

# Watermark Layering



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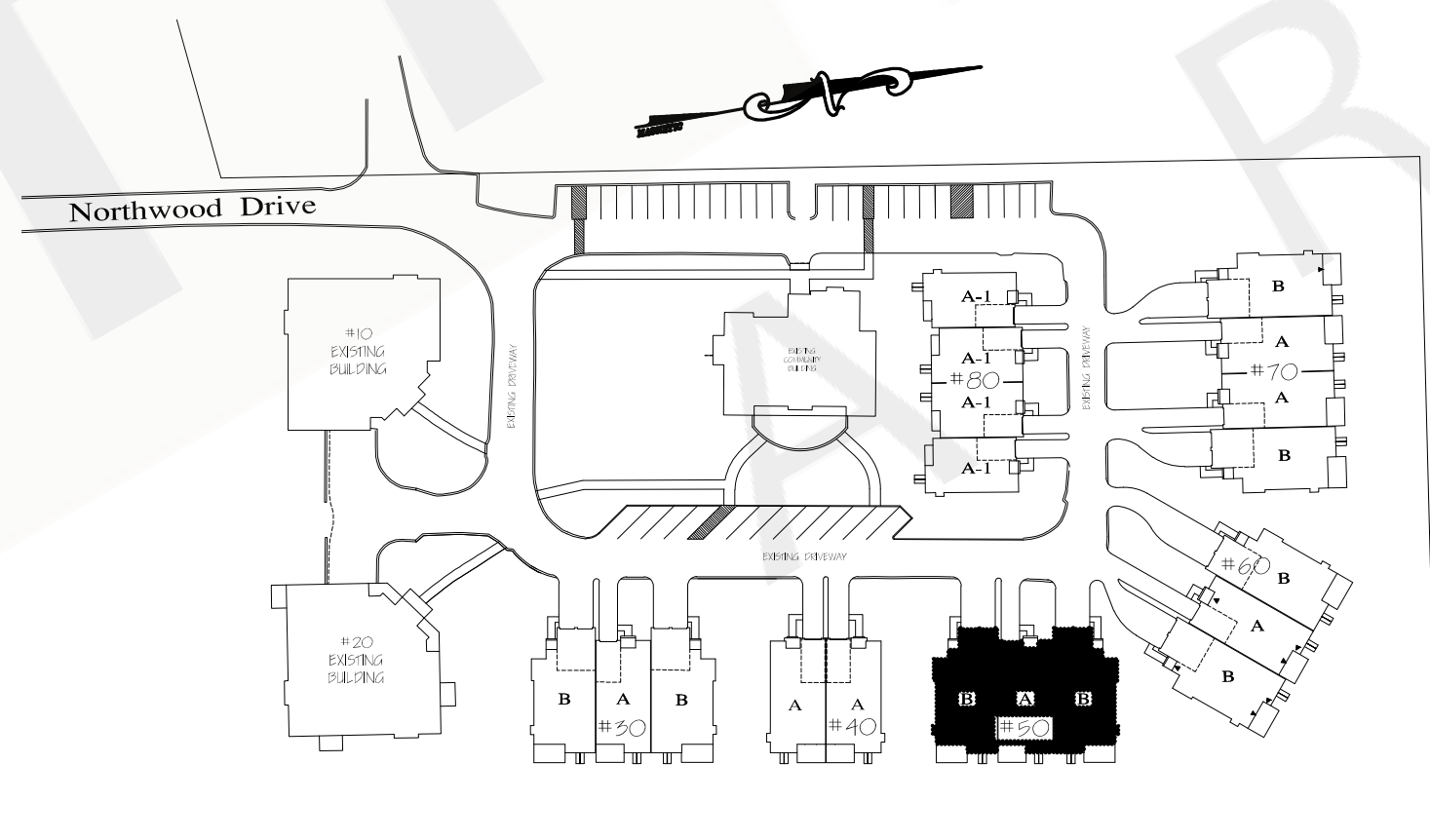
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## SCHEDULE OF DRAWINGS:

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KEY PLAN

DATE: AUGUST 7, 2018

DRAWN BY: RMB  
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CHECKED BY: HPA

PATH:  
20180101\_FIRST COLONY DEV  
20180101\_CDS

SCALE: SEE DRAWING

REVISIONS:

#	DATE	DESC.
0		ISSUED FOR CONSTRUCTION

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CONSTRUCTION BY:  
**FIRST COLONY DEV. LLC**  
150 NORTHWOOD DRIVE, NORTHWOOD TOWNHOUSE CONDOS, SUDBURY, MA

TITLE SHEET

SHEET:

A0.1

JOB NO. 20180101

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### GENERAL NOTES

#### GENERAL

- THE GOVERNING BUILDING CODE FOR THE DESIGN AND CONSTRUCTION IS THE INTERNATIONAL RESIDENTIAL (IRC 2018) WITH MASSACHUSETTS STATE BUILDING CODE AMENDMENTS (1TH EDITION).
- ARCHITECTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL, AND SHED DRAWINGS.
- THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES, AMBIGUITIES, OR INCONSISTENCIES PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ALSO NOTIFY THE ARCHITECT, PRIOR TO PROCEEDING WITH THE WORK, IF ANY CONSTRUCTION NEEDS TO BE ADJUSTED DUE TO FIELD CONDITIONS.
- AN ASSUMPTION HAS BEEN MADE THAT THE ELEVATION DIFFERENCE BETWEEN THE GARAGE SLAB AND THE FIRST FLOOR IS 24". THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IF THIS IS INCONGRUENT WITH THE SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
- ALL FLASHING IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE CORROSION RESISTANT.
- ALL EXPOSURE AND HOT WATER PIPING SHALL BE INSULATED AND WHERE NECESSARY, A VAPOR BARRIER FOR THE EXPOSURE WILL BE PROVIDED TO PREVENT CONDENSATION.
- ALL CHIMNEYS TO BE CONSTRUCTED SO THE TOP OF THE FLUE IS 2'-0" ABOVE ANY ROOF/WALL WITHIN 10'-0".
- PROVIDE CONTINUOUS PITCH BREAK VENTS AT ALL ROOF/WALL INTERSECTIONS WHERE SOFFIT VENTS ARE INSTALLED.

#### DIMENSIONS

- DIMENSIONING STANDARDS WITHIN THE DOCUMENTS ARE AS FOLLOWS UNLESS OTHERWISE NOTED:
  - DIMENSIONING TO EXTERIOR WALLS ARE FROM OUTSIDE FACE OF A STUD OR CONCRETE WALL.
  - DIMENSIONING AT WINDOWS AND EXTERIOR DOORS REPRESENTS A DIMENSION TO THE CENTER OF THAT OPENING FROM THE CENTER OF ANOTHER OPENING OR THE OUTSIDE FACE OF A STUD OR CONCRETE WALL.
  - INTERIOR DIMENSIONING AT STUD WALLS REPRESENTS A DIMENSION TO THE MIDDLE OF THE STUD UNLESS INTERIOR WALL IS ALSO AN EXTERIOR WALL. DIMENSION IS TO FACE OF STUD.
  - INTERIOR DIMENSIONING AT STAIRS REPRESENTS A DIMENSION TO THE FINISHED FACE OF THE STAIR.
  - DIMENSIONING OF WALLS ENCLOSED THEREAFTER WAYS PRE-MANUFACTURED FLOOR AGES AND ALL OTHER BUILDING NOT BE CONFORMED WITH THE FLOOR MANUFACTURER FOR THE REQUIRED R.G. AND TACMENT.
  - DIMENSIONS DEPENDING THE BUILDING HEIGHT SHOWN OF THE ARCHITECTURAL AND STRUCTURAL DRAWINGS ARE FOR THE BUILDING AND THE COMPONENTS SHALL. THE OVERALL BUILDING HEIGHT DETERMINED FROM THE 1ST FLOOR FLOOR DECK. THE OWNER/AGC IS RESPONSIBLE FOR COORDINATING AND ESTABLISHING THE GRADE RELATIVE TO THE 1ST FLOOR. TO ENSURE COMPLIANCE WITH ZONING AND BUILDING CODE HEIGHT REQUIREMENTS.
  - ALL DIMENSIONING FROM EXISTING SURFACES ARE FROM FACE OF EXISTING SURFACE.
  - CLOSET DOORS THAT ARE NOT DIMENSIONED ARE TYPICALLY 4'-0" X 4'-0" OPERATING ON THE FINISH CASING HEIGHT FROM FACE FINISH TO THE DOOR OPENING ON THE BUTT SIDE.
  - DIMENSIONING LOCATING CLOSET OPENINGS ARE TYPICALLY DIMENSIONED TO THE CENTER OF THAT OPENING. TYP. UNLESS OTHERWISE NOTED.

