

Contracts, Risks & Insurance



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INTRODUCTION

This presentation is for anyone involved in constructing, financing, owning, improving, maintaining, managing, or dealing with claims and litigation regarding real property. The program is intended to help avoid the most common pitfalls that cause project shortcomings, defects, delays, cost overruns, legal disputes and headaches in general.

Construction is more complex today than ever before. Labor shortages, under-supply and over-demand of qualified contractors, bureaucracy, legal risks, fees and taxes, and complicated insurance issues are only a few of the reasons why construction is increasing more rapidly than it should.

This program is a map of the rocky terrain that any construction project is. Even a bathroom remodel can turn into a nightmare. When we scale that up to complex multi-million dollar projects with scores of companies and hundreds or even thousands of people involved, understanding the big picture is critical for success.

PROGRAM OUTLINE

1. Introduction
2. Contracting 101
3. Contracts
4. Change Management
5. Risks
6. Insurance
7. Conclusion

LEARNING OBJECTIVES

- Introduce the basic roles & responsibilities on a construction project
- Offer an overview of contracts and the key components that aid in the management of risk
- Introduce a framework to help you identify and address the most common pitfalls that cause project shortcomings, defects, delays, cost over-runs, legal disputes, and headaches
- Offer an overview of insurance products that are applicable to construction professionals, businesses, and projects, and their use in managing risks

BACK-UP MATERIALS

1. The DBSKCV Construction Management Method by Peter D. Fowler
2. AIA A101 2017 Standard For Agreement Between Owner and Contractor
3. AIA A201 2017 General Conditions of the Contract for Construction
4. ConsensusDocs 200 2017 Standard Agreement and General Conditions Between Owner and Contractor
5. Managing Construction Quality by Peter D. Fowler
6. Insurance Basics by Shon DeVries
7. PFCS Risk Management Checklist

Originally Published in 2005
Updated 3/2018

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 - K. Definitions and Application
7. Conclusion
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Contracts, Risks & Insurance



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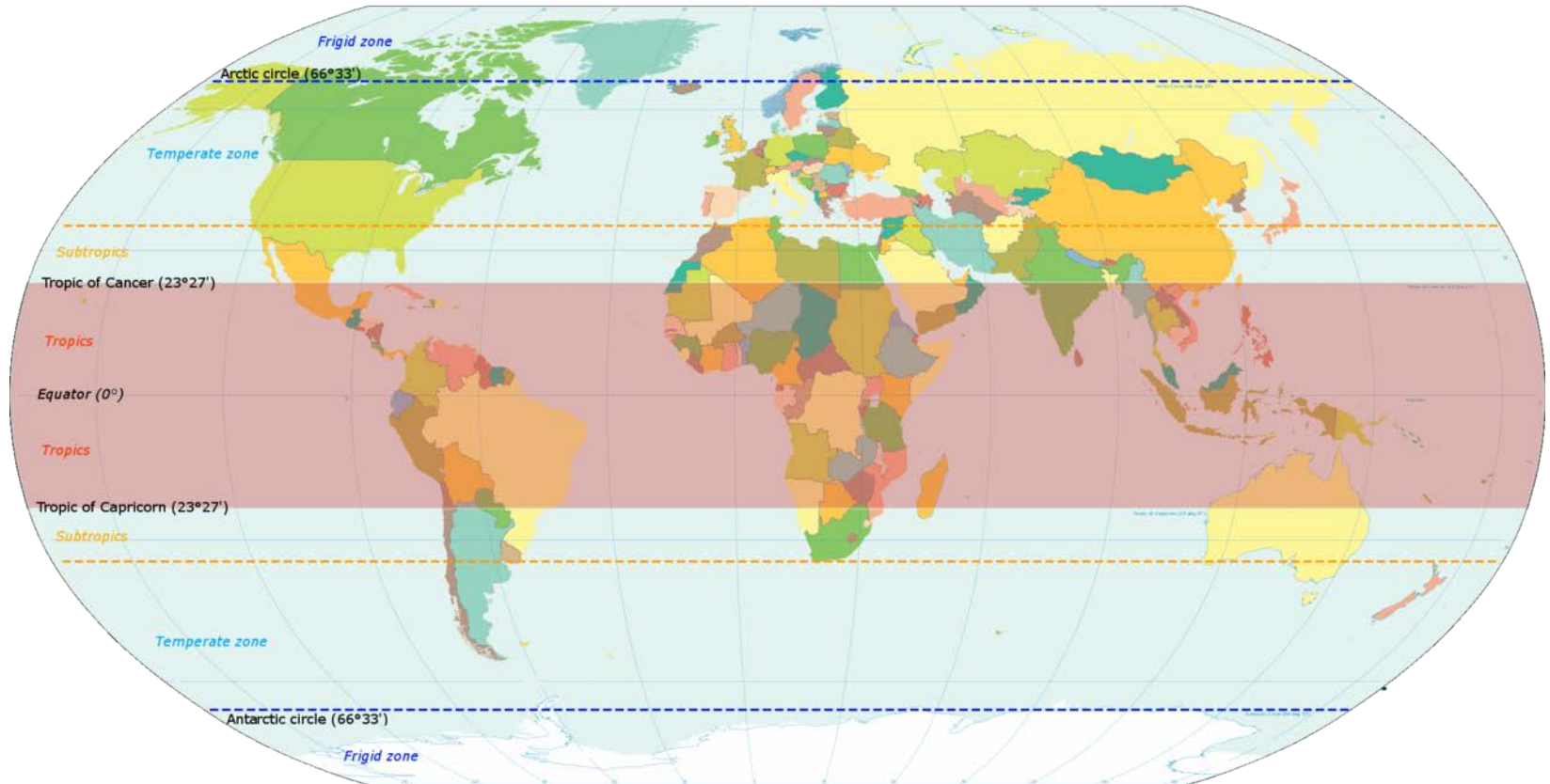
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Pete Fowler
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Monday, April 9th, 2018

1. INTRODUCTION



We know buildings

INSPECTION & TESTING

CONSTRUCTION MANAGEMENT

CLAIMS & LITIGATION



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You would do well to work as
a team in the coming week.

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BUILDING PERFORMANCE ANALYSIS
BUILDING ECONOMICS
CONSTRUCTION MANAGEMENT
PROJECT MANAGEMENT



Project Types



Clients



- 1 LAWYERS
- 2 INSURERS
- 3 PROPERTY OWNERS & MANAGERS
- 4 FINANCIAL INSTITUTIONS INCLUDING LENDERS
- 5 BUILDERS, DEVELOPERS AND CONSTRUCTION CONTRACTORS
- 6 PROPERTY MANUFACTURERS AND SUPPLIERS
- 7 GOVERNMENT

Program Outline

1. Introduction
2. Contracting 101
3. Contracts
4. Change Management
5. Risks
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Learning Objectives

- Introduce the basic roles & responsibilities on a construction project
- Offer an overview of contracts and the key components that aid in the management of risk.
- Introduce a framework to help you identify and address the most common pitfalls that cause project shortcomings, defects, delays, cost over-runs, legal disputes, and headaches.
- Offer an overview of insurance products that are applicable to construction professionals, businesses, and projects, and their use in managing risks.



Why This Is Important

Construction is more complex today than ever before. Labor shortages, under-supply and over-demand of qualified contractors, bureaucracy, legal risks, fees and taxes, and complicated insurance issues are only a few of the reasons why construction is increasing more rapidly than it should. This program is a map of the rocky terrain that any construction project is. Even a bathroom remodel can turn into a nightmare. When we scale that up to complex multi-million dollar projects with scores of companies and hundreds or even thousands of people involved, understanding the big picture is critical for success.



The DBSKCV™ Construction Management Method

What is this DBSKCV™ “Method”?

Since the time of the ancient Greeks, humans have been creating and using problem solving “methods” to help us structure situations to aid in identifying the best available alternatives. Some examples of these methods include:

- Classic Problem Solving (Where are we? Where are we going? How do we get there?)
- Scientific Method (Observe, Hypothesize, Predict, Test, Repeat)
- Alcoholics Anonymous’ 12-Steps (admit, believe, decide, inventory, confess, prepare, ask, list, amends, continue inventory, pray for knowledge, help)
- Dr. Deming’s 14-Points for Quality Management (purpose, philosophy, variation, suppliers, improvement, training, leadership, fear, barriers, slogans, eliminate MBO, workmanship, self-improvement, transformation)
- Six Sigma for Process Improvement (Define, Measure, Analyze, Improve, Control)
- Franklin Covey’s Project Management Method (Visualize, Plan, Implement, Close)
- Project Management Institute’s 9 Project Management Categories (Management of Scope, Time, Cost, Human Resource, Risk, Quality, Procurement, Communication, Integration)
- ASTM Standards: E 2018 Property Condition Assessments, E 2128 Standard Guide for Evaluating Water Leakage of Building Walls, E 1739 Guide for Risk Based Corrective Action.

The DBSKCV™ (pronounced “dib-skiv” - DiB-SKCiV) Method is a six-category framework to aid construction professionals in achieving construction project objectives. The DBSKCV™ Method begins with a

Project Plan (Figure 1), which starts with identification of the project Objective. We then use the *DBSKCV™ Menu of Deliverables* (Figure 2) as a menu to select documents or actions that will aid us in moving from where we are to our stated objective. The final step in project planning is to create a step-by-step list of actions. First we plan the work, and then we work the plan. Take a minute or two to review the plan and menu.

This is harder than it sounds. Construction people have a bias toward action; which is a good thing – we like to see things happen. But we need to resist the temptation to do work before planning. This way, we can be sure to not waste time on unnecessary activity, which is a common source of project failure.

What is Construction Management (CM)?

The Construction Management Association of America (CMAA) says the 120 most common responsibilities of a Construction Manager fall into the following 7 categories:

1. Project Management Planning, 2. Cost Management, 3. Time Management, 4. Quality Management, 5. Contract Administration, 6. Safety Management and 7. CM Professional Practice. This includes specific activities like defining the responsibilities and management structure of the project management team, organizing and leading by implementing project controls, defining roles and responsibilities and developing communication protocols,

and identifying elements of project design and construction likely to give rise to disputes and claims.

Why is Construction and Construction Management Important?

Construction professionals are living in a new world. The following social & economic realities make construction, CM and professionalism in construction critical:

- Building construction is a fundamental component of human society.
- Construction constitutes nearly 10% of Gross Domestic Product (GDP).
- Consumers are expecting quality increases and price decreases in all products.
- The building industry, in general, is not keeping pace with the quality and price improvements that many industries are making.
- The building industry is not attracting the brightest young people into the industry.
- Consumers are more litigious than ever and are becoming more and more so.
- There is a proliferation of attorneys.
- The built-environment has been altered dramatically in the last 20 years.
- Consumers are more conscious of building related health issues than ever.
- In some areas, a lack of skilled construction labor makes the construction professional's job even more critical.

Project Planning and Management

There is no way to 100% guarantee project success. The closest I have found to a guarantee (and I have been looking long and hard) is to hire highly experienced geniuses, or to use a proven **system**. So if you are not a genius, or can not afford an entire team of them, you better read on.

It is also my experience that **planning always saves time**. As I mentioned before, construction people want to see things happen and it takes discipline to resist the temptation to start working before completing the Project Plan. Remember: Planning is the closest we can get to a guarantee of project success.

Growing legal risks, administrative issues, sky-rocketing workers' compensation costs, increasing fees and taxation, and complicated insurance issues are only a few of the reasons why the price of construction is higher today than ever before. In addition, managing risk and facilitating a smooth operation are reasons enough to use a system for the management of your project.

We have all heard the adage: "Good people are hard to find." I think good companies are even harder to find. All great businesses create systems that help good people achieve the goals of the company. Most companies, particularly in the construction industry, rely on individuals to develop their own systems. This means the individual has to be some kind of genius. Geniuses **are** hard to find, but not as hard to find as good companies with good systems.

The construction industry is attracting fewer "geniuses" than other industries. We need to make it easier for construction managers to succeed, giving them tools and techniques to keep promises, balancing the big three (cost, quality, and time), to offer continuously improving value (more quality for less cost and time), and to **earn** the money they could make in competing industries. Teaching construction managers to plan profitable projects and manage them through fruition is a fundamental that the construction industry is not doing well enough.

Dealing with contractors and subcontractors requires skill, professionalism, and a system.

