

SPECIFICATIONS

DIVISION 1 GENERAL REQUIREMENTS

- TO THE BID AND START OF ANY WORK THE CONTRACTOR(S) SHALL VERIFY ALL GRADES, LINES, LEVELS, EXISTING CONDITIONS, AND DIMENSIONS INDICATED ON THE DRAWINGS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY BEFORE COMMENCING WITH ANY WORK.
- ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF ALL APPLICABLE NATIONAL AND/OR MUNICIPAL BUILDING CODES AND ORDINANCES. THE CONTRACTOR SHALL FURNISH AND PAY FOR ALL REQUIRED PERMITS AND UTILITY SERVICE CHARGES.
- CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF ANY EXCAVATION.
- SUB CONTRACTORS SHALL LEAVE SITE NEAT & FREE OF DEBRIS AT THE END OF EACH DAY.
- PLANS AND SPECIFICATIONS IF IT IS THE INTENT OF THE PROVIDER AND SPECIFICATIONS TO PROCEED FOR A CONTRACTOR. EVERYTHING NECESSARY FOR THE COMPLETION AND SUCCESSFUL OPERATION OF THE WORK, WHETHER OR NOT MENTIONED DEFINITELY SPECIFIED OR INDICATED, SHALL BE FURNISHED AND LABELED AS IF NOT SPECIFIED OR INDICATED. ALL MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- THE DRAWINGS ARE DIAGNOSTIC ONLY AND NOT INTENDED TO SHOW EXACT LOCATIONS AND SIZES. CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS, DIMENSIONS, AND LENGTHS PRIOR TO THE START OF ANY WORK AND SHALL ADJUST THE EQUIPMENT AND RIGGING LOCATIONS TO AVOID CONFLICTS WITH OTHER CONSTRUCTION OR EQUIPMENT.
- ALL SUB CONTRACTORS ARE RESPONSIBLE FOR THE COORDINATION OF THEIR WORK WITH ALL OTHER AFFECTED TRADES.
- NO CONSTRUCTION ADMINISTRATION IS PROVIDED BY THE ARCHITECT.
- THE ARCHITECT IS NOT RESPONSIBLE FOR THE METHODS OF CONSTRUCTION AND/OR ERRORS AND OMISSION WITHIN THE METHODS OF CONSTRUCTION.
- STARTRAYS SHALL COMPLY WITH THE LATEST MUNICIPAL CODE.
- GENERAL CONTRACTOR SHALL MAINTAIN AND CLEAN STREETS IMMEDIATELY THROUGHOUT CONSTRUCTION.
- TREE PRESERVATION FENCE IS TO MAINTAINED PER APPROVED SITE PLAN AT ALL TIMES.
- DO NOT START WORK IF THE SUB-SURFACES ARE DEFECTIVE. THE COMMENCEMENT OF SUB-CONTRACTOR'S WORK SHALL CONSTITUTE ACCEPTANCE OF SUB-SURFACE.
- EACH LOCAL BUILDING CODES HAVING JURISDICTION SHALL TAKE PRECEDENT OVER THESE PLANS AND SPECIFICATIONS IF THERE EXISTS A CONFLICT. THE SUB-CONTRACTOR SHALL NOT CHANGE EXCEPT FOR ITEMS NECESSARY TO MEET CODE REQUIREMENTS FOR HIS WORK EVEN IF THE ITEMS WERE NOT CALLED OUT ON THESE PLANS.
- ALL WORK SHALL BE PERFORMED IN GOOD WORKMANLIKE MANNER. EACH SUB-CONTRACTOR SHALL MAINTAIN THEIR WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF OCCUPANCY PERMIT FROM DEFECTS AND WORKMANSHIP AND REPAIR ANY DEFECTS AT THEIR OWN COST.
- THE APPROVED SET OF PERMITS WITH THE COORDINATING AGENCIES MUST BE KEPT ON-SITE DURING THE COURSE OF CONSTRUCTION. THESE ITEMS MUST BE MADE AVAILABLE TO ALL REPRESENTATIVES OF THE BUILDING DEPARTMENT UPON REQUEST.

DIVISION 2 EXISTING CONDITIONS

- FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS OF ALL UTILITIES.
- FOUNDATION SHALL BEAR ON A MINIMUM OF 1800 PSF UNDISTURBED SOIL.
- CONCRETE SHALL HAVE A MIN. ULTIMATE COMPRESSIVE STRENGTH OF 3800 PSI AT 28 DAYS. PROVIDE AIR ENTRAINING ADDITIVES FOR ALL CONCRETE EXPOSED TO THE WEATHER.
- CONCRETE USED FOR ALL EXTERIOR WORK SHALL BE 8X4 (6) BAG PORTLAND CEMENT PER CUBIC YARD (4500 PSI). PROVIDE AIR ENTRAINING FOR ALL EXTERIOR CONCRETE. SHALL BE FIVE AND A HALF (5 1/2) BAG PORTLAND CEMENT PER CUBIC YARD (3800 PSI).
- COMPLY WITH THE CRSI'S RECOMMENDED PRACTICE FOR "PLACING REINFORCING BARS" FOR DETAILS AND METHODS OF REINFORCEMENT, PLACEMENT, AND SUPPORTS, AND AS HEREIN SPECIFIED.
- PROVIDE TIEBARS TO HORIZONTAL SLAB SURFACES TO BE EXPOSED TO VIEW OR TO BE COVERED WITH CONCRETE OR OTHER FINISH. PROVIDE A LEVEL PLANE SO THAT DIMENSIONS BETWEEN HIGH SPOTS DO NOT EXCEED 1/8" UNDER A 10' STRAIGHT EDGE.
- ALL CONCRETE FINISH SHALL COMPLY WITH THE ASTM, THE ACI, AND THE CRSI.
- PROVIDE GRANULAR BACKFILL UNDER ALL CONCRETE SLABS NOT SUPPORTED BY KING WALLS.
- PROVIDE FIBERGLASS REINFORCED DAMP-PROOFING OR EQUAL ON FOUNDATION WALLS.
- PROVIDE GRANULAR BACKFILL FOR GARAGE AREA AND BASCULOT DRIVE AREAS.
- PROVIDE ZIP STRIPS IN BASEMENT SLAB AND BASCULOT CONTROL JOINTS AT GARAGE SLAB.
- PROVIDE WUF REINFORCING IN GARAGE SLAB AND PROVIDE FIBERMESH REINFORCING IN ALL OTHER SLABS.
- VERIFY LOCATIONS OF ALL SERVICE SLEEVES THROUGH FOUNDATION WALLS WITH THE BUILDER.

DIVISION 3 CONCRETE

- REINFORCING BARS SHALL BE ASTM GRADE 40 WITH SPICES TO BE LAPPED 12" MIN.
- ALL JOISTS, RAFTERS, STUDS, AND MSIC STRUCTURAL FRAMING SHALL BE KILN DRIED, LUMBER NO. 1, 3000 EMB E MINIMUM.
- PROVIDE DOUBLE JOISTS UNDER PARALLEL PARTITIONS AND SOLID BLOCKING BENEATH ALL PERPENDICULAR PARTITIONS.
- PROVIDE DOUBLE JOISTS BENEATH WASHROOM, REFRIGERATORS, TUBS, & SHOWERS.
- ALL EXTERIOR BEARING PARTITIONS SHALL HAVE STUDS @ 16" O.C. WITH DOUBLE TOP FLUTE MINIMUM LAP OF 48".
- ALL SUBFLOORS TO BE 3/4" 1x6 OSB WITH DRAINAGE NOTCHES BY LOUISIANA-PACIFIC, DECKING GULLED AND SCREWED AS PER SPECIFICATIONS OF THE APA.
- PROVIDE SILL SEALER BETWEEN FOUNDATION AND SILL PLATE. SILL PLATE SHALL WEATHER AND INSULATE. WEATHER SHALL BE PROTECTED.
- ALL WOOD IN CONTACT WITH CONCRETE, CONCRETE BLOCK, OR EARTH SHALL BE WEATHER AND INSECT TREATED.
- PROVIDE A MIN. OF DOUBLE 2x12'S WITH 1/2" PLYWOOD FLUTCH PLATE HEADERS AT ALL 2x4 FRAMED OPENINGS UNLESS NOTED OTHERWISE.
- PROVIDE 1/2" OSB OR PLYWOOD SHEATHING AT ENTIRE HOUSE.
- FRAMED CORNERS SHALL BE A MINIMUM OF THREE STUDS.
- PROVIDE A MINIMUM OF CONTINUOUS 2x6 LVLING PLATE ON TOP OF ALL STEEL BEAMS UNLESS NOTED OTHERWISE.
- PROVIDE 1/2" CRYSTALLINE FIBRE REPAIRMENT UNDER ALL TILE DECK RIM.
- PROVIDE A MINIMUM OF DOUBLE STUDS AT EACH JAMB.
- PROVIDE A MINIMUM OF DOUBLE COMPLEES AT EACH JAMB OPENING GREATER THAN 2'-0".
- ALL INSANEERED FLOOR JOISTS & BEAMS (E. T. L. V. L. PARALLEL, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- CARPENTER SHALL PROVIDE BACKING NECESSARY FOR CEILING ATTACHMENT, BATH ACCESSORIES, MEDICINE CABINETS, STAIR WALLS, CLOSET ROD, ETC.

DIVISION 4 METALS

- THE DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION LATEST EDITION FOR A36 STEEL. STEEL SHALL BE SHOP COATED.
- REINFORCING BARS SHALL BE ASTM GRADE 40 WITH SPICES TO BE LAPPED 12" MIN.

DIVISION 5 WOOD PLASTICS AND COMPOSITES

- ALL JOISTS, RAFTERS, STUDS, AND MSIC STRUCTURAL FRAMING SHALL BE KILN DRIED, LUMBER NO. 1, 3000 EMB E MINIMUM.
- PROVIDE DOUBLE JOISTS UNDER PARALLEL PARTITIONS AND SOLID BLOCKING BENEATH ALL PERPENDICULAR PARTITIONS.
- PROVIDE DOUBLE JOISTS BENEATH WASHROOM, REFRIGERATORS, TUBS, & SHOWERS.
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- CARPENTER SHALL PROVIDE BACKING NECESSARY FOR CEILING ATTACHMENT, BATH ACCESSORIES, MEDICINE CABINETS, STAIR WALLS, CLOSET ROD, ETC.

DIVISION 6 THERMAL AND MOISTURE PROTECTION

- PROVIDE SHARPS AND FIRESTOPPINGS AT ALL PIPE, CONDUIT, DUCT OPENINGS, OR PENETRATIONS. PROVIDE ADDITIONAL FIRESTOPPING AT ALL WIRING PENETRATIONS, AND OUTSIDE STUD WALLS AT THE LEVEL OF EACH FLOOR OR CEILING AND AT BOFFIT POINTS. PROVIDE ADDITIONAL FIRESTOPPING AS REQUIRED BY LOCAL CODE.
- ALL FLASHINGS AND SHEET METAL WORK SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST SPMCA REFERENCE MANUAL FOR INSTALLATION AND SHAPES.
- ROOFERS SHALL INSTALL TYPED SHEET METAL UNDER TYVEK UNIFLASH.
- REFER TO TYVEK MANUAL AND INSTALL AIR BARRIER IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. PROVIDE AIR BARRIER WRAP AND SILL HEAD, AND JAMB FLASHING AS MANUFACTURED BY TYVEK.
- PROVIDE SOUND ATTENUATION BLANKETS AT ALL WALLS LINES IN FLOOR AND WALL CAVITIES. PROVIDE SOFT CLOSED CELL FOAM OR DENSE GLASS FIBER SLEEVES, NORMALLY 2" LONG AND 1/2" THICK BETWEEN UNINSULATED PIPES AND HANGERS. THERE SHOULD BE NO DIRECT CONTACT BETWEEN THE PLUMBING AND STUDS OR STUD WALL.

DIVISION 8 OPENINGS

- ALL GLAZING SHALL MEET OR EXCEED THE REQUIREMENTS OUTLINED IN THE VILLAGE CODE.
- PROVIDE THERMOPANE OR SAFETY GLASS ABOVE TUBS, DOORS AND OTHER HAZARDOUS LOCATIONS FOR COPIES.
- PROVIDE EMERGENCY ESCAPE AND RESCUE WINDOWS IN BASEMENTS AND BEDROOMS.
- GLAZING SHALL NOT EXCEED 44 INCHES ABOVE THE FLOOR. MINIMUM NET CLEAR OPENING SHALL BE 5.7 SQUARE FEET EXCEPT AT GRADE FLOOR LEVEL OPENINGS SHALL HAVE A MIN. NET CLEAR OPENING OF 5.7 SQUARE FEET. WINDOW HEIGHT SHALL BE 20 INCHES AND THE MINIMUM NET CLEAR OPENING WITHIN SHALL BE 30 INCHES. ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS OR TOOLS.

ADDITIONAL NOTES:

- ALL HANDRAILS AND GUARDRAILS MUST BE CAPABLE OF RESISTING A CONCENTRATED LIVE LOAD OF 200 LBS APPLIED IN ANY DIRECTION.
- BATHROOM EXHAUST FANS TO BE VENTED DIRECTLY TO OUTSIDE.
- WALLS IN TUB AND SHOWER AREAS TO BE 1/2" DUROCK OR EQUAL.
- MAINTAIN SAFETY GLAZING FOR ALL HAZARDOUS LOCATIONS.
- ALL BOLTS AND FASTENERS USED MUST BE COMPATIBLE WITH PRESERVATIVELY-TREATED WOOD.
- FOLLOW MANUFACTURER'S SPECS FOR ANY NOTCHING OR CUTS TO JOISTS OR TRUSSES OR LVL MATERIAL.
- RANGE HOODS TO DISCHARGE TO OUTDOORS THROUGH A SINGLE WALL DUCT.
- JOINTS OF DUCT SYSTEMS SHALL BE MADE SUBSTANTIALLY AIRTIGHT BY MEANS OF APPROVED TAPE.
- PROVIDE ONE OF THE ELECTRICAL PANEL AS SPACES OR BLANKS FOR FUTURE EXPANSION.
- PROVIDE 1 1/4" UNFED RACEWAY FROM BASEMENT TO ATTIC.
- VERIFY LOCATION IN FIELD.
- PROVIDE TAMPER-RESISTANT RECEPTACLES.
- ALL CLOSET LIGHTS TO BE SURFACE MOUNT LED WITH COMPLETELY ENCLOSED TUBE.
- BUTCH AND RECEPTACLE BOXES TO BE 4" SQUARE BY 1 1/2" DEEP.
- ALL GENERAL LIGHTING SHALL BE 1/2" DEEP BY 3 3/4" DIA.
- PROVIDE MIN. FOUR INCH ADDRESS NUMBERS AFFIXED TO THE FRONT OF THE HOUSE VERIFY LOCATION.

DIVISION 9 FINISHES

- ALL BATHUB DECKS AND INTERIOR WALLS/SHOWER LOCATIONS SHALL BE DUROCK OR EQUAL.
- PROVIDE CONCRETE BACKER BOARD AT ALL AREAS TO RECEIVE TILE FINISH AND INSTALL GREEN BOARD AT MASTER TUB SURROUND WALLS FOR PAINT.
- ALL CERAMIC AND QUARRY TILE TO BE INSTALLED IN THINSET OVER CONCRETE BACKER BOARD.
- ALL GYPSUM BOARD SURFACES AND PAINTED WOODWORK TO RECEIVE ONE (1) PRIME AND TWO (2) FINISH COATS OF PABA-TEXTURE PAINT COATS. ALL INTERIOR DOOR TRIM TO BE BACK PRIMED, DOORS TO BE PAINTED (BEALED), ALL SIX SIDES. VERIFY FINISH WITH OWNER. PAINT FINISHES: WALLS - EGGSHELL, CEILING - FLAT, DOORS & TRIM - PRESERVE. MATERIALS: PRATT AND LAMBERT OR APPROVED EQUAL. VERIFY FINISHES IN FIELD WITH OWNER. STAINED WOODWORK TO RECEIVE ONE (1) COAT STAIN AND TWO (2) COATS VARNISH WITH STEEL WOODSING BENEATH COATS.
- GARAGE INTERIOR WALLS AND CEILING SHALL BE 5/8" TYPE "X" GYPSUM BOARD.
- ALL COLORS, FINISHES, AND MATERIAL SELECTIONS TO BE MADE AND APPROVED BY OWNER.
- ALL INTERIOR WALL FINISH TO BE 1/2" GYPSUM BOARD.

ADDITIONAL NOTES:

- APPROVED PLANS MUST BE KEPT ON SITE AT ALL TIMES.
- RIDGE BOARDS, VALLEY AND HIP BOARDS ARE NOT TO BE LESS IN DEPTH THAN THE CUT END OF RAFTERS.
- WRITER RECORD FROM THE MATERIAL SUPPLIER SHALL BE PROVIDED UPON DELIVERY OF CONCRETE.
- ALL NEW BATHROOM WINDOWS TO BE APPROVED SAFETY GLASS.
- GROUNDING BUSING OR LOCKOUTS SHALL BE USED IN METER FITTING AND CIRCUIT BREAKER PANEL, NO EXCEPTIONS.
- ALL OUTLETS AND SWITCHES SHALL BE CONNECTED TO WIRING USING SCREW-TYPE TERMINALS.
- ALL CEILING BOVENS IN HABITABLE ROOMS SHALL BE CEILING FAN RATED.
- ALL CLOSET LIGHTINGS TO BE SURFACE FLUORESCENT FIXTURES WITH COMPLETELY ENCLOSED LAMP HIN. 6" FROM STORAGE POINT.
- ALL WATER CLOSET VENTS TO BE 2" MIN. PURNAGE TO BE SUPPLIED WITH DEDICATED BRANCH CIRCUIT AIR CHAMBERS TO BE INSTALLED ON ALL FIXTURES. ALL TUB AND SHOWER FIXTURES TO BE ANTICALLD NOT EXCEED 18 DEG AT TIME OF INSTALLATION.
- ALL LOW VOLTAGE WIRING TO BE CONCEALED AND ACCESSIBLE SHALL BE RUN IN CONDUIT.
- ALL DUCT SYSTEM JOINTS AND SEAMS SHALL BE MADE SUBSTANTIALLY AIR TIGHT BY MEANS OF TAPE OF OTHER APPROVED METHODS AND BE SUPPORTED A MAX. OF 10' INTERVALS.
- RECEPTACLES ARE TO BE TAMPER RESISTANT TYPE.
- FIRESTOPPING TO BE PROVIDED HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'.
- ALL NEW AND ALTERED BRANCH CIRCUITS THAT SUPPLY 50-VOVLT SINGLE-PHASE 9- AND 20-AMPERE OUTLETS INSTALLED IN KITCHEN, DINING ROOMS, LIVING ROOMS, BREAKROOMS, LIBRARIES, DEN, BEDROOMS, GARAGE, RECREATIONS ROOMS, CLOSETS, HALLWAYS AND BIPHEAR ROOMS OR AREAS SHALL BE PROTECTED BY A COPENATION TYPE ARC-FULT CIRCUIT INTERRUPTER INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
- PROVIDE INTERSYSTEM BONDING TERMINATION AT THE EXTERIOR AS CLOSE AS FEASIBLE TO ELECTRICAL SERVICE ENTRY POINT. IT SHALL BE ACCESSIBLE FOR INSPECTION AND SERVICE. MUST HAVE A MINIMUM OF THREE CONNECTION POINTS.

