I CERTIFY THAT THE DWELLING IS LOCATED IN FLOOD PLAIN ZONES VE (EL.16) & AE (EL.15) AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 25001C0511J AND THAT FLOOD PLAIN ZONES VE (EL.16) & AE (EL.15) ARE SPECIAL FLOOD HAZARD AREA.

HOLMES AND McGRATH, INC.

Michael B. McGrath
Registered Professional
Land Surveyor

Aug 30 2021
Date

I CERTIFY THAT THE DWELLING AND SHED ARE LOCATED ON THE LOT AS SHOWN.

HOLMES AND McGRATH, INC.

Michael B. McGrath
Registered Professional
Land Surveyor

Aug 30 2021
Date

NOTES

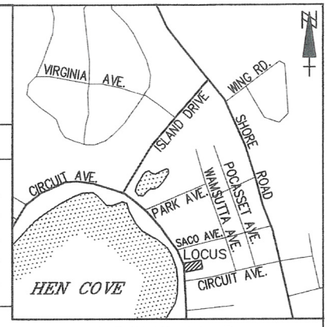
1. HOUSE NUMBER: 72
2. ASSESSOR'S NUMBER: MAP 43.3, PARCEL 239–0–R
3. ZONING DISTRICT: R–40
4. FLOOD HAZARD ZONES: VE (EL.16), AE (EL.15) & X (500 YR.)
5. BENCHMARK: AS SHOWN
6. TOPOGRAPHIC INFORMATION COMPILED FROM AN ON THE GROUND INSTRUMENT SURVEY.
7. ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN GEODETIC VERTICAL DATUM OF 1988. (NAVD88)
8. REFERENCE: PLAN BOOK 28, PAGE 1
   PLAN BOOK 196, PAGE 145
9. WIND EXPOSURE CATEGORY: C

LOT COVERAGE NOTES (FOR ZONING PURPOSES)

	EXISTING	MAXIMUM ALLOWABLE
BY STRUCTURES	24.2%	25%

LEGEND

UTILITY POLE	
GAS VALVE	
EXISTING SPOT GRADE	14.6
EXISTING GRADE	14



LOCUS MAP
NOT TO SCALE

GRAPHIC SCALE

20 10 0 20 60
(IN FEET)
1 inch = 20 ft.

DATE	DESCRIPTION	Drawn	Checked
8/27/21	ADD SETPIC SETBACK TO BEACH	TMS	

REVISIONS

PLAN
OF EXISTING CONDITIONS
PREPARED FOR
CHRISTINE BONVOULOIR
FOR LOT 135 1/2, #72 CIRCUIT AVE.
IN
POCASSET **BOURNE** MA

SCALE:	1" = 20'	DATE:	AUG. 26, 2020
DRAWN:	PJR	CHECKED:	
JOB NO:	220124	DWG. NO.:	89–2–32

holmes and mcgrath, inc.
civil engineers and land surveyors
205 worcester court · suite a4 · falmouth, ma · 02540
508-548-3564 www.holmesandmcgrath.com

MICHAEL B. McGRATH No. 26978 COMMONWEALTH OF MASSACHUSETTS

SHEET 1 OF 1

RESIDENTIAL BUILDING
DESIGN CRITERIA

INTERNATIONAL RESIDENTIAL CODE 2015 AND 780 CMR MASSACHUSETTS STATE BUILDING CODE AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE 2015 9TH EDITION (ONE AND TWO FAMILY DWELLINGS)

NOTE:
IT IS THE INTENT TO PROVIDE A CONTINUOUS LOAD PATH, THE INTERCONNECTION OF ALL FRAMING ELEMENTS IS CRITICAL TO A WIND-RESISTIVE BUILDING. A CONTINUOUS LOAD PATH OF INTERCONNECTED FRAMING ELEMENTS FROM FOOTINGS AND FOUNDATION WALLS TO FLOORS, WALLS, AND ROOF FRAMING SHALL BE PROVIDED.

1.1 SCOPE

Table R301.2(4) Massachusetts Basic Wind Speeds
Town: **Bourne**
Basic Wind Speed; **139 mph**

R301.2.1.4 Exposure Category
1 Exposure A; City
2 Exposure B; Urban, Surburban
3 Exposure C; Open Terrain
4 Exposure D; Flat Unobstructed

LOCATION; Exposure B

Table R301.2(5) Massachusetts Ground Snow Loads
Town: **BOURNE**
Snow Load; **30 psf**

R301.2.1.2 Protection of Openings
Windows in wind borne debris regions shall have glazed openings protected from wind borne debris in accordance with Large Missile Test of ASTM E 1996 and of ASTM E 1886.
Exception: Wood structural panels, 7/16" x 8'-0", shall be permitted for opening protection in one and two story buildings in accordance with Table R301.2.1.2.

FEMA 543 Definitions
Wind-borne debris regions. Areas within hurricane-prone regions located:
1 Within 1 mile of the coastal mean high water line where the basic wind speed
is equal to or greater than 130 mph.
2 In areas where the basic wind speed is equal to or greater than 130 mph.

1.2 APPLICABILITY
Height & Area Limitations (Table 503 2009 IBC); R3 Type 5 Unprotected;
3 Stories, Unlimited Square Feet
Roof Pitch; **12/12 VARIES**
Mean Roof Height; **MATCH EXISTING**

1.3 FRAMING
General framing connections shall be in accordance with 2009 International Residential Code Table R602.3.(1) Fastener Schedule For Structural Members, unless noted.

Table R301.5 Minimum Uniformly Distributed Live Loads
Attics without Storage; 10 psf
Attics with Limited Storage; 20 psf
Habitable Attics and with Stairs; 30 psf
Balconies and Decks; 40 psf
Fire Escapes; 40 psf
Guardrails, Handrails; 200 psf
Guardrails in-fill components; 50 psf
Passenger vehicle garage; 50 psf
Rooms other then sleeping; 40 psf
Sleeping Rooms; 30 psf
Stairs; 40 psf

Table R301.7
Rafters greater then 3/12; L/180
Interior Walls; H/180
Floors/Ceilings; L/360
Exterior Walls, stucco; H/360
Exterior Walls, brittle; L/240
Exterior Walls, flexible; L/120

2.1 FOUNDATION
Concrete shall be minimum 3,000 PSI at 28 days.

2.2 NEW FOUNDATION ANCHORAGE
Provide 5/8" diameter x 15" long x 3" hook anchor bolts @ **48"** O.C. with 3" x 3" x 1/8" plate washers.
Provide one anchor bolt 6" to 12" from each end of plate and one within 12" of corners.

3.1 FLOORS
The clear span of floor joist shall meet or exceed the values set forth in 2009 IRC. Floor openings shall not exceed the lesser of 12'-0" or 50% of the building dimension, L/2 or W/2.

3.2 FLOOR BRACING
Blocking and connections shall be provided at panel edges perpendicular to floor framing members in the first two truss or joist spaces and shall be 48" O.C. see Floor Bracing Detail.

4.1 WALLS
Loadbearing walls shall not exceed 10'-0" in height.
Non-loadbearing walls shall not exceed 20'-0" in height.

4.2 EXTERIOR WALLS
Maximum Loadbearing Stud Length
2x4 #2 at 16" O.C.; 9'-9"
2x6 #2 at 16" O.C.; 9'-9"
Maximum Non-loadbearing Stud Length
2x4 #2 at 16" O.C.; 11'-5"
2x6 #2 at 16" O.C.; 18'-5"

Gable Walls
Shall be braced for a distance of at least 1/3 of the building width with wood structural panels or at least 90% of the building width with gypsum wall board.

Story to Story Uplift and Lateral Connections see Detail.

4.3 EXTERIOR WALL SHEATHING
Provide 7/16" wood structural panel sheathing on all exterior walls as detailed. Provide hold downs as detailed

5.1 ROOF
Roof span shall not exceed 36'-0".
Roof openings shall not exceed the lesser of 12'-0" or 50% of the building dimension, L/2 or W/2.
Roof Slope shall not be greater than 12/12.