The quality of contractors ranges from excellent to criminally incompetent, which can make the process range from complex but satisfying, to nightmarish and costly. We can not rely on contractors to act professionally – if they do, let it be a pleasant surprise, and when some don't, we must have a system in place to manage the problem. My experience suggests that a nice but incompetent contractor might cost us more than a competent criminal. Don't let yourself be the victim of a contractor's lack of sophistication. If you use a process to guide you in dealing with problem contractors and project pitfalls, success is much more likely. The right planning activities at the beginning of the project will equip you to deal with the incompetent or the unscrupulous.

Summary of the DBSKCV™ Method

- Define the Scope of Work (this includes the design phase).
- Budget: identify how much the project will cost the contractor and owner.
- Schedule when the construction will happen and share this information.
- Contract: Who is doing what? Everyone should know what to expect.
- Coordinate the construction.
- Verify, document and communicate that everyone is doing what they should.

Each of these categories could be books by themselves. The idea here is to fly over the subject of Construction Management so that we see the big-picture. We need to understand the forest, so we don't get lost in the trees. Dealing with details before understanding the big picture can be dangerous. In construction, dangerous means expensive.

I. Define the Scope of Work

The "Define" phase of construction management consists of documenting the

work to be performed. This is usually done graphically and in writing with plans, specifications, references to codes and standards, and detailed "Scope of Work" documents. Getting a clear, specific and detailed project scope is the first step in the construction project management process.

See the DBSKCV™ Method Menu of Deliverables (Figure 2) for the most common scope of work documentation. Depending on the type of project, this is sometimes the work of architects and engineers, but many projects are defined by owners and contractors.

Complete, detailed scope of work documentation allows parties a mutual understanding of what is being bought and sold. My company has consulted on many projects where the owner and the contractor were in dispute and the root cause was a lack of clarity from the beginning. A good "scope of work" is like building on a proper foundation and should identify the quantities and locations ("scope") of the work as well as materials, specifications, methods and standards of workmanship. Until you have specified in writing the location, size, shape, materials and workmanship you are envisioning for your project, you are not ready to move forward in the planning process. The "scope of work" (i.e. mutual understanding of what is being bought and sold) should be updated as necessary throughout the project.

Keep in mind that the specifications or methods that are defined in the Scope of Work can mean the difference between long term success and failure. As an example, the right paint specifications can double the life of a paint job. If the owner thinks they are buying a 10-year paint job, but the specification will not deliver, a "re-meeting of the minds" might be called for.

Owners or their representatives should not sign a one or two page "Proposal" from a contractor. The "Scope of Work" in such a document is not likely to contain information specific enough to protect the owner if the workmanship is poor. In addition, the contract language will not protect the parties as well as a more complete and professional contract.

II. Budget

Estimating and budgeting are stand-alone areas of professional practice which some construction professionals dedicate their entire careers to. A good estimate for construction is based on lots of assumptions, including the scope of work. If the scope is a moving target, so will the construction costs. Direct costs of construction are usually categorized by Labor, Materials, Equipment and Subcontractors. Most good contractors estimate what they think direct construction costs will be, and then add for overhead, profit, other project costs and contingency, to come up with a contract price.

Total construction cost is made up of so many little pieces that it can become incomprehensible without a system for management. My company has worked on projects in dispute where the records were maintained so poorly that it was impossible to determine the exact costs of construction.

The importance of managing the budget cannot be understated. Before, during and after construction, the construction manager should always know where the project stands relative to the budget. During the course of construction you should know exactly what has been paid and the approximate amount remaining to complete the project.

Keeping an Expense Register that is coded to allocate all expenses is a critical activity

so the original and updated Schedule of Values can be compared to the actual project expense. A Budget Worksheet (similar to AIA form G703) should be setup at the beginning of the project and maintained through project close.

III. Schedule

A schedule can take many forms, including Barr / Gantt charts, or CPM (Critical Path Method) Schedules, but the simplest is a list of activities and when they will be performed. A competent contractor should be willing to put a schedule in writing. The owner should add some contingency time of her own. The schedule gives everyone an idea of what will go on and when and will serve as a measuring stick to compare plan to actual progress. With this tool, everyone can identify problems early.

Scheduling is about communication. Successful project management requires communication of expectations with everyone involved: owner(s), designers, contractor(s), government agencies, subcontractors, suppliers, and more. Each activity in construction is usually pretty simple; the greatest difficulty is often in coordination of so many parties. There are often more things to do and coordinate than people can keep organized in their heads. Unfortunately, many projects never have a schedule put to paper, or even if they have one at the beginning, it is not used as a management tool throughout construction.

IV. Contract

A contract is a binding agreement. It should be used as a communication tool to make sure that all parties understand and agree exactly what is being bought and sold. Like any other powerful tool, it can be dangerous, so be careful. Don't let the excitement of a

big project, a smooth talker, or a busy schedule allow you to gloss over the details.

A prime construction contract is an agreement between the owner and a contractor. A subcontract is an agreement between a prime contractor and some other contractor who will perform all or a portion of the work covered in the prime contract. Thus, if an owner contracts directly with a “subcontractor” like a painter, this is not a subcontract; it is a prime contract. Prime and subcontractors have different rights and responsibilities. Unfortunately, some prime and sub-contractors do not operate professionally.

All contracts for construction should be in writing. We will hit only the high-points here, but at a minimum, a construction contract should contain:

- Full contact information for all parties to the agreement, including contractor license information, physical location of all parties, and a description of the property in question.
- Detailed “Scope of Work” with material, equipment and workmanship specifications. This might include plans, and written specifications describing the work in detail, a list of fixtures, etc...
- Contract Price (Schedule of Values, Allowance Schedule, etc...)
- Payment Schedule
- Construction Schedule and any consequences for failure.

Change Orders are a natural part of construction and a contingency for them should be built into the budget. Change orders become a part of the construction contract, should always be in writing, and should be negotiated and signed at the time the change occurs, not at the end of the project.

A Payment Schedule should be negotiated at the time the contract is signed. Try to never pay more than the value of the work in place. That is, if the project is 50% complete and you have paid 75% of the contract price, then you are in a dangerous position.

Contractors’ lien rights are a complicated collection of legal protections to make sure contractors get paid for improving property. Collection of lien releases verifies that contractors have been paid and protects the property from liens.

V. Coordinate

The “coordinate” phase of construction management takes our planning and puts it to work. We spend a lot of time and energy in the define, budget, schedule, and contract phases, even though we get none of the satisfaction of seeing physical work take place. Remember: When the time to perform has arrived, the time to prepare has passed. If you effectively defined, budgeted, scheduled, and contracted the project, then this phase will go as smoothly as construction ever goes (so there will still be some problems to solve). Coordination of contractors, subcontractors, materials, equipment, inspections, changes, unforeseen conditions, personalities and forces of nature are always a challenge.

In addition to the real “work” of a construction project, the coordination phase is where the miscommunication, screaming matches, fistfights, litigation and endless frustration often occur; we could also call this phase “Herding Cats”. Managing a project from beginning to end requires a combination of construction knowledge, management skills, political savvy, and patience. While construction is usually a simple assemblage of labor, material, equipment and subcontractors, there are so

many moving parts that things regularly can and do go wrong.

Management of construction requires effective communication. Let's make this as clear as possible: OVER COMMUNICATE, in writing. If you have never read *The One Minute Manager*, do so before you start your next project; it takes less than 2-hours and will save more than that in the first week. The point is: (1.) Figure out what good performance looks like, communicate and document it in writing, and get agreement that everyone shares your vision (One Minute Goals). (2.) Make sure there are rewards for good performance because we all want to feel good about doing good work (One Minute Praisings), and (3.) have the courage to administer consequences for poor performance (One Minute Reprimands).

You need to have a filing system for your project and religiously document and file the mountain of project information. There are things that should be performed regularly to keep the project progressing. Forms that might be used and/or updated include: Scope of Work, Specifications, Finish Schedule(s), Schedule of Values, Budget, Expense Register, Project Schedule, Change Orders, Purchase Orders, Contacts List, Daily Log (who did what, how long it took, noteworthy conversations, etc...), Correspondence, Safety Meeting Minutes, Accident Reports, Inspection Check-Lists, Municipal inspection information, etc.

VI. Verify

Verifying that the construction is proceeding as planned is critical. This is where we compare our progress to plan. Big problems start small. When we find variations from our plan, we use our documentation system to memorialize them. Remember that property improvement contractors have become the #1 consumer complaint in the

U.S.; if you do not want to be a sad statistic, then problems need to be nipped-in-the-bud.

The building department might want to inspect at specified points for life-safety issues. If someone says no permit is required, ask them to put it in writing, or call the municipality. Remember: The building department is not where inspection ends. We have listened to scores of owners bemoaning their fate saying, "Where were the city inspectors?", when they had buildings that leaked or were otherwise constructed poorly. The owner or representative will want to "verify" at various hold-points to ensure the quantity and quality of workmanship. There may be special assemblies like roofs, decks, windows or weather-resistive assemblies that should be tested to make sure they were constructed appropriately.

The contractor will be asking for payments based on the Payment Schedule and you will need to verify the work is complete and built to the standards established in the "define" phase of planning. In addition, the owner will want to collect lien releases for work that is completed and paid.

Conclusion

Remember: 1. Use a system to document your objectives and the process of construction, in writing. 2. Communicate with all of the players in the process. 3. Put everything in writing: People are more committed and more accountable when they have put all their promises in writing.

*Project Plan - CM***Objective**

Generic Objective: We will complete and deliver the construction project as promised, with the negotiated level of quality, appropriate building performance, within budget and schedule. Based on our professionalism and effectiveness we will have EARNED enthusiastic recommendations from the client, the respect of other skilled professionals with whom we worked, and the profits we had planned for.

Method

	Description
1	D Define
2	B Budget
3	S Schedule
4	K Contract
5	C Coordinate
6	V Verify
7	
8	
9	
10	

Deliverables

	Description	Priority	Who	When
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Actions / Tasks / Work Breakdown Structure

	Description	Priority	Who	When	Time	\$
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
					-	\$ -

DBSKCV Method

Menu of Deliverables

FIGURE 2

Define	
Deliverables	
Project Summary (AIA G806, G808 & G809)	Workmanship / Trade Standards
Project Checklist (AIA D200)	Architect's Supplemental Instructions (AIA G710)
Plans (As-Built, New Work)	Construction Change Directive (AIA G714, G714 CMA)
Details (Plan, Section, Elevation)	RFI (Request for Information) (AIA G716)
Specifications	RFI (Request for Information) Log
Code References	RFP (Request for Proposal)
Building Standards (ASTM, AAMA, Etc.)	Submittal Transmittal
Testing Standards	Submittal Checklist/Log (Shop Drawing & Sample Record AIA G712)
Schedules: Room, Location, Area, Finishes, Equipment, Door, Window, etc.	Scope of Work (Prime & Sub)

Budget	
Deliverables	
Estimate: Feasibility	Expense Log / Check Register
Estimate: Design/Development	Payment / Application for Payment Log (CSI Form)
Estimate: Bid / Proposal	Allowance Schedule
Estimate Back-Up	Budget: Update (Weekly/Monthly)
Budget (Pre-Construction)	Change Order Summary / Log
Schedule of Values / Budget Worksheet (AIA G703)	

Schedule	
Deliverables	
Project Schedule: List	Project Schedule Actual vs. Plan
Project Schedule: Gantt / Bar	Notice to Proceed
Project Schedule: CPM	Work Breakdown Structure (WBS)

(K) Contract	
Deliverables	
Design Contract (AIA B141, B151, B155)	Indemnity Agreement
CM Contract (AIA B801 CMA)	Addenda (Other)
Consultant Agreement (AIA C141, C142, C727)	RFP (Request for Proposal)/Instructions to Bidders (AIA G709, A701)
Prime Contract (incl. Home Improvement) (AIA A101, A105, A107)	Bid Analysis
General Conditions (AIA A201, A201 CMA)	Proposal (incl. Prime K, Scope & Budget)
Contractor's Qualification Statement (AIA A305)	Subcontract (AIA A401)
Bid, Performance and Payment Bonds (AIA A310, A312)	Work Changes Proposal Request (AIA G709)
Supplemental Conditions (AIA A511)	Change Order (AIA G701, G701 CMA)
Insurance Requirements	Purchase Order

Coordinate	
Deliverables	
Project Plan	Materials List
Correspondence (Letter, Fax, Memo, E-Mail) (AIA G810)	Meeting Agenda
Communication Log	Meeting Minutes
Daily Log	Project Contacts (AIA: Subs G805, Team Directory G807)
Project File (Table of Contents)	One Minute Goals (via One Minute Manager)