#### STAIRWAYS/BALCONIES

- STAIRWAYS SHALL NOT BE LESS THAN 5'-0" IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. MAXIMUM RISER HEIGHT SHALL BE 8 1/4". MINIMUM TREAD DEPTH SHALL BE 10" WITH NOSING NOT TO EXCEED 1 1/4". RISER TREADS SHALL HAVE A MIN. DEPTH EQUAL TO THE STAIRWAY RUN TREAD DEPTH AT A DISTANCE OF 10" FROM THE HANDRAIL SIDE WITH A MIN. TREAD DEPTH OF 3" AT ANY POINT. MINIMUM HEADROOM SHALL BE 6'-4" MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING OR FROM THE FLOOR GRADE BELOW. GUARDRAILS ON OPEN SIDES OF STAIRS, WITH A TOTAL RISE OF MORE THAN THIRTY (30) INCHES ABOVE A FLOOR OR GRADE BELOW, SHALL BE NOT LESS THAN 34" IN HEIGHT MEASURED VERTICALLY FROM THE TONGUE OF THE TREADS. THE MAXIMUM CLEAR OPENING BETWEEN RAILS, BALUSTERS, AND FLOORS SHALL NOT EXCEED FOUR (4) INCHES.
- HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT OF STAIRS WITH A 4" OR MORE RISER. MINIMUM HEIGHT SHALL NOT BE LESS THAN 34" WITH A MAXIMUM TREAD TO EXCEED 30". HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE STAIR.
- GUARDRAILS, 36" MINIMUM IN HEIGHT, SHALL BE INSTALLED IN FLOOR, PORCH, AND/OR BALCONY AREA MORE THAN THIRTY (30) INCHES ABOVE A FLOOR OR GRADE BELOW. GUARDRAILS ON OPEN SIDES OF STAIRS, WITH A TOTAL RISE OF MORE THAN THIRTY (30) INCHES ABOVE A FLOOR OR GRADE BELOW, SHALL BE NOT LESS THAN 34" IN HEIGHT MEASURED VERTICALLY FROM THE TONGUE OF THE TREADS. THE MAXIMUM CLEAR OPENING BETWEEN RAILS, BALUSTERS, AND FLOORS SHALL NOT EXCEED FOUR (4) INCHES.

#### EXCEPTIONS

- THE TRIANGULAR OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD AT THE OPEN SIDE OF A STAIRWAY MAY BE OF SUCH A SIZE THAT A SIX INCH HIGH 1/4" SPHERE CANNOT PASS THROUGH. OPENINGS FOR REQUIRED GUARDS ON THE SIDES OF STAIR TREADS SHALL NOT ALLOW A SPHERE 4-5/8 INCHES TO PASS THROUGH.
- AN INSULATED DOOR SHALL BE PROVIDED AT THE TOP OF UNFINISHED BASEMENT STAIRS OR INSULATE THE WALLS AND THE INTERIOR OF STAIRS AND PROVIDE AN INSULATED DOOR AT THE BOTTOM OF BASEMENT STAIRS.
- AN INSULATED DOOR SHALL BE PROVIDED AT THE TOP OF ATTIC STAIRS OR INSULATE THE WALLS AND INTERSECT OF STAIRS AND PROVIDE AN INSULATED DOOR AT THE BOTTOM OF ATTIC STAIRS.

#### EMERGENCY ESCAPE AND RESCUE OPENINGS, EXTERIOR WINDOWS AND DOORS

- WINDOW SIZES SHOWN ON THE DRAWINGS ARE BASED GENERALLY ON AMERICAN AND THE OTHER OR GENERAL CONTRACTOR WHERE APPLICABLE SHALL CHOOSE THE FINAL MANUFACTURER. WINDOW SIZES SHALL BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO ORDERING. ROOM OPENING SIZES SHALL BE PROVIDED BY THE MANUFACTURER.
- BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS CONTAIN MORE THAN ONE SLEEPING ROOM EACH SHALL HAVE AN EMERGENCY ESCAPE AND RESCUE OPENING. ANY ADJOINING AREAS SHALL NOT REQUIRE ONE EMERGENCY ESCAPE AND RESCUE OPENING SHALL MEET THE FOLLOWING CRITERIA:
  - STILL HEIGHT SHALL NOT BE MORE THAN 44 INCHES ABOVE THE FLOOR.
  - WHERE A DOOR HAVING A TREADS BELOW THE ADJACENT GROUND ELEVATION IS USED AS AN EMERGENCY ESCAPE AND RESCUE OPENING AND IS PROVIDED WITH A BELLSHED ENCLOSURE, THE BELLSHED SHALL PROVIDE DIRECT ACCESS TO THE BASEMENT AND WHEN THE BELLSHED IS FULLY OPENED IT SHALL PROVIDE THE MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET.
  - EMERGENCY ESCAPE AND RESCUE OPENINGS WITH A HILL ELEVATION BELOW THE ADJACENT GROUND ELEVATION SHALL BE PROVIDED WITH A WINDOW WELL WITH A MINIMUM HORIZONTAL AREA OF 4 SQUARE FEET AND A MINIMUM HORIZONTAL PROJECTION OF 36". THE WINDOW WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.
  - ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET.

#### EXCEPTIONS

- GRADE FLOOR OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.0 SQUARE FEET.
- DOUBLE AND TRIPLE DOORS FOR EMERGENCY ESCAPE SHALL BE PERMITTED TO HAVE A NET CLEAR OPENING OF 3.3 SQUARE FEET PROVIDED THAT AT LEAST ONE OPERABLE SASH MEETS THE MINIMUM HEIGHT AND WIDTH REQUIREMENTS AND OPERATIONAL CONSTRAINTS.
- THE MINIMUM NET CLEAR OPENING SHALL BE 24 INCHES X 20 INCHES IN EITHER DIRECTION.
- EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE WITHOUT THE USE OF KEYS OR TOOLS.
- IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 10 INCHES ABOVE THE FINISHED GRADE OR SURFACE THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT POINT OPENING THAT ALLOW PASSAGE OF A 4 INCH DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES OF THE FINISHED FLOOR.