5.2 WOOD RAFTERS
The clear span of rafters shall meet or exceed the values set forth in 2009 IRC. The maximum rafter span shall be limited to 3/4 of teh span permitted for the 20psf roof live load case, not to exceed 26'-0".
Provide uplift connections at each rafter or truss.
Provide minimum 2x6 collar/rafter ties at 48" O.C. located in the upper third of the attic space and attached to rafters using 5-10d nails at each end.

5.3 ROOF SHEATHING
Provide 1/2" wood structural panel sheathing on all roofs.

5.4 ROOF BRACING ENDWALL
Blocking and connections shall be provided at panel edges perpendicular to roof framing members in the first two truss or rafter spaces and shall be 48" O.C. see Brace Detail.

BONVOULOIR RESIDENCE ADDITION

72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

LIST OF DRAWINGS

RECEIVED
NOV 08 2021
Bourne Health Department
24 Perry Avenue
Buzzards Bay, MA 02532

Architect:
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Architectural, Inc.
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The BONVOULOIR RESIDENCE ADDITION
72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

COVER SHEET

REVISIONS

NO.	DATE	DESCRIPTION

JOB NUMBER:

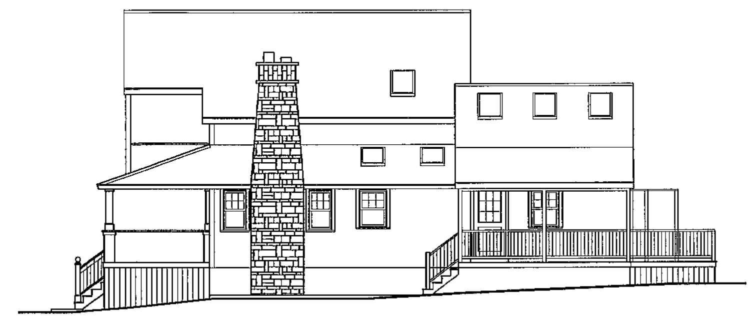
DATE: 01-08-21

CS

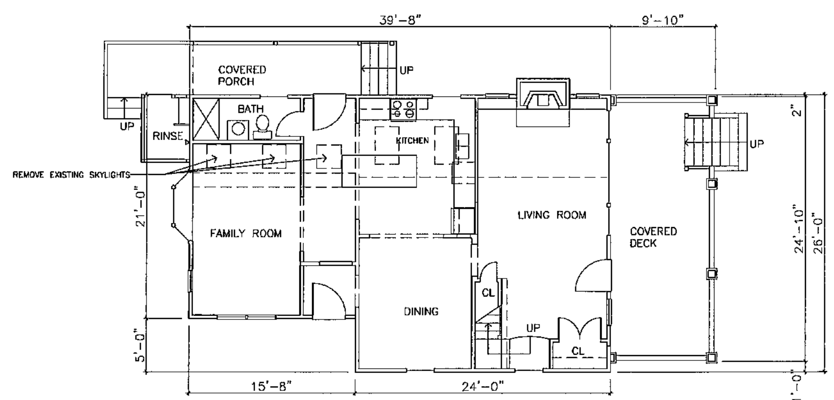
LEFT SIDE ELEVATION
1/8" = 1'-0"

REAR ELEVATION
1/8" = 1'-0"

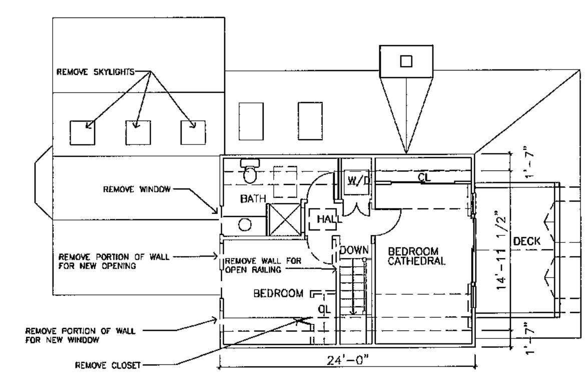
FRONT ELEVATION
1/8" = 1'-0"



RIGHT SIDE ELEVATION
1/8" = 1'-0"



EXISTING FIRST FLOOR PLAN
1/8"=1'-0"



EXISTING SECOND FLOOR PLAN
1/8"=1'-0"

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The BONVOULOIR RESIDENCE
ADDITION

72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

EXISTING CONDITIONS

REGISTERED ARCHITECT GREGORY B. SIROONIAN No. 97?8 BOURNE, MA COMMONWEALTH OF MASSACHUSETTS

CERTIFICATION:
THESE DRAWINGS HAVE BEEN PREPARED TO MEET REFERENCED BUILDING CODE AND PROJECT REQUIREMENTS. THE ARCHITECT BEARS NO RESPONSIBILITY FOR ANY DEVIATIONS MADE TO THE DESIGN OR STRUCTURAL DESIGN UNLESS WRITTEN AUTHORIZATION HAS BEEN GIVEN BY THE ARCHITECT APPROVING SUCH DEVIATION. THE INFORMATION ON THESE DRAWINGS SHALL NOT BE RELIED ON FOR ANY OTHER PURPOSE OTHER THAN ITS INTENDED USE.