Verify	
Deliverables	
Inspection Check-Lists	Safety Plan & Meeting Minutes
Inspection Documentation / Field Report (AIA G711)	Accident / Incident Reports
Municipal Inspection Documents	Timesheets
Hold Points	Punch List
Payment Schedule	Project Close Documents
Application for Payment (AIA G702/703, G702 CMA)	Certificate of Substantial Completion (AIA G704, G704 CMA)
Lien Releases (AIA G70)	Insurance & Additional Insured Endorsements
Contractor's Affidavit of Payment of Debts (AIA G706)	

DBSKCV Method

Project Plan - CM Sample

FIGURE 3

Objective	Generic Objective: We will complete and deliver the construction project as promised, with the negotiated level of quality, appropriate building performance, within budget and schedule. Based on our professionalism and effectiveness we will have EARNED enthusiastic recommendations from the client, the respect of other skilled professionals with whom we worked, and the profits we had planned for.
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Method			
		Description	
1	D	Define	The project is a 4,200 SF commercial tenant improvement.
2	B	Budget	The contract price is \$168,000.
3	S	Schedule	The Project Schedule allows for 4 months to complete.
4	K	Contract	The contract is a standard AIA Form Fixed Price Agreement.
5	C	Coordinate	The plans are now in plan check, and should be ready in 2 weeks.
6	V	Verify	Hold points include paint color sign-off, and the Payment Schedule is monthly.
7			
8			
9			
10			

Deliverables				
	Description	Priority	Who	When
1	Plans	A	ARCH	IP
2	Scope of Work	A	PF	Done
3	Schedule of Values	B	PF	Done
4	Finish Schedule	B	PF	Done
5	Budget Worksheet	B	KL	This Week
6	Allowance Schedule	B	KL	Next Week
7	Project Schedule	B	PF	Next Week
8	Prime Contract	Done	PF	Done
9	Subcontracts (Drywall, ELEC, PLMG, Paint, Cleiling, Flooring)	B	KL	Soon
10				

Actions / Tasks / Work Breakdown Structure						
	Description	Priority	Who	When	Time	\$
1	Call city to check on plans	A		This Week	0.5	
2	Compose Scope of Work document	A	PF	Done		
3	Port Schedule of Values to Budget Worksheet	B	KL	This Week	1.0	
4	Update Finish Schedule by room	B	PF	Done		
5	Create Allowance Schedule and Forward to Owner	B	KL	Next Week	2.0	
6	Create Project Schedule and forward to owner	B	PF	Next Week	2.0	
7	Lay-Out subcontracts & generic Scope of Work	B	KL	Next Week	5.0	
8	Coordinate with subcontractors and deliver information	B	KL	Next Week	8.0	
9	Finalize subcontract for Drywall	B	KL	Soon	4.0	
10	Finalize subcontract for ELEC	B	KL	Soon	4.0	
11	Finalize subcontract for PLMG	B	KL	Soon	4.0	
12	Finalize subcontract for Paint	B	KL	Soon	4.0	
13	Finalize subcontract for Ceiling	B	KL	Soon	4.0	
14	Finalize subcontract for Flooring	B	KL	Soon	4.0	
15	Prepare for project kick-off	B	PF	Soon	4.0	
16						
17						
18						
19						
20						
					46.5	\$ -

2. CONTRACTING 101

Define, Budget, & Schedule

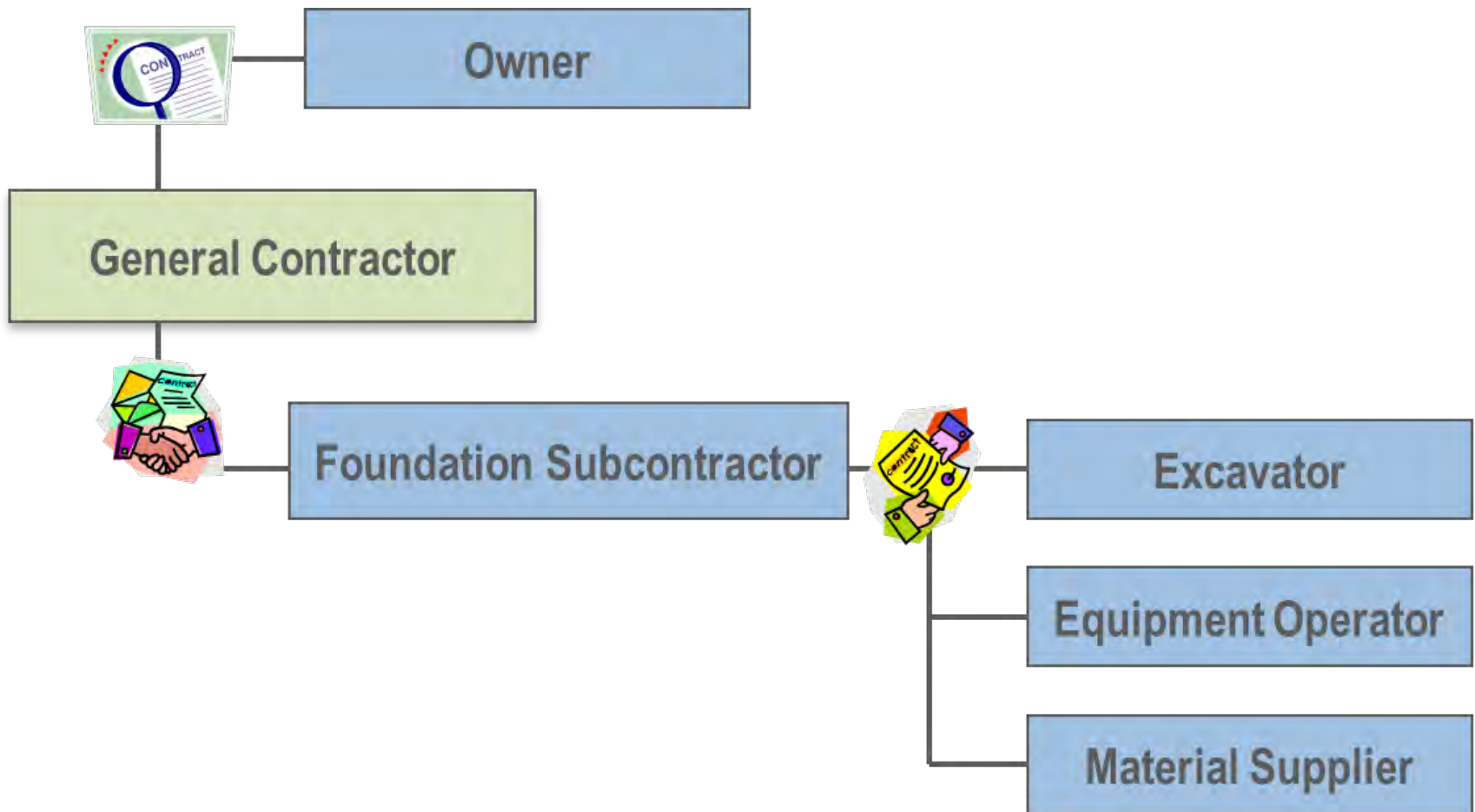
“I would like a car, please.”



