PIKES PEAK REGIONAL BUILDING DEPARTMENT

Commercial Plans Review

This packet is provided to assist in assembling a successful plans review submittal. The information is a summary of construction, mechanical, plumbing, electrical and elevator plan review requirements. In addition to Pikes Peak Regional Building Department, consult government departments in the jurisdiction of the site for additional criteria (a contact list is provided on page 8 of this packet.)

PIKES PEAK REGIONAL BUILDING DEPARTMENT

The Department enforces building codes through plan reviews and site inspections; tests and grants licenses to building and mechanical contractors, registers electrical and plumbing contractors who are licensed by the state of Colorado; oversees floodplain management; assigns new addresses; and issues permits to build, alter, convert, repair, move or demolish structures. Pikes Peak Regional Building Department provides services to:

El Paso County
Colorado Springs
Fountain
Green Mountain Falls
Manitou Springs
Monument
Palmer Lake

COMMERCIAL PLAN REVIEW OVERVIEW

"Commercial" is defined as any type of building except detached one- and two-family dwellings and their accessory structures which are classified as "Residential." Condominium and townhome projects of 3 or more units per building are classified as "Commercial."

A plan review fee is paid when the plan submittal is checked in at the front counter. The fee is calculated as 28 percent of the Building Permit fee that is based on the valuation of the project. Additional fees may be incurred when a plan requires three or more reviews. You will be given an estimated time for the length of review. However, the review time is subject to change due to the project scope and if plans must be amended and rerouted through departments.

In addition to Pikes Peak Regional Building Department, governmental departments in the site jurisdiction review plans for zoning, fire, engineering, traffic engineering, utilities, water, waste water, and health and environmental criteria.

Before checking in plans, make certain all information is included and accurate. Plans cannot be amended until the conclusion of the review process that includes the above governmental departments. Incomplete or inaccurate information will require correcting and resubmitting plans for another review which will cause a delay.

PLAN REVIEW SUBMITTALS — One complete set is required for plan review

- ☐ Code Study Form (www.pprbd.org/plancheck/codestudyform.pdf)
- ☐ Approved Development plans
- ☐ Approved Final Landscape plans
- ☐ Final plat
- ☐ Approved Grading & Erosion Control plans
- ☐ Approved water plans
- ☐ Utility plans
- ☐ Architectural plans
- ☐ Mechanical plans
- ☐ Plumbing plans
- ☐ Electrical plans
- ☐ Structural plans with soils report

Basic design information

CODES

Jurisdictions served by Pikes Peak Regional Building Code have adopted the following codes:

2005 Pikes Peak Regional Building Code (PPRBC)
2003 International Building Code (IBC)
2003 International Existing Building Code (IEBC)
2003 International Energy Conservation Code (IECC)
2003 International Mechanical Code (IMC)
2003 International Fuel Gas Code (IFGC)
2003 International Plumbing Code (IPC)
2005 National Electrical Code (NEC)
2003 ICC/ANSI A117.1 Accessibility Standard
ASME A17.1, 2004 Edition, Safety Code for Elevators & Escalators
ASME A17.3, 2002 Edition, Safety Code for Existing Elevators & Escalators

The 2003 International Fire Code and amendments are adopted by the Colorado Springs Fire Department. Plans are reviewed for compliance by the Colorado Springs Development Review Enterprise and Colorado Springs Fire Department.

The following criteria must be included on contact documents:

SNOW LOADS

Grade Plane — Average elevation of finished ground level adjacent to the building at exterior walls.
Flat Roof Snow Load — Building structure is designed for the specified uniform snow load, and cannot act concurrently with unbalanced loading and drifting. Load may be reduced slope per ASCE 7-02, no other reductions are permitted.
Unbalanced Loading & Drifting — Building structure is analyzed for drifting per ASCE 7-02. The specified ground snow load (p_g) is used to establish a new flat roof snow load (p_f) for this analysis only. The new value (p_f) is then used in the unbalanced loading and drifting calculations per Section 7.6, ASCE 7.

