DISPUTES IN CONSTRUCTION: AN EVALUATION OF CONTRACTUAL EFFECTS

A Thesis

by

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ABSTRACT

Construction disputes are on the rise globally. They adversely affect the progress and quality of a construction project by resulting in cost overruns and delays. Very often, disputes are a direct result of improper administration of contracts or failure to understand contractual obligations. In this regard, it is valuable to analyze the standard form contacts being used today for their effectiveness.

This study was an attempt to identify the most disputed clauses in construction in the US and the UK, and to evaluate the wording used by ConsensusDOCS in addressing these issues in the US. There exists several studies that either deal with comparison of one provision only or the entire general conditions of two contracts. Unlike what has been already done, this study attempts to perform seminal research in the area by first identifying the most disputed clauses and then determining the cause through a survey of industry professionals.

The findings of the study revealed that the four most disputed areas are the same in the two countries - delay, defects, changes and payment, indicating the pervasiveness of these issues. Further interviews of construction industry professionals suggested that improving contractual language will lead to a definite decrease in the number of disputes in construction.

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Contributors

This work was supported by a thesis committee consisting of Dr. Ben F. Bigelow [advisor] and Dr. Zofia K Rybkowski of the Department of Construction Science and Dr. Dawn E. Jourdan of the Department of Landscape Architecture and Urban Planning.

All work for the thesis was completed by the student, under the advisement of Dr. Ben F. Bigelow and Professor Steve Rodgers of the Department of Construction Science.

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1. INTRODUCTION

Disputes in construction are commonplace and recurrent. They can occur between any of the parties in a construction contract – owner, designers and contractors. They often result in cost overruns and delays in project delivery, and can adversely affect the quality of the project. In 2013, the National Construction Contracts and Law survey administered by National Building Specification (NBS) found that the number of disputes had increased by 6% from the previous year (NBS, 2013). Studies have also found a marked increase in both the value and the length of disputes from 2013 to 2014 (Arcadis, 2015). Consequently, once a dispute arises, resolving it can prove expensive and laborious for all stakeholders involved.

Globally, the two most common causes of disputes have been identified as failure to properly administer the contract, and failure to understand and/or comply with its contractual obligations by the employer/contractor/subcontractor (Arcadis, 2015). Hence, a paradigm shift in focus from dispute resolution methods to contract documents is imperative to avoid costly contingencies and adversarial negotiations. In this context, studying contractual language used in standard form contracts to understand its impact on disputes will prove consequential.

Since disputes and their consequences are issues of a universal nature in the construction industry, it is advantageous to identify the most disputed construction topics in the United States, compare them to those in a different region and study the contractual wording used to address them in a standard form of contract. United Kingdom was selected as the focus of this study based on convenience because the researcher had an opportunity to visit the country and meet with construction industry professionals.

The United States has several standard forms of construction contracts - for instance, those issued by the American Institute of Architects (AIA), ConsensusDOCS, and Engineers Joint Contracts Document Committee (EJCDC). ConsensusDOCS was selected to provide the foundation for this study, primarily because it is relatively new as compared to AIA, which is the other most commonly used standard contract form in the United States.

This study proposes to identify the most disputed areas in construction in the United States and the United Kingdom, and to determine if the contractual wording used to address them have an impact on the number of disputes. Specifically, the research questions of this study are 1) Which stakeholder initiates the highest proportion of disputes in the United States and the United Kingdom? 2) What are the most disputed areas in construction in the United States and the United Kingdom? 3) How do the most disputed topics in these regions compare against each other? 4) How do the clauses in

ConsensusDOCS address the most disputed topics in construction in the United States? and 4) How do construction industry practitioners view the performance of the contractual language used in ConsensusDOCS to address the identified dispute areas? By studying how the most disputed clauses have been dealt with in a standard form contract that is relatively new and has claimed to have improved upon existing standard form contracts, this study serves as a starting point to evaluate contractual language in construction contracts which will help reduce disputes, thereby improving the construction process.

2. LITERATURE REVIEW

There exists a multitude of definitions as to what a dispute is in the academic literature. Hence, it is necessary to define contract and dispute first. A contract is "a promise or set of promises, for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty" (Kelleher Jr et al., 2014). Nahapiet & Nahapiet (1985) describe a contract as a device for conducting exchanges which guarantees consistency and security in business exchanges. The contractual agreement that the client selects appoints organizations that make goods and services available to him, defines the parties' obligations towards the client and vice-versa, and indicates what is to happen in case of contingencies. In addition to detailing the relationship of various design and construction facilities with the client, the contractual document also describes their relationships to one another. Thus a contractual agreement has immediate ramifications for all parties involved in construction – and not just the building contractor.

A dispute is "any contract question or controversy that must be settled beyond the jobsite management" (Diekmann, Girard & Abdul-Haidi, 1994). Rule 1 of the Institution of Civil Engineers (ICE) Arbitration Procedure states that a dispute or difference shall be deemed to arise "when a claim or assertion made by one party is rejected by the other

party and that rejection is not accepted" (Eggleston 1993). Disputes in construction can be attributed to the conflicting interest of the large number of participants.

The National Building Specification's (NBS) National Construction Contracts and Law Survey (NBS, 2013) found that with 30% of the respondents having entered into a dispute within the past year, there was a rise of 6% in disputes from the previous year. The Construction Contracts and Law Survey administered by NBS in 2015 (NBS, 2015) reports that only 8% of the respondents reported the number of disputes in construction to have decreased in 2011, 10% in 2012 and 9% in 2015. The majority indicated that the number of disputes in the construction industry has either remained the same or has worsened as compared the previous year. The 2013 survey found that the client and the main contractor were in dispute 76% of the time. The study also established that disputes generally involve large sums of money and significantly affect the construction process. It found that 35% of the disputes reported had an approximate value between £250,000 ($356,000) to £5 million ($7 million), and nearly 20% of the disputes had a reported value in excess of £5 million ($7 million).

The findings of the Global Construction Dispute Reports (Arcadis, 2015) state that the value of disputes have increased considerably from 2013 to 2014 in Continental Europe (39.3%), the Middle East (87.5%), and Asia (104.3%), while it dipped marginally in the United Kingdom (3.2%) and the United States (13.7%). In spite of the drop in dispute

values in the United States and the United Kingdom, both these countries saw an increase in the time it took to resolve disputes. The length of disputes increased by 18.2% in the United States, averaging around 16.2 months, while it increased by 26.6% in the United Kingdom, averaging around 10 months to resolve. The report ascertained the leading causes of construction disputes globally to be failure to administer the contract, poorly drafted or incomplete and unsubstantiated claims, error and/or omissions in the contract document, failure to understand and/or comply with its contractual obligations by the employer/ contractor/ subcontractor, and failure to make interim awards on extensions of time and compensation. Factors that were identified by the report to have the largest impact in avoiding a dispute are proper contract administration, accurate contract documents, and fair and appropriate risk and balances in the contract. This implies a potential shortcoming in existing standard form construction contracts.

According to the specification prepared for the Institution of Civil Engineers (ICE) (Broome & Hayes, 1997), clarity in contractual language is achieved by using simple language, identical phrases and terminology common to all disciplines wherever possible, delineating duties and responsibilities of all stakeholders clearly, avoiding legal jargon and paraphrasing of existing law, excluding contract-specific data so that the core conditions of contract need not be modified, choosing clarity over fairness in minor

matters where complicated text has been used, and omitting matters which may be more effectively covered in the technical specification.

The standard form of contract used in this study is ConsensusDOCS. ConsensusDOCS standard contracts was published in 2007, after the Associated General Contractors of America (AGC) expressed concerns that the 2007 edition of the AIA documents did not balance risk fairly among all project participants, but instead shifted a significant portion of the risk to general contractors and other parties outside of the design profession (AGC of America, 2007). ConsensusDOCS publishes more than 100 contract documents, addressing a variety of project delivery methods, and claim that it is written in the project's best interest versus a single trade association in an attempt to fairly allocate risk. The ConsensusDOCS Coalition includes 41 trade associations representing stakeholders in all aspects of the construction industry, ranging from design professionals, owners, contractors and subcontractors to sureties in the design and construction industry (ConsensusDOCS, n.d.).

The main issues disputed in the United Kingdom in 2013 were identified to be extension of time, valuation of final contract, valuation of variations, loss and expense, and defective work (NBS, 2013). However, information comparable to this is not available in the United States. Some law reviews make unfounded claims about the most disputed issues in construction that are not supported by empirical studies. For instance, Spurr

(2009) speculates that the most common disputes in construction in the United States are related to non-payment, followed by disputes as to what is owed by the owner and what should have been built by the contractor, and what was intended to be shown in plans and specifications by way of detail. Bridston (2009) ventures that delay and impact claims are the most common, followed by limitation of liability clauses. The most common claims identified by Ledet (2014) are defect, delay, constructive acceleration, scope change, force majeure, differing site conditions, and performance failure claims. However, according to Hughes (2012), the number of delay claims and scope of work issues are seeing a sharp decrease nationally. These claims as to the most disputed clauses in the United States, not only contradict each other at times, they are also anecdotal at best, since they are not backed by hard data.

There exist several studies that either deal with comparison of one provision only or the entire general conditions of two contracts. For instance, Miller et al. (2014) performed a comparative analysis of AIA and Design-Build Institute of America (DBIA) contract documents. Three provisions – purpose, structure and risk allocation were selected as areas of focus and a provision-by-provision comparative analysis was performed to identify areas of similarities and differences. Yayla and Tas (2010) studied the change order process in AIA, FIDIC and Kamu Ihale Kurumu (KIK) conditions of contract. The provisions for change order in KIK are compared to those in AIA and FIDIC to identify areas of shortcomings in KIK.

Chui and Bai (2009) compared the general conditions of contract between AIA and that used in China (GF-1999-0201) using quantitative analysis. All sub-clauses in each of these documents were coded into one of the six categories and one sample chi-square tests were performed on this data to assess whether the proportions of sub-clauses from AIA and GF documents which fell into each of the categories were equal or not, and to study the proportional differences between the two documents within each of the six categories.

In 2009, Hanson Bridgett studied how the integrated project delivery (IPD) concepts in different IPD form agreements fare against each other. AIA C191 Family, AIA C195 Family, ConsensusDOCS 300, Sutter Health's Integrated Agreement for Lean Project Delivery, and Hanson Bridgett Standard Basic IPD Contract were used to compare target cost, compensation, changes and contingency, risk allocation, document and record access, and dispute resolution using a comparison table (Dal Gallo, O'Leary & Louridas, 2009). It concluded that AIA C191 has incorporated more IPD principles than AIA C195, and that ConsensusDOCS 300 needs to be updated to include more IPD concepts.

A similar study was performed in 2008 by Ballobin, where selected provisions in AIA A295, AIA C195 and ConsensusDOCS 300 were compared by first listing the pros and cons of each provision and then using a comparison table.

A study that focused on a single provision in contract documents was conducted by Tsai & Yen (2006). They studied the risk allocation of interfaces between construction and core system contracts by comparing provisions in FIDIC, AIA, NEC and Engineering Advancement Association of Japan (ENAA). Top risk factors were identified through a survey and quantitative analysis of the data. The provisions relating to these factors in the selected contract documents were then compared. The methodology used in these studies typically involve a clause-by-clause comparison of the selected contract documents to identify whether any difference exist between them.

Unlike what has been already done, this study shifts focus from a comparative study and attempted to perform seminal research in the area by approaching construction industry professionals to ascertain what the most disputed clauses are in construction, and then analyzing the contractual language in dispute prevention through further feedback from construction industry professionals.

3. METHODOLOGY

This research represents an exploratory qualitative study to evaluate common disputes in the construction industry and the impact of contractual language on them, based on the perceptions of attorneys practicing construction law. Qualitative research uses an open and flexible design, and the researcher plays as much a part of the research process as the participants and the data they provide (Corbin & Strauss, 2014). The qualitative strategy that will be used for this study is grounded theory. This strategy is used when the researcher needs to derive a theory of a process, action, or interaction which is grounded in the views of participants (Cresswell, 2007). It involves multiple stages of data collection and the refinement and interrelationship of categories of information (Charmaz, 2006; Corbin & Strauss, 2014). Corbin and Strauss (2014) identified doing comparative analysis as an analytic strategy for grounded theory research.

To determine the most disputed clauses in ConsensusDOCS, several attempts were made. The support staff at ConsensusDOCS informed that they did not collect this information. The government librarian at Evans Library at Texas A&M University, and the research librarian at the Law Library at Texas A&M University School of Law were contacted next, but they did not know if this information was available. Next, NBS was contacted to ascertain whether a study similar to National Construction Contracts and

Law Survey existed in the United States, which identified the main issues in dispute in the United Kingdom in 2015. However, they were not able to provide any leads. After this, WestlawNext, an online legal research database, was used to look for this data using various combinations of the keywords 'construction', 'dispute', 'contracts', and 'clauses'. This search identified a few law reviews that discussed dispute resolution methods and changing trends in construction law. However, only very limited information could be found regarding this topic.

In the absence of any concrete data, an online survey was created to identify the most disputed topics in construction and the stakeholder who initiates the most number of disputes. This survey was initially intended to be administered to the members of the Construction Law Section of the State Bar of Texas and the Society of Construction Law (SCL) in the United Kingdom. The Construction Law Section has over 2,500 members who are legal professionals in the field of construction law in the public and private sectors in Texas (Texas Construction Law Section > Home Page, n.d.), and SCL has 2,408 members. However, both organizations responded that email list of their members could only be used in connection with events sponsored by the organizations and developments in construction law. Following this, Construction Sections of Houston and Dallas Bar Associations were also contacted, but they responded in the negative as well. It was more convenient to collect surveys in Texas because the researcher was located

there and well-connected. The survey was forwarded to lawyers known to a clinical professor at the researcher's university and 59 surveys were collected. Since there were not many known lawyers in the United Kingdom, the survey forms were modified for the responder to suggest names and contact information of others to whom the survey could be forwarded. The modified survey forms were sent out to a total of 739 lawyers in the United Kingdom, and 35 responses were collected (response rate of 4.74%).

The survey had one closed question which asked whether the respondents were familiar with the contract form under study, and seven open-ended questions. These questions sought to understand the respondents' experience in the construction industry, the scale of disputes they have been involved in, and their familiarity with different contract forms. At the end, the survey asked the respondent to list the five most common construction-related disputes and asked a closed question about whether they were associated with a particular contract type.

The most disputed issues in construction in the United States were identified using the following steps that have been identified by Cresswell (2007). The data was first analyzed through coding. Coding involves segmenting the data collected into categories, which are labeled with a term to bring meaning to information. This was done in three steps as identified by Strauss & Corbin (1990). The first step was open

coding, where the data collected was broken down, examined, compared, and categorized. Next axial coding was done by putting data "back together in new ways after open coding, by making connections between categories. This was done using a coding paradigm involving conditions, context, action/interactional strategies and consequences." Lastly, selective coding was done by "selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement." After coding, a fellow researcher acted as a rater and double-coded the same data and refined the code definitions in order to improve interrater reliability. Interrater reliability is the extent to which two or more individuals evaluating the same product or performance give the same judgments (Leedy & Ormrod, 2014).

The identified dispute areas were then used as the basis for analysis of contractual language to understand the impact of contractual language on construction disputes. Initially, this part of the study was intended to be performed both the countries, with ConsensusDOCS and JCT as the focus of the study. However, a lack of response from industry professionals in the UK rendered it impossible to pursue that line of study, following which the scope of the study was revised to focus instead on the dispute areas in the US alone.

The analysis of contractual language in ConsensusDOCS was done through exploring the perceptions of construction industry professionals. Ten professionals with prior experience in disputes in the form of litigation, mediation, and/or arbitration were interviewed over the telephone. These professionals were identified through snowball sampling. Snowball sampling is a recruitment technique in which each research participant is asked to identify other potential subjects to participate in the study (Atkinson & Flint, 2001). The respondents who have been identified by the initial source help recruit others, after participation in the study, not unlike a snowball rolling down a hill (Wasserman, Pattison & Steinley, 2005). This recruitment strategy helped overcome the recruitment challenges associated with inviting lawyers with busy schedules to participate in the study.

A semi-structured interview questionnaire was developed for this study. Bernard (1988) recommends the use of this type of interviewing technique when the researcher will not get more than one chance to interview someone. The interviews were guided by a questionnaire, which is a "list of questions and topics that need to be covered during the conversation, usually in a particular order." This helped maintain consistency in the interviews, while allowing the interviewer to follow topical trajectories in the conversations. Open-ended questions were asked to help identify new ways of understanding the topic (Cohen & Crabtree, 2006). The questionnaire asked for the

interviewee's experience with disputes involving each of the five identified areas in the construction industry. Then it detailed relevant clauses from ConsensusDOCS relating to the five areas, and asked the interviewee how using ConsensusDOCS contractual language could impact the number of disputes in each area. This questionnaire was emailed to each participant well ahead of time and brief (20-30 minutes on average) interviews were conducted over the telephone. At the end of the interview, the interviewee was asked to identify two other potential subjects who could be interviewed for the study.

3.1 Credibility

Corbin and Strauss (2014) find that the terms *validity* and *reliability* carry too many quantitative implications, and that *credibility* (Glaser & Strauss, 1967; Lincoln & Guba, 1985) is better suited for qualitative research, as it indicates that the findings of the study are trustworthy by reflecting "participants', researchers' and readers' experiences with phenomena", while allowing for the fact that the "explanation the theory provides is only one of many "plausible" possible interpretations of data".

Cresswell (2007) proposes the following procedures for improving credibility of the findings: (1) "prolonged engagement and persistent observation in the field", (2) "triangulation", (3) using an interrater (4) "negative case analysis", (5) "clarifying

researcher bias", (6) "in member checks", (7) "rich thick description", and (8) "external audits." Prolonged engagement and persistent observation in the field, interrater reliability through double-coding the data, and triangulation through literature review, surveys as well as interviews are the procedures used in this study that helped mitigate the threats to credibility.

In summation, this exploratory qualitative study involved surveys, interviews, coding and thematic analysis, to identify and compare the most disputed clauses in the United Stated and the United Kingdom, and to understand whether the language used in ConsensusDOCS contract forms may result in the reduction of disputes in construction.

4. RESULTS AND DISCUSSION

From the responses collected, it was found that 88% of the respondents in the United States were familiar with AIA or ConsensusDOCS, as compared to 97% of the respondents in the United Kingdom who were familiar with either Joint Contracts Tribunal (JCT) contracts or National Engineering Contract's (NEC) Engineering and Construction Contracts (Figure 1). This indicates a more widespread use of custom contracts in the US as compared to the UK.

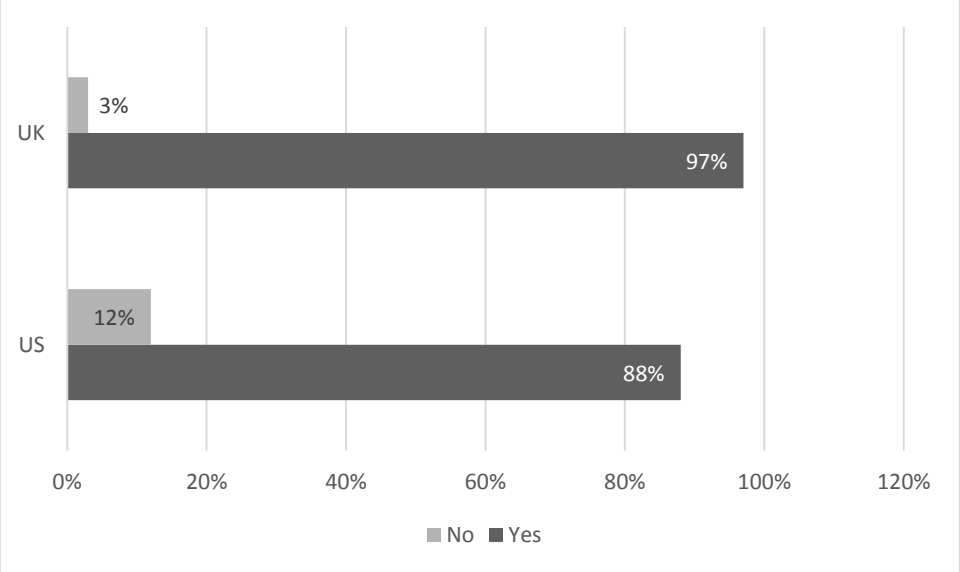

Figure 1. Familiarity with Standard Form Contracts

As shown in Figure 2, the respondents in both regions represented owners and general contractors more than subcontractors on average, however the representation of project owners among the respondents was more in the U.K. (54%) than in the U.S. (34%).

