

Building Permit Process Flowchart With Emphasis on Structural Plan Review

General:

- The department issues Residential (one- and two-family dwellings) and Commercial (everything else) permits. These main permit types can consist of new buildings, additions and alterations. We also issue land use permits, typically for work outside the Anchorage Building Safety Service Area (ABSSA), and Retro permits for the replacement of water heaters, boilers, etc.
- This flowchart details the permit process for a new commercial building located inside the ABSSA, highlighting structural plan review.

Apply for permit:

- In person, or
- Via email – Option typically used when requesting an electronic plan review (eplans), or
- Online via the new Dynamic Portal – not yet operational
- Permit Techs (front counter staff) enter the permit application information into the permit tracking software called Infor or IPS.

Screen application for minimum information necessary to perform review:

- Permit tech screens application to verify sufficient information for review.
- A submittal for a new building requires a completed application, plans with code study, structural calculations, plot plan, geotechnical soils report and stormwater pollution prevention plan (SWPPP).
- **Phased Permitting:** In order to facilitate the construction process, we allow phased permitting - meaning the design does not need to be complete at the time of permit application. Under the phased process, design, plan review and construction can proceed concurrently thus saving substantial time. A typical phased permit submittal will include:
 - Architectural: Code study, floor plans, sections and elevations. Detail work can be submitted later.
 - Structural: Mostly complete structural plans and calculations having sufficient information to review the foundation. Since all building loads are transferred by the foundation into the earth, the structural plans need to be mostly complete to be able to approve the foundation design.
 - Civil: Basic civil plans and a plot plan showing the location of the building on the property.
 - Geotechnical report: Since the soils support the building, a complete geotechnical report is required.
 - Plumbing, mechanical and electrical: Underground plans. The majority of the P/M/E work can be submitted later.
- If one applies for the permit in person, the in-take process can require anywhere from 15 minutes to a couple hours depending on the customer load. If one applies via email, the application is typically entered into Infor within one or two days depending on workload.

Plan review for a new commercial building:

- The MOA offers both paper and electronic plan review (eplans).
- Reviews are routed to the following review types:
 - Architectural – reviews for compliance with the architectural and fire life safety requirements of the 2018 International Building Code (IBC).
 - Structural – reviews for compliance with the structural requirements in the 2018 IBC and the various adopted standards such as ASCE/SEI 7-16.
 - Fire – reviews for compliance with the International Fire Code (IFC). The IFC covers fire sprinkler and alarm systems, fire extinguishers, fire hydrants, fire suppression water, site and building fire fighter access, hazardous materials, etc. The IFC is also a building maintenance code meaning its requirements are applicable to buildings even if no work is being done.
 - Plumbing – reviews for compliance with the Uniform Plumbing Code.
 - Mechanical – reviews for compliance with the International Mechanical Code (IMC) and the International Fuel Gas Code (IFGC).
 - Electrical – reviews for compliance with the National Electrical Code (NEC).
 - Zoning – reviews for compliance with land use regulations.
 - PD Civil – reviews for compliance with site drainage requirements.
 - Traffic – reviews for compliance with traffic and parking requirements.
 - Right of Way (ROW) – reviews for compliance with ROW requirements.
 - Addressing – Issues building addresses and reviews for compliance with addressing requirements.
 - Stormwater – reviews for compliance with Federal MS4 permit requirements (SWPPP).
 - Flood – determines if structures are located within the mapped flood zone and reviews for relevant requirements.
- Review time:
 - Since construction is seasonal, review times are seasonally dependent with the busiest time of year generally being March thru October. Reviews during the busy season may take twice as long to complete than other months.
 - Review times are dependent on the review discipline. Review disciplines having minimum scope like Addressing, ROW, Flood and Stormwater are typically completed within one to two weeks of submittal. Architectural, Fire, zoning and PD Civil may take 3 to 4 weeks. Structural may take longer than 4 weeks depending on the complexity of the structure.
 - Quality and completeness of a design has a big effect on plan review time. Poor quality or incomplete design work generally results in lots of comments and hence plan review work. The effort expended on these projects can delay other projects.
 - Delayed projects: Some projects take an exceptional amount of time to approve – and there is always a reason. If one claims a permit has taken an excessive amount of time to approve, that project would need to be researched to determine what factors delayed issuance of the permit.
 - Overall review time also depends on the responsiveness of the various designers.
 - **AMCR 23.11.001 – Times permitted for building plan review** (1994 ordinance).
 - Creates time constraints for the initial MOA plan review as follows:
 - 10 working days for one-and two-family dwellings, with exceptions.

