



Wisconsin Contractors Institute

CODE, CONTRACTS, LIABILITY, AND RISK MANAGEMENT FOR DWELLING CONTRACTORS

**Course Number 961592
4 CE Hours**

**Wisconsin Contractors Institute
N16W23217 Stone Ridge Dr., Ste. 290
Waukesha, WI 53188**

**www.wcitraining.com
wciceu@gmail.com
(262) 409-4282**

OVERVIEW

This course begins with an overview of Wisconsin code and discusses the principles of contracts, liability, and risk management for dwelling contractors. Learners will develop an understanding of what contracts, liability, and risk are and be able to clearly define issues and challenges for general contractors created by contracts, liability, and risk. Strategies and practices to minimize risk and liability will be explored. Contracts, examples of liability, and risk management strategies will be defined, including an in-depth analysis of bonds and insurance. The course concludes with best practices to mitigate risk, liability, and contract disputes.

After completing this course, learners will be able to:

1. Review Wisconsin SPS 321 code regarding exit ladders, ramps, natural light and ventilation, ceiling height, and attic and crawl space access.
2. Define contracts, liability, and risk management and recognize issues that contract, liability, and risk management can cause contractors.
3. List and identify strategies to plan for proper contract management.
4. Describe different types of business ownerships available to general contractors and develop an understanding of bonds and insurance.
5. Explain strategies for mitigating liability and risk, including a discussion of labor law.

WISCONSIN DWELLING CONTRACTOR CODES AND LAW

SPS 321.042 – Ladders

Ladders which are used as part of a required exit shall conform to this section.

- (1) DESIGN LOAD. Ladders shall be designed to withstand loads of at least 200 pounds.
- (2) TREAD OR RUNGS. (a) Minimum tread requirements shall be specified in Table 321.042. Treads less than 9 inches in width shall have open risers. All treads shall be uniform in dimension.

TABLE 321.042

PITCH OF LADDER ANGLE TO HORIZONTAL (DEGREES)	MAXIMUM RISE (INCHES)	MINIMUM TREAD (INCHES)
41.6 to 48.4	8	9
greater than 48.4 to 55.0	9	8
greater than 55.0 to 61.4	10	7
greater than 61.4 to 67.4	11	6
greater than 67.4 to 71.6	12	5
greater than 71.6 to 75.9	12	4
greater than 75.9 to 80.5	12	3
greater than 80.5 to 90	12	2

- (b) Rungs may only be used for ladders with a pitch range of 75° to 90°. Rungs shall be at least 1 inch in diameter for metal ladders and 1½ inch for wood ladders. All rungs shall be uniform in dimension.

(3) RISERS. Risers shall be uniform in height and shall conform with Table 321.042.

(4) WIDTH. The width of the ladder shall be a minimum of 20 inches wide and a maximum of 30 inches wide.

(5) HANDRAILS. (a) Handrails shall be required for ladders with pitches less than 65°. (b) Handrails shall be located so the top of the handrail is at least 30 inches, but not more than 38 inches, above the nosing of the treads. (c) Open handrails shall be provided with intermediate rails or an ornamental pattern such that a sphere with a diameter of 6 inches or larger cannot pass through. (d) The clearance between the handrail and the wall surface shall be at least 1½ inches. (e) Handrails shall be designed and constructed to withstand a 200 pound load applied in any direction.

(6) CLEARANCES. (a) The ladder shall have a minimum clearance of at least 15 inches on either side of the center of the tread. (b) The edge of the tread nearest to the wall behind the ladder shall be separated from the wall by at least 7 inches. (c) A passage way clearance of at least 30 inches parallel to the slope of a 90° ladder shall be provided. A passage way clearance of at least 36 inches parallel to the slope of a 75° ladder shall be provided. Clearances for intermediate pitches shall vary between these 2 limits in proportion to the slope. (d) For ladders with less than a 75° pitch the vertical clearance above any tread or rung to an overhead obstruction shall be at least 6 feet 4 inches measured from the leading edge of the tread or rung.

SPS 321.045 – Ramps

(1) GENERAL. Every exterior or interior ramp which leads to or from an exit shall comply with the requirements of this section. Note: See ICC/ANSI A117.1 chapter 5 for more guidelines relating to the design and construction of an accessible ramp. Under that standard, ramps along an accessible route for people with disabilities should have a slope of not more than 1-foot of rise in 12-feet of run and should have handrails on both sides of the ramp.

(2) SLOPE. Ramps shall not have a gradient greater than 1 in 8 or one foot of rise in 8 feet of run. Walkways with gradients less than 1 in 20 or one foot of rise in 20 feet of run are not considered to be ramps.

(3) SURFACE AND WIDTH. Ramps shall have a slip resistant surface and shall have a minimum width of 36 inches measured between handrails.

(4) HANDRAILS. Handrails shall be provided on all open sides of ramps. Every ramp that overcomes a change in elevation of more than 8 inches shall be provided with at least one handrail.

(a) Ramps which have a gradient greater than 8.33% or 1:12 or one foot rise in 12 feet of run and which overcome a change in elevation of more than 24 inches, shall be provided with handrails on both sides. (b) Handrails shall be located so the top of the handrail is at least 30 inches, but not more than 38 inches above the ramp surface. (c) 1. Open-sided ramps shall have the area below the handrail protected by intermediate rails or an ornamental pattern to prevent the passage of a sphere with a diameter of 4½ inches when applying a force of 4 pounds, except as provided in subd. 2. 2. This paragraph does not apply to ramps having a walking surface that is less than 24 inches above adjacent grade, if a toe-kick or side rail is provided to 4 inches above the walking surface, and a mid-rail is provided between the toe-kick or side rail and the handrail. (d) The clear space between the handrail and any adjoining wall shall be at least 1½ inches.

(5) LANDINGS. A level landing shall be provided at the top, at the foot and at any change in direction of the ramp. The landing shall be at least as wide as the ramp and shall measure at least 3 feet in the direction of travel.

SPS 321.05 – Natural Light and Natural Ventilation

(1) NATURAL LIGHT. Each habitable room shall be provided with natural light by means of glazed openings. The area of the glazed openings shall be at least 8% of the net floor area, except under the following circumstances: (a) Exception. Habitable rooms, other than bedrooms, located in basements, ground floors or above garages do not require natural light. (b) Exception. Natural light may be obtained from adjoining areas through glazed openings, louvers or other approved methods. Door openings into adjoining areas may not be used to satisfy this requirement. (1m) NET FLOOR AREA. For the purposes of subs. (1) and (2), "net floor area" does not include any area with a ceiling height of less than 5 feet.

(2) VENTILATION. (a) Natural ventilation. 1. Natural ventilation shall be provided to each habitable room by means of openable doors, skylights or windows. The net area of the openable doors, skylights or windows shall be at least 3.5% of the net floor area of the room, except as provided in subd. 2. Balanced mechanical ventilation may be provided in lieu of openable exterior doors, skylights or windows provided the system is capable of providing at least one air change per hour of fresh outside air while the room is occupied. Infiltration may not be considered as make-up air for balancing purposes. 2. Any area with a ceiling height of less than 5 feet may be excluded from the net floor area. (b) Exhaust ventilation. All exhaust ventilation shall terminate outside the building.

(3) SAFETY GLASS. (am) Except as provided in par. (bm), glazing shall consist of safety glass meeting the requirements of either 16 CFR Part 1201 or ANSI Z97.1 when installed in any of the following locations:

1. In any sidelight or glazing adjacent to a door, that meets all of the following: a. The nearest point of the glazing is within 2 feet of the door when the door is in the closed position. b. The nearest point of the glazing is within 5 feet of the floor. c. The plane of the glazing is within 30 degrees of the plane of the door when the door is in the closed position.
2. In any wall where the glazing is within 5 feet vertically of the lowest drain inlet and within 3 feet horizontally of the nearest part of the inner rim of a bathtub, hot tub, shower, spa or whirlpool appliance.
3. Within 4 feet vertically of a tread or landing in a stairway and within one foot horizontally of the near edge of the tread or landing.
4. Within 4 feet vertically of the floor and 3 feet horizontally of the nosing of the top or bottom tread of a stair.
5. In guard assemblies. (bm) Safety glass is not required where glazing meets any of the following: 1. The size of an individual pane of glass is 8 inches or less in the least dimension. 2. The safety glass is required by sub. (3) (am) 1. and the only door within 2 feet of the glazing is the fixed panel of a patio door. 3. The safety glass is required by sub. (3) (am) 1. and there is an intervening wall or other permanent barrier between the door and the glazing.

SPS 321.06 – Ceiling Height

All habitable rooms, kitchens, hallways, bathrooms and corridors

shall have a ceiling height of at least 7 feet, except as follows:

- (1) (a) Rooms may have ceiling heights of less than 7 feet provided at least 50% of the room's floor area has a ceiling height of at least 7 feet. Any area with a ceiling height of less than 5 feet may be ignored in this calculation. (b) The 50% limit in par. (a) does not apply to subs. (3) to (6).
- (2) Beams and girders or other projections may project to no more than 8 inches below the required ceiling height.
- (3) The ceiling height extending back from the front edge of a water closet may slope to below 7 feet, but may not go below 5 feet until beyond the back of the water closet.
- (4) The ceiling height extending back from the front edge of a lavatory may be less than 7 feet, but may not go below 5 feet until beyond the back of the lavatory.
- (5) A ceiling height of less than 7 feet may be provided between the rear rim of a bathtub and a wall of the room abutting that rim, or between the side rim and a room wall abutting that rim.
- (6) A ceiling height of less than 7 feet may be provided between the rear wall of a shower stall and a wall of the room abutting that rear wall, or between the side wall of a shower and a room wall abutting that side wall.