#### EXCEPTIONS

- STAIRWAYS, RAMPS, EXTERIOR EXIT BALCONIES, HALLWAYS AND DOORS SHALL MEET ALL MINIMUM EGRESS REQUIREMENTS.
- ALL REQUIRED EXITS SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE TO RESIST BOTH VERTICAL AND LATERAL FORCES.
- ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSON BOARDS.
- HALLWAYS SHALL BE A MINIMUM OF 3 FEET CLEAR.
- EXITS FROM DWELLING UNITS SHALL BE BY MEANS OF TWO EXIST DOORS. THE MINIMUM NORMAL WIDTH OF AT LEAST ONE OF THE REQUIRED EXIST DOORS SHALL BE NOT LESS THAN 30" WITH A NORMAL HEIGHT SHALL OF SIX FEET EIGHT INCHES AND EXIST DOOR SHALL BE NOT LESS THAN 30" WITH A NORMAL HEIGHT SHALL OF SIX FEET EIGHT INCHES IN NORMAL HEIGHT AND MAY BE SLOPED OR SIDE-HINGED.
- EXISTS FROM ATTACHED GARAGE SHALL BE PROVIDED WITH A 3' X 7' EXIST DOOR.
- ALL OTHER EXTERIOR DOORS IN EXCESS OF THE TWO REQUIRED EXIST DOORS ARE NOT REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS.
- ALL INTERIOR DOORS PROVIDING ACCESS TO HABITABLE ROOMS SHALL HAVE A NORMAL WIDTH OF 30 INCHES AND NORMAL HEIGHT OF SIX FEET 6 INCHES EXCEPT BATHROOMS WHICH ARE PERMITTED TO BE 24 INCHES IN NORMAL WIDTH.
- A FLOOR OR LANDING SHALL BE PROVIDED ON EACH SIDE OF AN EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SWEPT AND HAVE A MINIMUM DIMENSION OF 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL.

#### EXCEPTIONS

- ALL WINDOWS WHERE OPENINGS WILL NOT ALLOW A 4 INCH DIAMETER SPHERE TO PASS THROUGH THE OPENING WHEN THE OPENING IS IN ITS LARGEST OPEN POSITION.
- OPENINGS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH SECTION R602.3.
- OPENINGS THAT ARE PROVIDED WITH FALL PREVENTION DEVICES THAT COMPLY WITH ASTM F 2090.
- WINDOWS THAT ARE PROVIDED WITH OPENING LIMITING DEVICES THAT COMPLY WITH SECTION R602.4.

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### MINIMUM ROOM REQUIREMENTS

- HABITABLE ROOMS, HALLWAYS, CORRIDORS, BATHROOMS, TOILET ROOMS, LAUNDRY ROOMS AND BASEMENTS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN SEVEN (7) FEET MEASURED FROM THE FINISH FLOOR TO THE LOWEST PROJECTION FROM THE CEILING.
- EXCEPTIONS:
  - BEAMS AND GIRDERS SPACED NOT LESS THAN FOUR (4) FEET ON CENTER MAY PROJECT NOT MORE THAN SIX (6) INCHES BELOW THE REQUIRED CEILING HEIGHT.
  - CEILING IN BASEMENTS WITHOUT HABITABLE SPACE MAY PROJECT TO WITHIN SIX FEET EIGHT INCHES OF THE FINISHED FLOOR EXCEPT THAT BEAMS, GIRDERS, DUCTS AND OTHER OBSTRUCTIONS MAY PROJECT TO WITHIN SIX FEET FOUR INCHES OF THE FINISHED FLOOR.
  - NOT MORE THAN 50% OF THE REQUIRED FLOOR AREA OF A ROOM IS PERMITTED TO HAVE A SLOPED CEILING LESS THAN SEVEN FEET IN HEIGHT WITH NO PORTION OF THE REQUIRED FLOOR AREA LESS THAN FIVE FEET IN HEIGHT.
  - BATHROOMS SHALL HAVE A MINIMUM CEILING HEIGHT OF SIX FEET EIGHT INCHES OVER THE FINISH AND AT THE FRONT CLEARANCE AREA FOR THE FIXTURES. A SHOWER OR TUB WITH A SHOWERHEAD SHALL HAVE A MINIMUM CEILING HEIGHT OF SIX FEET EIGHT INCHES ABOVE A MINIMUM 50'X50' AREA AT THE SHOWERHEAD.
- EVERY DWELLING SHALL HAVE AT LEAST ONE HABITABLE ROOM WITH A GROSS FLOOR AREA OF AT LEAST 800 SQUARE FEET.
- OTHER HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN TO SQUARE FEET EXCEPT KITCHENS.
- HABITABLE ROOMS SHALL NOT BE LESS THAN SEVEN FEET IN ANY HORIZONTAL EXCEPT KITCHENS.
- PORTIONS OF A ROOM WITH A SLOPING CEILING MEASURING LESS THAN FIVE (5) FEET OR A HURDLED CEILING MEASURING LESS THAN SEVEN (7) FEET SHALL NOT BE CONSIDERED AS CONTRIBUTING TO THE MINIMUM REQUIRED HABITABLE AREA FOR THAT ROOM.

#### ROOMING AND SLEEPING

- PROVIDE CONTINUOUS 4'-0" WIDE FIBERGLASS REINFORCED BUTYRONE ICE AND WATER SHIELD AT ALL ROOF EDGES, CENTERED ON ALL VALLEYS AND AT ROOF/HALL INTERSECTIONS CARRIED 1'-0" UP THE WALLS/STAIR TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE ALUMINUM STEP FLASHING AT ROOF/WALL AND ROOF/GARMENT INTERSECTIONS.
- PROVIDE ALUMINUM FLASHING OVER ALL WINDOW AND DOORS HEAD TRIM AND AT THE CONNECTION BETWEEN ALL EXTERIOR WALLS AND EXTERIOR DECKS.
- PROVIDE CONTINUOUS SOFFIT VENTS OR CONTINUOUS VENTED DRAIN EDGE AT ALL SOFFIT OVERHANGS.
- PROVIDE 1/8" FLEET BACKER ALL ROOF SHALLS (UNLESS SPECIFIED OTHERWISE).
- PROVIDE CONTINUOUS RIDGE VENTS (UNLESS SPECIFIED AS OTHERWISE) SEE BUILDING ELEVATION FOR EXTENT.
- ALL GUTTERS AND DOWNSPOUTS TO BE PREFINISHED ALUM. COLOR TO BE SELECTED BY OWNER.

#### LIGHT/VENTILATION AND INSULATION

- ALL HABITABLE ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING OF NOT LESS THAN 8% OF THE FLOOR AREA OF SUCH ROOMS. NATURAL VENTILATION SHALL BE PROVIDED DOORS, WINDOWS, LOWERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED.
- EXCEPTIONS:
  - THE GLAZED AREAS NEED NOT BE OPENABLE WHEN THE OPENING IS NOT A REQUIRED TO BE AN EMERGENCY ESCAPE AND RESCUE OPENING AND AN APPROVED MECHANICAL VENTILATION SYSTEM IS PROVIDED CAPABLE OF PROVIDING 20% AIR EXCHANGE PER HOUR IN THE ROOM OR A MECHANICAL MECHANICAL VENTILATION SYSTEM IS INSTALLED CAPABLE OF SUPPLYING OUTDOOR VENTILATION AIR OF 5 CFM PER OCCUPANT FOR THE FIRST BEDROOM AND ONE FOR EVERY ADDITIONAL BEDROOM.
  - THE GLAZED AREAS NEED NOT BE PROVIDED IN ROOMS WHERE THE ABOVE EXCEPTION IS MET AND ARTIFICIAL LIGHT IS PROVIDED CAPABLE OF PROVIDING AN AVERAGE ILLUMINATION OF SIX FOOT-CANDELES OVER THE AREA OF THE ROOM AT A HEIGHT OF 30 INCHES.
- ALL BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA OF NOT LESS THAN THREE SQUARE FEET, 1/2 OF WHICH MUST BE OPENABLE.

