THE ASA's CONTRACTOR'S Compass

THE OFFICIAL EDUCATIONAL JOURNAL OF THE AMERICAN SUBCONTRACTORS ASSOCIATION

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MAY 2017

Change Orders

- *Recognizing Potential Change Orders*
- *Pricing Change Orders Like a Pro*
- *Negotiating Change Orders Like a Pro*
- *The First 100 Days of the Trump Administration*
- *Drones—Coming Now to a Construction Site Near You*
- *Legally Speaking: The Change Order Dance*

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EDITORIAL PURPOSE
The Contractor's Compass is the monthly educational journal of the Foundation of the American Subcontractors Association, Inc. (FASA) and part of FASA's Contractors' Knowledge Network. The journal is designed to equip construction subcontractors with the ideas, tools and tactics they need to thrive.

The views expressed by contributors to ***The Contractor's Compass*** do not necessarily represent the opinions of FASA or the American Subcontractors Association, Inc. (ASA).

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FASA was established in 1987 as a 501(c)(3) tax-exempt entity to support research, education and public awareness. Through its Contractors' Knowledge Network, FASA is committed to forging and exploring the critical issues shaping subcontractors and specialty trade contractors in the construction industry. FASA provides subcontractors and specialty trade contractors with the tools, techniques, practices, attitude and confidence they need to thrive and excel in the construction industry.

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ABOUT ASA
ASA is a nonprofit trade association of union and non-union subcontractors and suppliers. Through a nationwide network of local and state ASA associations, members receive information and education on relevant business issues and work together to protect their rights as an integral part of the construction team. For more information about becoming an ASA member, contact ASA at 1004 Duke St., Alexandria, VA 22314-3588, (703) 684-3450, membership@ASA-hq.com, or visit the ASA Web site, www.asaonline.com.

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OSHA Announces Three-Month Delay of Silica Rule Enforcement

The Occupational Safety and Health Administration has delayed for three months the enforcement of its crystalline silica standard as it applies to the construction industry. OSHA said that the additional time is necessary so that the agency can provide supplementary guidance to employers, particularly in light of the unique nature of the requirements in the construction standard. Originally scheduled to begin June 23 enforcement will now begin Sept. 23. The Construction Industry Safety Coalition to which ASA belongs said, it "is pleased that OSHA has recognized the need to develop guidance material for the construction industry before enforcing the silica rule, and we remain committed to working with the agency to create a feasible standard that promotes safe and healthy jobsites. While the CISC appreciates the 90-day delay in enforcement, the CISC remains concerned about the overall feasibility of the standard in construction and has requested that the Agency delay enforcement for a year." ASA urges its members to continue to prepare to fully comply with the OSHA rule. This includes taking steps either to come into compliance with the new permissible exposure limit, or to implement specific dust controls for certain operations as provided in Table 1 of the standard. Construction employers also should continue to prepare to implement the standard's other requirements, including exposure assessment, medical surveillance and employee training. For more information, see the ASA Fact Sheet on OSHA's Rule on Respirable Crystalline Silica, the ASA Frequently Asked Questions on the OSHA Standard on Respirable Crystalline Silica, and the free ASA video-on-demand, "OSHA Silica Rule—Applications for Subcontractors" (Item #8101), presented by Gary Visscher, Esq., Law Office of Adele L. Abrams, P.C.

EBSA Extends Fiduciary Rule Applicability Date

The Employee Benefits Security Administration, on April 7, announced a 60-day extension of the applicability dates of the fiduciary rule and related exemptions, including the Best Interest Contract Exemption. The announcement followed a Feb. 3 presidential memorandum which directed EBSA to examine the fiduciary rule to ensure that it does not adversely affect the ability of Americans to gain access to retirement information and financial advice. Under the terms of the extension, advisers to retirement investors will be treated as fiduciaries and have an obligation to give advice that adheres to "impartial conduct standards" beginning on June 9 rather than on April 10, as originally scheduled. These fiduciary standards require advisers to adhere to a best interest standard when making investment recommendations, charge no more than reasonable compensation for their services and refrain from making misleading statements. Before Jan. 1, 2018, when all of the exemptions' conditions are scheduled to become fully applicable, ESBA intends to complete its review under the presidential memorandum and decide whether to make or propose further changes to the fiduciary rule or associated exemptions.

ASA Publishes White Paper on Translating Changes and Changed Conditions into Dollars and Time Extensions

ASA has released a new white paper that discusses the steps a subcontractor should take to clearly demonstrate causation and quantification of impact of changes and changed conditions. The subcontractor must consider the total impact of a change or condition in order to assure the costs which must be recovered. The expected rate of return on a project can only be achieved if the subcontractor fully recovers every penny of increased costs, plus a reasonable profit. Full and accurate measurement of that impact is necessary for complete recovery. The ASA white paper on *Translating Changes and Changed Conditions into Dollars and Time Extensions* addresses:

- Proof of causation.
- Proof of quantum (amount).
- General considerations regarding proof of causation and quantum.
- General pricing methodologies and considerations.
- Direct cost pricing.
- Indirect cost pricing.
- Delay, disruption and impact on other work.
- Miscellaneous costs.
- Profit or return on investment.

The new white paper is available in the members-only section of the ASA Web site under "Contract Changes and Claims".

States Continue to Approve Subcontractor Payment Assurances on P3s

As the 2017 state legislative sessions wind down, construction subcontractors and suppliers in at least two states have won important payment protections on public work financed through public-private partnerships.

In Kansas, Gov. Sam Brownback (R) signed SB55, which requires a contractor with a prime contract exceeding $100,000 on a P3 to provide performance and payment bonds. Initiated by the ASA-Greater Kansas City chapter, the new law requires that the payment bond must be for "the full contract amount solely for the protection of claimants supplying labor or materials to the contractor or subcontractors in the performance of the work." Such bonds must be underwritten by "good and sufficient sureties as determined by the public owner."

Utah Gov. Gary Herbert (R) signed SB204, which modifies the state Procurement Code to allow for the use of public-private partnerships by virtually all state and local public contracting entities. The new law requires that a P3 agreement must provide for a "public need" through the development and operation of the project. The new law assures that the state Little Miller Act, which requires a 100 percent payment bond for the protection of construction subcontractors and suppliers, will apply to P3 projects.

In Arkansas, however, construction subcontractors and suppliers still have work to do to assure that they have payment assurances on P3 projects. Gov. Asa Hutchison (R) signed SB651, the Partnership for Public Facilities and Infrastructure Act, which establishes parameters for the regulation of P3s for public facilities and infrastructure. The new law requires the Arkansas Economic Development Commission and the Arkansas Development Finance Authority to jointly issue rules concerning P3s. This includes "[c] onsiderations and guidelines with respect to the preliminary mandatory, and optional terms and conditions of a comprehensive agreement, including without limitation … delivery of maintenance, payment and performance bonds in the amounts that may be specified by the responsible public entity." Until those regulations are finalized, subcontractors and suppliers will not know the extent of payment assurances, if any, on P3 projects in the state.

ASA's Board Approves Updated Policy on Bankruptcy Reform

As construction subcontractors and suppliers continue to report payment challenges, ASA is vitally concerned about the effects of bankruptcy law and practices. In response to growing concerns and at the recommendation of the ASA Task Force on Government Advocacy, on March 18, the ASA Board of Directors updated the Association's policy concerning reform of the Federal Bankruptcy Code. ASA's revised policy states:

- ASA supports an amendment to the Bankruptcy Code to require that a trustee conduct due diligence to determine whether or not a preference claim exists before making any demand upon a creditor.
- ASA supports an amendment to the Bankruptcy Code that would make clear that any payment made to a trade creditor within the 90-day period before the filing of a bankruptcy proceeding should be presumed to have been made in the ordinary course of business, except in the event that a trade creditor is an insider of the debtor and that the burden to overcome the presumption of ordinary should rest on the trustee.
- ASA supports an amendment to the Bankruptcy Code to require the debtor to file in the jurisdiction of its primary place of business or its principle assets within 180 days of a bankruptcy filing.

