

Planning Approval  
MASONRY CONSTRUCTION MATERIALS - 2103

2103.1 CONCRETE MASONRY UNITS  
LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90.

2103.7 MORTAR  
MORTAR FOR USE IN MASONRY CONSTRUCTION SHALL CONFORM TO ASTM C 270 AND SHALL CONFORM TO THE MORTAR PROPERTIES FOR TYPE M OR S MORTAR. THE AVERAGE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE A MINIMUM OF 1,800 PSI. THE WATER RETENTION PERCENTAGE SHALL BE A MINIMUM OF 75%. THE AIR CONTENT SHALL BE 18% MAXIMUM. UNUSED MORTAR SHALL BE DISCARDED AFTER 2-1/2 HOURS AFTER INITIAL MIXING.

2103.10 GROUT  
GROUT SHALL CONFORM TO THE FOLLOWING PROPORTIONS BY VOLUME FOR MASONRY CONSTRUCTION - FOR FINE GROUT 1 PART BY VOLUME PORTLAND CEMENT OR BLENDED CEMENT, 1/10 PART BY VOLUME OF HYDRATED LIME OR LIME PUTTY AND FOR AGGREGATE MEASURED IN A DAMP, LOOSE CONDITION 2-1/4 - 3 TIMES THE SUM OF THE VOLUMES OF THE CEMENTITIOUS MATERIALS - FOR COURSE GROUT 1 PART BY VOLUME PORTLAND CEMENT OR BLENDED CEMENT, 1/10 PART BY VOLUME OF HYDRATED LIME OR LIME PUTTY AND FOR AGGREGATE MEASURED IN A DAMP, LOOSE CONDITION 1 - 2 TIMES THE SUM OF THE VOLUMES OF THE CEMENTITIOUS MATERIALS.

2103.11 REINFORCING STEEL  
DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A 615 FOR DEFORMED ANDPLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT. JOINT REINFORCEMENT SHALL CONFORM TO ASTM A 951. DEFORMED REINFORCING WIRE SHALL CONFORM TO ASTM A 496. WIRE FABRIC SHALL CONFORM TO ASTM A 185 FOR PLAIN STEEL-WELDED WIRE FABRIC FOR CONCRETE RIENFORCEMENT OR ASTM A 496 FOR WELDED DEFORMED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT.

ANCHORS TIES AND ACCESSORIES  
ANCHOR TIES AND ACCESSORIES SHALL CONFORM TO ASTM A 36 FOR STRUCTURAL STEEL, ASTM A 82 FOR PLAIN STEEL WIRE FOR CONCRETE REINFORCEMENT, ASTM A 185 FOR PLAIN STEEL- WELDED WIRE FABRIC FOR CONCRETE REINFORCEMENT, ASTM A 366 FOR COLD-ROLLED CARBON STEEL SHEET, COMMERCIAL QUALITY AND ASTM A 167, TYPE 304 FOR STAINLESS AND HEAT RESISTING CHROMIUM-NICKEL STEEL PLATE, SHEET AND STRIP.

JOINT REINFORCEMENT  
JOINT REINFORCEMENT SHALL BE PROTECTED FROM CORROSION BY GALVANIZING IN ACCORDANCE WITH ASTM A 951. ANCHORS, WALL TIES AND ACCESSORIES SHALL BE PROTECTED FROM CORROSION BY HOT DIP GALVANIZING AFTER FABRICATION WITH A MINIMUM COATING OF 1.5 OUNCES PER SQUARE FOOT IN ACCORDANCE WITH ASTM A 153.

CONSTRUCTION - 2104

2104.1 MASONRY CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE NEW YORK STATE BUILDING CODE AND WITH ACI 530.1 / ASCE 6 / TMS 602. MASONRY SHALL BE CONSTRUCTED WITHIN THE TOLERANCES SPECIFIED IN ACI 530.1 / ASCE 6 / TMS 602.

BED AND HEAD JOINTS  
UNLESS OTHERWISE REQUIRED OR INDICATED ON THE CONSTRUCTION DOCUMENTS, HEAD AND BED JOINTS SHALL BE 3/8" THICK, EXCEPT THAT THE THICKNESS OF THE BED JOINT OF THE STARTING COURSE PLACED OVER THE FOUNDATION SHALL NOT BE LESS THAN 1/4" AND NOT MORE THAN 3/4".

OPEN ENDED UNITS  
OPEN ENDED UNITS WITH VEVELED ENDS SHALL BE FULLY GROUTED. HEAD JOINTS OF OPEN ENDED UNITS WITH BEVELED ENDS NEED NOT BE MORTARED. THE BEVELED END SHALL FORM A CROUT KEY THAT PERMITS GROUTS WITHIN 5/8" OF THE FACE OF THE UNIT. THE UNITS SHALL BE TIGHTLYBUTTED TO PREVENT LEAKAGE OF THE GROUT.