Grade plane	**Below 7000'**	**At or above 7000'**
	Flat roof snow load — p_f : 30 psf uniform	Flat roof snow load — p_f : 40 psf uniform
	Unbalanced load & drifting — p_g : 20 psf	Unbalanced load & drifting — p_g : 27 psf

Design factors

Exposure Factor C_e : 1.0
Thermal Factor C_t : 1.0
Importance Factor I : 1.0

WIND LOADS

Basic wind speed	100 mph (3-second gusts).
Exposure category	Exposure C required
Wind load	20 psf minimum

EARTHQUAKE LOADS — *Code sets spectral response factors and cannot be numerically less than the specified values.*

Short period spectral response	S_s : 0.185
1-Second spectral response	S_1 : 0.059

LIVE & DEAD LOADS — *Refer to Code*

Preparing the commercial plans submittal

PROFESSIONAL SEALS & STAMPS

The seal of a design professional licensed by the state of Colorado is required on each sheet of the commercial plans.
The seal, wet or raised, must be signed and dated by the design professional.
All sets of plans must bear an original seal.
Cut sheets and manufacturer's details must bear a seal.
Calculations, specification and soils reports may bear seals on the cover only.

COVER SHEET

The following information is required on the Cover Sheet of the plans submittal package.

Project description
Site address
Name, address, phone numbers (include all design professionals associated with the project)
Sheet legend
Vicinity map
Code Study (see below)

CODE STUDY

Scope of work — If the scope is self evident, a more definitive description is not required. If the submittal is part of a phased project, such as core/shell or tenant finish, the scope of work must be clarified in a written or graphical description, or both *(see next page)*.

Overall building description
- ☐ Total building area in square feet
- ☐ Height
- ☐ Number of levels (including basements)
- ☐ Area of each level in square feet

Site description of property
- ☐ Minimum distance to lot lines (platted, assumed, or middle of ROW) for each side of building – measured at right angles from the face of the wall.

Building Code Analysis
- ☐ Occupancy classification
- ☐ Mixed Occupancies, *include all that apply:*
  - ☐ Accessory use
  - ☐ Non-separated uses
  - ☐ Separated uses
  - ☐ Combined
- ☐ Area in square feet of each occupancy, tabular or graphically
- ☐ Required occupancy separation
- ☐ Type of Construction
- ☐ Mixed types of construction, *provide the following:*
  - ☐ Area in square feet of each type of construction
  - ☐ Any required area separation walls (fire walls)

Fire Areas
- ☐ Area in square feet of each "Fire Area" as defined in Code

Presence of fire sprinklers & reasons
Include all that apply:
- ☐ Allowable area/height
- ☐ 1-hour fire resistive substitution
- ☐ Basement only
- ☐ Required by IBC
- ☐ Required by other than IBC

Basic allowable area

Allowable area increase
- ☐ Frontage
- ☐ Sprinklers
- ☐ Multistory

Fire resistive requirements
Refer to Code

Egress requirements
- ☐ Occupant load calculations
- ☐ Exit width calculations
- ☐ Number of exits required (total for the building and for each area of consideration)
- ☐ Door hardware as required

Plans reviewed in phases

Based on the scope of the work, a phased plans submittal may be accepted, but must adhere to the limited components and meet the preliminary criteria required to obtain a “foundation only” permit.

FOUNDATION ONLY — Provide three sets of plans for review to include the following:

- ☐ **Development plan** approved by zoning in site jurisdiction
- ☐ **Civil plans**
  - Water approved by purveyor
  - Wastewater approved by purveyor
  - Electrical approved by purveyor
  - Landscape plan approved by zoning/planning in site jurisdiction
  - Grading erosion control plan approved by zoning/planning in site jurisdiction
- ☐ **Soils Report***
- ☐ **Foundation design***
- ☐ **Partial structual design** specifying loads to foundation, material specifications and design criteria*,
- ☐ **Architectural drawings** to include:
  - Code Study *(page 3 in this packet)*
  - Dimensioned floor plan for each level drawn to scale and proposed area uses indicated
  - Elevation drawings for all building sides

** Requires stamp, seal and signature by a design professional licensed by the state of Colorado*

FOUNDATION ONLY PERMIT is limited to the following scope of work:

- ☐ Below grade construction of piers, footers, foundation walls, pads and related components
- ☐ Basement slab including recessed floor or elevator pits (no above grade structure or walls)
- ☐ Underground plumbing and electrical conduit, but no wiring
- ☐ Site work and utilities permitted by other agencies or departments (but not within building perimeter)

SUPERSTRUCTURE — Plans include the “Foundation Only” plan components as well as:

- ☐ Complete structural design to include all framing plans, sections, details.
- ☐ Roof covering and drainage
- ☐ Exterior walls and finish

Note: To be eligible for a “Superstructure” permit plans cannot include interior finishes, non-bearing walls, mechanical, electrical or plumbing with the exception of temporary power or heating during construction. In addition, fire protection systems are limited to the requirements of Code. Shafts, elevators and stair enclosures cannot be included unless they are integral to the structure.

CORE/SHELL — Plans include the “Foundation Only” and “Superstructure” plan components and core elements divided into two categories, multistory and single story, below.

MULTISTORY plans such as office buildings, hospitals, condominiums, etc. may include:

- ☐ Stair enclosures
- ☐ Shafts
- ☐ Electrical, elevator and mechanical rooms and equipment
- ☐ Mechanical, Electrical and Plumbing completed in public areas such as lobbies, corridors and restrooms

SINGLE STORY plans, such as a retail strip mall where there is no common space, may include:

- ☐ Mechanical equipment, gas lines and duct penetrations through the roof or exterior walls
- ☐ Electrical panels and basic lighting fixtures
- ☐ Plumbing stubs

Note: To be eligible for a Core/Shell permit, plans cannot have any finish work in a tenant space including mechanical, electrical or plumbing build outs, and dropped or finished ceilings.

Commercial plans require the following information

Architectural plans are drawn to a minimum 1/8" scale on a minimum 18" x 24" size material. Include all that is applicable to the project including but not limited to:

ARCHITECTURAL

Demolition plan *if applicable*

Floor plans

- ☐ Graphically indicate the scope of work
- ☐ Provide dimensions and scale
- ☐ Label proposed use of each space
- ☐ Proper exits *(page 7 in this handout)*
- ☐ Fire-rated vertical assemblies *(page 7 in this handout)*
- ☐ Indicate egress travel distance *(page 7 in this handout)*

Reflected ceiling plans

- ☐ Ceiling finish
- ☐ Fire resistance, if any

Exterior elevations

- ☐ Indicate roofing material and slope
- ☐ Show finished grade

Sections

- ☐ Indicate fire-rated horizontal assemblies

Details

- ☐ Wall types
- ☐ Windows
- ☐ Stairs
- ☐ Rest-rooms dimensioned for accessibility standards

Door schedules

- ☐ Door and frame rating as required
- ☐ Hardware schedule

Structural

- ☐ Specifications & design criteria *(page 2 in this handout)*
- ☐ Foundation plan
- ☐ Floor framing plan
- ☐ Roof framing plan
- ☐ Structural sections and details

MECHANICAL

All mechanical equipment

- ☐ Listing/application
- ☐ Size
- ☐ Location
- ☐ Support
- ☐ Access
- ☐ Clearances

Air supply and return for occupants

- ☐Ventilation of outside air based on use of structure

(Continued)

Environmental exhaust

- ☐ Bath, shower, toilet, smoking rooms, etc.

Special exhaust systems including:

- ☐ Commercial food preparation
- ☐ Hazardous, flammable and/or corrosive materials

Smoke control

Duct systems

- ☐Material
- ☐ Support
- ☐ Location
- ☐ Insulation/sealing

Combustion air/Venting

- ☐ Provided for gas fueled appliances
- ☐ Venting of gas fueled appliances

Safety devices location and application including:

- ☐ Fire/smoke dampers
- ☐ Smoke shut down
- ☐ CO^2 sensors

Gas piping systems

- ☐Material
- ☐ Support
- ☐ Location
- ☐ Identification labeling
- ☐ Size and shut-off/pressure regulators

Refrigeration piping systems

- ☐Material
- ☐ Support
- ☐ Location based on types and amounts of refrigerants

Mechanical refrigeration room detection alarm

- ☐ Based on types and amounts of refrigerants
- ☐ Use of structure

Special conditions

Coordinated at construction review to include:

- ☐ Mechanical equipment weighing more than 300 pounds that is located on roof or supported by structure other than a concrete floor.
- ☐ Shafts required for ducts penetrating floors or rated assemblies.
- ☐ Special room construction for mechanical equipment greater than 400 MBH and refrigeration room

Commercial plans require the following information

PLUMBING

Designed to the **International Plumbing Code** in conjunction with the **Regional Building Code** amendments

- ☐ Engineer stamped plumbing sheets
- ☐ Minimum 1/8" scale drawings
- ☐ Grid and column lines coinciding with architectural plans
- ☐ Individual "P" pages not combined with other trades
- ☐ Roof drain layout on "P" page
- ☐ Gas piping is to be on "M" pages

DMV, Water and Roof Drain Piping

- ☐ Discernable plan view drawing with floor plan, isometric drawings for multi floor applications
- ☐ All pipe sizes
- ☐ Show connections to existing piping if applicable
- ☐ Materials not specified will be assumed to be the minimum allowable by Code

Fixture schedule to include

- ☐ All fixures and equipment relevant to the plumbing system (including owners furnished)
- ☐ Manufacturer's name and model
- ☐ ADA fixtures as needed
- ☐ Faucets with GPM and backflow preventers as needed
- ☐ Trap primer information

Food or drink establishments

- ☐ Prior to plumbing plan approval by Health Department and Waste Water required

Miscellaneous

- ☐ Proper fixture count
- ☐ Expansion tanks for water heaters
- ☐ GPM discharge rates with cycle length for any equipment or pumps requiring an indirect waste connection
- ☐ Indirect waste receptor dimensions if site built (trenches, pits, etc.)
- ☐ Discernable detail drawings
- ☐ Details or notation concerning rated wall penetration solutions
- ☐ Notaion for compliance with hot and tempered water requirements
- ☐ Hammer arrestors for quick closing valves

ELECTRICAL

Engineer Stamped Electrical Sheets

IECC Calculations (COM*check*-EZ)

One Line Service (include existing services)

- ☐ Wire size for service and sub panel feeders
- ☐ Conduit size
- ☐ Meters, disconnects & panels
- ☐ Calculated load of service for entire building
- ☐ Fault current calculations for all new service equipment and sub panels
- ☐ Series rating information (include plaques) when used

Panel schedule

- ☐ Disconnect & panel size (amps, main, feeder, circuit #'s)
- ☐ Volt amps on all branch circuits & calculated load of panel
- ☐ Panelboard AIC rating
- ☐ Bus duct load calculations

Floor Plans

- ☐ Location of service equipment
- ☐ Location of all equipment, lights, and panelboards
- ☐ Circuit numbers on all electrical equipment
- ☐ Circuit numbers on all receptacle & light outlets
- ☐ Dual level switching/occupancy sensors in rooms with more than 1 light fixture
- ☐ Commercial garages
- ☐ Patient care areas
- ☐ Commercial kitchens

Additional Items

- ☐ Kitchen equipment schedule & load data
- ☐ Lighting fixture schedule including fixture and lamp wattage, type of fixture, and light details
- ☐ Track lighting

ELEVATORS

Section of the hoist-way showing:

- ☐ Pit depth, ladder & location
- ☐ Hoist-way clearance
- ☐ Hoist-way ventilation

Sump in pit with GFI outlet & gravity drain/pump to:

- ☐ Sand/oil separator if hydraulic
- ☐ Storm sewer if roped or other

Machine room ventilation

Location of the control room

Lockable disconnect for equipment

Emergency Power

BEFORE SUBMITTING PLANS FOR REVIEW

Make certain all information is included and accurate, (plans submittal check list is on the cover page of this handout). Plans cannot be amended until the conclusion of the review process that includes the above governmental departments. Incomplete or inaccurate information require correcting and resubmitting plans again for review which will cause a delay.

Fire resistive construction & separation criteria

Indicate all assemblies of rated construction to include the following:

☐ Exterior walls
☐ Fire barriers
☐ Fire walls
☐ Incidental use areas
☐ Shaft enclosures
☐ Horizontal assemblies
☐ Exit enclosures
☐ Corridors
☐ Fire Resistive construction based on the type of construction

Exits

This guide is intended to be used by the designer or reviewer to ensure that exiting requirements have been met. This is a summary of the most common issues regarding exiting design.