DIVISION 22 PLUMBING

- PROVIDE 3/4" 90 GALLON WATER HEATERS WITH TEN (10) YEAR GUARANTEE.
- PROVIDE CLEANOUTS AT EVERY CHANGE IN DIRECTION AND IN ANY RUN WITH A BEND TOTAL GREATER THAN 45 DEGREES.
- WHERE INDICATED ON THE DRAWING, INSTALL ALL PLUMBING FIXTURES AND APPLIANCES AS SELECTED BY OWNER.
- PLUMBING CONTRACTOR TO PROVIDE ALL VENTS, SHUT-OFFS, AIR CHAMBERS, RISERS, ETC. AS REQUIRED.
- PLUMBING RISERS

 - THEVOID WALL SANITARY RISER SHALL BE CLASS 5 DUCTILE IRON.
 - SOLDER JOINTS BEFORE THE WATER METER ARE PROHIBITED.
 - MINIMUM CLEARANCES FOR ACCESS TO WATER CLOSETS SHALL BE 6 INCHES CENTERLINE TO WALL OR OTHER.
 - MINIMUM 10 INCHES FROM FRONT OF BOLL TO WALL OR OTHER OBSTRUCTIONS.
 - MINIMUM 30 INCH DEPTH FOR ALL ELECTOR FITS.
 - SHOWER TRAYS VALVES SHALL BE STAMPED ASSE 08.
 - PROVIDE MIN. 1/2" WATER SERVICE AND A 1 1/2" WATER METER.
 - PROVIDE SERVICE UEGHT PVC PIPE FOR BUILDING DRAIN AND RELATED UNDERGROUND FINING.

DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING

- HVAC CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT TO COMPLETE THE DESIGN AND INSTALLATION OF HEATING, COOLING, AND VENTILATION SYSTEMS, INCLUDING BUT NOT LIMITED TO HEATING PLANTS, DISTRIBUTION, AIR CONDITIONING SYSTEM, TEMPERATURE CONTROLS, SETTING-COOPERER, RETRACK (THERMOSTATS) AND HUMIDIFICATION CONTROL, FILTER, EXHAUST FAN CONNECTIONS, GAS FIRED EQUIPMENT FUELS AND APPLIANCE VENTS. ENTIRE SYSTEM SHALL CONFORM TO APPLICABLE ASHRAE AND KITCHEN STANDARDS. CONTRACTOR SHALL CALCULATE HEAT LOSS AND GAIN, SIZE ALL DUCTS AND EQUIPMENT TO GUARANTEE SYSTEM WILL HEAT HOUSE TO 74 F @ 8 1/2 OUTSIDE TEMPERATURE WITH 15 M.P.H. WINDS AND COOL HOUSE TO 74 F @ 95 F OUTSIDE TEMPERATURE. CONTRACTOR TO PROVIDE THE NUMBER, MANUFACTURER, AND EFFICIENCY OF THE MECHANICAL COMPRESSOR AND ASSOCIATED EQUIPMENT REQUIRED TO MEET THE MECHANICAL HEATING AND COOLING REQUIREMENTS AT TIME OF BID SUBMITTALS. THESE HAVE BEEN ANTICIPATED. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ZONING DEBERED. MECHANICAL CONTRACTOR TO REVIEW LAYOUT OF SUPPLY & RETURN GRILLES AND LOCATION OF THERMOSTATS WITH OWNER IN FIELD PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE LOAD CALCULATIONS MANUAL, J OR EQUAL.
- RUN DUCTWORK TIGHT TO UNDERSE OF FLOOR CONSTRUCTION IN BASEMENT.
- HEATING CONTRACTOR TO CONNECT FUEL FROM HOT WATER HEATERS INTO RURNAGE FUEL IF APPLICABLE.
- VENT ALL ROOFER ROOM AND BATH EXHAUST FANS THROUGH ATTIC TO EXTERIOR WALL LOCATIONS WHERE POSSIBLE.
- ALL DRIVEWAY VENTS & COODPOT EXHAUST SHALL BE VENTED DIRECTLY TO THE EXTERIOR AND FLASHED ACCORDINGLY.
- HEATING CONTRACTOR TO RUN ALL CONDENSATE LINES TO FLOOR DRAIN.
- PROVIDE COMBUSTION AIR SUPPLY TO ALL GAS FIRED EQUIPMENT IN ACCORDANCE WITH MPA 84 AND OTHER APPLICABLE CODES.
- HVAC CONTRACTOR SHALL PROVIDE DUCT LAYOUT, CFM DISTRIBUTION AND HEAT LOSS CALCULATIONS TO MEET LOCAL CODE REQUIREMENTS.
- ALL HEATING AND ELECTRIC EQUIPMENT TO BE INSTALLED TO MEET LOCAL BUILDING DEPARTMENT APPROVAL.
- PROVIDE SHEET METAL PAN UNDER PURNAGE ON SECOND FLOOR OR ATTIC.
- HVAC 10161

 - HVAC CONTRACTOR TO PROVIDE LOAD CALCS. (MANUAL J OR EQUAL).
 - FOR SON PURNAGE 1 OR 2 PIPE SYSTEM IF PIPE SYSTEM PROVIDE COMBUSTION AIR.
 - PROVIDE COMBUSTION AIR TO LIVING ROOM.
 - PROVIDE SHEET METAL PAN UNDER PURNAGE ON SECOND FLOOR.
 - NO RISK QOT ALLOWED IN CONDENSED AREAS.

DIVISION 26 ELECTRICAL

- ALL SWITCHES SHALL BE LOCATED AT 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. ALL RECEPTACLES SHALL BE LOCATED AT 10' ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- PROVIDE GFI OUTLETS AND BUTCHED CONNECTIONS AS REQUIRED. FINISHED CONNECTIONS AT POTIONS.
- ALL ELECTRICAL FIXTURES WITHIN UTILITY AREAS OF BATHROOM SHALL BE DAMP RATION APPROVED BY ELECTRICAL CONTRACTOR.
- GROUND ELECTRICAL PANEL SERVICE WITH 1/8" O.D. DRIVEN GROUNDING ROD AND CONNECT TO COLD WATER SERVICE.
- PROVIDE FC LIGHT NEXT TO ALL ATTIC ACCESS PANELS WITHIN ATTIC AREA.
- PROVIDE A MINIMUM OF 400 AMP SERVICE.
- UP RECEPTACLES SHALL BE WEATHER-PROOF AND HAVE GROUND FAULT INTERRUPTER.
- ALL INTERIOR RECEPTACLES SHALL HAVE AN AUTO-GROUND CLIP.
- ALL DIRECTLY CONNECTED HVAC AND KITCHEN APPLIANCES TO BE DIRECT WIRED BY ELECTRICALIAN.
- ALL ELECTRICAL CONTRACTOR SHALL VERIFY POWER REQUIREMENTS AND RECEPTACLE LOCATIONS FOR ALL APPLIANCES IN FIELD PRIOR TO WIRING.
- ALL SURFACE MOUNTED LIGHT FIXTURES NOT SPECIFIED TO BE PROVIDED BY GENERAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
- INSTALL TOGGLED TYPE SWITCHES AND OUTLETS (UNITS).
- ALL RECEPTACLES SHALL BE "UNIVERSAL HOUSING TO TYPE GANS FOR NON-INSULATED AREAS. USE I/C GANS FOR INSULATED AREAS.
- PROVIDE ARC-FULT RECEPTACLES & DEVICES BRANCH CIRCUIT FOR ALL BEDROOMS.
- GFI PROTECTION MUST BE FROM A RECEPTACLE IN SAID ROOM. SERVICE PANEL PROTECTION FROM ROOM TO ROOM IS NOT ALLOWED.
- RECEPTACLES SHALL BE RATED AT THE BRANCH CIRCUIT RATING.
- BASINETS AND GARAGES MUST HAVE AT LEAST ONE 50 AMP GFCI RECEPTACLES IN ENTIRE BASEMENT.
- BASINETS THAT HAVE NOT LESS THAN 8' FOOT CIRCLES OF ILLUMINATION IN THE BASEMENT.
- ALL APPLIANCES SHALL HAVE INDIVIDUAL CIRCUITS.
- MAXIMUM OF ELECTRICAL OPENINGS PER CIRCUITS: 9-6 AMP, 100 AMP.
- ALL REX MUST HAVE A GROUNDING CONDUCTOR INSTALLED.
- ALL BOXES MOUNTED IN CEILING MORE THAN 7 FEET FROM WALL MUST BE RATED FOR RAN SUPPORT.
- ALL 1/4" ACCESSIBLE GFCI RECEPTACLE 1 FEET AWAY FROM TUB OR BATH RECEPTACLE FOR POWER FEED FOR PUMP IN HYDRO TUB.
- EXPLODED WORK MUST BE INSTALLED IN A WORKMANLIKE MANNER.
- NO MORE THAN 3% VOLTAGE DROP IN ALL BRANCH CIRCUITS AT FURTHEST POINT.
- NO BACKFEED OR BACKFEEDS IN GARAGE BREAKER LOCK INSTALLED IN BREAKER.
- PROVIDE ARC FULT RECEPTACLES BRANCH CIRCUIT FOR BEDROOMS.
- NO MORE THAN 3% VOLTAGE DROP IN ALL BRANCH CIRCUITS AT FURTHEST POINT.
- ADDD 500 CIRCUTORS ONE AT EACH LEVEL OR BUILDING.
- GROUNDING CONDUCTOR THAT NOT BE SMALLER THAN 4 AWG.
- SERVICE DISCONNECTING MEANS SHALL BE ON THE EXTERIOR OF THE BUILDING.

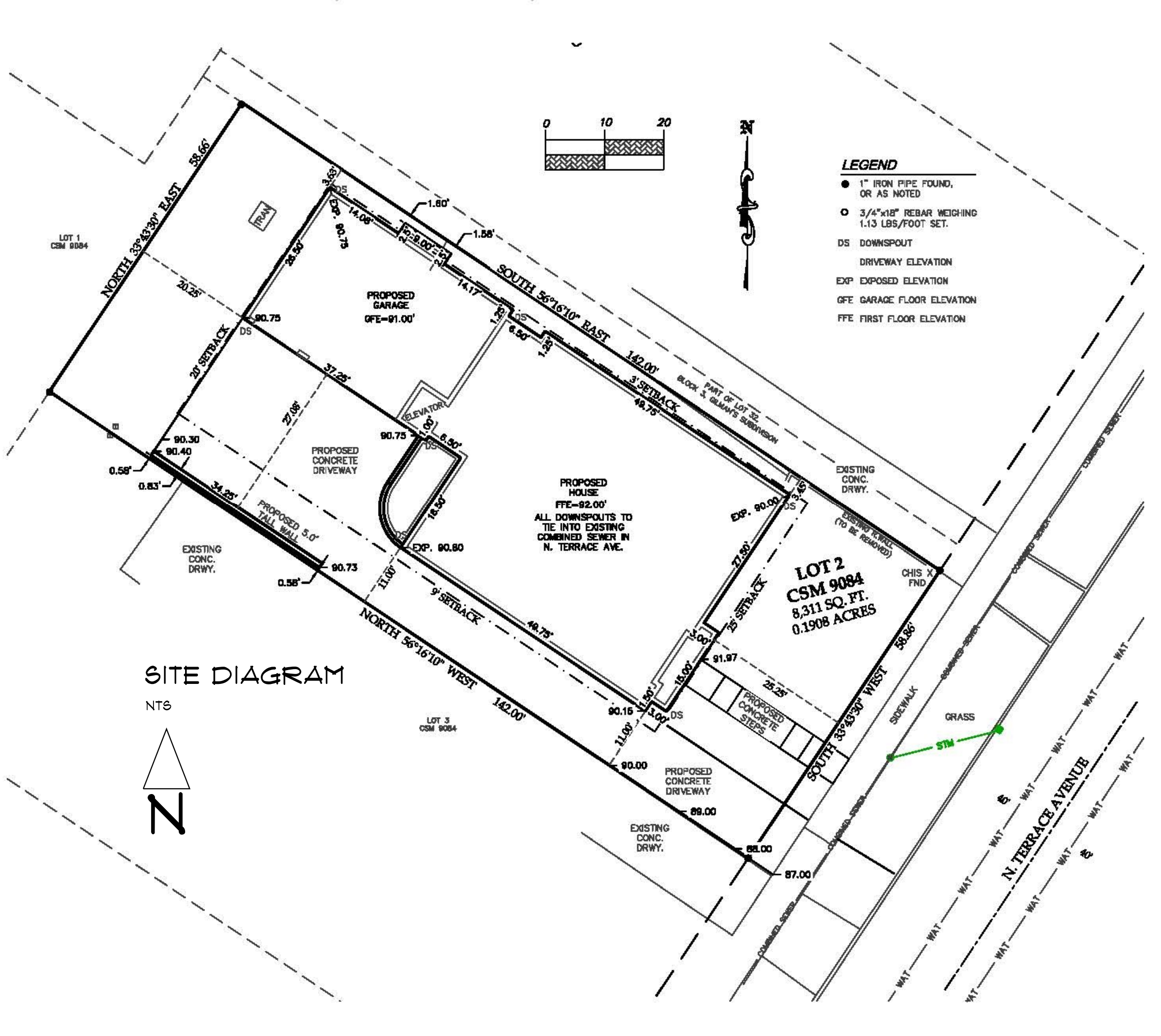
Electrical Notes:

- CLOSET LIGHT SHALL BE SURFACE MOUNT INCANDESCENT 2" AWAY FROM NEAREST POINT OF STORAGE OR RECESSED INCANDESCENT OR SURFACE MOUNT FLOOR, 6" AWAY FROM NEAREST POINT OF STORAGE.
- LIGHT FIXTURES IN CLOSET MUST HAVE A COMPLETELY ENCLOSED LAMP.
- ALL LIGHT FIXTURES WITHIN TUB & SHOWER COMPARTMENTS SHALL HAVE A VAPOR PROOF COVER AND SHALL BE GFCI PROTECTED.
- Additional Notes:

 - FLOOR CODE FOR BATHROOM RECEPTACLE CIRCUIT (E. 30 AMP CIRCUIT).
 - OUTSIDE GFCI RECEPTACLES MAY NOT BE ON SMALL APPLIANCE KITCHEN CIRCUIT.
 - GFCI PROTECTION MUST BE FROM A RECEPTACLE IN SAID ROOM OR SERVICE PANEL PROTECTION FROM ROOM TO ROOM IS NOT ALLOWED.
 - BASINETS AND GARAGES SHALL HAVE AT LEAST ONE 50 AMP GFCI RATED RECEPTACLE ON SEPARATE CIRCUITS.
 - NO NOTCHING OF WOOD.
 - GROUNDING CONDUCTORS MAY NOT BE SMALLER THAN 4 AWG.
 - INDIVIDUAL CIRCUITS REQUIRED FOR ALL APPLIANCES.
 - MAX. NO. OF ELECTRICAL OPENINGS PER CIRCUIT: 9-6 AMP, 100 AMP.
 - SMALLEST SIZE OF SERVICE IS 300 AMP/40 CIRCUITS CONDUIT UN WAPRE ON FINAL.
 - ALL WEX MUST HAVE A GROUNDING CONDUCTOR INSTALLED.
 - ALL BOXES INSTALLED IN CEILING MOUNTED MORE THAN 7' FROM WALL MUST BE RATED FOR CEILING SUPPORT.
 - INSTALL FACEBRES GFCI REC. 8' FROM TUB OR GFCI BREAKER IN PANEL FOR POWER FEED.
 - BROKE BREAKER LOCK INSTALLED IN BREAKER.
 - INSTALL 1/2" EMT TO OUTSIDE OF BUILDING FROM UTILITY MOUNT OF WATER METER FOR R.O.M.
 - EXPLODED WORK TO BE INSTALLED IN A WORKMANLIKE MANNER.
 - NO MORE THAN 3% VOLTAGE DROP IN ALL BRANCH CIRCUITS AT FURTHEST POINT.

PLUMBING NOTES:

- PROVIDE SHOWER MIXING VALVE ADJUSTED TO 13F AT TIME OF INSTALLATION. VERTICAL AND HORIZONTAL PIPING TO BE SECURED AND SUPPORTED IN ACCORDANCE WITH SUBPART G.
- SERVICE PIPES TO BE LAID MIN. 6" BELOW GRADE. MAX DEPTH OF WATER SERVICE TO BE 8" BELOW GRADE.
- PROVIDE PORTABLE WATER EXPANSION TANK WITH NO SHUT-OFF VALVE OR OTHER DEVICE BETWEEN THE HEATER AND EXPANSION TANK.
- UNDERGROUND BUILDING DRAINS TO BE CAST IRON SOIL PIPE.
- DRAINS PASSES THROUGH FOUNDATION WALLS TO BE CLASS 92.
- DUCTILE IRON TO MIN. 5" OUTSIDE FOUNDATION WALL.
- PVC SCHEDULE 40 PIPE OR HEAVIER TO BE USED FOR UNDERGROUND WASTE OR VENT PIPING SECURED BY STAKES. GROUND STAKES TO BE 60/42 CHEF TOMAHAWK #38-89 OR EQUAL.
- SUMP OR HAS DRAIN TO EXTEND 2" ABOVE BASEMENT FLOOR.
- A STACK TEST IS REQUIRED ON ALL WASTE AND VENT PIPING AT THE TIME OF ROUGH AND UNDERGROUND INSPECTIONS.
- PSI AIR TEST OR WATER PRESSURE REQUIRED ON WATER PIPING AT THE TIME OF ROUGH INSPECTION.
- PSI AIR TEST REQUIRED ON ALL GAS PIPING AT THE TIME OF ROUGH INSPECTION.



