DIFFERING SITE CONDITIONS

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I. Introduction

Generally, the common-law holds a contractor responsible for increased construction costs caused by unanticipated site conditions. To protect contractors from this risk, modern construction contracts include "Differing Site Conditions" clauses. These clauses entitle contractors to compensation for increased costs caused by unforeseeable site conditions. Owners benefit from "Differing Site Conditions" clauses because contractors may bid more accurately, and need not inflate their bids with unnecessary contingencies for unforeseeable extra costs caused by the unanticipated conditions.

"Differing Site Conditions" clauses in federal government construction contracts are substantively similar to those usually found in modern commercial construction contracts. A typical federal construction contract clause provides as follows:

> DIFFERING SITE CONDITIONS
>
> (a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.
>
> (b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.
>
> (c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.
>
> (d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.[1]

The Associated General Contractors of America (AGC) Document 200, frequently used in private construction contracts, includes a clause similar to that used in federal contracts:

> **CONCEALED OR UNKNOWN SITE CONDITIONS** If the conditions at the site are (a) subsurface or other physical conditions which are materially different from those indicated in the Contract Documents, or (b) unusual or unknown physical conditions which are materially different from conditions ordinarily encountered and generally recognized as inherent in Work provided for in the Contract Documents, then prompt notice shall be given to all affected parties before the conditions are disturbed, but in no event later than seven (7) days after discovery. If appropriate, an equitable adjustment to the Contract Price and Contract Time shall be made by Change Document. If agreement cannot be reached by the parties, the party seeking an adjustment in the Contract Price or Contract Time may assert a Claim in accordance with the Contract Documents.[2]

The American Institute of Architects (AIA) Document A 201, which also, is frequently incorporated into private construction contracts includes a clause similiar to the federal and AGC clauses:

> **Claims for Concealed or Unknown Conditions**. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 21 days after the Architect has given notice of the decision. If the conditions encountered are materially different, the Contract Sum and Contract Time shall be equitably adjusted, but if the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall

be referred to the Architect for initial determination, subject to further proceedings pursuant to Paragraph 4.4.[3]

Both the City of New York and the State of California use differing site condition clauses in their construction contracts. California's clause is required whenever a California public entity awards a contract requiring the digging of trenches or other excavation extending deeper than four feet below the surface.[4] The required clause is as follows:

> (a) That the contractor shall promptly, and before the following conditions are disturbed, notify the public entity in writing, of any:
>
> (1) Material that the contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be moved to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
>
> (2) Subsurface or latent physical conditions at the site differing from those indicated.
>
> (3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.
>
> (b) The public entity shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the contractor's cost of, or the time required for, performance of any part of the work, shall issue a change order under the procedures described in the contract.
>
> (c) That, in the event that a dispute arises between the public entity and the contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the contractor's cost of, or time required for, performance of any part of the work, the contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

The City of New York has utilized the following clause in its bid information documents:

> SECTION No. 4 – (EXAMINATION) VIEWING OF SITE AND CONSIDERATION OF OTHER SOURCES OF INFORMATION
>
> (a) PRE— BIDDING (INVESTIGATION) VIEWING OF SITE – Bidders must carefully (examine) view the site of the proposed work, as well as its adjacent area, and seek other usual sources of information for they will be conclusively presumed to have full knowledge of any and all conditions on, about

or above the site relating to or affecting in any way the performance of the work to be done under this contract which were or should have been indicated to a reasonably prudent bidder.