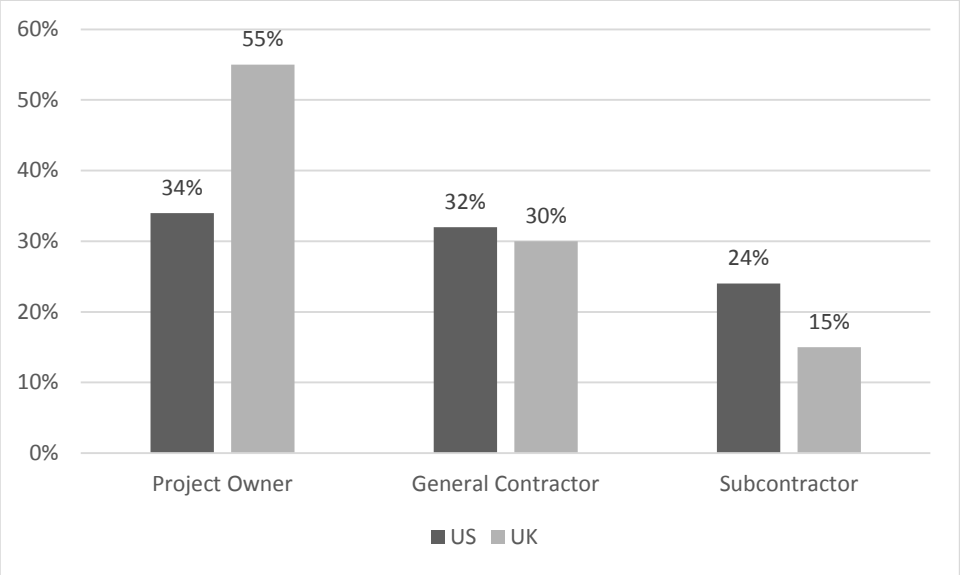

Figure 2. Representation by Stakeholder

The vast majority of the US respondents' construction-related practice is devoted to the commercial sector (57%), as compared to residential (15%), industrial (17%) and infrastructure (11%) sectors. Similarly, most of the construction-related portion of the UK respondents' practice is devoted to commercial (31%) construction, followed by infrastructure (28%), residential (24%) and industrial (16%) construction. This is depicted in Figure 3.

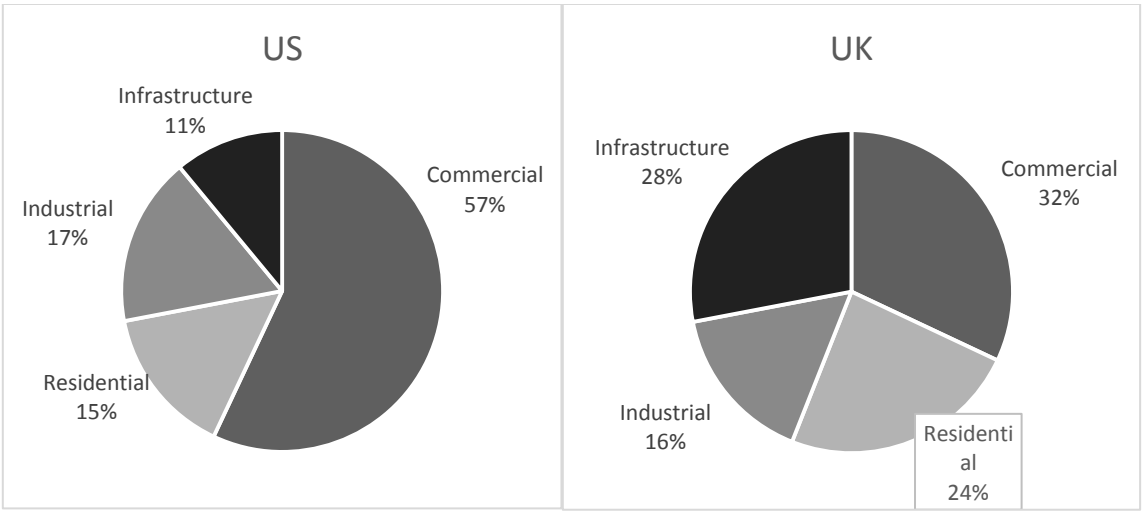

Figure 3. Representation by Project Sector

As seen in Figure 4, the respondents felt that most of the construction disputes in the US were initiated by project owners (38%), that general contractors and subcontractors initiated disputes almost equally (30%), while 2% of the respondents denoted 'others' as the initiator of disputes, and elaborated further by listing suppliers, surety, architect/engineer, and second tier subcontractors. However, general contractors were identified to be the major initiators of disputes (50%) in the UK, followed by project owners (26%), subcontractors (22%), and other stakeholders (2%). The other stakeholders who were identified were end users and professional consultants such as architects. The survey did not collect information about who the stakeholders were initiating the disputes against.

Looking at the reason for the difference in stakeholder initiation of disputes in the two countries from a logical perspective, the most disappointed person complains. In this case, it could be that contractors in the US, and owners in the UK do not get what they expect from construction contracts, possibly because they did not set out their expectations clearly enough in the contract. However, a cross tabulation of stakeholder a respondent most represented with the stakeholder that initiates the highest proportion of disputes according to a respondent revealed no correlation. Another possible reason could be that the contacts favor one party over the other in one country. Further study needs to be done to confirm the hypothesis.

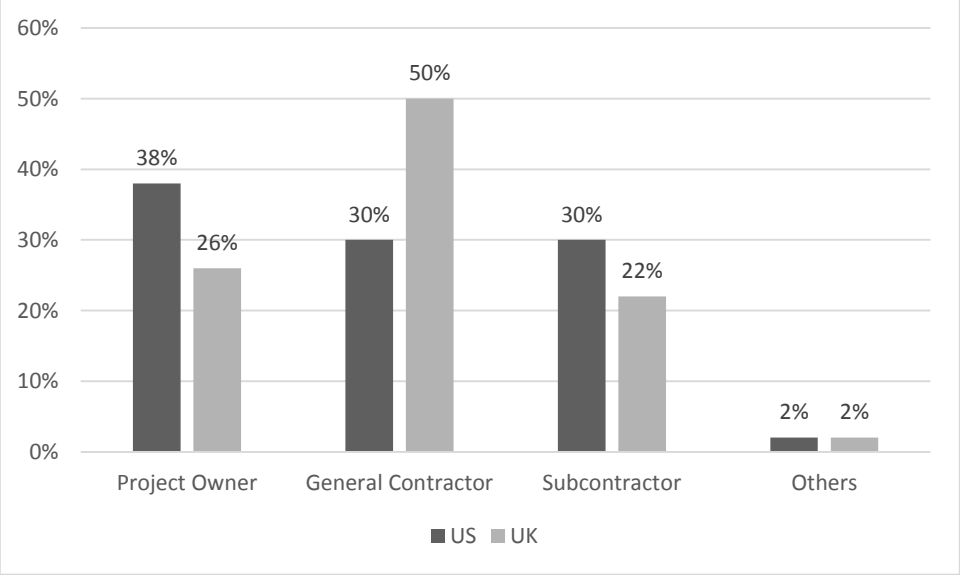

Figure 4. Initiation of Disputes by Stakeholder

On average, the respondents in the US felt that only 3% of the actual amounts in controversy for construction disputes was less than $10,000 or higher than $10 million.

A majority of the respondents felt that 29% of the disputed amount was between $10,000 and $100,000. In the UK, the respondents reported that nearly half of the actual amounts in controversy for construction disputes was between $1 million to $10 million, and that only 4% was less than $10,000. This is shown in Figures 5 and 6.

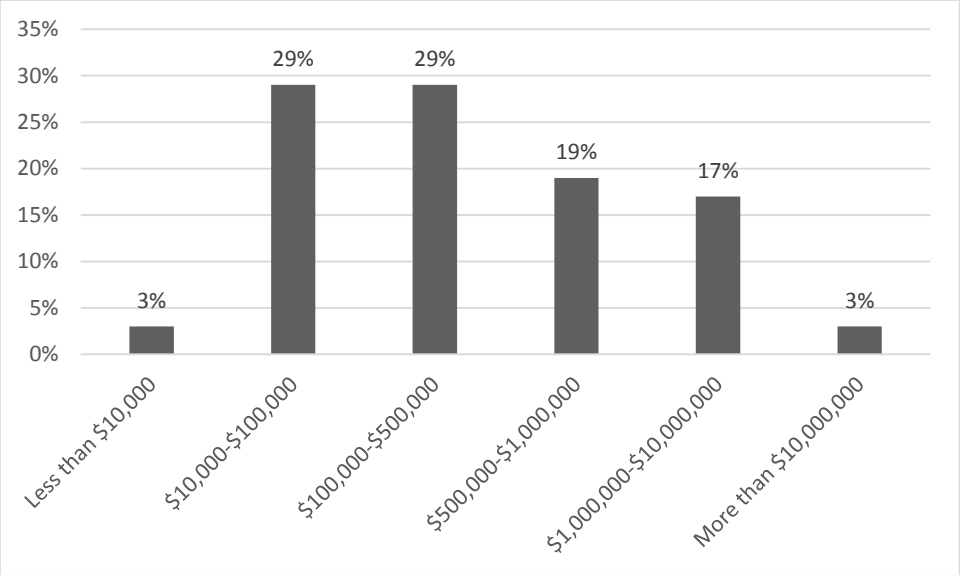

Figure 5. Disputed Amount in Construction in the US

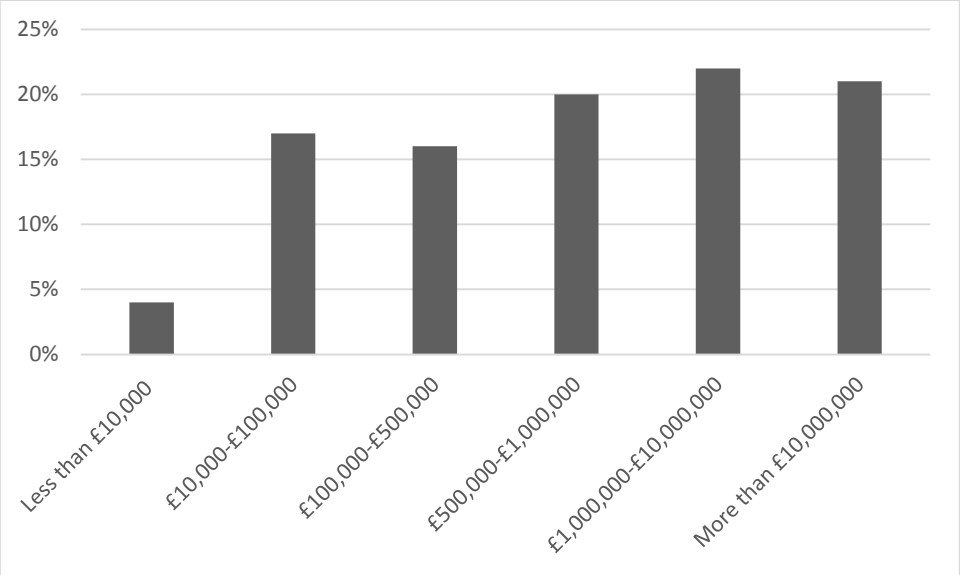

Figure 6. Disputed Amounts in Construction in the UK

As shown in figures 7 and 8, the respondents felt that 59% of the construction projects are governed by AIA contracts, followed by custom contracts (27%), other contract forms (7%) and ConsensusDOCS (4%). Other contract forms identified were DBIA, government forms, agency, and modified AIA contracts. One of the respondents clarified that most commercial projects use AIA contracts, municipality utility work use city forms and that most industrial forms are custom. In the United Kingdom, 55% of the respondents reported to using JCT contract forms most frequently, followed by other contracts (17%), NEC (16%) and custom contracts (11%). Some of the other contracts reported were the International Federation of Consulting Engineers Contract (FIDIC), ICE, Project Partnering Contract (PPC), Term Partnering Contract (TPC), and IChemE. It is of interest to note that the mostly widely used standard contract forms in both countries – AIA and JCT, are backed by the countries' respective architectural bodies.

On the other hand, ConsensusDOCS and NEC, which are not as widely used, are fairly recent in their origins and were published by improving upon existing standard forms.

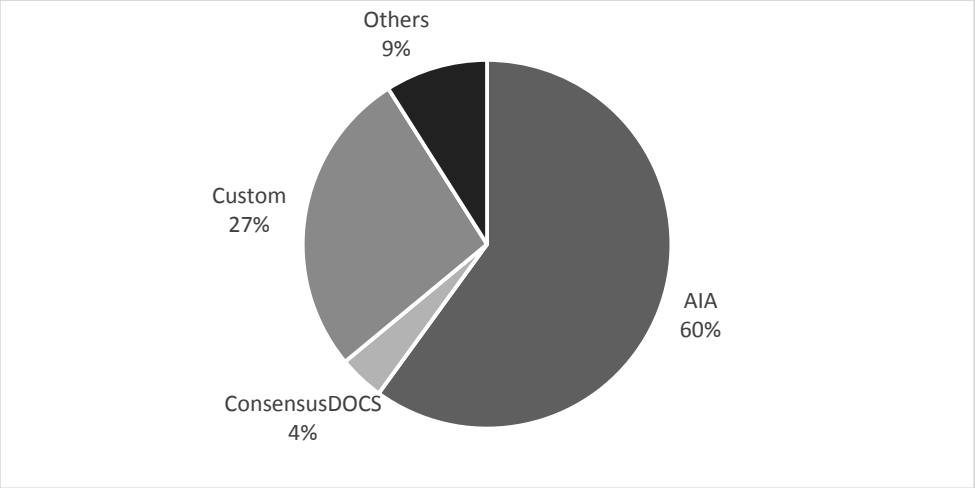

Figure 7. Predominance of Construction Contract Forms in the United States

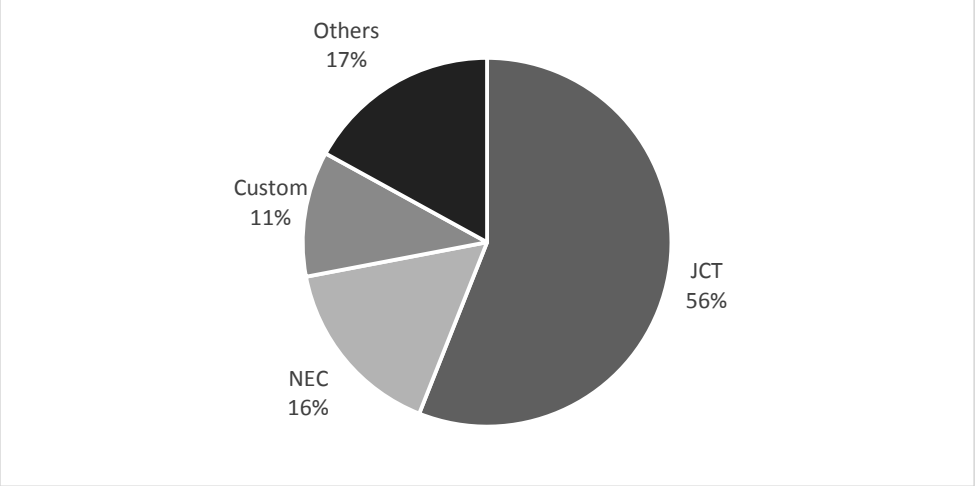

Figure 8. Predominance of Construction Contract Forms in the United Kingdom

From the survey responses, delay was identified as the most disputed topic in the construction industry in the United States and the United Kingdom. Compared to 69% of the respondents in the US, 94% of the UK respondents listed delay as a common construction-related dispute. Delay was selected as the core category among others such as scheduling, timeliness of work, phasing claims, and weather impacts. The next most disputed topic that was identified was construction defects in the US and defects in the UK (listed by 68% and 74% of the respondents in the US and the UK respectively). Other related categories to construction defects were poor workmanship, nonconforming work, latent defect, and quality of work. 61% of the respondents in the US and 71% of the respondents in the UK identified change as a commonly disputed issue, making in the third most disputed area in construction in both regions. Other related categories that were listed were extra work and scope inaccuracies. The next most disputed issues in construction in both the regions is payment, which was identified by 40% of the respondents in the US and 66% of the respondents in the UK. Other categories related to these were fee, cost overruns, pay-when-paid, subcontractor payment, and lien/bond claims. There was a divergence in the fifth most disputed area in construction in both the regions. It was identified to be design defects in the US (24%), with defective engineering as other category, while it was termination in the UK (20%), with insolvency as a related category. Figure 9 illustrates the most disputed issues in both countries.

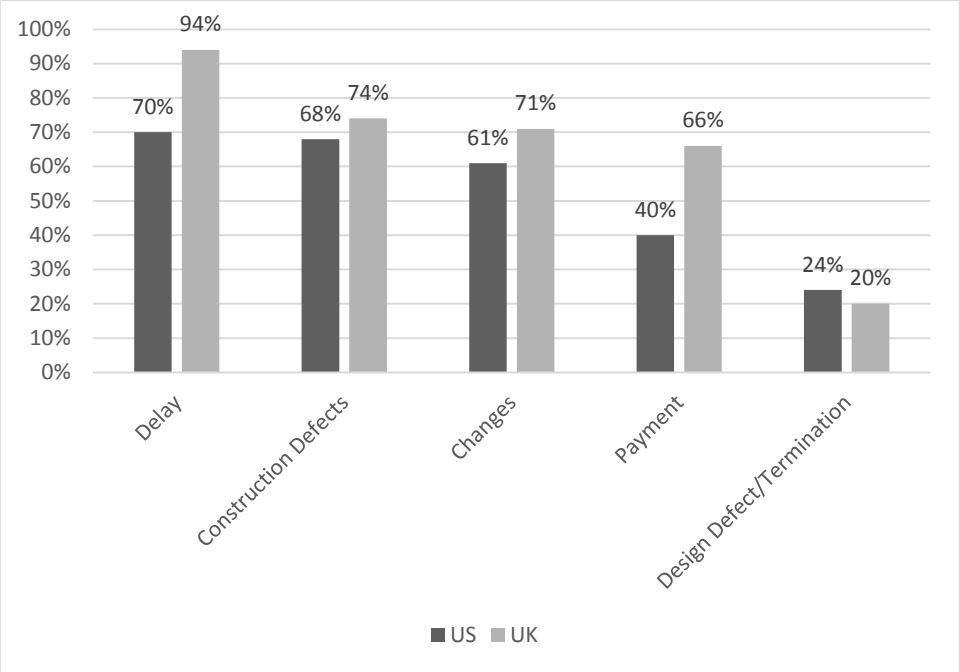

Figure 9. Most Disputed Areas in Construction

Ten construction industry professionals in the United States were interviewed to identify the impact contractual wording in ConsensusDOCS on the five identified dispute areas in the United States – delay, construction defects, changes, payment, and design defects, if any. Of the interviewees, half were experienced in litigation, two in mediation and one in arbitration. Two interviewees reported to have extensive background in litigation, mediation, and arbitration. Since ConsensusDOCS is not widely used and most of the initial respondents seemed unsure of what the provisions relating to these issues in ConsensusDOCS entailed, the interview questionnaire was modified to include clauses from ConsensusDOCS addressing the five dispute areas.

As shown in Figure 10, when asked whether the language used to address delay will impact disputes, fifty percent of the interviewees responded in the affirmative. One of the respondents felt that while the language is pro-contractor, ConsensusDOCS does a very good job of setting out various things that might happen and the outcome of those events, which will give the parties a quicker ability to come to an agreement without the need for a jury to make decisions. Another respondent expressed that while the language is more certain than is usually seen, it cannot reduce the number of disputes related to delay, and that in the event of a dispute, the intent of the language will, more than likely, be compromised. Specific provisions that were identified as helpful in reduction of disputes were 6.3.3 which sets up a process for handling a delay claim, and 6.3.2 which is an affirmative statement that that the contractor is entitled to an equitable adjustment of the contract price for certain delays. Only one respondent of the ten felt that the language used in ConsensusDOCS is worse than usual with respect to delays as it is very broad, which leaves room for it to be interpreted in multiple ways. Forty percent of the respondents felt that the language is fairly standard, and they suggested that material sources be added as a potential delay cause, weather days be added to the contract, and that clause 6.4 which deals with notice of delay claims needs better definition as to what can be recovered in the case of consequential damages.