SPS 321.07 – Attic and Crawl Space Access

- (1) ATTIC. Attics with 150 or more square feet of area and 30 or more inches of clear height between the top of the ceiling framing and the bottom of the rafter or top truss chord framing shall be provided with an access opening of at least 14 by 24 inches, accessible from inside the structure.
- (2) CRAWL SPACES. Crawl spaces with 18 inches of clearance or more between the crawl space floor and the underside of the house floor joist framing shall be provided with an access opening of at least 14 by 24 inches.

FINAL EXAM QUESTIONS:

1. Ladders which are used as part of a required exit shall be designed to withstand loads of at least _____.
 - A. 100 pounds
 - B. 150 pounds
 - C. 200 pounds
 - D. 250 pounds
2. According to Table 321.042, if the pitch of ladder angle to horizontal is 56 degrees, the maximum rise in inches must be _____.
 - A. 8
 - B. 9
 - C. 10
 - D. 11
3. Rungs of ladders shall be at least ____ inch(es) in diameter for metal ladders.
 - A. 1
 - B. 2
 - C. 3
 - D. 4

4. The width of the ladder shall be a minimum of ____ inches wide.

- 10
- 20
- 30
- 40

5. Ladders used for exits with treads less than 9 inches in width shall have open risers.

- True
- False

6. All treads on ladders used for exits should be uniform in dimension.

- True
- False

7. Handrails shall be designed and constructed to withstand a ___ pound load applied in any direction.

- 50
- 100
- 150
- 200

8. The ladder shall have a minimum clearance of at least ____ inches on either side of the center of the tread.

- 10
- 12
- 20
- 15

9. Ramps along an accessible route for people with disabilities should have a slope of not more than 1-foot of rise in ___ feet of run.

- 12
- 9
- 14
- 10

10. Which feature is required of all ramps?

- Appropriate signage
- Open concept
- Slip resistant surface
- Gate at the end

11. Ramps must have a minimum width of ____ measured between handrails.

- 30 inches
- 36 inches
- 42 inches
- 48 inches

12. Handrails shall be located so the top of the handrail is at least ____.

- 36 inches
- 48 inches
- 30 inches
- 20 inches

13. Every ramp that overcomes a change in elevation of more than ____ shall be provided with at least one handrail.

- 8 inches
- 2 feet
- 10 inches
- 1.5 feet

14. Ramps shall not have a gradient greater than 1 in 8 or one foot of rise in 8 feet of run.

- True
- False

15. Walkways with gradients less than 1 in 20 or one foot of rise in 20 feet of run are not considered to be ramps.

- True
- False

16. The landing of a ramp shall be at least as wide as the ramp and shall measure at least ____ in the direction of travel.

- 3 feet
- 4 feet
- 5 feet
- None of the above

17. Each habitable room shall be provided with natural light by means of glazed openings. The area of the glazed openings shall be at least ____ of the net floor area in most circumstances.

- 7%
- 8%
- 9%
- 10%

18. True or false: "Net floor area" does not include any area with a ceiling height of less than 6 feet.

- True
- False

19. All of the following are examples of natural ventilation except:

- Fireplaces
- Openable doors
- Skylights
- Windows

20. In most habitable rooms, the net area of natural ventilation sources should be at least ___% of the net floor area.

- 1.5
- 2.0
- 3.5
- 4.2

21. Balanced mechanical ventilation may be provided in lieu of natural ventilation provided the system is capable of providing at least one air change per ___ of fresh outside air while the room is occupied.

- Minute
- Day
- Week
- Hour

22. Regarding safety glass, in any sidelight or glazing adjacent to a door, the plane of glazing must be within ___ degrees of the plane of the door when the door is in the closed position.

- 10
- 20
- 30
- 40

23. In guard assemblies, safety glass is not required where the size of an individual pane of glass is ___ inches or less in the least dimension.

- 2
- 3
- 6
- 8

24. Which of the following rooms must have a ceiling of at least 7 feet tall?

- Kitchens
- Hallways
- Bathrooms
- All of the above

25. Rooms may have ceiling heights of less than 7 feet provided at least 20% of the room's floor area has a ceiling height of at least 7 feet.

- True
- False

26. Assuming an attic is required to have an access opening, the opening must be:

- At least 14 by 24 inches
- Accessible from the inside
- Both a & b
- None of the above

27. Attics with ___ or more square feet of area must be provided with an access opening accessible from inside the structure.

- 150
- 180
- 200
- 250

28. Attics with ___ or more inches of clear height between the top of the ceiling framing and bottom of the rafter or top truss chord framing must be provided with an access opening accessible from inside the structure.

- 10
- 20
- 30
- 40

29. Assuming a crawl space is required to have an access opening, the opening must be at least:

- 14 by 24 inches
- 18 by 24 inches
- 14 by 30 inches
- 18 by 30 inches

30. Crawl spaces with _____ inches of clearance or more between the crawl space floor and the underside of the house floor joist framing shall be provided with an access opening.

- 12
- 18
- 24
- 30

COMMON DEFINITIONS

Important Definitions

All-Risk Builders' Risk Insurance: Property insurance that covers property owners and builders for buildings under construction usually safeguarding machinery, equipment, materials, and supplies that are part or will become part of the structure

Asset: Any item that has value that is owned by the business

Bond: A procedure that transfers risk between a surety bonding company, the contractor, and the project owner. The contractor must comply with terms and conditions and if the contractor cannot meet the obligations, the surety bonding company acquires the contractors' responsibilities and manages project completion

Breach of Contract: When one of the participants involved in an agreement (contract) does not satisfy any terms or conditions of the contract

Business Plan: A document that forms and outlines a businesses goals and strategies for reaching those goals

Commercial General Liability Insurance (CGL): Liability insurance that covers bodily injury that results in real physical damage or losses for persons that are not employee, damages or

loss to property that does not belong to the business and personal injury including slander

Completed Operations Liability Insurance: A kind of liability insurance that offers coverage for loss occurring out of completed projects

Completion Bond: A kind of bond that delivers assurance to the financial backers of a construction project that it will be completed on time

Construction Wrap-Up Liability Insurance: A kind of insurance that packages liability and workers' compensation insurance for general contractors and subcontractors on sizeable construction projects to remove gaps in coverage

Contract: Legally binding agreement between two or more parties with the primary purpose of avoiding disputes between contract participants

Contractual Liability Insurance: A kind of liability insurance that offers contractors with protection for damages that occur from their negligence while part of a written contract

Cost-Plus Contract: A type of contract where the contractor is recompensed for the actual cost of labor and materials and is paid a markup fee for overhead and profits

Critical Path: The order or responsibilities that controls the duration of a project. Succeeding responsibilities cannot start or be completed until previous tasks are performed

Design or Build Contract: A kind of contract where the owner contracts with one company to complete a construction project from start to finish (cradle to the grave)

Immaterial Breach (Partial Breach): A less serious breach (violation) of a contract that generally does not result in dissolution or termination of the contract

Indemnification: A technique to relocate risk and exemption from a loss that clears (absolves) the indemnified party from any payment for losses and damages incurred by a third party

Insurance: A protective tool in which coverage is acquired for a certain risk (or risks) through a contract. One party is indemnifying another against certain risks in return for premium payments

Key Man Insurance: A kind of insurance coverage for a designated person that is needed (required) for the continued success of a business

Liabilities: All debts and responsibilities owed by a business

Liability Insurance: A kind of insurance designed to protect from third-party claims that stem from claimed negligence that result in injury or damage to property

Lien Bond: A type of bond that ensures liens cannot be placed against the owner's property by contractors for payment of services

Limited Liability Company (LLC): A legal business entity that has similarities to both an individual proprietorship and corporation. Members have protection from liability for actions taken by the company

Lump Sum Contract: A contract where the contractor agrees to complete the project for a specified and agreed upon up front cost

Maintenance Bond: A type of bond that guarantees for a specific period (generally a year), that there will be no defects in work, or material that is in the completed project

Material Breach: A serious violation of a contract that could void the contract and has a high likelihood of litigation

Mechanics' Lien: A legal process that disputes the title to real property and serves as a method for securing payment for labor or materials used in the construction or improvement of property

Negotiation: Discussion that is aimed at reaching an agreement generally for a dispute

Offer: A proposal that sets guidelines for the obligations of the contract, to include scope of work and compensation

Partnership: A business agreement or relationship between two or more participants who join or ally to conduct a trade or business

Payment Bond: A kind of bond that ensures subcontractors and material suppliers will be paid for work if they perform under the conditions of the contract

Professional Liability Insurance: A kind of insurance that protects contractors from negligence resulting from errors or negligence by designers or architects

Property Insurance: An insurance policy covering property when damage, theft, or loss occurs

S Corporation: A business type formed under Subchapter S of the Internal Revenue Code. Taxed like a partnership by passing items of income, loss, deduction, and credits through its shareholders to be included in separate returns