HOLLOW UNITS  
HOLLOW UNITS SHALL BE PLACED SUCH THAT FACE SHELLS OF BED JOINTS ARE FULLY MORTARED IN ALL COURSES OF PIERS, COLUMNS, PILASTERS, IN THE STARTING COURSE ON FOUNDATIONS WHERE ADJACENT CELLS OR CAVITIES ARE TO BE GROUTED OR WHERE OTHERWISE REQUIRED; AND HEAD JOINTS ARE MORTARED A MINIMUM DISTANCE FROM EACH FACE EQUAL TO THE FACE SHELL THICKNESS OF THE UNIT.

SOLID UNITS  
UNLESS OTHERWISE REQUIRED OR INDICATED ON THESE CONSTRUCTION DOCUMENTS, SOLID UNITS SHALL BE PLACED IN FULLY MORTARED BED AND HEAD JOINTS. THE ENDS OF THE UNITS SHALL BE COMPLETELY BUTTERED. HEAD JOINTS SHALL NOT BE FILLED BY SLUSHING WITH MORTAR. HEAD JOINTS SHALL BE CONSTRUCTED BY SHOVING MORTAR TIGHT AGAINST THE ADJOINING UNIT. BED JOINTS SHALLNOT BE FURROWED DEEP ENOUGH TO PRODUCE VOIDS.

ALL UNITS  
ALL UNITS SHALL BE PLACED WHILE THE MORTAR IS SOFT AND PLASTIC. ANY UNIT DISTURBED TO THE EXTENT THAT THE INITIAL BOND IS BROKEN AFTER INITIAL POSITIONING SHALL BE REMOVED AND RELAI D IN FRESH MORTAR.

LINTELS  
THE MINIMUM LENGTH OF END SUPPORT SHALL BE 4 INCHES.

MASONRY PROTECTION  
THE TOP OF UNFINISHED MASONRY WORK SHALL BE COVERED TO PROTECT THE MASONRY FROM THE WEATHER.

WEEP HOLES  
WEEP HOLES PROVIDED IN THE OUTSIDE WYTHE OF MASONRY WALLS SHALL BE AT A MAXIMUM SPACING OF 33 INCHES ON CENTER. WEEP HOLES SHALL NOT BE LESS THAN 3/16" IN DIAMETER.

2104.3 COLD WEATHER CONSTRUCTION  
CONSTRUCTION SHALL NOT OCCUR WHEN THE AMBIENT TEMPERATURE OR THE TEMPERATURE OF THE MASONRY UNITS IS BELOW 40F WITHOUT IMPLEMENTING SPECIAL COLD WEATHER PROCEDURES. CONTACT THE ENGINEER FOR COLD WEATHER PROCEDURES.

2104.4 HOT WEATHER CONSTRUCTION  
CONSTRUCTION SHALL NOT OCCUR WHEN THE AMBIENT TEMPERATURE IS GREATER THAN 100F WITHOUT SPECIAL HOT WEATHER PROCEDURES. CONTACT THE ENGINEER FOR HOT WEATHER PROCEDURES.

QUALITY - 2105

A QUALITY ASSURANCE PROGRAM SHALL BE USED TO ENSURE THAT THE CONSTRUCTED MASONRY IS IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. UNITS MUST CONFORM TO ASTM C 90 AND SAMPLED IN ACCORDANCE WITH ASTM C 140. THE THICKNESS OF BED JOINTS DOES NOT EXCEED 5/8". ALL GROUT SHALL CONFORM TO ASTM C 476. THE COMPRESSIVE STRENGTH OF THE GROUT SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C 1019.

COMPLIANCE WITH THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE

- PER 101.4.1.2 OF CHAPTER 1 NYS ENERGY CONSERVATION CONSTRUCTION CODE - BUILDING DESIGN ENVELOPE PROVISIONS ARE NOT REQUIRED SINCE THE BUILDING DESIGN ENERGY USAGE FOR HEATING/COOLING CAN BE DEMONSTRATED TO BE COMPLETELY SUPPLIED FROM RENEWABLE ENERGY SOURCES (I.E. SUNLIGHT, NATURAL VENTILATION). AIR CONDITIONING AND MECHANICAL VENTILATION WILL BE PROVIDED.
- BUILDING CATAGORY: M- MERCANTILE, TYPE III CONSTRUCTION, ALBANY COUNTY ZONE 14A - 6894 HEATING DEGREE DAYS.  
BUILDING USE: ICE CREAM SHOP OPERATING MAY TO AUGUST - SUMMER DESIGN DRY BULB TEMPERATURE = 86F - NON HEATED BUILDING.

