INTERIORS

Briggs Residence

P30074

148 Coolidge Hill
Cambridge, MA 02138

LDa Architecture & Interiors, LLP
222 Third Street, Suite 3212
Cambridge, MA 02142
617 621-1455 fax 617 621-1477
www.LDa-Architects.com

ISSUANCE:
BZA SUBMISSION SET

REVISION:

DATE: 08/18/2017
SCALE: 1/4" = 1'-0"
DRAWN: VO
CHECKED: TJ/KS

SHEET INFO:
EXTERIOR ELEVATIONS -EAST

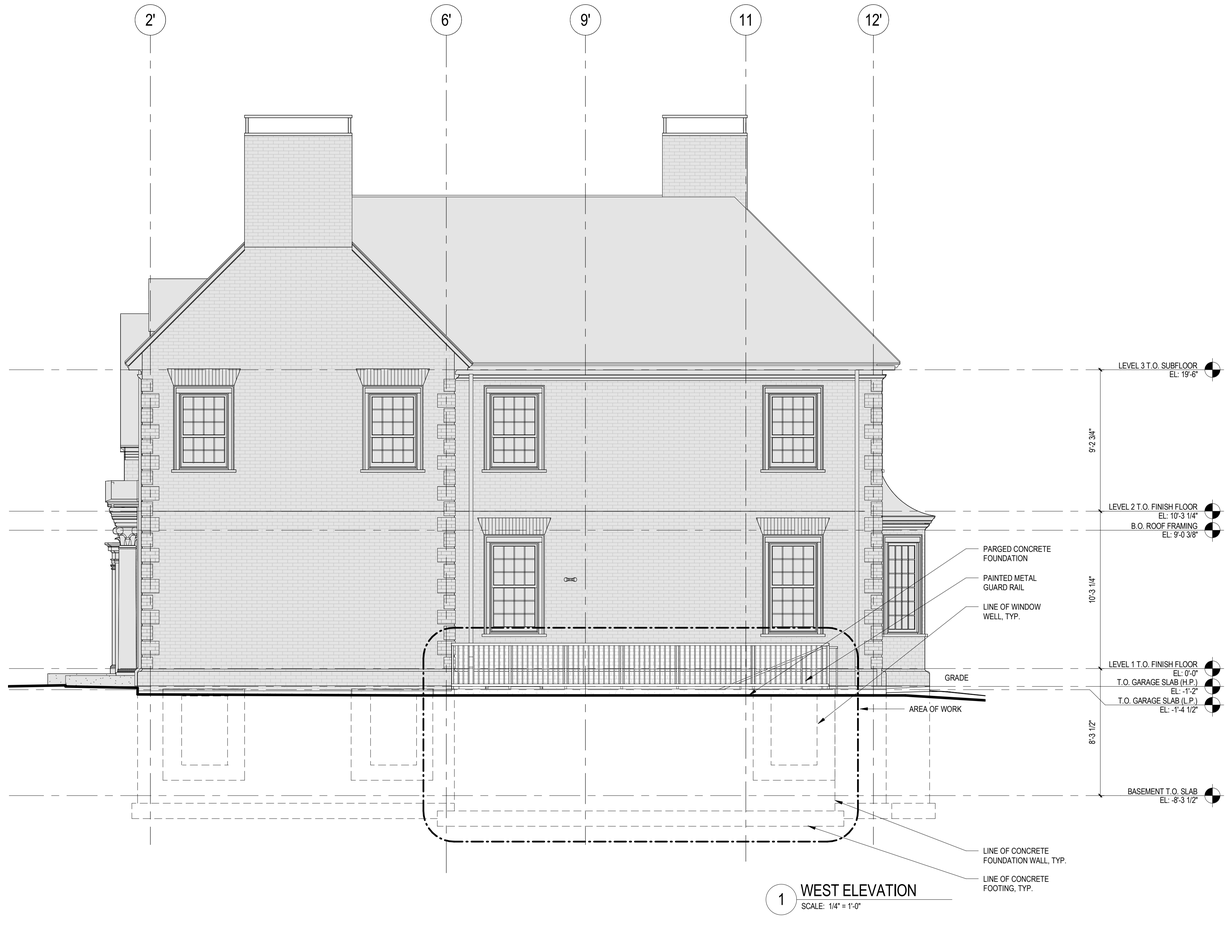
A202

GENERAL ELEVATION NOTES

1. GRID AND GRID DIMENSIONS ARE TO FACE OF FOUNDATION, EXTERIOR FACE OF FRAMING OR AS NOTED.
2. EXTERIOR DIMENSIONS ARE TO FACE OF FRAMING AND CENTERLINE OF OPENINGS OR AS NOTED.
3. PROVIDE ROUGH OPENINGS PER WINDOW AND DOOR MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OR DETAILED OTHERWISE.
4. SEE SHEET G100 FOR WINDOW TYPE ELEVATIONS.
5. SEE ROOF PLAN FOR ROOF NOTES, GUTTER & DOWNSPOUT INFORMATION.

HATCH KEY

- NEW CONCRETE CONSTRUCTION
- EXISTING FINISH TO REMAIN
- EXISTING WALL TO REMAIN



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

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Briggs Residence

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Cambridge, MA 02138

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Cambridge, MA 02142
617 621-1455 fax 617 621-1477
www.LDa-Architects.com

ISSUANCE:
BZA SUBMISSION SET

REVISION:

DATE: 08/18/2017
SCALE: 1/4" = 1'-0"
DRAWN: VO
CHECKED: TJ/KS

SHEET INFO:
EXTERIOR ELEVATIONS - WEST

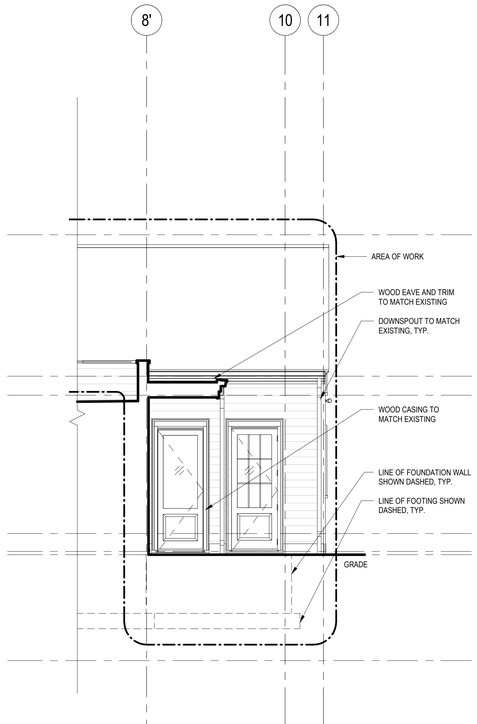
A203

GENERAL ELEVATION NOTES

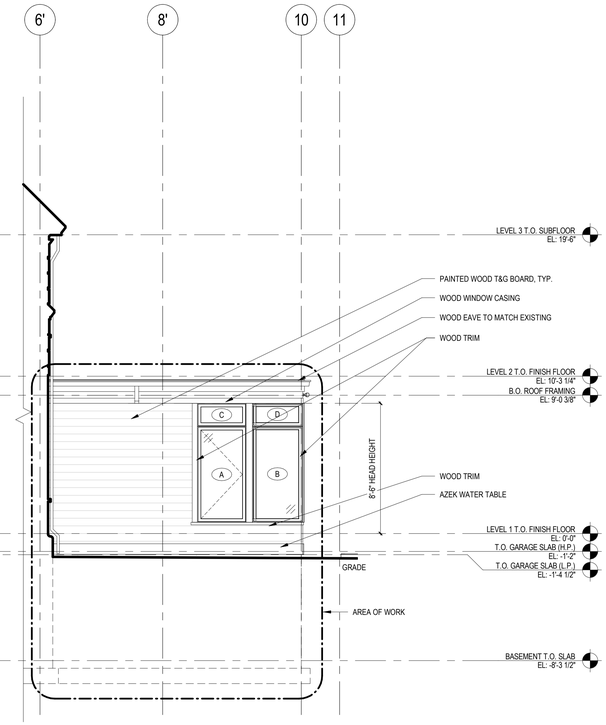
1. GRID AND GRID DIMENSIONS ARE TO FACE OF FOUNDATION, EXTERIOR FACE OF FRAMING OR AS NOTED.
2. EXTERIOR DIMENSIONS ARE TO FACE OF FRAMING AND CENTERLINE OF OPENINGS OR AS NOTED.
3. PROVIDE ROUGH OPENINGS PER WINDOW AND DOOR MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OR DETAILED OTHERWISE.
4. SEE SHEET G100 FOR WINDOW TYPE ELEVATIONS.
5. SEE ROOF PLAN FOR ROOF NOTES, GUTTER & DOWNSPOUT INFORMATION.

HATCH KEY

- EXISTING WALL TO REMAIN
- EXISTING FINISH TO REMAIN
- NEW CONSTRUCTION
- INSULATED WALL CONSTRUCTION
- GARAGE SEPARATION WALL



2 WORKSHOP ELEVATION - WEST
SCALE: 1/4" = 1'-0"



1 KITCHEN ELEVATION - WEST
SCALE: 1/4" = 1'-0"

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www.LDa-Architects.com

ISSUANCE:
BZA SUBMISSION SET

REVISION:

DATE: 08/18/2017
SCALE: 1/4" = 1'-0"
DRAWN: VO
CHECKED: TJ/KS

SHEET INFO:
EXTERIOR ELEVATIONS -WEST

A204

EXISTING NORTH ELEVATION

EXISTING NORTH ELEVATION

EXISTING NORTH ELEVATION DETAIL

EXISTING WEST ELEVATION DETAIL

PROPOSED NORTH ELEVATION

PROPOSED NORTH ELEVATION

PROPOSED NORTH ELEVATION DETAIL

PROPOSED WEST ELEVATION DETAIL

LDa
ARCHITECTURE & INTERIORS

Briggs Residence

P0074

148 Coolidge Hill
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222 Third Street, Suite 3212
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617 621-1455 fax 617 621-1477
www.LDa-Architects.com

ISSUANCE:
BZA SUBMISSION SET

REVISION:

DATE: 08/18/2017
SCALE: 12" = 1'-0"
DRAWN: VO
CHECKED: TJKS

SHEET INFO:
PERSPECTIVES AT PROPOSED EXTERIOR STAIR

A700

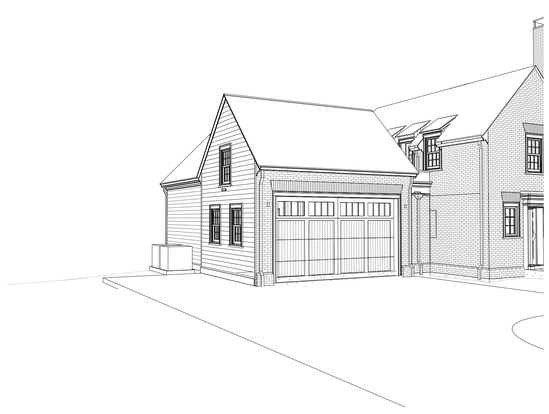
EXISTING NORTH GARAGE VIEW

EXISTING NORTHEAST GARAGE VIEW

EXISTING SOUTH GARAGE VIEW

EXISTING SOUTH ELEVATION

PROPOSED NORTH GARAGE VIEW



PROPOSED NORTHEAST GARAGE VIEW

PROPOSED SOUTH GARAGE VIEW

PROPOSED SOUTH ELEVATION

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Briggs Residence

P9074

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Cambridge, MA 02138

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www.LDa-Architects.com

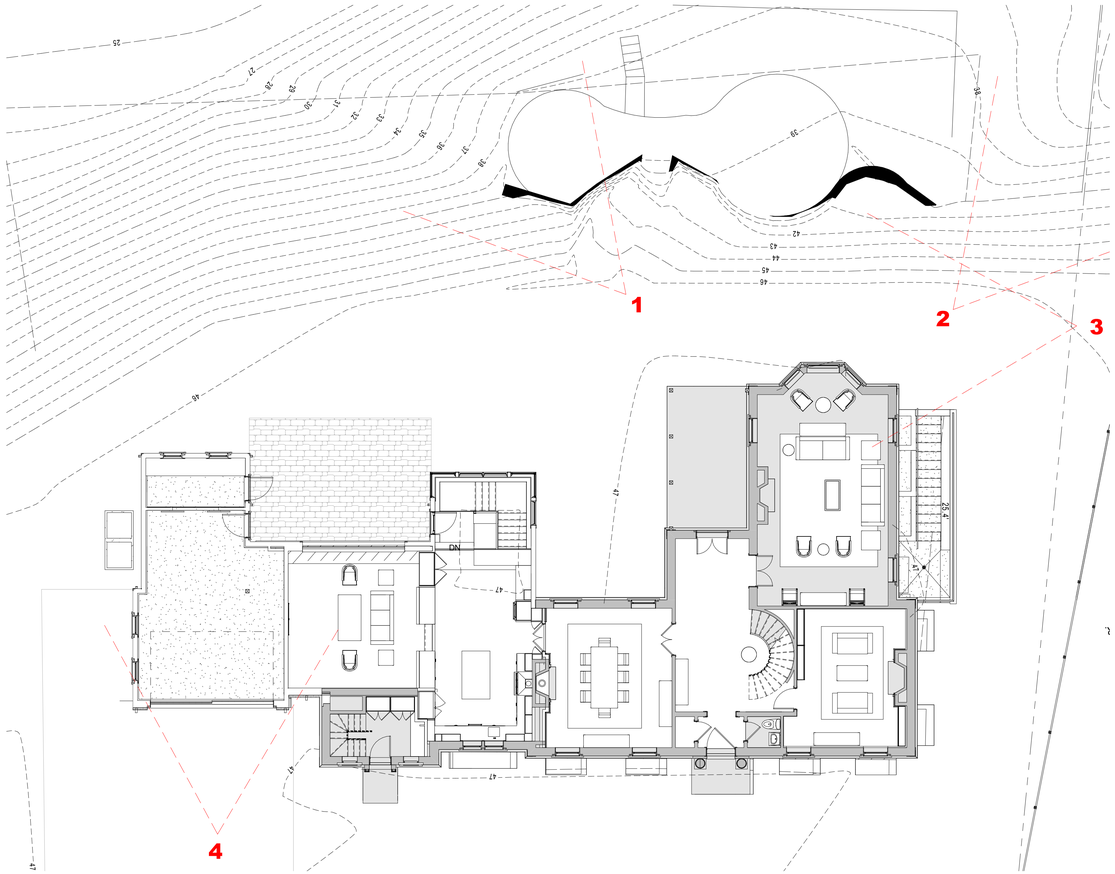
ISSUANCE:
BZA SUBMISSION SET

REVISION:

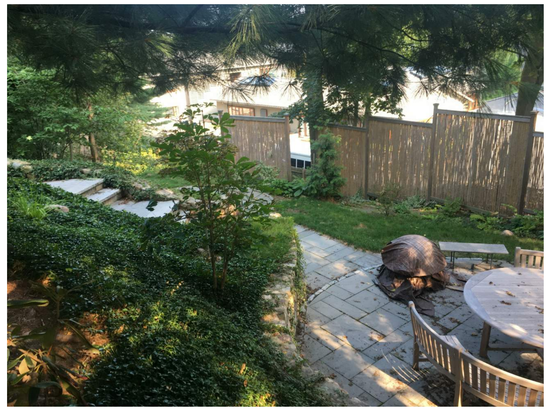
DATE: 08/18/2017
SCALE:
DRAWN: VO
CHECKED: TJKS

SHEET INFO:
PERSPECTIVES AT PROPOSED ADDITION

A701



PROPOSED NORTH GARAGE VIEW



1 - EXISTING REAR PATIO

2 - EXISTING REAR SLOPE

3 - EXISTING REAR YARD

4 - EXISTING DRIVEWAY

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www.LDa-Architects.com

ISSUANCE:
BZA SUBMISSION SET

REVISION:

DATE: 08/18/2017
SCALE: 1/8" = 1'-0"
DRAWN: VO
CHECKED: TJKS

SHEET INFO:
VIEWS OF PROPERTY SLOPE

A702

ZONING INFORMATION
RESIDENTIAL A-1 DISTRICT
SOURCE CITY OF CAMBRIDGE

ITEMS	REQUIRED
MIN LOT AREA	8,000 S.F.
MIN LOT WIDTH	80'
MIN FRONT YARD	25'
MIN SIDE YARD	15' (SUM OF 35')
MIN REAR YARD	25'
MAX BUILDING HEIGHT	35'