#### EXCEPTION

- THE GLAZED AREA SHALL NOT BE REQUIRED WHERE ARTIFICIAL LIGHT AND A MECHANICAL VENTILATION SYSTEM ARE PROVIDED. VENTILATION AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTSIDE.
- ATTIC VENTILATION WITH A CEILING VAPOR BARRIER, PROVIDE AT LEAST ONE (1) SQUARE FOOT OF FREE AREA FOR EACH THREE HUNDRED (300) SQUARE FEET OF CEILING AREA.
- ATTIC VENTILATION WITHOUT A CEILING VAPOR BARRIER, PROVIDE AT LEAST ONE (1) SQUARE FOOT OF FREE AREA FOR EACH ONE HUNDRED-FIFTY (150) SQUARE FEET OF CEILING AREA.
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A MOISTURE BARRIER AND PROPERLY INSULATE ALL WALLS AND CEILING TO AIR LEAKAGE INTO UNOCCUPIED SPACES.
- IF MECHANICAL, ELECTRICAL OR PLUMBING EQUIPMENT IS TO BE PLACED IN ATTICS, EYES, OVERHANGS AND OTHER SIMILAR UNOCCUPIED UNINSULATED SPACES, THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A PROPER ENCLOSURE, INSULATION, DIRECT VENTILATION ETC. TO AVOID MOISTURE CONDENSATION, FREEZE THAN ICE DAMMING, AND OTHER SIMILAR RISKS.

#### CLUSTERING

- ALL SANITARY LINES WITHIN WALLS AND FLOORS ADJOINING LIVING SPACES ARE TO BE SOUND INSULATED.
- ALL PLUMBING WITHIN WALL OR FLOOR CAVITIES WHICH BORDER UNOCCUPIED SPACES, ARE TO BE INSULATED AND ON THE WARM SIDE OF THE CAVITY INSULATE TO AVOID FREEZING.

#### SHAKE & CARBON MONOXIDE DETECTORS/ALARMS

- COMBINATION SMOKE AND CARBON MONOXIDE ALARMS ARE ACCEPTABLE PROVIDED SMOKE ALARMS HAVE SIMILATED VOICE AND TONE ALARMS THAT CLEARLY DISTINGUISH BETWEEN THE TWO TYPES OF SENSORS. IF COMBINED SHAKE AND CARBON MONOXIDE ALARMS ARE USED THEN ALL REQUIRED CRITERIA FOR SMOKE AND CARBON MONOXIDE DETECTORS NEED TO BE MET.
- SMOKE DETECTORS ARE REQUIRED TO MONITOR, FROM SALE OR TRANSFER, ALL DWELLING UNITS FOR REQUIRED SMOKE AND CARBON MONOXIDE DETECTORS.
- COMBOS SHALL CHECK WITH LOCAL BUILDING AND/OR FIRE DEPARTMENTS FOR ACCEPTED ALARM TYPES AND LOCATIONS FOR PROPER INSTALLATION IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

#### SHAKE & CARBON MONOXIDE DETECTORS

- ALL ONE AND TWO FAMILY SHALL BE EQUIPPED WITH A HOUSEHOLD FIRE WARNING SYSTEM. ALL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE CODES, MANUFACTURER'S INSTRUCTIONS AND LISTING CRITERIA.
- SHAKE DETECTORS ARE REQUIRED TO BE PERMANENTLY WIRRED TO AN AC PRIMARY POWER SOURCE AND SHALL HAVE SECONDARY (STANDBY) POWER SUPPLIED FROM MONITORED BATTERIES.
- WHERE MORE THAN ONE SMOKE DETECTOR IS REQUIRED, ALL REQUIRED DETECTORS SHALL BE INSTALLED SO THAT THE ACTIVATION OF ANY DETECTOR SHALL CAUSE THE ALARM IN ALL REQUIRED SMOKE DETECTORS IN THE DWELLING UNIT TO SOUND (MIN. 65 DBA AT 10 FEET TO 5 DBA IN BEDROOMS).
- SMOKE DETECTORS SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS:
  - IN THE IMMEDIATE VICINITY OF BEDROOMS.
  - IN ALL BEDROOMS.
  - IN EACH STORY OF A UNIT INCLUDING BASEMENTS & CELLARS FOR EACH LEVEL SOFTLY PART THEREOF.
  - NEAR THE BASE OF ALL STAIRS WHERE SUCH STAIRS LEAD TO ANOTHER OCCUPIED FLOOR.
- PHOTO ELECTRIC SMOKE DETECTORS ARE REQUIRED IF LOCATED WITHIN 20 FEET OF A KITCHEN OR BATHROOM.
- WHERE ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED TO AN EXISTING DWELLING, THE ENTIRE BUILDING SHALL BE PROVIDED WITH SMOKE DETECTORS DESIGNED AND LOCATED AS REQUIRED FOR NEW DWELLINGS.

#### CARBON MONOXIDE ALARM/DETECTORS

- ALL ONE AND TWO FAMILY DWELLINGS SHALL BE EQUIPPED WITH A HOUSEHOLD CARBON MONOXIDE WARNING SYSTEM. ALL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE CODES, MANUFACTURER'S INSTRUCTIONS AND LISTING CRITERIA.
- CARBON MONOXIDE DETECTORS SHALL BE LOCATED ON EVERY LEVEL OF THE DWELLING UNIT INCLUDING BASEMENTS AND CELLARS BUT NOT INCLUDING GARAGE, SPACES AND UNHABITABLE ATTICS.
- ALL ALARM-SOUNDING APPLIANCES SHALL HAVE A MINIMUM BATTERY OF 25 DBA @ 10 FEET.

#### HEAT DETECTORS

- HEAT DETECTORS SHALL BE INSTALLED IN ANY INTERNAL OR ATTACHED GARAGE TO THE MAIN HOUSE.
- A NEW ADDITION ATTACHED GARAGE TO AN EXISTING DWELLING INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES, MANUFACTURER'S INSTRUCTIONS AND LISTING CRITERIA. IF THE EXISTING DWELLING SYSTEM THAT IS COMPATIBLE WITH THE GARAGE HEAT DETECTOR, THAT THE GARAGE HEAT DETECTOR SHALL BE INTERCONNECTED TO THE EXISTING EXISTING FIRE DETECTOR SYSTEM. IF THE DETECTOR IS NOT COMPATIBLE WITH THE EXISTING SYSTEM, IT SHALL BE CONNECTED TO A SOUNDER OR A COMPATIBLE HEAT DETECTOR CONTAINING A SOUNDING DEVICE LOCATED IN THE DWELLING UNIT AND WITHIN 20 FEET OF THE NEAREST DOOR TO THE GARAGE.
- FOR FLAT-FINISHED GARAGE CEILING, THE DETECTOR SHALL BE LOCATED ON OR NEAR THE CENTER OF THE GARAGE CEILING. FOR VAULTED CEILING, THE DETECTOR SHALL BE PLACED IN THE APPROPRIATE CENTER OF THE VAULTED SPACE.
- THE HEADING DETECTOR SHALL BE LISTED FOR AND DESIGNED TO BE INTERCONNECTED TO ALL SMOKE DETECTORS OF THE REQUIRED HOUSEHOLD FIRE ALARM SYSTEM SUCH THAT THE ACTIVATION OF THE HEAT DETECTOR WILL ACTIVATE ALL OF THE ADJACENT ALARMS OF THE HOUSEHOLD FIRE ALARM SYSTEM THROUGHOUT THE DWELLING.

#### SPRINKLERS

- THE 3-UNIT TOWNHOUSE HAS AN AGGREGATE AREA OF 44,126.71 SF AND SHALL BE DESIGNED WITH A MINIMUM NFPA 13 SYSTEM.



