



This checklist contains the standard information required on submittals for commercial construction projects. For additional information, please contact Development Services Department, 200 West Washington Street, 2<sup>nd</sup> Floor, Phoenix, AZ 85003, (602) 262-7884 voice or 602-534-5500 (TTY)

This publication can be made available in alternate formats (Braille, large print, computer diskette, or audiotape) upon request. Contact the Development Services Department at (602) 262-7811 (voice) or (602) 534-5500 (TTY).

All submittals for commercial building permits should be appropriately scaled and should provide the following information:

**Project Description:**

- New Building
- New Shell Building
- Addition
- Remodel (verify existing occupancy)
- Tenant Improvement (T.I.)
- Miscellaneous Work
- Complete description of business operation
- Provide an HMIS for storage and manufactured operations

**Project Location:**

State the actual address of the project and legal description of the property:

- Lot and Block Number  
OR
- Metes and Bounds Description, etc.

If an address has not been established, the City will assign a permanent or temporary address. Contact the Development Center, 2<sup>nd</sup> Floor, Phoenix City Hall.

**Owner/Applicant/Information:**

- Owner's Name
- Owner's Mailing Address
- Contact Person (Owner or Owner's Rep.)
- Phone Number

**Contractor Information: Required prior to Permit Issuance**

Required for most projects by Arizona State Law

- Contractor Name
- Contractor Address
- Phone Number
- Contractor License Number
- State Privilege Tax Number
- City Privilege Tax Number

Two complete sets of plans, drawn to scale, are to be submitted for a plan review. Plan review fees are based on the current City of Phoenix Fee Schedule (Phoenix City Code, Appendix A-2) and are to be paid at the time of log-in. The permit fees are to be paid at the time of permit issuance, after review and approval of the plans.

**The plans required are as follows:**

**SITE PLAN**

The following requirements for the site plan do not cover or include Site Planning Requirements that may be necessary to obtain site planning approval. If site planning review is required, the Site Plan is reviewed concurrently with and within the Building Construction sets submitted to DSD for review and should reflect all site planning requirements in addition to the following requirements.

Sealed by an architect in State of Arizona (if applicable)

- Actual address of the project (suite number and floor number if applicable)
- Show the size and shape of the lot
- Identify the property lines with dimensions
- Show all buildings and structures
- Provide the dimensions between the buildings/structures and to the property lines

This publication can be made available in alternate formats (Braille, large print, computer diskette, or audiotape) upon request. Contact the Development Services Department at (602) 262-7811 voice or (602) 534-5500 TTY.

- Show the streets and alleys
- Indicate the North direction
- Show the parking spaces (standard and accessible), and provide parking calculations
- Show the location of the electric service entrance section(s) (if applicable)
- Provide accessibility routes including ramps as required
- Provide project scope to include manufacturing description (if applicable)
- Identify existing structures (if applicable)

### **GENERAL CODE DATA**

*The information required below can be shown either on site plan or architectural cover sheet.*

Sealed by an architect in State of Arizona (if applicable)

- Provide a building information block containing
  - Occupancy
  - Separated use or non-separated use
  - Type of construction
  - Square footage (of each building/ tenant space)
  - Allowable area calculation
  - Sprinklers / Yes or No
  - Fire alarms / Yes or No
  - Emergency lighting / Yes or No
  - Number of exits required
  - Exits provided
  - Number of floors in the building
  - Floor number on which work is being performed
  - Governing Codes as follows:

### **ARCHITECTURAL PLAN**

Sealed by an architect in State of Arizona (if applicable)

- Provide complete architectural floor plans, roof plans and reflected ceiling plans:
  1. Show complete floor layout including equipment.
  2. Identify the use of each room
  3. Identify the complete exiting system, including the occupant load of each room.
  4. Provide a wall schedule to identifying walls to be demolished, new/existing, bearing/non-bearing, and different height walls
  5. Provide dimensions of rooms, corridors, doors, etc.
  6. State the occupancy classification of the adjoining suites
- Provide energy code requirement for the building envelope and related details.
- Identify fire rated assemblies (if applicable) and provide architectural details, referred UL/Gypsum Board Association number and standard details.
- Show accessibility information to include:
  - the location and dimensions of the accessible restroom facilities
  - the location and dimensions of elevators (if applicable)
  - for remodels and alterations: if accessible route is not being made fully accessible provide documentation showing cost of upgrades to the accessible route is at least 20% the cost of the total alteration
- Provide four sides building elevations
- Provide building cross-sectional views
- Provide general architectural details
- Provide wall details (top and bottom connection details with approved listed anchors)
- Provide window schedule, door schedule and hardware schedule
- Provide floor/wall finish schedule
- Provide one copy of Special Architectural Inspection Certificate if having adhered veneer, spray-applied fire-proofing, intumescent coating and etc