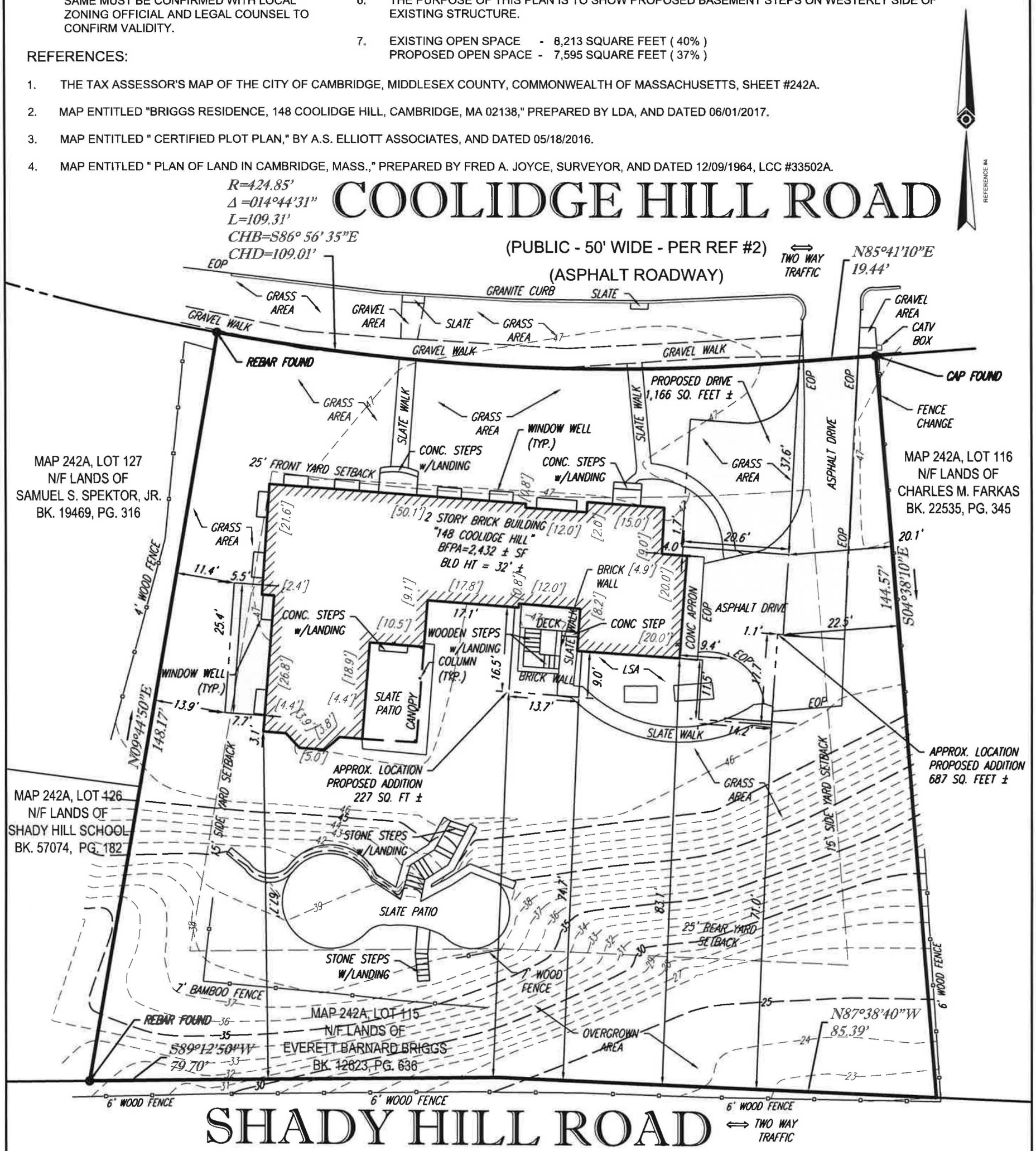
NOTE: ZONING CRITERIA IDENTIFIED HEREON ARE BASED UPON PRELIMINARY RESEARCH AND PRESENTED FOR REFERENCE ONLY. SAME MUST BE CONFIRMED WITH LOCAL ZONING OFFICIAL AND LEGAL COUNSEL TO CONFIRM VALIDITY.

NOTES:

1. PROPERTY KNOWN AS LOT 115 AS SHOWN ON THE CITY OF CAMBRIDGE, MIDDLESEX COUNTY, COMMONWEALTH OF MASSACHUSETTS; MAP NO. 242A.
2. AREA = 20,715 SQUARE FEET OR 0.476 ACRES
3. THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
4. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
5. THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.
6. THE PURPOSE OF THIS PLAN IS TO SHOW PROPOSED BASEMENT STEPS ON WESTERLY SIDE OF EXISTING STRUCTURE.
7. EXISTING OPEN SPACE - 8,213 SQUARE FEET (40%)
   PROPOSED OPEN SPACE - 7,595 SQUARE FEET (37%)

REFERENCES:

1. THE TAX ASSESSOR'S MAP OF THE CITY OF CAMBRIDGE, MIDDLESEX COUNTY, COMMONWEALTH OF MASSACHUSETTS, SHEET #242A.
2. MAP ENTITLED "BRIGGS RESIDENCE, 148 COOLIDGE HILL, CAMBRIDGE, MA 02138," PREPARED BY LDA, AND DATED 06/01/2017.
3. MAP ENTITLED " CERTIFIED PLOT PLAN," BY A.S. ELLIOTT ASSOCIATES, AND DATED 05/18/2016.
4. MAP ENTITLED " PLAN OF LAND IN CAMBRIDGE, MASS.," PREPARED BY FRED A. JOYCE, SURVEYOR, AND DATED 12/09/1964, LCC #33502A.



GRAPHIC SCALE
0 20 30 40
(IN FEET)
1 inch = 20 ft.

THIS SURVEY HAS BEEN PERFORMED IN THE FIELD UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, BELIEF, AND PROFESSIONAL OPINION, THIS SURVEY HAS BEEN PERFORMED IN ACCORDANCE WITH CURRENTLY ACCEPTED ACCURACY STANDARDS.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE SEAL

COMMONWEALTH OF MASSACHUSETTS
GERRY L. HOLDRIGHT
NO. 49211
REGISTERED
PROFESSIONAL LAND SURVEYOR

GERRY L. HOLDRIGHT, PLS
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211
DATE

FIELD DATE	FIELD BOOK NO.	FIELD BOOK PG.	FIELD CREW	DRAWN:
06/17/17	17-06MA	38	TM	J.M.R.

CERTIFIED PLOT PLAN
BRIGGS RESIDENCE
148 COOLIDGE HILL ROAD
MAP 242A, LOT 115
CITY OF CAMBRIDGE, MIDDLESEX COUNTY
COMMONWEALTH OF MASSACHUSETTS

CONTROL POINT ASSOCIATES, INC.
75 FEDERAL STREET, SUITE 620
BOSTON, MA 02110
(857) 327-8134
SOUTHBOROUGH, MA 508.948.3000

REVIEWED:	APPROVED:	DATE	SCALE	FILE NO.	DWG. NO.
J.M.R.	G.L.H.	08/03/17	1"=20'	06-170029	1 OF 1

Name: Susie Mees Longfield

Address: 106 Coolidge Hill
Cambridge, MA 02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed: S Mees Longfield

Susie Mees Longfield

Print Name:

Date: 7/19/17

Name: Michael Higgins

Address: 110 Coolidge Hill
Cambridge, MA
02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed: Michael Higgins

Michael Higgins

Print Name:

Date: 7/9/17

Name: Holly Browning

Address: 137 Coolidge Hill
Cambridge, MA. 02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed:

Holly B Browning

Print Name:

Date:

Name: Chester G. Affleck

Address: 141 Coolidge Hill
Cambridge

Attn: Cambridge Board of Zoning Appeals

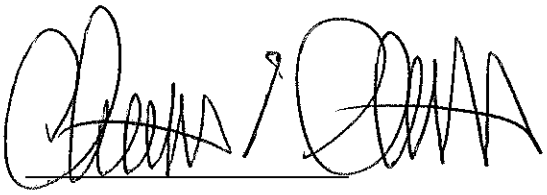
Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed:



Print Name:

Date:

Name: Sam SPEKTOR

Address: 144 Coolidge Hill

Cambridge MA 02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed:

Print Name: Sam SPEKTOR

Date:

Name: CHARLES FARKAS

Address: 154 COOLIDGE HILL
CAMBRIDGE, MA 02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed:

Print Name: CHARLES FARKAS

Date: 7/9/17

Name: RICHARD HARRIMAN

Address: 162 COOLIDGE HILL
CAMBRIDGE, MA 02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed:

RICHARD HARRIMAN

Print Name:

Date:

Name: Katherine Chi

Address: 170 Coolidge Hill
Cambridge, MA, 02138

Attn: Cambridge Board of Zoning Appeals

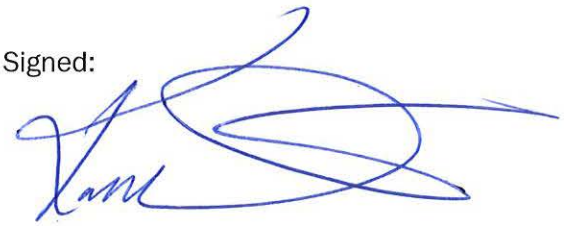
Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed:



Print Name: Katherine Chi

Date: July 19, 2017

Name: Porter Gifford

Address: 15 Coolidge Hill Rd
Camb. MA 02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed:

Print Name: Porter Gifford

Date: 7/19/17

Name: Nora MacDonald

Address: 45 Coolidge Hill Rd.
Cambridge, MA 02138

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

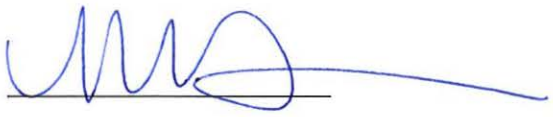
As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

As a biking enthusiasts, we fully support this update!

Signed:



Print Name: Nora MacDonald

Date: 7/19/17

Name: SHADY HILL SCHOOL

Address: 178 COOLIDGE HILL
(44 COOLIDGE AVE)
(62 COOLIDGE AVE)

Attn: Cambridge Board of Zoning Appeals

Re: 148 Coolidge Hill – Variance Application

As a homeowner in the neighborhood in and around the 148 Coolidge Hill property, I have met with the applicant to discuss the proposed plans for the property and have seen the plan which is before the Board of Zoning Appeals for zoning relief.

The proposed plan was explained to us and any questions or concerns have been addressed to our satisfaction. Please consider us in support of the application and plan as submitted by the applicant.

Additional Comments

Signed: Maureen Nunez
CFO/COO

MAUREEN NUNEZ

Print Name:

Date: 7/20/2017

Briggs Residence

P30074.00

148 Coolidge Hill
Cambridge, MA

Board of Zoning Appeals
Specifications
08-21-2017

LDa
ARCHITECTURE & INTERIORS

Table of Contents

Project Description:

The Briggs Residence project (The Project) is an addition/renovation of a 4 bedroom single family residence of 4,500 sf located at 148 Coolidge Hill Road in Cambridge, MA. The building is fully finished conventional wood frame residential construction with brick veneer, reinforced concrete basement and crawlspace foundations and includes conventional MEP systems. The scope of work includes but is not limited to selective demolition of the existing building(s), site clearing and site work, public/private utilities connections, excavation, trenching, backfill and rough and finish grading.

The Project is designed to meet the compliance approach outlined in the 9th Edition MA Residential Code 780 CMR 51.00 Proposed MA Amendments to the IRC 2015, Section N1101.1 and 780 CMR 115 AA, IECC 2009 Stretch Energy Code.

The Project's anticipated start of construction is 11-01-2017, and is to be completed and turned over to the owner by 09-01-2018.

Attachments

Permit Set Architectural & Structural Drawings
Window Schedule (On Drawings)
Door Schedule (On Drawings)

01 General Requirements

01.1 General

01.1.1 Construction specifications; the Construction Specifications are to be read in conjunction with the Construction Drawings. The Contractor is responsible for correlating between drawings and specifications. Discrepancies between drawings and specifications are to be brought to the Architects attention prior to procurement or fabrication of material.

01.1.2 Construction drawings; the Construction Drawings are to be reviewed individually and as a set. Discrepancies between drawings are to be brought to the Architects attention prior to procurement or fabrication of material.

01.1.3 Provide; the use of the word "provide" in this specification is taken to mean provide and install.

01.1.4 Or approved equal; the use of the words "or approved equal" in this specification is taken to mean that products will be as specified unless substitutions are approved prior to bid. Bids or bid qualifications based on unapproved substitutions will not be allowed. Substitutions presented before or after the bid must conform to the requirements herein for substitutions, including accurate representations of performance, quality and cost.

01.2 General Conditions

01.2.1 Construction schedule; the Contractor is to provide a written construction schedule in a format approved by the Architect. The schedule is to include deadlines for submittal review, finalizing open design issues and for final selection of finish materials, fixtures, appliances and equipment.

01.2.2 Insurance; the Contractor is to carry a minimum of $1,000,000 general liability insurance and workman's compensation insurance for persons employed at the site. Subcontractors are to carry a minimum of $500,000 general liability insurance and workman's compensation insurance for persons employed at the site. Submit applicable insurance certificates as required by the building code, CMR 780.

01.2.3 Site supervision; the Contractor is to provide necessary on-site supervision of trades to execute the scope of work described in the Construction Documents. Site supervision is to be performed by a licensed Construction Supervisor as required by the building code, 780 CMR.

01.2.4 Quality control; the Contractor is to complete the work with the quality and craftsmanship generally associated with high-end residential construction.

01.2.5 Utilities cost; the Contractor is responsible for temporary and permanent utilities costs during construction.

01.2.6 Shoring and bracing; the Contractor is responsible for shoring, bracing and foundation underpinning design, installation and maintenance as required for demolition, excavation and/or new construction. Contractor is to utilize a Massachusetts licensed engineer for design of temporary shoring and bracing.

01.2.7 Material and labor; the Contractor is responsible for providing materials and labor to ensure a complete, finished and operational building, in accordance with the drawings and specifications.

01.2.8 General conditions costs; the Contractor is to include general conditions and construction costs such as rubbish disposal, telephone, fax, and delivery costs.

01.2.9 Winter conditions; the Contractor is to make reasonable cost and schedule allowances for construction in winter conditions. The Contractor is to summarize allowances included in the contract price.

01.2.10 Snow removal; the Contractor is to provide snow removal and sanding for the duration of construction as required for continuing construction activities and as required to maintain public walkways at all times. Ice melt products must be approved prior to use.

01.2.11 Toilet facilities; the Contractor is responsible for providing and maintaining on-site toilet facilities.

01.2.12 Site security; the Contractor is responsible for securing the premises for the duration of construction including temporary fencing.

01.2.13 Final cleaning; the Contractor is responsible for providing a professional cleaning contractor to completely clean areas of renovation (and other areas effected by construction) at the end of construction and prior to the Architect's punch list survey.

01.2.14 Temporary protection; protect in-place construction and stored materials from the weather, including wind, hail, rain and snow. Any material that is allowed to get wet,

whether stored or installed, is to be replaced at Architects discretion and at the Contractor's expense.

01.2.15 Subcontractors and Owner's vendors; the Contractor is responsible for coordinating the work and general conditions requirements for subcontractors and vendors, including Owner's vendors. See Division 1, Owner's Obligations for applicable Owner's Vendors.

01.2.16 Erosion, dust and noise control; the Contractor is to provide erosion, dust and noise control for the duration of construction.

01.2.17 Demolition and construction debris; the Contractor is to remove and properly dispose of demolition and construction debris on a regular interval so that debris does not collect on site.

01.2.18 Other debris; food and beverage debris must be collected separately from demolition and construction debris and removed from the site daily.

01.2.19 Notice to neighbors; the Contractor is to give initial notice of construction to abutting property owners and occupants. Notice is to include Contractor's superintendent contact information, emergency contact information, and work schedule. The Contractor is to give periodic notice to abutting property owners and occupants when construction activities will produce nuisance including service interruptions, excessive noise, dust, large deliveries or public right-of-way obstructions.