Serious Violation: A violation or event where there is a high probability that death or serious physical injury could result and that the employer had knowledge of or should have known of the threat

Individual/Sole proprietorship: A business that has one person as the owner (proprietor) who is responsible for 100% of the decisions made about the business and assets

Subcontractor: An individual or business that contracts with the general contractor or other subcontractors to complete a particular piece of a larger project

FINAL EXAM QUESTIONS:

31. What is the definition of Asset?

- A. A procedure that transfers risk between a surety bonding company, the contractor, and the project owner. The contractor must comply with terms and conditions and if the contractor cannot meet the obligations, the surety bonding company acquires the contractors' responsibilities and manages project completion
- B. Any item that has value that is owned by the business
- C. A kind of bond that delivers assurance to the financial backers of a construction project that it will be completed on time
- D. Property insurance that covers property owners and builders for buildings under construction usually safeguarding machinery, equipment, materials, and supplies that are part or will become part of the structure

32. What is a Breach of Contract?

- A. When one of the participants involved in an agreement (contract) does not satisfy any terms or conditions of the contract
- B. A kind of liability insurance that offers contractors with protection for damages that occur from their negligence while part of a written contract
- C. A document that forms and outlines a business's goals and strategies for reaching those goals
- D. A kind of liability insurance that offers contractors with protection for damages that occur from their negligence while part of a written contract

33. What is a Business Plan?

- A. A procedure that transfers risk between a surety bonding company, the contractor, and the project owner. The contractor must comply with terms and conditions and if the contractor cannot meet the obligations, the surety bonding company acquires the contractors' responsibilities and manages project completion
- B. A legal business entity that has similarities to both an individual proprietorship and corporation. Members have protection from liability for actions taken by the company
- C. A protective tool in which coverage is acquired for a certain risk (or risks) through a contract. One party is indemnifying another against certain risks in return for premium payments
- D. A document that forms and outlines a business's goals and strategies for reaching those goals

34. What is a legally binding agreement between two or more parties with the primary purpose of avoiding disputes between parties?

- A. Insurance
- B. Contract
- C. Bond
- D. Liability

35. What is a Completion Bond?

- A. A document that forms and outlines a business's goals and strategies for reaching those goals
- B. A kind of liability insurance that offers contractors with protection for damages that occur from their negligence while part of a written contract
- C. A kind of bond that delivers assurance to the financial backers of a construction project that it will be completed on time
- D. Liability insurance that covers bodily injury that results in real physical damage or losses for persons that are not employees, damages or loss to property that does not belong to the business and personal injury including slander

36. All debts and responsibilities owed by a business are:

- A. Liabilities
- B. Transactions
- C. Accounts
- D. Contracts

37. What is Indemnification?

- A. A technique to relocate risk and exemption from a loss that clears (absolves) the indemnified party from any payment for losses and damages incurred by a third party
- B. A kind of contract where the owner contracts with one company to complete a construction project from start to finish (cradle to the grave)
- C. Legally binding agreement between two or more parties with the primary purpose of avoiding disputes between contract participants
- D. Any item that has value that is owned by the business

38. What is Critical Path?

- A. A kind of insurance coverage for a designated person that is needed (required) for the continued success of a business
- B. A type of bond that ensures liens cannot be placed against the owner's property by contractors for payment of services
- C. A type of bond that guarantees for a specific period (generally a year), that there will be no defects in work, or material that is in the completed project
- D. The order or responsibilities that controls the duration of a project. Succeeding responsibilities cannot start or be completed until previous tasks are performed

39. What is a Design or Build Contract?

- A. A less serious breach (violation) of a contract that generally does not result in dissolution or termination of the contract
- B. A kind of contract where the owner contracts with one company to complete a construction project from start to finish (cradle to the grave)
- C. A contract where the contractor agrees to complete the project for a specified and agreed upon up front cost
- D. A type of bond that ensures liens cannot be placed against the owner's property by contractors for payment of services

40. What is a Maintenance Bond?

- A. A type of bond that guarantees for a specific period (generally a year), that there will be no defects in work, or material that is in the completed project
- B. A type of bond that ensures liens cannot be placed against the owner's property by contractors for payment of services
- C. A contract where the contractor agrees to complete the project for a specified and agreed upon up front cost
- D. A kind of contract where the owner contracts with one company to complete a construction project from start to finish (cradle to the grave)

41. What is a Material Breach?

- A. Discussion that is aimed at reaching an agreement generally for a dispute
- B. A legal process that disputes the title to real property and serves as a method for securing payment for labor or materials used in the construction or improvement of property
- C. A serious violation of a contract that could void the contract and has a high likelihood of litigation
- D. A less serious breach (violation) of a contract that generally does not result in dissolution or termination of the contract

42. What is an Offer?

- A. Discussion that is aimed at reaching an agreement generally for a dispute
- B. All debts and responsibilities owed by a business
- C. Legally binding agreement between two or more parties with the primary purpose of avoiding disputes between contract participants
- D. A proposal that sets guidelines for the obligations of the contract, to include scope of work and compensation

43. What is Property Insurance?

- A. A kind of insurance coverage for a designated person that is needed (required) for the continued success of a business
- B. An insurance policy covering property when damage, theft, or loss occurs
- C. A kind of insurance that protects contractors from negligence resulting from errors or negligence by designers or architects
- D. A business agreement or relationship between two or more participants who join or ally to conduct a trade or business

44. A discussion that is aimed at reaching an Agreement General for a dispute is:

- A. Negotiation
- B. Due process
- C. Partnership
- D. Serious violation

TYPES OF BUSINESS STRUCTURES

Individual/Sole Proprietorship

The simplest business entity is the individual proprietorship, also called sole ownership or sole proprietorship because it only involves one person to establish. Additionally, it is the least expensive and requires few if any legal procedures to establish. However, owners still may need insurance/registration, and other legal considerations to begin. The proprietor or owner operates the business, provides the capital, and furnishes all the equipment and property. The owner is personally liable for all debts.

A sole proprietorship has no continuity in the event of the death of the owner, and all business transactions and contracts must be made in the owner's name.

Advantages of a Sole Proprietorship:

- Minimal legal restrictions
- Simple ownership forms or structure
- Low startup cost
- Sole ownership of profits
- Freedom in decision-making

Disadvantages of a Sole Proprietorship:

- Unlimited personal liability
- Less available capital
- Possible difficulty in obtaining long-term financing
- Dissolution of the business in the event of the owner's death

General Partnership

Another form of business ownership is the general partnership. Although establishing a partnership is not completely standardized, most states have adopted the Uniform Partnership Act. A General Partnership is a self-governing organization of two or more people, who as equal owners, conduct a business for profit. The business structure must be set up properly, using the Uniform Partnership Act as guide.

General Partnerships are more expensive and time consuming than individual proprietorship. A partnership can pool resources but should keep separate bank accounts and financial records for the business. Partners have an obligation to act in good faith toward one another. A partnership is not recognized by the law as being an entity separate from the partners. Partners are individually liable to creditors for the debts of the partnership, and each general partner is a representative of the partnership and can bind other partners without express authority. In the event of a death of a member, there is automatic dissolution.

Advantages of a General Partnership:

- Ease of Information
- Direct profit rewards
- Larger management base than that of an individual proprietorship
- Can be formed through an oral agreement but should be written

Disadvantages of a General Partnership:

- Unlimited personal liability of general partners
- Multiple decision makers
- Limited life of the business
- Changes of partners or terms of agreement may be challenging
- Partnership disbands in the occurrence of a partner's death

C Corporations

A C corporation is a type of business structure recognized by state and federal government. The two most common types of corporations are C and S corporations. Incorporation gives the business a legal existence. This means that the business can purchase and own assets and conduct business in its own name. A corporation will last as long as stockholders determine it is active and will continue to exist in the event of one or more shareholders death(s). Separate bank accounts and separate business records are a must as the corporation, NOT the shareholders, owns the money that shareholders invest to buy the corporations stock. Owners of a C Corporation (stockholders) are not personally liable for the losses of the business. The corporate entity itself is responsible for debts owed.

Advantages of C Corporations:

- Separate legal entity
- Limited liability for stockholders
- Unlimited life of the business
- Availability of capital resources
- Transfer of ownership through sales of stocks

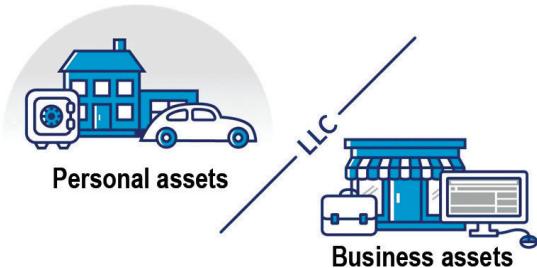
Disadvantages of C Corporations:

- Complex and expensive
- Limitations on corporate activities and decisions by the corporate charter
- Broad regulations and extensive record keeping requirements
- Double taxation (corporate profits are taxed and dividends are also taxed)

S Corporations

The style and structure of S corporations are very similar to a C Corporations. If the business is an ELIGIBLE domestic corporation (not foreign) double federal taxation can be prevented by selecting the S corporation under the required rules and regulations. In an S Corporation, income, loss, deductions, and any credits are passed to the shareholders who must include them on their respective separate returns. Their advantages and disadvantages are same and C Corporations, except for taxation.