(b) CHANGED CONDITIONS – should the Contractor encounter during the progress of the work, subsurface conditions at the site materially differing from any shown on the Contract Drawings or indicated in the specifications or such subsurface conditions as could not reasonably have been anticipated by the Contractor and were not anticipated by the City, which conditions will materially affect the cost of the work to be done under the contract, the attention of the Commissioner must be called immediately to such conditions before they are disturbed. The Commissioner shall thereupon promptly investigate the conditions. If he finds that they do so materially differ, or that they could not reasonably have been anticipated by the Contractor and were not anticipated by the City, the contract may be modified with his written approval. However, the amount of any increase or decrease of cost resulting from such conditions shall be subject to the prior written approval of the Comptroller's Chief Engineer. Any increase in costs resulting therefrom shall be subject to the Charter and Administrative Code provisions relating to additional work[5]

Although the foregoing clauses differ in certain respects, they each seek the common goal of ensuring that contractors will competitively prepare their bids based upon the conditions which can be reasonably anticipated from the available information. Owners benefit because the contractors' bids will include fewer, or be entirely free of, contingencies allocated to differing site conditions. In return, the contractor is provided assurance that in event site conditions prove more difficult than anticipated, an adjustment will be made in the contract price and/or time.[6]

II. Types of Differing Site Conditions

There are two principal types of site conditions recognized under the standard differing site conditions clauses.

A. Type I Conditions

The first category of differing site conditions ("Type I") includes "subsurface or latent physical conditions at the site differing materially from those indicated in [the] contract".[7] It should be noted that Type I conditions are not restricted to subsurface conditions only, but also include conditions which may be at, or above, the surface that are latent because they are concealed, hidden or dormant.

In order to prevail on a Type I differing site conditions claim, the Contractor must prove six elements:[8]

(1) The contract documents must have affirmatively indicated the conditions;

(2) the contractor must act in a reasonably prudent manner in interpreting the contract documents;

(3) the contractor must have relied on the indications of the conditions represented in the contract;

(4) the conditions encountered must have differed materially from those indicated in the contract;

(5) the actual conditions must have been reasonably unforeseeable;

(6) the contractor's damages must have been solely attributable to such materially different subsurface conditions.

As the language of the clause states, proof of the existence of Type I changed conditions depends upon comparison of the conditions actually encountered with those indicated in the contract.[9] Obviously, where the contract contains no indications with respect to subsurface conditions, this type of changed condition is logically impossible since the actual conditions cannot differ from those "indicated" in the contract.[10] Nevertheless, as discussed later, relief may still be available insofar as the changed conditions may be classified as Type II differing site conditions.[11]

Examples of conditions that courts have found to be Type I differing site conditions include the following:

(1) The presence of rock or boulders in an excavation area where none were shown or indicated, or the existence of such rock at materially different elevations than had been indicated in the data available to bidders;[12]

(2) The presence of permafrost or subsurface water where none had been indicated by the contract documents;[13]

(3) The encountering of loose, soft material at a location or elevation where the boring data indicated the existence of sound rock;[14]

(4) Physical differences in the behavioral characteristics and workability of soils encountered as contrasted with the type of soils indicated by the borings, even though the soils, encountered could be utilized with additional effort for the intended contract purpose;[15]

(5) The failure of designated borrow pits or quarry sites to produce the required materials entirely, or in sufficient quantities without excessive waste or the presence of unusable

materials beyond that reasonably anticipated from the pre-bid data;[16]

(6) The presence of rock, debris or other subsurface obstructions in substantially greater quantities than had been shown in the bid documents;[17]

(7) The existence of a subfloor not shown on the drawings which had to be removed under a contract to renovate a building;[18]

(8) The encountering of ground water at a higher elevation, or in quantities in excess of those indicated or reasonably anticipated from the data available to bidders;[19]

(9) The encountering of rock materially harder or tougher to excavate or drill and blast then was expected from information available prior to bidding;[20]

(10) The presence of a higher moisture content in soils to be compacted than was anticipated from the contract data.[21]

"Latent" conditions which have been held to constitute the basis for relief as Type I differing site conditions include the following:

(1) Ground contour elevations at the site which differed from those shown on the drawings, and, accordingly, required greater quantities of excavation or fill;[22]

(2) The existence of numerous taxiway crossovers that had to be removed to perform the contract work; but which were not disclosed on the drawings, and security regulations prevented the contractor from making an adequate pre— bid site investigation;[23]

(3) The presence or absence of plumbing in walls or ceilings;[24]

(4) The fitness for use of an existing bridge support;[25]

(5) Unusually strong bonding to the substrate of a pool's liner to be removed;[26]

(6) A thicker concrete floor than had been expected;[27]

(7) Topsoil hidden by vegetation and not shown on the drawings that had to be removed;[28]

(8) Additional layers of roofing not shown in the drawings and which the contractor had not seen during his pre-bid site investigation.[29]

As stated above, the existence of Type I differing site conditions turns upon a comparison between conditions actually encountered and those indicated in the contract. However, the contract representations as to the subsurface or latent conditions need not be explicit or specific.