ADDITIONAL ENERGY CODE COMPLIANCE NOTES:

- RECESSED CAN LIGHTING INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE. IC RATED AND LABELED.
- BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR TO HAVE AN AIR LEAKAGE RATE NOT MORE THAN 3.0 CFM. ALL CAN LIGHTING SHALL WALL OR CEILING COVERING.
- INSULATE ALL HOT WATER PIPING WITH MIN. R-3.
- PROVIDE A MINIMUM OF 90% OF ALL LAMPS IN PERMANENTLY INSTALLED LIGHTING SHALL BE HIGH-EFFICIENCY LAMPS.
- ALL NEW FENESTRATION TO HAVE U < 0.30 OR BETTER.
- ALL NEW EXTERIOR WALLS TO HAVE MIN. R-13 INSULATION.
- ALL NEW WINDOWS TO HAVE MAX AIR INFILTRATION RATE OF 0.3 CFM PER SQ. FT.
- ALL NEW BUILDING DOORS TO HAVE MAX 0.5 CFM PER SQ. FT.

DRAWING INDEX

- T TITLE PAGE
- GENERAL NOTES
- FRONT ELEVATION
- LEFT ELEVATION
- REAR ELEVATION
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- BASEMENT PLAN
- PLUMBING DIAGRAMS
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- RADON DIAGRAM
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- DETAILS

CODE REQUIREMENTS AND STANDARDS TO MEET THE FOLLOWING:

THESE PLANS AND ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF WISCONSIN BUILDING CODE FOR RESIDENTIAL STRUCTURES

2018 INTERNATIONAL ENERGY CODE: ZONE 6

LINE ITEM	REQUIRED	PROPOSED	NOTES
WINDOWS	0.30	0.30	FENESTRATION U FACTOR
	0.55	N.A.	SKYLIGHT U FACTOR
CEILING/ATTIC	NR	NR	GLAZED FENESTRATION SHGC.
	R-49	R-60	R-38 MINIMUM IN CATHEDRAL CEILING'S
WALLS	R-20 OR	R-21	WOOD FRAMED 2x6 WALL
FLOORS	R-30	R-38	
BASEMENT WALLS	R-10	R-15	INTERIOR BATT
SLAB ON GRADE	R-10	R-10	INTERIOR RIGID, UNDER SLAB CONTINUOUS
CRAWLSPACE	R-15 OR	N.A.	
SUNROOM	R-13 WALLS &	N.A.	
	R-24 CEILING		
DUCTWORK	R-8 OR		
	R-6	R-8	Supply and return ducts in the attic must be a minimum of R-8 (where 23-inch diameter) and R-6 (where 30-inch diameter). Supply and return ducts everywhere else must be a minimum of R-6 (where 23-inch diameter) and R-4.2 (where 30-inch diameter).

R402.2.1 Ceilings with attic spaces. When Section R402.2.1 would require R-38 in the ceiling, R-30 shall be deemed to satisfy the requirement for R-38 wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Similarly, R-38 shall be deemed to satisfy the requirement for R-45 wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the U-factor alternative approach in Section R402.1.3 and the total UA alternative in Section R402.1.4.

R402.2.2 Ceilings without attic spaces. Where Section R402.1.1 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section R402.1.1 shall be limited to 500 square feet (46 m2) or 20 percent of the total insulated ceiling area, whichever is less. This reduction shall not apply to the U-factor alternative approach in Section R402.1.3 and the total UA alternative in Section R402.1.4.

R403.4.2 Hot water pipe insulation (Prescriptive). Insulation for hot water pipes with a minimum thermal resistance (R-value) of R-3 shall be applied to the following:

- Piping larger than 3/4 inch nominal diameter.
- Piping serving more than one dwelling unit.
- Piping from the water heater to kitchen outlets.
- Piping located outside the conditioned space.
- Piping from the water heater to distribution manifold.
- Piping located under a floor slab.
- Supply and return piping in recirculation systems other than demand recirculation systems.

Piping with a nominal diameter greater than the minimum run length for the pipe size given in Table R403.4.2. All remaining piping shall be insulated to at least R-3 or meet the run length requirements of Table R403.4.2.

TABLE R403.4.2 MAXIMUM RUN LENGTH (feet)

Nominal Pipe Diameter or Max. No. of Electrical Openings (in the Run)	3/8	1/2	3/4	1
Maximum Run Length	30	20	10	5



STREET ELEVATION

SCALE 1/4" = 1'-0"

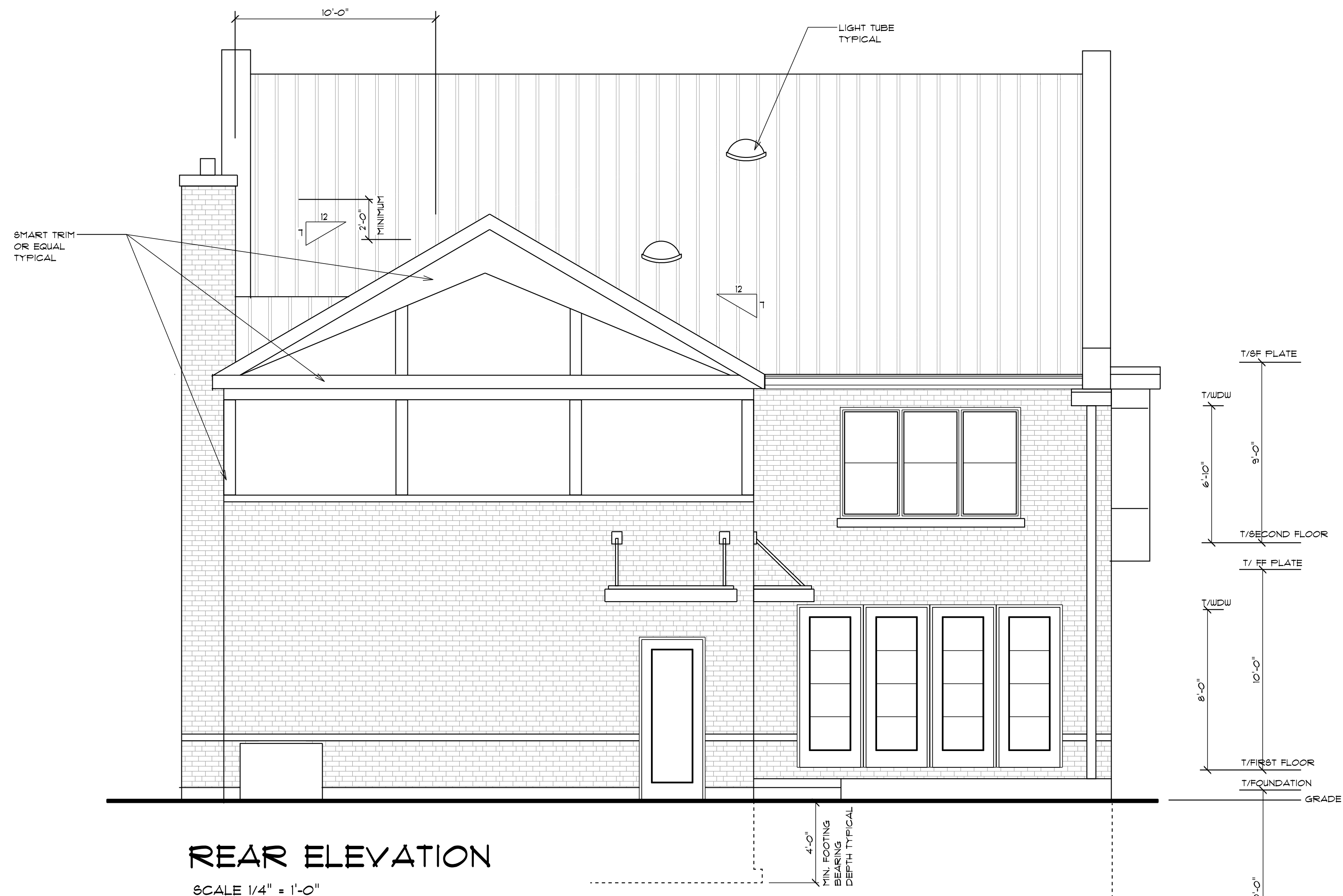


LEFT ELEVATION

SCALE 1/4" = 1'-0"

MINCHILLO RESIDENCE
2409 N TERRACE AVE, MILWAUKEE WI

PURNELL ARCHITECTS, INC.
20 HAWLEY COURT GRAYS LAKE IL 60030
847.989.2722 SHAUN@SHAUNPURNELL.COM



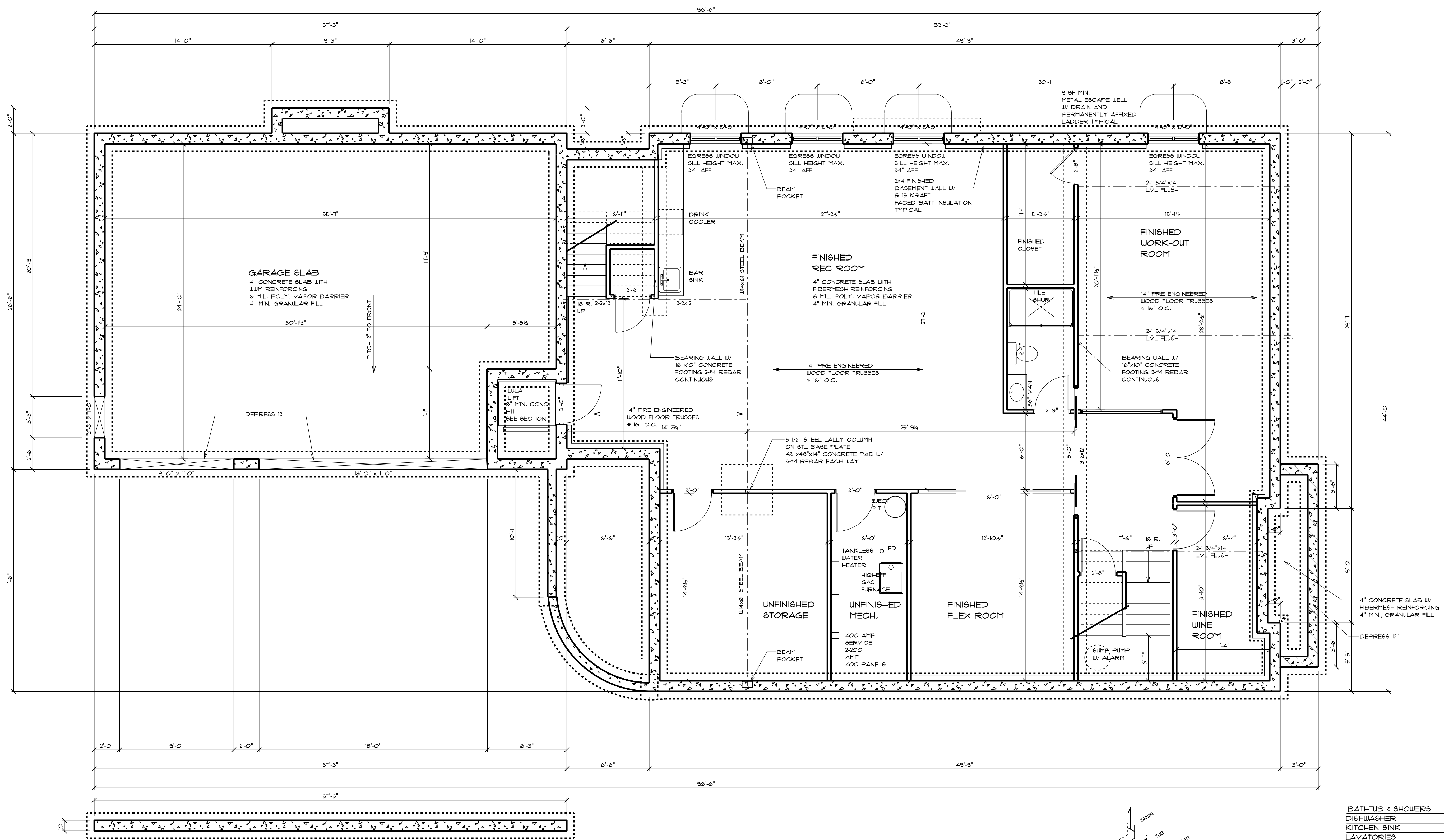
REAR ELEVATION
SCALE 1/4" = 1'-0"



RIGHT ELEVATION
SCALE 1/4" = 1'-0"

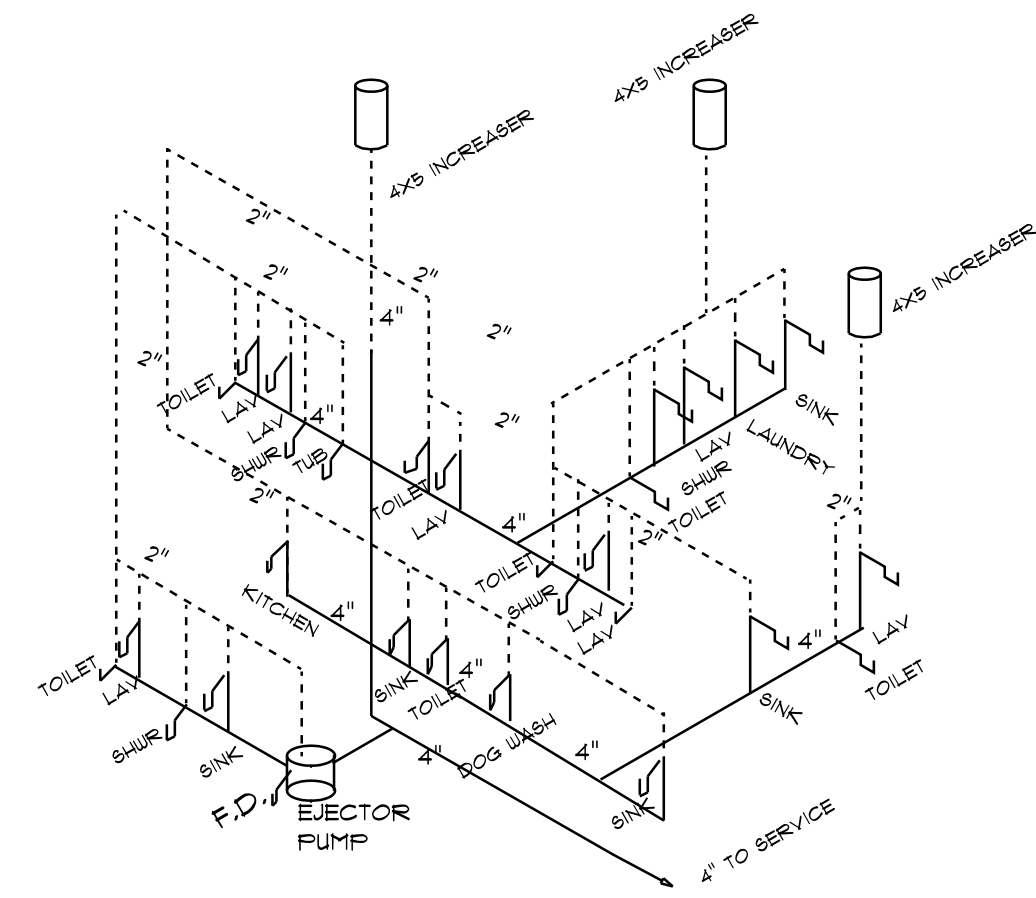
MINCHILLO RESIDENCE
2409 N TERRACE AVE. MILWAUKEE WI

PURNELL ARCHITECTS, INC.
20 HAWLEY COURT GRAYSLAKE IL 60030
847.989.2112 SHAWN@SHAWNPUENELL.COM



FOUNDATION PLAN / BASEMENT PLAN
SCALE 1/4" = 1'-0"

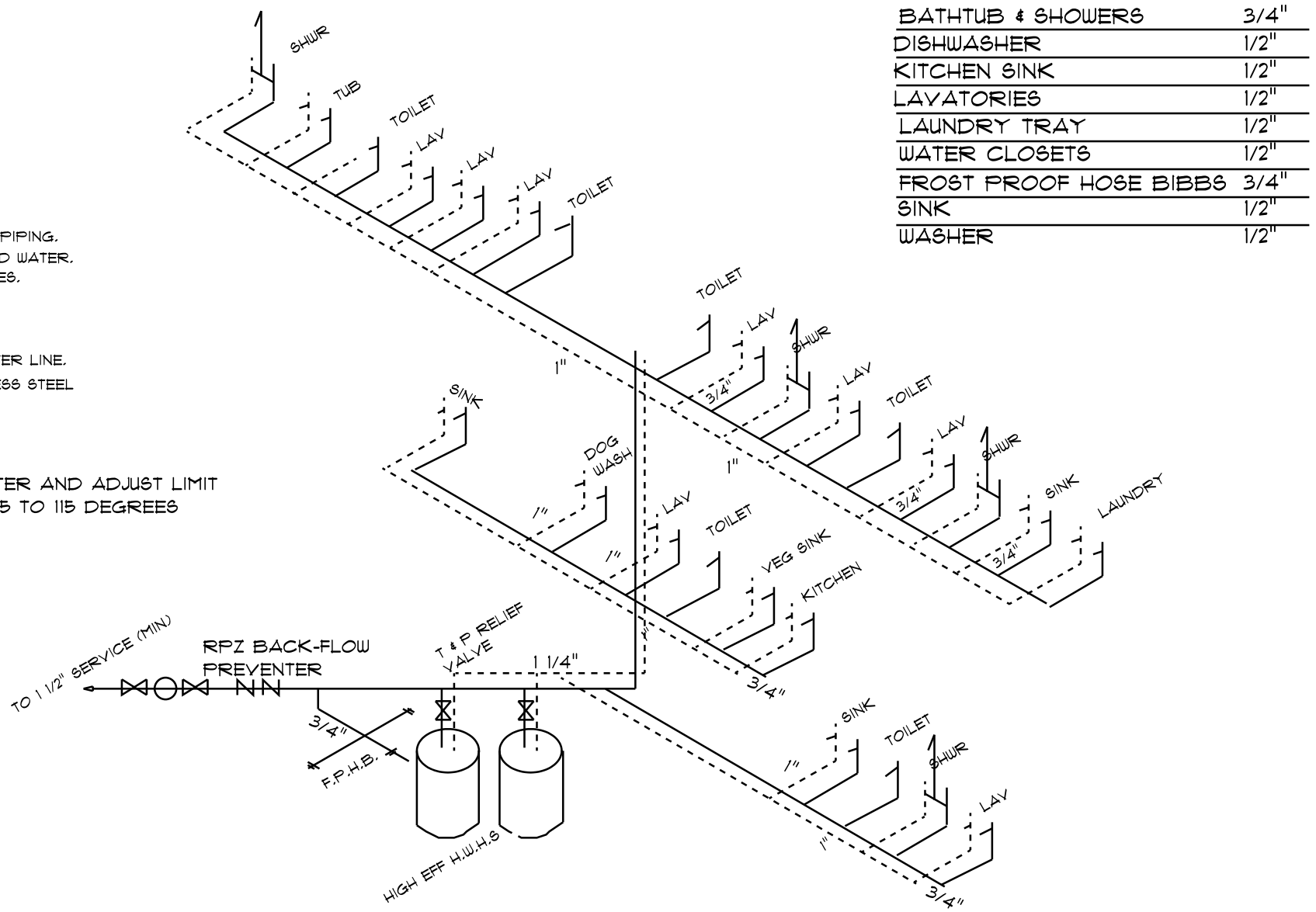
WASTE & VENT DIAGRAM
RUBBER CHECK VALVES NOT PERMITTED ON 2" DISCHARGE LINE.
ALL STORY FITS AND SEALED EJECTOR FITS SHALL BE INSTALLED WITH TOP EDGE 2" ABOVE FINISH FLOOR.
ALL PIPES SHALL BE SCHEDULE 40 PVC ABOVE GROUND.
EJECTOR FITS TO HAVE GATE VALVE ON 2" DISCHARGE WASTE LINE OR UN AIR CHAMBERS ARE PROHIBITED.
ONLY 2 TOILETS ARE ALLOWED TO DISCHARGE INTO A 3" HORIZONTAL WASTE LINE AND A MAX. OF 20 FIXTURE UNITS. TOILETS ON AN EJECTOR PUMP IS CONSIDERED A 3RD TOILET ON SAID LINE.
CELLULAR FOAM CORE TYPE PVC IS PROHIBITED.
HOSE BIBBS TO HAVE VACUUM BREAKER PROTECTION TYP.