ASA will work with the National Association of Credit Management to pursue bankruptcy reform in Congress.

ASA Supports Delay in Effective Date of OSHA Beryllium Rule

As part of the Coalition for Workplace Safety, ASA filed comments supporting a proposal by the Occupational Safety and Health Administration to delay to May 20 the effective date of its Occupational Exposure to Beryllium rule. The proposed delay is in response to a memo issued by White House Chief of Staff Reince Priebus on Jan. 20 that directed the departments to undertake a review of any new or pending regulations and temporarily postpone the date that they would take effect. In its March 13 letter, CWS noted "the proposed rule was the product of a years-long cooperative effort between industry and labor. There is still work to be done, however, to improve the final rule as issued by OSHA. In order to continue in the same collaborative manner that has brought the rulemaking process this far, CWS agrees that additional time is warranted." The OSHA rule reduces the eight-hour permissible exposure limit from the previous level of 2.0 micrograms per cubic meter (2.0 mg/m^{3}) to 0.2 micrograms per cubic meter (0.2 mg/m^{3}). Above that level, employers must take steps to reduce the airborne concentration of beryllium. The rule requires

additional protections, including personal protective equipment, medical exams, and other medical surveillance and training. It also establishes a short-term exposure limit of 2.0 mg/m3over a 15-minute sampling period. To give employers time to meet the requirements and put proper protections in place, the rule provides staggered compliance dates. Employers have one year after the effective date to implement most of the standard's provisions. Employers must provide the required change rooms and showers beginning two years after the effective date. Employers are also required to implement the engineering controls beginning three years after the effective date. For more information, see the OSHA Web page on the new rule.

OSHA Issues Recommendations for Anti-Retaliation Programs

The Occupational Safety and Health Administration issued a new guidebook that recommends practices for employer anti-retaliation programs. The new manual, Recommended Practices for Anti-Retaliation Programs, is "intended to assist employers in creating workplaces that are free of retaliation," including avoiding retaliation against employees who engage in activity protected under the 22 whistleblower laws that OSHA enforces. This document is advisory in nature and informational in content. It is not mandatory for employers, and does not interpret or create legal obligations. Retaliation occurs when an employer (through a manager, supervisor, or administrator) takes an adverse action against an employee because the employee engaged in protected activity, such as raising a concern about a workplace condition or activity that could have an adverse impact on the safety, health or well-being of the reporting employee, other workers, or the public; or reporting a suspected violation of law. Retaliation also occurs when an employer takes an adverse action because an employee reported an injury or to dissuade an employee from reporting an injury. An adverse action is an action that could dissuade or intimidate a reasonable worker from raising a concern about a workplace condition or activity. Implementing an effective anti-retaliation program is not intuitive and requires specific policies and commitments. The guide reviews five key elements to creating an effective anti-retaliation program:

- Management leadership, commitment, and accountability.
- System for listening to and resolving employees' safety and compliance concerns.
- System for receiving and responding to reports of retaliation.
- Anti-retaliation training for employees and managers.
- Program oversight.

The OSHA guide says that "in order to effectively support employee reporting and protect employees from retaliation, employers should integrate all five elements into a cohesive program."

ASA Introduces White Paper on Performance and Scope Requirements

Inconclusive scope requirements are a subcontractor's worst nightmare. Bidding a project with vague requirements and ambiguous instructions can only lead to conflicts—or, even worse, costly contract disputes. That is why many project failures can be traced back to the subcontract and its scope of work clause(s). Why agree to uncertain conditions when your company will be providing services on credit and undoubtedly will be held responsible should a conflict arise? Scope requirements are defined as the sum of all product-related requirements that apply to a subcontractor on a construction project. Scope is not and should never be defined by such terms like "most," "what is required," or "what is necessary." Open-ended contract terms only jeopardize a subcontractor's role in a project—and the likelihood of complete and final payment. One way for a subcontractor to ensure the certainty of its role in a project is to spell out in its bid the exact scope and terms upon which its price applies. In addition, a subcontractor should make sure that any resulting subcontract is subject to the terms and conditions of a subcontractor-friendly contract. Last, but not least, always remember: documents clearly identified as being incorporated in a subcontract by reference are legally binding on a subcontractor, regardless of whether they're attached to the subcontract or otherwise supplied to the subcontractor. Discover more about securing explicit scope requirements by downloading ASA's new Mastering Subcontract Performance and Scope Requirements. The white paper is a no-cost member benefit available under the "Contracts and Project Management Documents" section of the members-only area of the ASA Web site.

Share Your Experiences on Change Orders on Federal Construction

Are you wondering what sort of issues your colleagues in the construction industry go through for change orders when dealing with federal construction projects? Consider participating in NACM's Secured Transaction Services' (STS) Change Orders Survey. ASA is working with the National Association of Credit Management and the Construction Industry Procurement Coalition to

investigate the causes, effects and control measures of change orders on federal construction projects. With your valuable input, the information gleaned from this anonymous survey will be shared with participants in future ASA articles and will be used by the participating associations to pursue legislative and executive branch solutions to change order challenges.

ASA Calls for Surety Bonds on State and Local Water Projects

In a Feb. 14 letter, a coalition of eight construction-related associations including ASA called on the Environmental Protection Agency to require state and local governments to require performance and payment bonds on water projects financed by the federal government. The coalition recommended that surety bond requirements be included in EPA's interim final rule to implement the Water Infrastructure Finance and Investment of 2014. WIFIA provides loans guarantees to help finance state and local water projects, many of which could involve construction. "By requiring payment bonds be furnished on WIFIA-financed arrangements, EPA will ensure that certain subcontractors and suppliers on these projects will have payment remedies in the event of nonpayment, ensuring the continued viability of these often local businesses," the coalition told EPA. The coalition's letter further explained:

"The payment bond provides invaluable protection to parties furnishing labor or material on federal construction projects. Subcontractors and suppliers rely on the payment bond in case the prime contractor does not or cannot pay them. Subcontractors and suppliers often are small businesses and the risk of non-payment can be catastrophic to their businesses. The payment bond often is the only remedy for non-payment."

In addition to ASA, signatories to the letter included the National Association of Surety Bond Producers, The Surety & Fidelity Association of America, the American Institute of Architects, the American Insurance Association, the Business Coalition for Fair Competition, the Mechanical Contractors Association of America, and the National Electrical Contractors Association.

ConsensusDocs Updates Design-Build and CM At-Risk Contracts

ConsensusDocs, a coalition composed of ASA and 39 other design and construction industry associations, has updated its design-build and construction management at-risk standard documents. The documents have been revised to reflect changes in insurance, technology and other business practices in the industry. Design-build and construction management at-risk are project delivery methods that continue to grow in importance and market share. Because these now well-established methods, in addition to integrated project delivery (IPD), disrupt the traditional project delivery process, usage of the ConsensusDocs standard construction contracts is highest in these alternative project delivery methods. The ConsensusDocs design-build and CM at-risk contracts offer clear and concise legal writing; direct party communications with active owner input; and procedures to mitigate claims and disputes. The updated documents being released are:

- ConsensusDocs 410 *Owner & Design-Builder Agreement (Cost of Work Plus Fee with GMP)*
- ConsensusDocs 415 *Owner & Design-Builder Agreement (Lump Sum)*
- ConsensusDocs 420 *Design-Builder & Design Professional Agreement*
- ConsensusDocs 450 *Design-Builder & Subcontractor Agreement*
- ConsensusDocs 460 *Design-Builder & Subcontract Agreement (Cost Plus with GMP)*
- ConsensusDocs 500 *Owner & Construction Manager Agreement (GMP with Preconstruction Services Option)*

ConsensusDocs are the only contracts written by 40 leading design and construction industry organizations.

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FEATURE

Recognizing Potential Change Orders

by Stephane McShane

Failure to recognize potential change orders is a source of significant margin fade for many contractors. Managing change orders effectively creates the environment where contract status and margins are known and, better yet, predictable. Why is it that change orders go without being noticed or acted upon? Let's look at the source of the oversight and why this may be occurring in your organization.