Limited Liability Company (LLC)



A Limited Liability Company is a hybrid type of structure that shares similarities of both sole proprietorship and corporate structures. A one-person owned LLC is taxed at the same level as a sole proprietorship, whereas an LLC owned by two or more entities is taxed as a partnership. Income is considered earnings and not dividends.

Advantages of an LLC:

- Limited Disclosure of owners
- Limited documentation
- No advance IRS filings
- No public disclosure of finances
- Limited liability for managers and members
- Ability to assign management to a non-member

Disadvantages of an LLC:

- Generally more expensive (startup fee and yearly fee)
- Ownership in an LLC is often harder to transfer than with a corporation
- Employees of an LLC who receive fringe benefits, such as group insurance, medical reimbursement plans, medical insurance and parking, must treat these benefits as taxable income

FINAL EXAM QUESTIONS:

45. **What is the easiest and least expensive type of business structure to begin?**

- A. General Partnership
- B. Corporation
- C. Limited Liability Company (LLC)
- D. Sole/Individual Proprietorship

46. **One disadvantage of sole proprietorship is:**

- A. Minimal legal restrictions
- B. Unlimited personal liability
- C. Sole ownership of profits
- D. Freedom in decision-making

47. What is a self-governing organization of two or more persons, who as equal owners, conduct a business for profit?

- General Partnership
- Corporation
- Limited Liability Company (LLC)
- Sole/Individual Proprietorship

48. Partners are individually liable to creditors for the _____ of the partnership.

- Bills
- Agreements
- Records
- Debts

49. An advantage of general partnerships includes:

- Multiple decision makers
- Indirect profit rewards
- Larger management base
- Limited life of the business

50. Who is considered the owner of a C corporation?

- Stockholders
- Business owner
- Board members
- None of the above

51. Which of the following is considered an advantage of a C corporation?

- Separate legal entity
- Unlimited life of the business
- Availability of capital resources
- All the above

52. True or False: C corporations have triple taxation, which means corporate profits and dividends are also taxed.

- True
- False

53. What is a hybrid structure that shares similarities of the sole proprietorship and corporate structures?

- General Partnership
- Corporation
- Limited Liability Company (LLC)
- Sole/Individual Proprietorship

54. An LLC owned by two or more entities is taxed as a:

- Partnership
- Corporation
- Sole proprietorship
- None of the above

55. All of the following are advantages of LLCs, except:

- Limited documentation
- Limited liability for managers and members
- Employees with fringe benefits must treat these benefits as taxable income
- No public disclosure of finances

IMPORTANCE AND CHARACTERISTICS OF CONTRACTS AND BONDS



Introduction to Contracts

Contracts are extremely important as they set the guidelines for everyone involved throughout a project. Poorly constructed contracts can create issues with finances and liability. Typically, the prime (general) contractor enters into a binding agreement (contract) with the owner. The agreement defines in specifics the services and nature of activities and scope of construction. Choosing the proper contract is a significant task for a general contractor. Most contracts provide protections or advantages to one party over the other and this must be balanced and understood completely.

The National Association of State Contractors Licensing Agencies (NASCLA) defines a *contract* as a legally binding agreement between two or more parties with the main purpose of preventing disputes between parties entering into the agreement. A legally binding contract must have an offer and acceptance, considerations, competent parties, and legal purpose. NASCLA defines an *offer* as something that specifically outlines the obligations of the contract, including the work to be done and compensation for the work. *Acceptance* is an agreement to an offer made and generally is done by signing the offer.

Styles of Contracts

Lump Sum Contract:

- Contractor agrees to finish the project for a specified price
- Most if not all risk is on the contractor because the contractor would be responsible for any additional costs
- If the contract is completed for less or quicker the contractor would keep any savings
- Generally discouraged for general contractors

Unit-Price Contract:

- Best type of contract for when the size and scope of the work cannot be completely decided

- Specific quantities of needed items are unable to be estimated in advance
- A price per component is figured for each component and the general contractor is paid after the actual materials are used and calculated

Cost-Plus Contract:

- The contractor is paid for the actual cost for any materials or labors that is used
- A markup percentage or fee is added to the cost
- This fee or style can be determined in many different ways or styles
- Very popular style of contract with general contractors

Subcontractors are another party that involves a contract for the general contractor. These contracts are significant because contract disputes can cause issues with work, workmanship, or finances. Do not forget that doing business with subcontractors will require a contract. Subcontractors perform parts of the overall project that the general contractor either does not have the skills, license, or crew to perform. In some contracts, the owner must approve subcontractors. Proper contracting with subcontractors can help avoid issues. Everyone involved should understand all areas and expectations for the project.

Offers, Stipulations, and Payments

An *Offer* (terms that a contractor is giving to an owner) must be well defined and understood. Items that are recommended in an offer are:

- ✓ Date of Offer
- ✓ Names and contact information of contracting parties
- ✓ Name and location of project
- ✓ Description of the work to be performed
- ✓ Contract time or start and completion date
- ✓ Payment terms, including progress payment schedule and final payment
- ✓ Conditions for schedule delays
- ✓ List of contract documents, including general conditions, drawings, and specifications
- ✓ Contract sum, including contract type such as lump sum, unit price, or cost plus
- ✓ Expiration date of offer

Contract **Stipulations** are significant and must demonstrate all items clearly to all persons and businesses involved. Common stipulations include:

- Contracts must be transparent and succinct
- All parties (but especially the owner and general contractor) must have complete understanding of the terms and the contract
- The total price of the contract and how payments will be collected must be defined
- Requirements of all Parties must be defined
- Any extra requirements or obligations must be defined
- Contract conditions must be easily understood and outlined in an effort to define breach of contract specifications

Payments are extremely important to the general contractor. Whether it is a speculative house or a new construction for a homeowner, cash flow can enhance or cripple a business. Regardless of the style of contract (lump sum, unit price etc.) all fees and expected money or allowances should be inserted.

Questions to consider are:

- Who is delivering the payments?
- What are the payment terms, amounts, and timeline?
- What types of payments will be accepted (i.e. credit card, cash)?
- The timeline must be specifically defined. Most banks have a schedule of payments based on construction benchmarks.

Progress Payments are payments issued as defined aspects of the project are completed. Subcontractors will expect payment in a timely manner, so the schedule must be completely understood.

A **Retainage** is a percentage (usually 10) that is withheld from each payment to ensure the project is completed. This creates funding in the event of claims against the work or liens.

Breach of Contract can cause litigation and financial issues. Proper contract writing and application provides protection from these potential problems. Breach of Contract occurs when one of the parties does not meet the obligations of the contract. Examples include: refusing to perform work, behaving in a way or act that is prohibited, or behaving in a way that prohibits others from performing obligations.

There are two common types of breaches:

1. **Material Breach:** A significant violation of the contract provisions
2. **Immaterial (Partial) Breach:** A less significant violation that generally does not require termination of a contract

Bonds

A **Surety Bond** is a procedure to transfer risk between a contractor, surety bonding company, and the project owner. The original agreement holds the contractor responsible for fulfilling the terms and conditions of a signed and executed contract. If the contractor does not execute, then the surety bond assumes the responsibilities and completes the project.

Basic Parts of a Bond:

- Total Dollar Amount: the bond amount is normally a percentage of the total estimated project cost
- Length of Bond: Bonds are applicable for a designated amount of time
- Requirements for Notice: A time period to complete any defects and gives a time period for the bonding company to act after receiving notice
- Bond Enforcement: Outlines enforcement measures if the contractor does not fulfill obligations

Types of Bonds:

- A **Performance Bond** assures that the contractor will complete a contract within its time frame and conditions.
- A **Payment Bond** guarantees subcontractors and suppliers will be paid for work if they perform properly under the contract.

- A **Maintenance Bond** ensures that for a specific time—usually for one year—no defective workmanship or material will appear in the completed project.
- A **Completion Bond** provides assurance to the financial investors of a construction project that it will be completed on time.
- A **Fidelity Bond** covers business owners for losses due to dishonest acts by their employees.
- A **Lien Bond** guarantees that liens cannot be placed against the owner's property by contractors for payment of services.
- **Judicial or Court Bond:** when the contractor is the plaintiff in a legal action there are security costs. This bond provides security from costs.
- **License Bond:** sometimes called a permit bond; may be a condition to issue a contractor license. This bond guarantees compliance with statutes and ordinances.
- **Termite Bond:** protects property owner for a specific amount of time against termite damage.

Before a company issues a bond, they will examine a business to verify profitability and management.

Items that can be verified are good reference, ability to meet obligations, experience matching contract requirements, necessary equipment to complete the work, financial stability, good credit, and banking relationships. Bond premiums can be verified from different companies but are generally from a half percent to two percent of the contract amount. Contract laws and construction laws govern the bond claim process. The process will be outlined in the bond language, unless in the bond agreement it is stated that the surety bond company will not cover changes from the original contract. If a contractor defaults, the surety bond company may provide additional financing for the contractor, arrange for a new contractor, hire subcontractors to complete the work, or pay out the amount of the bond.