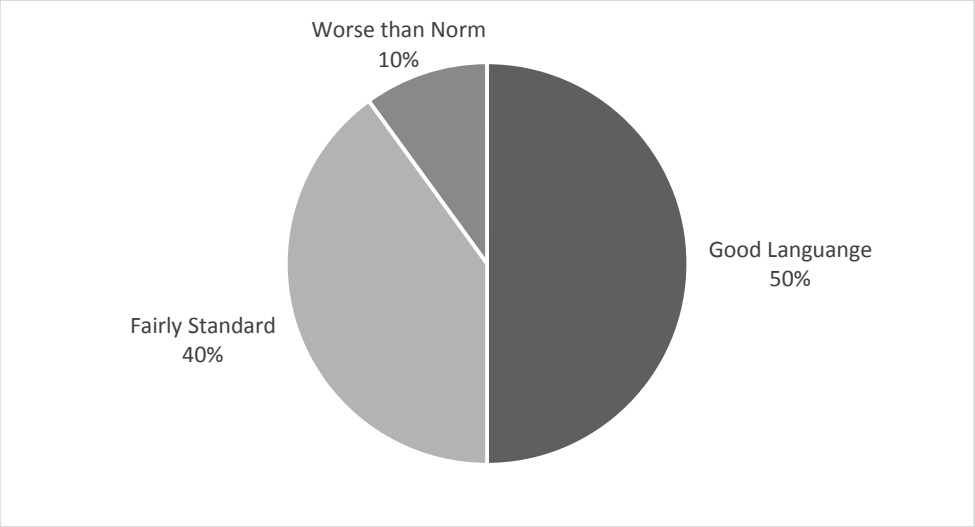

Figure 10. Interviewee Response to ConsensusDOCS Provisions for Delay

In the case of language used to address construction defects, which was identified as the second most disputed area in construction, only thirty percent of the respondents felt that ConsensusDOCS will have a positive impact (Figure 11). One of the respondents commended the language for its specificity. Good provisions in ConsensusDOCS that were identified by the respondents were 3.8.2 which limits the contractor's liability for extended warranties to one year, and 3.9 which says that if the owner does not promptly notify the contractor of a defect that is discovered, the owner waives the right to have the contractor correct that work, as well as the owner's right to claim a breach of warranty with respect to that work. Seven of the ten respondents (70%) felt that the language is standard – one of the respondents went as far as stating that it is almost identical to that used in ConsensusDOCS contract forms. Two of these respondents indicated that while

the language is standard, allocation of responsibility for construction defects and the provisions for patent defects are provisions that are not commonly seen, and could potentially reduce disputes. One respondent who felt the language was fairly standard said that latent defects needed to be addressed in the contract form.

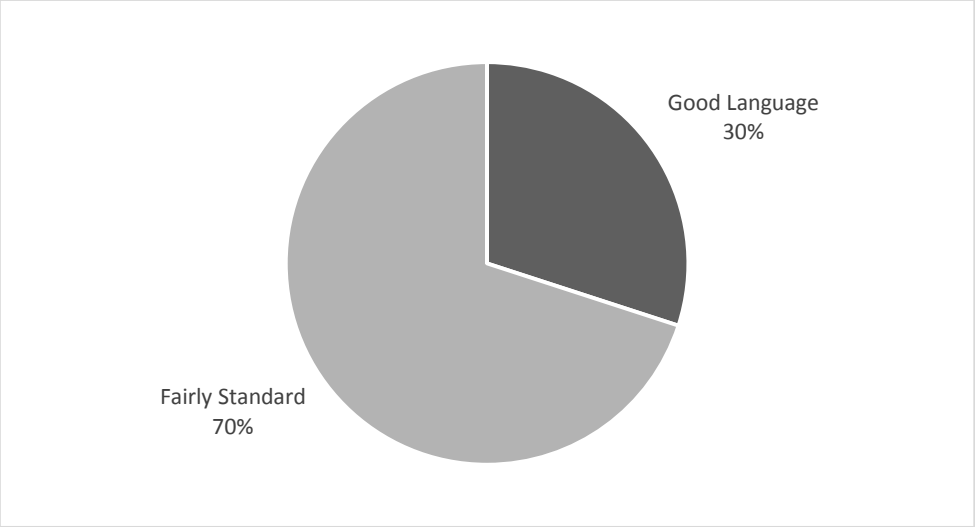

Figure 11. Interviewee Response to ConsensusDOCS Provisions for Construction Defects

Forty percent of the respondents were in agreement that the use of ConsensusDOCS provisions for changes could result in fewer disputes in construction (Figure 12). They felt that the language is more certain and very fact-specific. Provisions 8.2.1 and 8.3.3 were deemed as helpful in reducing disputes relating to changes, since they require the owner to pay 50% of the estimated cost to perform the work in case of interim directed change, which reportedly creates a more level playing field for the contractor. Thirty percent felt that the provisions were relatively standard as compared to other standard contract forms, while twenty percent found the provisions worse, and described it as ‘not

strong enough', 'too broad', and lacking in 'specificity'. A respondent further elaborated that it might be better to list the reasons for which a contractor is entitled to request a changer order specifically in the contract form. One interviewee (10%) responded that they had no experience with disputes regarding change order and was not able to give feedback about the language.

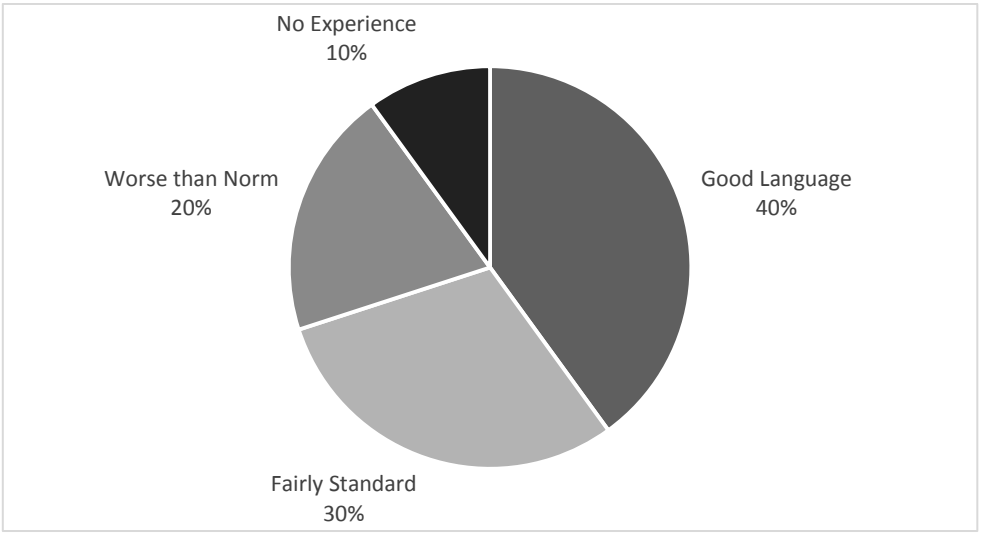

Figure 12. Interviewee Response to ConsensusDOCS Provisions for Changes

Half of the respondents felt that the provisions in ConsensusDOCS for payment are helpful in reducing disputes in construction, and attributed it to the specificity of the language. They clarified that clear language is especially important with regards to this dispute area because payment usually tends to be contractual. No respondent claimed that the provisions were broad and could lead to more disputes, if used. One respondent

(10%) did not have any experience with regards to payment disputes, and did not comment on the language (see Figure 13).

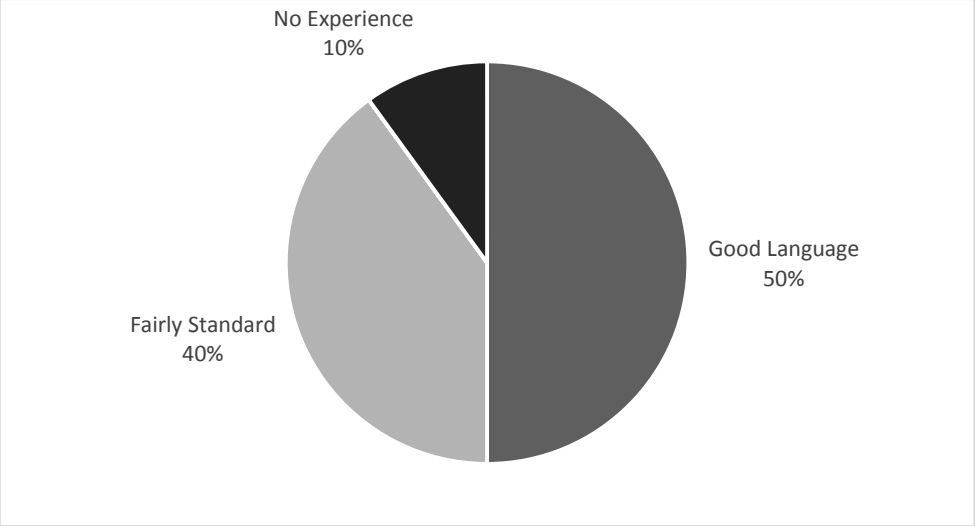

Figure 13. Interviewee Response to ConsensusDOCS Provisions for Payment

With regards to design defects, which was found to be the fifth most disputed area in construction, fifty percent of the respondents found that using the provisions in ConsensusDOCS would reduce the number of disputes (Figure 14). This was ascribed to the definite language which clearly allocates the responsibility for design defects. A respondent clarified further by saying that using this provision will help overcome the common law approach in Texas. While forty percent of the respondents indicated that the provisions in ConsensusDOCS were fairly standard, one respondent expressed that the provisions could lead to more disputes as it favors the contractor at the expense of the owner.

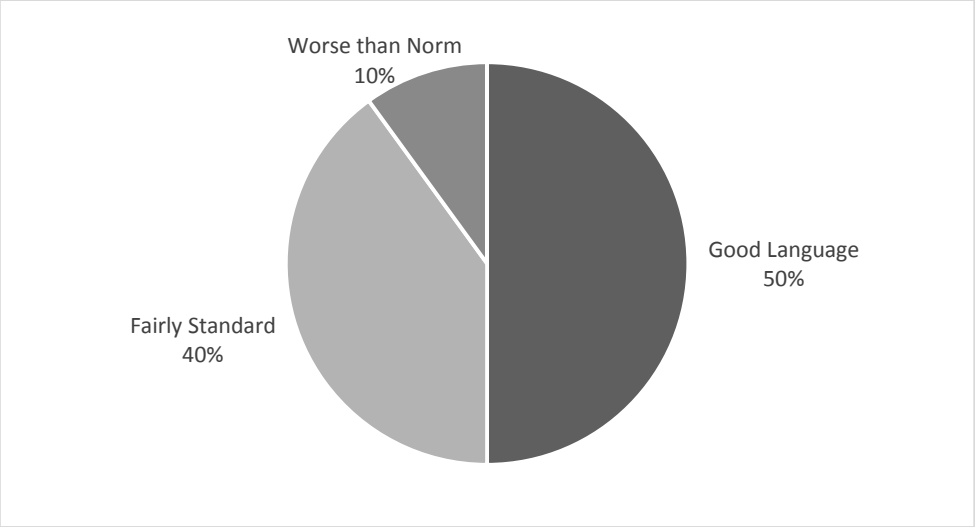

Figure 14. Interviewee Response to ConsensusDOCS Provisions for Design Defects

Overall, only one respondent felt that improving contract language will lead to a marked decrease in disputes in construction, and that it is best to resolve disputes on the front end by providing more clarity to contractual provisions. A majority of the respondents felt that while making contract language more specific will lead to a reduction in disputes, it will not make a significant difference. They stated a variety of reasons for this, such as disputes usually arising between parties who are not in privity with each other (privity of contract is a "relationship that exists between the parties to a contract" (Matin, 2009)), ambiguous words in the contract, unreasonable stakeholders willing to compromise the intent of the language, conflicting interests of the stakeholders, and so on. One respondent explained that the clauses in a standard contract form is usually negotiated before project commencement, and hence, the language in a standard contract form is not of much significance with respect to reducing disputes. Another respondent

stated that as long as people are involved in a transaction, disputes are unavoidable, and that it is prudent to focus on dispute resolution methods instead.

5. CONCLUSIONS

There is a global increase in construction disputes, to the extent that they are often viewed as an occupational hazard within the construction industry. They adversely affect the progress and quality of construction worldwide, which necessitates shifting the focus from making disputes easier to resolve through dispute resolution methods to preventing them in the first place. Towards this end, this study identified the top five most disputed topics in construction in two countries and compared them to explore the problem areas in each country. The findings lend credence to the claims of Bridston (2009), Spurr (2009), and Ledet (2014) – all disputed areas that were identified in this study have been reported in these law reviews as the most commonly disputed. However these claims were previously unfounded since they were not supported by empirical research.

This study revealed that the top four disputed areas were the same in both countries – delay, defects, change and payment. This indicates the universality and ubiquity of these particular issues within the construction sector. Hence they warrant considerable attention not only while drafting a contract or revising a standard contract form, but while negotiating the contract terms before commencement of a project as well.

The second part of the study which analyzed perceptions of the construction industry professionals regarding the contractual provisions in ConsensusDOCS for the dispute

areas identified in the US revealed a possible bias in opinion based on the stakeholder they represented. The respondents who felt that the provisions could worsen the situation and increase the number of disputes represented owners and architects more than contractors, which suggests that that their negative feedback about ConsensusDOCS could possibly be attributed to the seemingly pro-contractor provisions in the contract documents.

While all interviewees unanimously agreed that improvement in contractual language has the potential to reduce the number of disputes in construction and their recommendations towards improving contractual language aligned with those by ICE (Broome & Hayes, 1997), it was surprising to find that they did not think this would improve the situation by much. This was attributed to the conflicting interests of the stakeholders and unforeseeable ambiguity in contractual language. Nevertheless, it is a great starting point towards reducing disputes in construction. It could be improved further by getting all the stakeholders involved to contribute while negotiating contract terms before commencement of a project, which is a way to resolve issues at the front end as much as possible before they arise. If it is not feasible for them to be involved during the entire process, this study has identified four specific areas (delay, defects, change and payment) that are the most important that they need to focus on.

In conclusion, this study identified four pervasive issues in construction in two countries on both sides of the Atlantic and established that good contractual language could reduce the number of disputes in construction, which is useful while standardizing contract language. It is necessary to continue this research, and for future research, the author recommends the following topics: 1) The differences in contract interpretation in the US and the UK with respect to originalism, textualism, intentionalism, and pragmatism ; 2) Focused research to explore what specifically leads to the disparity in the initiation of disputes by stakeholder in the US and the UK; 3) Comparison of contractual provisions to identify the disparity in the fifth most disputed area in both regions (design defects and termination); and 4) Exploration of other means to reduce disputes in the construction industry.

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APPENDIX A: INFORMATION SHEET FOR SURVEY

Project Title: Disputes in Construction: An Evaluation of Contractual Effects

You are invited to take part in a research study being conducted by Dr. Ben Bigelow, a researcher from Texas A&M University, and Anusree Saseendran, a student from the same university. The information in this form is provided to help you decide whether or not to take part. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have.

Why Is This Study Being Done?

This is a research study that attempts to understand if using a contract results in fewer disputes and if that is related to contractual language.

Why Am I Being Asked To Be In This Study?

You are being asked to be in this study because you are a member of the Construction Law Section of the State Bar of Texas/Society of Construction Law, and have experience with disputes in construction law.

How Many People Will Be Asked To Be In This Study?

5000 people will be invited to participate in this study.

What Are the Alternatives to being in this study?

The alternative to being in the study is not to participate. Your participation is voluntary and there are no consequences if you choose not to participate or not to answer any questions.

What Will I Be Asked To Do In This Study?

Your participation in this study will include one 10 minute survey.

Are There Any Risks To Me?

The things that you will be doing are of no greater risks than you would come across in everyday life. You will be asked questions about which areas in construction see the most disputes, and the contract document most frequently used. Although the researchers have tried to avoid risks, you may feel that some questions that are asked of you are stressful or upsetting. You do not have to answer anything you do not want to.

Will There Be Any Costs To Me?

Aside from your time, there are no costs for taking part in the study.

Will I Be Paid To Be In This Study?

You will not be paid for being in this study.

Will Information From This Study Be Kept Private?

The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only Dr. Ben Bigelow, & Anusree Saseendran will have access to the records.

Information about you will be stored in computer files protected with a password.

Information about you will be kept confidential to the extent permitted or required by law. People who have access to your information include the Principal Investigator and research study personnel. Representatives of regulatory agencies such as the Office of Human Research Protections (OHRP) and entities such as the Texas A&M University Human Subjects Protection Program may access your records to make sure the study is being run correctly and that information is collected properly.

Information about you and related to this study will be kept confidential to the extent permitted or required by law.

Who may I Contact for More Information?

You may contact the Principal Investigator; Dr. Ben Bigelow to tell him/her about a concern or complaint about this research at 979-458-4457 or bbigelow@tamu.edu.

For questions about your rights as a research participant; or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or irb@tamu.edu.

What if I Change My Mind About Participating?

This research is voluntary and you have the choice whether or not to be in this research study. You may decide to not begin or to stop participating at any time. If you choose not to be in this study or stop being in the study, there will be no effect on your relationship with Texas A&M University.

By completing the survey(s), you are giving permission for the investigator to use your information for research purposes.

Thank you.

Anusree Saseendran

Dr. Ben F. Bigelow

APPENDIX B: INFORMATION SHEET FOR INTERVIEW

Project Title: Disputes in Construction – An Evaluation of Contractual Effects

You are invited to take part in a research study being conducted by Anusree Saseendran and Dr. Ben Bigelow, researchers from Texas A&M University The information in this form is provided to help you decide whether or not to take part. If you decide to take part in the study, you will be asked to sign this consent form. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have.

Why Is This Study Being Done?

The purpose of this study is to understand the role of contractual language in dispute prevention in construction

Why Am I Being Asked To Be In This Study?

You are being asked to be in this study because of your involvement in the legal aspects of construction.

How Many People Will Be Asked To Be In This Study?

10 people (participants) will be invited to participate in this study locally.

What Are the Alternatives to being in this study?

The alternative to being in the study is not to participate.

What Will I Be Asked To Do In This Study?

You will be asked questions relating to specific clauses in ConsensusDOCS contract, and your opinions about their strengths and/or weaknesses. Your participation in this study will last up to 45 minutes and includes one visit.

Will Photos, Video or Audio Recordings Be Made Of Me during the Study?

Audio recordings will be made during the interview.

Language for Required recordings:

The researchers will make an audio recording during the study so that the researcher does not miss key information during the interview. If you do not give permission for the audio recording to be obtained, you cannot participate in this study.

Are There Any Risks To Me?

The things that you will be doing are no more risks than you would come across in everyday life. There is a risk associated with breach of confidentiality. However, all records of this study will be kept private. Although the researchers have tried to avoid

risks, you may feel that some questions/procedures that are asked of you will be stressful or upsetting. You do not have to answer anything you do not want to.

Will There Be Any Costs To Me?

Aside from your time, there are no costs for taking part in the study.

Will I Be Paid To Be In This Study?

You will not be paid for being in this study.

Will Information From This Study Be Kept Private?

The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only the principal investigator and the research study personnel will have access to the records.

Who may I Contact for More Information?

You may contact the Principal Investigator, Dr. Ben F. Bigelow, to tell him/her about a concern or complaint about this research at 979-458-4457 or bbigelow@arch.tamu.edu. You may also contact the Protocol Director, Anusree Saseendran at 979-985-7345 or anusree.s@tamu.edu.

For questions about your rights as a research participant, to provide input regarding research, or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Subjects Protection Program office by phone at 1-979-458-4067, toll free at 1-855-795-8636, or by email at irb@tamu.edu.

What if I Change My Mind About Participating?

This research is voluntary and you have the choice whether or not to be in this research study. You may decide to not begin or to stop participating at any time. If you choose not to be in this study or stop being in the study, there will be no effect on your relationship with Texas A&M University.

APPENDIX C: SURVEY QUESTIONNAIRE IN THE US

Please take a few minutes to fill out this survey on disputes in construction.

Q1 Are you familiar with either of the standard form contracts set up by American Institute of Architects (AIA) or ConcensusDOCS?

- ❍ Yes
- ❍ No

Q2 In the construction-related portion of your practice, what percentage (%) is devoted to representation of:

Project owners

General Contractors

Subcontractors

Q3 In the construction-related portion of your practice, what percentage (%) is devoted to the following types of construction?

Residential

Commercial

Industrial

Infrastructure (utilities, roads & bridges etc.)

Q4 In your experience, what percentage (%) of construction disputes are initiated by:

Project Owner

General Contractor

Subcontractor

Others (Please specify)

Q5 In your experience, what has been the actual amounts in controversy for construction disputes, by percentage (%)?

Less than $10,000

$10,000 - $100,000

$100,000 - $500,000

$500,000 - $1,000,000

$1,000,000 - $10,000,000

More than $10,000,000

Q6 In your experience, what percentage (%) of construction projects are governed by:

AIA contracts

ConsensusDOCS contracts

Other contract form (Please specify)

Custom

Q7 Which contracts do you/your clients use most frequently?

- ❍ AIA contracts
- ❍ ConsensusDOCS contracts
- ❍ Other contract forms (Please specify) _____
- ❍ Custom

Q8 In your experience, what are the five most common construction-related disputes?

Sl. No.	Disputed Issue	Is this associated with a particular contract type?		If yes, please specify
		Yes	No	
1		❍	❍	
2		❍	❍	
3		❍	❍	
4		❍	❍	
5		❍	❍	

Thank you for taking the time to fill out the survey. Your input is greatly appreciated.

APPENDIX D: SURVEY QUESTIONNAIRE IN THE UK

Please take a few minutes to fill out this survey on disputes in construction.

Q1 Are you familiar with either of the standard form contracts set up by the Joint Contracts Tribunal (JCT) or the New Engineering Contract (NEC)?

- ❍ Yes
- ❍ No

Q2 In the construction-related portion of your practice, what percentage (%) is devoted to representation of:

Project owners

General Contractors

Subcontractors

Q3 In the construction-related portion of your practice, what percentage (%) is devoted to the following types of construction?