HPA Design, Inc.  
ARCHITECTS

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200 Stonewall Blvd  
Wrentham, MA



# FIRST COLONY DEVELOPMENT LLC



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STRUCTURAL ENGINEER

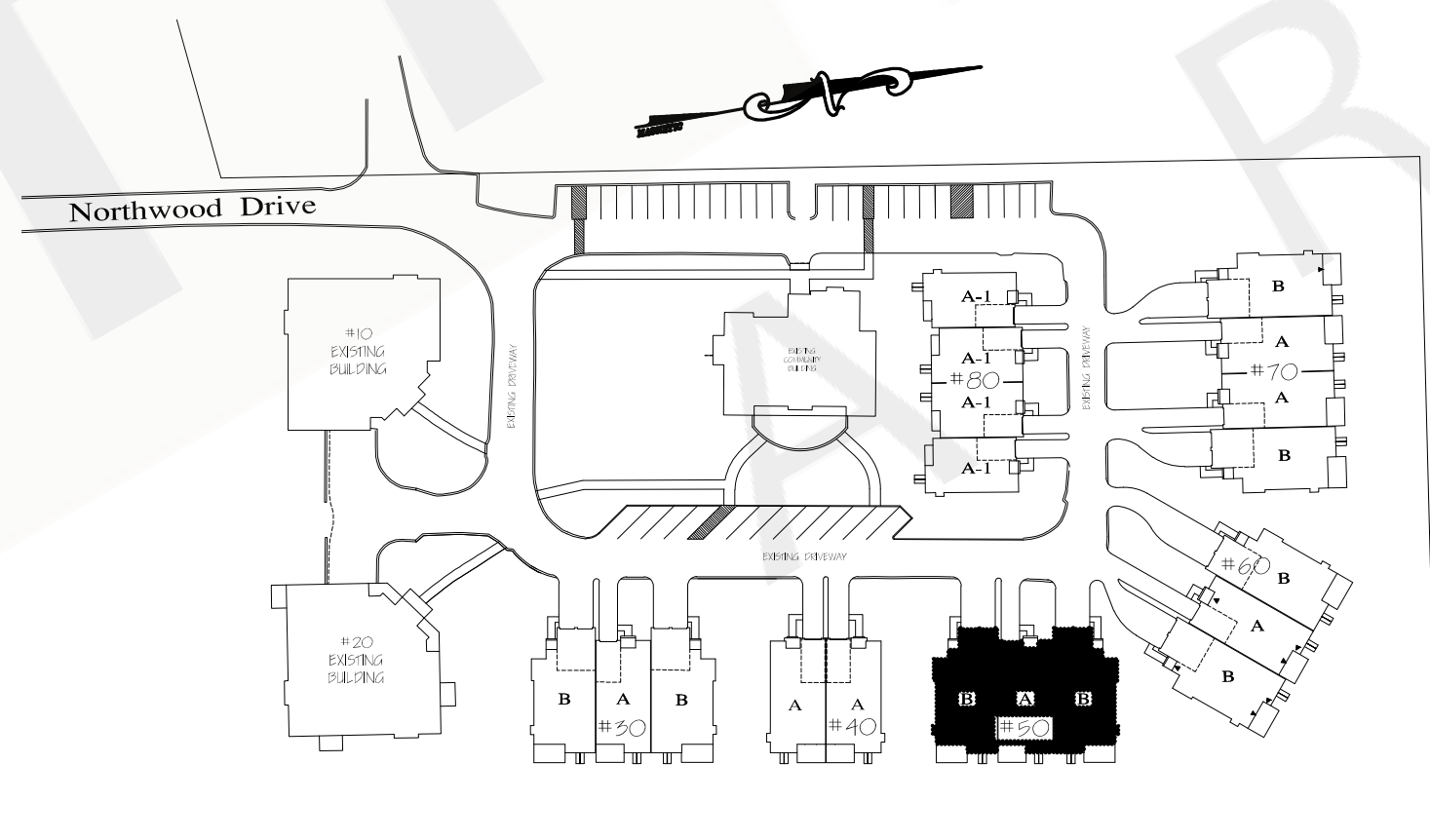
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## SCHEDULE OF DRAWINGS:

A0.1	TITLE SHEET
A1.1	1ST FLOOR PLAN
A1.2	2ND FLOOR PLAN
A2.1	ELEVATIONS
A2.2	ELEVATIONS
A3.1	BUILDING SECTIONS
A3.2	BUILDING SECTIONS
A4.1	WALL SECTIONS
A4.2	AIR BARRIER NOTES & DETAILS
A5.1	DETAILS
S1.1	FOUNDATION PLAN
S1.2	1ST FLOOR FRAMING
S1.3	2ND FLOOR FRAMING
S1.4	CEILING FRAMING
S1.5	ROOF FRAMING
S2.1	DETAILS
S2.2	DETAILS



KEY PLAN

DATE: AUGUST 7, 2018

DRAWN BY: RMB  
contact@hpadesign.com

CHECKED BY: HPA

PATH:  
20180101\_FIRST COLONY DEV  
20180101\_CDS

SCALE: SEE DRAWING

REVISIONS:

#	DATE	DESC.
0		ISSUED FOR CONSTRUCTION

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CONSTRUCTION BY:  
**FIRST COLONY DEV. LLC**  
150 NORTHWOOD DRIVE, NORTHWOOD TOWNHOUSE CONDOS, SUDBURY, MA

TITLE SHEET

SHEET:

A0.1

JOB NO. 20180101

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### GENERAL NOTES

#### GENERAL

- THE GOVERNING BUILDING CODE FOR THE DESIGN AND CONSTRUCTION IS THE INTERNATIONAL RESIDENTIAL (IRC 2018) WITH MASSACHUSETTS STATE BUILDING CODE AMENDMENTS (1TH EDITION).
- ARCHITECTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL, AND SHED DRAWINGS.
- THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES, AMBIGUITIES, OR INCONSISTENCIES PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ALSO NOTIFY THE ARCHITECT, PRIOR TO PROCEEDING WITH THE WORK, IF ANY CONSTRUCTION NEEDS TO BE ADJUSTED DUE TO FIELD CONDITIONS.
- AN ASSUMPTION HAS BEEN MADE THAT THE ELEVATION DIFFERENCE BETWEEN THE GARAGE SLAB AND THE FIRST FLOOR IS 24". THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IF THIS IS INCONGRUENT WITH THE SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
- ALL FLASHING IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE CORROSION RESISTANT.
- ALL EXPOSURE AND HOT WATER PIPING SHALL BE INSULATED AND WHERE NECESSARY, A VAPOR BARRIER FOR THE EXPOSURE WILL BE PROVIDED TO PREVENT CONDENSATION.
- ALL CHIMNEYS TO BE CONSTRUCTED SO THE TOP OF THE FLUE IS 2'-0" ABOVE ANY ROOF/WALL WITHIN 10'-0".
- PROVIDE CONTINUOUS PITCH BREAK VENTS AT ALL ROOF/WALL INTERSECTIONS WHERE SOFFIT VENTS ARE INSTALLED.