Change order management can be a time-consuming and painstaking process. Most of us agree that there is not a windfall of profit chasing change orders using the traditional processes. Because of the resistance received when submitting a request for a change order, many contractors decide that pursuing them, "just isn't worth it." Or, they believe that under a certain revenue limit, the effort is not worth the reward. However, if a justified change order is not transformed into a contract adjustment, who foots the bill?

The Point of Origin for Change Orders

The most easily identifiable change orders come from RFIs or other documents coming from the owner or general contractor asking for revisions to the scope or schedule of a project. These requests must be assessed in order to receive compensation for the additional cost or time. These are the easiest potential change orders to identify but an organization must have a clearly defined process that is universally followed for their execution.

Drawings and Specifications

In the design-bid-build world, many change order opportunities exist due to the lack of information contained within the contract documents. What used to be considered a fully engineered set of drawings is seldom considered "complete." Change orders also exist when there are conflicts between the drawings, specifications, and addenda. Another potential for change order exists in the value engineering of an existing design. How does a contractor ensure that these changes are recognized and pursued? The first line of defense in recognizing these change orders is the estimating group.

In performing assessments of construction organizations, it is apparent that many companies bid every opportunity that exists. In other words, any bid that is remotely within their skill set, geographic region, or vertical market is pursued with little thought to prioritizing those efforts in a structured and objective manner. It is common for estimators to struggle with having enough time to take-off the job and get it summarized by bid day. So, how can a contractor rely upon this group to identify the first line of potential change orders?

The solution exists in the process definition and resource management of the estimating group. Estimators must have the time available to capture this critical information. Utilizing tools such as scope review checklists that structure the documentation and information transfer of bid assumption, questions, risks, value engineering opportunities, and drawing/specification conflicts may be a solution to this workflow challenge. This structure creates the added benefits of a very thorough document review by the estimating group in order to capture all of this information and an expedited ramp-up for the rest of the operations team (design, fabrication, project management, field management, purchasing, safety, etc.) on the interpretation of the drawings and specifications at time of bid.

Unplanned Work

Unplanned work happens more often than we want to acknowledge. Is performing work that was not planned and not on the schedule grounds for a change order? It is certainly a possibility. However, the method of identifying this type of change order involves clearly defined teamwork between the field and the office.

Most contractors ask the field to provide a plan of their activities; many call this a three-week look ahead, a short-interval plan, or something similar. This plan allows the field leader to inform the rest of the team of what work will be accomplished for the project manager to ensure the correct resources are available to complete the plan. When the field tries to execute the plan and something happens outside of their control (the painters aren't done, the flooring isn't down, the sheetrock isn't complete, the framers didn't arrive on time, etc.), they are forced to abandon part or all of the plan in place. Activities A, B, and C were planned for today, but only work on activity C was completed. When that occurs, there is a serious loss in productivity as planned work, the work they had the resources to perform, is no longer available and they must regroup and find something else to do.

After the plan, the field staff perform the work and report time on the activities they spent hours on. This is where technology should be deployed to readily identify which reported activities were planned and which one were not. This is the point where many organizations lack the appropriate processes such as:

1. The company's focus and culture surrounding the accuracy of the short interval plan.
2. A review of field hours to analyze the accuracy of planned versus unplanned work activities.
3. Utilization of detailed daily project reports that document why unplanned activities occurred, who directed them, and identification of a possible time and financial impact.

If we can identify a change in schedule, show unplanned activities that were directed, and document the cause of the change, then we have a basis to discuss compensation in time or cost. This sounds simple, however, the information that allows a contractor to fight for time and compensation

comes from one single source—the field. Many organizations provide the necessary tools (process, forms, and systems) to perform the tasks of planning, time reporting, and daily project reports. However, they do not understand the critical role the field plays in gathering the information needed to identify and pursue these change orders, and many of these opportunities are lost due to lack of quality information.

Productivity Loss

The concept of productivity loss goes hand-in-hand with the field reporting discussion. Many self-performing construction firms have construction budgets that track hours, but only a few track quantities, as well. For instance, an electrical contractor has a specified number of days to install a conduit, based on:

- other trades completing their work.
- necessary tools, materials, and equipment.
- proper information.

If any of these qualifiers are incomplete, the electrical contractor is not able to complete the activity as planned. If the electrical contractor is disciplined at production tracking, providing grounds and data for a potential change order would be much easier because the request is based on facts. For example, the amount of conduit scheduled for installation was not possible due to other contractors not completing their work, differing site conditions, delay in owner furnished materials, etc.

In Fig. 1, the field spent 11 hours to install 30 linear feet of wall rough in. However, they should have spent only 2.81 hours to do this quantity of work. The loss of productivity is the difference between the earned hours and the actual hours, or 8.19 hours.

Schedule acceleration

When the schedule begins to slip, owners commonly ask the trades to accelerate their schedule, often requiring overtime and/or double-time work. Some may offer to pay the difference in wage rate between straight time and overtime or double-time. That is fantastic, but only part of the reimbursement that you may be entitled to. There are multiple published studies that prove the loss of production when overtime is performed for an extended period. The differential for the loss of productivity is significantly higher than the wage rate alone, as outlined below.

A 10-man crew is working 40 hours a week. To finish the project on time, the owner requests acceleration to finish the project on time—60-hour work weeks for the next five weeks to complete the project. Straight time wages are $50 per hour. Overtime wages are $75 per hour. The owner has graciously offered to pay the overtime difference of $25 per hour.

Using the NECA Overtime and Productivity in Electrical Construction study as an example, Week 3 will only be 85 percent efficient—a 15 percent loss of productivity. This is ONLY for Week 3 and loss of production continues to rise week to week.

> Week 3:
>
> 85 percent efficient
>
> 15 percent loss of productivity
>
> 15 percent of 600 hours = 90 additional hours needed to produce the work required
>
> 90 added hours x $75/hour = $6,750
>
> 20 OT hours/man x 10 men x $25/hour = $5,000
>
> Week 3 Total Impact = $11,750

In this example, the owner offered a $5,000 wage rate differential, but the loss of productivity will cost $6,750—a total impact for this week of $11,750. This example does not take into consideration any double time that may be incurred or items like tools, equipment, consumables, etc. If the contractor does not ask for all of this in a change order, there will be a loss in production, direct job cost, and profit.

Change order management is a progressive process that begins before the project starts:

1. Utilization of effective financial controls including standard cost codes and a budgeting process.
2. Preconstruction planning to identify all potential changes discovered during the bid process.
3. Consistent field planning, time reporting, quantity reporting (production tracking) and daily project reports.
4. Proper contract administration and risk management to ensure that change orders are approved and contracts revised to allow recognition and billing of these items in a timely manner.

Recognizing potential change orders and following them through to approval and execution is a team effort. Left unchecked, direct job cost budgets may suffer and margin erosion can result. Ensuring that the entire team has the correct tools to identify potential changes and are trained well and empowered to use them is the first step. Successful firms must have the change order process standardized and defined to create consistency within the company. Done well, this can allow the transformation of potential change orders into increased revenue and margin for the organization.

Stephane McShane is a director at Maxim Consulting Group and is responsible for the evaluation and implementation processes with our clients. She works with construction-related firms of all sizes to evaluate business practices and assist with management challenges. With a large depth of experience working in the construction industry, McShane is keenly aware of the business and, most specifically, operational challenges firms' face. Her areas of expertise include leadership development, organizational assessments, strategic planning, project execution, business development, productivity improvement, and training programs. McShane is an internationally recognized speaker, mentor, author, and teacher. Her ability to motivate, inspire, and create confidence among your work groups is extremely rare and very effective.