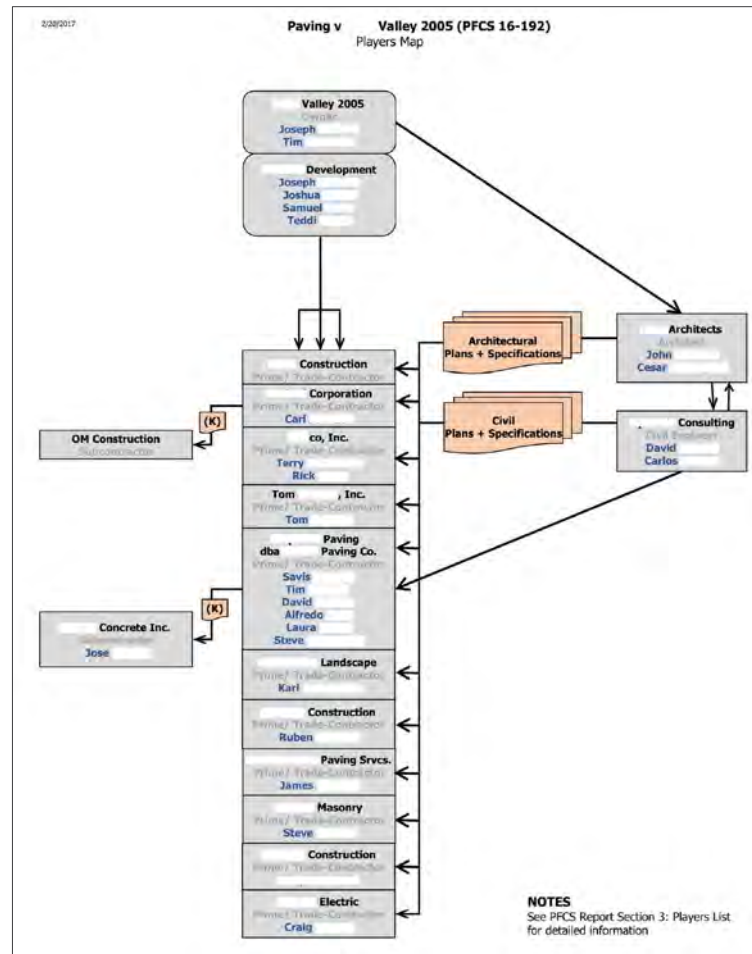
Contracting 101



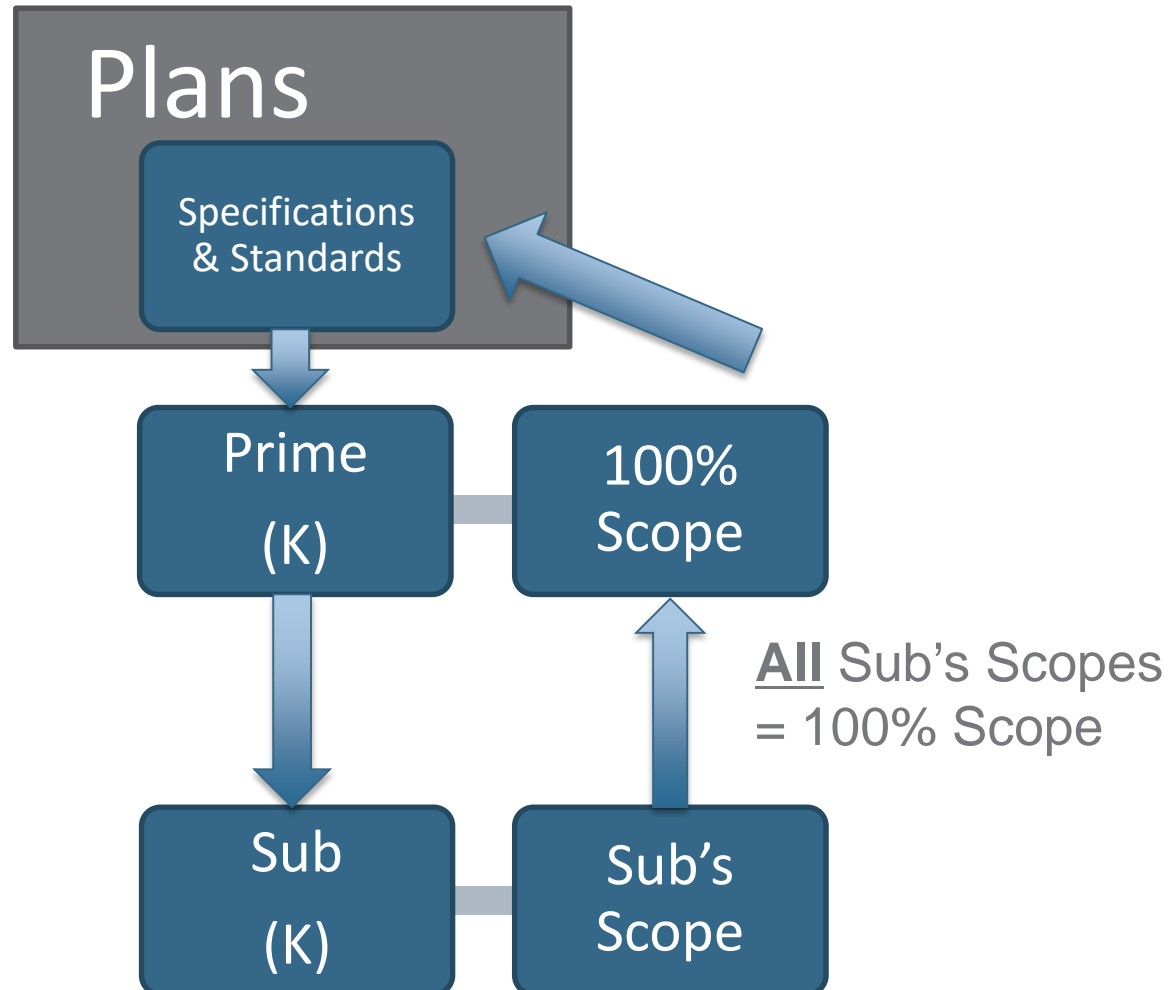
Contracting 101

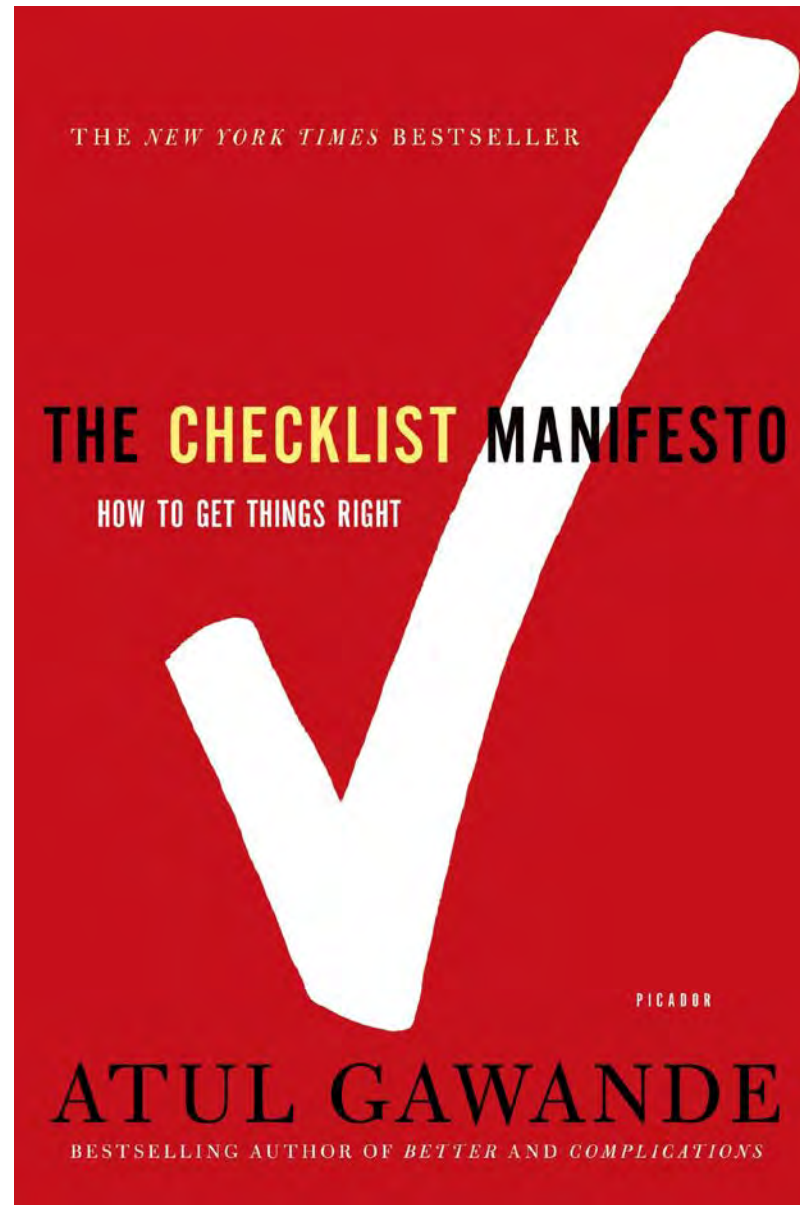


Sample Project: Claim for Nonpayment / Counter Claims for Defects & Delays



Professional Contracting Discipline





The DBSKCV CM Method Overview

- Define
- Budget
- Schedule
- (K) Contract
- Coordinate
- Verify



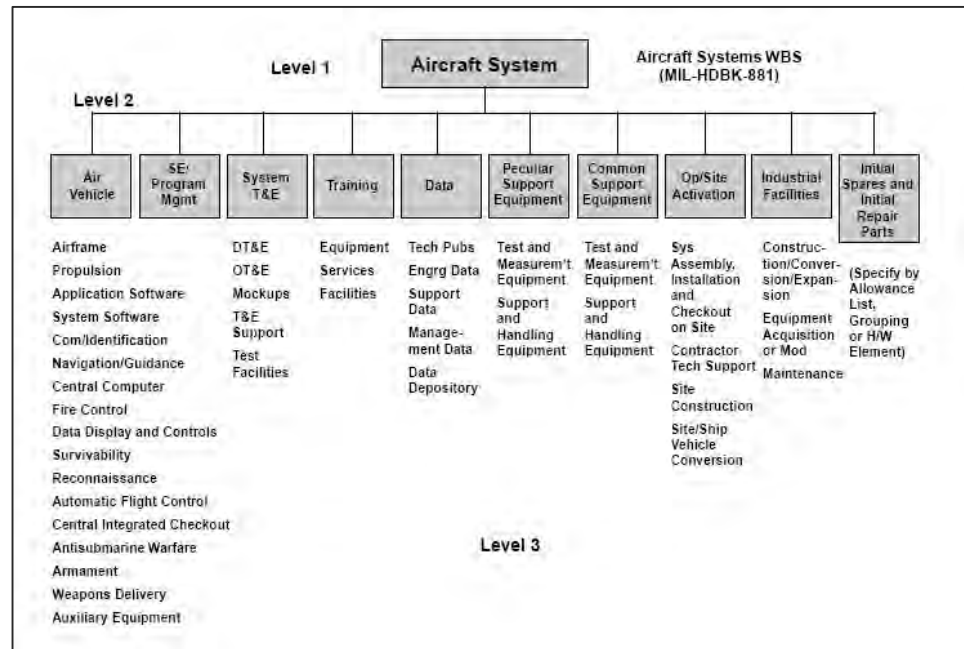
Scope of Work

- Definition of what is being bought and sold.
- References to plans, specification, prescriptive specifications, performance specifications, substitutions.
- Allowances.



Schedule of Values

A work breakdown structure (WBS), in project management, is a deliverable oriented decomposition of a project into smaller components.

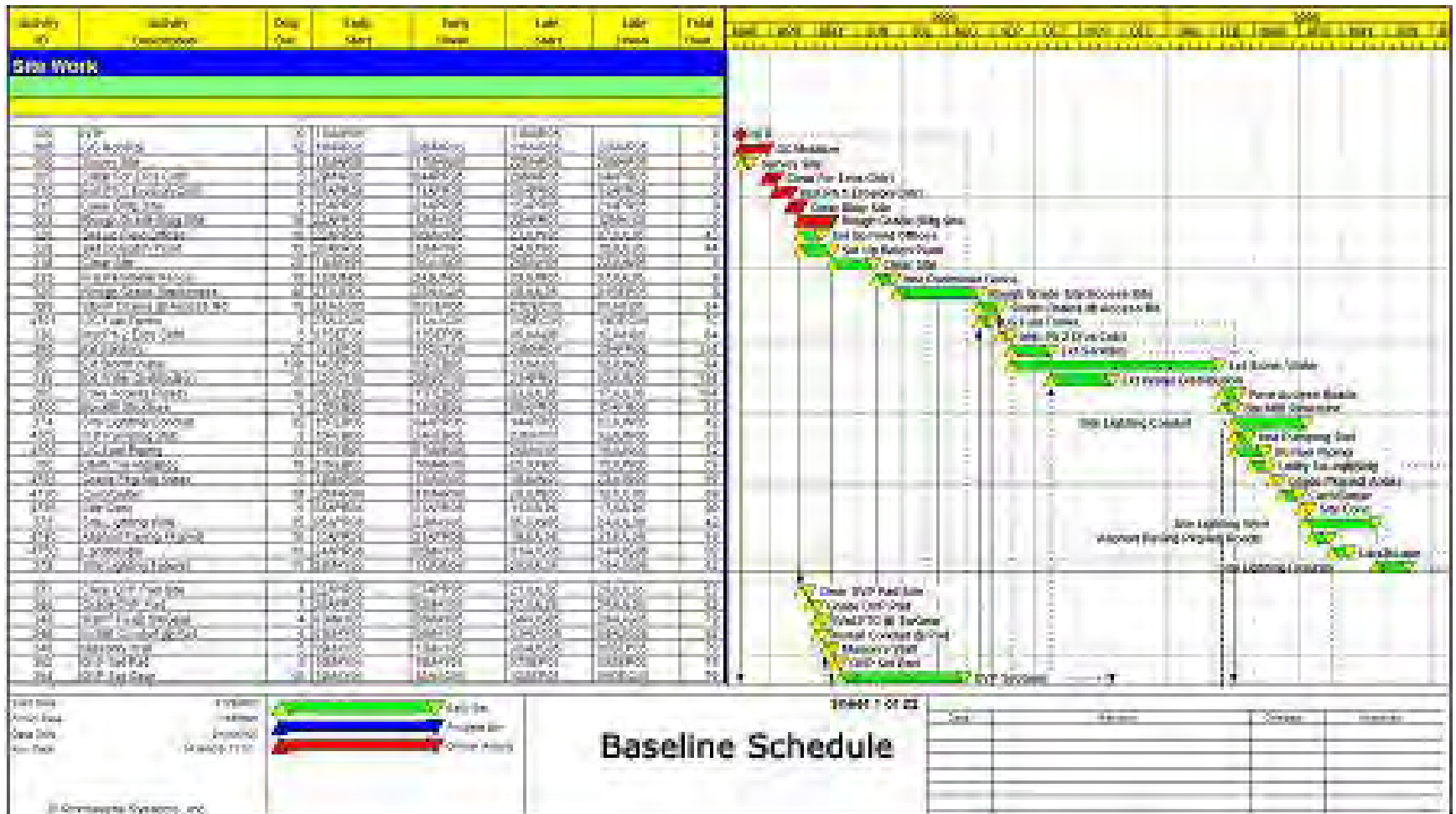


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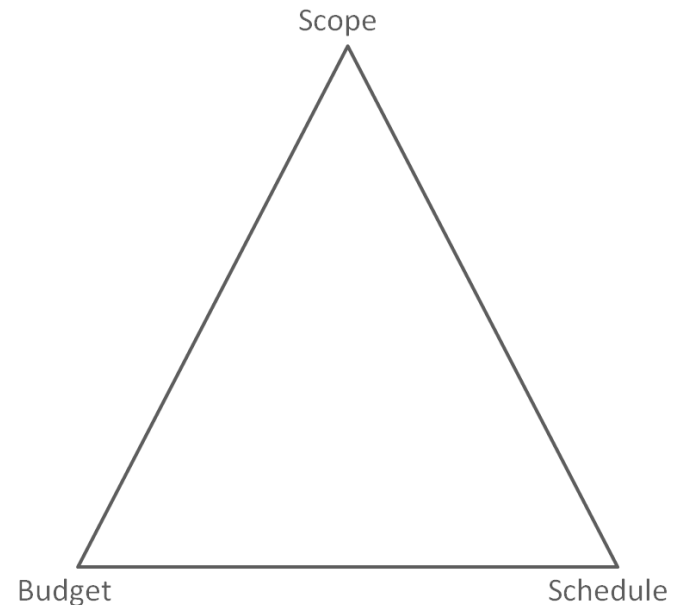
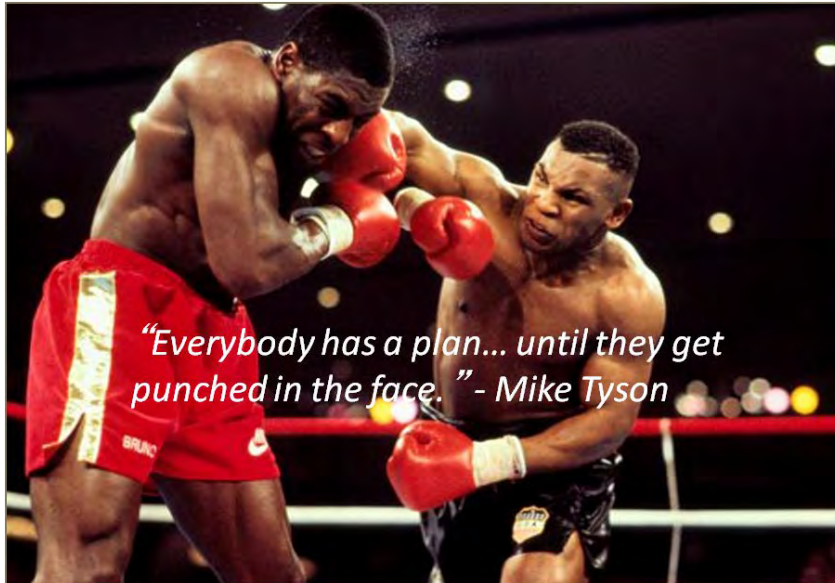
http://en.wikipedia.org/wiki/Work_breakdown_structure



