Village of Gurnee
Construction Documents Submittal Requirements

Commercial New Construction – 4 sets of complete plans
Commercial Alterations – 2 sets of complete plans
Residential New Construction, Remodel and/or Addition – 2 sets of complete plans

DETAILED PLAN REQUIREMENTS FOR THE ABOVE NOTED SETS ARE OUTLINED BELOW.
**Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a State of Illinois registered design professional."*

BUILDING PLAN REVIEW REQUIREMENTS

Building plan reviews are based on the specified edition of the International Building Code. In order to perform a thorough Building plan review, the following specifications, drawings, and details must be submitted:

1. Complete signed and sealed (as required by applicable law) architectural plans, structural plans, and material specifications of all work.
   (*exception – plans need not be signed and sealed for minor residential remodeling where no structural modifications exist (i.e. basement finish, kitchen remodel, bath remodel, etc.)

2. A site plan (plat of survey), including the following information:
   a. Size and location of all new construction and all existing structures on the site.
   b. Distances from lot lines and any existing buildings or structures.
   c. Established street grades and proposed finish grades.

3. Architectural plans and specifications to include:
   a. Description of uses and the proposed occupancy group(s) for all portions of the building. Provide the design approach for mixed-uses (as applicable).
   b. Proposed type of construction of the building.
   c. Fully dimensioned drawings to determine building areas and height.
   d. Adequate details and dimensions to evaluate means of egress, including occupant loads on each floor, exit arrangement and sizes, corridors, doors, stairs, etc.
   e. Exit signs/means of egress lighting, including power supply.
   f. Accessibility provisions.
   g. Description and details of proposed special occupancies such as a covered mall, high-rise, mezzanine, atrium, public garage, etc.
   h. Adequate details to evaluate fire-resistive construction requirements, including data substantiating required ratings.
   i. Details of plastic, insulation, and safety glazing installation.
   j. Details of required fire protection systems (see Fire Sprinklers, Fire Alarms, and/or Fire Suppression System Section).

4. Structural plans, specifications, and engineering details to include:
   a. Soils report indicating the soil type and recommended allowable bearing pressure and foundation type.

b. Signed and sealed structural design calculations which support the member sizes on the drawings.
c. Local design load criteria, including: frost depth, live loads, snow loads, wind loads, earthquake design data, and other special loads.
d. Details of foundations and super structure.
e. Provisions for required special inspections. Provide a statement of special inspections.
f. Applicable construction standards and material specifications (i.e. masonry, concrete, wood, steel, etc.).

ACCESSIBILITY PLAN REVIEW REQUIREMENTS

Accessibility plan reviews are based on the specified edition of the Illinois Accessibility Code and the Building Code. In order to perform a thorough accessibility plan review, the following specifications, drawings, and details must be submitted:

1. Complete signed and sealed (as required by applicable law) architectural plans and material specifications of all work. Details and plans drawn to scale with sufficient clarity, details and dimensions to show the nature and extent of the work proposed.

2. A site plan (plat of survey) including the following information:
   a. Size and location of all new construction and all existing structures on the site.
   b. Location of any recreational facilities (i.e. pool, tennis courts, etc.).
   c. Established street grades and proposed finished grade.
   d. Accessible parking, other locations of public access to the facility, accessible exterior routes, and locations of accessible entrances.

3. Architectural plans and specifications to include:
   a. Description of uses and the proposed occupancy group(s) for all portions of the building. Provide the design approach for mixed uses (as applicable).
   b. Fully dimensioned drawings to determine areas and building height.
   c. Adequate details and dimensions to evaluate accessible means of egress, including occupant loads for each floor, exit arrangement and sizes, corridors, doors, stairs, ramps, handrails, areas of refuge, etc.
   d. Adequate details and dimensions to evaluate the accessible route to areas required to be accessible, including: corridors, doors, protruding objects, maneuvering clearances, clear floor space at fixtures and controls, etc.
   e. Accessibility provisions, including but not limited to, access to services, seating, dining, listening systems, accessible fixtures, elevators, work surfaces, etc.
   f. Accessible plumbing facilities and details.
   g. Visual and tactile signage provided.
   h. Details of required fire protection systems and user controls.

NOTE: The Accessibility review will cover the scoping requirements in Chapter 11 of the International Building Code and other accessibility related requirements mainstreamed throughout the applicable building code. Technical requirements covered will be based on the applicable edition of the Illinois Accessibility Code.

ELECTRIC PLAN REVIEW REQUIREMENTS

Electrical plan reviews are based on the specified edition of the National Electrical Code. In order to perform a thorough electrical plan review, the following specifications, drawings, and details must be submitted:

1. Complete signed and sealed (as required by applicable laws) plans and specifications of all electrical work.

2. Labeling criteria of all electrical equipment.

3. Lighting floor plan, including: fixture locations, electrical circuits, circuit numbers, and panel locations.

4. Power floor plans, including: electrical circuits, wiring sizes, panel locations, working clearances and electrical room egress, disconnect switches, receptacle locations including GFCI locations and required arc fault protected circuits.