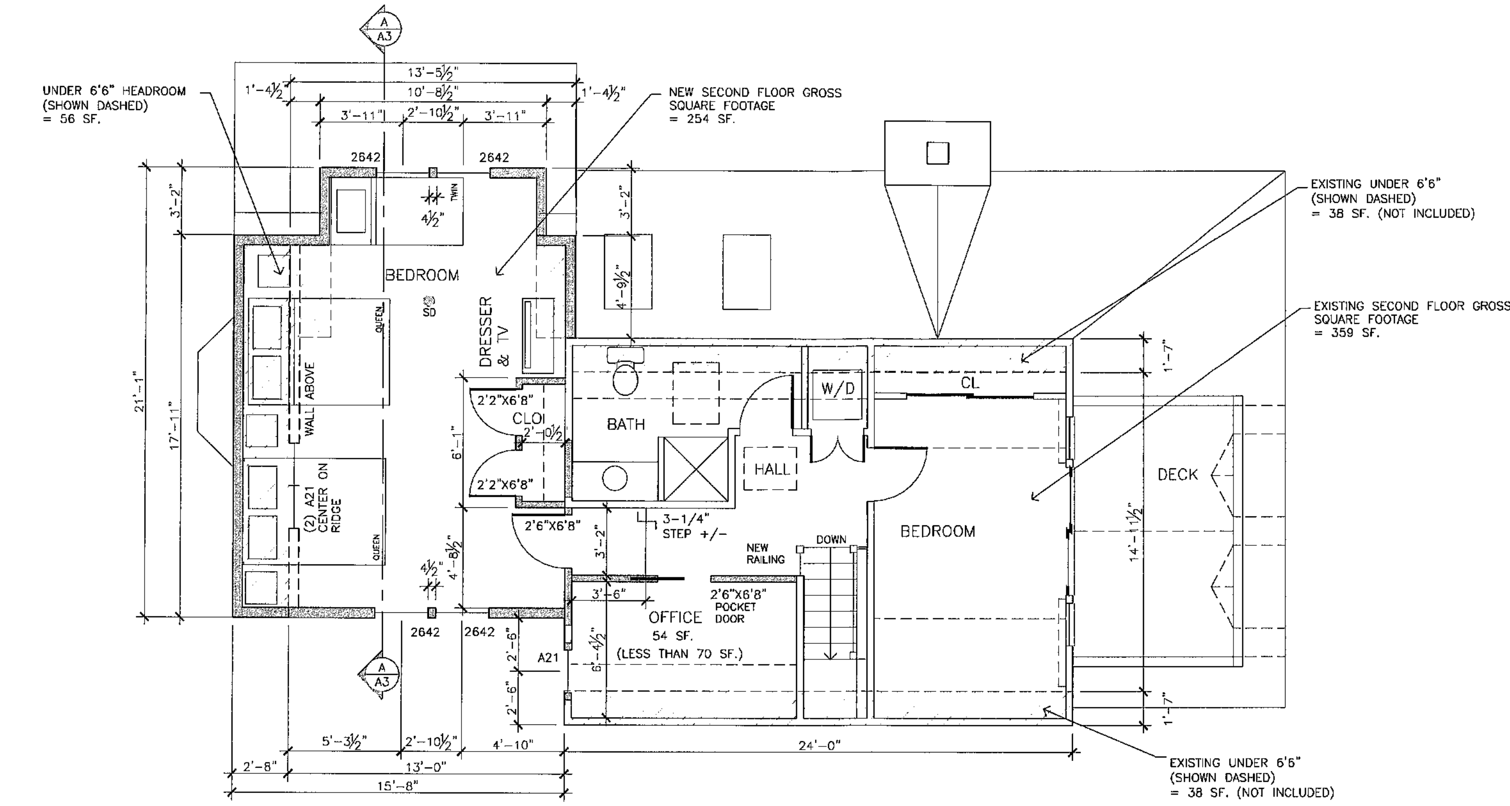
REVISIONS

NO.	DATE:	DESCRIPTION

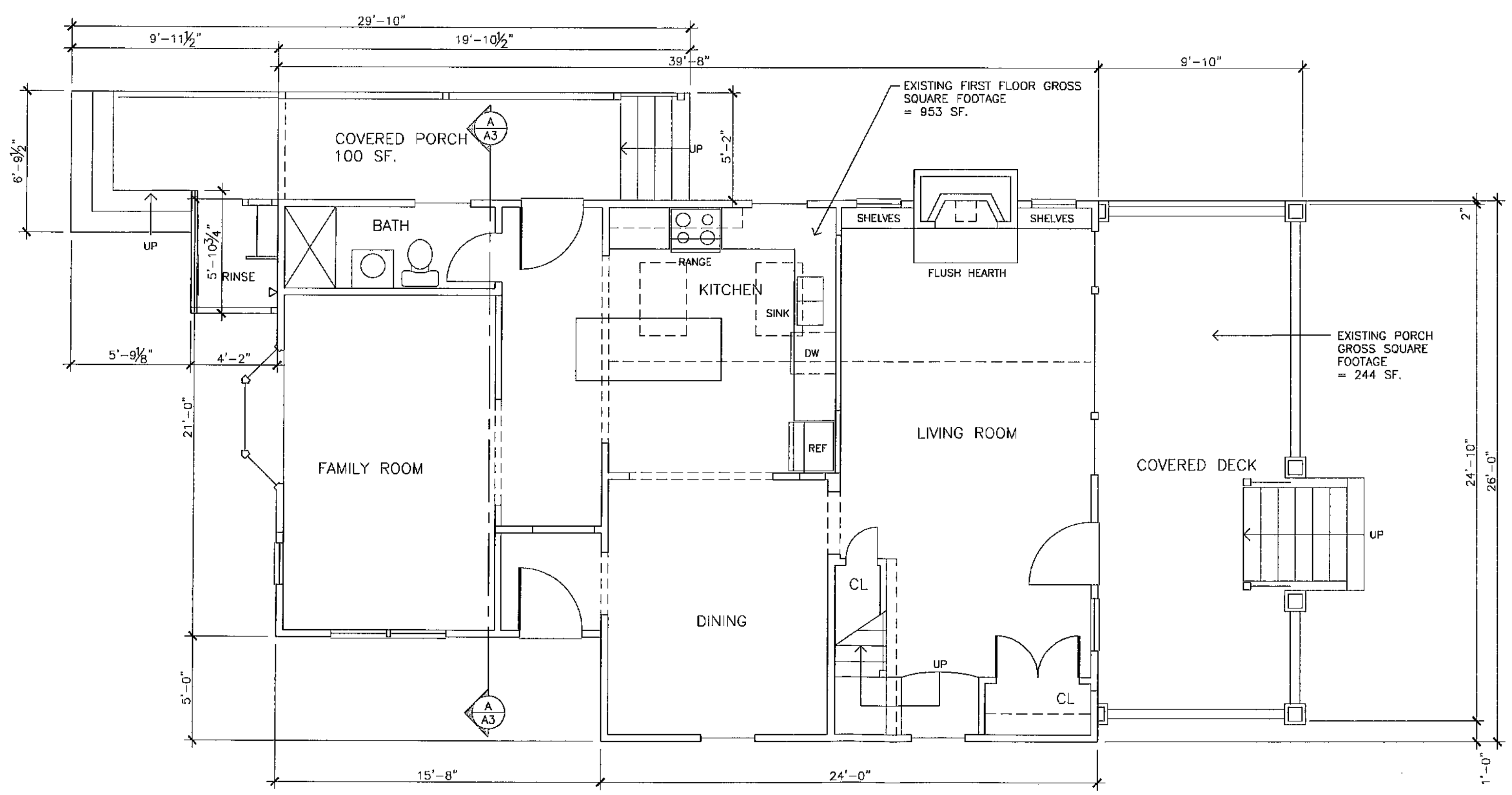
JOB NUMBER:

DATE: 01-08-21

EX1



SECOND FLOOR PLAN
1/4"=1'-0"



FIRST FLOOR PLAN
1/4"=1'-0"

LOT SIZE	6,897 S.F.
MAX GROSS FLOOR AREA (25%)	1,724 SF.
ADDITIONAL 10% W/ SPECIAL PERMIT	172 SF.
TOTAL ALLOWED	1,896 SF.

MAX GROSS FLOOR AREA

SQUARE FOOTAGE

FIRST FLOOR GROSS	953 S.F.
SECOND FLOOR GROSS	359 S.F.
PROPOSED SECOND FLOOR ADDITION	254 S.F.
PORCH GROSS	244 S.F.
SHED	80 S.F.
TOTAL GFA	1,890 S.F. (27.4%)

PROPOSED RELIEF (1,890 – 1,724) = 166 SF.

FINISH NOTES

1. FIR WOOD FLOORING TO MATCH EXISTING.
2. WOOD DOORS, CASINGS, TRIM TO MATCH EXISTING.
3. NEW WINDOWS TO MATCH EXISTING BRAND & FINISH.

GENERAL REQUIREMENTS:

1 ALL DIMENSIONS ARE TO FACE OF STUD UNLESS INDICATED OTHERWISE.

2 ALL EXTERIOR WALL FRAMING SHALL BE 2x6 CONSTRUCTION AND ALL INTERIOR WALL FRAMING SHALL BE 2x4 CONSTRUCTION UNLESS OTHERWISE NOTED.

3 ALL WORK SHALL COMPLY WITH THE INTERNATIONAL RESIDENTIAL CODE 2015 AND 780 CMR 9TH EDITION AND ALL MUNICIPALITY ORDINANCES AND BY-LAWS.

4 ALL WORKMANSHIP AND BUILDING MATERIALS SHALL MEET OR EXCEED RECOGNIZED INDUSTRY STANDARDS FOR EACH APPLICABLE TRADE.

5 REFER TO OTHER DRAWINGS AS PART OF THIS SET FOR MORE DETAILED REQUIREMENTS REGARDING BUILDING MATERIALS, FOUNDATIONS AND STRUCTURAL DESIGN CRITERIA.

6 SMOKE DETECTORS, HEAT DETECTORS AND CARBON MONOXIDE DETECTORS HAVE BEEN SHOWN ON THE PLANS TO COMPLY WITH THE REQUIREMENTS OF 780 CMR 3603.16 – FIRE PROTECTION SYSTEMS. HOWEVER THE ARCHITECT BEARS NO RESPONSIBILITY FOR THE DESIGN, FINAL PLACEMENT, OPERATION OR MAINTENANCE PROCEDURES OF THE HOUSEHOLD FIRE WARNING SYSTEM.