Approval of the project and **Final Payment** by the owner is a process that must be established and followed. Normally the general contractor requests an inspection from the owner or a designated representative that is listed in the contract. Different contracts may require an engineer / architect to be involved in the final inspection and issue a certificate for final payment. Final payments include any retainage that was kept during the process and is the completion of the project. This signals that each party has met their obligations. After the first inspection, a list of any issues or inadequacies is compiled (punch list). After the contractor fixes any issues a second (final) inspection is requested. If all items are approved application for final payment is initiated. Some contracts require documents to be submitted with final payment application (i.e. waivers of liens for material suppliers, subcontractors etc.).

Boilerplate Provisions and Contract Standards

All contracts will have **Boilerplate** or universal items. These items establish boundaries. Generally, regardless of the style of payment (lump sum, cost plus etc.) these items will still be put into all contracts. The first important item is the date. Historically the date is listed as the day (i.e. 21st day), then month (i.e. August), in the year (i.e. 2024).

More key components that are essentially in every contract are:

1. **Owner Information:** This seems easy but you must verify that the person you are contracting with is actually the owner or has authority to enter the contract. There

have been incidents where persons with no ownership or authority have entered into contracts with contractors for goods and services. This will cause issues and, in many instances, makes getting paid difficult.

2. The next important portion is the **Contractor**. Contracts must be created in the name of the business. Small errors can cause issues and complicate processes. In addition, it can cause the contractor issues with the licensing board. For example, if your business is filed under the name Bill Smith Construction, then all corresponding documentation should list this as the name. A contract with Smith construction could be invalid and not recognized by the legal system.
3. Third is the **Project**. Any agreements or expectations by either party should be put in this section. If a contractor assumes that the owner will do certain items (such as landscaping) this could be an area to add. These items can be spelled out in the other portions of the contract, but anything that is not the normal should be stressed here. If there is any confusion, the legal system will historically rule in favor of the owner for their expectations. These three areas must be correct and not simply glossed over as formalities.

The Associated General Contractors of America provides sample documents on their website. The following areas are noted as general provisions:

1. Relationship of Parties. The owner and the contractor agree to proceed with the project on the basis of mutual trust, good faith, and fair dealing. This provision can be added, however, remember that the information and the outline of the contract are still binding regardless of mutual trust.
2. The contractor shall furnish construction administration and management services and use the Contractor's best efforts to perform the Work in an expeditious manner consistent with the Contract Documents. The Owner and the Contractor shall endeavor so to promote the harmony and cooperation among all project participants.
3. The Contractor represents that it is an independent contractor and that in its performance of the work, it shall act as an independent contractor.
4. Neither Contractor nor any of its agents or employees shall act on behalf of or in the name of Owners except as provided in this Agreement or unless authorized in writing by Owner's Representative.
5. Extent of Agreement. This agreement is solely for the benefit of the parties, represents the entire and integrated agreement between the parties, and supersedes all prior negotiation, representation, or agreements, either written or oral. This agreement and each and every provision is for the exclusive benefit of the owner and contractor and not for the benefit of any third party except to the extent expressly provided in this Agreement.

Definitions are commonly added to ensure when terms or specifics are used that a standard and understood definition is implied. Definitions not spelled out can cause problems as one side of the agreement could interpret obligations differently. Standard terms that are defined include Architect/Engineer, Change Order, Contract Documents, Final Completion, owner, subcontractor, and defective work.

Contractor responsibilities are a common portion of contracts. The AGC example contains the following:

1. The contractor shall provide all labor, materials, equipment and services necessary to complete the Work, all of which

shall be provided in full accord with and reasonably inferable from the Contract Documents as being necessary to produce the indicated results.

2. The Contractor shall be responsible for the supervision and coordination of the Work, including the construction means, methods, techniques, sequences, and procedures utilized, unless the Contract Documents give other specific instructions. In such case, the Contractor shall not be liable to the Owner for damages resulting from compliance with such instructions unless the Contractor recognized and failed to timely report to the Owner any error, inconsistency, omission or unsafe practice that it discovered in the specified construction means, methods, techniques, sequences or procedures.
3. The Contractor shall perform Work only within locations allowed by the Contract Documents, applicable permits and applicable local law.

The responsibility for performance is a common section. AGC-200 gives examples of common areas in this section:

1. In order to facilitate its responsibilities for completion for the Work in accordance with and as reasonably inferable from the Contract Documents, prior to commencing the Work the Contractor shall examine and compare the drawings and specifications with information furnished by the Owner pursuant to Paragraph 4.3 relevant field measurements made by the Contractor and any visible conditions at the Worksite affecting the Work.
2. If in the course of the performance of the obligations in Subparagraph 3.3.1 the Contractor discovers any errors, omissions, or inconsistencies in the Contract Documents, the Contractor shall promptly report them to the Owner.
3. The Contractor shall have no liability for errors, omissions or inconsistencies discovered under Subparagraphs 3.3.1 and 3.3.2 unless the Contractor knowingly fails to report a recognized problem to the Owner.

It is important to remember that the contractor can be held responsible for items performed by their direct workers or their subcontractors. AGC has examples of certain sections:

1. The Contractor shall provide competent supervision for the performance of all the Work. Before commencing name and qualifications of its proposed superintendent(s) and project manager so Owner may review the individual's qualifications. If, for reasonable cause, the Owner refuses to approve the individual, or withdraws its approval after once giving it. Contractor shall name a different superintendent or project manager for Owner's review. Any disapproved superintendent shall not perform in that capacity thereafter at the Worksite.
2. The Contractor shall be responsible to the Owner for acts or omissions of parties or entities performing portions of the Work for on behalf of the Contractor or any of its Subcontractors.
3. The Contractor shall permit only skilled persons to perform the Work. The Contractor shall enforce safety procedures, strict discipline and good order among persons performing the Work. If the Owner determines that a particular person does not follow safety procedures, or is unfit or unskilled for the assigned work, the Contractor shall immediately reassign the person on receipt of the Owner's written notice to do so.

Tests and Inspections are required through the process of a new construction and in larger remodels, and should be detailed and outlined. Generally, contractors certify (or warranty) their work for

1 year (12 months). This is important as homeowners will call with any defective or deficient workmanship. However, defining what is warranted is important because if not the contractor could be financially responsible for items out of scope.

FINAL EXAM QUESTIONS:

56. _____ are extremely important as they set the guidelines for everyone involved throughout a project. They are legally binding agreements.
 - A. Contracts
 - B. E-mails
 - C. Meetings
 - D. Taxes
57. The general or prime contractor generally enters into a contract to begin the project with:
 - A. Subcontractor
 - B. Mayor
 - C. Owner
 - D. Lowe's
58. A legally binding contract must have all of the following, except:
 - A. Offer and acceptance
 - B. Considerations
 - C. Incompetent parties
 - D. Legal purpose
59. In what type of contract does a contractor agree to finish the project for a specified price?
 - A. Subcontract
 - B. Cost-Plus Contract
 - C. Unit-Price Contract
 - D. Lump Sum Contract
60. Who assumes the most risk in a lump sum contract due to potential additional costs?
 - A. The property owner
 - B. The contractor
 - C. The lender
 - D. The CCB
61. Which type of contract is best for when the size and scope of the work cannot be completely decided?
 - A. Subcontract
 - B. Cost-Plus Contract
 - C. Unit-Price Contract
 - D. Lump Sum Contract

62. In which type of contract is the contractor paid for the actual cost of any materials or labor?

- Subcontract
- Cost-Plus Contract
- Unit-Price Contract
- Lump Sum Contract

63. _____ perform parts of the overall project that the general contractor either does not have the skills, license, or crew to perform.

- Subcontractors
- Employees
- Property owners
- Inspectors

64. A(n) _____, terms that a contractor is giving to an owner, must be well defined and understood.

- Contract
- Summary
- Schedule
- Offer

65. All of the following should be part of the contract documents within an offer, except:

- General conditions
- Drawings
- Final payment
- Specifications

66. Contract _____ are significant and must demonstrate all items clearly to all persons and businesses involved.

- Stipulations
- Prices
- Documents
- Parties

67. True or false: The total price of the contract and how payments will be collected should be defined within the contract stipulations.

- True
- False

68. Most banks have a schedule of _____ based on construction benchmarks.

- Payments
- Offers
- Inspections
- Subcontractors

69. What are payments issued as defined aspects of the project completed?

- Bonds
- Progress payments
- Insurance
- Retainage

70. What percentage of each payment is typically withheld from each payment to ensure the project is completed, and creates funding in the event of claims against the work or liens?

- 3
- 5
- 8
- 10

71. _____ occurs when one of the parties does not meet the obligations of the contract?

- Debt
- Retainage
- Breach of contract
- Inspection

72. What is a surety bond?

- When one of the parties does not meet the obligations of the contract
- A procedure to transfer risk between a contractor, surety bonding company, and the project owner
- A percentage (usually 10) that is withheld from each payment to ensure the project is completed
- Description of the work to be performed

73. True or false: If the contractor does not execute the terms and conditions of a signed contract, the surety bond assumes the responsibilities and completes the project.