A. ADDITIONAL GENERAL REQUIREMENTS

- ALL MATERIALS AND CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE FIRE CODE OF NYS AND BUILDING CODE OF NYS FOR CATEGORY M COMMERCIAL BUILDING.
- ALL PLUMBING WORK TO COMPLY WITH PLUMBING CODE OF NYS.
- MECHANICAL VENTILATION SHALL BE PROVIDED IN THE BATHROOM AND SHALL BE IN ACCORDANCE WITH THE BUILDING CODE OF NYS.
- STRUCTURAL CHANGES TO THESE PLANS ARE PERMITTED ONLY IF REVIEWED AND APPROVED BY THE ENGINEER.
- GUTTERS AND DOWNSPOUTS SHALL BE INSTALLED TO DIRECT WATER AWAY FROM THE BUILDING AND PER THE OVERALL SITE PLAN.
- THE BUILDER IS RESPONSIBLE TO VERIFY THAT ALL DIMENSIONS, CONSTRUCTION MATERIAL AND WORK QUALITY ARE IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS AND APPLICABLE CODES. THESE PLANS WERE GENERATED BY THE ENGINEER FOR GENERAL STRUCTURAL COMPLIANCE WITH THE BUILDING CODE OF NYS. THE ENGINEER HAS NOT BEEN CONTRACTED TO PROVIDE CONSTRUCTION INSPECTION SERVICES AND THEREFORE DOES NOT ASSUME RESPONSIBILITY FOR THE FINISHED PRODUCT.
- THE OWNER AND/OR GENERAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, CERTIFICATES OF OCCUPANCY, AND ANY OTHER AUTHORIZATION REQUIRED TO COMPLETE THE PROJECT.

B. ELECTRICAL REQUIREMENTS

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST PROVISIONS OF THE NATIONAL ELECTRIC CODE (NEC).
- THE ELECTRICAL INFORMATION PROVIDED ON THIS DRAWING IS FOR REFERENCE ONLY. THIS DOCUMENT PROVIDES APPROXIMATE LOCATION OF RECEPTICALS, SWITCHES, LIGHTS AND OTHER EQUIPMENT AS WELL AS EQUIPMENT LOADS AS PROVIDED FROM THE MANUFACTURER.
- A LICENSED ELECTRICAL CONTRACTOR SHALL DETERMINE FINAL OPTIMUM PREMISES WIRING SYSTEM, WIRING METHODS, BRANCH CIRCUIT AND SERVICE REQUIREMENTS.
- THE PREMISES WIRING SYSTEM SHALL BE GROUNDED AT THE SERVICE WITH A GROUNDING ELECTRODE CONDUCTOR CONNECTED TO A CODE APPROVED GROUNDING ELECTRODE SYSTEM.
- OTHER ELECTRICAL NOTES ARE CONTAINED AS NEEDED IN THE DOCUMENT.

C. STRUCTURAL DESIGN

C1 - LOADS

- GROUND SNOW LOAD = 65 PSF, FLAT ROOF SNOW LOAD = 44 PSF, IMPORTANCE FACTOR I = 0.8
- SEISMIC DESIGN CATEGORY = C, SITE CLASS D, SEISMIC BASE SHEAR = 11,416 LBF PER EQUIVALENT LATERAL FORCE PROCEDURE OF BUILDING CODE OF NYS
- BASIC WIND SPEED = 90 MPH, EXPOSURE CATEGORY C, WIND LOADS CALCULATED IN ACCORDANCE WITH BUILDING CODE OF NYS & ASCE 7-93 WIND LOAD CALCULATION PROCUDURE.

C2 - CONCRETE

- FOOTING DESIGN IS BASED ON A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF (DEAD LOAD PLUS LIVE LOAD). ALL FOOTINGS ARE TO BEAR ON NATURAL, UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL ABOVE GROUND WATER TABLE AND AT A DEPTH OF 48" MINIMUM BELOW GRADE.
- LATERAL BRACING OF THE FOUNDATION ON THE FOOTINGS SHALL BE PROVIDED.
- ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 psi.
- REINFORCING BARS FOR CAST IN PLACE CONCRETE SHALL HAVE A MINIMUM YEILD STRENGTH OF 60,000 PSI AND SHALL BE DEFORMED REINFORCEMENT CONFORMING TO ACI 318 SECTION 3.5
- FOOTING WIDTH SHALL BE 16" MINIMUM. FOOTING THICKNESS SHALL BE 8" MINIMUM. FOUNDATION WALL THICKNESS SHALL BE 8" MINIMUM.