SD SMOKE DETECTOR
HD HEAT DETECTOR
CO CARBON MONOXIDE DETECTOR

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The BONVOULOIR RESIDENCE ADDITION
72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

FLOOR PLANS

REVISIONS

NO.	DATE:	DESCRIPTION

JOB NUMBER:

DATE: 01-08-21

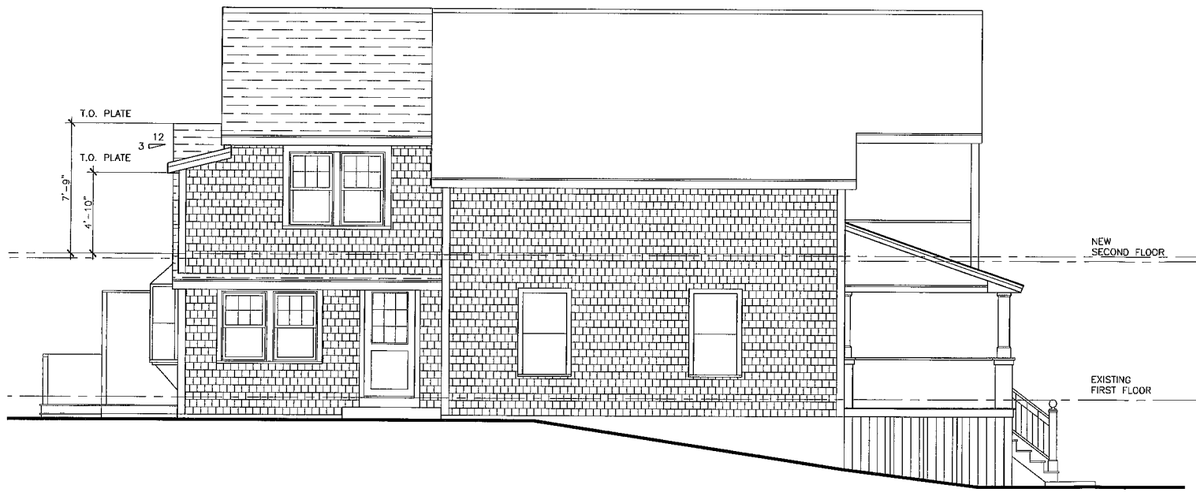
A1

FRONT ELEVATION

1/4" = 1'-0"

RIGHT SIDE ELEVATION

1/4" = 1'-0"



LEFT SIDE ELEVATION

1/4" = 1'-0"

REAR ELEVATION

1/4" = 1'-0"

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The BONVOULOIR RESIDENCE ADDITION

72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

ELEVATIONS

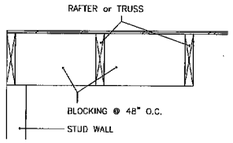
REVISIONS

NO.	DATE:	DESCRIPTION:

JOB NUMBER:

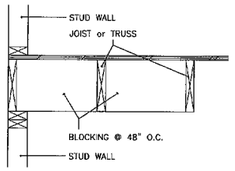
DATE: 01-08-21

A2



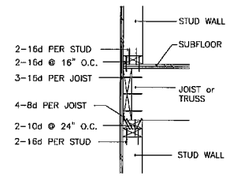
ROOF BRACE DETAIL

1" = 1'-0"



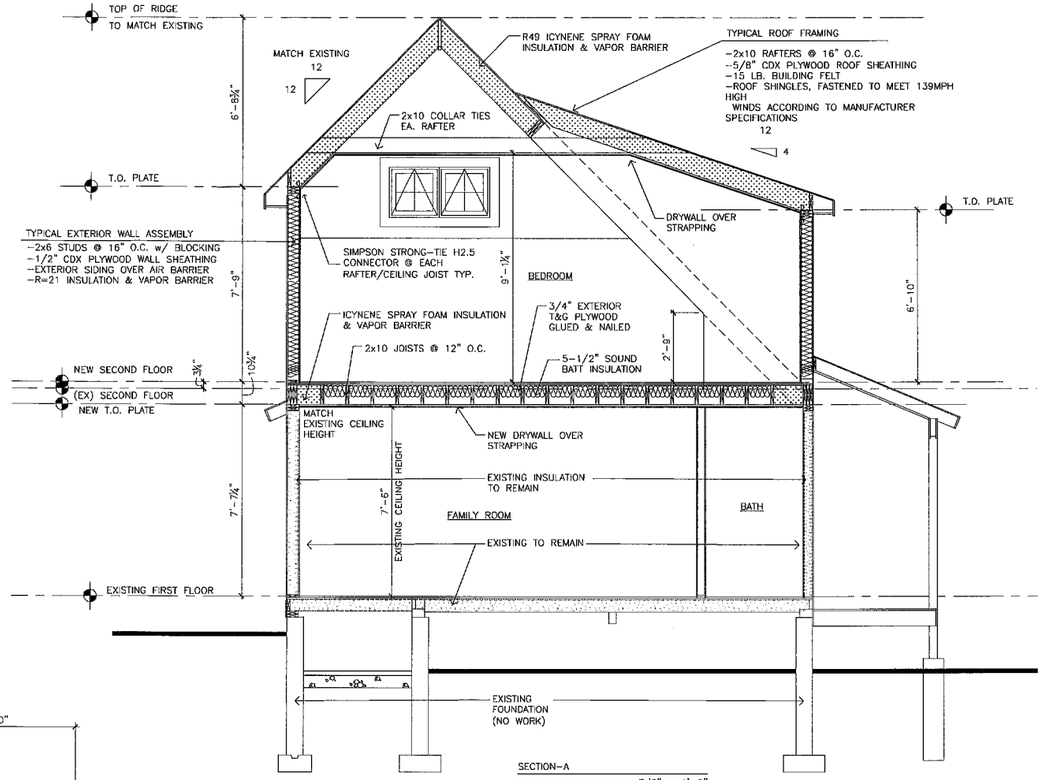
FLOOR BRACE DETAIL

1" = 1'-0"



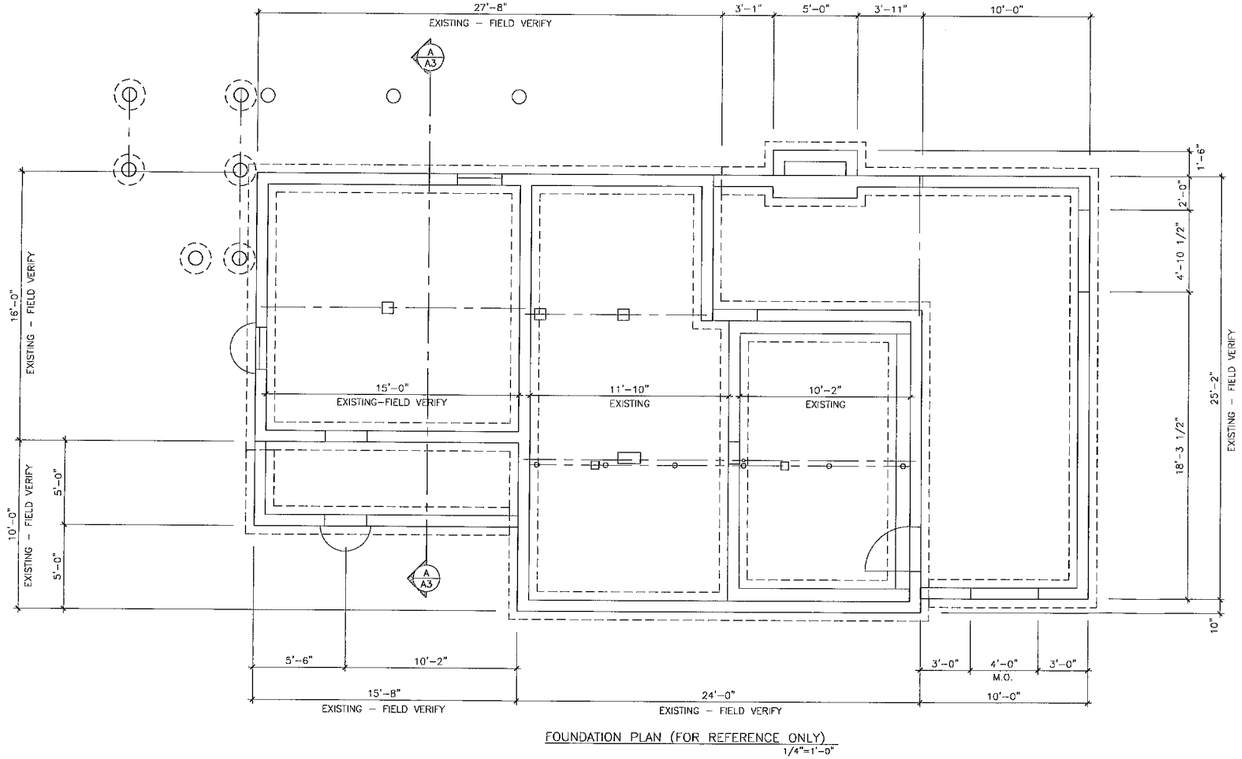
STORY TO STORY UPLIFT & LATERAL CONNECTIONS