Residential

Commercial

Industrial

Infrastructure (utilities, roads & bridges etc.)

Q4 In your experience, what percentage (%) of construction disputes are initiated by:

Project Owner

General Contractor

Subcontractor

Others (Please specify) _____

Q5 In your experience, what has been the actual amounts in controversy for construction disputes, by percentage (%)?

Less than £10,000

£10,000 - £100,000

£100,000 - £500,000

£500,000 - £1,000,000

£1,000,000 - £10,000,000

More than £10,000,000

Q6 In your experience, what percentage (%) of construction projects are governed by:

JCT contracts

NEC contracts

Other contract form (Please specify) _____

Custom

Q7 Which contracts do you/your clients use most frequently?

- ❍ JCT contracts
- ❍ NEC contracts
- ❍ Other contract forms (Please specify) _____
- ❍ Custom

Q15 In your experience, what are the five most common construction-related disputes?

Sl. No.	Disputed Issue	Is this associated with a particular contract type?		If yes, please specify
		Yes	No	Yes
1		❍	❍	
2		❍	❍	
3		❍	❍	
4		❍	❍	
5		❍	❍	

Q16 Do you know others experienced in construction law, to whom I could forward this survey? Please provide their names and email IDs.

Sl. No.	Name	Email ID
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Thank you for taking the time to fill out the survey. Your input is greatly appreciated.

APPENDIX E: INTERVIEW QUESTIONNAIRE

The area of study involves whether the standard form documents promulgated by ConcensusDocs may result in reduction of contract disputes in construction projects. For each of the following areas please express your experience and opinion. Your experience and opinion are the important factors in this study.

IDENTIFIED DISPUTE AREA #1 – DELAY (see Table 1 attached)

- What is your experience in disputes involving delays in a construction project (i.e. scope of work, etc.)?
- Do you think that if the ConcensusDocs contractual wording were used it could impact this dispute area? If so, how?

IDENTIFIED DISPUTE AREA #2 – CONSTRUCTION DEFECTS (see Table 2 attached)

- What is your experience in disputes involving construction defects in a construction project (i.e. scope of work, etc.)?
- Do you think that if the ConcensusDocs contractual wording were used it could impact this dispute area? If so, how?

IDENTIFIED DISPUTE AREA #3 – PAYMENT (see Table 3 attached)

- What is your experience in disputes involving payment in a construction project (i.e. scope of work, etc.)?
- Do you think that if the ConcensusDocs contractual wording were used it could impact this dispute area? If so, how?

IDENTIFIED DISPUTE AREA #4 – CHANGES (see Table 4 attached)

- What is your experience in disputes involving changes in a construction project (i.e. scope of work, etc.)?
- Do you think that if the ConcensusDocs contractual wording were used it could impact this dispute area? If so, how?

IDENTIFIED DISPUTE AREA #5 – DESIGN DEFECTS (see Table 5 attached)

- What is your experience in disputes involving design defects in a construction project (i.e. scope of work, etc.)?
- Do you think that if the ConcensusDocs contractual wording were used it could impact this dispute area? If so, how?

TABLE 1: DELAYS

DELAYS AND EXTENSIONS OF TIME
6.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by any cause beyond the control of the Contractor, the Contractor shall be entitled to an equitable extension of the Contract Time. Examples of causes beyond the control of the Contractor include, but are not limited to, the following: acts or omissions of the Owner, the Architect/Engineer or Others; changes in the Work or the sequencing of the Work ordered by the Owner, or arising from decisions of the Owner that impact the time of performance of the Work; transportation delays not reasonably foreseeable; labor disputes not involving the Contractor; general labor disputes impacting the Project but not specifically related to the Worksite; fire; terrorism, epidemics, adverse governmental actions, unavoidable accidents or circumstances; adverse weather conditions not reasonably anticipated; encountering Hazardous Materials; concealed or unknown conditions; delay authorized by the Owner pending dispute resolution; and suspension by the Owner under Paragraph 11.1. The Contractor shall submit any requests for equitable extensions of Contract Time in accordance with the provisions of Article 8. 6.3.2 In addition, if the Contractor incurs additional costs as a result of a delay that is caused by acts or omissions of the Owner, the Architect/Engineer or

Others, changes in the Work or the sequencing of the Work ordered by the Owner, or arising from decisions of the Owner that impact the time of performance of the Work, encountering Hazardous Materials, or concealed or unknown conditions, delay authorized by the Owner pending dispute resolution or suspension by the Owner under Paragraph 11.1, the Contractor shall be entitled to an equitable adjustment in the Contract Price subject to Paragraph 6.6.

6.3.3 NOTICE OF DELAYS In the event delays to the Work are encountered for any reason, the Contractor shall provide prompt written notice to the Owner of the cause of such delays after Contractor first recognizes the delay. The Owner and Contractor agree to undertake reasonable steps to mitigate the effect of such delays.

6.4 NOTICE OF DELAY CLAIMS If the Contractor requests an equitable extension of Contract Time or an equitable adjustment in Contract Price as a result of a delay described in Subparagraphs 6.3.1 and 6.3.2, the Contractor shall give the Owner written notice of the claim in accordance with Paragraph 8.4. If the Contractor causes delay in the completion of the Work, the Owner shall be entitled to recover its additional costs subject to Paragraph 6.6. The

Owner shall process any such claim against the Contractor in accordance with Article 8.

TABLE 2: CONSTRUCTION DEFECTS

3.2.3 With regard to the work of the Owner and Others, the Contractor shall (a) proceed with the Work in a manner which does not hinder, delay or interfere with the work of the Owner or Others or cause the work of the Owner or Others to become defective, (b) afford the Owner or Others reasonable access for introduction and storage of their materials and equipment and performance of their activities, and (c) coordinate the Contractor's construction and operations with theirs as required by this Paragraph 3.2.

3.2.4 Before proceeding with any portion of the Work affected by the construction or operations of the Owner or Others, the Contractor shall give the Owner prompt written notification of any defects the Contractor discovers in their work which will prevent the proper execution of the Work. The Contractor's obligations in this Paragraph do not create a responsibility for the work of the Owner or Others, but are for the purpose of facilitating the Work. If the Contractor does not notify the Owner of patent defects interfering with the performance of the Work, the Contractor acknowledges that the work of

the Owner or Others is not defective and is acceptable for the proper execution of the Work. Following receipt of written notice from the Contractor of defects, the Owner shall promptly inform the Contractor what action, if any, the Contractor shall take with regard to the defects.

3.8 WARRANTY

3.8.1 The Contractor warrants that all materials and equipment shall be new unless otherwise specified, of good quality, in conformance with the Contract Documents, and free from defective workmanship and materials. At the Owner's request, the Contractor shall furnish satisfactory evidence of the quality and type of materials and equipment furnished. The Contractor further warrants that the Work shall be free from material defects not intrinsic in the design or materials required in the Contract Documents. The Contractor's warranty does not include remedies for defects or damages caused by normal wear and tear during normal usage, use for a purpose for which the Project was not intended, improper or insufficient maintenance, modifications performed by the Owner or Others, or abuse. The Contractor's warranty pursuant to this Paragraph 3.8 shall commence on the Date of Substantial Completion.

3.8.2 The Contractor shall obtain from its Subcontractors and Material Suppliers any special or extended warranties required by the Contract Documents. All such warranties shall be listed in an attached Exhibit to this Agreement. Contractor's liability for such warranties shall be limited to the one-year correction period referred to in Paragraph 3.9. After that period Contractor shall assign them to the Owner and provide reasonable assistance to the Owner in enforcing the obligations of Subcontractors or Material Suppliers.

3.9 CORRECTION OF WORK WITHIN ONE YEAR

3.9.1 If, prior to Substantial Completion and within one year after the date of Substantial Completion of the Work, any Defective Work is found, the Owner shall promptly notify the Contractor in writing. Unless the Owner provides written acceptance of the condition, the Contractor shall promptly correct the Defective Work at its own cost and time and bear the expense of additional services required for correction of any Defective Work for which it is responsible. If within the one-year correction period the Owner discovers and does not promptly notify the Contractor or give the Contractor an opportunity to test or correct Defective Work as reasonably requested by the Contractor, the Owner waives the Contractor's obligation to correct that Defective Work as

well as the Owner's right to claim a breach of the warranty with respect to that Defective Work.

3.9.2 With respect to any portion of Work first performed after Substantial Completion, the one-year correction period shall be extended by the period of time between Substantial Completion and the actual performance of the later Work. Correction periods shall not be extended by corrective work performed by the Contractor.

3.9.3 If the Contractor fails to correct Defective Work within a reasonable time after receipt of written notice from the Owner prior to final payment, the Owner may correct it in accordance with the Owner's right to carry out the Work in Paragraph 11.2. In such case, an appropriate Change Order shall be issued deducting the cost of correcting such deficiencies from payments then or thereafter due the Contractor. If payments then or thereafter due Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

3.9.4 If after the one-year correction period but before the applicable limitation period the Owner discovers any Defective Work, the Owner shall, unless the

Defective Work requires emergency correction, promptly notify the Contractor. If the Contractor elects to correct the Work, it shall provide written notice of such intent within fourteen (14) Days of its receipt of notice from the Owner. The Contractor shall complete the correction of Work within a mutually agreed timeframe. If the Contractor does not elect to correct the Work, the Owner may have the Work corrected by itself or Others and charge the Contractor for the reasonable cost of the correction. Owner shall provide Contractor with an accounting of correction costs it incurs.

3.9.5 If the Contractor's correction or removal of Defective Work causes damage to or destroys other completed or partially completed Work or existing buildings, the Contractor shall be responsible for the cost of correcting the destroyed or damaged property.

3.9.6 The one-year period for correction of Defective Work does not constitute a limitation period with respect to the enforcement of the Contractor's other obligations under the Contract Documents.

3.9.7 Prior to final payment, at the Owner's option and with the Contractor's agreement, the Owner may elect to accept Defective Work rather than require

its removal and correction. In such case the Contract Price shall be equitably adjusted for any diminution in the value of the Project caused by such Defective Work.

3.10 CORRECTION OF COVERED WORK

3.10.1 On request of the Owner, Work that has been covered without a requirement that it be inspected prior to being covered may be uncovered for the Owner's inspection. The Owner shall pay for the costs of uncovering and replacement if the Work proves to be in conformance with the Contract Documents, or if the defective condition was caused by the Owner or Others. If the uncovered Work proves to be defective, the Contractor shall pay the costs of uncovering and replacement.

3.10.2 If contrary to specific requirements in the Contract Documents or contrary to a specific request from the Owner, a portion of the Work is covered, the Owner, by written request, may require the Contractor to uncover the Work for the Owner's observation. In this circumstance the Work shall be replaced at the Contractor's expense and with no adjustment to the Contract Time.

TABLE 3: PAYMENT

9.1 SCHEDULE OF VALUES Within twenty-one (21) Days from the date of execution of this Agreement, the Contractor shall prepare and submit to the Owner, and if directed, the Architect/Engineer, a schedule of values apportioned to the various divisions or phases of the Work. Each line item contained in the schedule of values shall be assigned a value such that the total of all items shall equal the Contract Price.
9.2 PROGRESS PAYMENTS
9.2.1 APPLICATIONS The Contractor shall submit to the Owner and the Architect/Engineer a monthly application for payment no later than the _____ Day of the calendar month for the preceding thirty (30) Days. Contractor's applications for payment shall be itemized and supported by the Contractor's schedule of values and any other substantiating data as required by this Agreement. Payment applications shall include payment requests on account of properly authorized Change Orders or Interim Directed Change. The Owner shall pay the amount otherwise due on any payment application, as certified by the Architect/Engineer, no later than twenty (20) Days after the Contractor has submitted a complete and accurate payment application, or such

shorter time period as required by applicable state statute. The Owner may deduct from any progress payment amounts as may be retained pursuant to Subparagraph 9.2.4.

9.2.2 STORED MATERIALS AND EQUIPMENT Unless otherwise provided in the Contract Documents, applications for payment may include materials and equipment not yet incorporated into the Work but delivered to and suitably stored onsite or offsite including applicable insurance, storage and costs incurred transporting the materials to an offsite storage facility. Approval of payment applications for stored materials and equipment stored offsite shall be conditioned on submission by the Contractor of bills of sale and proof of required insurance, or such other procedures satisfactory to the Owner to establish the proper valuation of the stored materials and equipment, the Owner's title to such materials and equipment, and to otherwise protect the Owner's interests therein, including transportation to the site.

9.2.3 LIEN WAIVERS AND LIENS

9.2.3.1 PARTIAL LIEN WAIVERS AND AFFIDAVITS If required by the Owner, as a prerequisite for payment, the Contractor shall provide partial lien and claim waivers in the amount of the application

for payment and affidavits from its Subcontractors, and Material Suppliers for the completed Work. Such waivers shall be conditional upon payment. In no event shall the Contractor be required to sign an unconditional waiver of lien or claim, either partial or final, prior to receiving payment or in an amount in excess of what it has been paid.

9.2.3.2 RESPONSIBILITY FOR LIENS If Owner has made payments in the time required by this Article 9, the Contractor shall, within thirty (30) Days after filing, cause the removal of any liens filed against the premises or public improvement fund by any party or parties performing labor or services or supplying materials in connection with the Work. If the Contractor fails to take such action on a lien, the Owner may cause the lien to be removed at the Contractor's expense, including bond costs and reasonable attorneys' fees. This Clause shall not apply if there is a dispute pursuant to Article 12 relating to the subject matter of the lien.

9.2.4 RETAINAGE From each progress payment made prior to Substantial Completion the Owner may retain _____ percent (_____ %) of the amount otherwise due after deduction

of any amounts as provided in Paragraph 9.3, and in no event shall such percentage exceed any applicable statutory requirements. If the Owner chooses to use this retainage provision:

9.2.4.1 after the Work is fifty percent (50%) complete, the Owner shall withhold no additional retainage and shall pay the Contractor the full amount of what is due on account of progress payments;

9.2.4.2 the Owner may, in its sole discretion, reduce the amount to be retained at any time;

9.2.4.3 the Owner may release retainage on that portion of the Work a Subcontractor has completed in whole or in part, and which the Owner has accepted. In lieu of retainage, the Contractor may furnish a retention bond or other security interest, acceptable to the Owner, to be held by the Owner.

9.3 ADJUSTMENT OF CONTRACTOR'S PAYMENT APPLICATION

The Owner may adjust or reject a payment application or nullify a previously approved payment application, in whole or in part, as may reasonably be necessary to protect the Owner from loss or damage based upon the following, to the extent that the Contractor is responsible therefor under this Agreement:

9.3.1 the Contractor's repeated failure to perform the Work as required by the Contract Documents;

9.3.2 loss or damage arising out of or relating to this Agreement and caused by the Contractor to the Owner or to Others to whom the Owner may be liable;

9.3.3 the Contractor's failure to properly pay Subcontractors and Material Suppliers following receipt of such payment from the Owner;

9.3.4 rejected, nonconforming or defective Work not corrected in a timely fashion;

9.3.5 reasonable evidence of delay in performance of the Work such that the Work will not be completed within the Contract Time, and

9.3.6 reasonable evidence demonstrating that the unpaid balance of the Contract Price is insufficient to fund the cost to complete the Work.

9.3.7 third party claims involving the Contractor or reasonable evidence demonstrating that third party claims are likely to be filed unless and until the Contractor furnishes the Owner with adequate security in the form of a surety bond, letter of credit or other collateral or commitment which are sufficient to discharge such claims if established. No later than seven (7) Days after receipt of an application for payment, the Owner shall give written notice to the Contractor, at

	the time of disapproving or nullifying all or part of an application for payment, stating its specific reasons for such disapproval or nullification, and the remedial actions to be taken by the Contractor in order to receive payment. When the above reasons for disapproving or nullifying an application for payment are removed, payment will be promptly made for the amount previously withheld.
	9.4 ACCEPTANCE OF WORK Neither the Owner's payment of progress payments nor its partial or full use or occupancy of the Project constitutes acceptance of Work not complying with the Contract Documents.
	9.5 PAYMENT DELAY If for any reason not the fault of the Contractor the Contractor does not receive a progress payment from the Owner within seven (7) Days after the time such payment is due, as defined in Subparagraph 9.2.1, then the Contractor, upon giving seven (7) Days' written notice to the Owner, and without prejudice to and in addition to any other legal remedies, may stop Work until payment of the full amount owing to the Contractor has been received, including interest from the date payment was due in accordance with Paragraph 9.9. The Contract Price and Contract Time shall be equitably

adjusted by a Change Order for reasonable cost and delay resulting from shutdown, delay and start-up.

9.6 SUBSTANTIAL COMPLETION

9.6.1 The Contractor shall notify the Owner and, if directed, its Architect/Engineer when it considers Substantial Completion of the Work or a designated portion to have been achieved. The Owner, with the assistance of its Architect/Engineer, shall promptly conduct an inspection to determine whether the Work or designated portion can be occupied or utilized for its intended use by the Owner without excessive interference in completing any remaining unfinished Work by the Contractor. If the Owner determines that the Work or designated portion has not reached Substantial Completion, the Owner shall promptly compile a list of items to be completed or corrected so the Owner may occupy or utilize the Work or designated portion for its intended use. The Contractor shall promptly complete all items on the list.

9.6.2 When Substantial Completion of the Work or a designated portion is achieved, the Contractor shall prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, and the respective responsibilities of the Owner and Contractor for interim items such as security,

maintenance, utilities, insurance and damage to the Work. In the absence of a clear delineation of responsibilities, the Owner shall assume all responsibilities for items such as security, maintenance, utilities, insurance, and damage to the Work. The certificate shall also list the items to be completed or corrected, and establish the time for their completion or correction. The Certificate of Substantial Completion shall be submitted by the Contractor to the Owner for written acceptance of responsibilities assigned in the Certificate.

9.6.3 Unless otherwise provided in the Certificate of Substantial Completion, warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or a designated portion.

9.6.4 Upon acceptance by the Owner of the Certificate of Substantial Completion, the Owner shall pay to the Contractor the remaining retainage held by the Owner for the Work described in the Certificate of Substantial Completion less a sum equal to two hundred percent (200%) of the estimated cost of completing or correcting remaining items on that part of the Work, as agreed to by the Owner and Contractor as necessary to achieve final completion. Uncompleted items shall be completed by the Contractor in a

mutually agreed upon timeframe. The Owner shall pay the Contractor monthly the amount retained for unfinished items as each item is completed.

9.7 PARTIAL OCCUPANCY OR USE

9.7.1 The Owner may occupy or use completed or partially completed portions of the Work when (a) the portion of the Work is designated in a Certificate of Substantial Completion, (b) appropriate insurer(s) consent to the occupancy or use, and (c) appropriate public authorities authorize the occupancy or use. Such partial occupancy or use shall constitute Substantial Completion of that portion of the Work.

9.8 FINAL COMPLETION AND FINAL PAYMENT

9.8.1 Upon notification from the Contractor that the Work is complete and ready for final inspection and acceptance, the Owner with the assistance of its Architect/Engineer shall promptly conduct an inspection to determine if the Work has been completed and is acceptable under the Contract Documents.

9.8.2 When Final Completion has been achieved, the Contractor shall prepare for the Owner's acceptance a final application for payment stating that to the best of the Contractor's knowledge, and based on the Owner's inspections, the

Work has reached Final Completion in accordance with the Contract Documents.

9.8.3 Final payment of the balance of the Contract Price shall be made to the Contractor within twenty (20) Days after the Contractor has submitted a complete and accurate application for final payment, including submissions required under Subparagraph 9.8.4, and a Certificate of Final Completion has been executed by the Owner and the Contractor.

9.8.4 Final payment shall be due on the Contractor's submission of the following to the Owner:

9.8.4.1 an affidavit declaring any indebtedness connected with the Work, e.g. payrolls or invoices for materials or equipment, to have been paid, satisfied or to be paid with the proceeds of final payment, so as not to encumber the Owner's property;

9.8.4.2 as-built drawings, manuals, copies of warranties and all other close-out documents required by the Contract Documents;

9.8.4.3 release of any liens, conditioned on final payment being received;

9.8.4.4 consent of any surety; and 9.8.4.5 any outstanding known and unreported accidents or injuries experienced by the Contractor or its Subcontractors at the Worksite.

9.8.5 If, after Substantial Completion of the Work, the Final Completion of a portion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the balance due for portion(s) of the Work fully completed and accepted. If the remaining contract balance for Work not fully completed and accepted is less than the retained amount prior to payment, the Contractor shall submit to the Owner, and, if directed, the Architect/Engineer, the written consent of any surety to payment of the balance due for portions of the Work that are fully completed and accepted. Such payment shall not constitute a waiver of claims, but otherwise shall be governed by these final payment provisions.

9.8.6 OWNER RESERVATION OF CLAIMS

Claims not reserved in writing by the Owner with the making of final payment shall be waived except for claims relating to liens or similar encumbrances, warranties, Defective Work and latent defects.