C3 - CONCRETE MASONRY UNITS

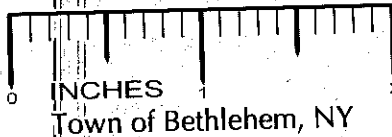
- CONCRETE MASONRY SHALL BE CONSTRUCTED OF PARTIALLY GROUTED RUNNING BOND. STANDARD UNIT SHALL BE 8" X 8" X 16" ARCHITECTURAL CMU WITH A NET AREA COMPRESSIVE STRENGTH, f'm = 2500 PSI. EACH UNIT SHALL BE FACE SHELL BEDDED AT A MINIMUM.
- MORTAR SHALL BE TYPE M OR S WITH A NET AREA COMPRESSIVE STRENGTH, f'm = 3750 PSI. UNITS SHALL HAVE FACE SHELL BEDDING AT A MINIMUM. CORNER PIERS (BETWEEN WINDOW AND CORNER) SHALL BE FULLY BEDDED.
- REINFORCING BARS FOR CONCRETE MASONRY SHALL HAVE A MINIMUM YEILD STRENGTH OF 60,000 PSI AND SHALL BE DEFORMED REINFORCEMENT CONFORMING TO ACI 318 SECTION 3.5.

C4 - STEEL

- ALL STRUCTURAL STEEL SHAPES SHALL BE ASTM A36. ALL BOLTS INCLUDING ANCHOR BOLTS SHALL BE ASTM A325.
- STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A501 OR ASTM A53 TYPE E OR S, GRADE B.
- SHEET STEEL SHEATHING SHALL BE A MINIMUM OF 24 GAGE STEEL.
- ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER AND SHALL DEVELOP THE STRENGTH OF THE THINNER MEMBER BEING JOINED.
- HORIZONTAL REINFORCEMENT SHALL BE PROVIDED AT THE BOTTOM AND TOP OF ALL WALL OPENINGS AND SHALL EXTEND NOT LESS THAN 24" NOR 40 BAR DIAMETERS PAST THE OPENING.

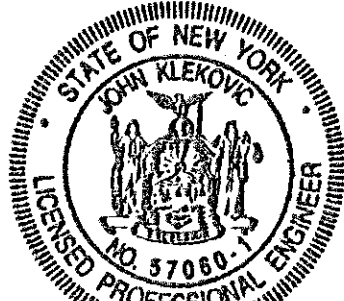
D. STRUCTURAL WOOD FRAMING AND TRUSSES

- ALL FRAMING SHALL BE IN ACCORDANCE WITH THE BUILDING CODE OF NYS AND LOCAL CODES.
- EXCEPT AS NOTED, ALL 2" & 4" LUMBER SHALL BE SPRUCE PINE FIR NO. 2 OR BETTER.
- ALL SILL PLATES OR OTHER MEMBERS IN CONTACT WITH MASONRY OR FOUNDATION SHALL BE WOLMANIZED (0.4 MIN. PRESSURE TREATED).
- TRUSSED RAFTERS SHALL BE DESIGNED BY A NYS REGISTERED PROFESSIONAL ENGINEER AND SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATION. PROVIDE WIND ANCHOR SUPPORTS PER CONSTRUCTION PLANS.
- EXCEPT AS NOTED ON PLANS, NAILING SHALL BE IN ACCORDANCE WITH TABLE 2304.9.1 OF THE BUILDING CODE OF NYS.
- ALL TRUSSES ARE TO HAVE SOLID WOOD BLOCKING AT THE MIDSPAN OR AS SHOWN WITH DIAGONAL BRACING DURING CONSTRUCTION.
- WOOD TRUSSES SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. CARE SHALL BE TAKEN TO PRECLUDE DAMAGE TO TRUSSES DURING CONSTRUCTION. INSPECT ALL TRUSS JOINTS AFTER SETTING TRUSSES.
- ALL DIMENSIONS ARE TO BE CHECKED PRIOR AND DURING CONSTRUCTION. DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENSION OF THE ENGINEER.



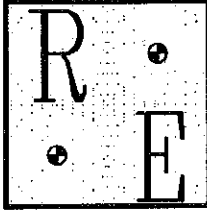
Town of Bethlehem, NY

TOWN OF GLENMONT  
ALBANY COUNTY



VALID P.E. STAMP IS RED (ORIGINAL)

**REXFORD ENGINEERING**  
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COMMERCIAL / MERCANTILE  
NEW CONSTRUCTION  
REV 1, DATE 01/15/07

MICHAEL AND LISA CHENETTE  
123 GEISER RD.  
WYNANTSKILL, NY 12198

JERICHO DRIVE IN ICE CREAM STAND  
NOTES  
TAX MAP NO. 109.14-3-4

DWG. NO. RE-0701  
SH. 6 OF 6