5. Exit signs/means of egress lighting locations and power supply.

6. Single line diagram and panel board schedule, including: AIC rating and available fault current and the calculated service load with a load distribution schedule.

7. Lighting fixture schedule.

8. Symbol schedule and diagrams.

9. Details showing the grounding electrodes, bonding of the grounding electrode system, and the size of all bonding and grounding electrode conductors for the service.

10. Specifications to include requirements for:
    a. Wire, cable, raceway, and conduit with fittings.
    b. Electrical boxes, connections, fittings, and installation.
    c. Electrical wiring devices.
    d. Circuit and motor disconnects and motor control centers.
    e. Hangers and supporting devices.
    f. Electrical identifications.
    g. Service entrance and details.
    h. Over current protection and grounding.
    i. Switchboard and panel boards.
    j. Transformers.
    k. Lighting fixtures.
    l. (See Energy plan review for additional information).

ENERGY PLAN REVIEW REQUIREMENTS

Residential and commercial energy plan reviews are based on the latest edition of the Illinois Energy Code. In order to perform a thorough energy plan review, the following specifications, drawings, and details must be submitted.

1. Compete signed and sealed (as required by applicable law) plans and specifications as indicated below.

2. Envelope – architectural plans and specifications to include:
   a. Description of uses and the proposed occupancy group(s) for all portions of the building.
   b. Thermal performance of envelope components.
   c. Fenestration performance details (U-factor, SC, SHGC, VLT, air leakage rates, etc.).
   d. Fully dimensioned drawings to determine gross and net areas of all envelope components.
   e. Details of vapor barrier and insulation installation, and air sealing methods.
   f. REScheck/COMcheck output on the plans.
   g. Design conditions (interior and exterior) consistent with local climate.

3. Electrical – complete plans and specifications of all electrical power and lighting work, including:
   a. Riser diagram(s) of the distribution system, indicating:
      1. Check metering provisions for individual dwelling units.
      2. Subdivision of feeders by end use: (1) Lighting, (2) HVAC (3) SWH and systems over 20 kW.
   b. Lighting fixture schedule(s) depicting: location, fixture lamps, ballasts, ballast specifications, fixture input watts, fixture wiring methods, power factor, etc.
   c. Lighting plan(s) for building exteriors including total exterior Connected Lighting Power (CLP).
   d. Lighting and power floor plans for building interiors including total interior CLP.
   e. REScheck/COMcheck output on the plans.
   f. Interior and exterior means of lighting control.
   g. Electric motor schedule, including: type, HP, and efficiencies.

4. Mechanical – complete plans and specifications of all mechanical work, including:
   a. Equipment type, capacity (BTU) and efficiency (peak and part load).
   b. System design air flow rates (cfm).
   c. Details of equipment/system sizing.
   d. System and/or zone control capabilities, including terminal device schedule.
   e. Provisions for automatic setback/shut down.
   f. Indicate intentions or plans for systems commissioning.
   g. Energy consumed by fans and pumps.
   h. Economizers (air or water), including provisions for integrated control.
   i. Duct construction and system static pressure(s), including provisions for sealing.
   j. Duct and/or hydronic-piping lining and insulation materials.
   k. Provisions for air and/or hydronic system balancing.
   l. Boiler and water heater equipment and piping details, safety controls, and distribution piping layout.

5. Service water heating (SWH) – complete SWH specifications, including:
   a. SWH equipment data, including: type, capacity, and efficiency.
   b. SWH pipe insulation, thickness, conductivity, and vapor retarder (where appropriate).
   c. Water conservation requirements.
   d. Energy conservation measures for swimming pools (where applicable).

MECHANICAL PLAN REVIEW REQUIREMENTS

Mechanical plan reviews are based on the specified edition of the International Mechanical Code (IMC) and International Fuel Gas Code (IFGC) or the International Residential Code. In order to perform a thorough mechanical plan review, the following specifications, drawings, and details should be submitted:

Commercial:

1. Complete signed and sealed plans, specifications, and calculations of all heating, ventilating, and air conditioning work.

2. Complete information on all the mechanical equipment and materials, including: listing, labeling, installation, and compliance with referenced material standards.

3. Details on the HVAC equipment, including: equipment capacity (BTU/h input), controls, equipment location, access, and clearances.

4. A ventilation scheduling indicating the outdoor air rates, the estimated occupant load/1,000 ft.2, the floor area of the space and the amount of outdoor air supplied to each space. Complete calculations clearly denoting equations and factors must be provided.

5. The location of all outdoor air intakes with respect to sources of contaminants.

6. Duct construction and installation methods, flame spread/smoke development ratings of materials, flexible air duct and connector listing, sealing of duct joints, seams and connections and duct support spacing.