9.8.7 CONTRACTOR ACCEPTANCE OF FINAL PAYMENT Unless the Contractor provides written identification of unsettled claims known to the Contractor at the time of making application for final payment, acceptance of final payment constitutes a waiver of such claims.
9.9 LATE PAYMENT Payments due but unpaid shall bear interest from the date payment is due at the statutory rate at the place of the Project.

TABLE 4: CHANGES

8.1 CHANGE ORDER
8.1.1 The Contractor may request or the Owner may order changes in the Work or the timing or sequencing of the Work that impacts the Contract Price or the Contract Time. All such changes in the Work that affect Contract Time or Contract Price shall be formalized in a Change Order. Any such requests for a change in the Contract Price or the Contract Time shall be processed in accordance with this Article 8. 8.1.2 The Owner and the Contractor shall negotiate in good faith an appropriate adjustment to the Contract Price or the Contract Time and shall

conclude these negotiations as expeditiously as possible. Acceptance of the Change Order and any adjustment in the Contract Price or Contract Time shall not be unreasonably withheld.

8.2 INTERIM DIRECTED CHANGE

8.2.1 The Owner may issue a written Interim Directed Change directing a change in the Work prior to reaching agreement with the Contractor on the adjustment, if any, in the Contract Price or the Contract Time. 8.2.2 The Owner and the Contractor shall negotiate expeditiously and in good faith for appropriate adjustments, as applicable, to the Contract Price or the Contract Time arising out of an Interim Directed Change. As the Changed Work is performed, the Contractor shall submit its costs for such work with its application for payment beginning with the next application for payment within thirty (30) Days of the issuance of the Interim Directed Change. If there is a dispute as to the cost to the Owner, the Owner shall pay the Contractor fifty percent (50%) of its estimated cost to perform the work. In such event, the Parties reserve their rights as to the disputed amount, subject to the requirements of Article 12. 8.2.3 When the Owner and the Contractor agree upon the adjustment in the Contract Price or the Contract Time, for a change in the Work directed by an Interim Directed Change, such agreement shall be the

subject of a Change Order. The Change Order shall include all outstanding Interim Directed Changes on which the Owner and Contractor have reached agreement on Contract Price or Contract Time issued since the last Change Order.

8.3 DETERMINATION OF COST

8.3.1 An increase or decrease in the Contract Price or the Contract Time resulting from a change in the Work shall be determined by one or more of the following methods:

8.3.1.1 unit prices set forth in this Agreement or as subsequently agreed;

8.3.1.2 a mutually accepted, itemized lump sum;

8.3.1.3 costs calculated on a basis agreed upon by the Owner and Contractor plus _____% Overhead and _____% profit; or

8.3.1.4 if an increase or decrease cannot be agreed to as set forth in Clauses .1 through .3 above, and the Owner issues an Interim Directed Change, the cost of the change in the Work shall be determined by the reasonable actual expense and savings of the performance of the Work resulting from the change. If there is a net increase in the Contract Price, the Contractor's Overhead and profit shall be adjusted

accordingly. In case of a net decrease in the Contract Price, the Contractor's Overhead and profit shall not be adjusted unless ten percent (10%) or more of the Project is deleted. The Contractor shall maintain a documented, itemized accounting evidencing the expenses and savings.

8.3.2 If unit prices are set forth in the Contract Documents or are subsequently agreed to by the Parties, but the character or quantity of such unit items as originally contemplated is so different in a proposed Change Order that the original unit prices will cause substantial inequity to the Owner or the Contractor, such unit prices shall be equitably adjusted.

8.3.3 If the Owner and the Contractor disagree as to whether work required by the Owner is within the scope of the Work, the Contractor shall furnish the Owner with an estimate of the costs to perform the disputed work in accordance with the Owner's interpretations. If the Owner issues a written order for the Contractor to proceed, the Contractor shall perform the disputed work and the Owner shall pay the Contractor fifty percent (50%) of its estimated cost to perform the work. In such event, both Parties reserve their rights as to whether the work was within the scope of the Work, subject to the

requirements of Article 12. The Owner's payment does not prejudice its right to be reimbursed should it be determined that the disputed work was within the scope of Work. The Contractor's receipt of payment for the disputed work does not prejudice its right to receive full payment for the disputed work should it be determined that the disputed work is not within the scope of the Work.
8.4 CLAIMS FOR ADDITIONAL COST OR TIME Except as provided in Subparagraph 6.3.2 and Paragraph 6.4 for any claim for an increase in the Contract Price or the Contract Time, the Contractor shall give the Owner written notice of the claim within fourteen (14) Days after the occurrence giving rise to the claim or within fourteen (14) Days after the Contractor first recognizes the condition giving rise to the claim, whichever is later. Except in an emergency, notice shall be given before proceeding with the Work. Thereafter, the Contractor shall submit written documentation of its claim, including appropriate supporting documentation, within twenty-one (21) Days after giving notice, unless the Parties mutually agree upon a longer period of time. The Owner shall respond in writing denying or approving the Contractor's claim no later than fourteen (14) Days after receipt of the Contractor's claim. Any change in the Contract Price or the Contract Time resulting from such claim shall be authorized by Change Order.

TABLE 5: DESIGN DEFECTS

2.3 ARCHITECT/ENGINEER The Owner, through its Architect/Engineer, shall provide all architectural and engineering design services necessary for the completion of the Work, except the following: _____. The Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering except as otherwise provided in Paragraph 3.15. 2.3.1 The Owner shall obtain from the Architect/Engineer either a license for Contractor and Subcontractors to use the design documents prepared by the Architect/Engineer or ownership of the copyrights for such design documents, and shall indemnify and hold harmless the Contractor against any suits or claims of infringement of any copyrights or licenses arising out of the use of the design documents for the project.
3.3 RESPONSIBILITY FOR PERFORMANCE
3.3.1 In order to facilitate its responsibilities for completion of the Work in accordance with and as reasonably inferable from the Contract Documents, prior to commencing the Work the Contractor shall examine and compare the

drawings and specifications with information furnished by the Owner pursuant to Paragraph 4.3, relevant field measurements made by the Contractor and any visible conditions at the Worksite affecting the Work.

3.3.2 If in the course of the performance of the obligations in Subparagraph 3.3.1 the Contractor discovers any errors, omissions or inconsistencies in the Contract Documents, the Contractor shall promptly report them to the Owner. It is recognized, however, that the Contractor is not acting in the capacity of a licensed design professional, and that the Contractor's examination is to facilitate construction and does not create an affirmative responsibility to detect errors, omissions or inconsistencies or to ascertain compliance with applicable laws, building codes or regulations. Following receipt of written notice from the Contractor of defects, the Owner shall promptly inform the Contractor what action, if any, the Contractor shall take with regard to the defects.

3.3.3 The Contractor shall have no liability for errors, omissions or inconsistencies discovered under Subparagraphs 3.3.1 and 3.3.2 unless the Contractor knowingly fails to report a recognized problem to the Owner.

3.3.4 The Contractor may be entitled to additional costs or time because of clarifications or instructions arising out of the Contractor's reports described in the three preceding Subparagraphs.

3.15 PROFESSIONAL SERVICES

The Contractor may be required to procure professional services in order to carry out its responsibilities for construction means, methods, techniques, sequences and procedures for such services specifically called for by the Contract Documents. The Contractor shall obtain these professional services and any design certifications required from licensed design professionals. All drawings, specifications, calculations, certifications and submittals prepared by such design professionals shall bear the signature and seal of such design professionals and the Owner and the Architect/Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of such design services. If professional services are specifically required by the Contract Documents, the Owner shall indicate all required performance and design criteria. The Contractor shall not be responsible for the adequacy of such performance and design criteria. The Contractor shall not be required to provide such services in violation of existing laws, rules and regulations in the jurisdiction where the Project is located.

10.8 PROFESSIONAL LIABILITY INSURANCE To the extent the Contractor is required to procure design services under this Agreement, in accordance with Paragraph 3.15, the Contractor shall require the designers to obtain professional liability insurance for claims arising from the negligent performance of professional services under this Agreement, with a company reasonably satisfactory to the Owner, including coverage for aall professional liability caused by any of the Designer's(s') consultants, written for not less than $_____ per claim and in the aggregate with the deductible not to exceed $_____. The deductible shall be paid by the Designer.

APPENDIX F: TRANSCRIPT OF INTERVIEWS

Interview 1

R: The first dispute is delay. What is your experience in disputes involving delay in construction projects?

Interviewee 1 (I1): My answer is going to be the same for all of these questions. I am a construction lawyer and I have dealt with all sorts of issues with delays, defects, payment issues on behalf on behalf of clients.

R: Do you think that if the ConsensusDOCS contractual wording were used it could impact disputes involving delay? If so, how?

I1: Yes. Although the parties seem to have different language dealing with delays, having it expressed in the contract is helpful. Are you asking about specific language here or in general, having these issues addressed in the contract?

R: The specific language used to address delays in ConsensusDOCS. It has been attached to the questionnaire I emailed you.

I1: Okay. Yes, I think the specific language will be helpful.

R: Do you think the language can be improved?

I1: Well. I draft contracts myself and negotiate contracts in a lot of different areas – industrial contracts, pipelines, school construction, residential. Some of these things maybe be different depending on the market that you are working in and the type of project.

R: Do you think that if the ConcensusDocs contractual wording were used it could impact disputes involving construction defects? If so, how?

I1: Yes. It is helpful because it describes who is responsible for doing what with respect to defects.

R: What I am trying to ask is, do you think the language used in ConsensusDOCS is better than what you normally see – AIA or custom contracts?

I1: Well, these look like some of the normal concepts you see over and over again in different documents. Sometimes the language is good, sometimes it is not good. It depends on the issue. And I'll give you an example. One area where this language is potentially weak is under 3.8.1, which is warranty. It says that the Contractor's warranty does not include remedies for defects or damages caused by normal wear and tear during normal usage, use for a purpose for which the Project was not intended, improper or insufficient maintenance, modifications performed by the Owner or Others, or abuse. What is not clear there is that sometimes the contractor may be responsible for maintain a piece of equipment before the whole project is turned over. So there is no clarification there. For example, if we build a building and we have HVAC running. Because of the construction debris in the building, the filters in the HVAC need to be changed frequently. So that would be a maintenance activity. And so if the building hasn't been turned over to the owner yet, and the contractor is not performing that routine maintenance of replacing the filters, does this clause excuse that? I don't think that is

what the parties intend, but it is not clear. Sometimes when we draft a contract, we clarify things like that.

So there are some more things that I could find in here. One issue that comes up on industrial contracts that doesn't come up in these types of contracts is that these presume that one builder is building the whole building. But in an industrial contract you might have different vendors coming in and putting in equipment, and I may not have the expertise to remove that piece of equipment to get to my work that's behind it. So for building projects, commercial building-type projects, this is okay.

R: Alright. Is there any other area where you thought the language was weak or could use improvement?

I1: In defects, no.

R: How about payment?

I1: Payment is okay depending on your point of view. That section 9.1 – the schedule of values. Let me explain schedule of values first. If we have an agreement of lump sum – I am going to build your building for a million dollars, how do you pay me? You are not going to just give me a million dollars, you need to break it up somehow. So we create something called the schedule of values which just allocates that million dollars to different types of work – 100,000 for plumping, 100,000 for electrical – it sort of just breaks it down. That's what the schedule of values is. It is a way that we can kind of measure what works go in the value of work that has been don**e.** What contractors like to

do is put more value on the stuff that is at the beginning of the project – they want to get more money out. That is called front loading. They want to get as much money out of that contract as possible, as early as possible. Owners like to backload it. So there is enough money in the contract. So one of the things that I routinely make changes to is which would cause like with the schedule of values. Let's just say that the contractor has prepared and submitted and says the schedule of values apportions the various divisions that effaces the work I like to include language about how it cannot be front loaded and that it has to be a reasonable approximation of the value of work. Things like that, so you can't just front load it. Or if you do, the owner can say: no, that's not okay, do it again. That's crazy. An example can be if you're building a foundation, the foundation might cost $25,000, the builder might put in $45,000 in the schedule of values. So while it not only costs him $25,000, he added the extra $20,000 to the cost. So he is getting money out of the job too soon. That's the issue number 1.

9.2.1 seems pretty standard and okay. 9.2.2 is usual and okay. 9.2.3.1 is okay unless you're dealing with big contracts. So for building contracts it is usually okay. When you are dealing with really big projects, getting lien waivers from all the subs and material suppliers can be a problem. Because if you go to a place like Lowe's and you buy materials, they are not going to give you a lien waiver. So sometimes you need to make changes to this language. It is pretty standard language. But sometimes you have to make changes to address that situation. I represent a pipeline contractor. So if they are

building a $100 billion pipeline, they don't want to have to worry about a $300 lien waiver. It is not proportionate to worry about that. But, if you are talking about standard language, this is good standard language. It might need to be adjusted to a particular situation.

9.2.4.1. On retainage this doesn't really comply with Texas law. It says 'shall withhold no additional retainage". That's not what the law says. So that's something that I would strike.

9.3 seems to be standard. The rest of it seems to be okay and standard. Yup, I'm generally okay with the rest of it except 9.8.3. That's not exactly in agreement with Texas Law. Texas Law requires the owner to hold retainage for thirty days upon final completion, and this says twenty days. So that would be something that would need to be adjusted.

Yeah, this is good.

R: Now, could you talk about the language used for changes?

I1: The changes are good. It is just standard stuff.

R: And how about design defects?

I1: It is pretty standard. In Texas, a contractor wants to make sure that it is not responsible for the design. So the one thing I would add here is contractor does not warrant the adequacy or the sufficiency of the design. But other than that, that is good.

Interview 2

R: Let's get started. Please state your experience in disputes involving in each of the five identified areas and comment on the language used to address them in ConsensusDOCS. The language is given in the tables. The first area is delay.

Interviewee 2 (I2): Okay. Well, for the first identified dispute area. What is my experience in disputes involving delays in construction projects – that's really all I do. I represent owners, general contractors, and subcontractors on all different aspects of the industry – architects and engineers too, and every dispute that I am involved in involves some form of delay. The documents that are normally used in Texas is some kind of a modified version of the AIA contract documents - (49 sec) usually it will be 141 in the General Conditions A-201. Sometimes they are heavily modified. In the process, it just depends upon what the actual document itself says. With respect to this area in delays, are you familiar with a Supreme Court decision that came out in 2014 – it's titled Port Authority of Houston vs. Zachry Construction Corporation?

R: Yes, I am.

I2: Yes, well, the Supreme Court of Texas decided whether or not the no damages for delay clause in the contract would preclude a contractor from being able to recover damages from the owner if the owner interferes with the way the contractor is performing his work. It is a very common clause in a contract between an owner and a general contractor. And what it tries to do is have the owner escape responsibility for

defective plans, specifications, or other type of interferences on a construction project when it is the owner that's involved. And what the Supreme Court said in that particular case (and it is very, very critical in Texas Law) – I recommend that you get a copy of it and read it – but it says that those clauses are enforceable in Texas unless an exception to the clause can be proven. And most exceptions to the enforceability of a clause like that deal with whether or not an owner actively interfered with the contractor in the performance of his work. And that seems to be the big case. The contract clause that is an issue here in the ConsensusDOCS is not a no damages for delay clause, it in fact allows for delay claims to be handled back and forth between owner and contractor and it sets up a process with which the parties need to make the other party aware of what the problem is. And usually, I consider that fair because if I am doing something that interferes with someone doing something for me and I don't know it, how can I stop doing that? I think this ConsensusDOCS clause is one of the better ones that I have seen. The only thing I would suggest to it is there is a statute also called Section 16.071 of the Texas Civil Practices and Remedies Code. It basically provides that if notice is a condition for a claim, the time to give the notice must be reasonable, but it can be no less than 90 days. And if it is less than 90 days, the entire clause is void, meaning that it cannot be enforced in Texas. And those issues come up all the time because the standard AIA contract says it has got to be within 21 days. The difference with ConsensusDOCS is it says after the contractor first recognizes the delay. Yeah I think that would be okay

in Texas, so long as it is within a reasonable time, but if someone tries to say that it was less than 90 days, then I think there might be some problems. Does that help?

R: Indeed. Now let us move on to construction defects.

I2: I'd say about 40-50% of my practice deals with construction defects. And again, it is the same usual contract clauses that are involved. But in this one, I like the way ConsensusDOCS work with respect to who is responsible for a particular problem. Because the Supreme Court of Texas, back in 1907, rendered a decision called Lonergan. It primarily puts the responsibility of the adequacy of the plans and specifications that were prepared by the owner's architect on the general contractor, it sounds strange I know, but Texas is in the minority, and what the law says is if there is a contract clause to the contrary, then you follow whatever the contract clause is. And the courts have been very liberal in trying to construe a clause that would reverse that bizarre common law approach making the general contractor responsible for the adequacy of the plans and specifications.

R. Alright. What do you think of the language used to address payments?

I2: Payments are always an issue, because if something goes wrong, the first thing that gets cut off is payment. An owner doesn't want to pay the contractor or the contractor doesn't want to pay the subcontractor for work properly performed, till the dispute is resolved. I glanced at the payment clause. It seems to be more liberal than the AIA contract documents, but there is also a Texas statute that says that owners and general

contractors must promptly pay the people underneath them for properly performed work, and they must do so within 35 days of the date of receipt of payment, or the person who doesn't get paid can charge interest at the rate of 18% per year. The issue that comes up is what is properly performed work? There is also a defense under this statute that if there is a "bona fide dispute" which is not defined, so you have to get into a subjective determination. The true question is whether or not there was a bona fide dispute. Now, what the bona fide dispute rule is if there is a bona fide dispute over the money, the person who owes the money must pay at least the amount that is not in dispute, and can retain the amount that is part of the dispute. And it can only be for a 100% of whatever the cost would be to correct the defect. The ConsensusDOCS seems to follow that payment provision. But the difference is for payment delay under the statute is 10 days, and under the ConsensusDOCS it is 7 days. It is probably going to be the statute that controls. I would suggest that it probably ought to be changed to 10 days. Also if they are not paid timely, then the person who is owed the money can send the owner and the owner's bank a letter saying, I am not paying and if I don't get paid within 10 days, I am going to suspend performance of the work. So that's a statutory scheme that has got control over this contract. But I like the language in this contract.

R: How about changes?

I2: The process that is called for in the AIA document is called a constructive change directive – if the parties can't agree upon the scope, the price and the time, the owner can still order the contractor to go do it. This one seems to follow pretty much the same

process that the AIA process goes through. If there is a dispute over the amount, it is basically time and materials. I think that the controlling clauses with ConsensusDOCS fall into play a lot with the AIA documents.

R: Now the last one, design defects.

I2: I think I have already kind of talked about the Lonergan case. It requires a contract clause such as this to protect contractor and/or subcontractors from defective plans and specs. And I think this clause would probably overcome that common law approach.

R: Thank you for your time, Mr. Sommers, I really appreciate it.

Interview 3

Interviewee 3 (I3): I did pull up your interview questions, and I pulled up a standard Consensus form contact and looked over the dispute measures. We could just talk about some of that for a few minutes if you'd like

R: That'd be great, yes.

I3: If we go by your questions, there seems to be a pattern in which you are talking about disputes involving delay in each of several scenarios. But disputes usually do not involve delays when you're taking about payment, for example. I think what I might do is talk to you about resolving disputes generally as they relate to the issue.

So on the first one, in terms of experience involving disputes involving delays in construction projects, oftentimes the delay in a project is tied directly to a scope dispute.

And so my experience is that delays are often involved in and a concern for the parties when they have a dispute over the scope of work - whether or not the price the owner is to pay or the contractor is to pay, and whether it includes certain services of work or not. Let's just talk about how the language of the ConsensusDOCS works for a minute. ConsensusDOCS calls for the parties to consider mitigation measures, meaning before disputes get too formal, dispute resolution such as mediation or arbitration or litigation or a dispute review board (DRB) helps the parties resolve the disputes. This way while the project is still ongoing, it can hopefully avoid or minimize delay and resolve the dispute. For a scope dispute, I think those kinds of resolution methods are helpful. But it all depends on who the dispute resolvers are going to be, because the parties have to have complete confidence that the people guiding them in the facilitation of dispute resolution are extremely knowledgeable, not just in the construction realm, but they need to know how to read parties, they need to know how to interpret them, look behind the spoken words to see what is really happening that is causing a breakdown of the communication and understanding. With respect to scope disputes, it is important how to manage the processes. If you have the project neutral or DRB in opposition, to render some kind of determination on who they think is right or wrong and why, that kind of determination can be very instructive to the parties, to give them a sense that they have received some sort of objective, independent determination that should guide them on how to move forward. That determination can be a security process and force the parties to look at their whole cards and decide whether or not they should come to an agreement

and move on and not keep fighting over the issues. Because one could lose badly, or both might lose badly.

Another issue that comes up is whether or not any such determination, assuming it is in writing, would be admissible in court, if they choose not to settle. Those are factors that are not addressed in the ConsensusDOCS forms, but things that are important for the parties to think about. So to sum up, the key issues are who the dispute facilitators are, and will there be a determination made, will it be in writing, will it be admissible in court.