Fig. 1

Week of	Area	Phase Code	Description	Budget			Hours		Quantity		
				Labor	Qty	UM	Actual	Earned	Week	to Date	% Comp
9/26/2016		SS-00-230	WALL ROUGH IN	87.50	935	LF	11.00	2.81	30.00	30.00	3.21%

FEATURE

Pricing Change Orders Like a Pro

by Anwar Hafeez

Most of the general provisions in the contracts have unfair mark-ups specified for overhead and profit for change orders. For instance, a mark-up of 15 percent in a contract includes payment for the entire subcontractor's overhead plus profit and sometimes the bond cost.

For instance, the G&A (home office overhead) is calculated this way for a subcontractor:

$$\frac{\text{G\&A} \quad \$3{,}500{,}000.00}{\text{Sales} \quad \$16{,}000{,}000.00} = 21.88\%$$

For instance, the G&A is calculated this way for a general contractor:

$$\frac{\text{G\&A} \quad \$3{,}500{,}000.00}{\text{Sales} \quad \$45{,}000{,}000.00} = 7.78\%$$

You can see that the subcontractor would always lose money if it recovered its bare costs back because its overhead is too high, while the GC would make money because its revenue includes all its subcontractors and thus its overhead is lower than subcontractors. To overcome this some subcontractors inflate their labor rates, material prices and equipment rates. This is a bad practice or tactic since the subcontractor can easily get caught in doing so. It is also unethical. In public work contracts, such as federal government contracts, the penalty for deliberately falsifying costs is forfeit of the claim and 200 percent penalty of the claim amount and possible debarment. In California, the penalty is 300 percent and other same provisions as the federal government contracts. You could get the GC in trouble if you falsified costs. A lot of private and public work contracts have audit provisions, and you can get caught during audits if you falsify costs. The fairest contracts that pay your actual overhead costs are federal government contracts and similar contracts, with some limitations.

Some subcontractors think that they should not provide much back-up or a lot of information to the GC/owner in submitting their change order costs because they set patterns. In fact the opposite is true: the GC/owner representatives have to justify the settlement of the change order to their bosses. These representatives for the most part do not understand construction. They think that the materials that you order for the change order beams up to the 5th floor (like Star Trek) and you can start installation.

You need to educate these representatives by telling them about this change order in detail. Explain how you built this change order from beginning to end, and provide lots of details with back-up, including exhibits, such as for labor rates, equipment rates, material invoices, etc., which the representatives love and helps them understand in minute detail how this added work was performed. You have distributed your costs over many items of the added work, which makes it difficult for the representatives to reduce the costs of the change order. The equation is simple—the more back-up you provide, the more money you will make on the change order.

Pricing in detail does not set patterns since each change order is unique and has its own price. For instance, you cannot install drywall on the 18th floor for the same price as the 2nd floor but unit pricing states that the price is the same.

Change order or claims include the following:

- Labor
- Equipment
- Materials
- Indirect costs
- Overhead
- Profit
- Bond

There are five major components of a change order:

Component No. 1—Discovery of the Problem

- Finding that the contract documents are incomplete and/or are not buildable.
- Stop work—lost time.
- Demobilize crew—lost time.
- Write RFI.
- Get answer to RFI.
- Ask for a change order.
- Change order is issued.
- The type and size of materials is determined by doing some engineering and take-off.
- Material is ordered.
- Crew remobilizes after material is received for the added work—lost time.

Component No. 2—Normal Material Handling

Before any material is installed it must be handled several times, examples are:

- Material is unloaded.
- Inspected for damage during transit.
- Carried to the storage area.
- Hoisted to the floor it is to be installed.
- Distributed to the installation location.
- Bundles must be broken apart.
- Equipment is removed from cartons, pallets, boxes, wrappings, cut from coils, etc.
- Empty cartons, pallets, boxes, wrappings, cut from coils, etc., must be disposed.

Component No. 3—Drawing Study, Measurement and Layout

Installation of any material cannot begin until:

- Installation location is verified.
- Product literature is read for installation instructions.

- Shop drawings are reviewed.
- Workers are instructed on what to do.
- Fastening devices are identified and procured.
- Measurement is made to insure the proper installation location.
- Installation location is marked.

Component No. 4— Material Installation

This effort includes:

- Procurement of tools other than hand tools carried in the tool belt.
- Return of tools other than hand tools carried in the tool belt.
- Installation of materials [Need to break each task of added work in minute details to show labor/ materials/equipment to accomplish all the added work]
- Besides materials—other components need to be installed, as applicable:
  - Fasteners, hangers and supports.
  - Cutting.
  - Bending.
  - Threading.
  - Core drilling.

Component No. 5— Normal Non-Productive Labor

During the installation of material there is normal non-productive labor for contract, as well as CO work, such as:

- Breaks required by laws.
- Attending tool box meetings.
- Parking in one area and being bussed to the jobsite in high security projects, such as airports.
- Lost time due to interference or coordination with other trades.

Cost breakdown of a change order includes:

Labor

- Mobilization
- Demobilization
- Unloading of materials
- Sorting of materials
- Carrying materials to right location
- Distribution of materials
- Layout
- Clean-up
- Engineering [estimate or actual]
- Supervision
- 25 percent for foreman

12.5 percent for general foreman

Equipment

Make sure you have corresponding labor to operate equipment.

Rates—Use Bluebook, Caltrans, Corps of Engineers, or whatever is specified.

Materials

Actual or estimated—provide invoices.

Indirect Costs

These are suggestions to add to your change order:

- Small tools—7 percent of labor [negotiate to 4 percent to 5 percent].
- Consumable—7 percent of labor [negotiate to 4 percent to 5 percent].
- Safety maintenance—2 percent of labor.
- OSHA tool box meetings—1.25 percent of labor [½ hour / 40 hours].
- As-built fees—1 percent of labor.
- Added warranty—2 percent of labor.
- Degree of difficulty—5 percent to 10 percent of labor.
- Coordination with other trades—Forman supervision in hours.
- Change order preparation—hours and rate.

Overhead

Use actual or whatever is specified.

Profit

Ask 12 percent—settle for 10 percent, or whatever is specified.

Federal contract—method of computing

Bond

Actual bond costs whatever is specified.

SAMPLE PROJECT

Overhead and Profit Mark-up example:

Item	Amount
Material & equipment	________
Labor	________
Subtotal	________
Overhead & Profit@ 15%	________
Subtotal	________
Subcontractor cost	
Subtotal	________
Overhead & Profit @ 5%	________
Subtotal	________
Bond premium [not addressed use actual]	________
Total	________

Note: These mark-ups are full compensation for all overhead and small tools and for all other indirect costs of the changed work, as well as for profit thereon. Included are applicable taxes, job burdens, general home office expenses, and all other OH costs.

This owner of the sample project does not want to pay for small tools. Here is how you overcome this obstacle. Some contracts state that they won't pay for small tools at all or small tools that have to have a purchase value of greater than $200 or $500. When the owner makes these limitations or specifies that it won't pay for them, it has made a big mistake in not defining what small tools are. Therefore, you get to define what small tools are—a piece of equipment that is not battery operated, electrically operated, pneumatically operated or hydraulically operated. What does that leave you? Hand tools such as a hammer, screwdriver, pliers, wire cutter, hand saw, etc. Everything else is classified under equipment and you can find rental rates and charge them under equipment.

This owner does not want to pay for indirect costs. Do you think that the indirect costs the owner is talking about is what is listed above? Of course it is. Here is how you overcome this obstacle:

Do you have to maintain safety? Do you use small tools? Do you use consumables? Do you have to prepare as-built drawings, etc. when you perform change order work? The answer is yes, thus, this is a direct cost.

Armed with this knowledge, subcontractors can go out there and price change orders like a pro—every time!

Anwar Hafeez is president of SDC & Associates, Inc., San Diego, Calif., a construction claims consulting firm that prepares and negotiates change orders/ claims with 99.999 percent success rate, CPM scheduling, and teaches seminars on project management and change orders/claims. Hafeez can be reached at (800) 732-3996 or ah@sdcassociates.com. Visit www.sdcassociates.com for more information.