- 21 working days for commercial projects not exceeding \$5,000,000 or 3 stories in height.
 - 31 working days for commercial projects not exceeding \$10,000,000.
 - 41 working days for commercial projects exceeding \$10,000,000 or high-rise buildings, or within a reasonable amount of time.
 - Re-reviews are to be completed within half the time stated above.
 - The time constraints are contingent on receiving complete plans and calculations.
 - If the MOA cannot meet the time constraints, the builder/developer may enter into a conditional work agreement with the MOA to proceed with construction, at risk. The building must comply with code to receive a certificate of occupancy.
 - Going back many years, the department has consistently met these time limitations.
 - The department has issued at-risk footing and foundation permits (without performing any structural review) when requested by the builder during exceptionally busy periods. Note however that this is uncommon.
 - Given the allowance for *phased permitting*, the *express plan review* option, the *expedited plan review* option, and the option to use MOA approved contractors, the process outlined in AMCR 23.11 is likely outdated/obsolete.
- **Review cycles** (or iterations). A review cycle is a review resulting in the issuance of comments followed by a response from the designer. Ideally there should not be more than two review cycles per discipline per permit. Some permits however may have disciplines with 4 or more review cycles. Since each cycle (of review and response) can take days to weeks, it is imperative to minimize the number of cycles to expeditiously obtain the permit. The most significant delay in issuing a permit is caused by an excessive number of review cycles. We have created a process called ***Express Plan Review*** to mitigate excessive review cycles.
 - Review cycles continue until each discipline is approved. Note however that partial permits are typically issued prior to the resolution of all review comments to allow construction to proceed concurrently with the review process.
 - **Examples:** Given the myriad of variables effecting review time, and given that each project is unique in regards to size, scope, complexity, quality/completeness of the design, it is difficult to state typical times. Hence, we have provided examples of several actual projects below.
 - **Structural review:** Given Anchorage's high seismicity and high snow and wind loads, structural review is arguably the most important review. Of all the review types listed above, structural is by far the most technical and time-consuming review. In many cases the structural review takes the longest time to complete; this however is not always the case as can be seen in the permit timeline examples provided below. Reviews can involve computer-based designs having over 1,000 pages of calculations. Since computer output is only as good as the input, and since a complex program is basically a black box, we use sophisticated modeling software to verify the validity of structural models. Buildings can be constructed from wood, steel, concrete, or combination

thereof, each have unique design parameters and features. A person having extensive experience with wood design may know little about concrete or steel design. In 2022, four of the five MOA structural plan reviews were licensed professional engineers. The reviewer not licensed had over 25 years of structural plan review experience and primarily focused on wood design. The licensed professional MOA plan review engineers possess an extensive breadth of knowledge given their exposure to the wide variety buildings constructed in Anchorage.

Permit Issuance:

- Full permit: Once all reviews are approved, the full building permit is issued.
- Partial permit: In many (if not most cases with new buildings), partial permits are issued to allow construction to start prior to issuance of a full permit. Substantial time can be gained by allowing construction, design and plan review to occur concurrently.

Construction and Inspections:

- Structural, architectural, fire, electrical, plumbing, mechanical and site drainage inspections are performed during the various stages of construction.
- The builder requests the various inspections when construction is ready. Inspections are performed the day after requested; however we can typically perform a same-day inspection as long as it is requested before 12 pm.
- Deficiencies are tracked through issuance of a comments.
- In order to obtain approval of an inspection discipline, comments must be resolved.
- Each discipline must be approved to obtain the Certificate of Occupancy.

Certificate of Occupancy:

- Conditional Certificate of Occupancy
 - In many cases a Conditional Certificate of Occupancy (CCO) is issued to allow partial/limited occupancy of a building prior to full approval of each inspection discipline.
- Certificate of Occupancy
 - Once construction is complete, including landscaping, civil as-built drawings have been submitted and the site drainage Operations and Maintenance Agreement has been recorded, a Certificate of Occupancy (CO) is issued to close the building permit.
 - The CO basically lives with the structure. Renovating or changing the use of the structure can result in the requirement for a new CO.

What the MOA offers to speed up the plan review process:

- The process outlined above is the result of several decades of evolution driven by constant pressure from the construction industry to be faster. We understand and respect the need to be fast. Through decades of experience, the department has created the following processes to speed up the process:
 - **Phased permitting:** Phased permitting is offered as a no cost benefit to the builder to allow the start of construction while the design team completes the design thus creating a parallel (versus linear) workflow saving the builder substantial time. Phased permitting

allows the submittal of partially complete plans with the intent of issuing partial approvals and hence partial permits. Note that phased permitting is not an efficient process for the MOA because it results in extra submittals and redundant tasks for permit techs and plan reviewers; however, the public benefit is worth the cost.