### **MECHANICAL PLAN**

Sealed by a registered mechanical engineer in State of Arizona (if applicable)

- Site plan documenting location of project
- Complete Mechanical floor plan for the entire project area
- Mechanical energy conservation code compliance
- Mechanical layout (ductwork, A/C units, air-handlers, diffusers, etc.)
- Mechanical equipment listings, specifications and weight
- Outside air ventilation calculations
- Air-balance schedule

- Air-balance report note
- HVAC equipment specifications
- HVAC duct detector automatic shutoffs
- HVAC duct detector audible/visual alarms and trouble lights
- HVAC automatic shutoff test report note
- Restroom exhaust ventilation systems
- Hazardous exhaust ventilation systems (if applicable)
- Make-up air openings [sizes and locations] (if applicable)
- Combustion-air openings [sizes and locations] (if applicable)
- Identify any special inspection items.

### **PLUMBING PLAN**

Sealed by a registered mechanical engineer in State of Arizona (if applicable)

- Complete on-site water & sewer plans
- Complete Plumbing floor plan and roof drainage systems for the entire project area
- Minimum plumbing fixture analysis
- Service water heating energy conservation compliance
- Plumbing fixture specifications
- Plumbing fixture connection schedule
- Drain, waste, and vent sizing isometrics
  - Water pipe and meter sizing calculations
- Backflow Devices [as required] – Type(s) and Location(s).
- Expansion Tanks [as required] -- Size(s) and Location(s).
- If there are multiple buildings located on one site with sewer discharge in excess of 3000 gallons per day, Aquifer Protection Permit 4.01 (APP 4.01) will be required (except the on-site utilities are approved to be public per technical appeal). Provide the following information :
  1. Complete the APP application form
  2. A sewer design report
  3. Complete construction-ready design plans
  4. The name of a Certified Operator, and
  5. A draft version of Code Covenants and Restrictions (CC & R's) or letter of financial responsibility.
  6. Identify onsite sewer installations designed, installed, and inspected per APP 4.01.
- Gas pipe sizing calculations and isometric (if applicable)
  - Provide a scaled site plan clearly denoting project location and gas meter location
  - Provide a floor/roof plan documenting ALL appliance types and locations
  - Provide a one-line gas pipe, sizing diagram
  - Identify ALL second stage regulators (if applicable)
  - Identify ALL appliance locations and Btu/hr input ratings
  - Identify on the one-line, ALL branch pipe lengths and sizes
  - Identify the total developed length of piping from the gas meter, or LPG tank, to the most remote appliance on the entire system
  - State the UPC table number used to size the piping system
  - Identify ALL gas pipe materials and locations, i.e., underground, building wall, roof, etc.
  - Specify gas pipe support method and spacing
  - Address gas venting and combustion air

### **ELECTRICAL DRAWINGS**

Sealed by electrical engineer registered in Arizona, or signed by the licensed electrical contractor performing the work (if applicable)

- Provide a symbol schedule of all symbols and abbreviations used
- Provide complete electrical site plans showing utility transformer(s) and SES location(s) and all exterior lighting or other wiring.
- Provide a one-line drawing of the complete electrical system showing:
  - System voltage, phase configuration, and available fault current
  - All subpanels and feeders with conductor sizes and types