One of the factors to consider here is cost. Most parties view the use of project neutral or a project dispute review board and mitigation measures as an expense they could choose to avoid, if they wait till a dispute arises. If you look at the website for the dispute review board foundation, you will see there is strong belief that the most effective use of the dispute review board or project neutral is to have them sit down with the project management teams of both owner and contractor and design professional periodically, say every 6 months, to see how things are going. These neutrals can function as the conscience of the project and inspire the parties to get their disputes out on the table, talk about them, and not let them fester and boil up to a more complex legal debate. So the cost is always of significance. It is usually for very large projects that DRB is best suited, because the cost of the project justifies the small cost towards having the DRB members of the project neutral come in periodically to see how the project is going.

So far we have mostly been talking about scope of work disputes. Let us talk about construction defects. Here mitigation measures are probably less appropriate, because defects in construction are usually not discovered at the time when the project is complete. When you are in your warranty period, or even after the warranty period, the parties are debating whether the defect is the result of a breach of contract as opposed to breach of warranty. In scope delay and construction defect, it is preferable to have mediation come before even DRB proceeds. It is not to say that you have to have mediation if you are using the DRB or project neutral to do 'arm-chair advising' and just meeting with the parties periodically to see how things are going.

When it comes to construction defects, they are usually going to involve debates about design, quality of design, quality of construction, and are going to arise after the project is done. Here arbitration or litigation is going to be more preferable. But if the experts cannot decide whether these defects should be allocated in terms of responsibility to which party, then mediation should come early, on recognition that there is a construction defect debate.

Now payment disputes can arise out of scope, but they can also arise out of a number of other circumstances like the financial difficulties of an owner. So it depends on what the source of the payment issue is. If it is quality of work as opposed to scope of work for example, work having to be reperformed, that sort of falls into the same realm as scope of work issues. Those issues can be addressed through a project neutral or DRB over

whether or not rework should be paid by the owner. In a great majority of the cases, payment gets resolved by the perfection of a lien or the failure to perfect the lien, the perfection of a bond claim or the failure to perfect a bond claim in the case of a public works project. So if the parties understand law and work out their payment security rights in advance of a payment dispute, they have much greater leverage and bargaining power. Probably the most effective form to resolve a payment dispute is through mediation. Because those payment disputes usually involve the least amount of disputed facts, or facts that can be readily determined.

Everything that I said about scope of work apply to changes. Design defects probably go hand in hand with construction defects. As I said, whether a construction defect is a function of design error or construction error is usually the debate. So for design defects, just like construction defects, I think mediation is the best suited form to resolve that. Those are a few thoughts. I did not have the time read the contract clauses you have attached to your survey questionnaire.

Do you have other questions that I can answer for you?

R: Yes, I was about to ask you what you thought about the language used to address these disputes in ConsensusDOCS.

I3: These clauses are going to be very similar to AIA contract form. In my past work with ConsensusDOCS and AIA forms, I have found them to be very similar in dealing with these issues. The real difference is the extent to which an architect is allowed to

manage the process – it is less so in ConsensusDOCS. But I really haven't done a comparison to see if one is stronger than the other, but from having done some comparisons before, my general impression is that they are going to be pretty similar in their spirit and effect. I had done a comparison of AIA and ConsensusDOCS provision by provision a long time ago, and I will be happy to share that with you and you can use that information to help you with your work.

R: Do you think improving contractual language alone could reduce the number of disputes in construction?

I3: No, I don't. You can write, and I have written extensive dispute resolution methods and procedures, but the parties are still going to have disputes. I think the real question is whether or not the language will force them to resolve their issues. In my opinion, the presence of dispute resolution provisions like ConsensusDOCS does, if the parties use them appropriately, and if they select good, quality neutrals. The parties are going to find that in a vast majority of the instances, they are going to want to stop the legal expense and get the disputes resolved by themselves. So I think the language isn't going to stop the disputes, but it is going to help resolve them. You will always have disputes when people are involved, and people are always involved in construction projects. It is because of things like failure to communicate, confusion, misunderstanding, lack of discipline, frustration, anger and all of the emotions that comes with trying to do

something that is difficult to accomplish in a limited period of time. By its very nature, construction is prone to disputes and disagreements.

Interview 4

R: Let's get started. Please state your experience in disputes involving in each of the five identified areas and comment on the language used to address them in ConsensusDOCS. The language is given in the tables. The first area is delay.

Interviewee 4 (I4): It probably is important for you to know from what direction I come and how you want me to answer the questions, because I spend half my time mediating these disputes as the mediator, and about half my time representing the bonding company who is not making any direct claims, but is either defending themselves or hoping that one of our contractors prevails with one. Because otherwise I am kind of all over the board when I answer these things.

R: Okay, I want you to answer as a mediator.

I4: Okay! My experience is I probably mediated 100 delay claims. They ranged from very small to tens of hundreds of millions of dollars. Whether using ConsensusDOCS will have an impact, my answer is no. Not because it doesn't add to the certainty of the circumstances, but because the vast majority of delay claims are simply things that are thrown out to big giant numbers, and the intent of the language is going to be

compromised anyway. Seldom, if ever, is the resolution of them has anything to do with the contract.

R: Okay, but what do you think of the language? Do you think it is better than what is commonly used?

I4: I think it is better. I think it is more certain and more straightforward.

R: Alright, now dispute area 2.

I4: Construction defects in construction projects – scope of work. I have probably mediated 500 to a 1000 construction defect cases. And I would give you the same answer. I don't believe that anyone pays attention to the contract language primarily because so much of this is made by people who are either not in privity with each other – you know a new owner to a project and a sub or designer or someone like that where contract terms don't apply, or an owner suing the contractor in a circumstance where they are not using the contract and they shotgun all of it. I think the construction defect claim language in ConsensusDOCS is good, fair, will help, but it doesn't deal with the workarounds for most commonly seen cases. That I think is going to take some statutory changes.

R: Alright, the next issue is payment.

I4: I think ConsensusDOCS helps better. Payment tends to be contractual. We have less disagreements, we have less workarounds and allegations of non-contractual claims in

dealing with progress payments. So I do think that this language is probably good language.

R: How about changes?

I4: Experience, well, hundreds and hundreds of change order claims. Impact of ConsensusDOCS. Again, I think it is better, more certain, so it is going to kind of help on the margin, but we still have people who are having disputes that are going to allege that there are changes – even changes that were made verbally to the contract to work around the contractual change claim, that's how it works. I sound like a lawyer who doesn't believe contracts count, don't I?

R: A little.

I4: It is just my experience. When people are fighting, they are pulling out all the stops and if the contract doesn't help them, they argue about something else.

R: Right. Now design defects.

I4: I have done lots and lots of design defects. I am not as familiar with ConsensusDOCS language on construction defects. This is good definite language that deals with crazy laws in Texas, it makes it clearer whether the owner warrants the design or not. So I think in Texas it is certainly an improvement and a necessity. I like it better than AIA.

R: Could you give me some specific examples where you feel this language is better than AIA?

I4: I like the idea that a contractor shall not be required to provide professional services [unclear] practices of architecture and engineering. In general that clears up what is loose language in the AIA documents that tends to try to push from the design professional's stand point all of the incidental design that goes through the shop drawing process and everything else down to the contractors and suppliers and subcontractors. I think that there is a similar strong statement in the AIA document that states that the contractor is not providing those services. I think this does a better job of stating that the contractor isn't liable. The AIA documents kind off waffle all around it – they talk about if you discover something who will give a notice, blah blah blah, but I think this is more straightforward language that a contractor is not liable for what the design professional does wrong.

R: Could you give specific examples for other dispute areas as well?

I4: Off the top of my head, not easily. My mind kind of goes blank other than that I just like the way it sounds. I don't know that I can give you specific examples for any of them.

R: In your opinion, is there a way that contractual language can be improved so as to reduce disputes in construction?

I4: It can be done, I suppose, that you can make it clearer when it applies to third parties. I think a stronger language that disclaims liability to subsequent owners, purchasers of property, I am thinking indemnification from the owner to the contractor to the extent that the contractor is bound to be liable for claims that are made against them that would

create liability beyond the contract, so that even if there is not a defense under the contract that the owner is at risk for having put the project in the stream of commerce leaving the contractor exposed to negligence claims and extra contractual claims that they bargained to make go away when they signed the contract. That is going to be tough to get owners to buy into, but I don't know of any other way to give the contractor the benefit of the bargain. Now if you can say I am going to cut my fee to 2% instead of 3% because we are going to get all these benefits and the owner can sell it to another person, then that person can come in and say, well I want everything under the sun and I am not bound by your contract, then the contractor has bought an exposure that **we will pay for**. So I think language that makes the owner liable or indemnifies the contractor from claims by third parties and creates liability in excess of contract language would help. It can be hard to negotiate. Let me tell you, you can put in whatever you want in these contracts between the contracting parties, but most of the problems that I see are extra contractual of people not in privity or people that turn a contract action into a negligence claim. That's where the real head aches and exposure are, because all of your limitations of liability don't apply.

Interviewee 5

R: First off, could you tell me your experience with disputes in construction with respect to the identified dispute areas?

Interviewee 5 (I5): Pretty good experience. I do a lot of construction law, I just got board certified in construction law. I have had cases dealing with delays, I have had discussions with clients before there was a lawsuit involved with delays and construction defects. I have had experience prior to litigation on all these topics, and I have been involved with litigation but didn't go to trial on dispute area numbers 2 and 4.

R: What do you think of the language used to address delays?

I5: Because the State doesn't really have any laws that will fill in the blanks, any contract language is going to significantly affect the outcome of a trial when it comes to delays. I think it does a very good job of setting out various things that might happen and the outcome of those events which will allow the parties much quicker ability to come to an agreement without the need for a judge or a jury to make the decisions. They know that if event A happens, then I get additional time and additional money and I don't need a judge to tell me that I have a contractual right to it. So there will be very limited fight about it. To me it looks like the language is very pro-contractor at the expense of the owner, just because it looks like the amount of events that will give the contractor more time and money is pretty broad. It is in the best interest of the owner to have those events small because the contractor is the one that is used to construction and has a better ability to foresee these problems and can take actions to prevent them from happening. Because there are so many events that will give the contractor more time and money, an owner can have his time and money budgets severely affected.

R: Let's move onto construction defects.

I5: I think it does a good job of laying out the results of different kinds of events if they happen, which is great because the parties can work it out without the need for a lawyer or the need of the expense of going to trial and having a judge decide what is fair. It looks pretty all-inclusive, it takes care of a lot of the items that I have seen come up. Yes, it would significantly affect the parties' rights because it kind of takes the decision making away from the judge or the jury and puts it to the hands of parties who have come to an agreement beforehand of what happens in these scenarios. It is very typical of the stuff I have seen too. When you ask people in the industry what they would expect to happen without reading any contract, this is what they would have expected to happen, they would kind of see as being fair.

R: What do you think about payment?

I5: The State has a law that you have to pay within 35 days – that is one of the few laws that the State has on how construction contracts operate. In here it is 20 days, which is fine. Again, the language is somewhat pro-contractor, it is pretty tight. The retainage language, the State has some laws about retainage and how much the owner should withhold on retainage. 9.2.4's subparts could get an owner in trouble because it goes against those rules about retainage. The owner should hold on to the retainage for as long as possible, to make sure the contractor will complete his work. These subparts requires the owner to not hold retainage during the entire project after it is fifty percent

complete. But it could get an owner in trouble because it impacts the ability of an owner to make sure that work is being done towards the end of the project.

R: Now, changes.

I5: Yes, it will change what happens if we give the owners a ground map of what constitutes a change, how the change will be paid for, and what happens if the parties don't agree on an amount. The language is not strict as to what happens if they don't follow these rules. The assumption is, if you don't follow the rules, you might not get paid. But this language isn't strong enough to really enforce that.

R: How about design defects?

I5: This would affect it. The State has a general rule about whether or not the contractor is responsible for design defects, and whether when the building is being built and it falls down, is the owner at risk for that or is the contractor at risk for that. The State has some laws regarding that. These provisions would change that, it would overwrite that law – which is doable for that particular law. Again this language is pretty pro-contractor. The owner agrees that the contractor has no duty for design and everything related to do, for instance he has no duty to ensure that the building codes are complied with. In practice, the tradesmen of the contractor will know more about the codes than an architect or civil engineer, for instance an electrician knows more about electrical codes than other project stakeholders. I guess you can tell, I represent the designers and owners more than contractors, so I just like it that way. My opinion is that whoever has the most

knowledge of these rules should be the ones tasked with who [unclear] it. However this language shoves off some of this responsibility back to the owner, which I don't think is fair.

R: So in your opinion, if ConsensusDOCS contract forms were used, would it impact the number of disputes in construction?

I5: It seems a little bit more detailed than the AIA contract. As far as some of these changes, delays, I think it would reduce disputes because some of these events are more clearly defined. As compared to having two people just shake hands and exchange money, using this would significantly reduce disputes, but compared to the AIA contracts, it would be in the same realm – maybe a little less disputes but not by much. They take care of the same topics, but just in a different way. But it does seem like the events are more specific in this one.

R: How about improving contractual language? Could that lead to a reduction in disputes?

I5: Yes. The state of Texas defers to the parties when it comes to contracting. So the more scenarios the contract provides provisions for, the better. Because if something happens that the contract doesn't talk about, someone has to make that decision – either pay for the fight or resolve it through other means.

Interview 6

R: Let's get started. First of all, I want you to tell me about your experience in disputes in construction.

Interviewee 6 (I6): For 39 years, I practiced construction law. While I do transactional work – negotiating contracts and so forth, probably the bulk of my time is spent in dispute resolution which frequently involves arguments over provisions in contracts similar to what you've sent me. Like delay claims is obviously very common. Construction defect claims are unfortunately also common. The issues that have been identified are fairly common. I've been an arbitrator in around 150 cases, I've represented parties in litigation, arbitration over these issues in thousands of cases. So they are among the core issues that you see being argued over incessantly.

R: Okay. What did you think about the contractual language used in ConsensusDOCS to address these issues?

I6: I primarily represent general contractors. I do some work for owners and very little for design professionals, but I think this particular form is a fair form. It is fairer and better than the AIA forms for instance, which are probably the most commonly used standard forms in domestic construction. I think they are much fairer and there are some specific points in what you sent me that are quite good for a contractor, as compared to what they normally see. I don't know what the percentages of use of these contract forms are, but I don't see ConsensusDOCS a lot. When I see some contract form that has

been put out there, assuming it is some standard form or variation thereof, usually the owner is the one proposing the contract form. Very rarely do they propose ConsensusDOCS, which is a shame from a contractor's standpoint because it is better. I think there is some good stuff in here for a contractor that they don't see in the other forms. Most of the contractors that do a one-off form or their own proprietor form are usually worse than the AIA, and certainly the ConsensusDOCS. When I say worse, worse from the perspective of a contractor. From an owner's perspective they may think it is better. I have got clients that have used this and I don't know that I have had a dispute arise under ConsensusDOCS. I don't know that I have seen one. Like I said, it is not used a lot either. If I had to put a guess on it, I'd say 5% or less of the standard forms I see are ConsensusDOCS.

R: If you think it is better, why do you think it is not more widely used?

I6: Because the owners are typically the ones who control, or at least propose the contract form. Their attorneys, when they look at these things, they are going to look for one that is more favorable to the owner. When contractors have an opportunity to propose a form, this would be a good form to propose. It's the golden rule – the party that has the gold makes the rules. Unfortunately the owner has the project and so they suggest the form to the contractor, and have to work off of that, so you're usually starting in a less advantaged position than where you would start with this. It's be good if you get more people to use this.

R: Could you go through the language that has been provided and give me specific instances where you thought it is better?

I6: A lot of this language is very similar to that of the AIA forms. But in Table 1, in 6.3.2, there is actually an affirmative statement that the contractor is entitled to an equitable adjustment of the contract price for certain delays. The AIA does not affirmatively say that. It says that this provision doesn't waive any right somebody may have otherwise to make a claim. It has got a negative implication. It doesn't actually affirmatively state like this one does. So I think this one is, from a contractor's standpoint, better.

Let's go to Table 2. There are two things here that jumped out at me. One is at 3.8.2. This speaking to the issue of when a contract calls for extended warranties for various items, such as a roof, or air conditioning compressors, or whatever it may be. And it specifically provides the contractors liability of those warranties as limited to the one year correction period. That is a big deal. And that is not in any of the other standard forms. Often the contract will say that the contractor is supposed to countersign all of the warranties, but it is not sensible to put a contractor on a roof warranty of 15 years for instance. I don't think a lot of contractors appreciate that this is what they are getting hooked on to. But this language counteracts that, so I think it is very good. And it clears it up. Because as it sits right now, you might get a manufacturer's warranty, but there may be vague language in the contract that might suggest that the contractor does not

own the warranty. This language makes it clear that when you specify a 15-year roof warranty, you are going to rely on that warranty after the first year, you are not going to rely on the contractor. So there is clarity in allocating responsibility of long term warranty. That I think is good. Some owners are not going to like it, but this will clarify things a bit and will reduce the disputes over this issue, and it does come up quite a bit.

The second thing in Table 2 was 3.9, which is basically talking about if there is a defect in one year and if the contractor is notified, he is supposed to go take care of it, but if the owner doesn't promptly notify the contractor of a defect that is discovered, the owner waives the right to have the contractor come back and correct that work, as well as the owner's right to claim a breach of warranty with respect to that work. That particular part of that clause is not in any of the standard documents. That is important, because you've got a one year comeback warranty that everybody has got in their forms, but this is not usually limited warranties. Owners may not like it, but this language brings some clarity and it should help limit disputes about that issue. Right now, without that kind of language, that is a common dispute – the owner knows about the problem, doesn't give notice of it, then comes back and says it is a breach of warranty. It is kind of a huge backdoor to make the contractor liable for something the owner knew about and sat on their hands on and didn't do anything about.

Next is Table 3. This is under 9.2.4, having under the contract provisions that after 50% complete, there will be no more retainage, making that standard is beneficial to the

contractor. In Texas, there is a statute that the owner's shouldn't do that, but they can, there is some potential exposure there when they do that. They're supposed to have 10% all the way to the project completion. So I think this is good. It obviously helps with the cash flow of the job. So that is something I think is useful. Sometimes people negotiate that. They may negotiate 5%, this is 50% here – presumably 10% till it is 50% complete, so that at the end of the job it is effectively 5%. That is negotiated quite a bit. Often there is some sort of reduction in retention. There wasn't a whole lot else in payment provision that I thought was out of the ordinary really.

In changes, there is something that is pretty different. It shows up in a couple of different places, but it has to do with when there are changes where either there is disagreement as to whether it constitutes a change, or on the amount. These provisions in 8.2.1 and 8.3.3 provide for the owner having to pay 50% of the estimated cost to perform. I don't think I have seen it elsewhere, it is not in the AIA for sure. What that does is, unless it is a deal where the issue is a 0, where you don't owe anything, it puts you in a middle starting point in terms of negotiation. So maybe it works out to it being 70% of what the estimated cost was, maybe it is 30%, but at 50%, you are a lot closer to those than at 0. So this is pushing some incentive on the owners to be reasonable, and it is fair to the contractor, because this is frequently used in a very abusive fashion – where there is no provision for payment, they will say you won't get paid until it is incorporated in a change order, then they won't agree on the change order. So even though there may be

an agreement that it is a change, but they dispute over the cost, they won't pay anything. And that is sometimes highly abused, and is a real problem. This mitigates that issue, which is good. Frequently I'll go in and we will try to put a cap on the amount of any interim directed changes or any kind of work we are doing under reservation, so that we are not obligated to perform work in excess of some percentage of the contract price when we have not been paid, so that the owner cannot start issuing directed changes and saying we are not going to pay him till I agree on the change order. Then the contractor is out all this money, while they're out there performing and arguing with the owner. And maybe the owner doesn't have the money. One think I like to do is tie this to the owner, there is usually a provision about the owner having to demonstrate that they have the money to pay for the work – there is a State law here in Texas about that. So you want to know when they are making changes that they actually have the funds to pay for it. So making them pay 50% is going a long way.

In 8.3.2, there is language in there that is a little different than the norm, in that they add the word 'character'. You have got unite prices, and usually you see the clause just talk about quantity – for instance, more or less by 15% or 20%, then you can have an equitable adjustment. This talks about character or quantity which is another favorable thing to the contractor, in those cases where it is more difficult that what was actually contemplated by the original unit price, and that goes to their character.