Feature

Negotiating Change Orders Like a Pro

by Anwar Hafeez

A long time ago, we in the United States used to negotiate, barter and trade goods. Over time, we have lost the fine art of negotiations because we are used to paying list prices for materials/equipment that we purchase. What do we negotiate for in real life? Buying cars, boats, homes – not much more. Therefore, we have lost practice and are afraid to negotiate.

I grew up in a country where we would negotiate for everything, so I am not afraid to negotiate. A lot of people are afraid to negotiate because someone will say no. The first thing to remember is that you need to turn the no into a yes or realize that just because you could not persuade one person to say yes, does not mean that the next time you can't get others to say yes. Don't take it as a personal rejection, don't let it bother you; keep trying—the next time you will succeed. Rejection is part of the process in negotiations, you will not succeed 100 percent of the time, but if you succeed 75 percent or 45 percent of the time you have exceeded 0 percent of time.

Can you walk into a Sears, JC Penny, Macy store and negotiate with them, besides the obvious appliances, TVs? Why do you believe that they will not negotiate with you? You are afraid of rejection if you do try. Negotiate with the manager/not the sales persons; they do not have the authority. Contractor walked into Sears—saw a table-saw, listed cost $230, he told the manager, that all he had was $170—can you sell it at $170, manager said yes, negotiations were over. This person had the guts to negotiate and was not afraid of being rejected. Try it yourself next time.

In negotiating change orders, you must have planning/goals:

Goals of the Owner/GC

- Wants extra work done. They want to pay as little as possible and want to understand:
  - Disputed (misunderstood) items
  - Differing Site Conditions
  - Delays / Disruptions
  - Scope of work
  - Contract provisions
  - The Price
- Needs to justify to others—wants more detail than less.

Goals of the Subcontractor

- Wants to do the work—only if compensated fairly.
  - Wants to provide the required information.
  - Wants to maintain good working relationship.
  - Wants to do work for this owner/GC again.
- Emphasize mutual goals during negotiations.
  - Showcase mutual goals.
  - Accent mutual goals already accomplished. This means that if you are in a heated argument during negotiations, remember most of the project all went well—you are arguing over 2 percent of the contract. The best thing to do is change the subject/distract them by reminding of a time that both of you accomplished something great working together. When you put them in a good mood, you go back to your negotiations. Success.
- Use the rule of three:
  - Establish a high-end initial asking price.
  - Know your bottom line—least settlement amount.
  - Have a "realistic" number in mind (70 percent to 85 percent—high end)
  - Be willing to settle between your high and low numbers.
- Know when to negotiate.
  - Negotiate early in project not at end, because:
  - You will lose all your leverage.
  - The owner/GC maybe out of money.
  - The aggregate amount is too large for the CM's authority to approve.
  - People have transferred—need great paperwork to get paid by the new person.
  - May take the owner a long time to get more funding.
  - Use the Sine Wave—negotiate when on top. The Sine Wave works like this on a project, sometimes you are on top and sometimes you make mistakes and you are on the bottom. When the owner/GC wants you to do them a favor—the owner asked me to put some banners up on the roof announcing Disney was coming to the library. I said sure but you have not helped on these nine claims. Let's settle them—I settled four out of nine and patiently waited for the next Sine Wave to resolve more claims. Don't go to the end of the project not resolving many claims.

Methods of negotiating

- Present the facts visually.
- Use notes to keep you on track.
- Maintain as much eye contact as possible, that:
  - Displays trust/exposes poor intent/exercise control.
    - Avoid emotional outbreaks, instead use measured, forceful, concise, language

Actual Negotiation

Owner issues change order—install receptacles/computer outlets at bottom of 5-foot walls. Architectural drawings showed sheet metal cover at bottom of wall/electrical show nothing. Owner rescinded this change order after receiving our price for $380,000—it is part of the contract. I did not want a precedence of letting the owner get away with this. At the meeting with the owner/CM/electrical subcontractor and myself, I used measured, forceful, concise, language and said in no uncertain terms that we were not going to accept rescinding of this change order. The PM from the owner was nice, honest. I never had any cross words with him. He got up at the end of the table and pointed his finger at me and said that if you ever talk to me like that again, I will never deal with you again. Sensing that his behavior was abnormal, I apologized and said that we got off on the wrong foot and I will never talk to him like that again. Let's terminate this meeting and meet at another time. Next day, I met with the assistant PM and asked him why the PM was so angry at me since I was 100 percent right in what I had stated. The assistant PM stated that the PM was not angry at me. He was angry because he thought that I was trying to cheat him since I did not provide the credit for the sheet metal cover. I asked another subcontractor to price the sheet metal cover and provided a credit of $7,200 and took it out of my $45,000 mark-ups. We never had a second meeting and the change order was approved. Sometimes you have to read people in negotiations.

Reaching Agreement

- Reach agreement on as many points as possible.
- Notify immediately if resolution has not been met from your perspective.
  - Many "one-sided" arguments are "finalized" later.
  - Request unilateral change order/ REA/claim.
  - Document your understanding of the agreement immediately.
  - Don't sign away your rights to pursue the difference.

Five Modes of Negotiating

1. Cooperative mode—Both parties win: Win-Win.
2. Competitive mode—One party wins at the expense of the other: Win-Lose.
   - Make higher initial demands.
   - Learn to listen to the other side before making a counter-argument.
   - Leave yourself room to negotiate.
   - Never be the one to make a major concession first.
   - Deadlines results in an unskilled negotiator making too large concessions.
3. Attitudinal mode—Negotiate on the following continuum:
   - Knowledge, trust, goodwill, capabilities, integrity, cooperative spirit.
4. Organizational mode—Behind each negotiator there are other forces at work:
   - Owner
   - Architect/engineer
   - Finance/legal
   - Contractor
   - Accounting/estimating
   - The boss
   - Subcontractors/suppliers
   - Legal
5. Personal Mode—Successful negotiator's 12 best traits:
   - Ability to negotiate with your own people.
   - Desire to get involved personally with opponent.
   - Courage to set higher targets.
   - Catch 22—Dumb is smart and smart is dumb.
   - Less decisive—Makes others start giving concessions.
   - Say I don't understand.
   - Patience—Don't be so quick on the draw.
   - Appropriate humility—Don't be the authority on everything.
   - Persistence is better.
   - Discretion—Don't "catch on" so quickly.
   - Listening ability vs. verbal skills.
   - Using team resources.

Things Not to Do:

- Don't view negotiation as confrontational.
- Don't try to win at all costs.
- Don't become emotional.
- Don't avoid trying to understand the other person.
- Don't focus on personalities instead of issues.
- Don't blame the other person—find third party to blame.
- Don't argue excessively.
- Don't show that you in a hurry.

Things to Do:

- Do solicit the other's perspective.
- Do prepare options beforehand/ Consider timing.
- Do avoid a "too quick" negotiation.
- Do negotiate labor first, then equipment, then materials.
- Do call time out if stuck during negotiations.

Negotiating in Review

- Identify the change order
- Notify the GC
- Know the Process
- Document, manage and track all change orders
- Price the change order
- Follow-up and negotiate the change order
- Request additional time extension
- Negotiate the change order like the Pros

If the GC/owner wants to reduce your price, ask them what part of the scope of work they want to delete for you to reduce your price. This tactic unnerves them. Armed with this knowledge, subcontractors can go out there and negotiate change orders like a pro—every time!

Anwar Hafeez is president of SDC & Associates, Inc., San Diego, Calif., a construction claims consulting firm that prepares and negotiates change orders/ claims with 99.999 percent success rate, CPM scheduling, and teaches seminars on project management and change orders/claims. Hafeez can be reached at (800) 732-3996 or ah@sdcassociates.com. Visit www.sdcassociates.com for more information.

FEATURE

Trump's First Hundred Days Creates Uncertainty for Subcontractors

by E. Colette Nelson

Construction owners, contractors and subcontractors must have an understanding of the future policy environment on key issues like taxes, workforce availability and cost, and government regulation. Whether you're the strongest Trumpeteer or a member of the Resistance, President Donald J. Trump's first 100 days in office have done little to remove uncertainty from business decision-making.