Progress Schedule



Project Management



Scope		Budget	Actual	Schedule
1.	Item 1	\$ XXX	\$ XXX	Plan/Actual
2.	Item 2	\$ XXX	\$ XXX	Plan/Actual
3.	Item 3	\$ XXX	\$ XXX	Plan/Actual
4.	Item 4	\$ XXX	\$ XXX	Plan/Actual
5.	Item 5	\$ XXX	\$ XXX	Plan/Actual
6.	TOTAL	\$ X,XXX	\$ X,XXX	

Project Delivery Schemes

- Design-Bid-Build
- Construction Management
- Design-Build
- Owner-Builder



Case Study

Our Simplified Case Study:
*DBSKCV® One Page
Summary*



Milestones vs. Values

#	Scope	Milestone	Value	PMT #1	PMT #2	PMT #3	Total Paid
1	Excavation	200	250	0	0	0	0
2	Walls *1	200	300	0	0	0	0
3	Roof	200	200	0	0	0	0
4	Signage*2	100	50	0	0	0	0
5	Paint*3	100	100	0	0	0	0
6	Complete	200	100	0	0	0	0
7	Total	1,000	1,000	0	0	0	0
8	-	-	-	-	-	-	-
9	CO#1	-	-	-	-	-	-
10	CO#2	-	-	-	-	-	-
11	CO#3	-	-	-	-	-	-
12	CO#4	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	Total	-	-	-	-	-	-

Notes: (1.) Allowance of \$30 for hardware. (2.) Allowance of \$40 for signs.
 (3.) Allowance of \$40 for material. (4.) Exclusion - Ladder



Payment Application

#	Scope	Milestone	Value	PMT #1	PMT #2	PMT #3	Total Paid
1	Excavation	200	250	200	0	0	200
2	Walls *1	200	300	30	0	0	30
3	Roof	200	200	0	0	0	0
4	Signage*2	100	50	0	0	0	0
5	Paint*3	100	100	0	0	0	0
6	Complete	200	100	0	0	0	0
7	Total	1,000	1,000	230	0	0	230
8	-	-	-	-	-	-	-
9	CO#1: Hardware	-	10	10	-	-	10
10	CO#2: Delete Signs	-	-	-	-	-	-
11	CO#3: Paint	-	-	-	-	-	-
12	CO#4: Landscaping	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	Total	-	1,010	240	-	-	240



Managing the Risks on Our Sample Project

- Risk Identification
- Risk Management



Purchasing Construction Services



Purchasing Construction Services

Step By Step

1. Outline the Scope / Schedule of Values (Preferably by Unifformat)
2. Compose the Scope of Work
3. Select Contract Form and Review the Terms (Really, read it.)
4. Select or Compose General Conditions
5. As necessary, send the contract to the lawyer for review and approval
6. Create a Progress Schedule form using the Schedule of Values
7. Create a Payment Application form using the Schedule of Values
8. Compose RFP (Request for Proposal) / Invitation to Bid document
9. Compile RFP attachments including Scope of Work, plans, etc...
10. Finding Qualified Bidders
11. Delivering RFP / Tendering
12. Analyzing Bids
13. Calling References
14. Making Recommendations
15. Executing the Contract



AIA[®] Document A201[™] – 2017

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503[™], Guide for Supplementary Conditions.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining

provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building

information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the

site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's

capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the

time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under

Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the

Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable

by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The

foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not

constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the

endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The

Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the

Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or Suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section

15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly

consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.



AIA® Document A101™ – 2007

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the _____ day of _____
in the year _____
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, legal status, address and other information)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201™–2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS
- 10 INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

§ 3.2 The Contract Time shall be measured from the date of commencement.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than () days from the date of commencement, or as follows:
(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)

Portion of Work

Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents.
(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:
(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 4.3 Unit prices, if any:
(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)

Item

Units and Limitations

Price per Unit (\$0.00)

§ 4.4 Allowances included in the Contract Sum, if any:
(Identify allowance and state exclusions, if any, from the allowance price.)

Item

Price

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the _____ day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the _____ day of the _____ month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than (_____) days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of _____ percent (_____ %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™-2007, General Conditions of the Contract for Construction;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of _____ percent (_____ %);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201-2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and
(Section 9.8.5 of AIA Document A201-2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)
- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201-2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:

(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows:

(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)

- ☐ Arbitration pursuant to Section 15.4 of AIA Document A201–2007
- ☐ Litigation in a court of competent jurisdiction
- ☐ Other: *(Specify)*

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

§ 8.3 The Owner's representative:
(Name, address and other information)

§ 8.4 The Contractor's representative:
(Name, address and other information)

§ 8.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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§ 9.1.4 The Specifications:

(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

Section	Title	Date	Pages
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§ 9.1.5 The Drawings:

(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

Number	Title	Date
--------	-------	------

§ 9.1.6 The Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

- .1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:
- .2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201–2007.

(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201–2007.)

Type of Insurance or Bond

Limit of Liability or Bond Amount (\$0.00)

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

3. CONTRACTS



Tender & Contract

Who Would You Prefer as Your Contractor?



Criminal
vs
Incompetent

Who? The Most Important Q



Introduction to Contracts

- Think like The One Minute Manager: What does good performance look like? What are the rewards for good performance? What are the ramifications for poor performance?
- Operating from a position of strength
- See Standard Contract Forms and Suppliers (PDF)
- The Golden Rule
(The one with the gold gets to make the rules!)



Introduction to Contracts

- Con·trac·tor (1): one that contracts or is party to a contract: as a: one that contracts to perform work or provide supplies b: one that contracts to erect buildings.
- Con·tract (1): to agree upon
- Documented negotiation
- A contract is a binding agreement. It should be used as a communication tool to make sure that all parties understand and agree exactly what is being bought and sold.



The Big Picture

- A contract is a legally enforceable agreement between two or more parties that creates an obligation to do or not do particular things.
- A contract has three parts: Offer, Acceptance and Consideration; for construction, they must be in writing.
- Who, What, When, Where, Why, How and How Much.
- Failure to Perform Under the Contract: "Breach."



Project Manager Responsibilities

A project manager is responsible for applying and managing the following ten knowledge areas:

Integration	Identify, define, combine, unify and coordinate activities within the Project Management Process Groups
Scope	Ensure the project includes all work required to complete the project successfully
Time	Manage the timely completion of the project
Cost	Manage the planning, estimating, budgeting, financing, funding, monitoring, and controlling of cost to enable the project to be completed within the approved budget
Quality	Determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken
Human Resources	Organize, manage, and lead the project team, including the identification of roles, responsibilities, required skills, and reporting relationships
Communication	Ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring and disposition of project information
Risk	Identify and assess risks, plan responses, and control risk to increase the likelihood and impact of positive events and decrease the likelihood and impact of negative events on the project
Procurement	Purchase or acquire and control products, services, or results needed from outside the project team
Stakeholders	Identify people, groups, or organizations that could impact or be impacted by the project; analyze expectations, and develop strategies to engage stakeholders in decisions and activities

SCOPE OF WORK



Specifications - Example

www.petefowler.com

1. B1001 Concrete Structure Crack Repairs

1. General	The concrete panels are cracked, allowing leakage, damaging the paint, and require repair.
2. Materials	Euclid DURALCRETE LV – Low Viscosity Epoxy Injection Resin and Binder (see attached specifications).
3. Execution	All products shall be applied in strict conformance with manufacturer's application instructions. Allowance to be provided for concrete crack repairs, based on visual inspection of property. Most cracks are located at south and west elevation panels. All crack repairs to utilize Euclid Chemicals products and installation instructions.
4. Quality Assurance	<u>Hold-Point</u> : Owner's Representative and/or product manufacturer's representative shall inspect after material application is complete but before it is covered.



AP 2.484

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DURALCRETE® LV LOW VISCOSITY EPOXY INJECTION RESIN AND BINDER

DESCRIPTION

DURALCRETE LV is a low viscosity, two part, 100% solids, low odor 2:1 mix ratio, moisture insensitive epoxy resin compound.

PRIMARY APPLICATIONS

- Concrete crack injection
- Gravity feed horizontal crack repair
- Vertical anchor bolt grouting
- Binder for horizontal concrete repairs

FEATURES/BENEFITS

- High strength
- Provides load transfer
- Virtually no odor
- 2:1 mix ratio
- Tenacious bond
- Moisture insensitive
- Deep penetration
- Can contribute to LEED points

TECHNICAL INFORMATION

Material Properties 75°F		Tempera Properties ASTM D 698 @ 14 days	
Color (mixed)	Clear Amber	Ultimate strength, psi (MPa)	7,125 (49.1)
Solids, %	100	Elongation at break, %	2.3
Mixing ratio (Parts A:B) by volume	2:1	Modulus, psi (MPa)	288,000 (1,012)
Gel time, min	40 to 45	Bond Strength ASTM C 882, psi (MPa)	2,150 (14.8)
Viscosity, cps	300 to 500	Hardened to hardened concrete	
Compressive Strength ASTM D 695, psi (MPa)		2 days (moist cure)	2,550 (17.6)
1 day (moist resin)	8,000 (55.3)	14 days (moist cure)	2,825 (19.5)
7 days (moist resin)	11,200 (77.2)	14 days (dry cure)	2,825 (19.5)
Compressive Modulus ASTM D 695, psi (MPa)		Heat Deflection Temp. ASTM D 648	126°F (52°C)
7 days (moist resin)	285,000 (1,827)	Water Absorption ASTM D 672	
Compressive Strength ASTM C 109, psi (MPa)		7 day, 24 hour immersion, %	0.34
7 days (mortar)	10,300 (71.0)	Data presented are typical laboratory values.	

PACKAGING

DURALCRETE LV is packaged in 15 gal (56.78 L) unit and 3 gal (11.36 L) case.

SHELF LIFE

2 years in original, unopened package.

SPECIFICATIONS/COMPLIANCE

ASTM C 881, Type I & IV Grade 1, Class B & C

COVERAGE

For anchoring, 1 neat gal yields 321 in³ of grout. One gallon of DURALCRETE LV mixed with 4 gal (15.14 L) of dry 20/40 mesh silica sand will yield approximately 0.45 ft³ (0.1 m³) of mortar. Coverage will vary depending on surface texture, porosity and temperature.

DIRECTIONS FOR USE

Surface Preparation: Concrete: The surface must be structurally sound; dry; free of grease, oil, coatings, dust, curing compounds and other contaminants. Surface laitance must be removed. The preferred method of surface preparation is abrasive blasting or other mechanical means. Oil contaminated surfaces should be degreased. Remove defective concrete, honeycombs, cavities, joint cracks, voids and other defects by routing to sound material.



Contract Components

- Parties
- General Information
- Schedule (Commencement & Completion Dates)
- Contract Sum
- Payments (Progress and Final): A Payment Schedule should be negotiated at the time the contract is signed. Try to never pay more than the value of the work in place. That is, if the project is 50% complete and you have paid 75% of the contract price, then you are in a dangerous position.
- Termination or Suspension Provisions
- List of Contract Documents that Define the Scope of Work (What is Being Bought and Sold)
- Indemnity



Contract Components

PFCS Request for Proposal (RFP) Contents:

1. Invitation to Bid (memo)
2. Plans
3. Specifications & Other Standards
4. Bid Form (Schedule of Values)
5. Progress Schedule Form
6. Standard Form Contract with General Conditions
7. Quality Control (QC) Hold Points
8. Application for Payment Form
9. Standard Form Subcontract Agreement



Contract Components

A201–2007, General Conditions of the Contract for Construction

The General Conditions are an integral part of the contract for construction. They set forth the rights, responsibilities, and relationships of the owner, contractor, and architect. Though not a party to the contract for construction between owner and contractor, the architect does participate in the preparation of the contract documents and performs certain construction phase duties and responsibilities described in detail in the general conditions. A201 is typically adopted by reference in certain other AIA documents, such as owner-architect agreements, owner-contractor agreements, and contractor-subcontractor agreements. Thus, it is often called the "keystone" document.