01.3 Contractor's Requisitions and Changes in the Work

01.3.1 Requisition; the Contractor is to submit a schedule of values and project payment schedule with the first requisition. Requisitions are to be submitted monthly to the Architect and the Owner for review and approval.

01.3.2 Release or Waiver of Liens; the contractor is to submit with each requisition a release of liens for each contractor, subcontractor, supplier, vendor and others who may have lien rights against the owner's property.

01.3.3 Change Orders; the contractor is to submit change orders to the Architect for review and approval. Change Orders included in the Contractor's requisition without prior approval from the Architect and the Owner will not be considered.

01.3.4 Changes in the Work; the Contractor is to submit cost and schedule impact documentation related to changes in the work before the work is executed. Submit detailed accounting of scope additions and deductions to the Architect and the Owner for review.

01.4 Existing Conditions Coordination

01.4.1 General; It is the responsibility of the Contractor and the Contractor's sub-contractors to review existing site and building conditions, in conjunction with Construction Documents, to the extent necessary to confirm that the work can be executed without delays or additional cost.

01.5 Regulations/Permits

01.5.1 General; the Contractor is to complete the work in compliance with zoning ordinances, building codes and laws applicable to the regulatory jurisdiction of the project, including but not limited to:

- City of Cambridge Zoning By Law.
- 780 CMR 51.00 Eighth Edition of the Massachusetts Residential Code (International Residential Code 2015).
- Stretch Energy Code, "Appendix 115 AA", Massachusetts State Building Code, 780 CMR.
- International Energy Conservation Code (IECC) 2015 as amended by Chapter 13 of 780 CMR.
- Specialized codes as applicable and as listed in the building code, CMR 780 51.00.
- Specialized codes as applicable and as listed in the building code, CMR 780.
- Massachusetts General Law.

01.5.2 Licenses, permits and inspections; the Contractor is responsible for applying for and obtaining releases, licenses, permits, and inspections required by the regulatory

jurisdiction of the project. Releases, licenses, permits, and inspections necessary for the completion, performance and approval of the work are to be obtained and paid for by the Contractor.

01.5.3 Inspections; the Contractor is responsible for initiating and coordinating inspections required by the regulatory jurisdiction of the project. The Contractor is to document such inspections.

01.5.4 As-built foundation survey; the Contractor is responsible for initiating and coordinating a certified as-built foundation survey by the Owner's surveyor sufficient to establish as-built conditions relative to the certified plot plan. The plan is to be stamped and signed by a MA licensed surveyor.

01.5.5 Work within public right-of-ways; the Contractor is responsible for obtaining permits, paying fees and arranging for police details as required for work within the public right-of-way. The Contractor is to comply with rules and requirements for such work including utilities connections, curb cuts and sidewalk and roadway repairs. Public safety is to be maintained at all times.

01.6 Hazardous Materials

01.6.1 General scope; the Owner will be responsible for abatement of known hazardous materials as identified in inspection reports provided by the Owner. The Owner will employ licensed inspectors and abatement contractors as required for complete hazardous material abatement and for follow up inspections. The Owner is to submit to the Contractor final compliance certifications following hazardous material abatement.

01.6.2 Unknown hazardous materials; the Contractor is to notify the Owner when additional materials, finishes or fixtures that may contain hazardous materials are encountered during the course of the work. The Contractor is to initiate an initial inspection by a licensed inspector to determine the nature and extent of hazardous materials and identify the scope of work required for abatement and associated costs. Hazardous material abatement activities require authorization from the Owner.

01.6.3 Lead; the Contractor is responsible for abating and containing dangerous levels of lead by removal of finishes components or fixtures or by approved containment or encapsulation methods.

01.7 Infestation

01.7.1 General scope; the Contractor is to engage pest control/exterminator services if and when signs of infestation become apparent during construction.

01.8 Submittals

01.8.1 Data submittals; submit manufacturer's data on the following:

- Division 07;
  - (a) Waterproofing and dampproofing.
  - (b) Water barriers, air barriers, vapor retarders and vapor barriers.
  - (c) Roofing and roof accessories.
- Division 08;
  - (a) Windows.
  - (b) Doors and door frames.
  - (c) Garage door and door operator.
  - (d) Key schedule.
- Division 09;
  - (a) Finishes.
- Division 10;
  - (a) Shower enclosure hardware.
- Division 11;
  - (a) Appliances.
- Division 22;
  - (a) Plumbing fixtures.
- Division 23;
  - (a) HVAC system components.

- Division 26;
  (a) Electrical devices and trim.
  (b) Electrical rough-in components.
  (c) Light fixtures and accessories.

01.8.2 Shop drawings submittals; submit shop drawings for the following:
- Division 05;
  (a) Metal fabrications.
- Division 06;
  (a) Miscellaneous millwork.
  (b) Standing and running trim.
  (c) Stair construction.
  (d) Stair balustrade.
  (e) Fabricated casework.
  (f) Fabricated countertops.
- Division 08;
  (a) Doors.
  (b) Windows.

01.8.3 Samples submittals; submit finished samples, include samples representing the full range of finish of natural materials when applicable:
- Division 04;
  (a) Veneer brick and mortar.
- Division 06;
  (a) Stone countertops and finishes.
  (b) Natural finished wood and wood veneer.
  (c) Casework finishes.
- Division 07;
  (a) Roofing flashing and gutter materials.
- Division 09;
  (a) Interior finishes.

01.8.4 Mock ups submittals; construct mock ups of the following assemblies:
- Division 04;
  (a) Brick veneer.

01.8 Substitutions

01.8.1 General; no substitutions are to be made for specified products without written approval from the Owner and the Architect.

01.8.2 Substitutions; substitutions to materials and items specified must be submitted to the Architect for review and approval. Substitution request submittals must show that the substitution is of equal or better design, quality and performance to the materials or items specified and can be installed with equal aesthetic effect and with no cost increase or delay. Any additional detailing, work or coordination related to a substitution is the contractor's responsibility. The Architect reserves the right to rely on the Contractor's representation that the substitution complies with the requirements outlined above.

01.8.3 Substitution submittal; when a substitution is proposed, the contractor is to provide sufficient information to enable the Architect to make a comparison between the specified product and the proposed product including changes in cost and schedule.

01.8.4 Owner substitutions; the Owner is entitled to make substitutions. Additions or credits in project cost and schedule are to be determined by the following process:
- Owner indicates proposed substitution.
- Contractor will provide a written proposal for changes which includes:
  (a) Contractor's cost, without markup, of material before change and after change.
  (b) Cost of labor before change and after change.
  (c) Incidental credits or expenses related to change.

(d) Tabulation of overhead and profit percentage. (Overhead and profit percentage will remain the same for changes. A credit will receive the same percentage as an addition receives.)

- The Contractor will proceed with the revised scope of work after the Architect and Owner review and approve proposals.

01.9 Testing and Inspections

01.9.1 Periodic Inspections; give reasonable notice to the Architect for the following inspections. Work found not to be in compliance with the drawings and specifications must be corrected promptly and without delaying construction progress.

- Footings and foundation formwork; for layout, masonry ledges, penetrations, reinforcing, capillary breaks.
- Framing layout; for framing efficiency, device, fixture and equipment locations.
- Insulation installation; following electrical rough-in, for continuity, thickness and coverage.
- Electrical and plumbing rough-in; for device and fixture coordination. Mark and review device and fixture locations prior to rough-in.
- Ductwork layout; for coordination with finishes and air register and grille locations. Mark and review duct, register and grille locations prior to rough-in.
- Rough grading; for surface drainage.

01.10 Commissioning

01.10.1 Systems commissioning; start up and demonstrate fully functioning systems to the satisfaction of the Architect and Owner. Systems found not to be in compliance with the drawings and specifications must be corrected promptly and without delaying construction progress.

- Fireplaces.
- Kitchen appliances.
- Laundry appliances.
- HVAC systems.
- Audiovisual systems.
- Irrigation system.
- Storm drainage systems.

01.11 Owner's Obligations

01.11.1 Site survey; the Owner will provide a property survey including property lines, easements, trees, plantings, landscape materials, exposed ledge, wetlands, buildings, curb cuts, paving, site features, site structures, buried and overhead utilities, buried drainage structures and septic systems spot grades, topographical contours and such additional information required to determine existing site conditions.

01.11.2 Plot plan; the Owner is responsible for obtaining and paying for a certified plot plan survey sufficient to establish zoning ordinance compliance, including building location on the property, paved areas, site structures and improvements, setbacks, lot coverage, curb cuts, storm water management systems, septic systems, water wells, existing grade, building area and height. The plan is to be stamped and signed by a MA licensed surveyor and must be included with the application for building permit.

01.11.3 Owner's vendors; the Owner will secure and pay vendors for the following work:

- Home Energy Rater.
- Hazardous material survey.
- Storm water management system design.
- Irrigation system design and installation.
- Landscape design.
- Security system design and installation.
- A/V system design and installation.

- Telephone systems design and installation.
- Computer networking system design and installation.
- Interior design.

01.11.4 Owner vendor permits; unless noted otherwise, the Contractor will secure required permits related to Owner's vendors work, including but not limited to storm water management system, septic systems and water well drilling.

01.11.5 Owner vendor coordination; the Contractor is to coordinate vendors' work at proper intervals in the project so as not to delay the work of other subcontractors and is to coordinate vendors' general conditions requirements.

01.12 Allowance Summary

01.12.1 Allowances; provide allowances as follows.

- Ledge Removal:	$3,000
- Kitchen Cabinetry: (Material cost only; installation cost provided in Section 6)	$85,000
- Other Cabinetry & Casework: (Material cost only; installation cost provided in Section 6)	$120,000
- Decorative Cabinetry Hardware: (Material cost only; installation cost provided in Section 6)	$2,000
- Interior Stone Countertops, Surrounds & Thresholds: (Material, template and installation cost)	$24,000
- Interior Door Hardware: (Material cost only; installation cost provided in Section 6)	$5,000
- Ceramic Wall and Floor Tile: (Material cost only; installation cost provided in Section 9)	$23,000
- Indoor/Outdoor Carpet: (Material cost only; installation cost provided in Section 9)	$13,000
- Bathroom Accessories: (Material cost only; installation cost provided in Section 6)	$4,000
- Shower Door Enclosures: (Material, template and installation cost)	$10,000
- Appliances: (Material cost only; installation cost provided in Section 6)	By Owner
- Plumbing Fixtures: (Material cost only; installation cost provided in Section 25)	$24,000
- Decorative Light Fixtures: (Material cost only; installation cost provided in Section 26)	By Owner
- A/V System: (Material and installation cost)	By Owner
Total Allowances	**$313,000**

01.12.2 Allowance pricing; material allowances are for materials, fixtures and equipment only. The Contractor is to include delivery, general conditions, labor and related material required for a complete and functional installation in the cost of the work.

01.13 Alternate Summary

01.13.1 Alternates; provide alternate scope and pricing as follows.

- Alternate 1; Wood clapboard wall cladding and wood windows/doors at family room/back stairs in lieu of copper metal wall cladding and copper clad windows/doors.

01.13.2 Alternate pricing; the Contractor is to price alternates to include general conditions, material, labor and normal overhead and profit mark up.

01.14 Project Closeout

01.14.1 Closeout submittals;

- Operation and maintenance data; provide operation and maintenance manuals to include the following:
  (a) Paint.

(b) Finishes.
(c) Appliances.
(d) Miscellaneous equipment.
(e) Plumbing fixtures.
(f) Ventilation system.
(g) Heating system.
(h) Radiant piping layout survey.
(i) Electric power, telephone and cable services.
(j) Light fixtures and lamps.
(k) Audiovisual systems.

- As-built record drawings and submittals; assemble and organize construction drawings, specifications, approved submittals, construction photographs and sketches to the Owner as a record of as-built conditions.
- Warranties; submit material and equipment warranties as specified and as offered by material and equipment manufacturers.
- Keys and keying schedule.
- Spare parts and surplus interior and exterior finish materials; inventory and store as directed by the Owner.

01.14.2 Punch list; The Contractor is to document the completion of punch list items.

01.14.3 Systems start up; the Contractor and appropriate subcontractors and manufacturer's representatives are to coordinate the proper startup of systems and instruct the Owner in the operation and routine maintenance of systems and associated equipment as required by the manufacturers' systems component warranties.

01.14.4 Occupancy permit; The Contractor is to obtain final occupancy permit and other required regulatory project closeout signoffs at the conclusion of construction.

01.15 Cutting and Patching

01.15.1 General scope; provide cutting and patching of existing and new construction as required to complete the work as specified and as shown on the drawings.

01.15.2 Concrete cutting and patching; penetrations of existing or new concrete is to be by coring clean properly sized holes. Where portions of new or existing concrete are to be removed, the boundaries are to be saw cut.

01.16 Contractor's Warranty

01.16.1 General; the Contractor is to provide a one-year warranty for finish quality and building systems performance. The warranty is to cover structural and enclosure components as well as waterproofing and drainage systems, interior and exterior finishes and building systems such as electrical, lighting and HVAC. Warranty is to begin upon date of substantial completion or in the case of work or products installed after completion; the date that work was completed. The Architect will review the status of the work to establish the date of substantial completion.

02 Existing Conditions

02.1 General

02.1.1 General scope; see site and floor plans.

02.2 Building Demolition

02.2.1 General scope; the Contractor is to obtain permits and utility releases required for demolition. See Site and Demolition plans for the scope of site, building and selective demolition. See Division 33 – Utilities for identification and protection of existing utilities. See General Conditions Shoring for temporary support requirements.

02.2.2 Site demolition; Remove existing site utilities, construction and features shown to be removed on the site demolition plan. Protect existing site utilities, construction, features and planting shown to remain.

02.2.3 Selective demolition; remove existing construction and finishes shown to be removed on demolition plans. Protect existing construction and finishes shown to remain.

See General Conditions, Shoring for temporary support requirements, including underpinning of existing foundations.

02.2.4 Demolition debris; see Division 1 – General Conditions, Demolition and construction debris.

02.2.5 Roofing demolition debris; see Division 1 – General Conditions, Demolition and construction debris.

02.2.6 Owner salvage; give Owner a minimum of 2-week notice of demolition. Owner will remove and salvage:
- TBD.

02.2.7 Contractor salvage; the Contractor is to remove, salvage and set aside for the Owner's use:
- TBD.

02.3 Site Clearing and Grubbing

02.3.1 Erosion control; Install sediment and erosion control measures as necessary.

02.3.2 Planting protection; protect and preserve existing vegetation not shown to be removed, keep vehicles and material outside the drip line of trees, leave existing topsoil in place under the drip line of existing trees shown to remain.

02.3.3 Topsoil; Strip and stockpile top soil for reuse, cover and prevent erosion.

02.3.4 Clearing; remove existing trees, shrubs and other vegetation from the work area. Coordinate marking and removal with the Owner, remove and properly dispose of vegetation material including stumps.

02.3.5 Pruning; coordinate extent of pruning of existing trees and shrubs to remain with the Owner.

02.3.6 Benchmarks and monuments; identify and protect benchmarks, monuments and control points.

03 Concrete

03.1 Envelope Performance Criteria

03.1.1 General scope; Concrete foundation and slab components of the structural envelope contribute to overall envelope performance to eliminate water and moisture migration to interior spaces, minimize thermal bridging, minimize infestation, inhibit mold growth and to achieve an air-tight building envelope. Strict compliance with the requirements of this section along with the requirements of Division 1 – General Requirements, Division 6 – Wood and Plastics, Division 7 Thermal and Moisture Protection and Division 8 – Doors and Windows are required to achieve minimum performance expectations for this project.

03.2 Concrete Foundations

03.2.1 General scope; see Structural Drawings and specifications for complete scope of work including concrete configurations and materials.

03.2.2 Foundation coordination; Coordinate structural scope of work with architectural drawings. Coordinate sub-grade piping rough in and footing and foundation penetrations with utility, sub-grade drainage, landscaping, irrigation, mechanical, plumbing and electrical subcontractors. Work required due to coordination after the foundations are installed will be at the Contractor's expense.

03.2.3 Footings; concrete mix specification, reinforcing, size and configuration as shown on structural drawings.

03.2.4 Footing capillary break; 6 mil polyethylene sheet or approved equal, separate the footing from the foundation wall, extend the capillary break to lap with the under-slab vapor barrier. See Division 7 Thermal and Moisture Protection for under-slab vapor barrier.