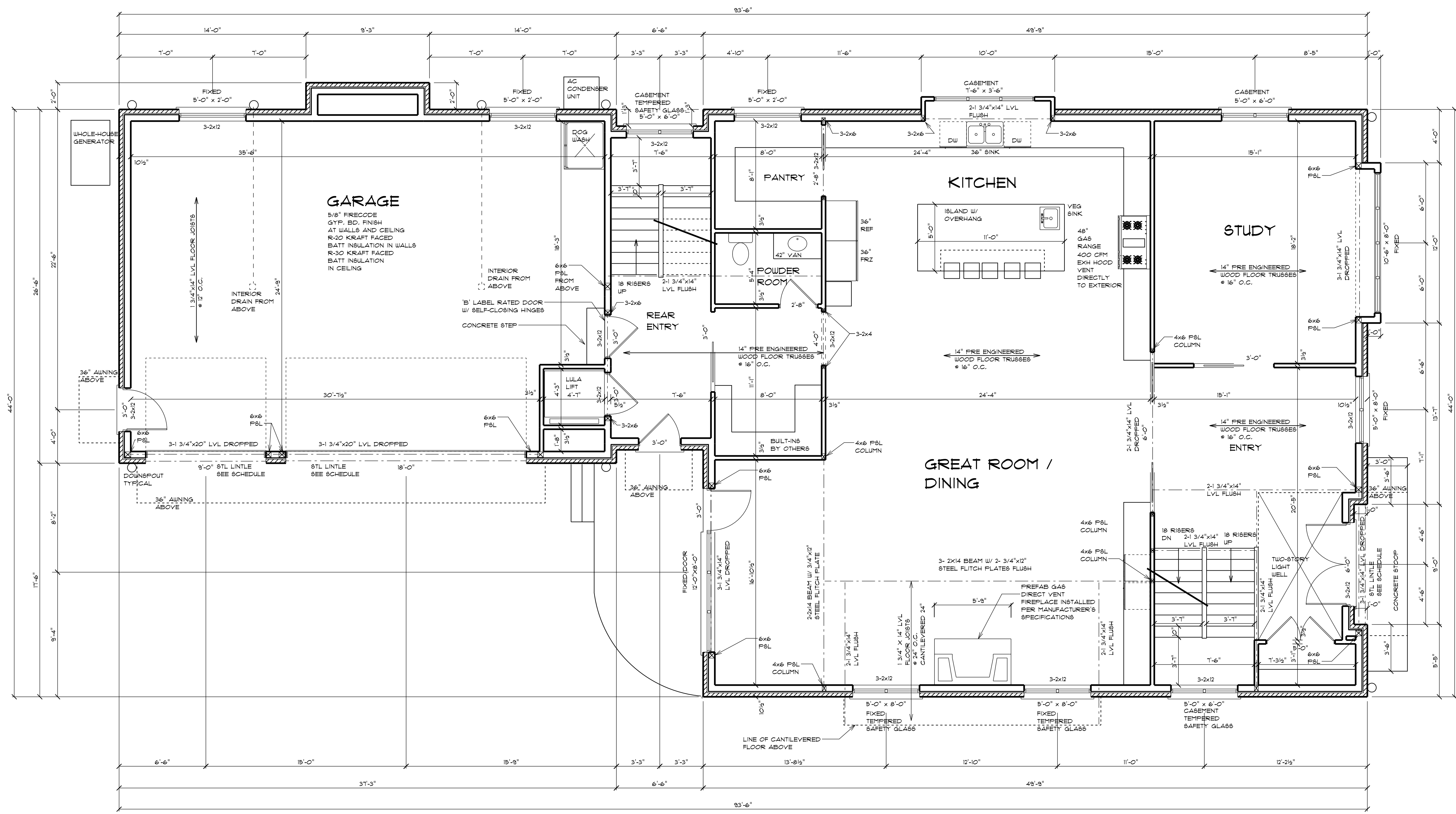
WATER SUPPLY DIAGRAM

PROVIDE SHUT OFF VALVES AT EACH FIXTURE.
TYPE K COPPER UNDERGROUND.
PEX PIPING ABOVE GROUND FOR ALL POTABLE WATER PIPING.
FROST PROOF HOSE BIBBS TO BE CONNECTED TO HARD WATER.
PROVIDE AIR CHAMBERS AT EACH HIC WATER FIXTURE.
SHOWER VALVES TO BE PRESSURE BALANCING TYPE.
INSTALL WATER SAVING FIXTURES PER CODE.
SHOWER MIXING VALVES TO BE STAMPED ASSE-1015.
ONE FIXTURE SUPPLY SHALL BE SUPPLIED ON A 1/2" WATER LINE.
NON METALLIC SUPPLY RISER TUBES, INCLUDING STAINLESS STEEL BRAIDED TYPE ARE PROHIBITED.
MIN. 1/2" SERVICE AND 1" WATER METER.

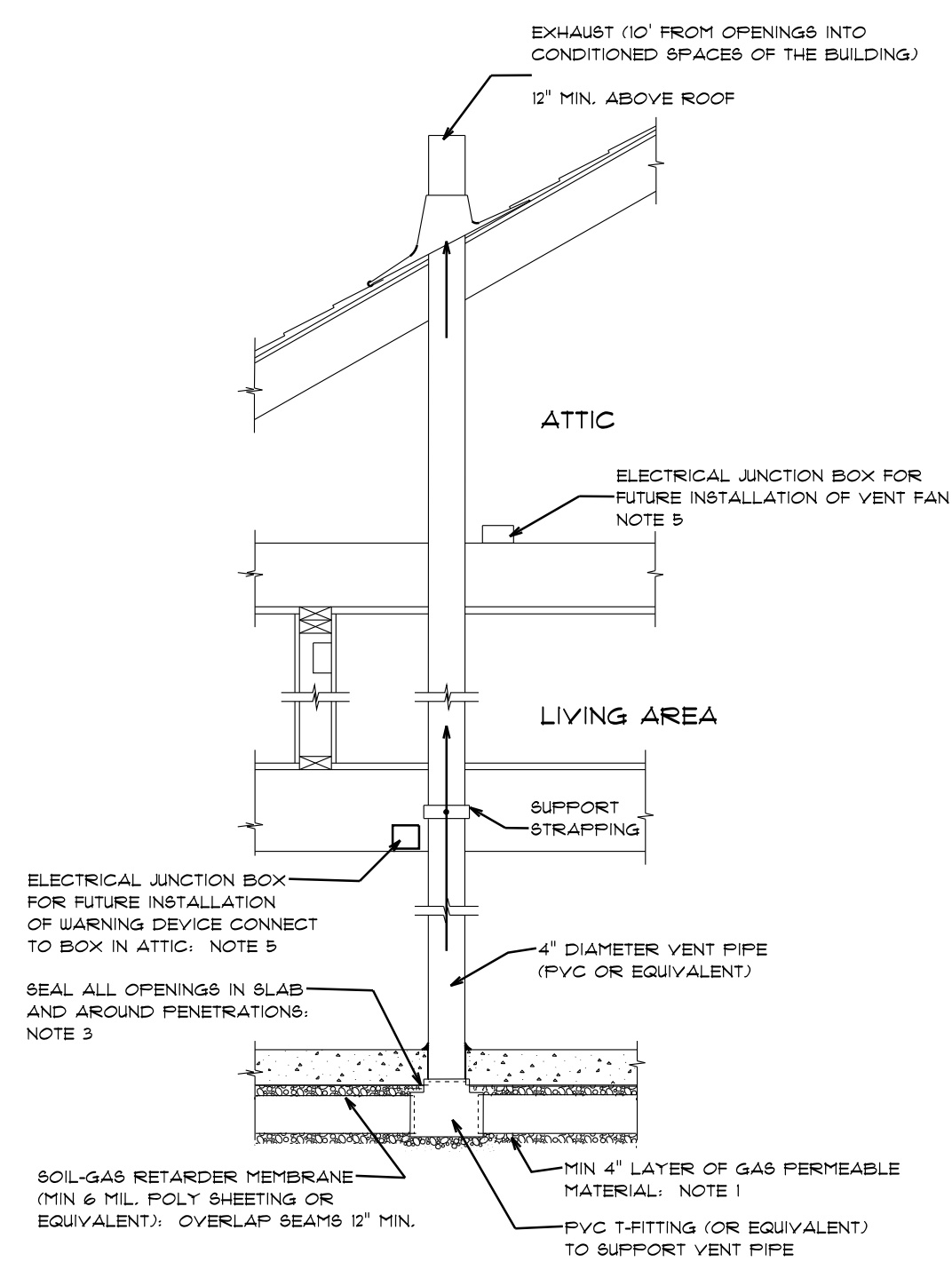
PROVIDE A MINIMUM OF 120 DEGREE HOT WATER AND ADJUST LIMIT CONTROL STOPS ON TUB/SHWR VALVES TO 85 TO 115 DEGREES



BATHTUB & SHOWERS	3/4"
DISHWASHER	1/2"
KITCHEN SINK	1/2"
LAVATORIES	1/2"
LAUNDRY TRAY	1/2"
WATER CLOSETS	1/2"
FROST PROOF HOSE BIBBS	3/4"
SINK	1/2"
WASHER	1/2"



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

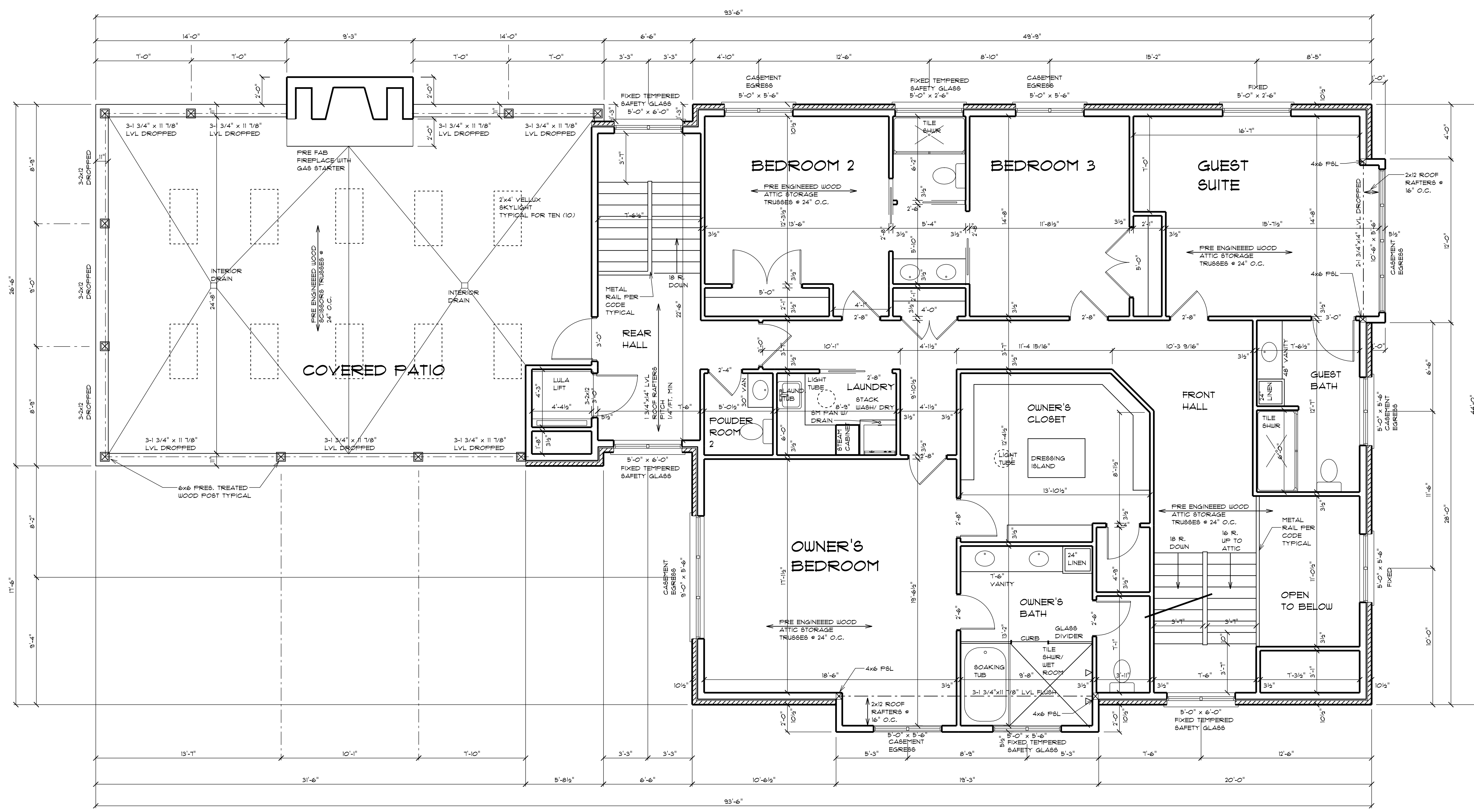


PASSIVE SUB-SLAB DEPRESSURIZATION RADON CONTROL SYSTEM
NOT TO SCALE

- NOTES:**
1. ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL BE LAID OVER A GAS PERMEABLE MATERIAL MADE UP OF MINIMUM 4" THICK UNIFORM LAYER OF CLEAN STONE AGGREGATE.
 2. ALL CONCRETE FLOOR SLABS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL BUILDING CODES.
 3. ALL OPENINGS, GAPS, AND JOINTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT WITH SOIL OR GAPS AROUND PIPES, TOILETS, BATHUBS, OR DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS, OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH AN ELASTOMERIC JOINT SEALANT AS DEFINED IN ASTM C920-81.
 4. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS MEMBRANE.
 5. CIRCUIT SHOULD BE MIN. 15 AMP, 120 VOLT.

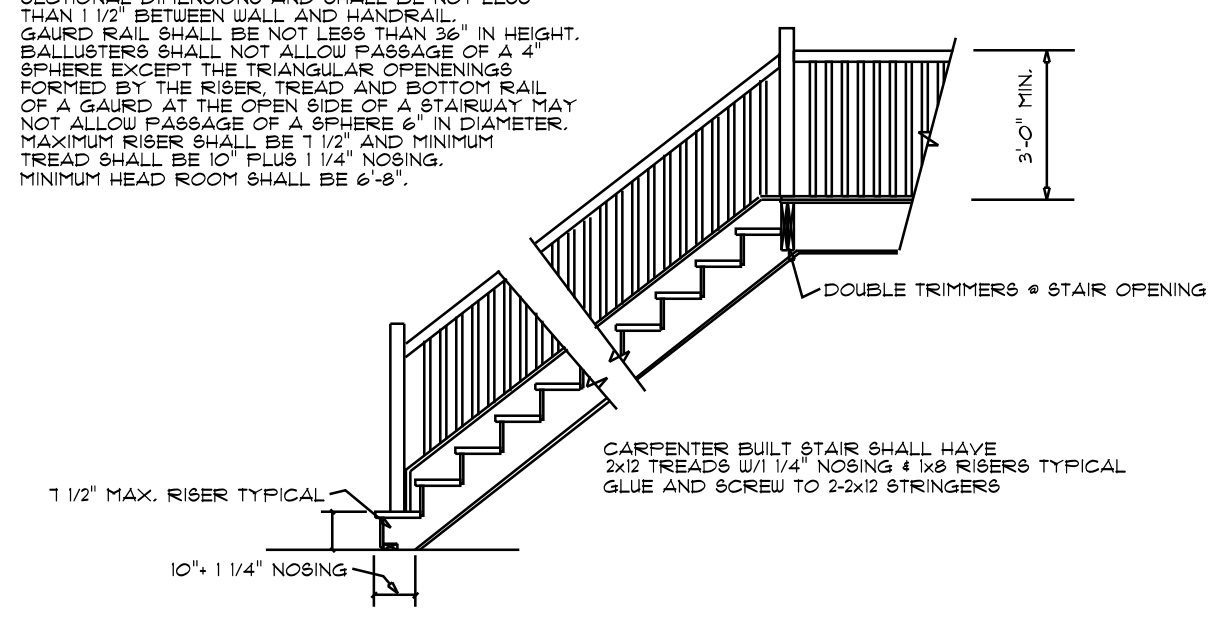
MINCHILLO RESIDENCE
2409 N TERRACE AVE, MILWAUKEE WI

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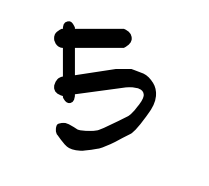


SECOND FLOOR PLAN
SCALE 1/4" = 1'-0"

HANDRAIL SHALL BE 34" ABOVE NOSING. THE HANDRAIL PORTION OF THE HANDRAILS SHALL NOT BE MORE THAN 2 5/8" IN CROSS SECTIONAL DIMENSIONS AND SHALL BE NOT LESS THAN 1 1/2" BETWEEN RAIL AND HANDRAIL. GUARD RAIL SHALL BE NOT LESS THAN 36" IN HEIGHT. BALLUSTERS SHALL NOT ALLOW PASSAGE OF A 4" SPHERE EXCEPT THE TRIANGULAR OPENING FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GAIRD AT THE OPEN SIDE OF A STAIRWAY THAT NOT ALLOW PASSAGE OF A SPHERE 6" IN DIAMETER. HANDRAIL RISER SHALL BE 1 1/2" AND MINIMUM TREAD SHALL BE 10" FLUSH 1 1/4" NOSING. MINIMUM HEAD ROOM SHALL BE 6'-8".