In Table 5, I expect you know that Texas is sort of an outlier in terms of how it views responsibility for design at least during construction. Federal projects and most other states say, if the contractor is not a design-build contractor, the contractor can perform according to the plans and specifications, and if it does not work, it is the owner's problem. In Texas, it says it is the contractor's problem if the contract does not address it, if something does not work from a design perspective. So you have to have some language in your contract that clearly allocates the risk for design defect. Again, this language is not in the AIA. This clearly allocates responsibility, and says the contractor does not have liability unless they know about something and they don't tell the owner. So that is really important in Texas. Having it in a standard form makes it a whole lot easier to get that. It is still a murky area, there is still a lot of litigation over it, and you don't know on a contract by contract basis what you are going to end up with. This language would bring clarity to that and it is the right thing because if it is the architect's problem and the contractor didn't hire the architect, the owner should be the one to cause the architect to be responsible. So I think this is a very good provision that would probably reduce the number of arguments over that issue. If you don't have it in there, you are going to have arguments. Now a lot of owners are not going to like this, because it is putting it right into their hands, but I think that is where it belongs. Contractors do not have any recourse against design professionals if they don't have a contract with them.

I'd be happy for my contractor clients if they could get their owner clients to use ConsensusDOCS contract forms. Because right now I don't see it as much.

R: Do you think improving contractual language can reduce the number of disputes in construction?

I6: Yes. But don't take it completely out of context. You can have a well-worded, clear contract, and an owner that is unreasonable, you may still have a dispute even though you have good contract provisions. But, on balance, I think it is going to help. I have been preaching for years, the purpose of the contract is to communicate clearly the parties' expectations to the others of what their performance will be, and what they expect others to do. You want the risk to be allocated depending on who has got the best ability to control it in general. And ConsensusDOCS does a better job of that than the AIA, for instance. So maybe if people start using this more, we would see fewer disputes over some of these particular issues.

Interview 7

Interviewee 7 (I7): Let me start by giving you an overview about ConsensusDOCS. ConsensusDOCS are very new and very similar to the AIA, which is a good thing because the AIA has a good set of documents and they have been around a long time. I like the five focus areas in your questionnaire. How did you choose these?

R: These were identified as five of the most commonly disputed areas in construction by surveying construction industry professionals.

I7: I think you have nailed them. If you ask me, the only thing I would add is indemnity, because that is commonly disputed as well. When I review contracts for clients, they range from giving it a quick look to detailing everything I want to change about it. On the quick look side, these are the issues I would look at.

With regards to your questions about my experience in each of these dispute areas and whether using this language will reduce the number of disputes, lots and yes. And that is going to be the same for each of the identified areas.

With delay, an important issue that you want to look at is the no damage for delay clause. ConsensusDOCS has moved away from that. They have got a somewhat transformed no damage for delay clause. I will tell you that the best contract is the one that most thoroughly defines what we are going to do if we are going to fight, and you hope not to have a fight. No damage for delay clauses have been litigated pretty forcefully in Texas. Here is the lowdown on delays. Two conflicting issues come up on delays. The first is the owner's perspective – you have delayed my project, I am losing money, you cost me money, your delays have created conflicts. Now the biggest thing for an owner on delays is time – primarily in commercial and industrial construction. For instance, delaying the opening of a refinery or a casino will cost money. For a casino, the income earned on a day to day basis is pretty high. If there is no liquidated damages clause and there is delay, the contractor may end up paying millions and millions. So

liquidated damages, which contractors often despise, aren't always a bad thing. They are contractual agreements that it would be very difficult, if not impossible, to determine what our damages would be if you do not finish this project on time, so we are going to contractually agree as we are entering this contract what the damages are. With the AIA contract for instance, and the ConsensusDOCS has a similar provision, there is a mutual waiver of consequential damages. That is lost profits, lost use of the building, additional financing because you are taking too long and we can't convert this construction loan to a permanent loan which has a lower rate. For what it is worth, I think the ConsensusDOCS does a little bit better job of defining what the consequential damages are that are being waived. I can't tell you how many times I have had owners who are livid and bitter about the damages they are incurring because they had waived consequential damages and did not bother to put in liquidated damages. In this case the contractor is in breach for not finishing the project on time, however all the damages that occur because of that breach have already been waived, so it is a non-issue.

As far as delay provision in ConsensusDOCS, they are not bad. And here again, they are almost identical to the AIA. They were so similar when they first came out that I anticipated there might be litigation. Because the AGC had been involved in the AIA documents, and when the 2007 revisions of AIA came out, the AGC was not asked to be involved in the negotiations of the revisions to the documents, and the AGC did not endorse the new documents. They were arguably a little bit more owner friendly. The 97

version left the owner community a little upset because they were a little too contractor friendly. When the 07s came out, they had issues like not only did the contractor need to point out anything he found wrong with a document, it also added that he needed to have pointed out something he found wrong or should have found wrong. And that upset the construction community – they were like what do you mean 'should have found wrong,' how far are we supposed to go with this? Also, the architects said they didn't endorse this because they came out with their own form documents and were trying to sell those. And the construction community and the AGC said they've got their own form documents because they are better, and they don't like the AIA documents anymore. I can't tell you who is right. I suspect that, like with most disputes, there is a little bit of truth on both sides. That is the basic background of ConsensusDOCS. I can tell you from my experience that they haven't picked up as quickly as the AGC hoped, especially in the commercial construction community, which primarily uses the design-bid-build form. So the first contact for an owner is going to be with his architect. And the architect is going to default to the AIA, and not ConsensusDOCS. So that is something the AGC is going to have to contend with in order to have their documents more in play than they are at the time. It is coming around some, especially with the increase in design-build model, where the owners contact the contractors first and the contractors go find designers. They may be a little more inclined to use ConsensusDOCS than AIA, but not by much because AIA docs are old and they are familiar, they have been using them for

a long time and they know exactly what is on them. As a practical matter, there is not that much difference in the ConsensusDOCS, they are a tiny bit more contractor and subcontractor friendly – the subcontractors have had a tremendous influence in all things AGC or ABC for a lot of years, because over the years, they had become the majority in these organizations.

The two main things to take away from delay disputes is, what kind of damages either party can allege, and whether or not the contract clauses address those. Consequential damages are the biggest thing for an owner. Home office overhead and productivity delay clauses are the biggest things for a contractor. ConsensusDOCS, not unlike the AIA, has a clause that waives both those things. As a practical matter, from a contractor's perspective, if you don't have those clauses, proving a delay damage claim is one of the most difficult things in construction law. It can be done, but you need to be talking about lawsuits in the millions, not the thousands, to bother with what it takes to deal through and prove a productivity and delay damage claim from a contractor's perspective. From an owner's perspective it is pretty easy – we were supposed to move in on Day X, it took an extra 6 months, here is the amount of money that I was supposed to be making on those 6 months, you owe me that much. Contractors have to go through a lot more hoops – here is the delay, here is what it cost me other than general conditions (which is a pretty basic amount). But the bigger aspects – yes we were delayed, here is documentation that shows the formulas for the productivity loss.

R: So in your opinion, could an improvement in language impact the number of disputes in construction?

I7: Always. Anything that you resolve on the front end and puts an absolute bar on certain things, that says if this occurs nothing is going to happen, it goes a long way in keeping a jug headed lawyer from making an argument. I have got a client right now who is contemplating a settlement offer for a lawsuit that, to the best of my knowledge, they have zero liability for. But lawsuits cost money. So they'd much rather settle than go through the hassle of a lawsuit. That is why you have certain things in contracts – it is to try to avoid problems. Even if you are totally in the right, it needs to be in the contract, or you have to pay somebody like me to go argue on your behalf. And it is not free. One other thing that you need to make note of, and it would be the same even for AIA documents – is that these are national documents. They do not take into account individual state laws. The indemnity provisions in the ConsensusDOCS, for instance, are not enforceable in Texas because of some specific state laws. For instance, ConsensusDOCS references written notice in accordance with 8.4 which has a 14 day limitation, while Texas law says that any notice provision for less than 90 days is unenforceable. The AIA's provision is for 21 days – also unenforceable. When these things come to trial and people say it's supposed to be 90 days, so just move it to 90 days, good trial courts and judges have to explain to the parties that they are not in the business of rewriting contracts, their duty is to tell whether or not the provisions are

enforceable. Some of the claimants in those cases where they had 21 days with the AIA were told that it is not enforceable in Texas if it is within 90 days, so they changed it to within 90 days, but were told that we are not re writing the contract, now there is no limitation other than statute of limitation which is four years. So anybody who is using the ConsensusDOCS from the owner's perspective needs to change it to 90 days or 91. I usually use 91 days because there has been some case files over what within 90 days means. That is something to make note of.

In 6.3.1 they did not reference material sources. From contractor's perspective that is not something that they would not want to add because those things will come up. When they do come up – and it has happened in the past with drywall and copper and several other things, there is not a doggone thing any contractor on the planet can do about it. Over the years, courts have looked it at those things and have said this kind of thing is common enough in the construction business that if you want to pass that risk on, it needs to be stated in the contract. That's the contractor's problem. That is something that ought to be addressed.

In 6.4, it wouldn't hurt to better define what they can get. They do have the mutual release of consequential damages. It's okay to just say what we are not going to be responsible for, but it can be very helpful to go on to say, here are the things that we can recover, just so that there is no fight about it.

R: What do you think about the language used for construction defects?

I7: Most commonly what is it is not shown on contract documents. That is why you have the standard language in these documents. The common phrase that you will hear is [unclear] reasonably inferable [unclear], and that phrase is the most common fight between the owners and contractors and architects. Are you familiar with the Spearin doctrine and the Lonergan case? Neither case specifically stands for what they argued to stand for, Spearin being the owner is responsible for the contract documents. Lonergan being the contractor is responsible for superior expertise of the project. Both of these were very fact-specific cases. The Spearin case didn't necessarily say that the owner is always responsible for the documents, they were dealing with the Corps of Engineers I think, and they had more field engineers on the project than the contractor did. They took such an active role in the special cases and oversight of the construction that they put on an obligation. The problems with the design in the Lonergan case were so blatantly obvious that anybody who had ever picked up a hammer should have figured it out. So neither one, even though they are commonly cited to say: this one says the contractor is responsible and this one says the owner is responsible, quite goes that far. They outline the series of factual situations where it is applicable to the case. Currently, the state of law in Texas is that it is on the contractor's back unless it is addressed in the contract. So, if anything, that would be a place for a little bit more detail in the ConsensusDOCS contract documents, as to who is responsible for the design. As I said, they revise the AIA documents every 10 years, and the cases that come out putting more

and more onus on the contractor has largely come out after 2007. So they are probably going to do a little tweaking on that topic in the 2017 version. I don't know if ConsensusDOCS is planning to come out with new versions every 10 years. I would, somewhat jadedly, suggest that it may largely depend on whether or not it has been a financially profitable concern. They have been out for 10 years now, but I have yet to have a single project come up where someone wanted me to review the ConsensusDOCS because of a dispute they are having. I would be more than happy if they did, they are perfectly good documents. They are somewhat similar to the AIA, but they don't seem to be catching hold. I can't swear to that, I haven't researched that, I haven't enquired among contractors whether they have come across these, but nobody had ever asked me to review it before you did. So they may or may not push this much further.

The primary goal of a contract is to address what happens if a construction defect exists. The secondary goal is to address what happens if one side says it exists and the other side says it doesn't. And the ConsensusDOCS is perfectly fine there, they are almost identical to the AIA, which is: if we can't agree, you got to fix it, and we will fight about it later. And that is probably the most critical issue in any construction contract: if there is a dispute, you don't walk away, you don't stop performance. You just keep going and you file your claim in accordance with the claims and disputes provision in the contract. ConsensusDOCS does a good job of addressing that, AIA does a good job of addressing that, any decent subcontract does a good job of addressing that, because the worst

situation to be in as an owner or any upstream party is to be held hostage – by a contractor, by a subcontractor, or a second-tier sub, who doesn't have any provision that says they have to continue performance and follow claims with their disputed issue. Because when that happens, you are stuck between acquiescing to whatever the demand is or going and getting somebody else to do the work, which may cost more money, which may or may not ever be recoverable from the subcontractor, second-tier sub, GC etc. So something that unequivocally says, if we have a dispute you keep going, you follow our instructions, and pursue a claim against us. And we will deal with that as the contract says – mediation, then arbitration or litigation, whatever the contract says, but you don't stop my project, you don't kick the brakes and say, you give me a $100,000 more or we are not doing anything else – that is a situation you don't want to be in. With construction defects, and with several of these other things, the typical dispute is: no it is not a defect, what you are asking for isn't on the drawings.

One of the things that ConsensusDOCS does a little better than the AIA, at least from the contractor's perspective is, they refer to patent defects, as opposed to latent defects.

R: What are your thoughts on the clauses that address payment?

I7: Two issues on payment is timing and [unclear] for withholding, and ConsensusDOCS does a pretty decent job of both. In Texas, according to the Prompt Pay Act, an owner is required to pay a contract within 35 days of the contractor's invoice. You can make a contract that says I don't owe you money for 90 days, and it doesn't mean anything.

The language in ConsensusDOCS about payment is a little bit softer than in AIA – they talk about reasonable time and so on, but what it basically boils down to is: they don't have to pay, they can hold out money for defective work. Neither ConsensusDOCS nor AIA does much along the way of defining what a reasonable amount to withhold is. And that has been a huge point of contention for years. From a contractor's perspective, it is always a good idea to say: you can withhold something for defective work, but the amount needs to have a reasonable relationship with the defective work. I have had a couple of situations over the years, where somebody had a small problem and decided to withhold large amounts of money, and it turned out to make bigger problems with more people. So that's always a good idea to get that established.

R: How about changes?

I7: This goes hand in hand with the construction defect issue – what is and is not on the drawings, what should and should not have been assumed by the contractor. And I like ConsensusDOCS' changes clauses. They are a little more contractor-friendly than AIA is, but this one is so fact-specific that the only thing the contract is much good for is defining how you resolve the dispute. Because you are not going to have a contractual method to determine what is and is not a change. You can put it in there, but it is always going to be fact-specific, it is always going to be subject to people negotiating and arguing. So the primary goal of your change order provisions are notice, what should be assumed and how you move forward in case of dispute. Which is the same thing we

talked about for construction defects. What is and is not on the drawings, what the notice provision is, and from an upstream party's perspective, the contractors don't stop performance in the face of what is and is not extra work. Now there are limitations to that in the face of a cardinal change. But honestly, I have read some cases about cardinal changes, but in 20 years of practice, I haven't had a cardinal change. You have got to have something doggone big to bring in a cardinal change argument, and they don't have them that often.

R: Finally, what do you think about the language used to address design defects in ConsensusDOCS contract forms?

I7: I haven't seen it done much to fruition, but they added that provision about taking the architect out of the role of the determining whether there is a problem with the design in the 2007 revisions to AIA. It was a long term reckoning of the inherent disputes in the designer being the person to determine that. Architects took offense, and they are duty bound to be ethical in their doings, and I have found that most of them are. But some aren't. They put that out of their hands at the contractors' urging. In 2007, they allowed the parties to designate an initial decider of disputes, and if they don't select someone, the responsibility falls back to the architect. That is the primary issue with design defects. The best thing that a contract can do is tell them how to resolve it, who resolves it, and what do we do in the meantime. Here again, it will go hand in hand with changes and construction defects, in that it boils down to what is and is not shown in the

drawings and specifications, what is and is not within industry tolerance, and what is and is not obvious in the drawing that somebody else should have caught. If I had to boil it down to one thing, it is: what happens if we disagree. Because nobody pulls out the contract if they are in agreement with something. Nobody cares what the details are if everybody says: okay, that's close enough, let's make this work. And any contractor or owner worth their salt tries to get to that point on their own. And I tell people all the time, the second to las thing you want to do is call me. But the last thing you want to do is go to court. So when in doubt, go ahead and call me, and let's try and sort this out on the easy side.

Contracts don't get too deep into the weed about design defects. Call me jaded, but that's a function of them being authored by architects. But they are more middle of the road than they used to be, and they put a little less emphasis on the design. Here again, you are talking about design defects, you are back to Spearin and Lonergan. From a contractor's perspective, it needs to be very clearly established that the owner warrants the completeness and accuracy of the drawings. ConsensusDOCS is pretty good about it; not perfect about it but probably a little bit better than the AIA. AIA doesn't get there, and anytime I'm drafting something for a contractor, I will specifically add that the owner warranties the completeness and accuracy of the drawings. I have seen so many owner-drafted contracts come out in the last 5 or 10 years that specifically exclude any warranty of accuracy and completeness of the contract documents, and so it is the

contractor's obligation to review and establish that they are adequate. I have had some that even say that contractors specifically warrants the adequacy and completeness of the documents. So you better change it out. If you can't like in the case of contractors who deal with owners that say: here is our contract, we will accept no changes, decide if you want to sign them. Which is fine, but that still doesn't mean you shouldn't read the contract. Contracts are basically just risk assessment. Payment time is a risk allocation. Somebody told me a long time ago: if you want to avoid risk, construction is the wrong profession.

Interview 8

R: Could you tell me your experience with disputes in construction with respect to delays?

Interviewee 8 (I8): I represent both sides – I represent owners and contractors. Generally, every dispute will involve some sort of delay. Even if you have a construction defect or a payment issue or changes or design defects, there is always going to be a delay claim. Any of these will cause delay in a project.

Just to let you know, notwithstanding the word 'consensus,' I don't think ConsensusDOCS are widely used. The AIA forms tend to be the most used forms in commercial in the United States. When you get to industrial projects like power plants, manufacturing facilities etc., you typically get bespoke agreements. They are tailored for

each project, and are not endorsed or prepared by any group. The other thing is, just like AIA documents, they are a good place to start. If the parties don't have legal counsel, you will see the documents used aren't modified, so they are using the standard form. But if they are bigger projects, then they have legal counsel and the documents are heavily modified. That is kind of the broad overview of ConsensusDOCS and forms in general.

It looks to me like the language used is too broad, the contractor has more room to make claims. For instance, I disagree with 6.3.1 as an owner representative. One thing that I use all the time, which I don't think is in the AIA, but is in this wording is, it says transportation delays not reasonably foreseeable. If my contractor is required to bring equipment to my project and that equipment is delayed by transportation delays they couldn't foresee, as an owner, I don't care – you don't get extra time if you can't do your job right. So I feel this provision is too broad. I am not in disagreement with a lot of them like owner-caused delays, but I don't agree with clauses like labor disputes. My quick answer is I don't think ConsensusDOCS language will prevent more claims. It is too broad. It is a good example of why forms are modified. The broader and the more ambiguous the language it is, there is more room for it to be interpreted in different ways. In this case, it is good, if I were representing the contractor. But it is also bad because claims cost money.

R: Let's move on to construction defects.

I8: Every claim has a delay claim, so that's a 100%. Construction defects, I think it is in the 30% range. I thought the language used was pretty standards. It is kind of what I see in the industry in the contracts. At the same time, it is a little broad, but then again, most forms are broad. But I don't think this language will prevent more construction defect claims. I thought the warranty language was fairly normal and standard, I did not have any big problems with the language used there.

R: Could you give me some specific examples of where you felt the language was too broad?

I8: Now that I am looking at it, I feel that it is pretty standard language. I guess it is not as broad as I initially thought. I use different kind of language, but there is nothing wrong with this language. So to answer the actual question, since this is fairly standard language, I don't think this language is going to prevent construction defect claims. It kind of makes sense anyway, because if it is a construction defect, then there is something wrong with the work. So no matter what is there in the language, if the work is not done correctly, it is a defect. What I did noticed in here was how they did not talk about latent defects. Some contracts do, most don't. How to handle latent defects is something that could be added to ConsensusDOCS. But that's something the owner is going to go after anyway, and the contractor doesn't want on the contract, so it may not be there on the contract once the negotiations are done.

R: Alright. Let's discuss payment now.

I8: Any time you have a change order or change dispute or construction defect dispute, you are talking about payment. So I'd say I see it about 75% of the time. The provision you sent me is more in accordance with a fixed price or lump sum type contract, so I don't really know what its provisions are for a cost plus contract. I don't see a whole lot in here that is different from what I am used to. I will say your lien waivers does not comply with Texas law (9.2.3.1). Texas law basically says that an owner cannot require an unconditional lien waiver from the contractor if he hasn't received the payment. The other thing in 9.2.3.1 is it says lien and claim waivers. Owners try sometimes to get a waiver of claim. That is different from a lien waiver. A lien is a statutory remedy, but that doesn't mean you are waiving all claims. You might have a claim under the contract for a change order or something like that. Working from a contractor's standpoint, I would strike that off. The other thing is, under Texas law, an owner can be held responsible for up to 10% of the contract amount. But 9.2.4.1 says after the work is 50% complete, owner shall withhold no additional retainage. Depending on the size of the project and how long it takes, I have a lot of owners who say, that's okay, I have withheld enough money to cover any claims. At some point you've withheld enough. I don't think I have ever seen a document that says no additional retainage can be held. I have negotiated that for contractors, but I don't think I have seen it in a form document. I also think 9.5 (payment delay) is a normal remedy but I think 7 days is probably too

short. All the other stuff looks pretty normal. To answer the question, I don't think this wording is going to really impact the disputes relating to payment in construction. Payment issues come up when the owner fails to pay, because, quite often, they run out of money. Or, most times, payment issues deal with general contractors and subcontractors, or even lower. I rarely see a payment issue between an owner and a contractor purely because the owner doesn't pay. It usually involves the contractor making a claim, or there is delay or so on. I rarely see payment issues between the owner and the contractor that are standalone.