On Oct. 22, 2016, then candidate Trump published a "Contract for the American Voter," a "100-day plan to restore prosperity to our economy, security to our communities, and honesty to our government." The first 100 to 300 days is important because, historically, what gets done up front matters most; what gets pushed to the rear might never get done. Like most new presidents, Trump has found that his to-do list doesn't match up with the legislative calendar, the federal budget, court interpretation of laws, or unplanned events such as international incidents or scandals.

This article addresses the progress on and outlook on several issues that most impact construction subcontractors, specialty trade contractors and suppliers. It is a follow up to an article published in December 2016 in The Contractor's Compass, "Construction Industry Contemplates Impact of Contentious Election."

Infrastructure Funding: A Promise Delayed

As part of his "Contract with the American Voter," Trump said he would "work with Congress to introduce and fight for "passage within the first 100 days of my Administration" the "American Energy and Infrastructure Act." He said the bill would leverage public-private partnerships and private investments through tax incentives to spur $1 trillion in infrastructure investment over 10 years. He also pledged that the bill would be revenue neutral.

However, the first 100 days has come and gone and the Trump Administration has provided few details on how it intends to approach or pay for its plan to rebuild American's failing roads, bridges, dams and other public structures. On March 2, the White House convened an inter-agency working group to begin to develop a specific plan. Even when more details are available, the proposal faces major obstacles, including a lack of budget and limited Congressional bandwidth.

The budget for the remainder of this fiscal year (i.e., through Sept. 30, 2017) does not include additional infrastructure funding. Although the Congressional budget process for the next fiscal year is in its early stages, infrastructure seems to be at the end of a long list of funding priorities. Further, Republican deficit-hawks are vehemently opposed to what they consider to be infrastructure budget busters.

Administration leaders, including Secretary of Transportation Elaine Chao and Secretary of Commerce Wilbur Ross, continue to advocate P3s as a way of reducing the direct cost of an infrastructure program to the federal government. P3s simply are a way of financing, not reducing the cost of construction. That is, the ultimate budget impact, although spread over more years, ultimately is the same. Sometimes the cost is reflected in lost revenue as the public pays tolls and other fees directly to the private partner, instead of to the government through taxes. Indeed, P3s only work when a private investor is assured of a revenue stream from fees, tolls, and the like. While projects in high population centers may be able to generate enough revenue to attract private investors, the same is not true in more rural areas. Thus, conservatives from such areas are unlikely to support the use of P3s.

Already committees in the Senate and House have held hearings on infrastructure needs and financing approaches. However, the next move is up to the Trump Administration. In either event, it is unlikely that construction contractors will be working on projects funded under the Trump Plan until well into 2018 and most likely later.

Immigration Reform: A Promise in Slow Motion

Trump's "Contract with the American Voter" also addressed immigration reform, promising to have introduced and fight for passage in Congress the "End Illegal Immigration Act" during the first 100 days. Trump said that bill would:

"[f]ully-fund the construction of a wall on our southern border with the full understanding that the country Mexico will be reimbursing the United States for the full cost of such wall; establish a two-year mandatory minimum federal prison sentence for illegally re-entering the U.S. after a previous deportation, and a five-year mandatory minimum for illegally re-entering for those with felony convictions, multiple misdemeanor convictions of two or more prior deportations; also reforms visa rules to enhance penalties for overstaying and to ensure open jobs are offered to American workers first."

Although the new Trump Administration has yet to submit such legislation to Congress, it has taken other steps to curb both legal and illegal

immigration, including two executive orders concerning the so-called Muslim ban and a ban on funding sanctuary cities, all three of which have been stayed by the courts.

In addition, the Administration has refocused existing resources, particularly those in the Department of Homeland Security, on stopping illegal crossings at the southern border. Customs and Border Protection has initiated preliminary steps to build Trump's border wall and the Immigration and Customs Enforcement has stepped up the hiring of additional enforcement agents within existing budget restrictions.

In the meantime, however, Congress has shown little interest in funding the president's immigration plan. For example, the continuing resolution, which Congress was in the process of approving as this article went to press, not only does not provide funding for the wall or eliminate funding for sanctuary cities, it contains a provision that would double the number of H-2B visas for seasonal workers, seemingly undermining the President's promise to "hire American."

Tax Reform: A Promise Scheduled

Also as part of his "Contract with the American Voter," Trump promised to have introduced within his first 100 days a "Middle Class Tax Relief and Simplification Act." The Trump Contract states that bill would include:

"An economic plan designed to grow the economy 4% per year and create at least 25 million new jobs through massive tax reduction and simplification, in combination with trade reform, regulatory relief, and lifting the restrictions on American energy. The largest tax reductions are for the middle class. A middle-class family with 2 children will get a 35% tax cut. The current number of brackets will be reduced from 7 to 3, and tax forms will likewise be greatly simplified. The business rate will be lowered from 35 to 15 percent, and the trillions of dollars of American corporate money overseas can now be brought back at a 10 percent rate."

The Trump Administration has not yet submitted a tax bill or even a comprehensive plan to Congress. On April 27, the Administration released a one-page description of a tax reform plan. Obviously, given its length, there weren't a lot of details. However, it appears that the plan is basically the same as the one that Trump promoted during his campaign. That plan paralleled in many ways the plan published by the House Republicans in 2016. Known informally as the "House Blueprint," this plan was largely the brainchild of House Speaker Paul Ryan (R-Wisc.).

There are a few major differences between the President's plan and the House Blueprint. First, while the House Blueprint calls for a 20 percent tax rate for C Corporations, the President's plan calls for a 15 percent tax rate. The House Blueprint calls for a 25 percent tax rate on a pass-through entity's "active business income," which is what is left after the owners are paid a "reasonable compensation for their services." The President's plan calls for a 15 percent tax rate on this "active business income."

Second, it looks like the President does not support the House Blueprint's controversial border adjustment tax. During an April 27 news conference, White House Chief Economic Advisor Gary Cohn and Treasury Secretary Steven Mnuchin said they plan to talk to Congressional leaders about the proposed BAT. Earlier the same day, House Speaker Paul Ryan said the House was going to consider revisions to the BAT proposal.

Third, Cohn and Mnuchin made it clear that part of the President's proposal would help repatriate the trillions of dollars held offshore by U.S. companies through the use of a one-time tax. According to Mnuchin, the tax rate has not yet been determined.

In addition, the White House spokesmen made clear that the President believes that the tax plan will pay for itself by growth in the economy and by the reduction or elimination of tax credits and deductions. Ryan confirmed that "it's basically along exactly the same lines we want to go."

At this time, Trump's tax package focuses on tax decreases rather than tax reform or simplification. Generally, everyone supports tax decreases. The challenges arise when Congress begins writing the details of which tax breaks stay and which go. Every tax break has a purpose (e.g., incentivize or de-incentivize an activity) and a constituency.

While the chances for real tax reform may not be as good as they looked right after the election, there remains a good chance that businesses will see reduced tax rates in 2018 or 2019. Cohn said that the White House will release "very firm" details in the near future. Mnuchin said the White House is aiming for a tax package to be passed before the end of the year. In the meantime, business tax planning remains in limbo.

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Regulatory Reform: A Down Payment on the Promise

One area in which Trump has made real progress is on his anti-regulatory agenda. Trump's "Contract with the American Voter" included numerous promises concerning regulatory reform. These included:

- "[A] hiring freeze on all federal employees to reduce federal workforce through attrition (exempting military, public safety, and public health)."
- "[A] requirement that for every new federal regulation, two existing regulations must be eliminated."