1" = 1'-0"



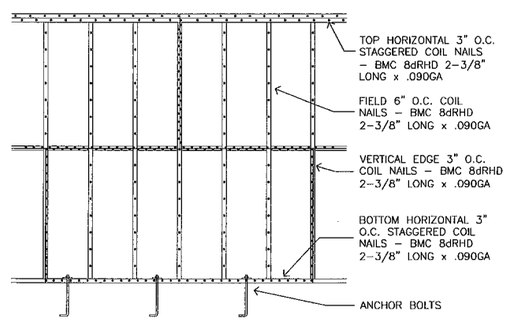
SECTION-A

3/8" = 1'-0"



FOUNDATION PLAN (FOR REFERENCE ONLY)

1/4"=1'-0"



EXTERIOR WALL SHEATHING ATTACHMENT

1/2" = 1'-0"

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The BONVOULOIR RESIDENCE ADDITION

72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

SECTION & DETAILS, EXISTING FOUNDATION PLAN

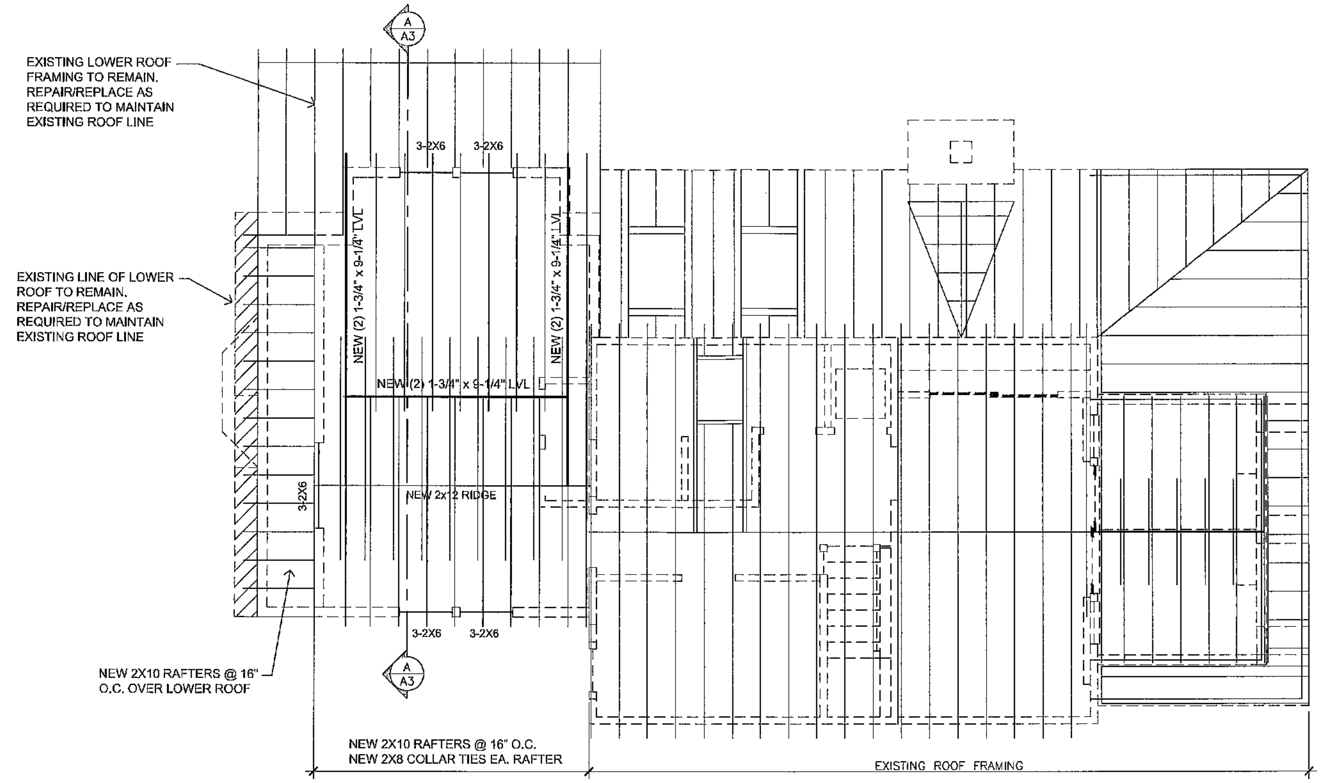
REVISIONS

NO.	DATE:	DESCRIPTION:

JOB NUMBER:

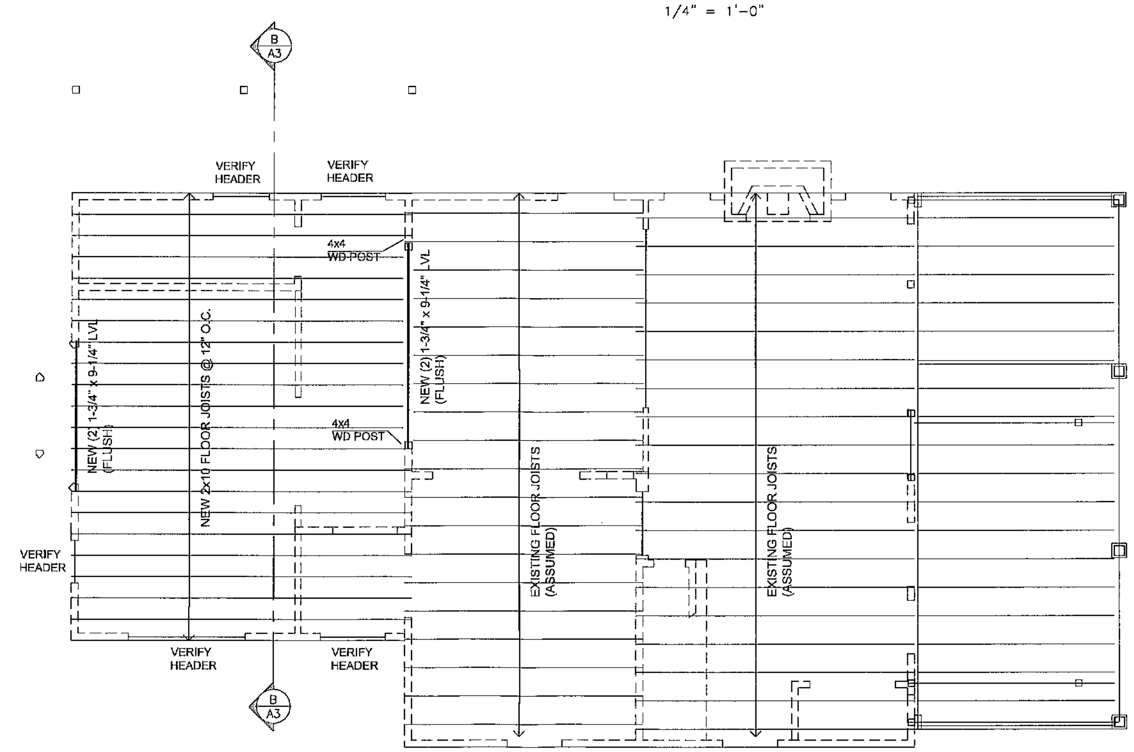
DATE: 01-08-21

A3



NOTE:
1. ALL NEW ROOF RAFTERS TO BE 2X10 @ 16" O.C. U.N.O

ROOF FRAMING PLAN
1/4" = 1'-0"