03.2.5 Foundation walls; concrete mix specification, reinforcing, size and configuration as shown on structural drawings, form beam pockets to allow for insulation.

03.2.6 Existing Foundations; new footings and foundation walls are to be pinned to existing stone, masonry or concrete foundations as shown on structural drawings.

03.2.7 Anchor bolts; galvanized steel bolts, size, length and spacing per structural drawings.
03.2.8 Exterior bike steps and ramp; reinforced cast-in-place concrete as shown on the drawings or as approved by the Architect.
03.2.9 Footing and foundation wall penetrations; coordinate penetration locations and install appropriately sized pipe sleeves in the foundation form work. Penetrations are to be sealed and watertight.
03.2.10 Foundation dampproofing; bituminous type, brush, spray or trowel-applied at basement and crawlspace foundation walls. Damp proofing is not required at slab-on-grade foundation walls.
03.2.11 Foundation drainage mat; Mar-Flex Geo-Mat Plus or approved equal, filter fabric/dimpled plastic drainage board, 1/2"-thick, provide products compatible with foundation insulation, waterproofing and/or dampproofing systems, install between backfill and foundation insulation or foundation wall at basement and crawlspace foundations, extend from 4" below finish grade to top of footing or as approved by the Architect. Provide seal or filter fabric at the top edge.
03.2.12 Filter fabric; light weight, non-woven polypropylene fabric, recycled fiber content, install where specified and where shown on the drawings.
03.2.13 Anchor bolts; size, type and length as shown on structural drawings.
03.2.14 Foundation insulation; see Division 7 – Thermal and Moisture Protection.
03.2.15 Foundations finish at dampproofing; immediately after removal of forms and before dampproofing is applied, chip off fins and other projections. Voids, honeycombs and imperfections are to be patched flush to surface. Remove ties and patch voids formed by tie rod cones.
03.2.16 Foundation finish - form finish; the intent is to provide a high quality form finish that will require only nominal finishing. Immediately after removal of forms, chip off fins and other projections. Voids, honeycombs, air pockets and imperfections are to be patched. Patches are to match the color and texture of surrounding poured surfaces. Remove ties and patch voids formed by tie rod cones. See drawings for locations.

03.3 Interior Concrete Slabs-On-Grade
03.3.1 General scope; reinforced concrete, concrete mix specification, reinforcing, size and configuration as shown on structural drawings.
03.3.2 Slab-on-grade; 4"-thick, reinforcing size, configuration and spacing as shown on structural drawings, seal slab edges exposed to grade or exposed to weather.
03.3.3 Slab-on-grade control joints; saw cut control joints in locations shown on the drawings or as directed by the Architect. Seal control joints, expansion joints and perimeter joints after the slab is fully cured and before finishes are installed.
03.3.4 Garage slab-on-grade; 5"-thick, reinforcing size, configuration and spacing as shown on structural drawings, slope to overhead sectional doors, 1/8"per foot minimum.
03.3.5 Perimeter joint; see Division 7 – Thermal and Moisture Protection for under-slab insulation.
03.3.6 Finish; smooth steel trowel.
03.3.7 Hardener/sealer; apply an approved hardener/sealer. Coordinate product selection for compatibility with floor finishes.
03.3.8 Sealants; see Division 7 – Thermal and Moisture Protection for sealants.
03.3.9 Protection; protect concrete slab from ongoing construction activities.
03.3.10 Under-slab fill; see Division 31 – Earthwork for Engineered fill and backfill.
03.3.11 Under-slab vapor barrier; see Division 7 – Thermal and Moisture Protection.
03.3.12 Under-slab insulation; see Division 7 – Thermal and Moisture Protection.
03.3.13 Radon venting; see Division 3 – Concrete, Radon Venting.

03.4 Radon Venting
03.4.1 General scope; install radon vent piping and crushed stone vent course below interior concrete slabs-on-grade including crawlspaces.
03.4.2 Below slab components; install a minimum of one 4" PVC riser with a "T" termination in a 6"-thick minimum crushed stone ventilation course, install an additional riser and termination for each 600 square foot increment of slab area.

03.4.3 Above slab components; provide 3" diameter PVC vent risers and reducer from connection points at the concrete slab to unoccupied attic space. Join riser stacks and provide for the future installation of a single inline fan, including service access. Coordinate above slab vent components including vent riser piping and inline exhaust fan installation with the HVAC plumbing and electrical subcontractors. Locate piping and piping offsets and future fan location as shown on the drawings or as approved by the Architect. Provide vibration isolation between PVC and building frame and finishes.

04 Masonry

04.1 Brick Veneer

04.1.1 General scope: provide brick veneer exterior wall construction where shown and noted on the drawings. Remove and recondition existing brick during demolition phase in preparation for reuse in renovation.

04.1.2 Brick; water struck or as approved, match existing brick type as required, color and color range for each application.

- Locations/applications;
  (a) Face brick; Carriage house street elevation.

04.1.3 Brick coursing; match existing brick masonry coursing, align bed and head joints as applicable for invisible transition of existing to new.

04.1.4 Brick mortar; Laticrete Portland cement or approved equal, mortar type and mix as appropriate to the application, color to match existing.

04.1.5 Ties; stainless steel wire ties at 2'-0" o.c. each way, staggered rows.

04.1.6 Cavity waterproofing; Grace, Perm-A-Barrier Wall Membrane or approved equal

04.1.7 Cavity insulation; Dow Building Solutions, Styrofoam, Cavitymate SC Insulation.

04.1.8 Through-wall flashing; Grace, Perm-A-Barrier Wall Flashing or approved equal

04.1.9 Weeps; open head joint at 2'-0" o.c. minimum or as approved.

04.1.10 Counter flashing; 16 oz copper as shown and noted on drawings.

04.1.11 Loose lintels; see structural drawings and specifications, galvanized.

04.1.12 Relieving angle support; see structural drawings and specifications.

04.1.13 Mock up; provide mock up panels of 3'-0" x 3'-0" minimum dimension of each brick application, mockups are to be positioned in immediate proximity to existing brick for comparison.

04.1.14 Locations;

- Carriage house elevations.

04.2 Brick and Stone Facing Repair and Conservation

04.2.1 General scope; TBD.

04.2.2 Mortar; match existing mortar strength and color.

04.2.3 Grinding; TBD.

04.2.4 Repointing; TBD.

04.2.5 Flashing; 16 oz copper as shown and noted on drawings.

04.2.6 Mock up; TBD.

04.2.7 Locations;

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04.3 Brick and Stone Cleaning

04.3.1 General scope; TBD.

04.3.2 Locations; TBD.

05 Metals

05.2 Structural Steel

05.2.1 General scope; see Structural Drawings and specifications for complete scope of work.

05.2.2 Steel beams; as shown on structural drawings.

05.2.3 Steel columns; as shown on structural drawings.
05.2.4 Flitch plates; as shown on structural drawings.

05.3 Slab Edge Angles
05.3.1 General scope; install embedded galvanized steel edge angles at overhead sectional doors and at locations shown on the drawings.

05.4 Loose Lintels
05.4.1 General scope; galvanized steel angles as shown on the drawings and as suitable to support masonry veneer at door and window openings.

05.5 Handrail and Guardrail Fabrications
05.5.1 Exterior guardrails; TBD.
05.5.2 Exterior handrails; TBD.
05.5.3 Wall brackets; selection TBD by Architect.

05.6 Finishes
05.6.1 Exterior; galvanized, see Division 9 – Finishes for field priming and painting.
05.6.2 Interior; primed for field painting, see Division 9 – Finishes for field priming and painting.

06 Wood, Plastics and Composites

06.2 Envelope Performance Criteria
06.2.1 General scope; Framing and sheathing components of the structural envelope contribute to overall envelope performance to minimize thermal bridging, minimize infestation, inhibit mold growth and to achieve an air-tight envelope. Strict compliance with the requirements of this section along with the requirements of Division 1 – General Requirements, Division 3 – Concrete, Division 7 - Thermal and Moisture Protection and Division 8 – Doors and Windows are required to achieve minimum performance expectations for this project.

06.3 Temporary Shoring and Bracing
06.3.1 Provide engineered temporary shoring and bracing as required to facilitate new construction shown on the drawings. Contractor is to utilize a Massachusetts licensed engineer for design of temporary shoring and bracing.

06.4 Rough Framing
06.4.1 General scope; see Structural drawings and specifications for complete scope of wood framing materials and work. Coordinate structural scope of work with Architectural drawings.
06.4.2 Framing Coordination; the Contractor is responsible for coordinating wall, floor and ceiling framing layout to accommodate furnishings, fixtures, appliances, equipment, fireplaces, air registers and grilles and device locations shown or noted on the drawings. Post installation modifications to make such accommodations in the framing layout will be at the Contractor's expense.
06.4.3 Foundation sill plates; preservative-treated dimensional lumber, per structural and as shown on the drawings.
06.4.4 Sill sealer; see Division 7 - Thermal and Moisture Protection.
06.4.5 Exterior wall framing; kiln-dried dimensional lumber per structural and as shown on the drawings.
06.4.6 Beams; kiln-dried dimensional lumber or engineered wood per structural and as shown on the drawings.
06.4.7 Headers; kiln-dried dimensional lumber or engineered wood per structural and as shown on the drawings, insulated at exterior wall locations.
06.4.8 Floor framing; kiln-dried dimensional lumber per structural and as shown and detailed on the drawings, utilize stack framing techniques.
06.4.9 Floor sleepers on existing garage concrete slab-on-grade; kiln-dried dimensional lumber as shown and detailed on the drawings.
06.4.10 Roof framing; kiln-dried dimensional lumber per structural and as shown and detailed on the drawings, utilize stack framing techniques.

06.4.11 Ceiling joists; kiln-dried dimensional lumber per structural and as shown on the drawings.
06.4.12 Stair stringers; engineered wood framing per structural, 1'-0" o.c. maximum spacing.
06.4.13 Subfloor; Advantech tongue and groove flooring panel, 3/4"-thick, install in strict accordance with manufacturer's requirements and recommendations, adhere to floor joists with manufacturer's recommended construction adhesive.
06.4.14 Exterior wall sheathing; APA trademarked plywood, 1/2" thick minimum, materials per structural and as shown on the drawings. Sheathing joints and edges are to be sealed.
06.4.15 Exterior roof sheathing; APA trademarked plywood, 5/8" thick minimum, materials per structural and as shown on the drawings. Sheathing joints and edges are to be sealed.
06.4.16 Interior non load-bearing wall framing and furring; kiln-dried dimensional lumber, 2x4 minimum depth and 1'-4" o.c. or as shown on the drawings, 2X6 and greater framing depth as required to accommodate piping, ductwork or wiring and as approved by the Architect. Exterior and interior corners are to be 2-stud configuration as shown on the drawings. Basement wall and furring sill plates are to be preservative-treated.
06.4.17 Wood blocking; kiln-dried dimensional lumber, 2X4 or 2X6 wood blocking as required for firestopping to meet building code requirements and at casework, shelving, shelving standards, equipment, devices, fixtures, door stops and other fixtures, furnishings and accessories requiring blocking support.
06.4.18 Wood strapping; kiln-dried dimensional lumber, 1X3 or as shown on the drawings.
06.4.19 Connectors and hardware; joist hangers, beam hangers, column bases, hurricane clips, bolts, anchors and miscellaneous clips and fasteners as shown on structural drawings and as required by structural specifications, hot-dipped galvanized finish.
06.4.20 Plywood backing panels at electric and tele/data equipment; 3/4"-thick, APA trademarked. Length and support as described on the drawings or as required by the equipment, paint finish.
06.4.21 Construction adhesive; products and installation as recommended by adhesive manufacturer for each intended use.
06.4.22 Termite shield; see Division 7 - Thermal and Moisture Protection.

06.5 Exterior Finish Carpentry

06.5.1 General scope; see drawings for materials, layout, profiles, dimensions and detail of exterior finish carpentry. Provide blocking and nailers as required for full support of trim and moldings. Configure jointing to shed water and prevent capillary wicking. Use full length pieces or locate piece jointing as approved by the Architect.
06.5.2 Corner trim; Western Red Cedar, 5/4-thick, dimensions and details as shown or noted on drawings.
06.5.3 Window and door casing trim; Western Red Cedar, clear grade, 5/4-thick, dimensions and details as shown or noted on drawings, match existing at accessory apartment.
06.5.4 Window and door casing back band molding; Western Red Cedar, clear grade, molding profile as shown or noted on drawings, match existing at accessory apartment.
06.5.5 Window and door head drip trim; Western Red Cedar, clear grade, profiles, dimensions and details as shown or noted on drawings, match existing at accessory apartment.
06.5.6 Window sills; Western Red Cedar, clear grade, profiles, dimensions and details as shown or noted on drawings, match existing at accessory apartment.
06.5.7 Eave fascia and eave drip trim; Western Red Cedar, clear grade, 4/4-thick, dimensions and details as shown or noted on drawings, match existing at accessory apartment.
06.5.8 Rake fascia and rake drip trim; Western Red Cedar, clear grade, 4/4-thick, dimensions and details as shown or noted on drawings, match existing at accessory apartment.

06.5.9 Eave and rake moldings; Western Red Cedar, clear grade, 2 piece, molding profiles as shown or noted on drawings, match existing at accessory apartment.
06.5.10 Eave and rake soffits; Western Red Cedar, clear grade, 4/4-thick, T&G beadboard.
06.5.11 Watertable trim; PVC, 5/4-thick, 2 piece assembly, profiles as shown or noted on drawings or as approved by the Architect.
06.5.12 Miscellaneous trim and mounting blocks; Western Red Cedar clear grade, as noted on the drawings, dimensions and detail as shown or noted on drawings.
06.5.13 Trim finish; field paint, see Division 9, Exterior Paint Finish. Painted wood trim and moldings are to be pre-primed. Field cut edges and ends are to be primed prior to installation.
06.5.14 Fasteners; stainless steel.
06.5.15 Water resistive barrier (WRB); see Division 7 – Thermal and Moisture Protection for Water resistive barrier.

06.6 Clapboard Siding at Carriage House **(Alternate #1 at Family Room/Mudroom Stair)**
06.6.1 Clapboards; Western Red Cedar, clear grade, 6" exposure, smooth face, field paint.
06.6.2 Fasteners; stainless steel.
06.6.3 Water resistive barrier (WRB); see Division 7 – Thermal and Moisture Protection for Water resistive barrier.
06.6.4 Siding field finish; see Division 7, Exterior Paint Finish. Painted siding is to be pre-primed. Field cut edges and ends are to be primed prior to installation.

06.7 Interior Finish Carpentry
06.7.1 General scope; see drawings for materials, layout, profiles, dimensions and detail of interior finish carpentry. Provide blocking and nailers as required for full support of trim and moldings. Use full length pieces or locate piece jointing as approved by the Architect.
06.7.2 Standing and running wood trim - painted; Poplar, clear grade. Sizes, profiles and configurations as shown and detailed on the drawings. Field paint finish. See interior elevations and details for locations. See Division 9 – Painting for paint finish.
06.7.3 Miscellaneous trim - painted; Poplar, clear grade. Sizes, profiles and configurations as shown and detailed on the drawings. Field paint finish. See interior elevations and details for locations.
06.7.4 Door/window casing, stool and apron trim; Poplar, clear grade. Sizes, profiles and configurations to match existing. Field paint finish. See Division 9 – Painting for paint finish.
06.7.5 Wall base, cap and shoe; species, grade, profile(s) and finish to match existing.
06.7.6 Crown molding; species, grade, profile(s) and finish to match existing.
06.7.7 Columns and Pilasters; custom, material and size TBD by Architect.
06.7.8 Finishes; see Division 9 Interior Paint Finish for paint finishes and Interior Clear Finish for stain with clear finishes.

06.8 Stairs – Field Fabricated
06.8.1 Stringers: see Rough Carpentry.
06.8.2 Treads; match WD-1 flooring, 1"-thick, finish to match WD-1 floor finish, nosing profile as detailed or as approved by the Architect.
06.8.3 Risers; Poplar, clear grade as shown and detailed on the drawings. Field paint finish.
06.8.4 Skirts; Poplar, clear grade as shown and detailed on the drawings. Field paint finish.
06.8.5 Scotia; Poplar, clear grade as shown and detailed on the drawings, profile to match existing. Field paint finish.

