ENERGY CALCS	. COM	PLIANCE CERTI	FICATE	<u>GEN</u>
REFERENCE CODE SECTION NIIØ1.14				1.
A PERMANENT CERTIFICATE SHALL BE AFFIXED IN ONE OF THE FOLLOWING LOCATIONS NEAR THE FURNACE:				2.
• MALL NE • UTILITY • PREVIOU	EAR FUR ROOM JSLY AF	RNACE PPROVED LOCAT		3.
INSIDE BUILDING •ELECTRICAL PANEL (CERTIFICATE				4.
SHALL N VISIBILI DIRECTO	IOT CO ^V TY OF ⁻ DRY).	VER OR OBSTRUC THE CIRCUIT	ST THE	5.
CERTIFICATE SHALL LIST THE FOLLOWING: • PREDOMINANT R-VALUES OF INSULATION INSTALLED ON OR ON CEILING/ ROOF, WALLS, FOUNDATION				6.
				7.
AND DUCTS OUTSIDE CONDITIONED SPACE.				8.
•U-FACTORS FOR FENESTRATION AND SOLAR HEAT GAIN COEFFICIENT				9.
(SHGC). •RESULTS OF AIR LEAKAGE TEST				10
COMPLETED ON THE BUILDING.				
CERTIFICATE SHALL ALSO LIST THE FOLLOWING: •EFFICIENCY OF AND TYPE OF HEATING, COOLING AND SERVICE HOT WATER HEATING EQUIPMENT. •OTHER PRODUCTS AND EQUIPMENT AS				HAN
				1.
				2.
LISTED ABOVE.				
				3.
MECHANICAL VENTILATION				4.
REFERENCE CODE SECTION NILØ3.6				5.
VENTILATION THAT MEETS ALL REQUIREMENTS OF MECHANICAL VENTILATION CODES.				6.
OUTDOOR AIR INTAKES & EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN VENTILATION SYSTEM IS NOT IN OPERATION.				7.
MECHANICAL VENTILATION SYSTEMS SHALL MEET THE EFFICACY REQUIREMENTS AS				8.
	MIN. CFM	CFM/ WATT	MAX. CFM	9.
RANGE HOODS	ANY	2.8 CFM/ WATT	ANY	
IN-LINE FAN	ANY	2.8 CFM/ WATT	ANY	10
UTILITY ROOM	1Ø	1.4 CFM/ WATT	<9Ø	

BATHROOM

UTILITY ROOM

90

2.8 CFM/WATT ANY

NERAL DOOR & WINDOW NOTES:

- and owner to adjust rough openings and confirm code compliance.
- finished floor. of 5.0 square feet.

- Egress windows shall be operational from the inside of the room without the use of keys, tools, or special knowledge.
- Glazing in doors shall be safety glazing.
- Glazing, in an individual fixed or operable panel adjacent to a door where the nearest vertical edge it within 24 inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface shall be safety glazing.

DRAIL & GUARD REQUIREMENTS:

- continuous run of treads or flight with 4 or more risers.
- nosing, shall not be less than 34" and not more than 38".
- terminate in newel posts.
- Handrails adjacent to a wall shall have a space of not less than 1-ia" between the wall and handrail.
- 1-1/4" and not greater than 2".
- below.
- latest version of the NYS residential code.
- distributed live load of 200 pounds per square foot.
- concurrently with any other live load requirement.

GENERAL FLASHING NOTES:

- structural floors, shelf angles and lintels and under sills.
- installed at all of the following locations:
- 2.1. leakproof
- 2.2.
- 2.4
- Continuously above all projecting wood trim. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood frame construction.
- 2.5. 2.6. At wall and roof intersections.
- 3. Flashings shall be installed in such a manner as to prevent moisture entering the wall and roof through joints in copings, through moi
- 4. Flashings shall be installed in such a manner as to prevent moisture entering the wall and roof through joints in copings, through moisture permeable materials, and at intersections with parapet walls and other penetrations through the roof plane.
- galvanized sheet metal)

HEADER & BEAM NOTES:

- otherwise
- otherwise
- 3. When securing (2) members, less than 12" tall, together for a beam or header, use
- 2 rows of 16d nails @ 6" o.c. unless noted otherwise. 4. When securing (2) members, greater than 12" tall, together for a beam or header,
- use 3 rows of 16d nails @ 6" o.c. unless noted otherwise.
- a minimum of 2" from the exterior top & bottom face.
- 6. When securing 3-4 microlam members together, or 2 microlams & 1 steel plate, top-loaded, use 1/2" diameter steel bolts 24" o.c., staggered top & bottom, placed a minimum of 2" from the exterior top & bottom face.
- 7. All steel beams to bear 3-1/2" on beam pockets in concrete walls.
- 8. Exterior masonry veneer not bearing directly on a concrete foundation. wall must bear directly on a steel beam or steel angle.
- 9. All beams made from engineered members, such as microlams, shall have minimum bearing required by manufacturer or section r502.6 of the building codes above, whichever is greater. all conventional beams shall meet r502.6 unless noted otherwise.
- 10. All beams & headers greater than 4" in length shall have a post supporting each end. the post shall be composed of a min. (2) 2x4 studs unless noted otherwise.
- 11. Unless noted otherwise, all beams shall bear on top of another beam or post and shall be laterally braced w/ solid blocking on both sides of beam.
- 12. LVL shall be used in covered dry use conditions with moisture content less than 16%. IvI's shall not allow for direct contact with moisture.

Interior and exterior doors are 6'-8" high unless noted otherwise on drawing. Alside window unit sizes, rough openings and light/ vent areas have been used by the approving architect on these drawings for design & code compliance purposes. if another window product is substituted, it is the responsibility of the contractor

Egress windows shall open directly into a public street, public alley, yard, or court. Egress windows shall have a sill height of not more than 44 inches above the

Egress windows on shall have a minimum net clear opening of 5.7 square feet. exception: egress windows on grade floor shall have a minimum net clear opening

Egress windows shall have a minimum net clear opening height of 24".

Egress windows shall have a minimum net clear opening width of 20".

Handrails shall be required on at least one side of each

- Handrail height, measured vertically from the sloped plane adjoining the tread
- Handrail ends, directly above top & bottom risers, shall be returned to the wall or

Handrails with a circular cross section shall have an outside diameter of at least

Handrails that are not circular shall have a perimiter dimension of at least 4" and not greater than 6-1/4" with a maximum cross section dimension of 2-1/4".

Guards, or "guardrail" shall be not less than 36" in height. provide guardrail where indicated and at the following locations: porches, balconies, decks or raised floor surfaces, including stair treads, located more than 30" above the floor or grade

Owner/ contractor to supply building inspector a test report confirming prefabricated guardrail will span horizontal distance shown on drawings and meet

A single concentrated load applied in any direction at any point along the top of the guards and handrails shall be capable of resisting a minimum uniformly

Guard in-fill components(all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to one square foot. this load need not be assumed to act

Flashing shall be located beneath the first course of masonry above finished ground level above the foundation wall or slab and at other points of support, including

2. Approved corrosion resistant flashing shall be provided in the exterior wall envelope in such a manner as to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish and shall be installed to prevent water from re-entering the exterior wall envelope. Approved corrosion resistant flashings shall be

At top of all exterior windows and door openings in such a manner as to be

At the intersection of chimneys or other masonry construction with frame and stucco walls, with projecting lips on both sides under stucco copings. Under and at the ends of masonry, wood or metal copings and sills.

5. Flashings shall be installed at wall and roof intersections; wherever there is a change in roof slope or direction; all around roof openings. where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch(no. 26

1. All wall openings have minimum (2) 2x10 headers at 2x4 stud walls unless noted

2. All wall openings have minimum (3) 2x10 headers at 2x6 stud walls unless noted

- 5. When securing 3-4 microlam members together, or 2 microlams & 1 steel plate, side-loaded, use 1/2" diameter steel bolts 12" o.c., staggered top & bottom, placed

GENERAL ROOF NOTES:

- 1. Downspouts shall have cross section of approx. 7 sq. in.
- 2. Asphalt shingles on 15# felt paper on 5/8" plywd. sheathing.
- 3. 6'-0" ice shielding at all eaves.
- 4. "srv" stands for static roof vents, each one shall have a net free area of 61 sq. in. the min. number of roof vents are shown. consult architect prior to altering number of "srv's".
- 5. Continuous ridge vents, where indicated, shall provide net free ventilating area of 18" per linear foot.
- 6. Valley linings shall be installed in accordance with manufacturer's installation instructions before applying shingles. valley lining of one ply of smooth roll roofing complying with astm d 224 type ii, or type iii and at least 36" wide. specialty underlayment complying with astm d 1970 may be used in lieu of the lining
- 7. Roof & exterior wall penetrations shall be made water tight. joints at the roof, around vent pipes, shall be made water tight by the use of lead, copper or galvanized iron flashings or an approved elastomeric material. Counterflashing shall not restrict the required internal cross-sectional area of any vent.