<http://www.aia.org/contractdocs/AIAS076742>



Payment Terms

- a. Invoice Requirements: Lien Releases, Schedule Updates
- b. Approvals / Certifications
- c. Retention
- d. Final Invoices: O & M Manuals, As-Built Drawings, Insurance Certificates, Written Warranties
- e. Right to Suspend for Non-Payment
- f. Right to Withhold Payments: 150% of Amounts in Dispute



Prime vs. Sub Contracts



Prime Contracts

- Contracting Directly with the Owner. A prime construction contract is an agreement between the owner and a contractor.
- AIA Forms: (www.aiacontracts.org)
- Instructions.
- Who is doing what?



Subcontracts

- A subcontract is an agreement between a prime contractor and some other contractor who will perform all or a portion of the work covered in the prime contract. Thus, if an owner contracts directly with a subcontractor, like a painter, this is not a subcontract; it is a prime contract. Prime and subcontractors have different rights and responsibilities.
- AGC and other industry standard forms. See [Standard Contract Forms and Suppliers \(PDF\)](#).



Finding Qualified Bidders: Sample Script



Calling References: Sample Script

1. Date
2. Time
3. Name
4. Company
5. When did XXX work for you?
6. What was the scope of work?
7. What was the original contract price (approximately)?
8. Were there any change orders? How much?
9. Was the work performed on time?
10. Tell me about how things went during construction?
11. How was the quality of the work?



Analyzing Bids and Making Recommendations



Pete Fowler
CONSTRUCTION
Services, Inc.

Bid Analysis Memorandum

Date:	May 10, 2011
To:	Condominium Owners Association
From:	Pete Fowler Construction Services, Inc.
Project:	XXXXX Condominiums, Milwaukee, OR (PFCS Project No. 10-241)
Regarding:	Summary of Bids

Dear Condominiums Board of Directors:

Our bidding process involved contacting 4 contractors in the Portland area, sending them our Request for Proposal, and receiving 4 complete bids based on the Scope of Repair as presented in our Request for Proposal package. The deadline was set by the end of the business day, Friday May 6, 2011; however two bidders submitted after this date which was negotiated with PFCS. We have prepared an accompanying Bid Analysis spreadsheet that allows for easy item-by-item comparison and the bids are attached in their entirety at the end of this document.

Summary of Bids

1. Bidder #1: This bid is the low bid totaling \$26,943.60. XXXXXX is a vinyl siding

Line	Item	Description	Quantity	Bidder #1	Bidder #2	Bidder #3	Bidder #4
1	1	Cleaning (CSI 01 74): Vinyl siding - OMMITTED	All BLDGS	-	-	-	-
2	2	Rough Carpentry (CSI 06 10): Repair of damaged OSB below window sill. Connected to Item 5 - see below.	15% (11-13 Windows)	\$3,250.00	\$4,340.00	\$1,350.70	\$2,731.00
3	3	Rough Carpentry (CSI 06 10): Treat Exposed OSB	2 BLDGS	\$420.00	\$1,920.00	\$766.36	\$14,633.00
4	4	Omitted	N/A	-	-	-	-
5	5	Siding (CSI 07 46): Leaks at corners of Window Sill.	76 Windows	\$12,160.00	\$10,960.00	\$13,281.52	\$24,472.00
6	6	Omitted	N/A	-	-	-	-
7	7	Siding (CSI 07 46): Siding Corner Trim Components	10 Each, 2 SF total	\$500.00	\$610.00	\$960.00	\$1,725.00
8	8	Siding (CSI 07 46): Siding Warping due to Reflected Sunlight	4 LOC, 10 SF total	\$400.00	\$190.00	\$117.90	\$5,520.00
9	9	Flashing and Sheet Metal (CSI 07 61): Lifting Roof to Wall Metal Flashing	All BLDGS, 450 LF total	\$675.00	\$580.00	\$576.50	\$5,175.00
10	10	Other (Supervision or General Conditions)		\$0.00	\$500.00	\$2,994.69	\$22,713.00
10	11	Overhead and Profit		\$3,288.60	\$2,860.00	\$5,177.54	\$0.00
12		Grand Total		\$20,693.60	\$21,960.00	\$25,225.21	\$76,969.00

9320 SW Barbur Blvd., Suite 120, Portland, OR 97219 T: 503.246.3744 F: 949.240.9972



Standard Forms and Contracts

Trade Organization Suppliers

- American Institute of Architects (www.aia.org)
- ConsensusDocs (www.consensusdocs.org)
- American Subcontractors Association (www.asaonline.com)
- Associated General Contractors of America (www.agc.org)
- Construction Management Association of America (www.cmaanet.org)
- Construction Owners Association of America (www.coaa.org)
- Design-Build Institute of America (www.dbia.org)
- Engineers Joint Contract Documents Committee (www.ejcdcc.org)



Executing the Contract



4. CHANGE MANAGEMENT



Change Orders

Change Orders are a natural part of construction and a contingency for them should be built into the budget. Change orders become a part of the construction contract, should always be in writing, and should be negotiated and signed at the time the change occurs, not at the end of the project.



Change Orders

Some years ago, Congress tasked the National Research Council to study the issue of cost growth of construction contracts.

Conclusions from that study determined that there was no perfect or complete set of specifications and drawings.

The reality is that most projects are not really “design-bid-build,” but rather “design-bid-build-figure out the design-build-change the design-build-argue over the design-build...”



Processing Change Orders

- What Does the Contract Say?
- Refer to the Scope of Work
- Frequency
- Causes
- Changes in Scope
- Changes in Cost
- Changes in Time
- Authorization
- Accounting for Change Orders
- Disputes
- How To



Negotiation

- All Relationships Include Negotiation
- Negotiation is a Fine Art
- Negotiation is Fun
- Strength AND Kindness
- Think Win-Win
- Some Say Think “Win-Win or No Deal”
- There Are a Million Great Resources Available



Payment Application

#	Scope	Milestone	Value	PMT #1	PMT #2	PMT #3	Total Paid
1	Excavation	200	250	200	0	0	200
2	Walls *1	200	300	30	0	0	30
3	Roof	200	200	0	0	0	0
4	Signage*2	100	50	0	0	0	0
5	Paint*3	100	100	0	0	0	0
6	Complete	200	100	0	0	0	0
7	Total	1,000	1,000	230	0	0	230
8	-	-	-	-	-	-	-
9	CO#1: Hardware	-	10	10	-	-	10
10	CO#2: Delete Signs	-	-	-	-	-	-
11	CO#3: Paint	-	-	-	-	-	-
12	CO#4: Landscaping	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	Total	-	1,010	240	-	-	240



5. RISKS



5. RISKS



What is Risk Management?

A mechanism by which risks and uncertainties that threaten success are identified and dealt with.



This is a Bad Risk Management Strategy

**It also happens to
be the strategy
most commonly
employed.**



Examples of Risks

- Bad Contracts
- Accidents/Safety
- Acts of God/Nature
- Fire
- Mold
- Soil Problems
- Managing Quality
- Negligence
- Strict Liability
- Right to Repair
- Budget
- Defects



The ABC's of Risk Management

- Avoid Potentially Dangerous Situations
- Be really good at the work you do
- C.Y.A. (Cover Your Assets)



Risk Types

- Speculative Risks: Entrepreneurship Risks That Offer Rewards Or Losses.
- Pure Risks: Typical Losses Like Fires & Floods. Always a loss.
- Direct: Fire, Key Employees, etc.
- Indirect: Can be larger than direct risks.



Risk Identification

RISK MANAGEMENT CHECKLIST

www.petefowler.com

Risk Management Check List
Risks by DBSICV Method

7/13/2010

Define	
Incomplete design	Sufficiency of drawings & specifications
Inadequate site investigation	Accuracy & conformity of submittals & shop drawings
Appropriateness of specifications	Review & approval of submittals & shop drawings
Product defect	Provision of professional design services for project
Comparison of design w/ Owner & field info	Accurate & timely surveys, environmental reports, etc.
Known errors in drawings & specifications	Exemptions, approvals, building permit

Budget	
Uncertainty over the source & availability of materials	Workers compensation
Resource availability	Material costs
Inflation	Subcontractor costs
Availability & fluctuation in foreign exchange	Permits, licenses, taxes pertaining to work
Repatriation of funds	Evidence of project financing
Local taxes	

Schedule	
Time of performance	Delays: Caused by Owner
Schedule of the work: Creating, updating	Delays: Caused by Contractor
Schedule of the work: Approval	Delays: Beyond control of parties - weather, acts of God, gov. acts

(K) Contract	
Insurance	Indemnity: Personal injury & property damage
Contract disputes	Procure insurance: Workers compensation, commercial general liability
Subcontractor walks off	Procure insurance: Property, business income
Indemnity	Patent & copyright infringement
Confidentiality of information	Cost of dispute resolution
Changes in the work	

Coordinate	
Deliverables	
Availability of sufficient transportation facilities	Provision of skilled labor
Uncertain productivity of resources	Owner-furnished materials: delivery, quality & installation
Weather & seasonal implications	Safety precautions & programs
Industrial relations problems	Hazardous materials discovered at site
Building performance problems	Hazardous materials brought to the site
Unknown site/geotechnical conditions	Concealed/unknown site conditions
Near-injury accidents (property damage)	Cutting, fitting & patching of the work
Car accident	Damage/loss from separate contractors
Drink employee	Consequential damages
Coordination & supervision of Contractor's work, construction means & methods	Suspension of the work: Owner's convenience
Coordination of work of separate contractors/concurrent work	Termination: Owner's convenience
Defects in work of separate contractors	Termination: Contractor default
Aids & omissions/incompetence of Subcontractors	Termination: Owner default

Verify	
Deliverables	
Delay in payment	Tests & inspections: Expenses
Mold	Warranty regarding work
Construction defects	Correction of work within one year
Non-payment	Maintenance of records (shop drawings, original as-builts, change orders)
Reporting defects in work of separate contractors	Payment/payment delay
Workmanship	Removal of liens
Tests & inspections: Scheduling	

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Risk Management Strategies

To Retain or Not to Retain - Transfer of Risk

- Identify Risks & Uncertainties
- Deal with Risks Through Retention or Transfer
- Risk Avoidance
- Risk Reduction
- Risk Assumption (Indemnity granted to others)
- Risk Transfer (Insurance or Indemnity from others)

Risk Mitigation

- Risk Avoidance
- Risk Reduction
- Risk Sharing or Transfer (see next section)
- Risk Retention
- Risk Allocation
- Identify each risk category and deal with them one by one
- Tools: Contracts, Insurance, Pre-Qualification



Allocating Risk

- Share or Transfer?
- Fairness? (Can vs. Should)
- Who are you in the process?
- Allocation Matrix



Indemnification Provisions

- a. Definition
- b. Purpose: Reassign, consolidate or transfer risks.
- c. Types of Clauses
 - i. Limited: Each party is responsible for their share.
 - ii. Intermediate: One party will pay for all damages if it is partly responsible.
 - iii. Broad Form Indemnity: One party will pay for all damages even if they have not caused any of the damages. Illegal in many states.



Indemnity (1 of 2)

- Indemnification: (1.) The technical definition of "indemnity" means to make whole again. (2.) An agreement whereby one party agrees to secure another against an anticipated loss or damage.
- An indemnity agreement or indemnification provision in a contract is an agreement in which a person agrees to be responsible for the consequence of some act whether his/hers or someone else's. Essentially, it is a contract which shifts liability from one party to another party. Indemnity agreements are extremely common in construction contracts, but are often ignored. Understanding an indemnity agreement is important in assessing contract risk, becoming properly insured for such risks, and responding to any incidents which may occur.
(<http://www.jonesobenchmark.com/articles/article15.htm>).



Indemnity (2 of 2)

- Whether an indemnitee or an indemnitor, it is important to understand who is being indemnified, what the triggering event is for the indemnification provision, and what types of claims are being indemnified against. Indemnification agreements are becoming a hotly litigated provision, and people are looking to them more and more often for protection as we become a more litigious society. It is important to know before entering into a contract what the risks are. Consulting with counsel and with your insurance agent are critical. Of course, whenever possible, always try to transfer your risk to some third party and ensure they have the financial wherewithal, either themselves or through insurance, to cover the transferred risk. Unfortunately, when it comes to indemnity agreements, ignorance is not bliss.