On the President's first day in office, White House Chief of Staff Reince Priebus issued a Memorandum for the Heads of Executive Departments and Agencies on "Regulatory Freeze Pending Review." The Memorandum, which is subject to exemptions for emergency situations or other urgent circumstances relating to health, safety, financial or national security matters, is designed to give the new President's appointees or designees the opportunity to review any new or pending regulations. Specifically, the memorandum directed departments and agencies to:

- Send no regulations to the *Federal Register* until a department or agency head appointed or designated by the President after noon on Jan. 20, 2017, reviews and approves the regulation.
- For regulations that have been sent to the *Federal Register*, but not yet published, immediately withdraw them, subject to the exceptions described above and consistent with *Federal Register* procedures.
- For regulations that have been published in the *Federal Register* but have not taken effect, temporarily postpone their effective date for 60 days for the purpose of reviewing questions of fact, law and policy, including possible further review.

Then on Jan. 23, the President signed a memorandum ordering "a freeze on the hiring of Federal civilian employees to be applied across the board in the executive branch." However, that freeze was rescinded on April 12, as the new Administration started to better allocate the human resources it needs to fulfill its agenda.

Trump added the "Presidential Executive Order on Reducing Regulation and Controlling Regulatory Costs" on Jan. 30. That E.O. requires federal agencies to withdraw two regulations for each new regulation they issue. Under the directive, federal agencies must self-identify which regulations to cut based on their estimates of the cost. The process of revoking old rules apparently does not have to take place concurrently with the proposal of a new rule. The new executive order does not apply to the military or national security. It also does not apply to regulations that are mandated by law. Ultimately, the White House will make the decision on which regulations to withdraw.

Existing regulations cannot be eliminated with a flick of a pen. Just as when an agency initiates a rule, when an agency wants to amend or eliminate a regulation, it must follow the procedures established in the Administrative Procedures Act. Under the APA, a federal agency must make a determination that a regulatory change is necessary, write the proposed change and its justification, and open the proposal to public comment. In general, the time from public notice to the effective date of a new rule takes at a minimum 120 days. Usually, it takes much longer.

In the meantime, however, the new Trump Administration has been inordinately slow to fill federal positions allotted to political appointments. For example, current law identifies 556 presidential appointments needing Senate confirmation. As of April 29, the President's 100th day in office, he had achieved Senate confirmation of 24 of his appointments, nominated an additional 40 that were awaiting confirmation, and identified but not nominated an additional 26 individuals. That means the president has not even named 466 individuals who can be expected to assure that his policies are implemented in the federal departments and agencies. In the absence of political appointees, knowledgeable and experienced career civil servants are in charge. However, that is not the same as having in place political appointees who can provide the direction and guidance needed to implement a president's policies, including the review and revocation of burdensome regulations.

More than President Trump, the Republican-controlled Congress has aggressively tackled what it considers to be the Obama Administration's over-regulation, through the use of the Congressional Review Act. That law allows Congress to review and reject any new regulation within 60 legislative days of its final publication. For example, Congress passed resolutions, which subsequently were signed by President Trump that invalidated regulations to require federal contractors and subcontractors to disclose labor violations when bidding and performing on federal contracts and to lengthen the statute of limitations for recordkeeping violations under OSHA.

E. Colette Nelson is ASA's chief advocacy officer. She manages all facets of ASA's government and industry advocacy initiatives. During her tenure with ASA, she has been actively involved in most of the major issues impacting the construction industry, including small business development, government procurement, labor-management relations and taxes. Nelson has served as the lead industry representative on the key issues of prompt payment and bonding of construction contractors and subcontractors. She has published numerous articles and manuals, including several for the Foundation of ASA. She also is in demand as a public speaker and facilitator on association management and construction issues. Nelson can be reached at (703) 684-3450, Ext. 1310, or cnelson@asa-hq.com.

FEATURE

Drones—Coming Now to a Construction Site Near You

by Brian Esler & Seth Row

Drones and construction projects—the question is not "if," but "when." The ability to get real-time information and monitoring from an "eye in the sky," or to deliver tools and materials exactly where they need to be when they need to be there, is irresistible. Small unmanned aircraft (i.e., drones) are cheaper to operate than manned aircraft, can collect data on a project's progress almost continuously and in real-time, and allow companies to spot problems earlier and more safely, and deploy resources more efficiently. But until last summer, the rules for using drones on construction sites (or any other location) were complex, messy, vague, and difficult. Although drones were being used on construction sites anyway, in many cases those uses were probably illegal under existing law. All that changed last summer, with new regulations. Now that drones are "legit" for use on a construction site, there are regulatory and insurance implications to be considered.

New Regulations Authorize Commercial Drone Use, With Restrictions

On Aug. 29, 2016, the Federal Aviation Agency enacted long-debated new regulations for the commercial use of drones. The rules create a decidedly more business-friendly approach to licensing and operating drones. With manageable rules in place, the rush is on to figure out how drones can most effectively help construction projects.

By way of example, shortly before the new rules went into effect, Autodesk (one of the largest BIM software providers) announced a significant investment in 3D Robotics, which is developing specialized drones for the construction industry to monitor projects that will share the information through the cloud and presumably now incorporate the information directly into Autodesk's BIM software. Similarly, Caterpillar recently disclosed its investment in drone-software startup Airware.

So what do you need to know about the new FAA regulations? Here are some of the most important provisions:

- Drones must weigh less than 55 pounds, including anything being carried.
- External loads are allowed so long as securely attached.
- Drones must remain in line of sight of operator, and generally may not be operated from a moving vehicle.
- Drones may not operate over persons not involved in or consenting to the observation.
- Drones generally may only operate in daylight.
- Maximum speed for drones is 100 mph.
- Maximum altitude for drones is generally 400 feet.

Any drone operator must hold a remote pilot airman certificate from the FAA, or be operating under the supervision of someone who has that certificate.

The regulations are much more detailed, but decidedly more straightforward (and operator-friendly) than the previous nebulous regime. The FAA can waive many of the restrictions, but that requires the operator to obtain a certificate of waiver, and the penalties for violating the FAA's regulations remain severe. Most restrictions can be waived if the applicant can demonstrate that the operation may be safely conducted under the terms of a certificate of waiver.

Although the FAA has normalized drone regulations to make it simpler for companies to comply with the law, complying with the regulations is not enough. If you are thinking about using drones on your project (or subcontracting on a project where drones are going to be used), other issues need to be considered as well. Principal among them are whether and how the use of drones may create new and different risks for your company, and whether your insurance coverage protects you from those risks.

Insurance Issues with Drones in the Construction Industry

Drones are being used by many to *reduce* risks, particularly risks from inspecting building elements that are hard to reach, and where in-person inspection would be risky for the worker. But at the same time, drones create both first-party and third-party (liability) risks for the drone owner, the operator, and entities that contract for the drone to be used. The risks range from damage to the drone itself, damage to persons or property from crashing, delay from interference with operation of other machinery, cyber-risks from hacking, and invasion-of-privacy claims.

Drone-Related Risks May Be Excluded from Current Insurance Coverage. Many in the construction field do not realize that liability insurance carriers view most drone-related risks as excluded from coverage under standard Commercial General Liability policies due to the "aircraft" exclusion in the standard-form CGL policy. While there was uncertainty about the classification of drones as "aircraft" for quite some time, the FAA's new regulations make it clear that drones are "aircraft" for purposes of its regulations. Presumably the insurance industry will argue that this means that drones are now clearly "aircraft" for purposes of the CGL exclusion.

However, because of the lack of clarity on that point, the Insurance Services

Office, a.k.a. "ISO," the organization that creates standard forms for CGL policies that are used in whole or in part by most insurers, has published several exclusionary endorsements that can be added on to a CGL policy by the underwriter to specifically exclude all, or some, drone-related risks. The form endorsements include exclusions for use in single-policyholder GL policies, as well as wrap-up, a.k.a. OCIP/CCIP, and excess/umbrella policies. These endorsements came out in 2015 and are gradually being adopted.

Importantly, these endorsements broaden the scope of the "aircraft" exclusion not just by including drones specifically within the definition of "aircraft," but also by excluding not just direct liability for the drone/aircraft operator, but also excluding indirect, or "vicarious," liability arising from drone use, such as the liability of an owner or contractor who might hire, direct, or supervise a subcontractor who is using a drone. (Subcontractors should, therefore, expect general contractors to attempt to specifically shift all drone-related risks to subcontractors through the construction contract).