NOTE:
CONTRACTOR TO VERIFY EXISTING WINDOW HEADER SIZES AND REPORT TO ARCHITECT PRIOR TO NEW FLOOR ADDITION

NOTE:
1. PROVIDE MIDSPAN BLOCKING AS REQ'D
2. DOUBLE UNDER ALL WALLS ABOVE

SECOND FLOOR FRAMING PLAN
1/4" = 1'-0"

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The BONVOULOIR RESIDENCE
ADDITION
72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

FRAMING PLANS

REVISIONS

NO.	DATE:	DESCRIPTION

JOB NUMBER:

DATE: 01-08-21

S1

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER a,b,c	SPACING AND LOCATION
	ROOF		
1	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	4-8d BOX (2-1/2" X 0.113") OR 3-8d COMMON (2-1/2" X 0.131") OR 3-10d BOX (3" X 0.128") OR 3-3"X 0.131" NAILS	TOE NAIL
2	CEILING JOISTS TO TOP PLATE	4-8d BOX (2-1/2" X 0.113") OR 3-8d COMMON (2-1/2" X 0.131") OR 3-10d BOX (3" X 0.128") OR 3-3"X 0.131" NAILS	PER JOIST, TOE NAIL
3	CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS [SEE SECTIONS R802.3.1, R802.3.2 AND TABLE R802.5.1(9)]	4-10d BOX (3" X 0.128") OR 3-16d COMMON (3-1/2" X 0.162") OR 4-3"X 0.131" NAILS	FACE NAIL
4	CEILING JOISTS ATTACHED TO PARALLEL RAFTER, (HEEL JOINT) [SEE SECTIONS R802.3.1, R802.3.2 AND TABLE R802.5.1(9)]	TABLE R802.5.1(9)	FACE NAIL
5	COLLAR TIE TO RAFTER, FACE NAIL OR 1-1/4 X 20 GAGE RIDGE STRAP TO RAFTER	4-10d BOX (3" X 0.128") OR 3-10d COMMON (3" X 0.148") OR 4-3"X 0.131" NAILS	FACE NAIL EACH RAFTER
6	RAFTER OR ROOF TRUSS TO PLATE	3-16d BOX NAILS (3-1/2" X 0.135") OR 3-10d COMMON NAILS (3" X 0.148") OR 4-10d BOX (3" X 0.128") OR 4-3"X 0.131" NAILS	2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS'
7	ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS OR ROOF RAFTER TO MINIMUM 2" RIDGE BEAMS	4-16d (3-1/2" X 0.135") OR 3-10d COMMON (3" X 0.148") OR 4-10d BOX (3" X 0.128") OR 4-3"X 0.131" NAILS	TOE NAIL
		3-16d BOX (3-1/2" X 0.135") OR 2-16d COMMON (3-1/2" X 0.162") OR 3-10d BOX (3" X 0.128") OR 3-3"X 0.131" NAILS	END NAIL
	WALL		
8	STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON (3-1/2" X 0.162")	24" O.C. FACE NAIL
		10d BOX (3" X 0.128") OR 3"X 0.131" NAILS	16" O.C. FACE NAIL
9	STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d BOX (3-1/2" X 0.135") OR 3"X 0.131" NAILS	12" O.C. FACE NAIL
		16d COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL
10	BUILT-UP HEADER (2" TO 2" HEADER W/ ½" SPACER)	16d COMMON (3-1/2" X 0.162")	16" O.C. EACH EDGE FACE NAIL
		16d BOX (3-1/2" X 0.135")	12" O.C. EACH EDGE FACE NAIL
11	CONTINUOUS HEADER TO STUD	5-8d BOX (2-1/2" X 0.113") OR 4-8d COMMON (2-1/2" X 0.131") OR 4-10d BOX (3" X 0.128")	TOE NAIL
12	TOP PLATE TO TOP PLATE	16d COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL
		10d BOX (3" X 0.128") OR 3"X 0.131" NAILS	12" O.C. FACE NAIL
13	DOUBLE TOP PLATE SPLICE FOR SDCs $A-D_2$ WITH SEISMIC BRACED WALL LINE SPACING < 25'	8-16d COMMON (3-1/2" X 0.162") OR 12-16d BOX (3-1/2" X 0.135") OR 12-10d BOX (3" X 0.128") OR 12-3"X 0.131" NAILS	FACE NAIL ON EACH SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT
	DOUBLE TOP PLATE SPLICE FOR SDCs D_0, D_1, D_2 AND BRACED WALL LINE SPACING ≤25'	12-16d (3-1/2" X 0.135")	
14	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (3-1/2" X 0.162")	16" O.C. FACE NAIL
		16d BOX (3-1/2" X 0.135") OR 3"X 0.131" NAILS	12" O.C. FACE NAIL
15	BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (AT BRACED WALL PANELS)	3-16d BOX (3-1/2" X 0.135") OR 2-16d COMMON (3-1/2" X 0.162") OR 4-3"X 0.131" NAILS	3 EA. 16" O.C. FACE NAIL 2 EA. 16" O.C. FACE NAIL 4 EA. 16" O.C. FACE NAIL
16	TOP OF BOTTOM PLATE TO STUD	4-8d BOX (2-1/2" X 0.113") OR 3-16d BOX (3-1/2" X 0.135") OR 4-8d COMMON (2-1/2" X 0.131") OR 4-10d BOX (3" X 0.128") OR 4-3"X 0.131" NAILS	TOE NAIL
		3-16d BOX (3-1/2" X 0.135") OR 2-16d COMMON (3-1/2" X 0.162") OR 3-10d BOX (3" X 0.128") OR 3-3"X 0.131" NAILS	END NAIL
17	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	3-10d BOX (3" X 0.128") OR 2-16d COMMON (3-1/2" X 0.162") OR 3-3"X 0.131" NAILS	FACE NAIL
18	1" BRACE TO EACH STUD AND PLATE	3-8d BOX (2-1/2" X 0.113") OR 2-8d COMMON (2-1/2" X 0.131") OR 2-10d BOX (3" X 0.128") OR 2 STAPLES 1-3/4"	FACE NAIL
19	1"X6" SHEATHING TO EACH BEARING	3-8d BOX (2-1/2" X 0.113") OR 2-8d COMMON (2-1/2" X 0.131") OR 2-10d BOX (3" X 0.128") OR 2 STAPLES, 1" CROWN, 16 GA. 1¾" LONG	FACE NAIL
20	1"X8" AND WIDER SHEATHING TO EACH BEARING	3-8d BOX (2-1/2" X 0.113") OR 3-8d COMMON (2-1/2" X 0.131") OR 3-10d BOX (3" X 0.128") OR 3 STAPLES, 1" CROWN, 16 GA. 1¾" LONG	FACE NAIL
		WIDER THAN 1"X8" 4-8d BOX (2-1/2" X 0.113") OR 3-8d COMMON (2-1/2" X 0.131") OR 3-10d BOX (3" X 0.128") OR 4 STAPLES, 1" CROWN, 16 GA. 1¾" LONG	