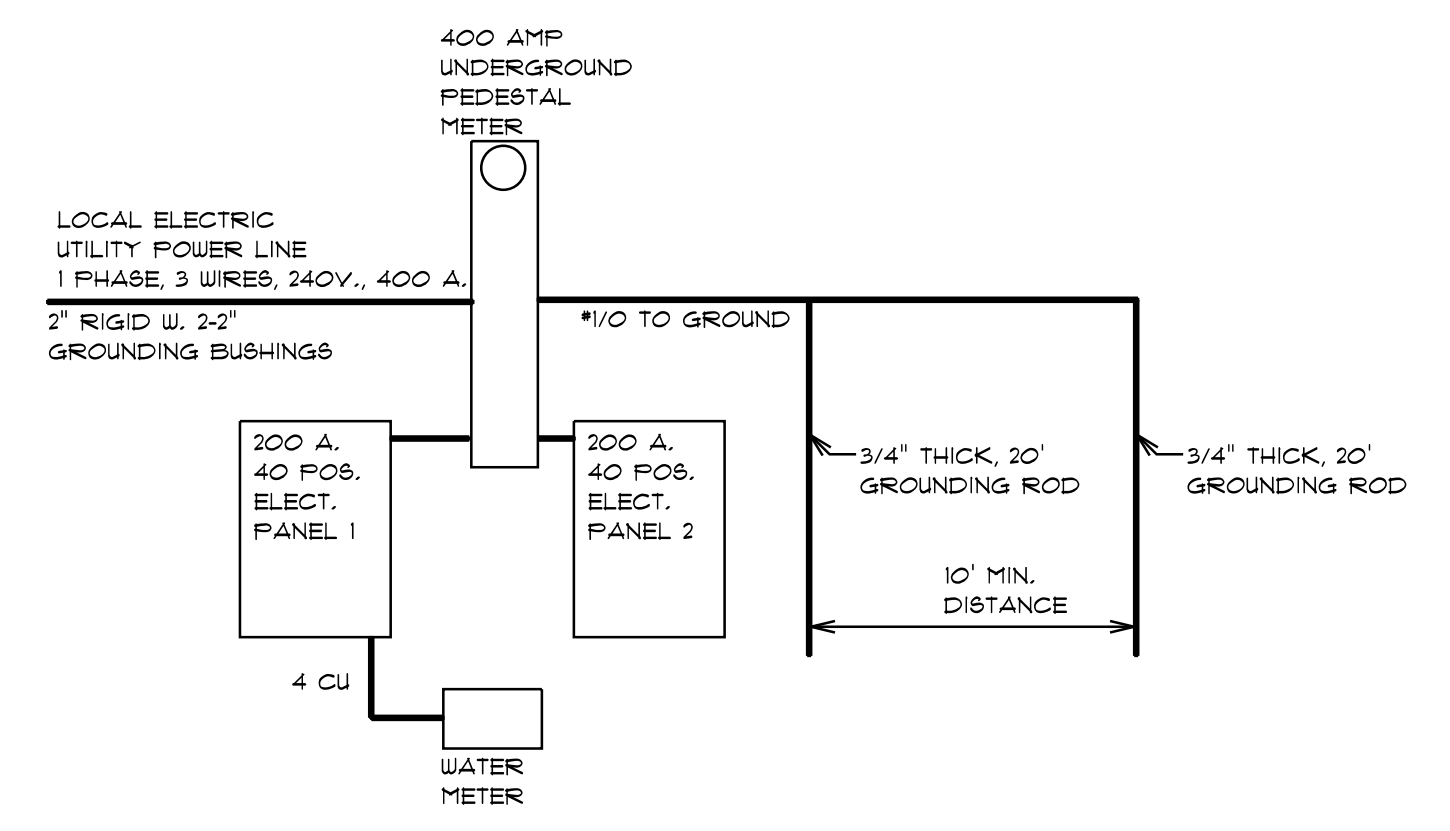


STAIR DETAIL



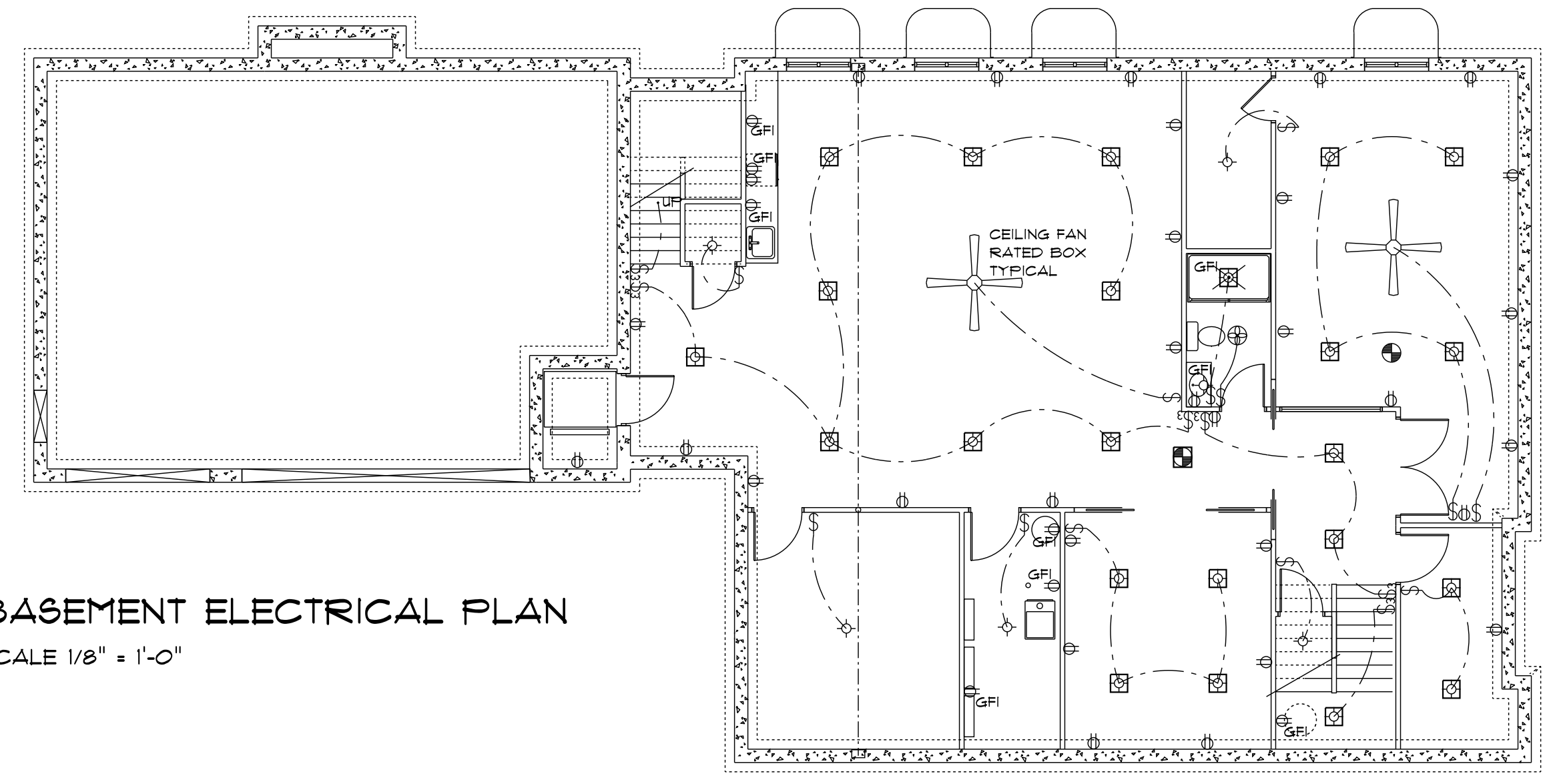
PANEL 1 200 AMP MAIN BREAKER				PANEL 2 200 AMP MAIN BREAKER			
LOAD DESCRIPTION	AMP	CIRCUIT BREAKER	AMP	LOAD DESCRIPTION	AMP	CIRCUIT BREAKER	AMP
MASTER BATH GFI OUTLET	20	1	15	LIVING ROOM	15	1	15
MASTER BEDROOM OUTLET	15	3	4	DINING ROOM OUTLET	20	3	4
MASTER BEDROOM LIGHTS	15	5	6	DINING ROOM	15	5	6
WORKROOM	20	7	8	POUNDER ROOM GFI	20	7	8
BEDROOM 1	15	9	10	STUDY	15	9	10
HALL BATH LIGHTS	20	11	12	STUDY P.R. LIGHTS	15	11	12
BEDROOM 3 BATH GFI OUTLET	20	13	14	FAMILY ROOM LIGHTS	15	13	14
BEDROOM 2	15	15	16	FAMILY ROOM LIGHTS	15	15	16
BEDROOM 3	15	17	18	FAMILY ROOM OUTLETS	15	17	18
HALL BATH GFI OUTLET	20	19	20	LAUNDRY	15	19	20
BEDROOM 3 BATH LIGHT	15	21	22	GARAGE	15	21	22
2ND FLOOR HALL LIGHTS	15	23	24	GARAGE	15	23	24
FLEX ROOM LIGHT	15	25	26	G.D.O.	15	25	26
FLEX ROOM OUTLET	15	27	28	G.D.O.	15	27	28
GUEST ROOM	15	29	30	HALL/LOFT LIGHTS	15	29	30
		31	32	HALL/LOFT OUTLETS	15	31	32
		33	34				
		35	36				
		37	38				
		39	40				

LOAD DESCRIPTION	AMP	CIRCUIT BREAKER	AMP	LOAD DESCRIPTION	AMP	CIRCUIT BREAKER	AMP
A/C UNIT	30	1	2	GARAGE DISPOSAL	20	1	2
A/C UNIT	30	3	4	DISHWASHER	20	3	4
A/C UNIT	40	5	6	REFRIGERATOR	20	5	6
A/C UNIT	40	7	8	MICROWAVE	20	7	8
GAS FURNACE	15	9	10	KITCHEN OUTLETS	20	9	10
GAS FURNACE	15	11	12	KITCHEN OUTLETS	20	11	12
BREAKFAST LIGHT	15	13	14	KITCHEN LIGHTS	15	13	14
PANTRY	20	15	16	KITCHEN LIGHTS	15	15	16
PANTRY	20	17	18	KITCHEN LIGHTS	15	17	18
BASEMNT. LIGHT	15	19	20	OVEN	30	19	20
BASEMNT. RECPT.	15	21	22	OVEN	30	21	22
BASEMNT. RECPT.	15	23	24	MICROWAVE	20	23	24
PANEL OUTLET	20	25	26	BREAKFAST SEATING	15	25	26
EXT OUTLET	20	27	28	UTILITY LIGHTS	15	27	28
EXT OUTLET	20	29	30	UTILITY LIGHTS	15	29	30
FLEX ROOM	15	31	32	BASEMNT LIGHTS / SMOKE DET	15	31	32
FLEX ROOM	20	33	34	BASEMNT BATH GFI OUTLET	20	33	34
WORKOUT	15	35	36	BASEMNT LIGHTS	15	35	36
WORKOUT	15	37	38	BUMP PUMP	15	37	38
		39	40	ELECTOR PUMP	15	39	40

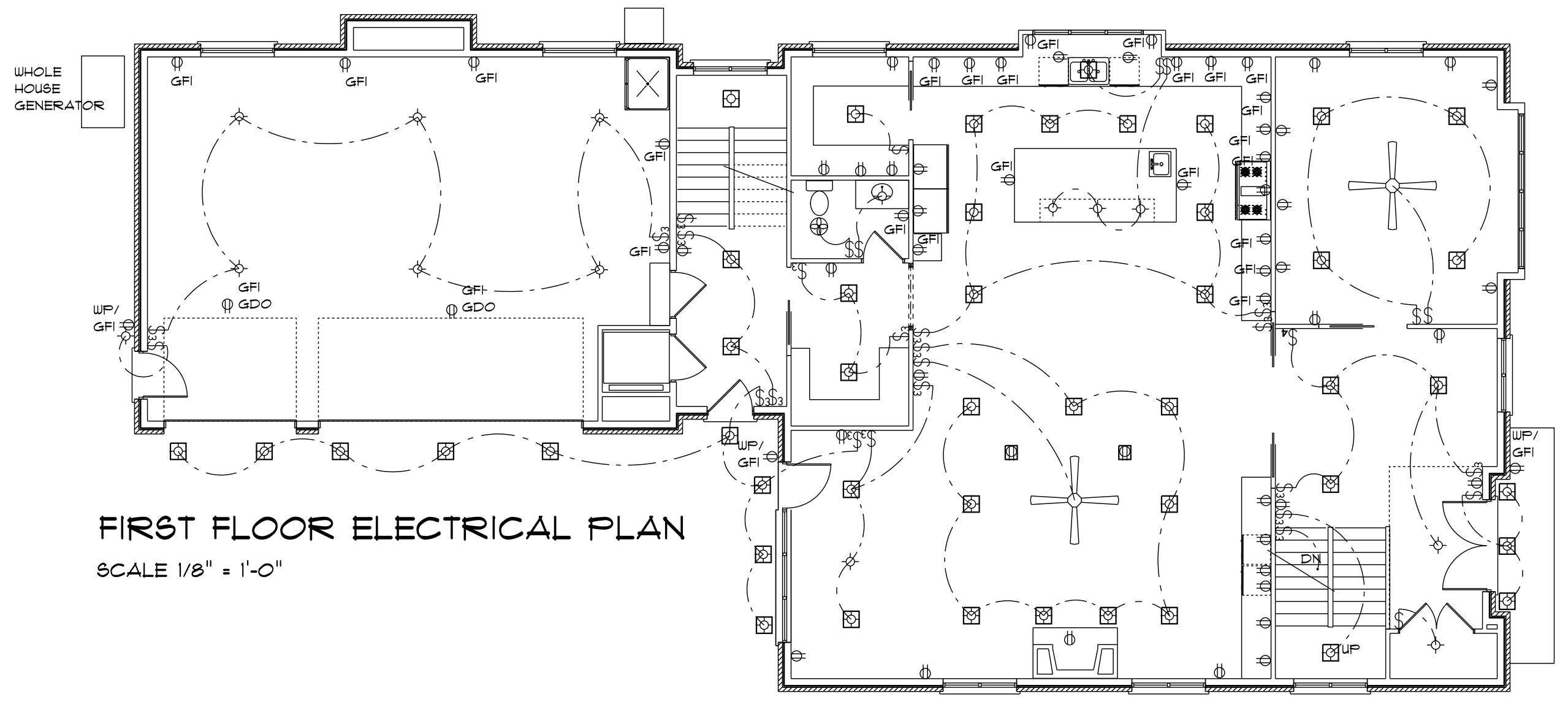


EXISTING ELECTRIC RISER DIAGRAM

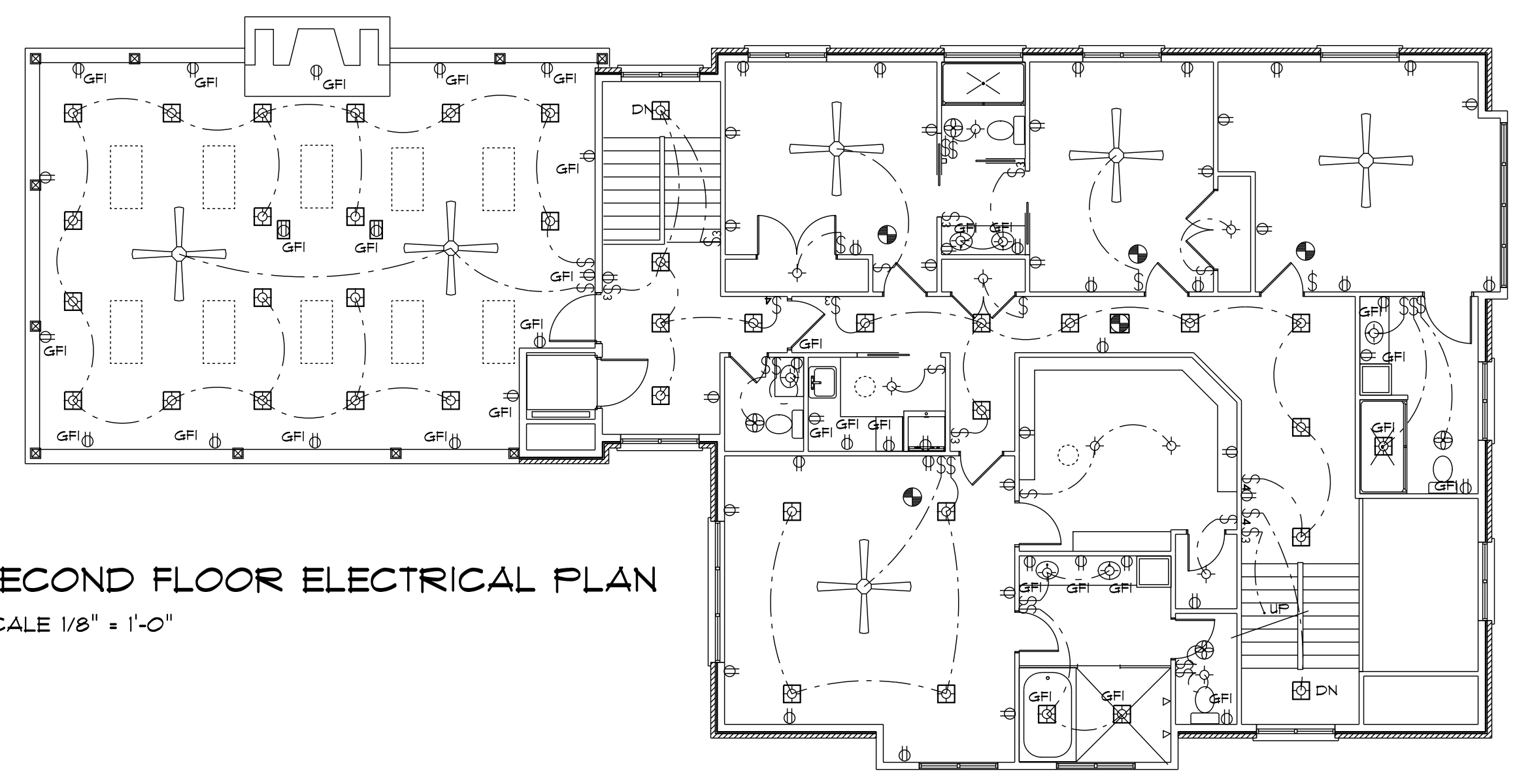
ELECTRICAL SYMBOLS	
	150 CFM EXH. FAN
	LIGHT
	OUTLET
	FLOOR OUTLET VERIFY LOCATION
	OUTLET GFI
	REC. CAN LIGHT
	SWITCH
	SMOKE DETECTOR / SMOKE & CARBON MONOXIDE DETECTOR
	PHONE / TV / DATA