FOUNDATION & CONCRETE DESIGN:

- Soil Evaluatior 1. Confirm that all foundation excavations are seated in stable, naturally deposited soil or clear thoroughly compacted granular fill material, such as number 2 crusher run stone, that extends to virgin soil.
- 2. The presumed load-bearing value of 1,500 psf is used for foundation design. if a soil investigation is obtained by owner, results of soil investigation shall be reported to architect for confirmation of foundation design prior to installing new foundatior
- 3. General contractor shall report to architect type of soil encountered in the field. notify architect of unsuitable conditions before starting construction.
- 4. Grout beam pockets & securely fasten beams to columns.
- 5. Provide expansion joints in concrete slabs, including basements, driveways and patios, at no greater than 16' in one direction and 40' in the other direction
- 6. Backfill shall not be placed until foundation walls are braced or until first floor deck is in place
- 7. Design loads: 7.1.
- roof slope greater than 6:12 = 55 psf, under 6:12 = 58 psf floor, residential living areas = 50 psf 72
- 7.3. floor, residential sleeping areas = 40 psf
- 8. Minimum compressive strength of concrete at 28 days 8.1. basement walls, footings & piers = 3,000 psi
- 8.2. basement slab =3.000 psi
- 8.3. garage floor slab & exterior conc . to be air entrained conc. = 3,500 psi

STAIR REQUIREMENTS:

- 1. Stairways shall not be less than 36" in clear width at all points above the permitted handrail height and below the required headroom height.
- 2. Handrails shall not project more than 4.5" on either side of the stairway.
- 3. The minimum headroom in all parts of the stairway shall not be less than 6'-8" measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform.
- 4. The max. riser height shall be 8 1/4". the greatest riser height with in any flight of stairs shall not exceed the smallest by more than 3/8".the min. tread depth shall be
- 5. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8". Winder treads shall have a min. tread depth of 10" at a point 12" from the side where the treads are narrower. Winder treads shall have a minimum eau deptn of \mathfrak{b}° at any point. The greatest winder tread depth at the 12" walk line shall not exceed the smallest by more than 3/8".
- 6. Open stair stringers, unsupported by walls or beams for the length of the stringer, shall be designed by the stair fabricator. Stair shop drawings shall be submitted to architect for review prior to installation.
- 7. All interior & exterior stairways shall be provided with a means to illuminate the stairs, including the landings & treads. interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. For interior stairs, the artificial light source shall be capable of illuminating treads and landings to levels not less than 1 foot-candle measured at the center of treads and landings. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. Exterior stairways providing access to a basement from the outside grade level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway.

FIREBLOCKING NOTES:

- 1. Fireblocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire barrier between stories and between a top story and roof space. Fireblocking shall be provided in wood-frame construction in the following locations:
- 1.1. In concealed spaces of stud walls and partitions, including furred space and parallel rows of studs or staggered studs; as follows:
- 1.1.1. Vertically at the ceiling and floor levels 1.1.2. Horizontally at intervals not exceeding 10 feet.
- 1.2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
- 1.3. In concealed spaces between stair stringers at the top and bottom of the run. enclosed accessible space under stairs shall have walls, under stair surfaces and any soffits protected on the enclosed side with 1/2-inch gypsum board.
- 1.4. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion.
- All spaces between chimneys and floors and ceilings through which chimneys 1.5. pass shall be fireblocked with noncombustible material securely fastened in place. the fireblocking of spaces between chimneys and wood joists, beams or headers shall be self-supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material.
- 1.6. Fireblocking of cornices of a two family dwelling is required at the line of dwelling unit separation.