Compounding the coverage problem is the fact that many players in the construction industry do not routinely purchase "personal and advertising injury" coverage as part of their CGL package because of low perceived risk. Standard CGL forms generally define invasion-of-privacy claims as "personal injury," and if that coverage is not purchased, such risks are excluded. If that coverage is purchased, it is not subject to the standard-form "aircraft" exclusion—but if the 2015 exclusion endorsements are added, they will zap all coverage, including for invasion-of-privacy claims.

On the first-party side, standard-form contractors-equipment, boiler and machinery, equipment floater, or "inland marine" coverage may not cover damage to the drone itself if the drone is not scheduled on the policy, because it is not standard equipment. However, some construction firms have been successful in adding drones to their equipment coverage, subject to a separate sub-limit and additional premium.

Before Using Drones, Check Insurance Options. All is not lost, of course: what the insurance industry taketh away, it will give back—for a price. A number of insurers now offer specialized "Unmanned Aerial Vehicle" insurance that provides combined first-party and liability coverage. Some of the offerings come from aviation insurers, who may not be familiar names to brokers who focus on the construction arena. This kind of insurance is usually modeled on marine-vessel insurance, e.g. "hull" coverage, using language unfamiliar to those who dwell mainly in the CGL world.

ISO also offers an endorsement to the CGL policy that adds back in liability coverage for drone-related risks. At the same time that ISO created the 2015 form exclusions, it created form endorsements that provide limited coverage for drones—but the drones used must be "scheduled," or listed, and the projects where they are used must also be scheduled. These endorsements broadly exclude drone-related risks but then add coverage back in only for scheduled drones, working on scheduled projects. The trick to successful use of this coverage-by-endorsement will be keeping the insurer apprised of new drones, and new projects where drones may be used. This may be difficult if the policyholder is arranging for the drone to be used, but does not own the drone itself and is mostly concerned about vicarious liability. In addition, the liability insurance offered by the endorsement is subject to a sub-limit that must be specified in the declarations. One important caveat: the liability coverage will likely not apply to any FAA or state/local fines or penalties for improper use of a drone.

In summary, the path is now fairly clear for the use of drones in construction projects. The FAA's regulations must be carefully followed, however, as the agency will likely be seeking to create "examples" out of violators to send a message to users. Moreover, and perhaps of more concern given the frequency of litigation arising out of construction projects, those considering using drones must carefully evaluate their insurance coverage options, bringing their brokers and legal counsel into the discussion, to make sure that the risks are carefully managed.

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The Change Order Dance

by Joe Katz

At a recent networking event, I overheard a snippet that went something like this: "change orders—you can't live with them and you can't live without 'em!" I suspect many might be tempted to agree with this sentiment. It is crucial, however, to understand what a change order is, what it is not, and how to leverage that information to your benefit. Once certain best practices are adopted throughout your organization to manage the change order process efficiently and effectively, you will view change orders differently.

Change Order Defined

A change order, in its simplest form, is an agreement to affect a change to the already executed subcontract. Often, it is necessitated by added, deleted or, simply changed work from the plans and specifications already bid and agreed upon. While a change order typically adds value to the contract in exchange for the changed scope, it can also delete funds, change work without affecting price, and add or subtract time to completion of the work.

Industry-Wide Best Practices

As with nearly every issue which may arise in commercial construction, we begin every analysis with the subcontract itself. The particular language of the contract will govern the general process, time requirements and other housekeeping items surrounding the issuance of change orders. Notwithstanding, certain best practices remain constant in successfully managing change orders, no matter what type of work, project or subcontract is at hand. When a subcontractor integrates these measures across its organization it can avoid costly disputes later, and hopefully even turn a healthy profit from the change order process itself.

Do It Later Approach Does Not Work

Stopping to get written approval for every change during the construction process is sometimes seen by the subcontractor as potentially detrimental to his or her relationship with the customer, or otherwise perceived as not being a team player. Often, the mentality is to "just get the work done and we will negotiate the price and terms in good faith later," or "we just don't have the time to do it now."

This "do it later" approach often leads to a huge amount of time (i.e., lost profitability) spent on the back end of a job trying to resolve disputes (i.e., potential damage to the contractor's reputation) that could have been avoided if changes were dealt with in writing before the work was done. Even more harmful, crucial notice or signature provisions of the subcontract will be missed, meaning you are no longer contractually entitled to payment for such extra work. Keep an especially watchful eye for lien releases, which will often not simply release lien rights for the current funds being paid, but will release all rights to lien for all work performed through the date of payment, which will include both unbilled and unapproved change orders. If your subcontract says no change order work is to be done unless a signed change order is in place, insist on this—simply do not do the work until a signed change order is in place!

Learn the Change Order 'DANS'

Think of change orders as a carefully choreographed dance, with all the dancers executing their role with precision. If one step is missing, the entire performance may fail. The change order process is complex, and involves the owner, the general contractor and ultimately the subcontractor tasked with the change—often the one who discovered the need for the change in the first place! Even within the subcontractor entity itself, change orders will involve multiple disciplines, including estimating and pricing, notice from the field, implementation and documentation. It is crucial these elements work together, whether you are a five-person firm or nationwide conglomerate.

D – Document

A – Amount

N – Notice

S – Signature

Document

In commercial construction, like much in life these days, if it is not in writing, it does not exist. I've seen too many subcontractors get burned by relying

on verbal assurances from GC project managers and superintendents that the extra work they are performing will be paid as a change order. Once the work is done, however, the story changes.

Email is your friend—use it often. Electronic communications are just as binding and compelling as the old-fashioned letter. Writing a quick email as soon as you learn of the potential for additional or extra work is crucial—and if you are performing extra work, always ask for extra time to perform it!

Amount

Price your change orders—even if you don't ultimately get approval at that amount, you have gone on record on what you will be charging for the work. If the GC instructs performance, the price will become binding upon it, or otherwise its burden to demonstrate the price was not contractually permitted. Again, this can be done in an email—the important thing is to get it into the universe of documents quickly (make sure it is accurate and leaves no money on the table), so it becomes the GC's burden to pass your price upstream. If the price is determined based upon specific timing, include that. A condition on the price could be the change order's approval within 24 hours, while your forces remain mobilized in that portion of the project—after that time, a 10 percent to 20 percent premium can be added to return to the area because of the remobilization and/or work inefficiencies involved.

Notice

Many subcontracts contain notice provisions for proposed change orders—use email for that, too. Get into the habit of documenting everything in real time, and your email will be a paper trail credibly demonstrating the project timeline and milestone events. More courts around the country are agreeing that an electronic signature, i.e., your name at the bottom of an email, constitutes a legally binding signature. As such, contractual notices and even change orders can be established simply through your email. Do not waste this golden opportunity.

Signature

Finally, and perhaps the hardest part, is simply not beginning the work until a signed change order is issued. You will be pushed, prodded, cajoled, and perhaps even threatened, to just do the work and worry about change orders later. If the subcontract does not address change orders (a rarity these days), there is simply no obligation to do the work until a signed agreement for that work is in place. If the subcontract addresses change orders, read it carefully—the vast majority state that no work is to be done unless a signed change order is in place. Do not be fooled—GC's place that into the contract specifically in order to not pay subcontractors for change work performed without a signed agreement. Insist on the signed changed order, or no work.

While many subcontracts have an alternate approach that states if price cannot be agreed upon, the work is still to proceed and is to paid at either cost plus markup or a similar calculation, this will often require a specific, force account instruction by the GC. Hold them to it—insist that they order the work, in writing, on force account, so there can be no question later on who requested the work.

Learn and practice the change order dance, and you may just view change orders more as profit centers than headaches.

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THEME: Change Orders

- *Calculating Delay Claim Costs*
- *Calculating Inefficiency Claim Costs*
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