#### DIMENSIONS

- DIMENSIONING STANDARDS WITHIN THE DOCUMENTS ARE AS FOLLOWS UNLESS OTHERWISE NOTED:
  - DIMENSIONING TO EXTERIOR WALLS ARE FROM OUTSIDE FACE OF A STUD OR CONCRETE WALL.
  - DIMENSIONING AT WINDOWS AND EXTERIOR DOORS REPRESENTS A DIMENSION TO THE CENTER OF THAT OPENING FROM THE CENTER OF ANOTHER OPENING OR THE OUTSIDE FACE OF A STUD OR CONCRETE WALL.
  - INTERIOR DIMENSIONING AT STUD WALLS REPRESENTS A DIMENSION TO THE MIDDLE OF THE STUD UNLESS INTERIOR WALL IS ALSO AN EXTERIOR WALL. DIMENSION IS TO FACE OF STUD.
  - INTERIOR DIMENSIONING AT STAIRS REPRESENTS A DIMENSION TO THE FINISHED FACE OF THE STAIR.
  - DIMENSIONING OF WALLS ENCLOSED THEREAFTER HAVE PRE-FACTURED FINISH FACES AND ALL OTHER BUILDING NOT BE CONFORMED WITH THE FINISHED MANUFACTURER FOR THE REQUIRED R.O. AND FINISHES.
- DIMENSIONS DEPICTING THE BUILDING HEIGHT SHOWN OF THE ARCHITECTURAL AND STRUCTURAL DRAWINGS ARE FOR THE BUILDING AND THE COMPONENTS SHALL. THE OVERALL BUILDING HEIGHT MEASURED FROM THE 1ST FLOOR FLOOR DECK. THE OWNER/AGC IS RESPONSIBLE FOR COORDINATING AND ESTABLISHING THE GRADE RELATIVE TO THE 1ST FLOOR. TO ENSURE COMPLIANCE WITH ZONING AND BUILDING CODE HEIGHT REQUIREMENTS.
- ALL DIMENSIONING FROM EXISTING SURFACES ARE FROM FACE OF EXISTING SURFACE.
- CLOSET DOORS THAT ARE NOT DIMENSIONED ARE TYPICALLY 4'-0" X 6'-0" OPENING ON THE FINISH CASING HEIGHT FROM FACE FINISH TO THE DOOR OPENING ON THE BUTT SIDE.
- DIMENSIONING LOCATING CASES OPENINGS ARE TYPICALLY DIMENSIONED TO THE CENTER OF THAT OPENING. TYP. UNLESS OTHERWISE NOTED.

#### STAIRWAYS/BALCONIES

- STAIRWAYS SHALL NOT BE LESS THAN 5'-0" IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. MAXIMUM RISER HEIGHT SHALL BE 8 1/4". MINIMUM TREAD DEPTH SHALL BE 10" WITH NOSING NOT TO EXCEED 1 1/4". RISER TREADS SHALL HAVE A MIN. DEPTH EQUAL TO THE STAIRWAY RUN TREAD DEPTH AT A DISTANCE OF 12" FROM THE HANDRAIL RISE WITH A MIN. TREAD DEPTH OF 3" AT ANY POINT. MINIMUM HEADROOM SHALL BE 6'-4" MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING OR FROM THE FLOOR GRADE BELOW. GUARDRAILS ON OPEN SIDES OF STAIRS WITH A TOTAL RISE OF MORE THAN THIRTY (30) INCHES ABOVE A FLOOR OR GRADE BELOW SHALL BE NOT LESS THAN 34" IN HEIGHT MEASURED VERTICALLY FROM THE NOSE OF THE TREADS. THE MAXIMUM CLEAR OPENING BETWEEN RAILS, BALUSTERS, AND FLOORS SHALL NOT EXCEED FOUR (4) INCHES.
- HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT OF STAIRS WITH 4 OR MORE RISERS. MINIMUM HEIGHT SHALL NOT BE LESS THAN 34" WITH A MAXIMUM TREAD TO EXCEED 30". HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE STAIR.
- GUARDRAILS, 36" MINIMUM IN HEIGHT, SHALL BE INSTALLED IN FLOOR, PORCH, AND/OR BALCONY AREA MORE THAN THIRTY (30) INCHES ABOVE A FLOOR OR GRADE BELOW. GUARDRAILS ON OPEN SIDES OF STAIRS WITH A TOTAL RISE OF MORE THAN THIRTY (30) INCHES ABOVE A FLOOR OR GRADE BELOW SHALL BE NOT LESS THAN 34" IN HEIGHT MEASURED VERTICALLY FROM THE NOSE OF THE TREADS. THE MAXIMUM CLEAR OPENING BETWEEN RAILS, BALUSTERS, AND FLOORS SHALL NOT EXCEED FOUR (4) INCHES.

#### EXCEPTIONS

- THE TRIANGULAR OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD AT THE OPEN SIDE OF A STAIRWAY MAY BE OF SUCH A SIZE THAT A SIX INCH HIGH SPHERE CANNOT PASS THROUGH. OPENINGS FOR REQUIRED GUARDS ON THE SIDES OF STAIR TREADS SHALL NOT ALLOW A SPHERE 4-5/8 INCHES TO PASS THROUGH.
- AN INSULATED DOOR SHALL BE PROVIDED AT THE TOP OF UNFINISHED BASEMENT STAIRS OR INSULATE THE WALLS AND THE INTERIOR OF STAIRS AND PROVIDE AN INSULATED DOOR AT THE BOTTOM OF BASEMENT STAIRS.
- AN INSULATED DOOR SHALL BE PROVIDED AT THE TOP OF ATTIC STAIRS OR INSULATE THE WALLS AND INTERSECT OF STAIRS AND PROVIDE AN INSULATED DOOR AT THE BOTTOM OF ATTIC STAIRS.

#### EMERGENCY ESCAPE AND RESCUE OPENINGS, EXTERIOR WINDOWS AND DOORS

- WINDOW SIZES SHOWN ON THE DRAWINGS ARE BASED GENERALLY ON AMERICAN AND THE OTHER OR GENERAL CONTRACTOR WHERE APPLICABLE SHALL CHOOSE THE FINAL MANUFACTURER. WINDOW SIZES SHALL BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO ORDERING. ROOM OPENING SIZES SHALL BE PROVIDED BY THE MANUFACTURER.
- BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS CONTAIN MORE THAN ONE SLEEPING ROOM EACH SHALL HAVE AN EMERGENCY ESCAPE AND RESCUE OPENING. ANY ADJOINING AREAS SHALL NOT REQUIRE ONE EMERGENCY ESCAPE AND RESCUE OPENING SHALL MEET THE FOLLOWING CRITERIA:
  - STILL HEIGHT SHALL NOT BE MORE THAN 44 INCHES ABOVE THE FLOOR.
  - WHERE A DOOR HAVING A THRESHOLD BELOW THE ADJACENT GROUND ELEVATION IS USED AS AN EMERGENCY ESCAPE AND RESCUE OPENING AND IS PROVIDED WITH A BULKHEAD ENCLOSURE, THE BULKHEAD SHALL PROVIDE DIRECT ACCESS TO THE BASEMENT AND WHEN THE BULKHEAD IS FULLY OPENED IT SHALL PROVIDE THE MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET.
  - EMERGENCY ESCAPE AND RESCUE OPENINGS WITH A RAIL ELEVATION BELOW THE ADJACENT GROUND ELEVATION SHALL BE PROVIDED WITH A WINDOW WELL WITH A MINIMUM HORIZONTAL AREA OF 4 SQUARE FEET AND A MINIMUM HORIZONTAL PROJECTION OF 36". THE WINDOW WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.
  - ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET.

#### EXCEPTIONS

- GRADE FLOOR OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.0 SQUARE FEET.
- DOUBLE AND TRIPLE DOORS FOR EMERGENCY ESCAPE SHALL BE PERMITTED TO HAVE A NET CLEAR OPENING OF 3.3 SQUARE FEET PROVIDED THAT AT LEAST ONE OPERABLE SASH MEETS THE MINIMUM HEIGHT AND WIDTH REQUIREMENTS AND OPERATIONAL CONSTRAINTS.
- THE MINIMUM NET CLEAR OPENING SHALL BE 24 INCHES X 20 INCHES IN EITHER DIRECTION.
- EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE WITHOUT THE USE OF KEYS OR TOOLS.
- IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 10 INCHES ABOVE THE FINISHED GRADE OR SURFACE THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT POINT OPENING THAT ALLOW PASSAGE OF A 4 INCH DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES OF THE FINISHED FLOOR.