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS-CONTINUED

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER a,b,c	SPACING AND LOCATION
	FLOOR		
21	JOIST TO SILL, TOP PLATE OR GIRDER	4-8d BOX (2-1/2" X 0.113") OR 3-8d COMMON (2-1/2" X 0.131") OR 3-10d BOX (3" X 0.128") OR 3-3"X 0.131" NAILS	TOE NAIL
22	RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO)	8d BOX (2-1/2" X 0.113")	4" O.C. TOE NAIL
		8d COMMON (2-1/2" X 0.131") OR 10d BOX (3" X 0.128") OR 3"X 0.131" NAILS	6" O.C. TOE NAIL
23	1"X6" SUBFLOOR OR LESS TO EACH JOIST	3-8d BOX (2-1/2" X 0.113") OR 2-8d COMMON (2-1/2" X 0.131") OR 3-10d BOX (3" X 0.128") OR 2 STAPLES, 1" CROWN, 16 GA. 1¾" LONG	FACE NAIL
24	2" SUBFLOOR TO JOIST OR GIRDER	3-16d BOX (3-1/2" X 0.135") OR 2-16d COMMON (3-1/2" X 0.162")	BLIND AND FACE NAIL
25	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	3-16d BOX (3-1/2" X 0.135") OR 2-16d COMMON (3-1/2" X 0.162")	AT EACH BEARING, FACE NAIL
26	BAND OR RIM JOIST TO JOIST	3-16d COMMON (3-1/2" X 0.162") OR 4-10d BOX (3" X 0.128") OR 4-3"X 0.131" NAILS 4-3"X14GA. STAPLES, 7/16 CROWN	END NAIL
27	BUILT-UP GIRDERS AND BEAMS, 2-INCH LUMBER LAYERS	20d COMMON (4" X 0.192") OR	NAIL EACH LAYER AS FOLLOWS: 32" O.C. AT TOP AND BOTTOM AND STAGGERED
		10d BOX (3" X 0.128") OR 3-3"X 0.131" NAILS	24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
		AND: 2-20d COMMON (4" X 0.192") OR 3-10d BOX (3" X 0.128") OR 3-3"X 0.131" NAILS	FACE NAIL AT ENDS AND AT EACH SPLICE
28	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	4-16d BOX (3-1/2" X 0.135") OR 3-16d COMMON (3-1/2" X 0.162") OR 4-10d BOX (3" X 0.128") OR 4-3"X 0.131" NAILS	AT EACH JOIST OR RAFTER, FACE NAIL
29	BRIDGING TO JOIST	2-10d (3" X 0.128")	EACH END, TOE NAIL

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS - CONTINUED

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER [b,c,e]	SPACING OF FASTENERS EDGES (INCHES) [h]	SPACING OF FASTENERS INTERMEDIATE SUPPORTS [c,e] (INCHES)
	WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING (see TABLE R602.3(3) FOR WOOD STRUCTURAL PANEL EXTERIOR WALL SHEATHING TO WALL FRAMING)			
30	3/8"-1/2"	6D COMMON (2" X 0.113") NAIL (SUBFLOOR, WALL) [i] 8D COMMON (2-1/2" X 0.131") NAIL (ROOF)	6	12[f]
31	19/32"-1"	8D COMMON (2-1/2" X 0.131")	6	12[f]
32	1-1/8" - 1-1/4"	10D COMMON (3" X 0.148") NAIL OR 8D (2-1/2" X 0.131") DEFORMED NAIL	6	12
	OTHER WALL SHEATHING [g]			
33	1/2" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1/2" GALVANIZED ROOFING NAIL, 7/16" HEAD DIAM. , OR 1" CROWN STAPLE 16GA., 1-1/4" LONG	3	6
34	25/32" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1-3/4" GALVANIZED ROOFING NAIL, 7/16" CROWN OR 1" CROWN STAPLE 16GA., 1-1/4" LONG	3	6
35	1/2" GYPSUM SHEATHING [d]	1-1/2" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-1/2" LONG; 1-1/4" SCREWS, TYPE W OR S	7	7
36	5/8" GYPSUM SHEATHING [d]	1-3/4" GALVANIZED ROOFING NAIL; STAPLE GALVANIZED, 1-5/8" LONG; 1-5/8" SCREWS, TYPE W OR S	7	7
	WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
37	3/4" AND LESS	6D DEFORMED (2" X 0.120") NAIL OR 8D COMMON (2-1/2" X 0.131") NAIL	6	12
38	7/8"-1"	8D COMMON (2-1/2" X 0.131") NAIL OR 8D DEFORMED (2-1/2" X 0.120") NAIL	6	12
39	1-1/8" - 1-1/4"	10D COMMON (3" X 0.148") NAIL OR 8D DEFORMED (2-1/2" X 0.120") NAIL	6	12

NOTE:
1 ALL NAILS ARE SMOOTH-COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED.
2 FOR ADDITION INFORMATION AND FOOTNOTES REFERENCE 2015 IRC TABLE R602.3(1)

RESIDENTIAL BUILDING DESIGN CRITERIA NOTES:

INTERNATIONAL RESIDENTIAL CODE 2015 AND 780 CMR MASSACHUSETTS STATE BUILDING CODE AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE 2015 9th EDITION (ONE AND TWO FAMILY DWELLINGS)

NOTE:
IT IS THE INTENT TO PROVIDE A CONTINUOUS LOAD PATH, THE INTERCONNECTION OF ALL FRAMING ELEMENTS IS CRITICAL TO A WIND-RESISTIVE BUILDING. A CONTINUOUS LOAD PATH OF INTERCONNECTED FRAMING ELEMENTS FROM FOOTINGS AND FOUNDATION WALLS TO FLOORS, WALLS, AND ROOF FRAMING SHALL BE PROVIDED.

STRUCTURAL DESIGN CRITERIA

1.0 DESIGN CRITERIA:
THE FOLLOWING OUTLINES MINIMUM PERFORMANCE STANDARDS FOR THE PROJECT AND THE BASIS UPON WHICH SHOP DRAWINGS (IF ANY) WILL BE REVIEWED.
1.1 TYPICAL ALTERNATE STANDARDS (FOR REQUIREMENTS NOT OTHERWISE INDICATED IN THIS SPECIFICATION OR RELATED DRAWINGS): APPLICABLE BUILDING CODE (INCLUDING INDUSTRY STANDARDS REFERENCED THERE-IN) OR PRODUCT MANUFACTURER'S RECOMMENDED STANDARD, WHICHEVER IS THE MORE STRINGENT FOR A PARTICULAR ITEM OR CONDITION.
1.2 FEMA 543 DEFINITIONS, WIND BORNE DEBRIS REGIONS WITHIN 1 MILE OF COASTAL MEAN HIGH WATER LINE. LOCATION WITHIN 1 MILE OF COASTAL MEAN HIGH WATER LINE. PROVIDE IMPACT RESISTANT EXTERIOR WINDOWS AND DOORS.

2.0 DEAD LOADS:
2.1 STRUCTURAL SHEATHING:
2.1.1 FLOORS: 3/4" MIN. THICK, T & G, CDX PLY.
2.1.2 EXTERIOR WALLS: 1/2" MIN. EXTERIOR PLYWOOD
2.1.3 ROOFS: 5/8" MIN. EXTERIOR PLYWOOD
2.2 FINISHES: (THE FOLLOWING REPRESENTS STRUCTURAL DESIGN CRITERIA, NOT FINISH SPECIFICATIONS)
2.2.1 FLOOR FINISHES AT ENTRIES, BATHROOMS AND KITCHEN AREAS: ASSUME THIN-SET CERAMIC TILE OVER 1/2" CEMENT FIBER BOARD UNDERLAYMENT.
2.2.2 FLOOR FINISHES AT OTHER HABITABLE AREAS: ASSUME 3/4" HARDWOOD FLOORS.
2.2.3 WALL FINISHES: ASSUME CERAMIC TILE WITH 1/2" CEMENT FIBER BOARD BACKER AT TUB AND SHOWERS; 1/2" BLUEBOARD AND PLASTER ALL OTHER LOCATIONS.
2.2.4 CEILING FINISHES: ASSUME 1/2" BLUEBOARD AND PLASTER
2.2.5 ROOF FINISHES: ASSUME HEAVY DUTY, ARCHITECTURAL GRADE ASPHALT SHINGLES.
2.3 MAXIMUM DEAD LOAD OF 10 P.S.F.