- True
- False

74. In regards to a bond, the time period to complete any defects after received notice is known as:

- Total dollar amount
- Length of a bond
- Requirements for notice
- Bond enforcement

75. Within the basic parts of a bond, the section that outlines measures that will be taken if the contractor does not fulfill obligations is called:

- Total dollar amount
- Length of a bond
- Requirements for notice
- Bond enforcement

76. What is a performance bond?

- A. Assures that the contractor will complete a contract within its time frame and conditions
- B. Guarantees subcontractors and suppliers that they will be paid for work if they perform properly under the contract
- C. Ensures that for a specific time, usually for one year, no defective workmanship or material will appear in the completed project
- D. Guarantees that liens cannot be placed against the owner's property by contractors for payment of services

77. What is a Fidelity Bond?

- A. Provides assurance to the financial investors of a construction project that it will be completed on time
- B. Guarantees that liens cannot be placed against the owner's property by contractors for payment of services
- C. Guarantees subcontractors and suppliers that they will be paid for work if they perform properly under the contract
- D. Covers business owners for losses due to dishonest acts by their employees

78. What is a judicial bond?

- A. When the contractor is the plaintiff in a legal action there are security costs
- B. Bond provides security from costs guarantees that liens cannot be placed against the owner's property by contractors for payment of services
- C. Guarantees subcontractors and suppliers that they will be paid for work if they perform properly under the contract
- D. Covers business owners for losses due to dishonest acts by their employees

79. Before a company issues a bond, they will examine a business to verify _____ and management.

- A. Ownership
- B. Profitability
- C. Insurance
- D. Contracts

80. Bond premiums are generally within what percentage range of the contract amount?

- A. 0-0.5%
- B. 1-3%
- C. 0.5-2%
- D. 3-5%

81. What is the first step to initiating the final payment process?

- A. Final payment is made
- B. Punch list compiled
- C. Contractor fixes any issues found upon inspection
- D. The general contractor requests an inspection from the owner or designated representative

82. Any agreements or expectations by either party should be put into which section of the contract?

- A. Owner information
- B. Contractor
- C. Project
- D. None of the above

83. True or false: According to the general provisions section provided by the Associated General Contractors of America, contractors and their employees shall not act on behalf of the owners unless authorized in writing by the owner's representative.

- A. True
- B. False

84. _____ are commonly added within contracts to ensure that terms or specifics are understood.

- A. Definitions
- B. Agreements
- C. Parties
- D. All the above

85. In a contract, the section that emphasizes responsibilities for completion for the work in accordance with the contract is called:

- A. Subcontractors
- B. General provisions
- C. Definitions
- D. Responsibility for performance

RISK MANAGEMENT AND INSURANCE

Risk Management

Risk Management has many different definitions and is extremely important to general contractors. Customers rely on the general contractor to be successful financially and keep them safe, which is a huge responsibility. Using proper components such as project management and insurance allows for better organization of the company.



Risk Management can be defined many different ways but one common definition is the forecasting and evaluation of financial risks together with the identification of procedures to avoid or minimize their impact. It must be comprehensive method to handling anticipated and realized losses, and can keep areas safe including financial and personal injury. Insurance is a significant component of risk management

Methods of Risk Management:

- **Avoidance:** not joining in activities that may cause injury, sickness, or loss. For general contractors this could include items such as not signing poorly constructed contracts
- **Retention:** accepting risk as part of the job or as a given. For general contractors this could include buying insurance with a lower premium but a higher deductible
- **Sharing:** a method of sharing the risk through parties of a contract. For example, contractors and subcontractors could agree to share portions of insurance premiums
- **Transferring:** placing the bulk or entirety of the risk onto another party. Generally with insurance where the insurance company takes the risk for a provided amount (premiums)
- **Loss Prevention:** minimizing the threat or actual loss instead of eliminating the risk. Examples would include an insurance providing discounts for gym or health club memberships

Five Steps to Risk Management:

1. Acknowledge and identify the different risks that apply to the construction process. These may arise as a consequence of contract provisions, the nature of work, site conditions, or the operation of law (Clough, 2005)
2. Gauge the amount of exposure presented by any risks identified. This involves establishing the frequency of losses and the potential severity of the losses that may occur (Clough, 2005)
3. Choose how to protect against those risks that have been identified. Choose insurance wisely (Clough, 2005)
4. Implementing a company-wide loss control and prevention (Clough, 2005)
5. Monitor the results (Clough, 2005)

According to the United States Bureau of Labor Statistics, there are 150,000 injuries on construction job sites currently each year. Between 2011 and 2019 construction site injuries rose over 41%. In 2019 there were 5,333 deaths in the United States in construction accidents, which is the highest of any industry. Falls, encounters with large objects or machinery, electrocution and collisions are the most common injuries. The construction industry led all careers in

the total number fatal injuries in 2000, and 174,100 nonfatal injuries were reported in 2020.

Other than coverage that is required by law, the general contractor will decide which insurance policies to buy. A general contractor cannot afford to carry all insurance coverages available, and deciding which to purchase must be strategic and tactical related to the construction business. If new jobs become available, it may be that insurance can be bought for shorter amounts of time if the profit justifies the added expense. Read insurance policies completely and do not assume that they cover everything desired. The policy is essentially a contract and understanding the terms is significant to general contractors. Managing risk is the most difficult portion as many things are uncontrollable such as weather, employee issues, and customers changing their minds. The lower the business risk evaluation, the lower the insurance premiums and opportunities to be in litigation.

Jobsite Safety:

- Historically job sites were unsafe, and the workers had no recourse if they wanted to get paid
- The Occupational Safety and Health Administration (OSHA) was created by the Occupational Safety and Health Act of 1970
- All employers are required to follow federal OSHA requirements and some states have created a state plan
- The Occupational Health Program at the Wisconsin Department of Health Services works to provide resources that inform workers of potential workplace hazards
- Certain Standards apply to the construction industry

Construction OSHA Standards:

- 29 CFR 1926, Safety and Health Regulations for the Construction Industry
- 29 CFR 1910, Occupational Safety and Health Standards
- 29 CFR 1904, Recording and Reporting Occupational Injuries and Illnesses
- It is the employer's responsibility to understand the OSHA requirements and correct any issues or breaches
- OSHA inspectors are authorized to complete unannounced site inspections to check for compliance

There are several OSHA requirements that contractors must follow. Every employer must post the OSHA poster in an obvious location in the workplace, and the OSHA poster is downable at the OSHA website www.OSHA.gov. The OSHA Construction and Safety Act sets safety standards for construction contracts on federal projects. Consult OSHA safety requirements to confirm the correct safety equipment is being implemented (i.e. hard hats, safety shoes, face shields, fall protection, hearing protection). Material Safety Data Sheets (MSDS) are a requirement from OSHA in the Hazard Communication Standard (HCS).

OSHA Penalties:

- ✓ Violations considered **other** are discretionary up to \$7,000 per violation
- ✓ Violations considered **serious** are mandatory penalty up to \$7,000 per violation
- ✓ Violations considered **willful** violations are penalties of up to \$70,000 with a minimum of \$5,000 for each violation
- ✓ Violations considered **repeat** violations are discretionary penalties up to \$70,000

- ✓ Most common OSHA violations are scaffolding, fall protection, excavations, ladders, head protection, hazard communication, fall protection (training requirements), and electrical

Types of Insurance

Laws may require certain types of insurance coverage and even certain dollar levels. This can include items such as workers' compensation, unemployment, and vehicle insurance. Many contracts will define the required coverage for the general contractor. For example, automobile liability for a prescribed amount of 3,000,000.

Property Insurance normally shelters your business and personal property when loss, theft, or damage occurs. Property insurance can be bought for defined risks such as fire. Larger coverage insurance can be purchased that may cover several risks to include vandalism, "acts of God", larceny, and intentional damage (i.e. vandalism). When buying property insurance an evaluation of the location of job sites, and the areas of the country business is conducted.

All-Risk Builders' Risk Insurance is a style of property insurance that covers both the property owners and builders for buildings that are currently under construction. It will insure items such as machinery, equipment, materials, supplies, and fixtures that are currently part of the current building/home or will become part of the new building/home. More coverage (higher premiums) can be combined for additional items such as scaffolding and temporary structures that are needed during construction. Deficient workmanship and design deficiencies are not covered under this type of insurance. It should be noted that tools are commonly not covered under this type of insurance. Construction must have begun and be in progress for insurance to be binding. This type of insurance delivers coverage for items such as theft, accidental losses, damage, destruction or vandalism.

Inland Marine / Equipment Theft Insurance is a style of property insurance that delivers coverage for tools and equipment. It also provides coverage for goods that are in transit and current construction projects. It is commonly very costly, and many risk management strategies may be more strategic than purchasing a policy. If you have equipment thefts often, an insurance company may deny coverage and new coverage may be difficult to obtain.

Liability is an obligation imposed by law. This means that the person or entity responsible will have financial or building obligations required. Liability insurance has also been called defense coverage. This coverage protects the contractor against claims by third parties, and will pay the contractor's defense fees and judgements up to the face value of the policy. Liability insurance carriers have the right to negotiate a settlement with the third party without the knowledge or consent of the general contractor. Subrogation clauses are usually parts of policies that allow the insurance company the right to file litigation or lawsuits to recover losses.

Most general contractors need the same types of basic coverages for liability, many times this is packaged together into **Commercial General Liability** policies. These policies are written to cover property damage and bodily injury that is caused by "occurrences". Occurrences are defined by Clough as accidents including continuous or repeated exposure to the same harmful conditions. Coverage is not limited to one single event, and the occurrence may not be sudden but may be produced over time. Bodily injury, property damage caused by pile driving, water leakage and seepage, dust, settlement, inadequate shoring, and other instances of injurious exposure and generally covered by this type of policy. An occurrence must be unforeseen, unexpected, and not intended.