06.9 Balustrade
06.9.1 General scope; install all components of a stair balustrade system, including anchors and supports and transitions and returns required for a structurally sound and code-compliant railing.
06.9.2 Newels; Poplar, clear grade, see drawings for profile, location and detail. Field paint finish.
06.9.3 Balusters; Poplar, clear grade, see drawings for profile, spacing and detail. Field paint finish.

06.9.4 Railing; White Oak, see drawings for profile, size, radius returns and radius slope transitions and detail. Terminate railings at newels or at wall returns.

06.10 Casework

06.10.1 General scope; provide casework in compliance with AWI standards, as shown and detailed on the drawings and as specified below.

06.10.2 Bike Shop: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Bike Shop Allowance in section 6.**

06.10.3 Everett's Office: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Everett's Office Allowance in section 6.**

06.10.4 Rec Room: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Rec Room Allowance in section 6.**

06.10.5 Basement Bathroom: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Basement Bathroom Allowance in section 6.**

06.10.6 Basement Locker/Laundry: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Basement Locker/Laundry Allowance in section 6.**

06.10.7 Mudroom: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Mudroom Allowance in section 6.**

06.10.8 Kitchen: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Kitchen Allowance in section 6.**

06.10.9 Family Room: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Family Room Allowance in section 6.**

06.10.10 Workshop: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Workshop Allowance in section 6.**

06.10.11 Hollie's Bath: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Hollie's Bath Allowance in section 6.**

06.10.12 Hollie's Closet: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Hollie's Closet Allowance in section 6.**

06.10.13 Hollie's Office: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Hollie's Office Allowance in section 6.**

06.10.14 Laundry: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Laundry Allowance in section 6.**

06.10.15 Master Bath: **Provide allowance for materials only; See section 1 - Allowances. Carry installation cost of 20% of overall Master Bath Allowance in section 6.**

06.10.16 Cabinetry Decorative Hardware: **Provide allowance for materials only; See section 1 – Allowances**.

06.11 Hardwood Veneer Stile and Rail Cabinets – Clear Finish

06.11.1 General scope; provide hardwood veneer casework in compliance with AWI Premium Grade standards, flush overlay construction and as shown on the drawings.

06.11.2 Hardwood veneer; hardwood species, cut, AA Grade, slip match. Veneer edge band.

06.11.3 Solid wood; hardwood species, cut, Grade I.

06.11.4 Casework components; comply with AWI Premium Grade standards.

- Case construction; ½" Plywood.
- Doors and end panels (exposed sides); stile and rail, flat panel, AA face veneer.
- Drawer fronts; flush panel, AA face veneer.
- Glass panels; clear, tempered, low iron.
- Interior wood (back, divider panels and shelves); B face veneer.
- Interior case; B face veneer.
- Drawer construction; hardwood veneer core plywood, dovetail.
- Drawer slides; full extension, self-closing.
- Door hinges; concealed European type.
- Adjustable shelves; multiple holes with pins.
- Door and drawer pulls; TBD by Architect.
- Hardware finish; TBD by Architect.

- Lighting; as shown on the drawings.

06.11.5 Door and drawer finish; shop finished. Stain and clear finish TBD by Architect.

06.11.6 Appliance coordination; coordinate casework with approved appliances sinks and faucets, verify required cooktop clearances to combustible material.

06.11.7 Locations:
- Kitchen.
- Master Bath.

06.12 Wood Flush Panel Cabinets – Paint Finish

06.12.1 General scope; provide wood casework in compliance with AWI Custom Grade standards, flush overlay construction and as shown on the drawings.

06.12.2 Casework components; comply with AWI Custom Grade standards.
- Case construction; MDF.
- Doors and end panels (exposed sides); MDF.
- Interior wood (back, divider panels and shelves); MDF.
- Interior case; MDF.
- Drawer construction; edge banded HPDL, lock shoulder.
- Drawer slides; full extension, self-closing.
- Door hinges; concealed European type.
- Adjustable shelves; multiple holes with pins.
- Door and drawer pulls; TBD by Architect.
- Hardware finish; TBD by Architect.
- Lighting; as shown on the drawings.

06.12.3 Door and drawer finish; shop finished paint, color TBD by Architect.

06.12.4 Fixture coordination; coordinate casework with approved sinks and faucets.

06.12.5 Locations:
- Bike Shop.
- Laundry.
- Woodshop.

06.13 Wood Stile and Rail Cabinets – Paint Finish

06.13.1 General scope; provide wood casework in compliance with AWI Custom Grade standards, flush overlay construction and as shown on the drawings.

06.13.2 Casework components; comply with AWI Custom Grade standards.
- Case construction; MDF.
- Doors and end panels (exposed sides); MDF, stile and rail, flat panel.
- Glass panels; clear, tempered, low iron.
- Interior wood (back, divider panels and shelves); MDF.
- Interior case; MDF.
- Drawer construction; edge banded HPDL, lock shoulder.
- Drawer slides; full extension, self-closing.
- Door hinges; concealed European type.
- Adjustable shelves; multiple holes with pins.
- Door and drawer pulls; TBD by Architect.
- Hardware finish; TBD by Architect.
- Lighting; as shown on the drawings.

06.13.3 Door and drawer finish; shop finished paint, color TBD by Architect.

06.13.4 Fixture coordination; coordinate casework with approved sinks and faucets.

06.13.5 Locations:
- Everett's Office.
- Rec Room.
- Basement Bath.
- Mudroom.
- Family Room.
- Laundry.
- Hollie's Bath.

- Hollie's Office.

06.14 Countertops

06.14.1 General scope; provide countertops as shown and detailed on the drawings and as specified below. Provide countertops in compliance with AWI standards to match standards of supporting cabinets.

06.14.2 Stone; stone selection, stone finish and edge profile TBD by Architect.

06.14.3 Locations:

- Basement Bath.
- Locker/Laundry.
- Kitchen.
- Hollie's Bath.
- Master Bath.

06.14.4 **Provide allowance for materials, template and installation; See section 1 - Allowances.**

07 Thermal and Moisture Protection

07.1 Envelope Performance Criteria

07.1.1 General scope; envelope components specified in Division 7 contribute to overall envelope performance to eliminate water and moisture migration to interior spaces, minimize thermal bridging, minimize infestation, inhibit mold growth and to achieve an air-tight building envelope. Strict compliance with the requirements of this section along with the requirements of Division 1 – General Requirements, Division 3 – Concrete, Division 6 – Wood and Plastics and Division 8 – Doors and Windows are required to achieve minimum performance expectations for this project.

07.2 Insulation

07.2.1 General scope; install insulation in strict accordance with manufacturer's requirements, instructions, recommendations and guidelines and good practice. Use manufacturer certified installers only.

07.2.2 Roof insulation – low density foam; spray-type polyurethane foam, 0.5 PCF density, R-3.7/inch, R-49 minimum or as noted on the drawings, install in accordance with manufacturer's instructions and recommendations, verify manufacturer's maximum allowable installed thicknesses.

07.2.3 Thermal barrier; 1/2" gypsum wall board or approved equal, install in accessible areas including attics and crawlspaces. Where allowed by the building code, an approved spray applied intumescent coating may be used in lieu of an ignition barrier.

07.2.4 Ignition barrier; where allowed by the building code, an approved spray applied intumescent coating may be used in lieu of an ignition barrier.

07.2.5 Exterior wall insulation – high density foam; spray-type polyurethane foam, 2.0 PCF density, R-6.5/inch, R-35 minimum, install in accordance with manufacturer's instructions and recommendations.

07.2.6 Interior foundation wall insulation – high density foam; spray-type polyurethane foam, 2.0 PCF density, R-6.5/inch, R-10 minimum, install in accordance with manufacturer's instructions and recommendations, install in basement and crawlspace areas, extend insulation to underside of subfloor.

07.2.7 Under-slab insulation and vapor barrier – high density foam; spray-type polyurethane foam, 2.0 PCF density, R-6.5/inch, R-10 minimum, isolate slab from foundation walls with 2"-thick insulation, install in accordance with manufacturer's instructions and recommendations.

07.2.8 Sill sealer; Protecto Wrap, Protecto Triple Guard Energy Sill Sealer, or approved equal, install in strict accordance with the manufacturer's instructions, provide accessory materials including repair tape and primers recommended by the manufacturer.

07.2.9 Sill sealer; polyethylene foam gasket between sill plate and concrete foundation, caulk foundation/sill plate joint for air infiltration barrier.
07.2.10 Acoustical wall insulation – mineral wool batts; Thermafiber SAFB 2.5PCF or approved equal, 2"-thick, tightly fitted between wall studs, cut to fit piping and electrical rough in, extend from floor to ceiling.
07.2.11 Firestopping insulation; Thermafiber Safing or approved equal, tightly fitted.
07.2.12 Miscellaneous exterior openings; spray-type polyurethane foam insulation, non-expanding, install around exterior wall penetrations, gaps between insulation boards and wood floor framing, sill plate gaps, and window and door shim spaces, fill all voids.
07.2.13 Insulation tape; as recommended by insulation manufacturer.
07.2.14 Insulation adhesive; as recommended by insulation manufacturer.

07.3 Water Resistive Barrier (WRB)
07.3.1 General scope; install a continuous water-tight barrier as shown on the drawings, coordinate the installation of window, door and wall flashings for a complete water-tight installation.
07.3.2 Water resistive barrier (WRB); #30 building paper, install continuously under siding and trim, shingle horizontal edges and flashings and lap vertical edges.

07.4 Under-Slab Vapor Barrier
07.4.1 Vapor barrier; 6 mil reinforced polyethylene sheet, <0.01 perm rating maximum, install between under-slab insulation and concrete slab, lap and tape perimeter to footing capillary break, tape penetrations.

07.5 Ice and Water Membrane
07.5.1 General scope; install membrane at roof deck surfaces as shown on the drawings. Extend 3'-0" upslope of interior face of wall framing and 8" minimum vertically behind wall and step flashings or as shown on the drawings, 18" on either side of valleys and continuously at roof surfaces less than 4:12 slope.
07.5.2 Membrane; WR Grace Ice and Water Shield or approved equal.
07.5.3 High-temperature membrane; WR Grace Ice and Water Shield HT or approved equal.

07.6 Slate Shingle Roofing
07.6.1 General scope; New slate roof at carriage house to match existing.
07.6.2 Slate shingles; new shingles are required match existing, thickness, size, cut & color.
07.6.3 Underlayment; ice and water membrane or as recommended by the roofing contractor.
07.6.4 Flashing; 16 oz copper as shown, detailed or noted on the drawing and as required for a water and weather tight roofing installation.
07.6.5 Finial; East Coast Weathervanes and Cupolas, copper, style as shown and detailed on drawings.
07.6.6 Fasteners; stainless steel or as recommended by the roofing contractor.

07.7 Metal Wall Cladding
07.7.1 General scope; provide all components of a watertight metal wall cladding system at basement stair, family room, and garage back door wall as shown on the drawings. Allow for thermal movement. Review detailing with architect prior to fabrication of components. Comply with SMACNA and the Copper Development Association recommendations and standards for sheet metal selection, forming, fabrication and installation.
07.7.2 Cladding; 16 oz copper, flat-seam pans, see drawings for seam layout. Include formed casing and sills.
07.7.3 Clips, cleats, hook strips; 16 oz copper, configure and install in strict accordance with SMACNA approved detailing, specifications and recommended procedures.
07.7.4 Flashing; 16 oz copper, ridge, valley, wall and step flashings, install in strict accordance with SMACNA and the Copper Development Association approved

detailing, specifications and recommended procedures, see drawings for flashing details and profiles

07.7.5 Slip sheet; rosin-sized smooth building paper, 4lb minimum.

07.7.6 Underlayment; 30# building felt or as recommended by SMACNA and the Copper Development Association.

07.7.7 Installation; Confirm layout and seam locations with Architect prior to fabrication and installation. Location and layout of seams is important for design intent. Fasteners are to be concealed.

07.7.8 Warranty; provide a minimum 20 year system, material and finish warranty.

07.8 Membrane Roofing

07.8.1 General scope; provide all components of a watertight membrane roofing system as shown on the drawings. Review detailing with architect prior to fabrication of components. Comply with SMACNA recommendations and standards for sheet metal selection, forming, fabrication and installation.

07.8.2 Membrane; Carlisle Syntec Systems, SureSeal, 60-mil-thick EPDM fully-adhered membrane, or approved equal. Install components in strict accordance with the roofing manufacturer's recommendations and requirements.

07.8.3 Tapered insulation; Carlisle Syntec Systems, Insulfoam SP or approved equal, 1/4"/FT slope.

07.8.4 Crickets; Carlisle Syntec Systems, Insulfoam SP or approved equal, form tapered crickets at 1/2"/FT slope.

07.8.5 Cover board; Georgia-Pacific, DensDeck Roof Board, 5/8"-thick or as noted on the drawings, mechanically fastened.

07.8.6 Gypsum sheathing – wall application; Georgia-Pacific, DensDeck Roof Board, 1/2"-thick or as noted on the drawings, mechanically fastened.

07.8.7 Roof drain sumps; form tapered 4'-square roof drain sumps at 1/2"/FT slope.

07.8.8 Mechanical fasteners; as recommended by roof membrane and cover board manufacturers.

07.8.9 Adhesives and sealants; as recommended by the roofing manufacturer.

07.8.10 Membrane transitions and terminations; as detailed on the drawings and as recommended by the manufacturer.

07.8.11 Warranty; provide the roofing manufacturer's 20-year warranty.

07.9 Roofing Accessories

07.9.1 Plumbing vent boot; custom fabricated watertight 16 oz copper cladding at vent pipe.

07.9.2 Radon vent cap; 16 oz copper, as approved by the Architect.

07.9.3 Flue flashing; coordinate flue manufacturer's counter flashing collar with flashing configurations for a watertight installation.

07.9.4 Kitchen Exhaust; coordinate flashing and installation of a roof-mounted kitchen exhaust hood blower fan or roof cap exhaust termination.

07.9.5 Roof Crickets; 16 oz copper, form crickets where shown and detailed on the drawings. Make watertight transitions to the adjacent roofing system and exterior finishes.

07.10 Gutters and Downspouts

07.10.1 General scope; provide gutters and downspouts as required to control roof water run-off and as shown on the drawings. Review location of gutters and downspouts with the Architect prior to fabrication. Coordinate with the storm water management system.

07.10.2 Gutters; seamless 16 oz copper, 5" K-style, preformed inside and outside corners, end caps, mitered return ends, downspout connection boots, solder seams and joints, brackets spaced at 2'-8" o.c. minimum, bracket and fastener material, style and finish TBD by Architect.

07.10.3 Collectors; 16 oz copper, custom fabricated in configurations shown on the drawings.

07.10.4 Downspouts; 16 oz copper, 3" diameter, debris screens at gutter outlets, preformed offsets and terminations to follow exterior wall finish profiles closely, brackets spaced at 4'-0" o.c. minimum and within 2'-0" above and below offsets, bracket and fastener material, style and finish TBD by Architect.
07.10.5 Subgrade drains; route downspouts to below grade drains. See Division 2 Downspout Drains for connection to foundation perimeter drains.
07.10.6 Splash blocks; precast concrete, size, style and color TBD by Architect.

07.11 Roof Flashing
07.11.1 General scope; comply with SMACNA recommendations and standards for sheet metal selection, forming, fabricating and installation, coordinate with roofing system flashing.
07.11.2 Eave drip; 16 oz copper, field-fabricated as detailed.
07.11.3 Rake drip; 16 oz copper, field-fabricated as detailed.
07.11.4 Valley flashing; 16 oz copper, 1'-6"-wide minimum, install in strict accordance with the roofing manufacturer's instructions and recommendations.
07.11.5 Step flashing; 16 oz copper, field-fabricated as detailed.
07.11.6 Wall flashing; 16 oz copper, field-fabricated as detailed.