#### EXCEPTIONS

- STAIRWAYS, RAMPS, EXTERIOR EXIT BALCONIES, HALLWAYS AND DOORS SHALL MEET ALL MINIMUM EGRESS REQUIREMENTS.
- HALLWAYS SHALL BE A MINIMUM OF 3 FEET CLEAR.
- ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSON BOARD.
- HALLWAYS SHALL BE A MINIMUM OF 3 FEET CLEAR.
- EXITS FROM DWELLING UNITS SHALL BE BY MEANS OF TWO EXIST DOORS. THE MINIMUM NORMAL WIDTH OF AT LEAST ONE OF THE REQUIRED EXIST DOORS SHALL BE NOT LESS THAN 30" WITH A NORMAL HEIGHT SHALL OF SIX FEET EIGHT INCHES AND EXIST DOOR SHALL BE NOT LESS THAN 30" WITH A NORMAL HEIGHT SHALL OF SIX FEET EIGHT INCHES IN NORMAL HEIGHT AND MAY BE SLOPED OR SIDE-HINGED.
- EXISTS FROM ATTACHED GARAGE SHALL BE PROVIDED PROVIDED THAT THE ATTACHED GARAGE IS ALSO PROVIDED WITH A 32" EXIST DOOR.
- ALL OTHER EXTERIOR DOORS IN EXCESS OF THE TWO REQUIRED EXIST DOORS ARE NOT REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS.
- ALL INTERIOR DOORS PROVIDING ACCESS TO HABITABLE ROOMS SHALL HAVE A NORMAL WIDTH OF 30 INCHES AND NORMAL HEIGHT OF SIX FEET 6 INCHES EXCEPT BATHROOMS WHICH ARE PERMITTED TO BE 24 INCHES IN NORMAL WIDTH.
- A FLOOR OR LANDING SHALL BE PROVIDED ON EACH SIDE OF AN EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SWEPT AND HAVE A MINIMUM DIMENSION OF 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL.

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### MINIMUM ROOM REQUIREMENTS

- HABITABLE ROOMS, HALLWAYS, CORRIDORS, BATHROOMS, TOILET ROOMS, LAUNDRY ROOMS AND BASEMENTS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN SEVEN (7) FEET MEASURED FROM THE FINISH FLOOR TO THE LOWEST PROJECTION FROM THE CEILING.
- BEAMS AND GIRDERS SPACED NOT LESS THAN FOUR (4) FEET ON CENTER MAY PROJECT NOT MORE THAN SIX (6) INCHES BELOW THE REQUIRED CEILING HEIGHT.
- CEILING IN BASEMENTS WITHOUT HABITABLE SPACE MAY PROJECT TO WITHIN SIX FEET EIGHT INCHES OF THE FINISHED FLOOR EXCEPT THAT BEAMS, GIRDERS, DUCTS AND OTHER OBSTRUCTIONS MAY PROJECT TO WITHIN SIX FEET FOUR INCHES OF THE FINISHED FLOOR.
- NOT MORE THAN 50% OF THE REQUIRED FLOOR AREA OF A ROOM IS PERMITTED TO HAVE A SLOPED CEILING LESS THAN SEVEN FEET IN HEIGHT WITH NO PORTION OF THE REQUIRED FLOOR AREA LESS THAN FIVE FEET IN HEIGHT.
- BATHROOMS SHALL HAVE A MINIMUM CEILING HEIGHT OF SIX FEET EIGHT INCHES OVER THE FINISH AND AT THE FRONT CLEARANCE AREA FOR THE FIXTURES. A SHOWER OR TUB WITH A SHOWERHEAD SHALL HAVE A MINIMUM CEILING HEIGHT OF SIX FEET EIGHT INCHES ABOVE A MINIMUM 50'X50' AREA AT THE SHOWERHEAD.
- EVERY DWELLING SHALL HAVE AT LEAST ONE HABITABLE ROOM WITH A GROSS FLOOR AREA OF AT LEAST 800 SQUARE FEET.
- OTHER HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN TO SQUARE FEET EXCEPT KITCHENS.
- HABITABLE ROOMS SHALL NOT BE LESS THAN SEVEN FEET IN ANY HORIZONTAL EXCEPT KITCHENS.
- PORTIONS OF A ROOM WITH A SLOPING CEILING MEASURING LESS THAN FIVE (5) FEET OR A HINGED CEILING MEASURING LESS THAN SEVEN (7) FEET SHALL NOT BE CONSIDERED AS CONTRIBUTING TO THE MINIMUM REQUIRED HABITABLE AREA FOR THAT ROOM.

#### ROOMING AND SLEEPING

- PROVIDE CONTINUOUS 4'-0" WIDE FIBERGLASS REINFORCED BUTYRONE ICE AND WATER SHIELD AT ALL ROOF EDGES, CENTERED ON ALL VALLEYS AND AT ROOF/WALL INTERSECTIONS CARRIED 1'-0" UP THE WALLS/STAIR TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE ALUMINUM STEP FLASHING AT ROOF/WALL AND ROOF/GARMENT INTERSECTIONS.
- PROVIDE ALUMINUM FLASHING OVER ALL WINDOW AND DOORS HEAD TRIM AND AT THE CONNECTION BETWEEN ALL EXTERIOR WALLS AND EXTERIOR DECKS.
- PROVIDE CONTINUOUS SOFFIT VENTS OR CONTINUOUS VENTED DRAIN EDGE AT ALL SOFFIT OVERHANGS.
- PROVIDE 1/8" FLEET BACKER ALL ROOF SHALLS (UNLESS SPECIFIED OTHERWISE).
- PROVIDE CONTINUOUS RIDGE VENTS (UNLESS SPECIFIED AS OTHERWISE) SEE BUILDING ELEVATION FOR EXTENT.
- ALL GUTTERS AND DOWNSPOUTS TO BE PREFINISHED ALUM. COLOR TO BE SELECTED BY OWNER.

#### LIGHT/VENTILATION AND INSULATION

- ALL HABITABLE ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING OF NOT LESS THAN 8% OF THE FLOOR AREA OF SUCH ROOMS. NATURAL VENTILATION SHALL BE PROVIDED DOORS, WINDOWS, LOWERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED.

#### EXCEPTIONS

- THE GLAZED AREAS NEED NOT BE OPENABLE WHEN THE OPENING IS NOT A REQUIRED TO BE AN EMERGENCY ESCAPE AND RESCUE OPENING AND AN APPROVED MECHANICAL VENTILATION SYSTEM IS PROVIDED CAPABLE OF PROVIDING 20% AIR EXCHANGE PER HOUR IN THE ROOM OR A MECHANICAL MECHANICAL VENTILATION SYSTEM IS INSTALLED CAPABLE OF SUPPLYING OUTDOOR VENTILATION AIR OF 5 CFM PER OCCUPANT FOR THE FIRST BEDROOM AND ONE FOR EVERY ADDITIONAL BEDROOM.

- THE GLAZED AREAS NEED NOT BE PROVIDED IN ROOMS WHERE THE ABOVE EXCEPTION IS MET AND ARTIFICIAL LIGHT IS PROVIDED CAPABLE OF PROVIDING AN AVERAGE ILLUMINATION OF SIX FOOT-CANDELES OVER THE AREA OF THE ROOM AT A HEIGHT OF 30 INCHES.
- ALL BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA OF NOT LESS THAN THREE SQUARE FEET, 1/2 OF WHICH MUST BE OPENABLE.