- **Express Plan Review:** Express plan review is effective at shortening the overall review time by eliminating time-consuming review cycles. Once a review is completed, the permit applicant can choose to have the plan reviewer meet directly with the designer to resolve the review comments. Express plan review has proven to be effective at timely resolving structural plan review comments. The cost is \$270 per hour with a half hour minimum. This sounds expensive but is typically a small fraction of the cost of Expedited Plan Review because it is generally used for only one review discipline (typically structural) and usually involves only a few hours of review time.
- **Expedited Plan Review:** An applicant can have their project moved to the front of the list by paying an extra 60% of the permit fee. Since paying for privilege is obviously controversial, we do not promote this option. We recommend Phased Permitting, and if necessary, Express Plan Review because we know it works and is fair. The Express Plan Review option is likely the primary reason for the significant reduction in the number of Expedited permits.
- **Outsource Structural Plan Review:** We have two structural engineering firms (Reid Middleton and Coffman Engineers) on contract to perform structural plan review when requested. The contractors were selected through a formal/detailed RFP selection process. Note this option is rarely used. The last Outsource Review occurred in 2018. That year three projects went thru Outsource Review. Prior to that was 2015 when one project went thru an Outsource Review. This option was more popular in the mid 2000s during the building boom. The downside to Outsource Review concerns issues during construction. The Outsource Reviewer is not obligated to provide an expedited (immediate) response should problems arise during construction. The internal MOA plan reviewers (familiar with the project from performing the review) can respond quickly to assist with the resolution of construction issues.

Some things that can delay issuance of a permit:

- Applicant did not realize they needed a conditional use permit/approval or other Title 21 approval. These processes often require a public process that can take several months.
- Incomplete and/or poor-quality design submittals.
 - Some projects require an inordinate amount of effort to obtain approval. This can be referred to as *design by comment*.
- Designers using MOA plan review as peer review/quality control.
- Designers not providing a timely response to review comments.

Excessive plan review comments:

- We are aware of industry comments and concerns that the MOA issues an excessive amount of plan review comments. It is important to note that reviewers review to the applicable codes and standards, and comment on deficiencies. Writing a comment creates work for the reviewer. The more comments, the more review work required upon resubmittal of the plans. If an applicant

does not resolve a comment on a resubmittal, this creates work for the reviewer because now the reviewer has to review another resubmittal. It also creates more work for the design team because they need to prepare yet another resubmittal. Plan reviewers are saturated with work (it never stops coming) and creating plan review comments means they will see the plans again.

- It is a standing policy that reviewers cite the applicable code section for each comment.

Paper versus electronic plan review:

- Applicants have the option of paper or electronic plan review (eplans).
- Having an established electronic review process allowed building safety to function efficiently and continue to issue permits during the height of the Covid-19 pandemic.
- If requested, the department can explain the advantages/disadvantages of eplans.

Examples – Permit timelines for new buildings:

- Since structural plan review timeliness is the focus of this exercise, the examples show structural review timelines for each project. For simplicity we have omitted other review timelines, except when they impact the overall review timeline. If include all disciplines, the examples would be quite busy.
- All of the examples are eplans reviews. Eplans projects were selected because the software tracks all milestones making collection of data easier than paper reviews.
- Note: An applicant response may not include all review disciplines. For instance, a discipline having 5 review cycles may actually have only 3 reviews because on two of the cycles the applicant did not provide a response to that particular discipline. This is simply a nuance of the eplans software.

C22-1231 – Block 96, Apartment building with parking, Corner of 8th and K street

- 4 stories consisting of one level of parking and 3 stories of dwelling units
- 8400 sqft/floor, 33,000 sqft total, MOA valuation \$8 million
- Concrete parking level with Type V-A one hour fire resistive wood construction above
- Plans loaded on 3-18-2022
- Initial structural review completed 4-15-2022, comments issued
- Response to comments received 5-5-2022
- Excavation permit issued 5-18-2022 to allow site work to commence
- Second structural review completed 5-19-2022, some comments remain unresolved
- Responses received 5-25-2022
- Third structural review complete 6-6-2022, some comments remain unresolved
- Response to comments received 6-9-2022
- 4th structural review completed 6-10-2022, approved
- Footing/Foundation permit issued 6-10-2022
- All reviews approved by 6-20-22
- Full permit issued on 6-21-2022
- Under construction

C22-1231 – Gage Tree Service office/warehouse

- 2,000 sqft, \$240,000 MOA valuation
- Type V-A one hour fire resistive wood construction
- Plans loaded 3-28-2022
- Initial structural review completed on 4-11-22, comments issued
- Response to structural comments received 5-27-2022
- Second structural review completed 6-16-2022, approved
- Footing/Foundation (partial) permit issued 6-16-2022
- Core/shell (partial) permit issued 6-28-2022
- PD civil review approved on 10-10-2022 after 5 review cycles
- All reviews approved 10-10-2022
- Full permit issued 10-11-2022
- Under construction