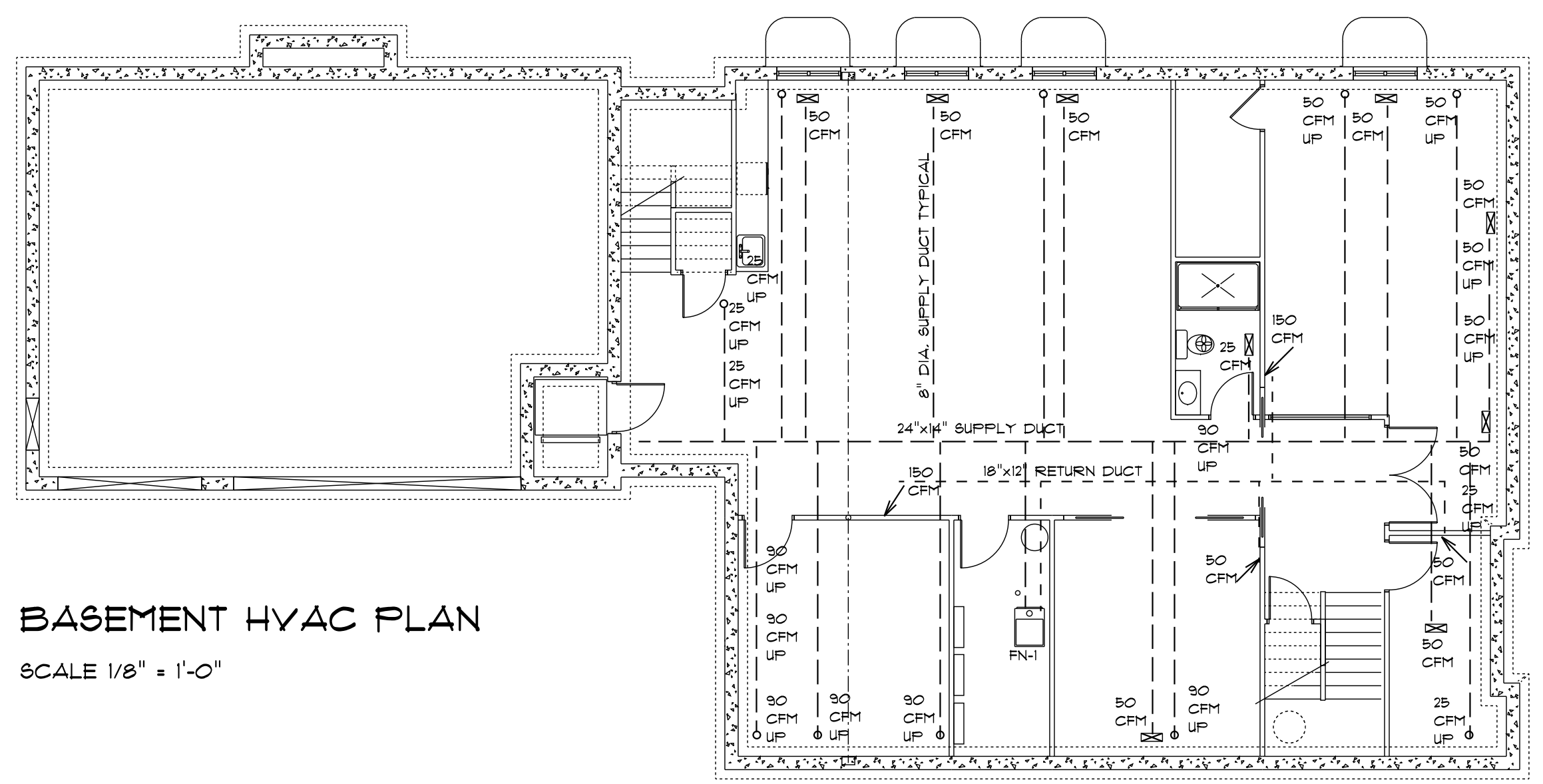
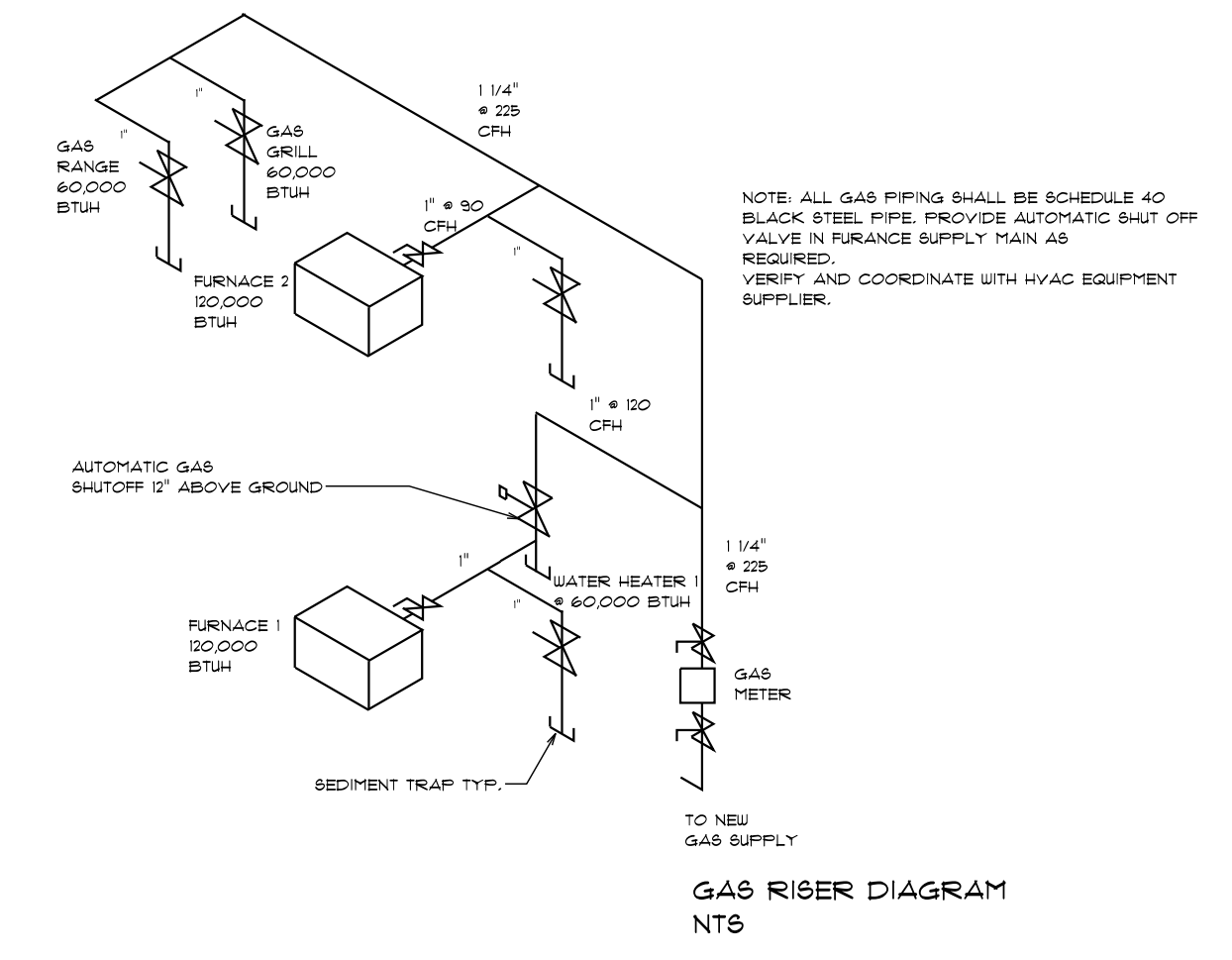
BASEMENT ELECTRICAL PLAN
SCALE 1/8" = 1'-0"



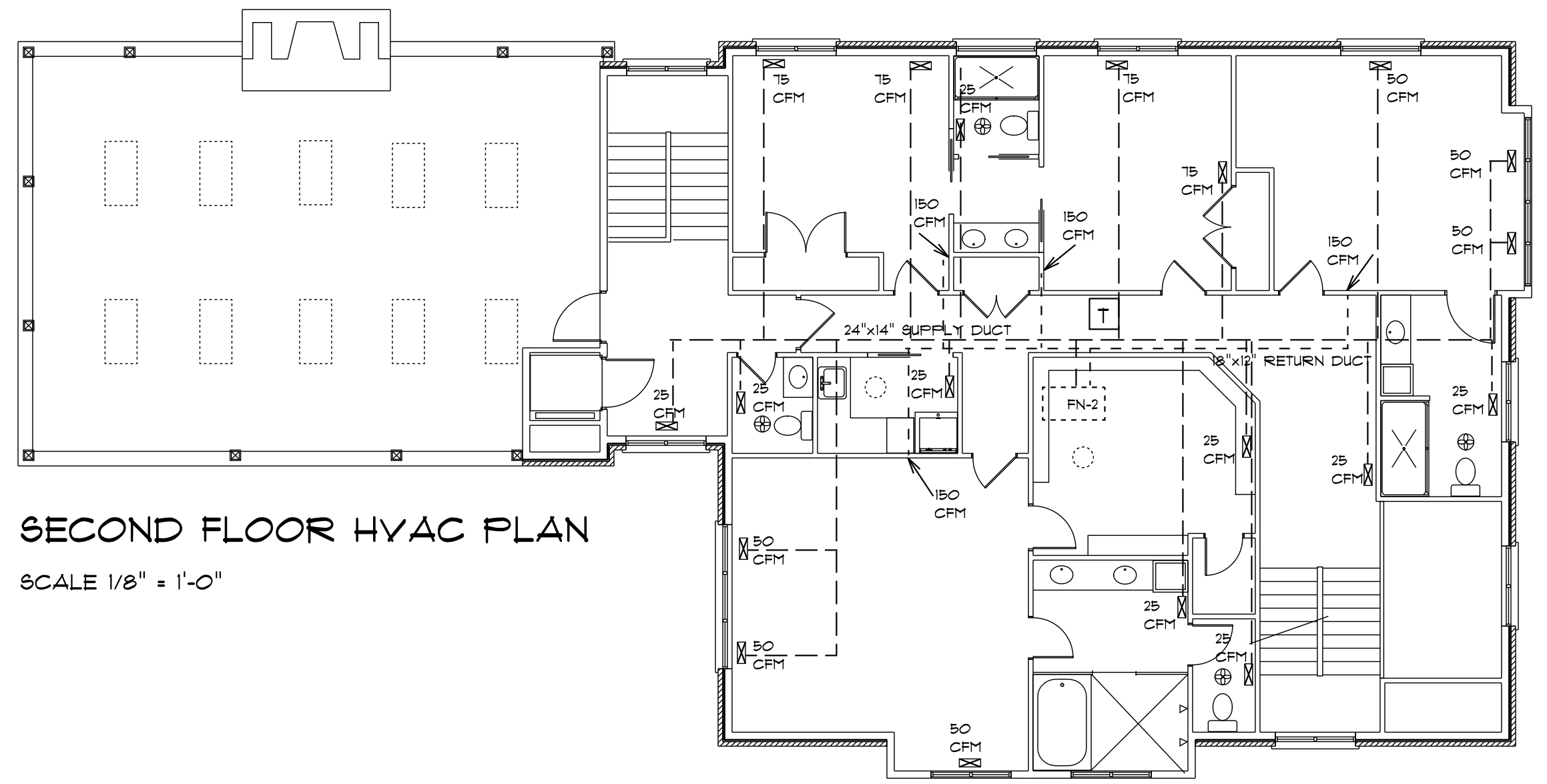
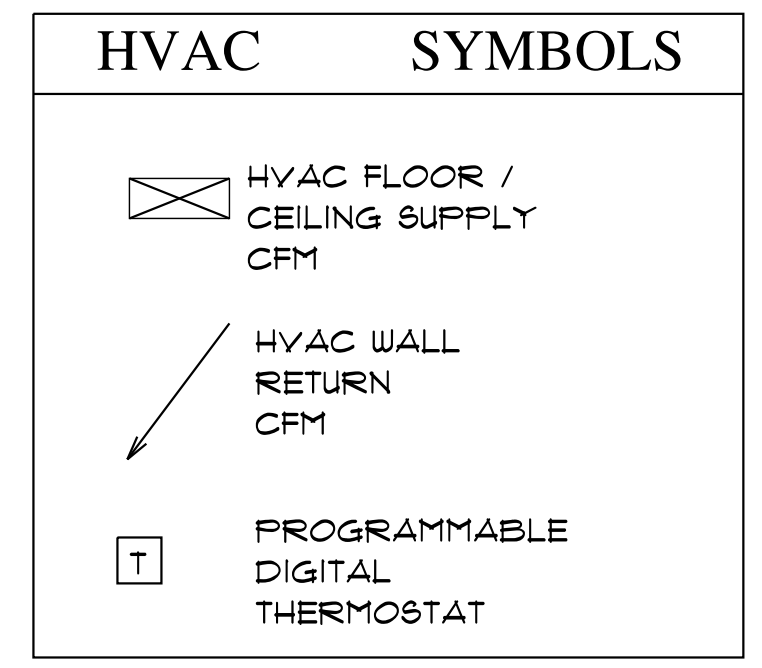
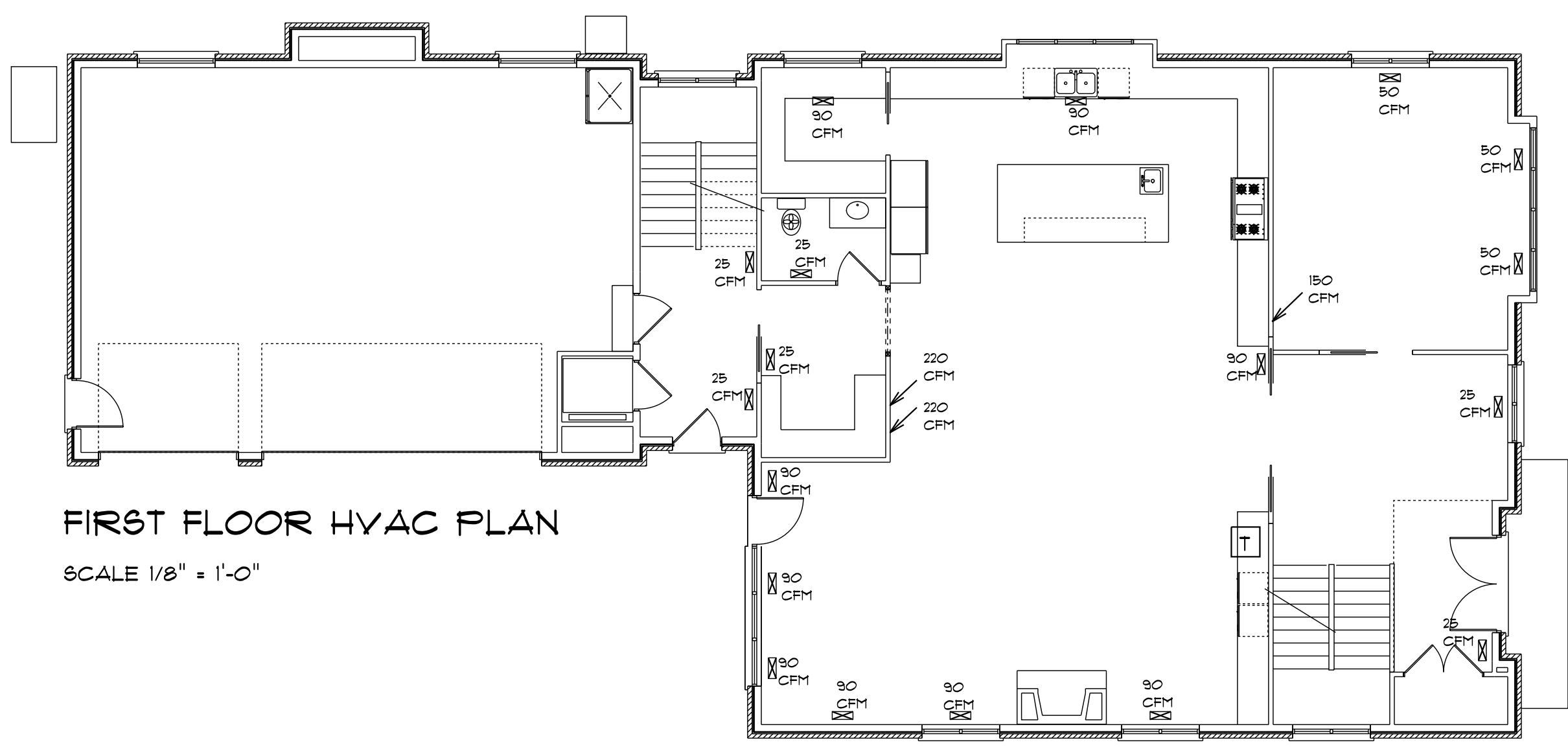
FIRST FLOOR ELECTRICAL PLAN
SCALE 1/8" = 1'-0"