POWER & LIGHTING DISTRIBUTION:

- line in any wall space is more than 6 feet from a receptacle outlet.
- 2. Countertop receptacles shall be installed in accordance with section E3801.4 of residential code.
- 3. Appliance receptacle outlets installed for specific appliances, such as laundry equipment, shall be installed within 6 ft. of the intended location of the appliance.
- 4. At least one wall receptacle outlet shall be installed in bathrooms and such outlet shall be located within 36" of the outside edge of each lavatory basin. the receptacle shall be located on a wall that is adjacent to the lavatory basin location. receptacle outlets shall not be installed in a face-up position in the work surfaces or countertops in a bathroom basin location.
- At least one receptacle outlet, in addition to those provided for laundry equipment, shall be installed in each basement and attached garage, and in each detached garage that is provided with electrical power.
- 6. Hallways 10 feet or more in length shall have at lease one receptacle outlet. the wall length shall be considered the length measured alone the centerline of the hall without passing through a doorway.
- 7. A 125-volt, single phase, 15 or 20 ampere-rated receptacle outlet shall be installed at an accessible location for the servicing of heating, air-conditioning and refrigeration equipment. the receptacle shall be located on the same level and within 25 feet of the heating, air-conditioning and refrigeration equipment. the receptacle outlet shall not be connected to the load side of the HVAC equipment disconnecting means.
- 8. All 125-volt, single phase, 15- or 20-ampere receptacles installed in bathrooms, serve countertop spaces, outdoors, in garages and grade-level portions of unfinished accessory buildings used for storage or work areas, shall have ground-fault circuit-interrupter protection for personnel.
- 9. All 125-volt, single phase, 15- or 20-ampere receptacles installed in unfinished basements shall have ground-fault circuit-interrupter protection for personnel. for purposes of this section, unfinished basements are defined as portions or areas of the basement not intended as habitable rooms and limited to storage areas, work areas, and the like.
- 10. All branch circuits that supple 125-volt, single phase, 15- or 20-ampere outlets in dwelling unit bedrooms shall be protected by an arc-fault circuit-interrupter listed to provide protection of the entire branch.
- 11. At least one wall switch-controlled lighting outlet shall be installed in every habitable room and bathroom.
- 12. At least one wall switch-controlled lighting outlet shall be installed in hallways, stairways, attached garages, and detached garages with electric power. at least one wall switch-controlled lighting outlet shall be installed to provide illumination on the exterior side of each outdoor egress door having grade level access, including outdoor egress doors for attached garages and detached garages with electric power. a vehicle door in a garage shall not be considered as an outdoor egress door. where one or more lighting outlets are installed for interior stairways, there shall be a wall switch at each floor level and landing level that includes an entryway to control the lighting outlets where the stairway between floor levels has six or more risers.
- 13. In attics, under-floor spaces, utility rooms and basements, at least one lighting outlet shall be installed where these spaces are used for storage or contain equipment requiring servicing. such lighting outlet shall be controlled by a wall switch or shall have an integral switch. at least one point of control shall be at the usual point of entry to these spaces. the lighting outlet shall be provided at or near the equipment requiring servicing.
- 14. Electrical subcontractor shall review & confirm with owner location of equipment, outlets, switches, light fixtures and other devices prior to installation.

GENERAL FRAMING NOTES:

- 1. Interior walls have 2x4 studs @ 16"o.c., exterior walls have 2x6 studs @ 16" o.c., unless noted otherwise.
- Lumber species is Douglas fir-larch #2 or hem-fir #2 for common rafters, joists and beams unless noted otherwise
- Modulus of elasticity for microlam laminated veneer lumber is 1.9 x 10,000,000. All concentrated loads shall be transferred to foundation via beams, posts, and/or solid

Dimensions for interior walls are to face of stud.

above for more information

doors, and 8'-2" A.F.F. for 8'-0" doors.

or beams and toe nailed to the bearing member.

be used.

8" of grade

truss, rafter or joist.

feet at ceiling joists.

Simpson.

1. Receptacles shall be installed so that no point measured horizontally along the floor

Dimension for outside face of exterior walls are to face of stud.

7. Notches in solid lumber joists, rafters and beams shall not exceed 1/6th of the depth of the member, shall not be longer than 1/3rd of the depth of the member and shall not be located in the middle 1/3rd of the span. Notches at the ends of the member shall not exceed 1/4th the depth of the member. See section R502.8.1 in the codes referenced

Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. (40% for non bearing partitions).