Commercial General Liability Insurance covers bodily injury that results in actual physical damage or loss for individuals who are not employees. It covers damage or loss to property not belonging to the business, personal injury, including slander or damage to reputation, advertising injury, including charges of negligence that result from promotion of goods or services. Commercial General Liability Insurance is a good foundation; however, general contractors should consider other types of insurance to supplement loss and damage.

Contractor's Contingent Liability Insurance protects the contractor from its contingent liability imposed by law because of injuries to persons or damage to property of others arising from the acts or omissions of independent contractors. It protects the general contractor if the subcontractor's insurance is inadequate or absent. A claimant alleging damages can sue the subcontractor and the prime contractor as well.

Completed-Operations Liability Insurance covers or protects the contractor from liabilities rising from projects that have been completed or abandoned. For the most part (limited protection) the contractor is not liable for damages suffered by a third party because of the condition of the work after the project has been completed AND accepted. Once the owner accepts the work the owner can become responsible.

Contractual Liability Insurance: In construction the contractor, by terms of a construction contract or other agreements, can assume the legal liability of another. The contractor is protected from such assumed liability by contractual liability insurance. The premium for contractual liability insurance is based on the contract amount prescribed.

Contractor's Protective Public and Property Damage protects contractors who supervise subcontractors. If subcontractors gain claims for personal injury or property damage this protects the general contractor from the claims. It is very similar to other styles of insurance.

Professional Liability Insurance is also referred to as errors and omissions insurance. If designers and/or architects are negligent the general contractor is shielded from this negligence by this type of policy.

Construction Wrap-Up Liability is best for large projects. It packages liability and workers' compensation insurance for general contractors and subcontractors. This type of insurance helps to eliminate any gaps between other coverages. Each state has requirements to qualify for this type of insurance and is usually based on cost requirements.

Other Types of Insurance

Automobile Insurance:

- Automobiles have two general categories of risk
- First is loss or damage to the vehicles owned by the contractor caused by accident, fire, theft, collision, or other hazards
- Second is liability for injury or property damage caused by operation of vehicles owned by general contractor
- Provides financial protection when the contractor becomes obligated (usually legally) to pay for bodily injury or property damage

Burglary and Theft Insurance:

- Covers loss or damage by certain acts
- Acts generally include burglary, theft, larceny, robbery, forgery, fraud, and vandalism
- Does not normally cover acts committed by employees of the general contractor

- Fidelity bond or employee theft insurance would be needed to cover criminal acts of employees

Key Man Life Insurance:

- Extremely important if the business or agency depends on certain employees/persons for significant portions of the business
- Partnerships were discussed earlier and structure that would have key members / persons
- If the key person leaves the agency/entity for any reason this type of coverage may be able to keep the business running until a replacement or new structure is in place

Certain items are excluded from coverage in a Commercial General Liability Policy:

- ✓ Property Damage Liability
- ✓ Automobile, watercraft, and aircraft liability
- ✓ Professional Liability
- ✓ Liability for injury to the contractor's own employees
- ✓ Liability arising from pollution
- ✓ Most items can be insured for extra premiums

Exclusions from Commercial General Liability Policy:

- ✓ Property owned by, leased to, or rented to the contractor
- ✓ Personal property in the contractor's care, custody, or control
- ✓ Premises sold, abandoned, or given away by the contractor
- ✓ Property lent to the contractor

FINAL EXAM QUESTIONS:

86. What is the forecasting and evaluation of financial risks together with the identification of procedures or avoid or minimize their impact?

- A. Contracts
- B. Risk Management
- C. Bond
- D. Insurance

87. The method of risk management where the focus is minimizing the threat or actual loss instead of eliminating the risk is called:

- A. Loss prevention
- B. Avoidance
- C. Retention
- D. Transferring

88. In risk management, retention is:

- A. Placing the bulk or entirety of the risk onto another party
- B. Accepting risk as part of the job or as a given
- C. A method of sharing the risk through parties of a contract
- D. None of the above

89. Which of the following is the third step with the five steps of risk management?

- A. Monitor the results
- B. Implementing a company-wide loss control and prevention
- C. Acknowledge and identify risk
- D. Choose how to protect against those risks that have been identified

90. According to the United States Bureau of Labor Statistics, there are _____ injuries on construction job sites each year.

- A. 150,000
- B. 2 million
- C. 200,000
- D. 850,000

91. True or false: In 2019, there were 5,333 deaths in the United States in construction accidents, making it the second highest of any industry.

- A. True
- B. False

92. Where must each employer post the OSHA poster in the workplace?

- A. In the main office
- B. At the construction site
- C. Obvious location
- D. In the owner's office

93. OSHA violations considered serious have a mandatory penalty up to _____ per violation.

- A. \$2000
- B. \$5000
- C. \$7000
- D. \$70,000

94. All of the following are potentially required types of insurance for contractors, except:

- A. Workers' compensation
- B. Unemployment
- C. Vehicle insurance
- D. Dental insurance

95. What type of insurance is also called defense coverage?

- A. Property Insurance
- B. Automobile Insurance
- C. Commercial Insurance
- D. Liability Insurance

96. **True or false: Burglary and Theft Insurance covers the criminal acts of employees.**

- A. True
- B. False

PROJECT MANAGEMENT

Project Management is a term that is discussed in all fields but is extremely important in construction management. It includes guiding and coordinating each part of the project from concept to completion.

The approach should include aspects such as concept, cost control, scheduling, procurement, and risk assessment.

The **Project Manager** organizes, plans schedules, controls the work, and is accountable for completing the project on time and within budget. Project administration includes actions that are mandatory to reach the required project goals.

Meetings are a necessary portion of construction or project management. Important topics that can be included are shop drawing, project time schedules, storage and hoisting facilities, project site offices, temporary job services and utilities, job site security, owner-furnished materials, site surveys, quality control, insurance certificates, required permits, cost breakdowns, list of subcontractors, construction schedule, schedule of owner payments, project safety plans approval, contractor's quality control plan approval, completion date, liquidated damages, progress payments, bonus clauses, sit access provisions, environmental impact initiatives, and time extensions.

Scheduling is another vital aspect of project management. An accurate schedule is essential to a well-managed project. Planning and scheduling allows for the project to be visualized before things happen and anticipates possible risks or issues. The beginning of the project and the completion dates should be outlined in the contract. The project manager must understand the dates, any penalties for non-completion, change requirements, and scope of project. They also must make sure the schedule fits into the time frame to include labor, delivery of materials, and inspections.

Tasks are generally listed in order of completion. Subcontractors are impacted the most by this type of scheduling. Some tasks may overlap while others must be completed before moving onto the next task. Each task must be assigned a timeline.

Quality Control confirms work is performed according to the contract specifications. Inspection, testing, documentation of materials, and workmanship are all parts of quality control. Inspections are not personal but an evaluation of the work. Understanding code and contract requirements is essential to project management.

Number of labor hours to complete a task is fundamental. **Duration of Tasks** is dependent upon the size of the project, labor hours (estimated), and length of time devoted to each task for each day. Contribution and coordination with subcontractor is crucial so that estimates of time are realistic and reachable. To determine labor hours, combine the time of each activity to compare total time needed versus the project completion outline that is contracted.

Contingency Time must be estimated and is used to cushion between tasks to be prepared for any delays or issues. Weather delays can increase time, custom work can increase time, limited access to site can increase time. **Float Time** is the time after a task is completed before the next task begins. Any activity with "zero float" is counted as a critical activity.

Three types of common scheduling styles:

1. Calendar Scheduling
2. Bar Chart Scheduling
3. Critical Path Method

Calendar Scheduling is the simplest method and can be constructed on a common desk calendar. The biggest advantage of this method is that project tasks can link to specific dates such as dates of other projects, delivery dates of materials, payment schedules, and employee vacations and holidays. The sequence of tasks and activity duration are crucial to creating a calendar schedule. This method works best for small projects or less complex projects.

Bar Chart Scheduling creates a visualization of activities. It demonstrates duration and sequence of tasks to be completed. The biggest weakness of the bar chart is that it does not show correlation and dependence of activities (i.e., if one activity must be completed before another). Delays in tasks cannot be illustrated in the bar chart. Bar charts are simple and best suited for small or less complex projects.



The **Critical Path Method** is most like a flow chart and illustrates or demonstrates the relationship (dependency) of tasks. This method begins by deciding the sequence of task and activity duration as with other scheduling methods. The outline (chart) must demonstrate the relationship between tasks (i.e., drywall must be installed before interior painting). Events that can or will occur at the same time (simultaneously) must be designated. Scheduling this well can decrease project time. This method uses the sequence of events (tasks) to decide the length of the project.

Cost Control is the responsibility of the manager (general contractor). Poor cost control can create less profit for the general contractor. The project cost system recovers items such as labor and equipment hours, production quantities, and total costs. Contractors should maintain as much control as feasible over field operations. Smaller projects can be more simple but complex projects must have a detailed information flow and system.