NUMBER OF EXITS REQUIRE FOR EACH SPACE
For each space under consideration on the plans, write, *"Space under consideration."* This may be a single room or a group of rooms having a common means of egress.

☐ Occupancy Classification
☐ Area in square feet
☐ Occupant load factor
☐ Number of occupants
☐ Number of exits required

SEPARATION OF EXITS

☐ When 2 exits are required, the distance between the exits must be equal to *or* more than 1/2 the diagonal dimension of the area served or 1/3 the diagonal if the building is sprinklered.

☐ When more than 2 exits are required, they must be arranged a reasonable distance apart so that if one exit becomes blocked, others will be available.

TRAVEL DISTANCE TO THE EXIT

TRAVEL THROUGH INTERVENING ROOMS
The code specifically prohibits travel through intervening rooms with the following exceptions:

☐ Adjoining room/area is accessory to the area served;
☐ It is not a high hazard (H occupancy); and
☐ There is a recognized path of egress to an exit.

Travel through intervening rooms — *Continued*
The general intent of the code is to allow the occupant passage through successive spaces of increased protection from an occupied space to the public way. As an occupant reaches a higher level of protection, the passage cannot revert to a lower protective level.

CORRIDORS
Most occupancies (A, B, E, F, M, S, U) require corridors to be 1-hour rated unless the building is sprinklered *or* the occupant load served by the corridor is 30 or less.

ENCLOSURES & FIRE-RESISTIVE RATINGS

☐ Stairs must be enclosed with fire-resistive construction.
☐ Exit enclosures cannot have any openings except those required for egress from normally occupied spaces.

SHAFTS & ELEVATORS

☐ Elevator is considered a shaft if enclosed and must be protected as such.
☐ Elevator lobby is not required unless the elevator opens into a corridor rated in compliance with code. If the corridor is not required to be rated, neither is the elevator lobby.
☐ Elevator cannot be located in stair or exit enclosure.
☐ Access to an exit gained through an elevator lobby is acceptable if another exit is provided that complies with code.

Example of a path of egress:
Occupied space —>Corridor —>Rated exit enclosure —>Exterior court —> Public way

Departments that review plan submittals

Contact information is listed in the typical order of the review process, and includes most departments. After plans are submitted for review, you may track the progress on our web site, under PLAN CHECK, by the assigned plan number.

DEPARTMENT	PHONE	WEB ADDRESS
Pikes Peak Regional Building Department		
Plan Review	719-327-2880	www.pprbd.org
Enumeration	719-327-2960	www.pprbd.org
Floodplain Management	719-327-2889	www.pprbd.org
Elevators	719-327-2880	www.pprbd.org
Zoning		
Colorado Springs Development Review	719-385-5982	www.springsgov.com
El Paso County Development Services	719-520-6300	www.co.elpasoco.com
Fountain Planning & Zoning	719-322-2028	www.ci.fountain.co.us
Green Mountain Falls City Clerk	719-684-9414	
Manitou Springs Planning	719-685-4398	www.manitousprings_co.gov
Monument Planning*	719-481-2953	www.ci.palmer_lake.co.us
Fire Authority		
Colorado Springs	719-385-5959	www.springsgov.com
Engineering		
Colorado Springs	719-385-5918	www.springsgov.com
El Paso County	719-520-6460	www.co.elpasoco.com
Traffic Engineering		
Colorado Springs	719-385-5908 or 385-5051	www.springsgov.com
El Paso County	719-520-6460	www.co.elpasoco.com
El Paso County Health Department	719-578-3199	www.co.elpasoco.com
Colorado Springs Utilities		
Applications & Permits	719-668-8111	www.csu.org
Electrical Division	719-668-7211 or 668-8253	www.csu.org
Wastewater & Water Division	719-668-7211 or 668-8253	www.csu.org

Suburban communities located outside of the city of Colorado Springs are served by several different utility providers and fire districts. Please call the appropriate phone number listed above under "Zoning" for information. Links to most cities and townships served by Regional Building Department are also available on our web site.