Managing Construction Quality



OFFICES

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GENERAL INQUIRY

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Pete Fowler
CONSTRUCTION
Services, Inc.

THE GOOD OLD DAYS

Successful construction projects used to go something like this: Owners would hire experienced, hardworking Architects and Engineers who developed plans and specifications that were not perfect, but good enough that experienced, hardworking General Contractors could hire experienced, hardworking Trade Contractors to do the work of making a project happen. We worked through the inherent difficulties of construction by working long hours, keeping our word and understanding that “stuff happens”. We accepted that no project was perfect, that people screw up, and knew that there was little use in crying over spilled milk. The satisfaction of a job well done carried us through the toughest days.

We didn't spend much time telling specialists, like trade contractors, how to do their job. They had skilled tradesmen, the construction was relatively simple, and most contractors did things pretty much the same. If we had a contract, it was something the “suits” put together, and copies might not be sent to the job site since they had little or no connection to the “getting the job done”.

THE NEW WORLD

Construction professionals are living in a new world:

- Consumers expect quality increases and price decreases in all products.
- The building industry is not keeping pace with the quality and price advances many industries are making.
- Consumers are more litigious than ever and there is a proliferation of attorneys.
- The building industry is not attracting the best and brightest young people.
- The built-environment has been altered in the last 20 years, including increased complexity, less fault-tolerant materials, and tighter, slower drying buildings.
- Consumers are more conscious of building-related health issues than ever.
- In some areas, a lack of skilled construction labor makes the construction professional's job even more critical.

CONSTRUCTION MANAGEMENT

Our company delivers training in construction management and we have categorized the phases of project planning and management in a framework we call

“The DBSKCV™ (pronounced “dib-skiv”) Method.”

SUMMARY OF THE DBSKCV METHOD

- Define the Scope of Work (this includes the design phase).
- Budget: Identify how much the project will cost the contractors and owner.
- Schedule when the construction will happen and share this information.
- Contract (K): Who is doing what? Everyone should know what to expect.
- Coordinate the construction.
- Verify, document and communicate that everyone is doing what they should.

For details, please read *The DBSKCV™ Construction Management Method*.

CONSTRUCTION RISK MANAGEMENT

Growing legal risks, administrative issues, sky-rocketing workers' compensation costs, increasing fees and taxation, and complicated insurance issues are only a few of the reasons why the price of construction is higher today than ever before. Managing construction risk is a full time vocation for many professionals and beyond the scope of this article (we do training on this too).

THE ABC'S OF RISK MANAGEMENT

- A = Avoid Potentially Dangerous Situations (Impossible in construction)
- B = Be Really Good At What You Do
- C = Cover Your Assets

The ABC's apply to Managing Construction Quality because (A.) we must face the fact that "risk avoidance" as a construction professional is impossible, (B.) being good at what you do means doing all you can to make sure a project succeeds, and doing a little bit of someone else's job will sometimes become necessary, and (C.) the best "coverage" is

avoiding problems by delivering work that meets expectations. Just accept buyers expect high quality *and* performance, even when they pay rock-bottom prices, and lawyers expect perfection; the former is hard, but easier than the latter.

PROJECT DEFINITION

The "Define" phase of construction management consists of documenting the work to be performed. This is usually graphic and written with plans, specs, references to codes and standards, and detailed "Scope of Work" documents. Getting a clear, specific and detailed project scope is the first step in the construction project management process and it is where a project's "quality" should be established.

SOME QUICK DEFINITIONS

- Plans and Details: Graphic representation of construction.
- Specifications: Specs are the written representation of construction, which usually includes a greater level of detail regarding construction performance, process, products, and quality.
- Construction Contract: Agreement between two or more parties for the delivery of construction; plans and specifications are used as the definition of what is being bought and sold.
- Standards: Documents, with graphic and written information, referenced by plans, specifications and construction contracts, which specify performance criteria and/or methods in greater detail than typical plans or specifications. Standards are created by standards setting bodies like ASTM, product manufactures, and industry trade groups.

- Scope of Work: The written definition of what is being bought and sold. Usually articulated in writing by making a list or description of responsibilities and specific exclusions (work that is NOT included), with references to plans, specifications (prescriptive or performance based), and industry standards. I strongly prefer when the scope can be summarized in a 5-15 point list, or conform to the fundamentals of a 2 or 3 level "Work Breakdown Structure," collectively representing 100% of the project scope.
- Hold-Point: Critical time in the construction process where construction should stop for verification of conformance with plans, specifications, standards (including performance) and contracts. Verification can include inspection, testing, recording, and reporting.

In "the good old days" we left the details of "how to" to the trade contractors. After all, they are the specialists. But for the reasons stated above, leaving the details to trade contractors to work out among themselves has left a lot of projects in a less than enviable position: lack of integration, quality problems, re-work, leaks, lack of durability and on and on.

Owners or their representatives should no longer sign a one or two page "Proposal" from a contractor which serves as the "Scope of Work." Such documents are not likely to contain information specific enough to ensure the scope is complete, to ensure that the parties are on the same page for quality or performance, and they lack adequate contractual protections.

Specification writers making obscure references to documents that are difficult to obtain is not new. But acquiring these

documents is much easier due to the internet. It is now possible to "define" (design) our projects using readily accessible documents that we can use during the building process to make sure the on-site work is being installed and integrated correctly. This information needs to be integrated throughout the plans, specifications, standards and contracts. In practice, these documents should be created or referenced in the *Define* phase, referenced in the *Contract* phase, and used to compare the actual work in the field to the plan during *Coordination* and *Verification*.

MANAGING CONSTRUCTION QUALITY

There is no way to 100% guarantee project success and performance; the closest I have found is the use of a proven system.

Think of it this way: *Construction plans and specifications are a hypothesis, and a hypothesis should always be verified.* The hypothesis is that the designers and specialty consultants have composed a set of documents that are appropriate to build a project that will meet the *performance expectations* of the owners and applicable codes. The contractors on the project then work under the hypothesis that the design is functional, and that the work they do will also meet *performance expectations*.

Question: How do we verify our construction projects are going to perform?

Answer: (1.) During the define phase, we make sure our design hypothesis is reasonable by having someone with experience in building performance issues review, comment and recommend improvements; (2.) We make sure the plans, specifications, standards, and contracts are consistent in describing to the contractors who will install the specified material "what good performance looks like"; (3.) We establish a procedure to "verify" at

specified *Hold-Points* during construction; (4.) During construction we inspect to verify conformance with the design (plans, specs, standards, and contracts). (5.) After the initial assemblies are installed, test them to verify performance, or build a mock-up and test it before construction (whichever is more cost effective).

Remember: We must be willing to administer consequences to project team members who don't do what they promise. You will get resistance. If a contractor has signed a contract to perform consistent with a specified standard, it will sometimes take a strong will to make some of them perform.

ATTACHMENT: The attached *Independent Quality Review* spreadsheet is a matrix of optional activities one might perform or purchase from a consultant. The minimum activities required, for a third party to be of assistance in ensuring project quality, are identified; higher levels of service are like buying more insurance. Remember, this does not include *doing* the actual design. At a minimum, this is making sure the project definition is close to complete, and helping assure that proper installation and integration of the assemblies will lead to appropriate performance. Further work can ensure a connection between the plans, specifications, standards and contract scope of work documents.

QUALITY MANAGEMENT PLAN

Here is the system, organized in the context of The DBSKCV Method. Remember, the DBSKCV Method is iterative, meaning we walk through all steps many times throughout the life of a project. We should go through the "D-B Loop" (e.g Define-Budget-Repeat) many times before moving forward.

DEFINE

- Architectural, Structural, and Specialty Design
- Specification Writing
- Referenced Standards

QUALITY PLANNING

- Evaluation of plans and specs
- Evaluation of referenced standards, and contract / scope of work language review (Optional)
- Hold Point Development and performance verification planning (Optional)
- Mock-Up of assemblies and testing (Optional)
- Recommendations (final) from Quality Review Consultant
- Meetings or teleconferences between Quality Review Consultant and Owner, Designers and/or Contractors (Optional).
- Review of updated design, specification, referenced standards and contracts made in response to Recommendations from Independent Quality Review Consultant (Optional).

BUDGET

Update as necessary throughout the process. Make active decisions about "how much insurance to buy".

SCHEDULE

- Establish Hold Points
- Be prepared to stop the project if acceptable performance cannot be achieved

CONTRACT

Connect the Plans, Specifications, and Standards, Quality Management Plan, including Hold Points, to the Contract and Scope of Work documents so that Quality does not “cost extra” (in change orders) during construction.

COORDINATE

- Make sure prime and trade contractors know the standards they will be held to during the Verify phase.
- Coordinate actions at Hold Points in the construction schedule to verify quality of installations.

VERIFY

- Visual Inspection at Hold Points to verify conformance with project definition (plans, specs, standards and contract scope of work documents) and to evaluate any on-site changes (Optional)
- Testing to verify performance (Optional)
- Final Report that might include: Quality control process, design summary, evaluation process, inspection summary, testing summary and on-going maintenance recommendations (Optional)

PROJECT NAME

Independent Quality Review

Line	Description of Potential Services	Service and Document Review Levels																		Typical Durations	
		1A	1B	1C	2A	2B	2C	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	6C	Low	High
1	Evaluation of plans and specifications	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	8	40
2	Evaluation of referenced standards		x	x		x	x		x	x		x	x		x	x		x	x	4	40
3	Evaluation of contracts (scope of work)			x			x			x			x			x			x	4	40
4	Hold Point Development							x	x	x	x	x	x	x	x	x	x	x	x	4	40
5	Mock-Up of Assemblies and Testing										?	?	?	?	?	?	x	x	x	16	80
6	Recommendations (final)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	8	80
7	Meetings or Teleconferences	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	2	40
8	Review of Updated Design	?	?	?	?	?	?	?	?	?	?	?	?	x	x	x	x	x	x	4	40
9	Visual Inspection				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	4	160
10	Testing							x	x	x	x	x	x	x	x	x	x	x	x	8	80
11	Final Report										x	x	x	x	x	x	x	x	x	8	40
12																					
13	Potential Deliverables																				
14	Opinion Letter re: Evaluation	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	2	16
15	Issues List with Recommendations	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	2	16
16	Inspection Summary				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	2	8
17	Inspection Report										x	x	x	x	x	x	x	x	x	4	16
18	Location Matrix				?	?	?	?	?	?	?	?	?	x	x	x	x	x	x	1	16
19	Hold Points				?	?	?	x	x	x	x	x	x	x	x	x	x	x	x	1	16
20	Testing Protocol							x	x	x	x	x	x	x	x	x	x	x	x	2	16
21	Testing Summary Report							x	x	x	x	x	x	x	x	x	x	x	x	4	16
22	Project Close Report							?	?	?	?	?	?	x	x	x	x	x	x	4	16

Explanation of Service Levels

- L1: No Inspection
- L2: Limited Visual Inspection
- L3: Limited Visual, Limited Testing
- L4: Periodic Inspection, Limited Testing
- L5: Extensive Inspection, Limited Testing
- L6: Extensive Inspection, Extensive Testing

Document Review Levels

- A: Plans and Specs only
- B: Plans, Specs, and Standards
- C: Plans, Specs, and Standards and Contracts



6. INSURANCE



Another Bad Risk Management Strategy



Brokers



Summary of Types of Insurance

- Workers Compensation
- Commercial General Liability
- Builder's Risk
- Umbrella Liability Insurance
- Errors & Omissions / Professional Liability
- Wrap-Ups / Owner Controlled
- Self Insurance or No Insurance



Workers Compensation

Workers Compensation

Insurance that covers medical and rehabilitation costs and lost wages for employees injured at work; required by law in all states (Entrepreneur.com).



Commercial General Liability

Commercial General Liability

- Coverage
 - Premises / Operations
 - Property Damage
- Common Exclusions
 - Completed Operations
 - Mold
 - Work Product (“Business Risk”)
 - Types of Work
- Certificate of Insurance
- Additional Insured
- Endorsements: ISO 2010
- Defense Costs / Burning Limits



Builder's Risk

Builder's Risk

Builder's Risk is a form of property insurance for projects during the course of construction. Coverage generally includes theft and vandalism, accidental loss, and damage or destruction of property. The policy is usually purchased by the owner, and the contractor can be named as additional insured. It does not cover contractor equipment or tools. The policies are limited to the duration of construction. Optional coverage might include indirect costs like financial losses, interest expense, legal fees, or delay costs like loss of rents.