#### EXCEPTION

- THE GLAZED AREA SHALL NOT BE REQUIRED WHERE ARTIFICIAL LIGHT AND A MECHANICAL VENTILATION SYSTEM ARE PROVIDED. VENTILATION AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTSIDE.

- ATTIC VENTILATION WITH A CEILING VAPOR BARRIER, PROVIDE AT LEAST ONE (1) SQUARE FOOT OF FREE AREA FOR EACH THREE HUNDRED (300) SQUARE FEET OF CEILING AREA.
- ATTIC VENTILATION WITHOUT A CEILING VAPOR BARRIER, PROVIDE AT LEAST ONE (1) SQUARE FOOT OF FREE AREA FOR EACH ONE HUNDRED-FIFTY (150) SQUARE FEET OF CEILING AREA.
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A MOISTURE BARRIER AND PROPERLY INSULATE ALL WALLS AND CEILING TO AIR LEAKAGE INTO UNOCCUPIED SPACES.
- IF MECHANICAL, ELECTRICAL OR PLUMBING EQUIPMENT IS TO BE PLACED IN ATTICS, EYES, OVERHANGS AND OTHER SIMILAR UNOCCUPIED UNINSULATED SPACES, THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A PROPER ENCLOSURE, INSULATION, DIRECT VENTILATION ETC. TO AVOID MOISTURE CONDENSATION, FREEZE THAN ICE DAMMING, AND OTHER SIMILAR RISKS.

#### CLUSTERING

- ALL SANITARY LINES WITHIN WALLS AND FLOORS ADJOINING LIVING SPACES ARE TO BE SOUND INSULATED.
- ALL PLUMBING WITHIN WALL OR FLOOR CAVITIES WHICH BORDER UNOCCUPIED SPACES, ARE TO BE INSULATED AND ON THE WARM SIDE OF THE CAVITY INSULATE TO AVOID FREEZING.

#### SHAKE & CARBON MONOXIDE DETECTORS/ALARMS

- COMBINATION SMOKE AND CARBON MONOXIDE ALARMS ARE ACCEPTABLE PROVIDED SMOKE ALARMS HAVE SIMILATED VOICE AND TONE ALARMS THAT CLEARLY DISTINGUISH BETWEEN THE TWO TYPES OF EMERGENCIES. IF COMBINED SHAKE AND CARBON MONOXIDE ALARMS ARE USED THEY MUST MEET THE FOLLOWING CRITERIA FOR SMOKE AND CARBON MONOXIDE DETECTORS NEED TO BE MET.
- SMOKE DETECTORS ARE REQUIRED TO MONITOR, FROM SALE OR TRANSFER, ALL DWELLING UNITS FOR REQUIRED SMOKE AND CARBON MONOXIDE DETECTORS.
- COMBOS SHALL CHECK WITH LOCAL BUILDING AND/OR FIRE DEPARTMENTS FOR ACCEPTED ALARM TYPES AND LOCATIONS FOR PROPER INSTALLATION IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.

#### SHAKE & CARBON MONOXIDE DETECTORS

- ALL ONE AND TWO FAMILY SHALL BE EQUIPPED WITH A HOUSEHOLD FIRE WARNING SYSTEM. ALL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE CODES, MANUFACTURER'S INSTRUCTIONS AND LISTING CRITERIA.
- SMOKE DETECTORS ARE REQUIRED TO BE PERMANENTLY WIRRED TO AN AC PRIMARY POWER SOURCE AND SHALL HAVE SECONDARY (STANDBY) POWER SUPPLIED FROM MONITORED BATTERIES.
- WHERE MORE THAN ONE SMOKE DETECTOR IS REQUIRED, ALL REQUIRED DETECTORS SHALL BE INSTALLED SO THAT THE ACTIVATION OF ANY DETECTOR SHALL CAUSE THE ALARM IN ALL REQUIRED SMOKE DETECTORS IN THE DWELLING UNIT TO SOUND (MIN. 65 DBA AT 10 FEET TO 5 DBA IN BEDROOMS).
- SMOKE DETECTORS SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS:
  - IN THE IMMEDIATE VICINITY OF BEDROOMS.
  - IN ALL BEDROOMS.
  - IN EACH STORY OF A UNIT INCLUDING BASEMENTS & CELLARS FOR EACH LEVEL SOFTLY PART THEREOF.
  - NEAR THE BASE OF ALL STAIRS WHERE SUCH STAIRS LEAD TO ANOTHER OCCUPIED FLOOR.
- PHOTO ELECTRIC SMOKE DETECTORS ARE REQUIRED IF LOCATED WITHIN 20 FEET OF A KITCHEN OR BATHROOM.
- WHERE ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED TO AN EXISTING DWELLING, THE ENTIRE BUILDING SHALL BE PROVIDED WITH SMOKE DETECTORS DESIGNED AND LOCATED AS REQUIRED FOR NEW DWELLINGS.

#### CARBON MONOXIDE ALARMS/DETECTORS

- ALL ONE AND TWO FAMILY DWELLINGS SHALL BE EQUIPPED WITH A HOUSEHOLD CARBON MONOXIDE WARNING SYSTEM. ALL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE CODES, MANUFACTURER'S INSTRUCTIONS AND LISTING CRITERIA.
- CARBON MONOXIDE DETECTORS SHALL BE LOCATED ON EVERY LEVEL OF THE DWELLING UNIT INCLUDING BASEMENTS AND CELLARS BUT NOT INCLUDING GARAGE, SPACES AND UNHABITABLE ATTICS.
- ALL ALARM-SOUNDING APPLIANCES SHALL HAVE A MINIMUM BATTERY OF 25 DBA @ 10 FEET.
- HEAT DETECTORS

#### HEAT DETECTORS

- HEAT DETECTORS SHALL BE INSTALLED IN ANY INTERNAL OR ATTACHED GARAGE TO THE MAIN HOUSE.
- A NEW ADDITION ATTACHED GARAGE TO AN EXISTING DWELLING INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES, MANUFACTURER'S INSTRUCTIONS AND LISTING CRITERIA. IF THE EXISTING DWELLING SYSTEM THAT IS COMPATIBLE WITH THE GARAGE HEAT DETECTOR, THAT THE GARAGE HEAT DETECTOR SHALL BE INTERCONNECTED TO THE EXISTING EXISTING FIRE DETECTOR SYSTEM. IF THE DETECTOR IS NOT COMPATIBLE WITH THE EXISTING SYSTEM, IT SHALL BE CONNECTED TO A SOUNDING OR A COMPATIBLE HEAT DETECTOR CONTAINING A SOUNDING DEVICE LOCATED IN THE DWELLING UNIT AND WITHIN 20 FEET OF THE NEAREST DOOR TO THE GARAGE.
- FOR FLAT-FINISHED GARAGE CEILING, THE DETECTOR SHALL BE LOCATED ON OR NEAR THE CENTER OF THE GARAGE CEILING. FOR VAULTED CEILING, THE DETECTOR SHALL BE PLACED IN THE APPROPRIATE CENTER OF THE VAULTED SPACE.
- THE HEAT DETECTOR SHALL BE LISTED FOR AND DESIGNED TO BE INTERCONNECTED TO ALL SMOKE DETECTORS OF THE REQUIRED HOUSEHOLD FIRE ALARM SYSTEM SUCH THAT THE ACTIVATION OF THE HEAT DETECTOR WILL ACTIVATE ALL OF THE ADJACENT ALARMS OF THE HOUSEHOLD FIRE ALARM SYSTEM THROUGHOUT THE DWELLING.

#### SPRINKLERS

- THE 3-UNIT TOWNHOUSE HAS AN AGGREGATE AREA OF 44,126.71 SF AND SHALL BE DESIGNED WITH A MINIMUM NFPA 13 SYSTEM.



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