- 
- Fault current calculations from SES to lowest rated overcurrent device or equipment.
  - Ampere rating of all overcurrent devices
  - Grounding detail(s)
  - Provide a lighting floor plan including fixture types & wattage
  - Provide a power floor plan showing receptacles, switches, outlets, etc. (identify if new, existing, relocated)
  - Label all rooms/areas on all floor plans
  - Show the location of all electrical equipment (IE, SES, panels, transformers, etc)
  - Provide nameplate ratings of all motors, elevators, AC units, and equipment
  - Provide a schedule for each panel showing:
    - Voltage, phase configuration, and interrupting rating
    - NEMA enclosure type
    - Ampere rating of all overcurrent devices
  - Load calculations for the SES and all panels
  - Identify any hazardous or classified areas by NEC type
  - Provide lighting power calculations and controls per IECC or ASHRAE 90.1
  - Provide a copy of Special Electrical Inspection Certificate if applicable

### **STRUCTURAL DRAWINGS**

Sealed by either a structural or civil engineer registered in the State of Arizona

1. General Structural Notes
  - Design Dead Loads
  - Design Live Loads
  - Wind Design Data
  - Seismic Design Data
  - Special Loads (if applicable) that are specified by the code
  - Identify all Deferred Submittal Items
  - Identify all Special Inspection and Structural Observation requirements
  - Material Specifications
  - Geotechnical Information, i.e. Soils Class, Allowable Bearing Pressure, Reference to Geotechnical Investigation Report or IBC Table 1804.2, other information pertaining to the design
2. Foundation Plan
  - Indicate shear wall and hold down locations
  - Include separate sheets for "mirrored" plans
  - Footing bearing or top of footing elevations
  - Anchor size and placements
3. Floor Framing Plan
  - Indicate shear wall and hold down locations
  - Include separate sheets for "mirrored" plans
  - Framing floor layout and sizes
  - Section and detail cuts
4. Roof Framing Plan
  - Framing roof layout and sizes
  - Section and detail cuts
5. Wall Framing Information and Details
6. Structural Details
  - General structural details, connection details and all cut structural details called out from structural foundation/framing plans.

**7. Calculations**

- One copy of Structural calcs that includes vertical and lateral structural analysis and sealed by the structural engineer of record:
  - 1) Computer Calculations shall include design input load summary, output summary and explicit cross references to supplemental calcs as well as the plans.
  - 2) Sketched detailed layout of Lateral Force Resistance System members
  - 3) Hand calculations to validate design input loads, output data, connection details, etc.

**8. Geotechnical Investigation Report**

- Provide one copy of soil report sealed by the geotechnical engineer of record

**9. Prefabricated Metal Building:**

- Provide separate manufacturer's construction drawings and calculations that are sealed by the structural engineer of record for the prefabricated metal building.

**10. Post-Tension Slab-on-Ground Plans:**

- 1) Slab/beam geometry: length, width, thickness, overlapping regions based on simplified analysis for complex geometries, thickened sections if used, dimensions of turndowns.
- 2) Slab type per PTI guide- type I, II, III, or IV.
- 3) Minimum concrete strength at 28 days and minimum concrete strength at jacking.
- 4)  $E_m$ ,  $Y_m$ , coefficient of subgrade friction, soil subgrade modulus.
- 5) Strand specifications; strand grade and diameter, clearances, drapes if used,
- 6) Post tendons' jacking force, assumed losses, anchor set, edge distance to first strand, edge moisture variation. Plans shall graphically show all locations of strand tendons with dimensioned spacing requirements.
- 7) Mild reinforcing associated with stress concentrations ( re-entrant corners, etc.)
- 8) Provide the following loading data in Post-Tension Slab-on-Ground calculation: concentrated loads from framing elements; posts and columns, fire places, heavy equipment, etc, and perimeter line loading.
- 9) Plans shall reference the correct vital soil report information for design: the company and their report number, allowable soil bearing capacities and at what depth and any compacted fill requirements in addition to items noted above. All calculations shall be based and coordinated with this soil report.
- 10) Strand elongation.
- 11) Post tension hardware supplier assumptions- ie, proprietary data from supplier used in analysis assumptions.

**11. Remodels and Alterations:**

- Provide structural evaluation/calculations addressing code compliance.

**12. Special Inspections:**

- One copy of Special Structural Inspection Certificate and Special Geotechnical Inspection Certificate if applicable

**OTHER DRAWINGS**

Sealed by registered civil engineer/landscape architect in the State of Arizona

- Grading & Drainage plans included in building plan set for reference for floor elevation, accessible route, etc.
- Landscape plans included in building plan set for landscape meters calculation.

**NOTE: Additional drawings may be required depending on the complexity of the project.**