C22-1259 – The Stone Law Building

- Mixed use with retail/assembly on first floor and office on the second floor
- Two floors, 4,800 sqft, Type V-B primarily wood construction, MOA valuation \$1 million
- Applied for permit 3-22-2022
- Demo (partial) permit issued 5-26-2022
- Structural plans loaded 6-6-2022 (contractor was out in front of the structural engineer)
- Initial structural review complete 6-23-2022, comments issued
- Response to comments received 6-30-2022
- Second structural review completed 7-11-2022, some comments remain unresolved
- Footing/foundation (partial) permit issued 7-12-2022
- Response to comments received 7-13-2022
- Third structural review completed 7-20-2022, Approved
- Partial permit issued 8-4-2022 (full permit excluding canopy that projects into state ROW)
- As of 12-30-2022 the review is not approved due to one outstanding zoning comment requiring approval of state DOT for the canopy encroachment into the state right-of-way.
- Under construction

C22-1274 Four-plex

- Townhouse style apartment building
- Two story, 5,200 sqft, MOA valuation \$801,383
- Plans loaded 4-4-2022
- Initial structural review completed 4-11-2022, comments issued
- Initial zoning review completed 4-15-2022, comments issued
- Response to comments received 5-10-2022
- Second structural review completed 5-16-2022, some comments remain
- Second zoning review completed 5-26-2022, some comments remain
- Response to comments received 5-31-2022
- Third structural review completed 6-6-2022, approved
- Zoning and PD civil reviews approved on the 8th review cycle on 10-17-2022
- Permit issued on 10-19-2022

C22-1284 – Stop and Shop

- Single story, 6,000 sqft, retail, MOA Valuation \$904,332
- Plans loaded 4-13-2022
- Initial structural review completed 4-27-2022, comments issued
- Initial architectural and zoning reviews completed 4-28-2022, comments issued
- Initial fire review completed 4-29, comments issued
- Response to comments received 5-25-2022
- Second structural review completed 6-2-2022, some comments remain
- Second zoning review completed 6-13-2022, some comments remain
- Second PD civil review completed 6-15-2022, some comments remain
- Response to comments received 6-20-2022
- Third structural review completed 6-30-2022, approved
- Permit issued 6-30-2022
- Zoning and ROW reviews approved 10-6-2022 on 5th review cycle
- PD civil review is the final review approved - 10-25-2022 on the 6th review cycle
- As can be seen from the timeline, the full permit was issued prior to resolution of all zoning, ROW and PD civil comments. This is likely due to the minor nature of the remaining comments resulting in the reviewer's approving issuance of the permit prior to full resolution.

C21-1466 – Greatland Foods

- 27,000 sqft, single story w. mezzanine, storage/office, MOA valuation \$3.9 million
- Type II noncombustible (steel frame) construction
- Plans loaded 5-24-2021
- Initial structural review completed 6-22-2021, comments issued
- Initial zoning review completed 6-22-2021, comments issued
- Response to comments received 7-7-2021
- Footing/foundation (partial) permit issued 7-9-2021
- Second structural review completed 7-20-2021, some comments remain
- Second zoning review completed 7-20-2021, some comments remain
- Response to comments received 8-4-2021
- Third structural review completed 8-10-2021, some comments remain
- Third zoning review completed 8-13-2021, some comments remain
- Response received 8-16-2021
- Fourth structural review completed 8-16-2021, approved
- Core/shell (partial) permit issued 8-16-2021
- Zoning is the last review to be approved 8-25-21, on the fifth review cycle
- Full permit issued 8-25-2021
- Certificate of Occupancy issued 7-25-2022

C21-1390 – Girdwood Health Clinic

- 6,400 sqft, V-B combustible construction, MOA valuation \$1.1 million

- Assembly approval requires this building (located outside the ABSSA) go thru the building permit plan review and inspection process
- Plans loaded 5-7-2021
- Initial structural review completed 5-28-2021, comments issued
- Response to comments received 6-9-2021
- Second structural review completed 6-16-2021, some comments remain
- Second PD civil review completed 6-18-2021, some comments remain
- Second zoning review completed 6-22-2021, some comments remain
- Response to comments received 6-29-2021
- Third structural review completed 7-13-2021, some comments remain
- Third zoning review completed 7-14-2021, some comments remain
- Response received 7-16-2021
- Fourth structural review completed 7-19-2021, some comments remain
- Fourth PD civil and traffic reviews completed 7-20-2021, approved
- Response to comments received 7-22-2021
- Fifth structural review completed 7-27-2021, approved
- Stormwater is the final discipline approved on 7-27-2021
- Full permit issued on 7-29-2021
- Under construction