Umbrella Liability Coverage

Umbrella Liability Coverage

Umbrella coverage is a form of supplemental insurance. It protects the insured in the event that a claim exceeds the amount covered by their primary insurance policies or for specific claims not covered in their primary policy.



Errors & Omissions / Professional Liability

Errors & Omissions / Professional Liability

Professional Liability Insurance (Errors and Omissions Insurance) protects against loss from a claim of alleged negligent acts, errors or omissions in the performance of professional services.



Wrap-Ups / Owner Controlled

Wrap-Ups / Owner Controlled Insurance Programs

An Owner Controlled Insurance Program (OCIP) will cover the owner, contractor and subcontractors. An OCIP also may include design professionals. The coverage can include general liability (CGL), builder's risk, worker's compensation, design errors and omissions as well as excess, umbrella and other special coverages.



Self Insurance or No Insurance

- Evaluation
- Option Review



Definitions and Application

- Additional Insured: A person other than the original policy purchaser or the one named in the contract, who is also protected under the insurance contract.
- Indemnification: (1.) The technical definition of "indemnity" means to make whole again. (2.) An agreement whereby one party agrees to secure another against an anticipated loss or damage.
- Subrogation: An insurance carrier may choose to take action to recover the amount of a claim paid to a covered insured if the loss was caused by a third party.





Act 2: Insurance Basics

Construction Contracts, Risk & Insurance
Thursday, June 8, 2017



Insurance Basics



- Role of Agent/Broker
 - Manage Insurer Services
 - Identify Insurable Risks
 - Provide/Compare Coverage and Pricing Options
 - Assure Coverage is Correct
- Role of Insurance Company
 - Interpret Coverage
 - Pay Claims (or Deny coverage)
 - Loss Control Services
 - Claims Adjustment Services

Coverage Basics



Commercial General Liability

- Pays legal liability for Bodily Injury or Property Damage occurrences to third parties. For contractors this includes operations performed during construction and completed operations post-construction.

Business Automobile Liability

- Pays legal liability For Bodily Injury or Property Damage to third parties from accidents involving use of owned, non-owned or hired autos.

Umbrella Liability

- Pays legal liability for Bodily Injury or Property Damage to third parties in excess of scheduled underlying policies--General Liability, Auto Liability and Employer's Liability

Coverage Basics



Workers' Compensation and Employers Liability

- Workers' Compensation pays medical expenses and loss of income to employees injured on the job. Workers' comp is considered the "sole remedy for injured workers from their employers." Employer's Liability is legal liability outside the scope of Workers' Compensation. Rarely is this coverage used. It applies to legal liability of the employer for accidents or disease incurred by employees.
- In the State of Oregon, Workers' Comp and Employer's Liability are provided by either SAIF (State owned insurer) or private insurers. In Washington, Workers' Comp is provided by the State run program. Employers Liability is normally provided by the General Liability policy by a "Stop Gap" endorsement. Both States allow Self Insurance subject to State approval (size of employer and financial backing).

Coverage Basics



Insurance Normally Purchased by Contractors (required by Contract):

- General Liability
- Auto Liability
- Excess/Umbrella Liability
- Workers' Comp

Additional Insurance Purchased by Contractors (not required by Contract):

- Contractors Equipment
- Builders Risk/Installation Floater
- Property Insurance
- Crime/Employee Dishonesty
- Pollution Liability
- Professional Liability
- Fiduciary Liability
- Employment Practices Liability
- Director & Officer Liability

Contractual Risk Transfer



- **Certificate of Insurance** is just a piece of paper
 - Certificate holder has no rights within the policy
 - Must be accompanied by Additional Insured endorsement
- **Additional Insured (AI) Endorsements**
 - AI has rights within the policy, limited by endorsement
 - Insurance Standards Office (ISO) Forms
 - Non-Standard Forms
 - Examples:
 - CG 20 10 11 85 Arising out of “Your Work”
 - CG 20 10 10 93 Arising out of your “ongoing operations”
 - CG 20 10 07 04 Caused in whole or in part by your Acts or omissions; or
The acts or omissions of those acting on your behalf in performing ongoing operations

Certificates of Insurance



ACORD CERTIFICATE OF LIABILITY INSURANCE						Clear	Save	DATE (MM/DD/YYYY) current date
PRODUCER Subcontractor's Insurance Agent				THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.				
INSURED Subcontractor (same as on Subcontract Exhibit A)				INSURERS AFFORDING COVERAGE		NAIC #		
				INSURER A: GL Insurer Name				
				INSURER B: Auto Insurer Name				
				INSURER C: WC Insurer Name				
				INSURER D: Professional Liab Insurer Name				
				INSURER E:				
COVERAGES								
THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.								
SECTION	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS			
A	GENERAL LIABILITY				EACH OCCURRENCE	\$	1,000,000	
	COMMERCIAL GENERAL LIABILITY				NEWLY ACQUIRED ASSETS (Per person)	\$	N/A	
	CLAIMS MADE				NEW EXP (Any one person)	\$	N/A	
					PERSONAL AND ADJ INJURY	\$	1,000,000	
					GENERAL AGGREGATE	\$	2,000,000	
	OWNERS AGGREGATE LIMIT APPLIES PER:				PRODUCTS - COMPOUND AGG	\$	1,000,000	
	POLICY							
B	AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Per accident)	\$	1,000,000	
	ANY AUTO				BODILY INJURY (Per person)	\$		
	ALL OWNED AUTOS				BODILY INJURY (Per accident)	\$		
	SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	\$		
	HIRED AUTOS				AUTOONLY - B&C ACCIDENT	\$		
	NON-OWNED AUTOS				OTHER THAN AUTOONLY - EA ACC	\$		
					AGG	\$		
	GARAGE LIABILITY				EACH OCCURRENCE	\$		
	ANY AUTO				AGGREGATE	\$		
	EXCESS/UMBRELLA LIABILITY					\$		
	OCUR					\$		
	CLAIMS MADE					\$		
	DEDUCTIBLE					\$		
	ATTENTION					\$		
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				PER STATE - PER EMPLOYEE	\$	1,000,000	
	ANY REGISTRATION/PARTNERS/ROUTING OFFICERS/OWNER ORIGINATED				EL EACH ACCIDENT	\$	1,000,000	
	Yes, include agent				EL DISEASE - EA EMPLOYEE	\$	1,000,000	
	SPECIAL PROVISIONS below				EL DISEASE - POLICY LIMIT	\$	1,000,000	
	OTHER							
D	Professional Liability (or Errors & Omissions)					\$	1,000,000	
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS								
General Liability: "Certificate Holder" and "Project Owner" are named as Additional Insured per the attached form								
RE: SDD Job # <OR>								
RE: All Operations for the above Named Insured								
CERTIFICATE HOLDER				CANCELLATION				
CONTRACTOR NAME				SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL, DATE WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL WAIVE NO CANCELLATION OR LIABILITY OF ANY KIND UNDER THE POLICY, ITS ENDORSEMENTS, OR REPLENISHMENTS.				
CONTRACTOR ADDRESS				AUTHORIZED REPRESENTATIVE				
ACORD 26 (2001/08)				© ACORD CORPORATION 1988				

Certificate and AI Best Practices



- Step 1: Develop clear insurance requirements in Contractor and Subcontract Agreement
- Step 2: Determine who manages Certificates and how records are maintained
- Step 3: Make compliance mandatory for high risk subtrades, with waiver process for lower risk trades
- Step 4: Develop internal waiver process when accepting non-compliance for lower risk trades
- Step 5: Keep copies of all documents in Subcontract file. Make sure to get renewal Certificates and AI endorsements



Conclusion and Questions

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7. CONCLUSION

Learning Objectives

- Offer an overview of construction contracts and the key components of contracts that aid in the management of risk.
- Introduce a framework to help you identify and address the most common pitfalls that cause project shortcomings, defects, delays, cost over-runs, legal disputes, and headaches.
- Offer an overview of insurance products that are applicable to construction professionals, businesses, and projects, and their use in managing risks.



Learning Objectives

- Introduce the basic roles & responsibilities on a construction project
- Offer an overview of contracts and the key components that aid in the management of risk.
- Introduce a framework to help you identify and address the most common pitfalls that cause project shortcomings, defects, delays, cost over-runs, legal disputes, and headaches.
- Offer an overview of insurance products that are applicable to construction professionals, businesses, and projects, and their use in managing risks.



Homework

Blog Posts: See petefowler.com/articles

1. Contracting 101
2. A Sensible List
3. Contractor Pre-qualification Checklist
4. Avoid Bad Contractors: Basic Due Diligence in Hiring
5. Who Would You Prefer as Your Contractor?
6. Who Needs a Contractors License?



Homework

Read PFCS Articles: See petefowler.com/resources

1. The DBSKCV Construction Management Method
2. Managing Construction Quality
3. Managing Property Maintenance & Improvement
4. Level 5 Estimating



Homework

Watch / Study PFCS Seminars & Webinars

1. Budgeting & Estimating Construction, Building and Property Maintenance, Repairs & Improvements.
2. Contracting 101.
3. Managing Construction, Building and Property Maintenance, Repair & Improvements.
4. Specifying Building Construction, Maintenance, Repairs & Improvements.
5. Quality Control for Construction Maintenance, Repairs & Improvements.
6. How to Contract for 7-Figure Residential Construction & Remodeling: Applying Professional Contracting Discipline to an Often Messy Business.



Homework

Read Industry Standards

1. AIA A101 Standard Form of Agreement between Owner and Contractor (Instructions).
2. AIA A201 General Conditions.
3. ConsensusDocs 200 Agreement and General Conditions between Owner and Constructor (Lump Sum).
4. ConsensusDocs 800 Program Management Agreement and General Conditions between Owner and Program Manager.
ConsensusDocs 805 Agreement Owner & Owner's Representative.
5. Contracting for Success by California CSLB.
6. Oregon CCB Law Excerpts.
7. Detailing Your Scope of Work by Bob Kovacs, JLC.



Risk Management Check List

7/13/2010

Risks by DBSKCV Method

Define	
Incomplete design	Sufficiency of drawings & specifications
Inadequate site investigation	Accuracy & conformity of submittals & shop drawings
Appropriateness of specifications	Review & approval of submittals & shop drawings
Product defect	Provision of professional design services for project
Comparison of design w/ Owner & field info	Accurate & timely surveys, environmental reports, etc.
Known errors in drawings & specifications	Easements, approvals, building permit

Budget	
Uncertainty over the source & availability of materials	Workers compensation
Resource availability	Material costs
Inflation	Subcontractor costs
Availability & fluctuation in foreign exchange	Permits, licenses, taxes pertaining to work
Repatriation of funds	Evidence of project financing
Local taxes	

Schedule	
Time of performance	Delays: Caused by Owner
Schedule of the work: Creating, updating	Delays: Caused by Contractor
Schedule of the work: Approval	Delays: Beyond control of parties - weather, acts of God, gov. acts

(K) Contract	
Insurance	Indemnity: Personal injury & property damage
Contract disputes	Procure insurance: Workers compensation, commercial general liability
Subcontractor walks off	Procure insurance: Property, business income
Indemnity	Patent & copyright infringement
Confidentiality of information	Cost of dispute resolution
Changes in the work	

Coordinate	
Deliverables	
Availability of sufficient transportation facilities	Provision of skilled labor
Uncertain productivity of resources	Owner-furnished materials: delivery, quality & installation
Weather & seasonal implications	Safety precautions & programs
Industrial relations problems	Hazardous materials discovered at site
Building performance problem	Hazardous materials brought to the site
Unforeseen site/geotechnical conditions	Concealed/unknown site conditions
Non-injury accidents (property damage)	Cutting, fitting & patching of the work
Car accident	Damage/loss from separate contractors
Drunk employee	Consequential damages
Coordination & supervision of Contractor's work; construction means & methods	Suspension of the work: Owner's convenience
Coordination of work of separate contractors/concurrent work	Termination: Owner's convenience
Defects in work of separate contractors	Termination: Contractor default
Acts & omissions/competence of Subcontractors	Termination: Owner default

Verify	
Deliverables	
Delay in payment	Tests & inspections: Expenses
Mold	Warranty regarding work
Construction defects	Correction of work within one year
Non-payment	Maintenance of records (shop drawings, original as-builts, change orders)
Reporting defects in work of separate contractors	Payment/payment delay
Workmanship	Removal of liens
Tests & inspections: Scheduling	

End

We know buildings

EXPERTISE

PROJECT MANAGEMENT

TECHNOLOGY

STANDARDS

RESULTS

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