R: What do you think of the language used to address changes?

I8: I think changes are probably in the 50-60% range in terms of disputes. I have mostly represented owners, so I don't use ConsensusDOCS or AIA for changes, I think the language is not specific enough. I think it increases the claims. The language is very broad. A good example of what I have done from an owner's standpoint is, I will say that contractors are entitled to request a change order for these reasons, and I list them out – I have 5 or 6 reasons, such as owner changes, owner issues, owner causing a schedule delay, force majeure, schedule acceleration etc. So I like to be very specific. ConsensusDOCS is not.

On the interim directed change (8.2), I am a 100% behind this. Sometimes I have problems with my contractor clients who don't like it, but I think this is necessary. Because if the two parties don't agree, I think the owner should have the right to direct

the contractor to make the change. We might disagree on what the time extension is or how much you are going to get paid for it, but I think the owner should have the right to say, we are not going to stop work, so I need you to just go ahead and do it. And the owner is responsible for making payment on that. So I like this. The one thing I didn't like in 8.2.1 is it says the owner should pay the contractor 50% of the estimated cost. What I normally do is say the owner has to pay all disputed amount, and that usually works. You usually don't have to tell an owner you have to pay 50%. So I just think that it is a little specific and it is not a good parameter of how much it is.

And then the last thing, 8.4 gives you 14 days after the occurrence gives rise to a claim – this doesn't comply with Texas law. In Texas we have a little law that not a lot of people know about and there is not a lot of case law on it. Everybody on the construction side knows about it, but nobody really knows how to enforce it. It basically says any time limit for making a claim that is less than 90 days is invalid/void. So ConsensusDOCS, AIA documents, I would say that 50 % of the time, they don't get modified because they don't have lawyers or the project is really small or they don't want to spend a lot of money on it. So the AIA requires 21 days, this one requires 14 days. These are void. So that means the contractor technically has no time limit in which to bring a claim. But generally, I don't think this language prevents claims. I am going to send you my change order provisions from my owner contracts, so that you can see the difference. And I think that language does prevent claims.

R: What are your thoughts on the language used for design defects?

I8: 2.3.1 sounds good, but I don't think I have ever represented an owner or a contractor where an owner indemnified the contractor from infringements arising out of the use of the design documents. I don't think I have ever seen that. What I do see is if it is design-build or EPC, the contractor indemnifies the owner for infringement. As an owner representative, I am going to tell my clients that we are not going to do that.

In 3.3.2, when I represent contractors I make sure I delete it, when I represent owners I insert it, but in the course of performance of obligations, if you see a defect, you need to tell the owner. But as a contractor, you are not being held to the standard of an architect, so you don't have to redo the drawings and all that. When I represent owners, I always say, if you see it, or pursuant to the standards in this contract, you should have known about it, then you need to tell me. That puts a little more obligation on the contractor, so the contractor can't just say that they didn't know anything about it. But from an owner's standpoint, I like to say, if you were a good contractor you would have known, and you told me you were a good contractor. But keep in mind that when I represent a contractor I always strike it out. So it always depends on how good the attorney is. I wanted to highlight that for you because that is a negotiation tactic that I deal with all the time.

Again, I think ConsensusDOCS has pretty standard language, so I don't think using this standard form is going to do away with claims. That's not because there is something

wrong with it, it is because it is fairly standard. ConsensusDOCS and AIA are pretty standard. There are two lines of theories with design defects – the first is that the owner is responsible if the owner's architect or engineer had prepared it, the owner can't pass that on to the contractor. But you will see other documents where the owner is passing it on to the contractor, and the contractor has full responsibility. Most construction lawyers won't let that happen for a contractor. If you are doing design build, then you are responsible, but not otherwise. There is another line of theory that says the contractor is responsible, because really owners don't know what they are doing. It is 3.3.2 in here. Having that duty does not mean you have an affirmative responsibility to find errors, you don't have an affirmative responsibility to be a design professional. So, ConsensusDOCS goes against the theory that the owner doesn't really know what they are doing. And the contractor shouldn't have that professional design responsibility either. I mean, if you are going to pay for the contractor, you are paying for a contractor and not an architect.

Interview 9

R: Could you tell me about your experience in disputes with respect to the identified dispute areas?

Interviewee 9 (I9): Some of it is going to be repetitive, but I am going to rely on my experience as lawyer many years ago for 10 years where we had a lot of contract

disputes, and as a judge for nearly 15 years, and then I was in Congress for 10 years. Problem-solving and models to problem-solving kind of all have the same principles. So I am going to base my opinion on my own experience, and of course, being a mediator when these things come into play.

So the first thing is the delay area. My experience is presiding over cases where there were delays and as a result, work was taken over by someone other than the contracting construction. Where you have delays, there is cost incurred as a result, even to the point of substituting parties, but even if you don't, you have cost that is associated with delays.

R: Do you think using ConsensusDOCS language will reduce the number of disputes associated with delay?

I9: Definitely. And the lot of these answers are going to be applicable to all of them. SO the general premise is going to be this: the more specificity you have in a contract, you will probably avoid disputes. In other words, if you know what constitutes a delay that would not hold a party accountable or makes a party responsible, then that always helps. As a general observation, I would say, yes, when it comes to delay it is very important to have as much in there to have what constitutes a reasonable or what constitutes an unreasonable delay. And if you can put as many things that would constitute those things, the better. Although it is not limited to what you list. And so that is the first

thing. So, yes, I think the contractual wording as it relates to the topic of delay could go a long way in avoiding disputes because the parties themselves understand a lot better.

R: What do you think about the language used to address construction defects?

I9: The most important thing on all these dispute areas is that you have things that have to be done in writing. So you start off with the basic document which has a lot of specificity and it is in writing. So it will give the parties a better understanding of what they can and cannot do, what will be excused and what will not be excused with each of these areas. One of the most important aspects of the language that you are working with is that it requires written notice of those things that might constitute reasons for delay, what constitutes a defect. This is significant because what happens very often is that people have conversations on the phone, on the site, and they may even note it in their own notes, and that will be in writing, but it is not a writing to the other party. The other party has to be placed on notice as to what may not be going right that is going to impact the performance of either party. So I think that is going to be something that is incredibly important. To me, this is one of the most important parts of the language – that it requires written notice by the parties to one another so that there are no surprises or misunderstandings. Because they are done in writing, although it takes more time, it is more formal, it could impact a relationship because there are some things that are minor in nature that you would orally notify somebody and it is taken care of – people don't want to take the time to do everything in writing. But believe me, as a lawyer and a

judge, and even as someone who drafted legislation, when things are in writing, there is no question as to what the issue might be. And if it is not resolved everybody in the future will say they complied, or didn't comply, they had notice, didn't have notice, and so on.

R: How about the language used for payment?

I9: Payment is incredibly important because it is never one big lump sum. It is piecemealed out. And you have got to understand that the contractor and their subcontractors have to get paid. So it can't be one final payment. I think the language used in ConsensusDOCS is very important as to how this piecemeal payment is performed. Again, because it gives you a lot of direction as to how you make your request for payment, what might excuse payment, and then if you have a dispute about receiving payment, it gives parties a template, a directive as to how to comply with a request. This way you are not just submitting a bill and waiting for payment, it is how you submit a bill, what it has to reflect, and why the responding party might have an issue with payment, and how you go from there. So in payment, I think it is incredibly important. The biggest complaints that you are going to get is not timely payment. So the more directives you have as to how to submit, how to clarify, and what constitutes a reasonable delay, the better. Because it is the life and death of a business to be able to submit a request for payment and get paid.

R: So do you think the language used in ConsensusDOCS is better than what you usually see?

I9: What I am assuming is ConsensusDOCS contractual wording has to basically track what other documents have, and what has been standard operating procedure or what we refer to as best practice in the industry. So I think it is a collection based on experience, because there is no really original idea out there – it is just about trying to find out the best of what is out there, the best wording, the best practices, the best contractual provisions, and bringing them under one document – if you can do that, then that is wonderful. You still have to have some wiggle room. When reading this, I am seeing a lot of things in here that would have been the result of case law, in other words, what has happened in disputes and what have courts done, that give direction as to how parties should behave in these type of situations.

R: What are your thoughts about changes in ConsensusDOCS?

I9: One thing I left out when telling you about my experience is that I serve on a lot of boards. These boards have project and development committees, and what happens with those committees is that all these contracts come before them. Usually, you don't get into a lot of detail, but what you do is you pretty well understand how these contracts work. It is one thing to give the work to the most qualified and the most reasonable bidder, but then n performance, all of a sudden, you are hearing that the contract that you left to contractor A is way behind schedule, or that they ran into problems, or that there has been a change order, and all of a sudden everybody rolls their eyes because we know

what that means – it either means delay or more cost or both. So how you go about determining that a change order is based on why it is needed – was it a correction, was it based on something out of your control that neither party anticipated, those are good things. But then, what is the change order, and how does it impact other timeline, timely performance of the work, cost for performance of the work, those are important things. So the more specificity you can have there, it is going to save you probably going to arbitration, mediation or the courtroom.

R: And finally, design defects.

I9: Yes. What happens in the course of performance can be unpredictable and unforeseen, but some things are predictable, and some things should have been foreseen. So when you let a contract out, there are certain things that should have been anticipated. But now we are talking about how to distinguish that, design defects and such, and hold a party responsible for these things. Again, looking at some the wording, which is interesting…. You have got to figure out how to beget a meeting of the minds, because the first question is why a change is necessary, or if something wasn't anticipated, or out of the control of someone performing the duties. How you identify that, and more importantly, how you reach agreement as to what that change order should look like is what is important. So the language is incredibly important. It is almost like prewriting a contract. On a minor thing, it won't matter that much, but who is to say what is minor and what is not? What is minor and what is major is determined by how much more time

it is going to take and how much it is going to cost. So now you are talking about the parties renegotiating something midstream, and that can always be a very difficult thing. So again, the more specificity you have on identifying the reasons for a change, what that change will be, whose responsibility it will be, the better. The language that directs them and structures the conversation is very important.

I don't want to identify it as a major problem area, but if you look at it, how a decision by an architect or engineer will impact the work that the contractors are going to do. So if there are any kind of design defects, how much is that going to impact the contractor's responsibility? This is an area that I don't have much familiarity with. This is holding the person that should have been able to anticipate or foresee certain things, and they did not, and now it is going to impact performance by a third party, such as a contractor. I want to point out a couple of things. No matter how much you anticipate things, something will always happen. At least this attempts to address things beforehand, and that is the most important aspect of what you have got here.

Let us start off with some things that could be open to different points of view. Let's take delays and extensions of time. 'A contractor shall be entitled to an equitable extension of the contract time.' It is hard to define what is equitable. Again under delays, '… equitable adjustment in his contract price.' Another one is '… reasonable steps to mitigate the delays. So these words can be open to interpretation. In other words, the contractor may say, this is equitable or this is reasonable, but the owner may say

something else. At what point do you need a third party to come in and help them reach early resolution? Because a dispute early on can cause a lot of delay and disruption in cost. What I am getting at is, what happens if even with all of the safeguards such as wording that is as specific as you can get, there are still words that need some sort of interpretation if the two parties do not agree. So what you are going to be looking at is that provision: any dispute shall be subject to mediation or arbitration. So I don't know what the mediation/arbitration clause in ConsensusDOCS looks like, but I think it is always important to be able to resolve these issues that come up during construction on a timely basis. It spurs people's behavior if they can't agree. Then they can turn to a mediator, who is an impartial third party. The mediator can help them resolve some of these disagreements in the course of the construction project – try to be as timely as you can. The other thing is mediators will cost you money, and sometimes the parties become more reasonable when they find a neutral third party that can give them assistance or direction. I think that is an area of contractual law that is incredibly important, and that is the parties seek an impartial mediator to help resolve disputes as early on as possible, and not wait till it starts getting into litigation. Best thing to do is resolve these issues while you can still salvage the relationship between the parties and the success of the project.

Interview 10

R: Could you tell me a little about your experience in the identified dispute areas?

Interviewee 10 (I10): Let me give some background on what I do. Basically, my answer to bullet point number 1 on all 5 disputed areas is going to be pretty much the same. One of the subject matters that I handle is construction law and so whenever there is a question about a contract – construction contract or architecture contract, I am the person that it comes to. I generally don't get involved in a lot of day to day activities on construction projects. From a day to day perspective dealing with a contractor on a question about an invoice or whether or not something constitutes an excusable delay or whether or not we are truly at substantial completion etc. Those are really good questions that are answered by somebody at our facilities planning construction (FPC) department.

When you talk about disputes, those will come up on a daily basis. You may have something that come up dealing with the critical path on a project. The construction managers talk to make sure the project is on schedule and if it is a GMP project you have to make sure that they stay within their guaranteed maximum price. This is the daily job of our area managers and regional managers down in FPC. It really has to be at a high level for me to get involved – something that they haven't been able to work out on their own. Usually I get involved at the back end of the project where maybe there was some additional cost incurred and now somebody is asking for a request for equitable

adjustment, or a change order on the back end of the project for a very large amount due to certain cost overrides, or if there is some design defect that has been discovered after the project has been completed. So that's usually when I get involved. So, that is going to be the perspective I am going to be coming from when I respond to you regarding your questionnaire. So that's really the answer for the first 5.

I will tell you that from my perspective, I have been involved in delays, very minimally involved in defects, payments. The only involvement I have had in payment dispute is when they are asking for a huge amount of money and we are saying: no, we don't owe that. Changes are again mostly tied into payment disputes. So when somebody asks for a change order asking for additional days on a project to relieve them from any liability issues, they are not meeting their substantial completion deadlines of a project – these are instances when I get involved. Not so much in design defects. When there are construction defects, a lot of times the contractor will point to the architect and the architect is saying: no, you didn't read my drawings, and results in a construction defect. It's very rare that you don't have a construction defect where the architects and contractors are pointing fingers at each other. I have had at least minimal experience on all 5 of these areas.

What we use in our system is we all have our own standard contract that we use. We have one for competitive proposal, we have one for design build, we have one for construction manager at risk and we have our own architect agreement as well. A big

attachment that goes with those is our Uniform General and Supplementary Conditions (UGSC) and that is where you are going to find the majority, if not all, of the language that is contained in the sample ConsensusDOCS that you have attached. I would say that the language in UGSC is almost similar to ConsensusDOCS in some form or fashion, but not 100%. Some of it is pretty close. In some form or fashion, all of the subject matters and a majority of the clauses that you have sent over are contained in our UGSC that the FPC group uses in prosecuting the project. These forms are set, you are not going to get much, if any, change allowed. So these are going to be representative with the UGSC. SO that's going to be kind of the groundwork – of what I do, what FPC does, how current documents interplay with the samples that you provided me.

R: Okay, what did you think about the language used to address delays?

I10: There is always an expectation on when a project is going to be substantially complete. You have an end user who has an idea of when they need to move in, let's take the case of a student housing complex. You're selling space in those dorms to kiddos and you are expecting them to move in a certain day, and so if you don't have the building substantially complete, and you better be able to identify how to handle delay claims. The contractor is always going to want to be able to establish that something qualifies as a delay. The owner is going to want to make sure that they are protecting themselves against any kind of delays because they've got end users that need to occupy the facilities that are being constructed. The contractors also try to protect themselves

against liquidated damages, because if they go beyond the substantial completion deadline, then they have got to deal with delay damage claim that can be held against them. So these are very important to make sure you get agreement on.

One thing that is not there in the documents that you have here that we utilize heavily are weather days. Time is of the essence on all of our projects. We define weather days very specifically that you, as a contractor, are expected to build into your schedule. Potential days for weather, be it rainfall or cold wind etc. need to be built into your schedule because we are expecting you to do that. That is something we are keen to have as part of the UGSC and it's from an owner's perspective.

R: How about the language for construction defects?

I10: Construction defects are very important. I can't tell you how many times I have had to utilize the one-year warranty on a project. Something that every facility director knows to do is when they get close to one-year, they will do a one year walkthrough and identify all the problems and make sure that they are going back to the contractor, because that way the building has had a chance to settle, users have had a chance to utilize all of the equipment, everything that is involved in the facility – be it a dorm, be it a lab, be it an office building, you will be able to identify to the contractor certain things that you can get the contractor to come in and fix. So, in that regard, you need to ensure that you are establishing the benchmark by which they are going to be constructing your project and then have that one-year warranty (that is something I utilize a lot). That is

something that is very important. We had projects where we had to go beyond the one-year warranty. We had a project where a humongous problem arose during the one year. It was a major construction defect. I don't believe we had gotten to substantial completion on the project, but it was pretty close, and then this problem came up. So what we were able to do was to establish two dates for substantial completion. So the majority of the facility was under the earlier substantial deadline and then you have a later substantial completion deadline regarding that major construction defect. The problem is, while calendaring, you have to track two days and do two one year walkthroughs and all that. We did have one problem where we had a contractor go bankrupt, hopefully your bonds are still in effect, because we are statutorily required to have the bonds on project payments and performance bonds.

R: What are your thoughts on the language for payment?

I10: Payment is something that I am not really involved in. I wouldn't be able to give you any good experience-based advice related to payment. Usually when it comes to me it's more a matter of: they are asking for an additional $5 million on the back end of the project and they are wanting to get paid for that. I would say all of these topics are really important to have in your contracts and assist you in your ability to handle any problem that may arise. I really haven't had any experience on this but I can tell you that with respect to lien, in the public sector, you cannot lien a state property, may be you can try – anybody can go to the court and file a lien, but the way the statute is written is so you

cannot execute the lien. So owners will get notices of a contractor not making proper payments and the subcontractors are statutorily required to send in notice if they want to go under payment bond. But there is really no liens that can be filed against state property. So we generally give people notice about it to make sure they know. We are responding to a lot of form documents and we realize that this is just a performance thing that they have to do monthly if they want to perfect a payment bond claim in the future, if they end up not getting paid. Lien is not something that we generally deal a lot with because you can't lien state property.

Under table 3, you do have the substantial completion deadline notice. That is something that I have dealt with in the past. I have actually had a construction dispute that heavily hinged on substantial completion. Because that is when their warranty starts to run. We were trying to determine when the warranty actually started so that we could establish the one-year timeline. From my perspective as an attorney, substantial completion language is very, very important. Getting that properly documented is important. Something that the owner needs to make sure they are watching very carefully is proper documentation. That has come up on a couple of projects I had on two different campuses. You've got this section on partial use or occupancy where you could do a partial substantial completion.

R: How about change order clauses in ConsensusDOCS?

I10: It is really more of an operational mechanism that on a daily basis, the FPC guys make sure these are channeled correctly. Sometimes they may come up to me. We've got an owner-issued change order that turn into a unilateral change order because we need them to keep moving on something. They are trying to reserve their rights down the road. For the most part I don't get involved in that. That is more of an FPC area. So I'll leave this one at that.

R: What about design defects?

I10: The ability to go after architects for design defects is really difficult. I want to say recent legislation has made it a little easier, but from a legal perspective, there is lot you have to do. You have to get an architect to certify that one of its brethren screwed up – that is one of the touchy things that you should get done. From a procurement perspective, we have to procure our architects on a qualifications basis. They have to make sure that they are registered and they have proper licensing and all that, but we do require professional liability insurance. So those are all requirements for the architects. As I was telling you, going in for design defects is very difficult from a litigation stand point. But I have had matters where I have settled design defects. We have had issues on construction of a curtain wall on a building that chronically leaked. It had nothing to do with installation, it had to do with the design. So we were able to settle that without any litigation. It is possible to do that, but litigating design defects is very hard.

R: Do you think improving contractual language could result in a reduction of disputes?

I10: The problems that you have is the competing interests in construction. They work on the documents all the time. They do their best to get to the point where you won't have to engage in litigation or arbitration or mediation. But you will always have the dichotomy of the contractor or the architect approaching the project from a business perspective. While it is laudable to try and work out language that is beneficial to both parties, you will always have clauses that will be owner-friendly, or contractor-friendly. It is really more in the art of negotiation in trying to draft a contract that addresses all the areas, which is not very hard to do. Construction law has been around for a very long time, and everybody knows areas that you have to get nailed down. But there is also innovation. Like BIM modeling. That's new, that has come about in the last two years. And you don't know what inherent problems there may be from a contracting standpoint or a construction law standpoint with BIM modeling. So obviously, I think that a construction contract is a living thing and it needs to be constantly improved. It depends, in my opinion, on who is a better negotiator – who gets the best language in there, and who gets the most benefits. And it is all about give and take – these types of things are important to me, so I'm willing to give on these other things. Obviously, the goal is to have it down to contract that is beneficial to all parties, allows everybody to work collaboratively to get the project done on time, on budget, and with a good product. I don't know if just working on the language itself would make a lot of difference. I mean, you can do this all day long and come up with language that is great, but at the end of the

day, it is going to be negotiated. So each time, you are going to come up with something different, unless you are working with a system that mandates you using their bespoke contract.