Joists under parallel bearing partitions shall be (2) 2 x 10 unless noted otherwise on plan. If (2) 2 x 10 need to be separated for piping etc. they shall be full depth solid blocked with 2x lumber, spaced not more than 4 feet on center.

10. The ends of each joist, beam or girder shall have not less than 1.5" of bearing on wood or metal and not less than 3" on masonry or concrete, or approved joist hangers shall

11. Comply with table R6023(1), fastener schedule for structural members.

12. Interior wall rough openings are 6'-10" A.F.F. unless noted otherwise.

13. Interior door rough openings are 6'-10" A.F.F. for 6'-8" doors. 7'-2" A.F.F. for 7'-0"

14. Provide pressure treated sill plates at garage & other locations where sill plate is within

15. Brace ridges, hips, valleys and purlins to beam or bearing wall w/(2) 2 x 4 at 64" o.c.

16. Provide 2 x 4 collar ties at 48" o.c. Locate at midpoint between ridge and eave.

17. Use 2 x 12 at all roof ridge beams & hip beams unless noted otherwise. 18. Cap all stud walls w/ double plate, provide overlapping at corners & intersections w/

bearing partitions. End joints in top plates shall be offset at least 24".

19. When trusses, rafters or joists are spaced 24" o.c., studs shall be located under each

20. Angled walls are 45 degrees unless noted otherwise.

Hidden beams typically require floor joists and ceiling joists to be hung from the side of the beam. Provide Simpson joist hangers (or approved equal) at each joist when joists are hung from the side of a beam. Use type and number of fasteners specified by

22. Ends of ceiling joists shall be lapped a minimum of 3" or butted over bearing partitions

23. Provide solid blocking, bridging, strong back, or tie back at intervals not exceeding 8

GENERAL MECHANICAL AND EQUIPMENT NOTES:

1. New supply and return ductwork to be installed as high as possible in basement area

Provide 3" flue from new water heater to exterior, verify exact location and routing in field. install per manufacturer's recommendations

- New heating and cooling systems, including supply & return ductwork to be installed in accordance with chapter 16 of the building codes listed above.
- Provide new ductwork to vent all new fans to exterior, through wall or roof. clothes dryers shall be exhausted in accordance with manufacturers' instructions and with building codes referenced above. Exhaust ducts shall terminate on the exterior of the building.
- Provide flexible ductwork to vent new dryer to exterior.
- Provide minimum of (1) new heat diffuser and (1) cold air return in each bedroom and living space.
- General contractor shall indicate manufacturer & model number of new furnace and air conditioning unit on proposal. New gas furnaces shall have minimum of 92% energy efficiency rating.
- Factory built fireplaces, chimneys & exterior air supply shall comply w/sections 1004. 1005, and 1006 of the latest building code.
- Air exhaust openings shall terminate not less than 3 feet from property lines; 3 feet from operable or non-operable openings into the building and 10 feet from mechanical air intakes except where the opening is located 3 feet above the air intake.
- 10. Exhaust air from bathrooms and toilet rooms shall not be re-circulated within residence or to another dwelling unit and shall be exhausted directly to the outdoors. Exhaust air from bathrooms and toilet rooms shall not discharge into an attic, crawl space, or other areas inside the building.
- 11. Range hoods shall discharge to the outdoors through a duct. The duct serving the hood shall have a smooth interior surface, shall be airtight, shall be equipped with a back-draft damper and shall be independent of all other exhaust systems. Ducts serving range hoods shall not terminate in an attic or crawl space or areas inside the building. Exception:where installed in accordance with the manufacturer's instructions, and
 - where mechanical or natural ventilation is otherwise provided, listed and labeled ductless range hoods shall not be required to discharge to the outdoors.
- 12. Where the air infiltration rate of a dwelling unit is 5 air changes per hour or less where tested with a blower door at a pressure of 0.2 inch w.c. in accordance with section N11024.12, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with section M1507.3.
- 13. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet from all hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks.
- 14. Exhaust air shall not be directed onto walkways.
- 15. Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles having an opening size of not less than 1/4 inch and a various opening size of 1/2 inch in any dimension.