7. Condensate disposal, routing of piping and auxiliary and secondary drainage systems.

8. Required exhaust systems, routing of ducts and termination to the exterior.

9. Complete details of all Type I and Type II kitchen hoods, grease duct construction and velocity, clearance to combustibles, and fire suppression system.

10. Details of all duct penetrations through fire-resistance rated assemblies, including locations for all fire dampers, smoke dampers, ceiling radiation dampers, and combination dampers along with applicable fire protection ratings and labeling requirements indicated on the plans. Provide the manufacturer's model and specifications for each damper.

11. Indicate the method of supplying combustion air to all fuel fired appliances, the location and size of openings, and criteria used to size the openings.

12. Details on the vents used to vent the products of combustion from all fuel-burning appliances, including: the type of venting system, the sizing criteria required for the type of vent, and the routing of the vent.

13. Boiler and water heater equipment and piping details including: safety controls, gauges, valves, and distribution piping layout.

14. Details on the type and quantity of refrigerant, calculations indicating the quantity of refrigerant and refrigerant piping materials, and the type of connections.

15. Complete details on the gas piping system, including: materials, installation, valve locations, sizing criteria and calculations (i.e. the longest run of piping, the pressure, the pressure drop, and applicable gas pipe sizing table(s) in the IFGC).

Residential: One and Two family dwellings:

1. Provide a complete mechanical plan as part of the technical submission that is sealed by the licensed design professional. This mechanical plan shall include but not be limited to an equipment schedule, mechanical duct layout including an exhaust plan with duct sizes clearly labeled, whole house ventilation plan and calculations in accordance with the State of Illinois Energy Code, and the ACCA residential plans examiner review form or approved equivalent. Provide the required manual J, S, and D supporting documents. Verify consistency between all documents.

2. Interior design temperatures used for load calculations shall be a maximum of 72 degrees F for heating and a minimum 75 degrees F for cooling. Outdoor design temperature shall be based on Waukegan Illinois in table 1A of ACCA Manual J eighth edition or approved equal.

3. Provide the duct construction and installations methods including all flexible duct connectors. Provide the listing for all flexible duct connectors.

4. Indicate the method of supplying combustion air to all fuel fired appliances, the location and size of openings, and criteria used to size the openings.

5. Details on the vents used to vent the products of combustion from all fuel-burning appliances, including: the type of venting system, the sizing criteria required for the type of vent, and the routing of the vent.

6. Boiler and water heater equipment and piping details including: safety controls, gauges, valves, and distribution piping layout.

7. Complete details on the gas piping system, including: materials, installation, valve locations, sizing criteria and calculations (i.e. the longest run of piping, the pressure, the pressure drop, and applicable gas pipe sizing table(s) in the IRC).

PLUMBING PLAN REVIEW REQUIREMENTS

Plumbing plan reviews are based on the State of Illinois Plumbing Code. In order to perform a thorough plumbing plan review, the following specifications, drawings, and details must be submitted:

1. Complete signed and sealed (as required by applicable law) plans and specifications of all plumbing work.

2. Plumbing fixture specifications, including, identification of the applicable referenced material standards and the maximum flow rates for the plumbing fixtures.

3. The basis for the number of plumbing fixtures provided, including the occupancy load used, the applicable occupancy group(s), and fixture rate(s).

4. Dimensions for bathrooms and plumbing fixture locations, along with the wall and floor surface materials to be installed.

5. Site plan which indicates the routing of the sanitary, storm, and water service with the burial depths for all sewers and water service.

6. Water distribution system sizing criteria and calculations.

7. Water supply and distribution piping plans showing the incoming water supply, distribution piping, pipe size, and the location of all valves.

8. The location of all backflow preventers, the type of backflow preventers provided for each piece of equipment or outlet, and the specified material standards referenced in the code.

9. Drainage system piping plan showing the layout of all piping, of plumbing fixtures, and the location of cleanouts.

10. Riser diagram(s) of the drain, waste and vent piping including the building drain, all horizontal branches, and the connections and layout of all fixtures, pipe sizes, direction of flow, grade of horizontal piping, drainage fixture loads, and the method of venting all plumbing fixtures.

11. The location of all indirect waste connections, standpipes, grease traps, and separators.

12. Complete water heater details, temperature and pressure relief valve discharge, discharge piping and pan details, along with the method of supplying tempered water to required fixtures.

13. Complete details of the method of draining storm water from the roof, including: pipe sizes and the location of all roof drains.

14. Piping material specifications to verify compliance with the referenced material standards for all sanitary, storm, and potable water piping (e.g. ASTM B88 for copper pipe), the type of joints and connections for all piping, the pipe hanger support spacing, and details of anchorage and bracing.

16. According to Public Act 094-0132 Sec. 37 - A letter of intent shall be included with all permit applications. The letter shall be written on the licensed plumber of record's business stationery and shall include the license holder's signature and, if the license holder is incorporated, the license holder's corporate seal. If the license holder is not incorporated, the letter must be notarized.

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