The beginning estimate is the first step in **controlling the cost of a project**. The owner of other parties of the contract expect the estimate to be close to the cost of the project, and proper estimating is an essential function of a contractor. Costs as they are reported should be compared and applied to the original estimate or document. Summary cost reports (i.e. monthly, weekly, quarterly) should be prepared at scheduled intervals and evaluated against the original estimate. Weekly reports allow a contractor or company to swiftly assess the areas of the project that are on budget, below budget, and above budget. Weekly reports do not normally list project overhead costs. Do not forget the factor in these costs (i.e.

salaries, travel, accounting expenses, taxes, utilities). *Just-in-Time* deliveries help to lower cost for inventory. Deliveries should occur in a timed scheduled that is a short time frame before materials are used in the construction process. Using purchase orders can help with organization and documentation of expenses. Receiving is often forgotten but proper receiving procedures and documentation will assist in controlling costs and increasing profit.

FINAL EXAM QUESTIONS:

97. What includes guiding and coordinating each part of the project from concept to completion?

- A. Property Insurance
- B. Project Management
- C. Risk Management
- D. Liability

98. Project _____ includes actions that are mandatory to reach the required project goals.

- A. Manager
- B. Administration
- C. Scheduling
- D. None of the above

99. Which of the following are important topics to cover in construction meetings?

- A. Project time schedules
- B. Job site security
- C. Site surveys
- D. All the above

100. Planning and scheduling allows the project to be _____ before things happen and anticipates possible risks or issues.

- A. Visualized
- B. Completed
- C. Started
- D. Insured

101. Duration of tasks is dependent upon all of the following, except:

- A. Size of the project
- B. Estimated labor hours
- C. Type of scheduling method chosen
- D. Length of time devoted to each task each day

102. What confirms work is performed according to contract specifications?

- A. Inspector
- B. Project Manager
- C. General contractor
- D. Quality Control

103. What is the simplest type of scheduling?

- A. Calendar Scheduling
- B. Bar Chart Scheduling
- C. Critical Path Method
- D. Sequence of Events

104. Which type of scheduling has the biggest weakness that does not show correlation and dependence of activities?

- A. Calendar Scheduling
- B. Critical Path Scheduling
- C. Bar Chart Scheduling
- D. Accrual Accounting

105. Which method is most like a flow chart and illustrates or demonstrates the relationship (dependency) of tasks?

- A. Calendar Scheduling
- B. Critical Path Method
- C. Bar Chart Scheduling
- D. Sequence Scheduling

106. Who has the primary task of managing cost control?

- A. General Contractor
- B. Owner
- C. Subcontractor
- D. Inspector

107. Poor cost control can create _____ profit for the general contractor.

- A. More
- B. Less
- C. Equal
- D. All the above

108. What is the first step in controlling the cost of a project?

- A. Making an offer
- B. Signing the contract
- C. Beginning estimate
- D. Choosing a scheduling method

LABOR LAW



General Contractors will be employing individuals and subcontracting out activities. Contractors are responsible for following both state and federal labor laws and tax guidelines. Hiring the right person or company will decrease issues and increase profit. Ignorance of the law is not a defense and the contractor can still be held liable. Understanding and adhering to labor laws will increase profit and decrease risk.

Clayton Act

In 1914 a push to change discriminatory results of the Sherman Act on organized labor. The Clayton Act claimed "The labor of a human being is not a commodity or article of commerce". The Supreme Court, however, disagreed and ruled that the Clayton Act was only applicable to peaceful activities and labor disputes were not considered peaceful. In 1932 the Norris-LaGuardia Act was enacted and strictly limits the power of the federal courts to issue injunctions against union activities in labor disputes and protects the right of workers to strike and picket peacefully.

Civil Rights Act of 1964

Although the Civil Rights Act is most famous for rights pertaining to voting, access to public accommodations and education the act was impactful on labor law. Title VII of this Act, Equal Opportunity, forbids discrimination in employment or union membership. This Act made it unlawful for an employer to refuse to hire or to discharge any individual or otherwise discriminate against individuals regarding conditions of employment because of race, color, religion, sex, or national origin.

Age Discrimination in Employment Act

The Age Discrimination in Employment Act was established in 1967. The act prohibits arbitrary age discrimination in employment and protects persons 40 years of age or older from age discrimination by employers of 20 or more persons in an industry involving interstate commerce. Employers cannot fail or refuse to hire or discharge, limit, segregate, or classify employees to deprive them of opportunities or reduce wages. The act is not applicable if the age is a bona fide occupational qualification. Employers must post an approved notice of Age Discrimination in Employment Act in a conspicuous place where employees can view the notice.

Fair Labor Standards Act

This act was originally passed by Congress in 1939 and has been amended several times over the years. It is also referred to as the Wage and Hour Law. Workers whose employment is related to interstate commerce are covered without regard to volume of business. The FLSA provides for a minimum wage for all employees that qualify

and requires overtime pay and provisions for any worker that works over 40 hours per week. Salaried employees may not be entitled to the overtime wages.

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) was passed in 1990. This was the first federal statute that expanded civil rights protections to disabled persons. The Act applies to the public and private sector employers who have 15 or more employees. The term disabled means (in this act) "(1) having a physical or mental impairment that substantially limits one or more of the major life activities of such individual (2) having a record of such an impairment, (3) being regarded as having such an impairment.

Disabled persons now had similar or the same protections as any other groups.

Interviewing and Hiring New Employees

Asking the correct questions is the key to finding the right employees. In the construction industry there may be a practical demonstration (i.e. building a wall, mudding a sheetrock wall). Employees should be qualified for the position, motivated, accountable, dependable and open minded. There are questions that can be asked and questions that cannot be asked during an interview. In many construction jobs, an interview is not conducted because of previous interaction, but this is not recommended.

Interview questions that are allowed:

- ✓ What is your experience with (insert job duty or title)?
- ✓ What is your experience working with a construction team?
- ✓ Do you have any certifications or licensures related to this job?
- ✓ What is your process of dealing with disagreements or conflict?

Interview questions that are *not* allowed:

- How old are you?
- Do you have any disabilities?
- Are you pregnant?
- Are you married?
- Do you have children?
- What is your religion?
- What is your sexual orientation?

It is important to keep **Employee Files** and documentation for reporting purposes. Common items to include are:

- **I-9 Form** – The United States Customs and Immigration Service requires employers to have this form and it demonstrates that a worker has legal immigration status to work
- **IRS W-4 Form** – Required to establish the proper level of federal taxes to be withheld
- **IRS Form W-5** – Form that must be completed in advance that allows low to moderate income employees eligibility to receive earned income credit
- **State tax form** – Whichever state the contractor is doing business from must have state tax forms on file

Employee Files:

- Employment Application – Many times in construction applications are dismissed and persons are hired on reputation. This is not recommended and a complete and accurate application should be completed for employees.
- Policy Acknowledgement – Employees should sign any training or policy recognition that states they have received and reviewed the information
- Emergency Notification Form Emergency contact should be established if there is an accident or situation that needs to be relayed to the emergency contact

Establishing a ***Handbook and Policy and Procedure Manual*** for employees helps mitigate risk and define expectations. This document should be updated annually to ensure information is correct and applicable. Company policy, employee benefits and rights, and procedures should all be parts of the document

Suggested Items For Employee Policy and Procedure Manual:

- Disciplinary action procedures
- Company History
- Equipment and Tool Policies
- Compensation Guidelines
- Policy on Sexual Harassment
- Policy on the use of illegal drugs or alcohols
- Non-discrimination policy
- Payroll dates and times
- Benefits
- Normal Working Hours
- Overtime Pay
- Vacation Pay
- Sick Days
- Rules of conduct
- Safety Policies

FINAL EXAM QUESTIONS:

109. True or false: Ignorance of the law is a defense that can be used in court.

- A. True
- B. False

110. Which act claimed “The labor of a human being is not a commodity or article of commerce”?

- A. Fair Labor and Standards Act
- B. Civil Rights Act of 1964
- C. Age Discrimination in Employment Act
- D. Clayton Act

111. Title ___ of the Civil Rights Acts of 1964 forbids discrimination in employment or union membership.

- A. V
- B. VI
- C. VII
- D. VIII

112. The Age Discrimination in Employment Act was established in what year?

- A. 1964
- B. 1967
- C. 1990
- D. 1939

113. The Fair Labor Standards Act requires overtime pay and provisions for any worker that works over ___ per week.

- A. 36
- B. 50
- C. 40
- D. 42

114. Which act was passed in 1990 that was the first federal statute that expanded civil rights protections to people with disabilities?

- A. Fair Labor and Standards Act
- B. Americans with Disabilities Act
- C. Elliot-Larsen Civil Rights Act
- D. Civil Rights Act of 1964

115. The Americans with Disabilities Act applies to public and private sector employers who have ___ or more employees.

- A. 15
- B. 20
- C. 25
- D. 30

116. What are qualities to consider when hiring new employees?

- A. Qualification
- B. Motivation
- C. Dependable
- D. All the above

117. True or false: In a job interview, candidates can be asked about their past work experiences.

- A. True
- B. False

118. Each of the following interview questions is not allowed, except:

- A. How old are you?
- B. Are you married?
- C. How do you deal with conflict?
- D. Do you have any disabilities?

119. Which type of employee file includes contact information in case there is an accident?

- A. Employment Application
- B. Policy Acknowledgement
- C. Emergency Notification Form
- D. None of the above

120. Which of the following are items employers should include in an Employee Policy and Procedure Manual?

- A. Company History
- B. Benefits
- C. Sick Days
- D. All the above