3.0 (NOT USED)

4.0 ALLOWABLE DEFLECTION:
4.1 FLOOR/CEILING ASSEMBLIES (INCLUDING SUPPORTING BEAMS) - (NOTE: WINDOWS AND DOORS - ASSUME NAILING TABS AT JAMBS AND HEADS, WITH MANUF. RECOMMENDED HEAD CLEARANCES OF APPROXIMATELY 1/2")
4.1.1 LIVE LOAD DEFLECTION: L/480 UP TO 1/2" MAX.
4.1.2 TOTAL LOAD DEFLECTION: L/240 UP TO 3/4" MAX.

5.0 MATERIALS:
5.1 FRAMING DIMENSION LUMBER
LOAD BEARING DIMENSION LUMBER FOR JOISTS, STUDS, PLATES, RAFTERS, HEADERS, BEAMS AND GIRDERS ETC. SHALL CONFORM TO 2009 IRC, AND TO OTHER APPLICABLE STANDARDS OR GRADING RULES AND SHALL BE SO IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN APPROVED AGENCY. THE GRADE MARK OR CERTIFICATE SHALL PROVIDE ADEQUATE INFORMATION TO DETERMINE Fb, THE ALLOWABLE STRESS IN BENDING, AND E, THE MODULUS OF ELASTICITY.
5.1.1 ALLOWABLE JOIST SPANS: THE CLEAR SPAN OF FLOOR JOISTS SHALL NOT EXCEED THE VALUES SET FORTH IN TABLES 2009 IRC R502.3.1(1) & R502.3.1(2).

5.1.2 ALLOWABLE SPANS: THE UNSUPPORTED SPANS FOR CEILING JOISTS SHALL NOT EXCEED THE VALUES SET FORTH IN TABLES 209 IRC R804.3.1(1), R804.3.1(2) R804.3.1(3), R804.3.1(4), R804.3.1(5), R804.3.1(6), R804.3.1(7), R804.3.1(8). THE UNSUPPORTED SPANS FOR RAFTERS SHALL NOT EXCEED THE VALUES SET FORTH IN TABLES 2009 IRC R802.3.1(1), R802.3.1(2) R802.3.1(3), R802.3.1(4), R802.3.1(5), R802.3.1(6), R802.3.1(7), R802.3.1(8).

5.1.3 PLYWOOD SHEATHING: AND WOOD STRUCTURAL PANELS USED FOR STRUCTURAL PURPOSES SHALL CONFORM TO 2009 IRC TABLE R602.3(3). ALL PANELS SHALL BE IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN APPROVED AGENCY.

5.1.3a WHERE USED AS SUBFLOORING OR COMBINATION SUBFLOOR UNDERLAYMENT, WOOD STRUCTURAL PANELS SHALL BE OF ONE OF THE GRADES SPECIFIED IN 2009 IRC TABLE R503.2.1(1). WHEN SANDED PLYWOOD IS USED AS A COMBINATION SUBFLOOR UNDERLAYMENT, THE GRADE SHALL BE AS SPECIFIED IN 2009 IRC TABLE R503.2.1(2).

5.2 ENGINEERED WOOD
ALL BEAMS, HEADERS AND GIRDERS SPECIFIED ON THE PLANS AS LVL BEAMS, OR COMPOSITE (BUILT-UP) LVL BEAMS, SHALL BE AS MANUFACTURED BY TRUS JOIST MACMILLAN OR APPROVED EQUAL. ALL SPANS, LOAD CAPACITIES, BEARING CONDITIONS AND FASTENING SCHEDULES SHALL BE AS REQUIRED BY THE MANUFACTURER.

6.0 INSTALLATION STANDARDS
PROVIDE CONTINUOUS LOAD PATH BETWEEN FOOTINGS, FOUNDATION WALLS, FLOORS, STUDS AND ROOF FRAMING.
6.1 FRAMING SYSTEM: WESTERN PLATFORM
6.2 WOOD POSTS AND JACKS SUPPORTING WOOD FRAMING
6.2.1 WITHIN 2 X 4 WALL FRAMING: 4 X 4 MIN
6.2.2 WITHIN 2 X 6 WALL FRAMING: 4 X 6, OR 6 X 6 (REFER TO PLANS)
6.2.3 ALL WOOD POSTS SHALL BE CONNECTED TO THE WOOD FRAMING AT TOP WITH METAL POST CAP A.C. OR A.C.E. BY SIMPSON.
6.3 COLUMNS (BASEMENT OR EXTERIOR LOCATIONS): 3 1/2" LALLY COLUMNS
6.3.1 BASE PLATES: SPRINGFIELD BEARING PLATES WELDED TO COLUMN.
6.3.2 CAPS (CONNECTING COLUMNS TO WOOD FRAMING): SPRINGFIELD BEARING PLATES OR SIMPSON "CC" TYPE COLUMN CAPS

6.4 ANCHORS, CONNECTORS AND HANGERS
6.4.1 SIZE, CONFIGURATION, LOCATION AND QUANTITIES TO MEET WIND, EARTHQUAKE AND GRAVITY LOADS.

6.4.2 JOIST HANGERS: TOP FLANGE TYPE (UNLESS NOT FEASIBLE) SHALL BE USED AT ALL CONNECTIONS AS REQUIRED. HANGERS SHALL BE 18 GA. MIN. WITH ALL HOLES FILLED WITH REQUIRED FASTENERS.
6.5 WALL FRAMING ALL EXTERIOR WALLS SHALL BE 2x4 OR 2x6 (AS INDICATED ON PLANS)

6.5.1 EXTERIOR WALL SHEATHING SHALL BE FASTENED WITH (SEE SCHEDULE & DETAILS) @ INTERIOR SUPPORTS, UNLESS OTHERWISE NOTED ON PLANS (U.O.N.)
6.5.2 2x4 INTERIOR STUD BEARING WALLS SHALL BE 2 X 4 STUDS AT 16" O.C. WITH BLOCKING AT MID HEIGHT FOR WALLS OVER 9 FEET HIGH, AND METAL X-BRACING (SIMPSON STRONG TIE TYPE WB) U.O.N.
6.6 FLOOR AND CEILING FRAMING (UNLESS NOTED OTHERWISE ON ATTACHED DRAWINGS): DIMENSION LUMBER.
6.6.1 PROVIDE DOUBLE JOISTS BENEATH ALL BEARING PARTITIONS AND AT ALL ROUGH OPENINGS.
6.6.2 PROVIDE SOLID BLOCKING BETWEEN JOISTS AT BEARING WALLS RUNNING PERPENDICULAR TO WALL AND BETWEEN JOISTS TO EITHER SIDE OF PARTITIONS RUNNING PARALLEL TO FRAMING.
6.6.3 PROVIDE SOLID BRIDGING AT 8 FT MAX. O.C.
6.6.4 PLYWOOD SUBFLOOR SHALL BE GLUED AND NAILED WITH 8D NAILS AT 10" O.C. TO INTERMEDIATE SUPPORTS AND 8D NAILS AT 6" O.C. TO PANEL EDGE SUPPORTS.
6.7 RAFTERS (UNLESS NOTED OTHERWISE ON ATTACHED DRAWINGS): DIMENSION LUMBER.

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ADDITION
72 CIRCUIT AVENUE
BOURNE, MASSACHUSETTS

FASTENER SCHEDULE
STRUCTURAL DESIGN
CRITERIA

REVISIONS

NO.	DATE:	DESCRIPTION

JOB NUMBER:

DATE: 01-08-21

S2