07.12 Window and Door Flashing
07.12.1 Window and door head drip flashing; 16 oz copper, field fabricated as detailed or as approved by the Architect.
07.12.2 Window and door installation flashing; Grace Vycor V40 self-adhesive membrane flashing system or approved equal.
07.12.3 Window and door sill pan flashing: Grace Vycor V40 self-adhesive membrane or approved equal, VYCORner preformed corners.
07.12.4 Installation; Install flashing in accordance with the flashing membrane manufacturer's recommendations and as shown on the drawings including head, jamb and sill conditions. Sill flashing is to be panned at interior edge and jamb ends. Flashing is to be integrated with sheathing and Water resistive barrier system for a complete, air- and water-tight installation of weather barrier, doors and windows.
07.12.5 Wood and Plastics for exterior wall sheathing system; See Division 6

07.13 Termite Shield
07.13.1 General scope; install a continuous sheet metal termite shield around the perimeter of the building. Review materials and detail with the Architect prior to fabrication.
07.13.2 Termite shield; aluminum, 0.020"-thick, field break-formed, mill finish.

07.14 Sealants
07.14.1 General scope; provide sealants as required, use sealants appropriate to each application, submit sealants to Architect for review, color selection and approval.
07.14.2 Applications: provide sealants for each application including but not limited to:
- Concrete slab-on-grade sealant.
- Plumbing fixture installation sealant.
- Exterior wood trim sealant.
- Interior wood trim sealant.
- Threshold installation sealant.
- Foundation penetration sealant.
- Acoustical sealant.
- Roofing sealant.

08 Openings

08.1 Envelope Performance Criteria
08.1.1 General scope; envelope components specified in Division 8 contribute to overall envelope performance to eliminate water and moisture migration to interior spaces, minimize thermal bridging, minimize infestation, inhibit mold growth and

to achieve an air-tight building envelope. Strict compliance with the requirements of this section along with the requirements of Division 1 – General Requirements, Division 3 – Concrete, Division 6 – Wood and Plastics and Division 7 - Thermal and Moisture Protection are required to achieve minimum performance expectations for this project.

08.2 Exterior Windows

08.2.1 General scope; See exterior elevations and window type elevations for window types, sizes and divided light patterns. Coordinate installation with Division 7 - Thermal and Moisture Protection requirements.

08.2.2 Double hung windows; Marvin Wood Ultimate Series.

- Frame; primed pine exterior, primed pine interior.
- Jamb extensions; Pine, as required.
- Sash; primed Pine exterior, primed Pine interior, removable for cleaning.
- Glass; clear, insulating low-E II with argon gas, simulated divide light, tempered where required by the building code.
- Muntins; simulated divide light, primed Pine exterior, 7/8"-wide, layout as shown on the drawings.
- Balance system; spiral balance.
- Sash lock; number and location per window manufacturer, oil-rubbed bronze finish for pricing purposes only.
- Sash lift; none.
- Insect screens; aluminum frame half screen, Marvin High Transparency insect mesh or approved equal, frame color white.
- Gaskets and weatherstripping; color white.
- Exterior finish; primed for field painting.
- Interior finish; frame, sash, muntins and jamb extensions, primed for field painting.

08.2.3 Casement Windows; Loewen Cyprium Collection.

- Frame; Copper Natura, primed Douglas Fir interior.
- Jamb extensions; Douglas Fir, as required.
- Sash; Copper Natura exterior, primed Douglas Fir interior, removable for cleaning.
- Glass; clear, insulating low-E II with argon gas, simulated divide light, tempered where required by the building code.
- Muntins; simulated divide light, Copper Natura exterior, 7/8"-wide, layout as shown on the drawings.
- Balance system; spiral balance.
- Sash Operator; Hannover oil-rubbed bronze finish for pricing purposes only.
- Insect screens; aluminum frame, Loewen High Transparency insect mesh or approved equal, frame color white.
- Gaskets and weatherstripping; color white.
- Exterior finish; Copper Natura.
- Interior finish; frame, sash, muntins and jamb extensions, primed for field painting.

08.2.4 See Division 6 – Wood and Plastics for exterior and interior casings and sill.

08.2.5 See Division 7 – Thermal and Moisture Protection for flashing.

Casement Windows; Marvin Wood Ultimate Series **(Alternate #2 at Mudroom Stair)**

- Frame; primed Pine exterior, primed Pine interior.
- Jamb extensions; Pine, as required.
- Sash; primed Pine exterior, primed Pine interior, removable for cleaning.
- Glass; clear, insulating low-E II with argon gas, simulated divide light, tempered where required by the building code.
- Muntins; simulated divide light, primed Pine exterior, 7/8"-wide, layout as shown on the drawings.

- Balance system; spiral balance.
- Sash Operator; oil-rubbed bronze finish for pricing purposes only.
- Insect screens; aluminum frame, Marvin High Transparency insect mesh or approved equal, frame color white.
- Gaskets and weatherstripping; color white.
- Exterior finish; primed for field painting.
- Interior finish; frame, sash, muntins and jamb extensions, primed for field painting.

08.2.6 See Division 6 – Wood and Plastics for exterior and interior casings and sill.

08.2.7 See Division 7 – Thermal and Moisture Protection for flashing.

08.3 Exterior Hinged and Fixed French Doors @ Workshop **(Alternate #2 at Garage/Mudroom Stair)**

08.3.1 General Scope; Marvin Wood Ultimate Series Inswing French Door at workshop. See exterior elevations and window schedule for size and divided light patterns. Coordinate installation with Division 7 - Thermal and Moisture Protection requirements.

08.3.2 Inswing French Door; Marvin Wood Ultimate Series Hinged French Door

- Frame; primed Pine exterior, Pine interior.
- Jamb extensions; Pine, see details for size.
- Sash; Pine exterior, Pine interior.
- Glass; clear, insulating low-E II with argon gas, simulated divide light, tempered where required by the building code.
- Muntins; simulated divide light, primed Pine exterior, Pine interior, 7/8"-wide.
- Hardware; 10" rectilinear escutcheon, Churchill level, oil-rubbed bronze finish for pricing purposes only.
- Gaskets and weatherstripping; color TBD by Architect.
- Exterior finish; primed for field painting.
- Interior finish; frame, sash, muntins and jamb extensions, primed pine.

08.4 Lift and Slide Terrace Door

08.4.1 General scope; See exterior elevations and window type elevations for window types, sizes. Coordinate installation with Division 7 - Thermal and Moisture Protection requirements.

08.4.2 Sliding door; Loewen Cyprium Collection Lift and Slide Door or approved equal, Stacked Panel, 6-panels.

- Frame; Copper Natura exterior, Douglas Fir interior.
- Jamb extensions; see details for size.
- Door panel; 6"-wide stile, Copper Natura exterior, Douglas Fir interior.
- Sill; Recessed with Drainage, Copper Natura finish.
- Glass; clear, insulating low-E II with argon gas, simulated divide light, tempered where required by the building code.
- Hardware; Verona handle, oil-rubbed bronze interior finish.
- Gaskets and weatherstripping; color white.
- Exterior finish; frame, sash, muntins and jamb extensions, Copper Natura.
- Interior finish; frame, sash, muntins and jamb extensions, shop primed for field paint finish.

08.4.3 Location; Family Room.

08.4.4 See Division 6 – Wood, Plastics and Composites for interior casings and sill.

08.4.5 See Division 7 – Thermal and Moisture Protection for flashing.

08.5 Lift and Slide Terrace Door **(Alternate #2 at Family Room)**

08.5.1 General scope; See exterior elevations and window type elevations for window types, sizes. Coordinate installation with Division 7 - Thermal and Moisture Protection requirements.

08.5.2 Sliding door; Marvin Ultimate Lift and Slide Door or approved equal, Stacked Panel, 4-panels.
- Frame; Vertical grain Douglas Fir exterior, Pine interior.
- Jamb extensions; see details for size.
- Door panel; 6"-wide stile, Vertical grain Douglas Fir exterior, Pine interior.
- Sill; Recessed with Drainage, anodized bronze finish.
- Glass; clear, insulating low-E II with argon gas, simulated divide light, tempered where required by the building code.
- Hardware; manufacturer's standard with optional interior finger pull, oil-rubbed bronze exterior finish, oil-rubbed bronze interior finish.
- Gaskets and weatherstripping; color white.
- Exterior finish; frame, sash, muntins and jamb extensions, shop primed for field paint finish.
- Interior finish; frame, sash, muntins and jamb extensions, shop primed for field paint finish.

08.5.3 Location; Family Room.
08.5.4 See Division 6 – Wood, Plastics and Composites for interior casings and sill.
08.5.5 See Division 7 – Thermal and Moisture Protection for flashing.

08.6 Screen Door at Family Room
08.6.1 General Scope; Centor Single horizontal S1E Eco-Screen sliding screen door.
08.6.2 Insect Screen; match window screen specification.
08.6.3 Hardware; TBD by architect.

08.7 Interior Transom Windows
08.7.1 General scope; See interior elevations and window schedules for window type, size and divided light patterns.
08.7.2 Transom windows; Pine sash, 7/8" true divided lights to match exterior windows, finish to match interior wood finishes.
08.7.3 Glass; clear, tempered where required by the building code.
08.7.4 Location; Second Floor Laundry.

08.8 Screen Doors
08.8.1 Screen Door; TBD.

08.9 Exterior Doors and Frames
08.9.1 Door; TBD.

08.10 Interior Non Fire-Rated Panel Doors and Frames
08.10.1 Non fire-rated doors; TruStile or approved equal, 1-3/4"-thick solid wood style and rail panel door, wood species style and finish to match existing.
08.10.2 Non fire-rated door frames; TruStile or approved equal, wood species and finish to match existing.
08.10.3 Glass; clear, tempered.
08.10.4 Hardware; see hardware sets.

08.11 Interior Fire-Rated Panel Doors and Frames
08.11.1 Fire-rated doors; TruStile Fire Door or approved equal, style and finish to match non fire-rated doors.
08.11.2 Fire-rated door frames; TruStile Fire Door Frames or approved equal, finish to match non fire-rated door frames.
08.11.3 Hardware; see hardware sets.

08.12 Overhead Sectional Doors
08.12.1 General scope; provide all components of overhead sectional doors including sectional doors, tracks, torsion spring balances, weatherstripping, heavy duty motor operators and controls, contact and photo eye reversing control and rolling access code remote controls.
08.12.2 Overhead sectional door; Wayne Dalton, 7400 Del May Series or approved equal, see drawings for size and style.
08.12.3 Wood species; TBD by Architect.
08.12.4 Glass; clear, tempered.

08.12.5 Finish; primed for field painting.
08.12.6 Warranty; provide the manufacturer's 5-year warranty.

08.13 Door Hardware
08.13.1 **Interior Door Hardware Allowance: See Section 1 - Allowances for budget, materials cost only. This allowance includes all locksets, hinges, door stops, catches, trims, etc. Contractor to carry installation cost separately in section 6.**
08.13.2 Finishes; Match existing.

08.14 Hardware Sets
08.14.1 **HW-1**; Storage/Mechanical
- Lockset; storage function.
- Trim; TBD.
- Hinges; 1-1/2 pair.
- Door stop; TBD.

08.14.2 **HW-2**; Bathrooms, Locker/Laundry, Bedrooms
- Lockset; TBD, privacy function.
- Trim; TBD.
- Hinges; 1-1/2 pair.

08.14.3 **HW-3**; Basement, Garage, Rear Entry
- Lockset; TBD, entrance function with keyed dead bolt.
- Trim; Lever
- Hinges; 1-1/2 pair.
- Door bottom; Pemko.
- Threshold; Pemko.
- Weatherstripping

08.14.4 **HW-4**; Laundry
- Lockset; TBD, passage function.
- Trim; TBD.
- Hinges; 1-1/2 pair.

09 Finishes

09.1 Gypsum Wall Board
09.1.1 General scope; garage, workshop, and loft locations only. Gypsum board wall and ceiling systems are to be installed in accordance with the standards and recommendations outline in the USG "The Gypsum Construction Handbook", current edition.
09.1.2 Wallboard; Sheetrock Brand Gypsum Panels, Regular Core or approved equal, 1/2"-thick or as shown on the drawings.
09.1.3 Fire-rated wall board; Sheetrock Brand Gypsum Panels, Fire Code C Core or approved equal, 1/2" and 5/8"-thick.
09.1.4 Moisture resistant wall board; Sheetrock Brand Gypsum Panels - Water-Resistant (with Aqua-Tough) or approved equal, 1/2"-thick.
09.1.5 Garage fire-rated separation; install a continuous fire-rated barrier on walls and ceilings between the garage and occupied areas in compliance with the building code, extend the separation full height to underside of roof sheathing, seal edges and penetrations with fire-rated sealant.
09.1.6 Corner and edge trim; metal corner and edge beads as detailed and as required for a proper installation.
09.1.7 Support; provide framing or blocking support of edges and penetrations larger than 4" diameter or square.
09.1.8 Reveal trims; Reglet or approved equal, profiles as shown or as approved by the Architect.
09.1.9 Finish; level 4 finish minimum.

09.2 Veneer Plaster

09.2.1 General scope; see drawings for location and extent. Veneer plaster wall and ceiling systems are to be installed in accordance with the standards and recommendations outline in the USG "The Gypsum Construction Handbook", current edition.
09.2.2 Gypsum base; Imperial Brand Gypsum Bases or approved equal, 1/2"-thick.
09.2.3 Garage separation; install a continuous fire-rated barrier on walls and ceilings between the garage and occupied areas in compliance with the building code, extend the separation full height to underside of roof sheathing, seal edges and penetrations.
09.2.4 Veneer plaster; USG 2-coat veneer plaster system.
09.2.5 Corner and edge trim; metal corner and edge beads as detailed and as required for a proper installation.
09.2.6 Support; provide framing support of edges and penetrations larger than 4" diameter or square.
09.2.7 Reveal trims; Reglet or approved equal, profiles as shown or as approved by the Architect.
09.2.8 Finish; smooth.

09.3 Access Doors
09.3.1 General scope; install access doors as required and as approved by the Architect.
09.3.2 Access door; Bauco Access Panel Solutions, Plus II or approved equal, single leaf, size and location as approved by the Architect.

09.4 Tile Backer Board
09.4.1 General scope; see drawings for location and extent, for use in tub and shower enclosures and other areas as noted on the drawings or as specified. Tile backer board wall and ceiling systems are to be installed in accordance with the standards and recommendations outline in the USG "The Gypsum Construction Handbook", current edition for installation on floors, walls and ceilings and Tile Council of North America guidelines.
09.4.2 Backer Board; Durock Cementitious Backer Board, 1/2"-thick or as noted on the drawings.

09.5 Ceramic Wall Tile
09.5.1 General scope; see finish schedule and interior elevations for location, pattern and extent.
09.5.2 **CWT**; tile selection TBD by Architect.
09.5.3 Tile trim shapes; TBD by Architect.
09.5.4 Grout; color TBD by Architect.
09.5.5 Setting method; Setting method; thin-set adhesive on tile backer board underlayment, provide all components, prepare substrates and install tile according to manufacturer's requirements and recommendations and Tile Council of North America guidelines.
09.5.6 Waterproof membrane; Schluter KERDI-SHOWER-KIT or approved equal, provide a complete system of components for a water-tight shower assembly.
09.5.7 **Tile Allowance: See Section 1 – Allowance for material cost only from subcontractor. Contractor to carry installation cost separately in section 9.**

09.6 Floor Finish Transitions
09.6.1 General scope; provide finish transitions at door openings as shown or noted on the drawings or as approved by the Architect. Finish transitions are to be centered under doors unless noted, detailed or approved otherwise.

09.7 Ceramic Floor Tile
09.7.1 General scope; see finish schedule and finish plans for location, pattern and extent.
09.7.2 **CFT**; tile selection TBD by Architect.
09.7.3 Tile trim shapes; TBD by Architect.
09.7.4 Grout; color TBD by Architect.

09.7.5 Setting method; thin-set adhesive on tile backer board underlayment, provide all components, prepare substrates and install tile according to manufacturer's requirements and recommendations and Tile Council of North America guidelines.
09.7.6 Waterproof membrane; Schluter KERDI-SHOWER-KIT or approved equal, provide a complete system of components for a water-tight shower assembly.
09.7.7 Floor finish transition; TBD by Architect.
09.7.8 **Tile Allowance: See Section 1 – Allowance for material cost only from subcontractor. Contractor to carry installation cost separately in section 9.**

09.8 Stone Tile Flooring
09.8.1 General scope; see finish schedule and interior elevations for location, pattern and extent.
09.8.2 **ST**; stone, size, thickness and finish TBD by Architect.
09.8.3 Setting method; thin-set adhesive on backer board underlayment unless otherwise noted, 3/4" total thickness for flush finish to adjacent floor finishes, provide all components, prepare substrates and install tile according to manufacturer's requirements and recommendations and Tile Council of North America guidelines.
09.8.4 Adhesive; as recommended by tile manufacturer/supplier.
09.8.5 Waterproof floor and shower membrane; Schluter KERDI-SHOWER-KIT or approved equal, provide a complete system of components for a water-tight floor and shower assembly.
- Showers.
- Floors.