SECOND FLOOR ELECTRICAL PLAN
SCALE 1/8" = 1'-0"



NATURAL LIGHT AND VENTILATION SCHEDULE									
ROOM NAME	ROOM AREA/SF	HEAT LOSS @ 40 BTU/SF	REQUIRED NAT'L LIGHT & VENT		SUPPLIED NAT'L LIGHT & VENT		SUPPLY/EXHAUST AIR/MECH		FAN
			GLASS	VENT	GLASS	VENT	SUPPLY	EXHAUST	
GREAT/KITCHEN	1236	49440	98.88	49.44	104.64	52.32	824	220	
ENTRY	320	12800	-	-	-	-	-	-	
STUDY	285	11400	22.8	11.4	112.44	15	150	150	
STAIRCASE	72	2880	-	-	-	-	-	-	
PANTRY	80	3200	-	-	-	-	-	-	
REAR ENTRY	202	8080	-	-	-	-	-	-	
PR FIRST FLOOR	41	1640	-	-	18	19.9	23	120	EF-3
OWNERS BEDROOM	373	14920	29.84	14.92	62.2	31.1	150	150	
BEDROOM 2	170	6800	13.6	6.8	24.88	12.44	150	150	
BEDROOM 3	175	7000	14	7	24.88	12.44	150	150	
GUEST ROOM	244	9760	19.52	9.76	74.64	12.44	150	150	
FRONT HALL	400	16000	-	-	-	-	-	-	
REAR HALL	200	8000	-	-	-	-	-	-	
LAUNDRY	54	2160	-	-	-	-	-	-	
OWNERS BATH	130	5200	-	-	-	-	23	120	EF-3
GUEST BATH	94	3760	-	-	-	-	23	120	EF-3
HALL BATH	67	2680	-	-	-	-	23	120	EF-3
PR SECOND FL	30	1200	-	-	-	-	23	120	EF-3
BASEMENT BATH	55	2200	-	-	-	-	23	120	EF-3
WORKOUT ROOM	375	15000	30	15	24.88	12.44	150	150	
FLEX ROOM	192	7680	15.36	7.68	24.88	12.44	150	150	
WINE ROOM	88	3520	7.04	3.52	24.88	12.44	150	150	
REC ROOM	789	31560	63.12	31.56	24.88	12.44	150	150	
TOTAL OUTPUT		226880							
TOTAL CFM REQUIRED							2312		

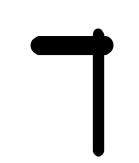


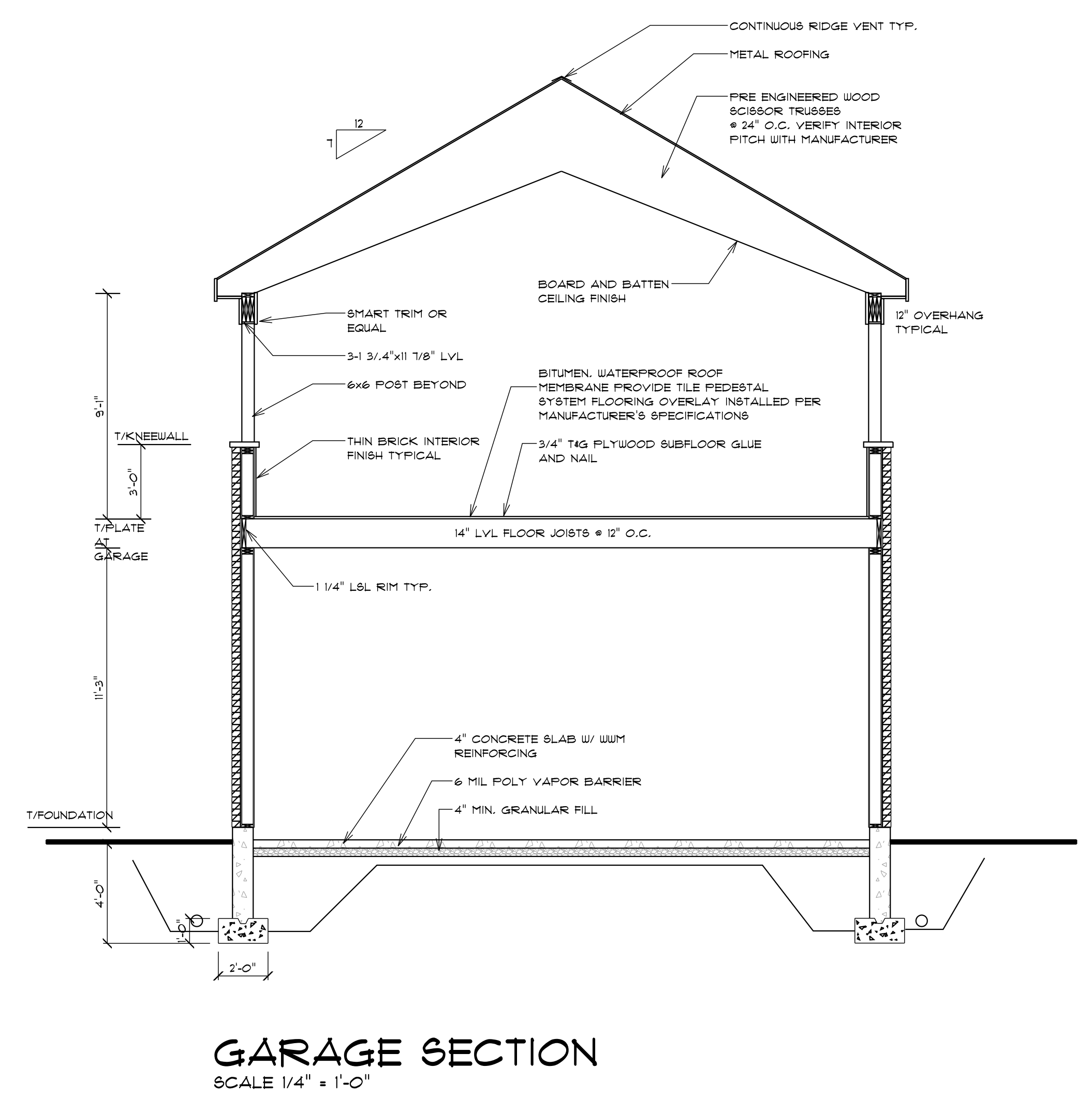
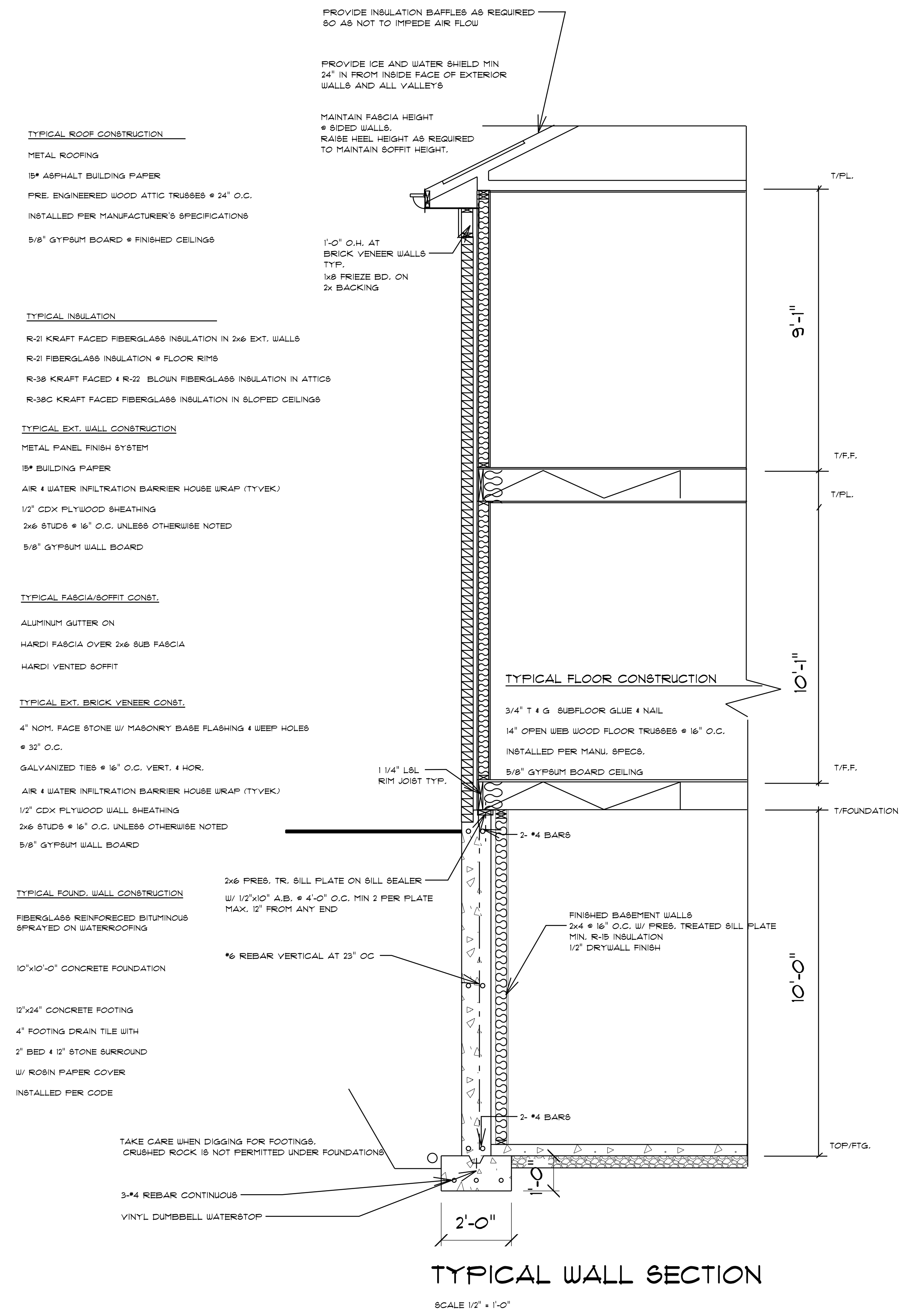
HEATING																
TAG	TYPE	MFGR	SERIES	MODEL	EFFICIENCY (AFUE)	AIR VOLUME (CFM)	HEATING		FLUE			COMBUSTION AIR			SERVICE REQUIREMENTS	
							INPUT (MBTU)	OUTPUT (MBTU)	TYPE	SIZE	LOC	TYPE	SIZE	LOC	ELEC	GAS
FN-1	FURNACE	TRANE	XB90	TUD1D140A9601A	96.7	2200	120K	113K	PVC	2"	ROOF	PVC	2"	ROOF	110/15	1/2"
FN-2	FURNACE	TRANE	XB90	TUD1D140A9601A	96.7	2200	120K	113K	PVC	2"	ROOF	PVC	2"	ROOF	110/15	1/2"

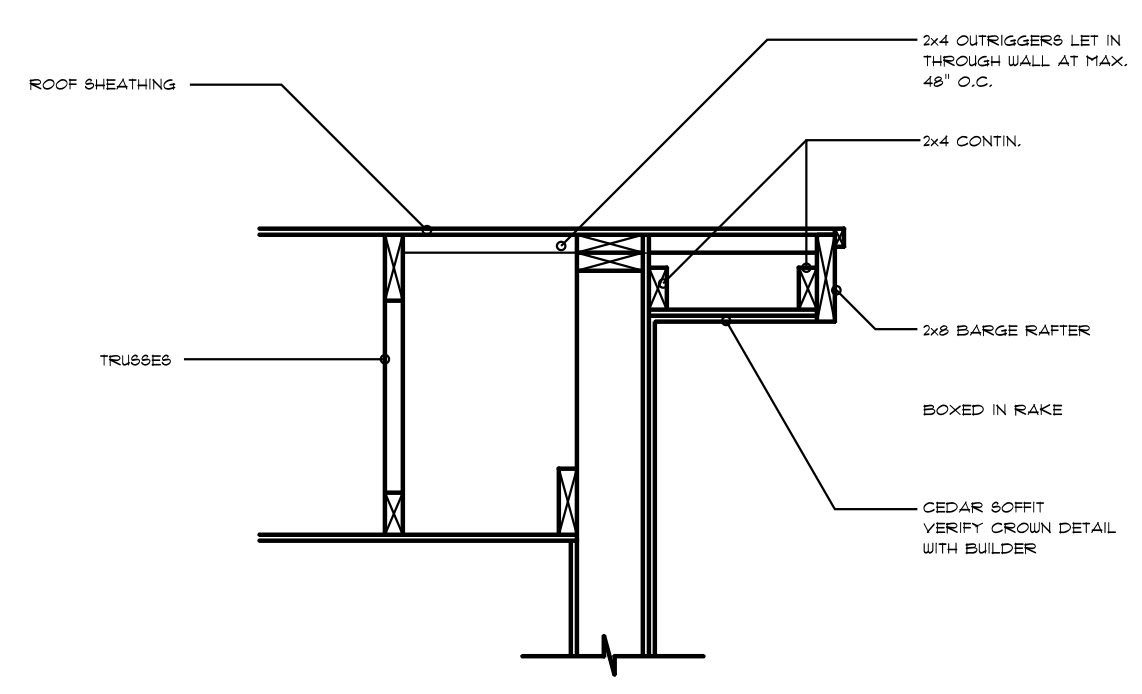
COOLING															
TAG	TYPE	MFGR	SERIES	MODEL	EFFICIENCY (AFUE)	AIR VOLUME (CFM)	COOLING		CONDENSER			SERVICE REQUIREMENTS			
							TONS	REFGT TYPE	REFGT LBS	PCKG/RE MOTE	LIQUID LINE	AIR/WATER	VAPOR LINE	ELEC	GAS
AC-1	AIR COND	CARRIER	INFINITY 21	24.ANA.1.36.A.0.30	17.5	1200	5	R410A	12.8	REMOTE	3/8"	AIR	YARD	7/8"	220/12

VENTILATION															
TAG	TYPE	MFGR	SERIES	MODEL	AIR VOLUME (CFM)	FLUE			INTAKE			SERVICE REQUIREMENTS			
						TYPE	SIZE	LOC	TYPE	SIZE	LOC	ELEC	GAS		
EF-1	HOOD	BROAN	BEST EXTNL	EB6	200				ALUM	6"	WALL				
EF-3	BATH	PANASONIC	WHISPER	FV-10NLF1	120				ALUM	4"	ROOF				120V
ERV-1	CENTRAL	CARRIER	ERCVLHU	1200	117-214				ALUM	6"	WALL	ALUM	6"	WALL	115/15

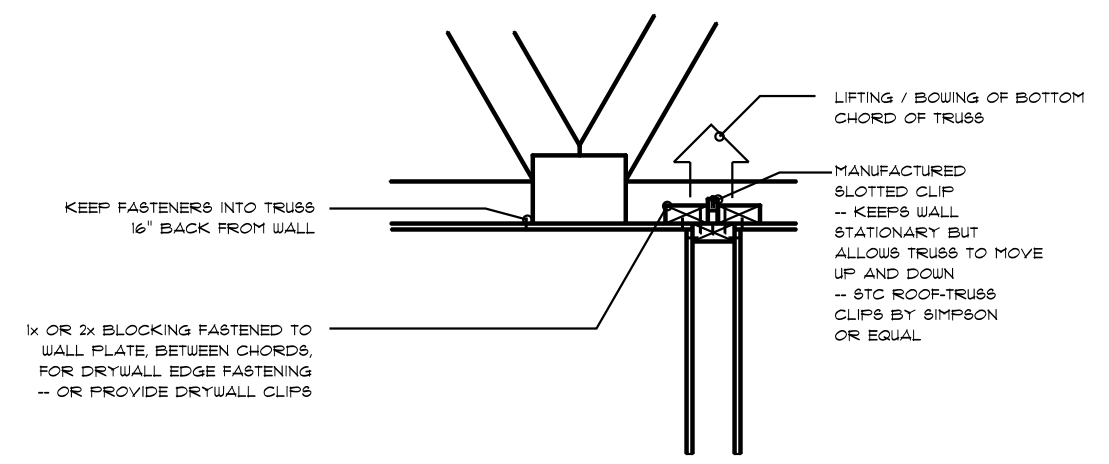
HOT WATER HEATING																
TAG	TYPE	MFGR	SERIES	MODEL	EFFCY	GPH @ +100	INPUT (MBTU)	1ST HR GALS	FLUE			COMBUSTION AIR			SERVICE REQUIREMENTS	
									TYPE	SIZE	LOC	TYPE	SIZE	LOC	ELEC	GAS
WH-1	TANK	LOCHINVAR	SHIELD	SNR150-100	96%	175	150K	249	PVC	3"	ROOF	PVC	3"	ROOF	120/15	1/2"