09.8.6 Shower drain; Schluter KERDI-LINE, linear type.
09.8.7 Floor finish transitions; TBD.
09.8.8 **Tile Allowance: See Section 1 – Allowance for material cost only from subcontractor. Contractor to carry installation cost separately in section 9.**

09.9 Hardwood Flooring
09.9.1 General scope; see finish schedule and interior elevations for location, pattern and extent.
09.9.2 **WD**; White Oak T&G, rift sawn, clear grade, 25/32"-thick, 3-1/2 wide.
09.9.3 Installation; rosin paper.
09.9.4 Stain; Minwax or approved equal, 250 VOC Compliant Wood Finish, stain color TBD by Architect.
09.9.5 Finish; Minwax Super Fast-Drying Polyurethane for Floors 350 V.o.c. or approved equal, stain and 3-coats polyurethane finish, 2 coats high gloss, 1 coat satin, clear gloss.

09.10 Carpeting
09.10.1 General scope; see finish schedule and interior elevations for location, pattern and extent.
09.10.2 **CPT**; TBD by Architect.
09.10.3 Pad;
09.10.4 Installation; provide all components, prepare substrates and install carpeting according to manufacturer's requirements
09.10.5 Floor finish transitions; TBD by Architect.
09.10.6 **Carpet Allowance: See Section 1 – Allowance for material cost only from subcontractor. Contractor to carry installation cost separately in section 9.**

09.11 Interior Paint Finish
09.11.1 General scope; see finish schedule and interior elevations for location and extent. Prepare substrates and apply primers and paint in strict accordance with paint manufacturer's requirements and recommendations.
09.11.2 Veneer plaster walls; Benjamin Moore Aura, 2 finish coats minimum, eggshell finish, color TBD by Interior Designer.

09.11.3 Veneer plaster ceilings; Benjamin Moore Aura, 2 finish coats minimum, flat finish, color TBD by Interior Designer.
09.11.4 Wood trim; Benjamin Moore Aura, 2 finish coats minimum, semi-gloss finish, color TBD by Interior Designer.
09.11.5 Concrete slabs; Benjamin Moore.
09.11.6 Ducts and plenums; paint interior duct surfaces where visible through grilles and registers, color flat black.
09.11.7 Interior primers; Provide primers suitable for each substrate and as recommended by the paint manufacturer.

09.12 Exterior Paint Finish
09.12.1 General scope; prepare substrates and apply primer and paint in strict accordance with paint manufacturer's requirements and recommendations.
09.12.2 Siding and trim paint; Benjamin Moore Aura or approved equal, semi-gloss finish, minimum 2 finish coats, colors to match existing.
09.12.3 Wood door paint; surfaces pre-primed with Cabot "problem solver" acrylic primer before installation, minimum 2 finish coats siding and trim paint. Color to match existing.
09.12.4 Wrought iron fence, railings and window grates; Benjamin Moore Ultra-Spec EXT or approved equal, gloss finish, color black.
09.12.5 Exterior primers; provide primers suitable for each substrate and as recommended by the paint manufacturer.

010 Specialties

010.1 Mirrors
010.1.1 Mirrors; see interior elevations for locations and sizes.

010.2 Bathroom Accessories
010.2.1 General scope; provide accessories as follows. See drawings for locations and mounting heights.
010.2.2 Basement Bath;
- Towel bars; style TBD by Architect.
- Robe hooks; style TBD by Architect.
- Toilet paper holder; style TBD by Architect.

010.2.3 Master Bathroom;
- Towel bars; style TBD by Architect.
- Robe hooks; style TBD by Architect.
- Toilet paper holder; style TBD by Architect.

010.2.4 Hollie's Bath;
- Medicine Cabinet; Robern or equal, style TBD by Architect.
- Towel bars; style TBD by Architect.
- Robe hooks; style TBD by Architect.
- Toilet paper holder; style TBD by Architect.
- Shampoo shelf; style TBD by Architect.

010.2.5 **Bath Accessories Allowance: See Section 1 – Allowance for material only. Contractor to carry installation cost separately in section 6.**

010.3 Shower Enclosure and Doors
010.3.1 Generals scope; Glass shower enclosure & door at basement bath, and master bathroom. Additional glass door at master bath window. Layout and details as shown on the drawings.
010.3.2 Doors; 3/8" low iron tempered glass frameless shower enclosure and door.
010.3.3 Hardware; CR Lawrence Co. or equal, D-style handle, 3/4x3/4 channel on bottom, sides and top of glass as required. Chrome finish.
010.3.4 Pulls; TBD.
010.3.5 Hardware finish; chrome (US26).

010.3.6 Blocking; provide blocking as required for proper anchoring and support of glass fixings and hinges. See Division 6 – Wood Plastic and Composites for Rough framing, Wood blocking.

010.4 Louvers and wall caps

010.4.1 General scope; see exterior elevations for locations and installation detail.

010.4.2 Louver; Airolite or approved equal, size and style TBD by Architect.

010.4.3 Louver accessories; bird screen, see window installation for flashing and sill pans.

010.4.4 Louver plenum; coordinate installation with duct plenum, drain plenum to exterior.

010.4.5 Louver finish; TBD by Architect.

010.4.6 Wall caps; type, style and finish TBD by Architect.
- Dryer vent.
- Bathroom exhaust vent.

010.4.7 Roof caps; type, style and finish TBD by Architect.
- Radon vent.
- Kitchen exhaust hood vent.
- Bathroom exhaust vent.

011 Equipment

011.1 Appliances

011.1.1 General scope; see Kitchen Appliances Schedule. Appliances are to be provided and installed by the Contractor. The Contractor is to coordinate and provide utility connections as required by each appliance. See drawings for appliance locations.

011.1.2 Connections; provide utility rough-in and final connections to each appliance according to the manufacturers requirements.

011.1.3 Coordination; coordinate appliance installation requirements with casework and countertops.

011.1.4 **Appliance Allowance: See Section 1 – Allowance for material only. Contractor to carry installation cost separately in section 6.**

012 Furnishings (Division Not Used)

013 Special Construction (Division Not Used)

014 Conveying Equipment (Division Not Used)

021 Plumbing

022.1 Plumbing

022.1.1 General scope; Existing plumbing supply and waste lines to be removed. Provide a complete and fully engineered domestic water supply and waste system on a design build basis. Provide engineering and engineering documentation required by state and local building codes and permitting. See drawings for fixture and appliance layout. Provide piping and connections to fixtures, appliances and equipment.

022.1.2 Coordination; **review of Architectural and Structural drawings is required**. Coordinate with framing, HVAC, water treatment, irrigation system, and security system subcontractors and vendors and provide piping, valves and connections as required. Install fixtures and equipment in exact locations shown on the drawings or as approved by the Architect. **Fixtures and equipment not installed in approved locations must be relocated at the Contractor's expense**.

022.1.3 Plumbing fixtures; see plumbing fixture schedule, install concealed shut off valves at fixtures.
022.1.4 Master Bath Steam Shower; see plumbing fixture schedule, install rough plumbing to accommodate for scope. Kohler Invigoration Series steam generator or equal.
022.1.5 Domestic hot and cold water distribution; PEX, Uponor terminations. Remove all existing copper piping where possible.
022.1.6 Water filtration; install water filtration systems as recommended by the Owner's water testing vendor. Scope, TBD.
022.1.7 Pipe insulation; fiberglass, domestic hot and cold water piping, thickness in accordance with local energy codes, R-4 minimum.
022.1.8 Domestic hot water heating – recirculation loop; Master bath.
022.1.9 Waste piping; Cast Iron for all vertical runs, sized to suit demand.
022.1.10 Vent piping; PVC or approved equal, sized to suit demand.
022.1.11 Gas distribution piping; black iron pipe, sized to suit demand install shut off valves at gas-fired appliances.
022.1.12 Vibration isolation; isolate supply and waste piping from framing and finish.
022.1.13 Labeling; label control components of the system including shutoff valves.

022.2 Plumbing Fixtures
022.2.1 General scope; see Plumbing Fixture Schedule, plumbing fixtures are to be provided and installed by the Contractor. The Contractor is to coordinate and provide rough-in components, connections and shut-off valves to each fixture. Location of shut-off valves is to be approved by the Architect.
022.2.2 Connections; provide supply and waste rough-in and final connections to each fixture according to the manufacturers requirements.
022.2.3 Coordination; coordinate fixture installation requirements with casework and countertops as applicable.

022.3 Hose Bibs
022.3.1 General scope; locations as shown on the drawings or as approved by the Architect.
022.3.2 Wall mounted hydrant; Woodford or approved equal, freezeless type, angled sill cock with hand wheel.
022.3.3 Finish; brass.
022.3.4 Locations; see drawings for exact location.
- Garage (interior).
- Workshop (exterior).

023 Heating, Ventilation and Air Conditioning

023.1 HVAC
023.1.1 General scope; Existing cast iron radiator system on first floor to remain. Provide a complete heating and cooling system on a design/build basis. Provide all components required for a complete and functioning system.
023.1.2 Coordination; **review of architectural and Structural drawings is required**. Coordinate with framing, electrical and security system subcontractors and vendors as required. Review location of equipment and installation and routing of piping, ductwork and registers with the architect prior to procurement and fabrication. **Equipment, piping, ductwork and registers not installed in approved locations must be relocated at the Contractor's expense**.
023.1.3 Design Basis; consult Owner or Architect for detailed performance criteria.
023.1.4 Basement Heating system; hydronic baseboard, gas-fired hot water boiler to supply hot water baseboard convectors, and domestic hot water heating.
- Zones; One (1) total.
  (a) All basement spaces.

023.1.5 First Floor Heating system; hydronic baseboard on first floor, gas-fired hot water boiler to supply hot water baseboard convectors at all existing locations, hot water radiant floor heat, and domestic hot water heating.
- Zones; Three (3) total.
  (a) Library 103, Living Room 104.
  (b) Hall 102, Powder Room, Dining Room 105.
  (c) Kitchen 106, Family Room, 108, Stair 107.

023.1.6 First Floor Cooling system; ducted hydro-air cooling system, DX split system at family room to supply cold water coil. Condenser location as shown on drawings.

023.1.7 Second & Third Floor Heating-cooling system; ducted low-velocity hydro-air heating and cooling system located in the attic, gas-fired hot water boiler to supply AHU hot water coils and domestic hot water heating, cold water coil.
- Zones; Four (4) total.
  (a) Master Suite
  (b) Bedroom 202, Bath 201
  (c) Hall 206, Hollie's Office 207, Hollie's bath 208
  (d) Attic.

023.1.8 Accessory Apartment Heating-cooling system; Cassette mini-split heating and cooling system located in bedroom and living room, gas-fired hot water boiler to supply AHU hot water coils and domestic hot water heating, cold water coil.

023.1.9 Garage Heat; 50,000 BTU natural gas, direct vent unit heater, Modine Hot Dawg, or approved equal to be located over back door to exterior.

023.1.10 Boiler; Weil McLain or approved equal.

023.1.11 Hot Water Storage; Weil McLain Plus or approved equal.

023.1.12 Hydronic baseboard; Runtal or approved equal.

023.1.13 Radiant floor; Viega ProRadiant Systems Climate Panel or approved equal.
- Locations: kitchen, family room, master bath, Hollie's bath.

023.1.14 Hot water supply and return piping; PEX, Uponor terminations.

023.1.15 Pipe insulation; fiberglass, supply and return piping, thickness in accordance with local energy codes, R-4 minimum.

023.1.16 Condensate piping; PVC or ABS, route to adjacent floor drains or as approved by the Architect.

023.1.17 Air Handling Units; First Company or approved equal.

023.1.18 AHU Filters; Lennox HC-13 MERV 13 or approved equal.

023.1.19 Humidification; Nortec Resdelux or approved equal.

023.1.20 Ducts – rectangular; galvanized sheet metal, trunks and branch ducts, fabricated and installed in accordance with SMACNA standards, insulated.

023.1.21 Ducts – flexible; branch terminations only, maximum length 6', insulated.

023.1.22 Duct insulation; FSK foil-backed insulation, supply and return ducts, 2"-thick at attics and crawlspaces, 1-1/2" at basement areas.

023.1.23 Duct lining; non-fiberglass acoustical duct liner, 1"-thick.

023.1.24 Duct sealing; 3M mastic duct sealer or approved equal.

023.1.25 Duct painting; paint duct interiors flat black where visible through registers and grills.

023.1.26 Combustion vent and flue; as required by the combustion appliance manufacturer, location as shown on the drawings or as approved by the architect.

023.1.27 Wood floor registers and grilles; Wood Ventures or approved equal, egg crate pattern, wood species and finish to match hardwood flooring or as approved by the Architect.

023.1.28 Metal wall and ceiling registers and grilles; Hart & Cooley or approved equal, style TBD by Architect, finish TBD by Architect.

023.1.29 Thermostats; Aprilaire or approved equal, heating cooling thermostats with low temp alarm for security system trouble monitoring, coordinate low-voltage control wiring with the electrical subcontractor.

023.1.30 Air and water system balancing; balance supply and return air and water distribution systems, provide written balancing report.
023.1.31 Sound and vibration attenuation; isolate sources of vibration from wood frame wall, floor structure and finishes. Isolate circulators from piping and AHU from ductwork. Provide vibration isolator types appropriate for each purpose.
023.1.32 Toilet exhaust fans; Panasonic or approved equal, back draft dampers.
023.1.33 Kitchen hood exhaust; see appliance schedule, coordinate duct and power requirements.
023.1.34 Dryer exhaust; see appliance schedule, coordinate duct and wall cap installation, wall cap location as shown on the drawings or as approved by the Architect.
023.1.35 Radon exhaust fan; accommodate the future installation of a dedicated radon exhaust fan. Fantech Inline fan or approved equal.
023.1.36 Labeling; label control components of the system and the flow direction of water and air systems.

023.2 Exterior Radiant Driveway/Walkway System
023.2.1 General scope; Provide all components required for a complete and functioning exterior radiant system.
023.2.2 Coordination; review of architectural and structural drawings is required. Coordinate with landscape construction as required. Review location of equipment and installation and routing of piping with the architect and landscape architect prior to procurement and fabrication.
023.2.3 Layout Documentation; survey radiant piping layout and document full extent of pipe locations.
023.2.4 Locations;
- Extend 15'-0" in front of garage doors.
- 4'-0" wide exterior stone walkway from back garage door to mudroom door.

026 Electrical

026.1 Power
026.1.1 General scope; Existing wiring scope to remain in accessory apartment and living room. Provide a complete and fully engineered electrical system on a design/build basis. Provide engineering and engineering documentation required by state and local building codes and permitting. Rewire all existing first floor, second floor, and attic rooms. See drawings for device, fixture and appliance layout. Provide power and control wiring and connection to devices, fixtures, appliances and equipment including line voltage and low voltage fixtures and equipment.
026.1.2 Materials and Installation; provide materials and installation methods in compliance with the National Electrical Code, NEC 2008/NFPA 70.
026.1.3 Coordination; **review of Architectural and Structural drawings is required**. Coordinate with framing, HVAC, security, A/V, irrigation, fire protection and data subcontractors and vendors and provide power and control wiring connections and/or devices as required. **Install devices, fixtures and equipment in exact locations shown on the drawings or as approved by the Architect. Devices, fixtures and equipment not installed in approved locations must be relocated at the Contractor's expense**.
026.1.4 Electric Service; Square D or approved equal, provide a new 400 AMP service and associated power feeds, panels, breakers and distribution. Service location as shown on the drawings or as approved by the Architect.
- Electrical Service Distribution; 300 AMP to main house, 100 AMP to Accessory apartment, each with dedicated meters.

026.1.5 Distribution panels; Square D or approved equal, provide distribution panels and sub panels, required to serve building loads, size panels to allow 20% surplus

load capacity. Panel locations as shown on the drawings or as approved by the Architect.

026.1.6 Wiring; copper, 12GA minimum, route wiring in accordance with NEC requirements.

026.1.7 Ground-fault circuit-interrupter (GFCI) protection; provide ground-fault circuits to or GFCI outlets at locations requiring ground-fault protection.