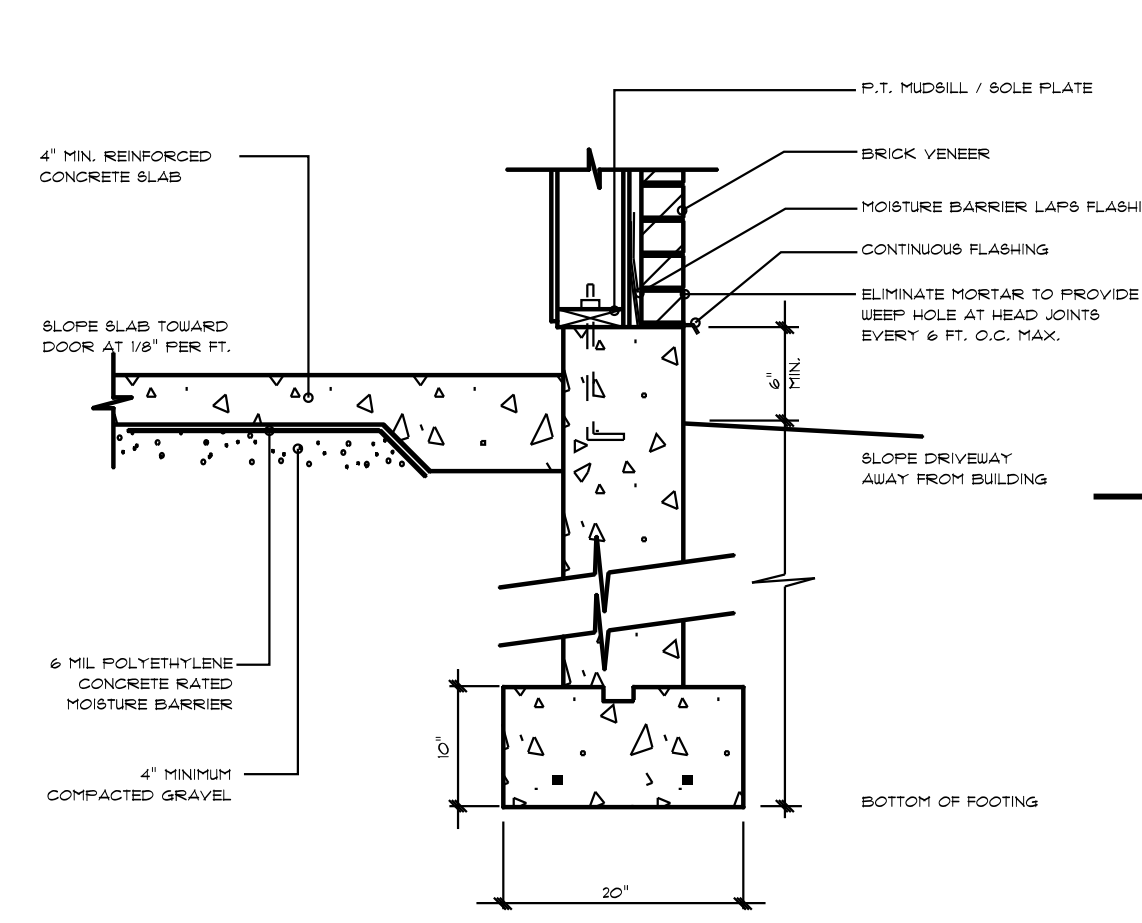
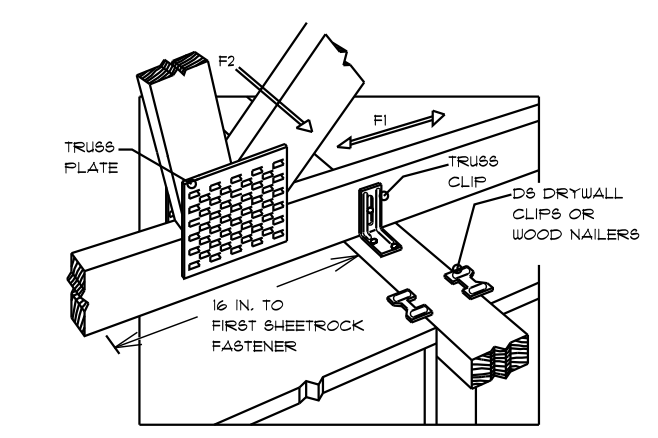




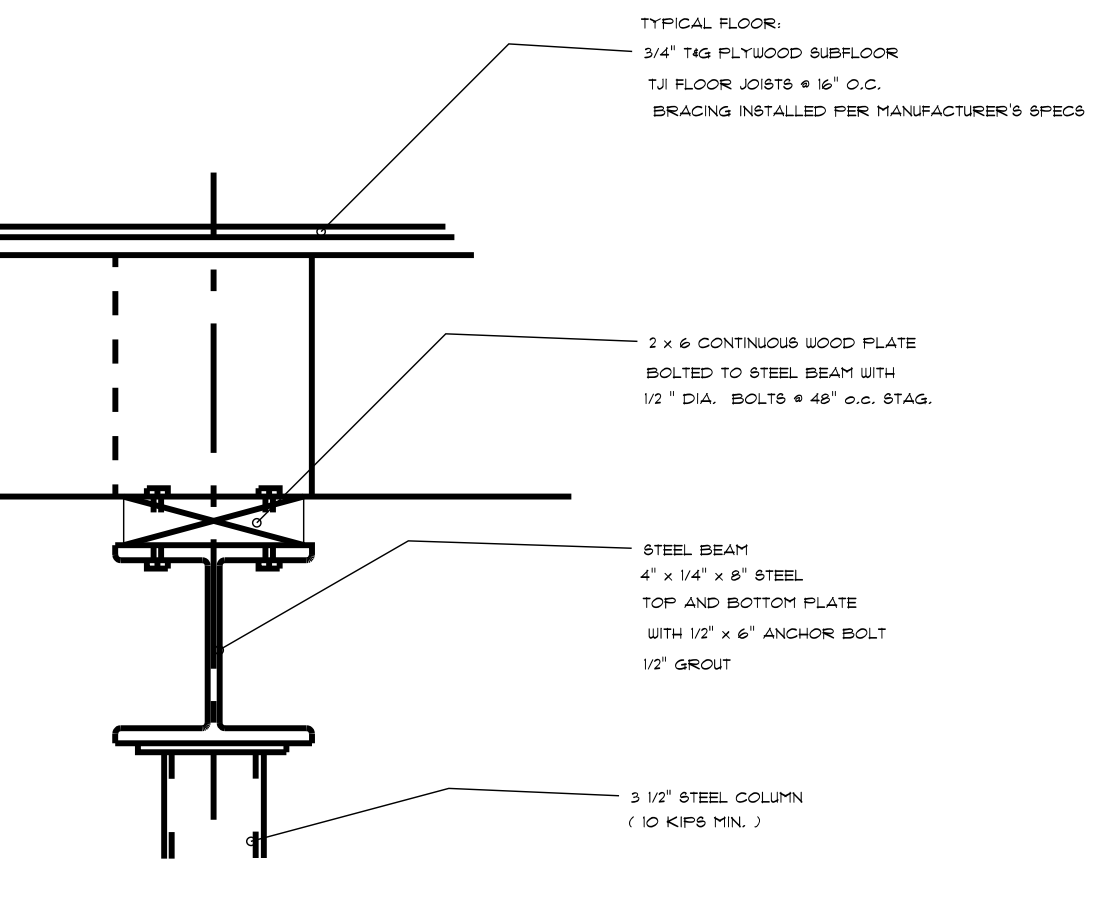
BOXED RAKE GABLE END TRUSS FRAMED



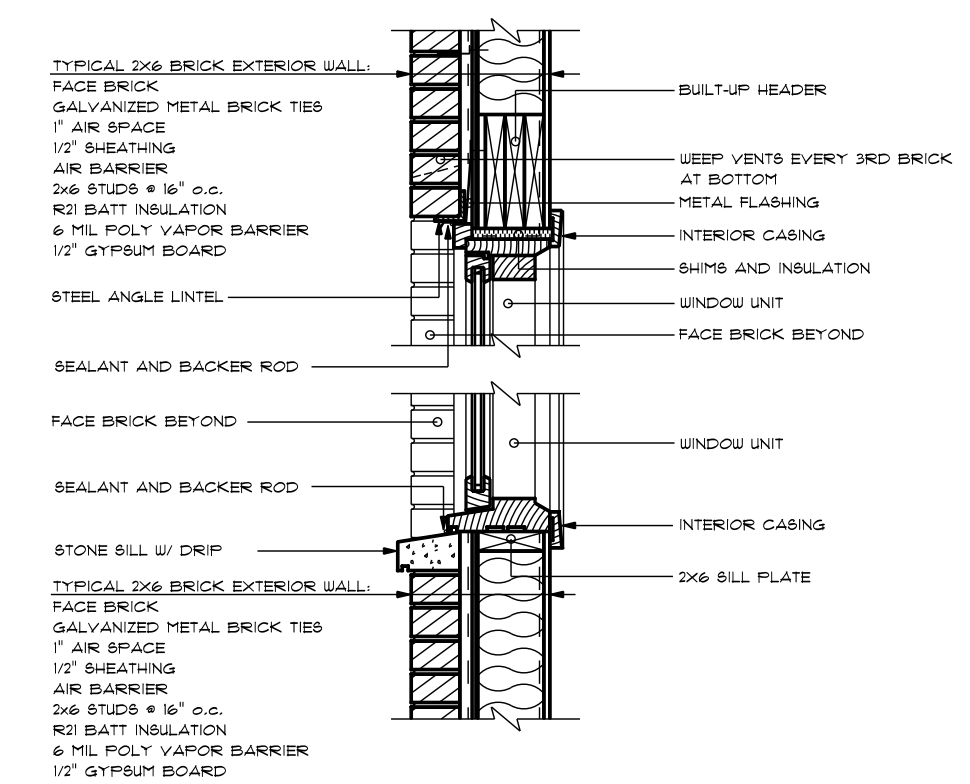
NON-BEARING INT. WALL ATTACHMENT TO TRUSSES



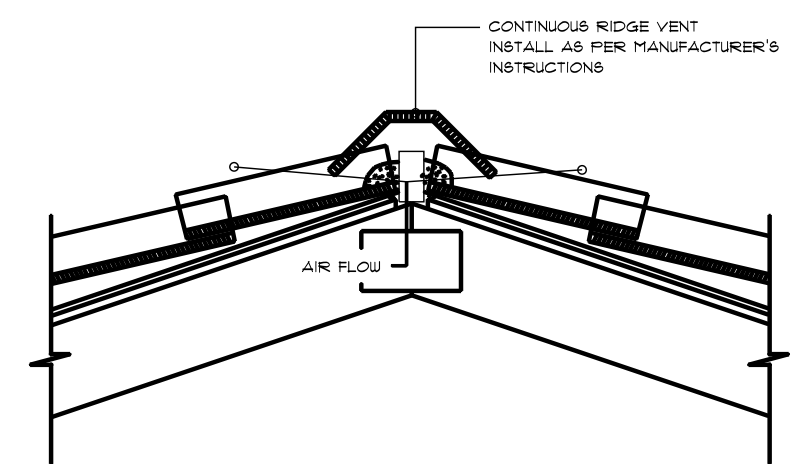
POURED CONCRETE FOOTING AT GARAGE



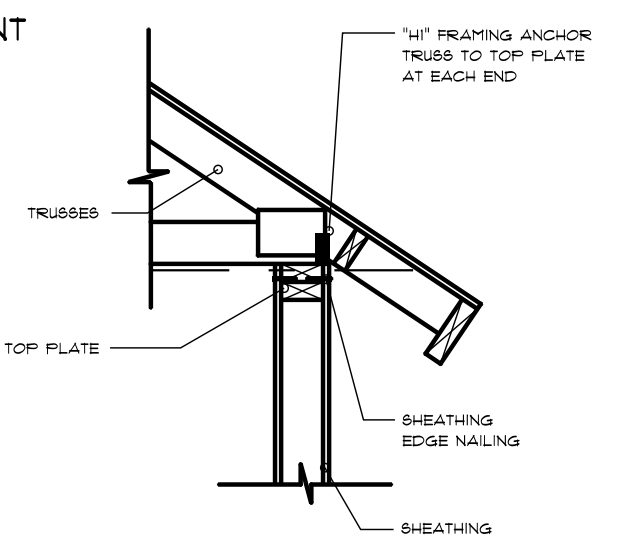
TYPICAL BEAM DETAIL STEEL / BOTTOM BEARING



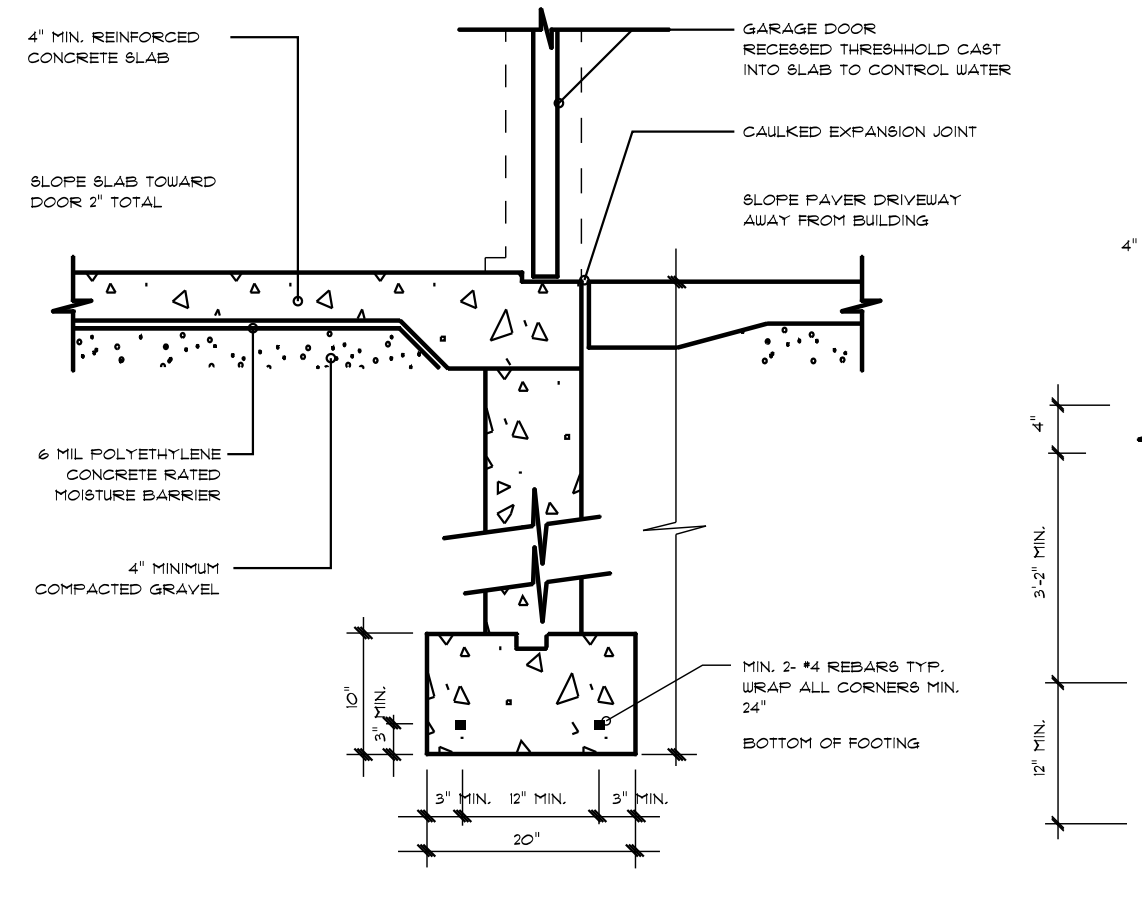
2x6/BRICK HEADER & SILL



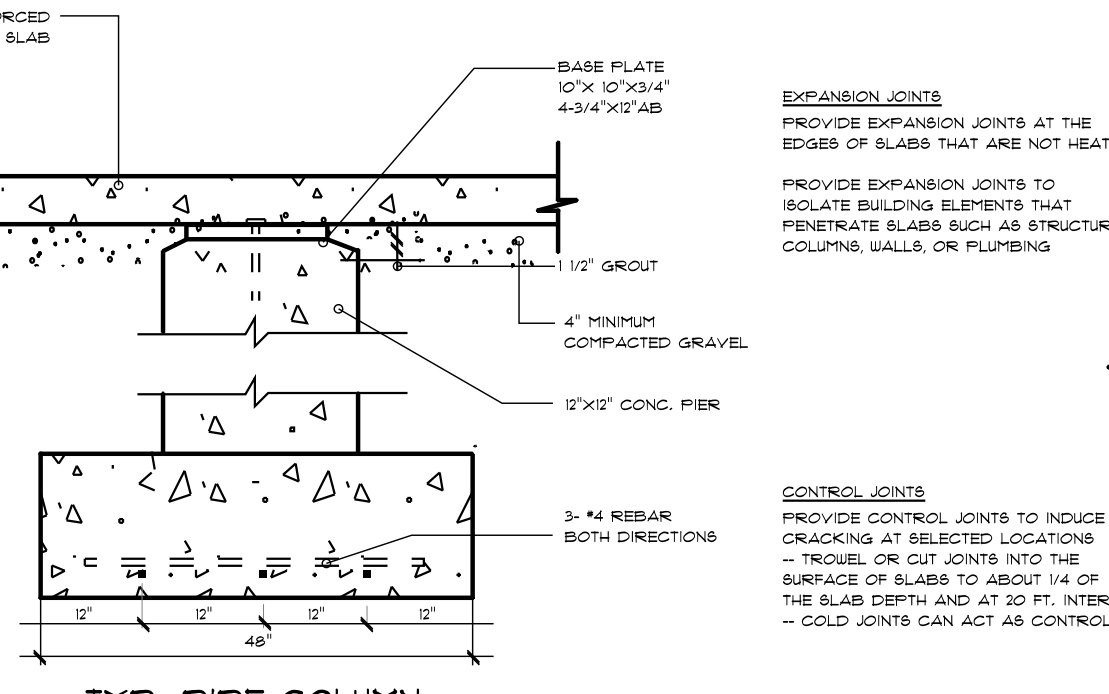
TILE RIDGE VENT



SHEAR TRANSFER



POURED CONCRETE FOOTING DETAIL



TYP. PIPE COLUMN ANCHORAGE DETAILS RECESSED PAD

EXPANSION JOINTS PROVIDE EXPANSION JOINTS AT THE EDGES OF SLABS THAT ARE NOT HEATED
PROVIDE EXPANSION JOINTS TO ISOLATE BUILDING ELEMENTS THAT PENETRATE SLABS SUCH AS STRUCTURAL COLUMNS, WALLS, OR PLUMBING

CONTROL JOINTS PROVIDE CONTROL JOINTS TO INDUCE CRACKING AT SELECTED LOCATIONS - TRUSSES OR CUT JOINTS INTO THE SURFACE OF SLABS TO ABOUT 1/4" OF THE SLAB DEPTH AND AT 20 FT. INTERVALS - COLD JOINTS CAN ACT AS CONTROL JS

CONCRETE SLAB DETAILS / NOTES