026.1.8 Arc-fault circuit-interrupter (AFCI) protection; provide arc-fault circuits to or AFCI outlets at locations requiring ground-fault protection.

026.1.9 Existing Rough wiring scope to remain; Assume that the electrical rough wiring scope will include accommodating and incorporating into the overall renovated spaces existing electrical destinations such as outlets, switch locations and existing fixtures and/or light fixture locations that are remaining. This scope to include all wiring materials and labor.

026.1.10 New rough wiring scope; Assume that the electrical rough wiring scope will include providing wiring materials and labor for the installation of new electrical destinations such as outlets, standard and dimmer switches and/or light fixtures, appliances, fans, etc., including rewiring of existing destinations. See electrical drawings for scope.

026.1.11 Exterior power; covered weather proof outlets as approved by the Architect, locations as shown on the drawings or as approved by the Architect, 2 locations minimum.
- Garage front.
- Workshop rear.

026.1.12 HVAC Equipment; provide power and control wiring, devices and connections as required by the HVAC system.

026.1.13 Future radon vent fan; provide power wiring and connection at the future radon vent fan location.

026.1.14 Future Irrigation system; provide power and control wiring, devices and connections for a future irrigation system.

026.1.15 Security system; provide power wiring and devices as required by the security system.

026.1.16 Appliances; provide power and control wiring, devices and connections as required by appliances.

026.1.17 Sump pumps; provide power and control wiring, devices and connections as required by the sump pumps.

026.1.18 Devices and cover plates; Leviton Decora style or approved equal, color white or as approved by Architect.

026.1.19 Devices and cover plates; Lutron Diva style or approved equal, color white or as approved by Architect. Assume for pricing purposes that at least one circuit per room will have a dimmer.

026.1.20 Floor boxes; Hubbell or approved equal, flush, style and finish as shown on the drawings or as approved by the Architect.

026.1.21 Labeling; typed labeling of panels and circuit breakers.

026.2 Heat Trace

026.2.1 General scope; provide heat trace at all flat roof eave edge and gutter locations. Review power feed locations with the Architect prior to installation.

026.3 Smoke and CO detection

026.3.1 General scope; provide smoke and CO detectors as required by applicable building codes, locations throughout the existing and new spaces, as shown on the drawings and as approved by the Architect.

026.3.2 Combined smoke and CO detectors; Kidde or approved equal, device selection TBD by Architect.

026.4 Lighting

026.4.1 General scope; provide light fixtures as shown on the drawings and as outlined in the Light Fixture Schedule. Provide IC enclosures where fixtures are installed in insulated wall, floor or roof assemblies.

026.4.2 Coordination; **review of Architectural and Structural drawings is required**. Coordinate with framing subcontractors. **Install fixtures and switches in exact locations shown on the drawings or as approved by the Architect. Fixtures and switches not installed in approved locations must be relocated at the Contractor's expense. Locate remote transformers as shown on the drawings or as approved by the Architect**.

026.4.3 Interior recessed light fixtures; See electrical schedule for scope.

026.4.4 Exterior light fixtures; see Light Fixture Schedule, see drawings for type and location.

026.5 Lighting Control

026.5.1 Lighting control system; TBD.

026.6 Landscape Lighting

026.6.1 Landscape and site light fixtures; TBD.

026.7 Door Bell

026.7.1 General scope; provide all components of a door bell including one two tone chime and two push button locations. Coordinate transformer location, power connection and low-voltage control wiring.

026.7.2 Chime; Chime; Nutone LA174WH two tone chime, locations as shown on the drawings. location as shown on the drawings or as approved by the Architect.

026.7.3 Push button; button style TBD by Architect, push button locations as shown on the drawing or as approved by the architect, allow for 2 locations:

- Front door.
- Mudroom door.

026.8 Photo-Voltaic Panel System

026.8.1 General scope; Prepare for future photo-voltaic panel system.

026.8.2 Coordination; **review of Architectural and Structural drawings is required**. Coordinate with subcontractors for panels to be located at the east side of the workshop.

026.8.3 Components;

- Breaker panels.

027 Communications

027.1 General

027.1.1 All cabling shall be home run, free of splice points and in compliance with NEC, TIA/EIA and BICSI Installation Standards.

027.1.2 All coaxial cabling shall be terminated at both ends with high quality snap & seal F-type connectors (no crimp-on or twist-on connectors).

027.1.3 Category 6 cabling shall be terminated at both ends with RJ45 Category 6 termination (Standard T568B).

027.1.4 A dedicated 20A circuit shall be provided for communication panel and incoming services.

027.1.5 A supplemental grounding bar shall be provided for communication services and equipment.

027.2 Telephone Systems

027.2.1 General scope; provide wiring and devices for telephone locations shown on the drawings. Coordinate device type and wiring installation with the Owner's telephone systems vendor if applicable.

027.2.2 Locations;

- Everett's Office.
- Kitchen.
- Library.

- Hollie's Office.
- Master Bedroom.

027.2.3 Devices; provide device types shown on the drawings, match electrical devices and cover plates.

027.3 CATV and data distribution system

027.3.1 General scope; provide a complete structured cable data distribution system. Structured cable bundle to consist of one (1) CAT-6 cable and one (1) RG6 cable. See drawings for device type and layout, terminate structured cable at backing panel location shown on the drawings or as approved by the Architect.

027.3.2 Coordination; **review of Architectural and Structural drawings is required**. Coordinate with framing and A/V, subcontractors and vendors. **Install devices in exact locations shown on the drawings or as approved by the Architect. Devices not installed in approved locations must be relocated at the Contractor's expense**.

027.3.3 Locations;

- Everett's Office.
- Rec Room.
- Family Room.
- Hollie's Office.

027.3.4 Devices; provide device types shown on the drawings, match electrical devices and cover plates.

027.3.5 Wireless Access Points; Provide two wireless access points. Coordinate with owner and Architect.

- Locations; Basement AV panel, Attic eve.

027.4 Audio/Visual Systems

027.4.1 General scope; design and installation by Owner's vendor, the Contractor is to coordinate the installation.

027.5 Attic Location/Cell Reception

027.5.1 One 2" PVC conduit for low voltage from basement to attic.

027.5.2 RG11 from attic to communication panel head end (for cellular reception)

027.6 Security Systems

027.6.1 General scope; design and installation by Owner's vendor, the Contractor is to coordinate installation.

027.6.2 Coordination; coordinate with HVAC, A/V, irrigation, fire protection and data subcontractors and vendors and provide power and control wiring connections and/or devices as required. **Install devices, fixtures and equipment in exact locations shown on the drawings or as approved by the Architect. Devices, fixtures and equipment not installed in approved locations must be relocated at the Contractor's expense**.

027.6.3 Equipment performance and trouble monitoring; provide performance and/or trouble monitoring for the following:

- Heating system, low temperature.
- Basement water and flood.
- Sump pump.
- Sewage ejector.

027.6.4 Device and cover plates; match electrical devices and cover plates.

031 Earthwork

02.1 Excavation

02.1.1 General scope; prior to excavation notify Dig Safe and initiate a survey for adjacent public ways and on-site documentation of existing utilities locations, identify utilities and protect location marks from damage for the duration of the project. Initiate additional surveys when location marks are lost.

02.1.2 Building footings and foundations; excavate as required for sub-grade fill, footings, foundation walls and slabs-on-grade.

02.1.3 Concrete slabs-on-grade; excavate to 1'-0" minimum below finished concrete slab to allow for crushed stone drainage and radon ventilation course and insulation.

02.1.4 Utilities; excavate as required for utility trenches and proper installation of utilities. Excavate to depths required by public and private utility companies and provide required separation between utilities where applicable.

02.1.5 Site walls; excavate as required for sub-grade fill, footings, foundation walls and slabs-on-grade.

02.1.6 Shoring; see General Conditions, Shoring for temporary shoring and foundation underpinning requirements.

02.1.7 Excavated material; stockpile excavated material for reuse as rough grading – not backfill. Remove excess excavated material from site and dispose of in accordance with local requirements.

02.1.8 Unforeseen conditions; report unforeseen conditions to the Architect immediately. Potential unforeseen conditions include but are not limited to ledge, poor soils conditions, buried drainage structures, abandoned foundations or concrete slabs, abandoned tanks, abandoned septic systems, watertable, and undocumented utilities.

02.2 Ledge Removal

02.2.1 **Assume $3,000 allowance for removal of ledge associated with building foundation excavation, utilities trenching**.

02.3 Engineered Fill and Backfill

02.3.1 Footings; bear footings on undisturbed and compacted sub-grade. Where fill is required under footings use crushed stone fill, compacted in 6" lifts to 95% compaction.

02.3.2 Slabs-on-grade; crushed stone drainage and radon ventilation fill, 6"-thick minimum, compacted in 12" lifts to 95% compaction.

02.3.3 Drainage fill; clean crushed stone.

02.3.4 Foundation and retaining wall backfill; clean well-drained fill, compacted. Do not backfill until authorized by the Structural Engineer or when the foundation walls have been fully braced by concrete slab-on-grade or first floor framing and subfloor decking.

02.3.5 Utilities; where fill is required under utilities use crushed stone fill, compacted in 6" lifts to 95% compaction or as required by public or private utilities.

02.3.6 Paving; crushed stone sub-grade fill, 6"-thick minimum, compacted in 6" lifts to 95% compaction.

032 Exterior Improvements

032.1 Foundation Exterior Perimeter Drain

032.1.1 General scope; install exterior perimeter drains at below grade foundations for new basement foundation.

032.1.2 Drainage fill; see Division 31 – Earthwork, Engineered Fill and Backfill.

032.1.3 Filter fabric; see Division 31 – Earthwork, Filter fabric.

032.1.4 Drain pipe; 6"-diameter perforated PVC pipe.

032.2 Foundation Interior Perimeter Drain

032.2.1 General scope; install interior perimeter drains at existing foundations interior perimeter for basements as shown on the drawings. Connect perimeter drains to a sump pump system and route drains to a minimum of two daylight outlet locations (if allowed by local ordinances). Coordinate locations of daylight outlets with Owner and Landscape Architect.

032.2.2 Concrete slab; saw cut and remove existing concrete slab for drain installation as shown on the drawings.

032.2.3 Drain daylight outlet; install pop-up drain terminations at daylight outlets.
032.2.4 Drainage fill; see Division 31 – Earthwork, Engineered Fill and Backfill.
032.2.5 Filter fabric; see Division 31 – Earthwork, Filter fabric.
032.2.6 Drain pipe; 4"-diameter perforated PVC pipe.

032.3 Filter Fabric
032.3.1 General scope; provide filter fabric at foundation perimeter, subgrade drains and where shown or noted on the drawings.
032.3.2 Filter Fabric; light weight, non-woven polypropylene fabric made of recycled fiber where possible.

032.4 Downspout Drains
032.4.1 General scope; connect downspouts to concrete splash blocks.

032.5 Concrete Slab-on-Grade Sub-Grade Drain Field
032.5.1 General scope; install a sub-grade drain under garage concrete slab-on-grade in each garage bay. Route the sub-grade drain field through foundation wall to a one daylight outlet locations (if allowed by local ordinances). Coordinate locations of daylight outlet with Owner and Landscape Architect.
032.5.2 Drain pipe; 4"-diameter PVC perimeter drainage pipe.
032.5.3 Drainage fill; see Division 31 – Earthwork, Drainage fill, as shown on the drawings, 6"-thick minimum depth.
032.5.4 Filter Fabric; see Division 31 – Earthwork, Filter fabric, install on subgrade under drainage fill.

032.6 Basement Sump System
032.6.1 General scope; Install an interior sump pit with sealed cover where shown on the drawings or as approved by the Architect with a duplex pump and piping sized for maximum expected water flow. Install all necessary piping, backflow preventers, power, battery back-up, security system alarm monitoring and automatic control. Connect piping to a storm water management system or to daylight outlets (if allowed by local ordinances).

032.7 Storm Water Management
032.7.1 General scope; TBD.

032.8 Grading
032.8.1 General scope; see drawings for finish grading scope, elevations and transition locations.
032.8.2 Rough grading; grade to 6" below finish contour elevations of areas to be seeded and as shown on the drawings. Use excavated material where necessary and to the greatest extent possible to raise the grade. Import suitable grading fill as required if existing material is not suitable or if there is not an adequate quantity. Make transitions to existing grades smooth and imperceptible. Slope grades away from the building perimeter for positive surface drainage, 5% minimum slope.
032.8.3 Finish grading; TBD by Landscape Architect.

032.9 Asphalt Paving
032.9.1 General scope; TBD by Landscape Architect.

032.10 Site Walkway Paving
032.10.1 General scope; TBD by Landscape Architect.

032.11 Patio and Landing Paving
032.11.1 General scope; TBD by Landscape Architect.

032.12 Site Steps
032.12.1 General scope; TBD by Landscape Architect.

032.13 Site Retaining Walls
032.13.1 General scope; TBD by Landscape Architect.

032.14 Site Railings
032.14.1 General scope; provide site guardrails and handrails as shown on the drawings.
032.14.2 Railings; decorative wrought iron.
032.14.3 Railing anchors; see drawings for anchor details.

032.14.4 Finish; finishes TBD by Architect.
032.15 Equipment Screening
032.15.1 Condenser unit screening; TBD by Landscape Architect.
032.16 Landscape Materials
032.16.1 General scope; TBD by Landscape Architect.
032.17 Irrigation System
032.17.1 General scope; TBD by Landscape Architect.

033 Utilities

033.1 Utilities
033.1.1 General scope; provide excavation, trenching, installation and backfill of buried utilities associated with the project including storm water management systems. See Ledge Removal for excavation through ledge.
033.1.2 Existing utilities; contact private and public utilities and coordinate service terminations, temporary services and permanent services as required by the project.
033.1.3 New utilities; install new utilities as required and as shown on the drawings. Comply with public and private utility installation requirements for materials, methods, details and procedures related to utility installations.
033.2 Electric Service
033.2.1 General scope; extend a new buried 400 amp electric service from the private utility connection location to the existing electric meter location. Extend a new buried 100 amp electric service from the private utility to accessory apartment to existing meter in basement.
033.3 Telephone and CATV
033.3.1 General scope; extend two buried 3" PVC conduit from private utility connection location in mechanical room.
033.4 Building Sewer
033.4.1 General scope; Evaluate condition of existing sewer line from street into the house at new mechanical room.
033.5 Natural Gas
033.5.1 General scope; Existing to remain.
033.6 Water Service
033.6.1 Public water utility; Add a separate irrigation meter to the existing water service as it enters the house.

End of Specifications

Revised 9/21/17

BZA APPLICATION FORM

SUPPORTING STATEMENT FOR A VARIANCE

EACH OF THE FOLLOWING REQUIREMENTS FOR A VARIANCE MUST BE ESTABLISHED AND SET FORTH IN COMPLETE DETAIL BY THE APPLICANT IN ACCORDANCE WITH MGL 40A, SECTION 10:

A) A Literal enforcement of the provisions of this Ordinance would involve a substantial hardship, financial or otherwise, to the petitioner or appellant for the following reasons:

The Owner would not be able to build a dimensionally conforming addition with regard to FAR, setback dimensions, and other zoning requirements for the property.

B) The hardship is owing to the following circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located for the following reasons:

The hardship arises from the shape and existing topography of an old lot; where the existing house is located at the very front of a property, and the grade of the lot drops off precipitously from the middle to the back of the lot. The percentage of the steep grade on the lot limits the buildable area on the remaining portion of the lot that is less than a 10% grade based on the current Private Open Space requirements.

C) ***DESIRABLE RELIEF MAY BE GRANTED WITHOUT EITHER:***

1) Substantial detriment to the public good for the following reasons:

The basement egress stair/ramp access provides the most direct access to/from the basement and to/from the street without impacting the visual appearance of added pathways and/or surface bicycle storage rack/shed on the site. The proposed garage addition is built on the existing footprint of the house as well as the existing driveway. The steeply sloping wooded area of the site remains as a buffer between the house and the abutting properties.

2) Relief may be granted without nullifying or substantially derogating from the intent or purpose of this Ordinance for the following reasons:

This will not create a precedent because it's a unique, preexisting, naturally occurring topographical condition that is unique to only a few properties in the City.

* **If You have any questions as to whether you can establish all of the applicable legal requirements, you should consult with your own attorney.**