All that is required is a sufficient indication to support the conclusion that a bidder would not reasonably have expected the conditions actually encountered.[30] Thus, the contract indications with respect to the conditions to be anticipated may be implicit in the contract documents.[31] For example, where the owner has specified an embankment design which calls for certain sizes and types of stone, and has designated a quarry for production of such stone, such actions constituted a sufficient "indication" to permit recovery by the contractor under the clause when it encountered great difficulty in obtaining stone from the quarry in the sizes required by the design.[32] Similarly, it has been held that the absence of any indication of water in test pit data constituted a representation that dry conditions would be encountered, although the contract specifications otherwise made no representation with regard to groundwater.[33]

B. Type II Differing Site Conditions

The second principal category of differing site conditions ("Type II" conditions) are described as "unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in [the] contract".[34] In contrast to Type I conditions, this category of differing site conditions is not predicated upon the existence of some difference between the conditions encountered and those represented or indicated in the contract documents.

A Type II claim requires the contractor to prove three elements:[35]

(1) The contractor must show that it did not know about the physical condition;

(2) The contractor must show that it could not have anticipated the condition from inspection or general experience;

(3) The contractor must show that the condition varied from the norm in similar contracting work.

The oft – stated standard applied in determining the existence of Type II differing site conditions is the "standard of normal conditions".[36] Any unknown condition could qualify as a Type II differing site condition, and it should be emphasized that to be unusual, the condition encountered does not have to constitute a geological or other freakish condition – such as frozen material or permafrost in the tropics.[37] The condition is unusual if it was not indicated or could not reasonably have been anticipated from an analysis of the contract documents, subsurface boring logs or other available information, and, thus, was not contemplated by the parties.[38]

Examples of Type II differing site conditions include the following:

(1) The unexpected and highly corrosive nature of ground water at the site, which resulted in extensive damage to the contractor's dewatering equipment;[39]

(1) Excessive hydrostatic pressure encountered in the laying of a pipe line, which

could not have been anticipated at the time of bidding;[40]

(3) In a contract requiring sawing of a concrete runway, the contractor encountered river rock used as aggregate in the concrete with MOHS hardness of more than nine in an area where the river rock has a hardness more typically in the range of six-seven on the MOHS scale;[41]

(4) The presence of caked material which was not revealed by a site inspection of heating ducts to be cleaned under the contract;[42]

(5) Jet fuel which flooded manholes because of an unknown blockage in an airport drainage system, which caused damage to an underground transmission cable installed by the contractor;[43]

(6) Failure of rock from an approved borrow pit to factor in the manner expected for production of concrete aggregate;[44]

An unknown and unanticipated oily substance which prevented adherence of polyvinylchloride that the contract required be applied to the roof;[45]

(8) More rock excavation required than the contractor anticipated based on experience in the project's area even though contract made no representations and all excavation was "unclassified".[46]

III. Conditions Typically Excluded

Differing site conditions clauses generally refer solely to physical conditions at the site, and, therefore, non— physical conditions that may adversely affect the performance of the contract work are not encompassed within the conditions for which relief is provided under the clause. For example, such non— physical conditions for which relief is not provided would include:

(1) Changes to or errors in wage rates stated in the contract;[47]

(2) Delay by another contractor to complete work or to furnish equipment, absent a guarantee;[48]

(3) Inability to procure labor because of the presence of competing government contractors in the same area;[49]

(4) Delay by the government in providing access to the site or in approving Drawings;[50]

(5) Unavailability of materials resulting from effects of the government's priority system;[51]

(6) Overly strict inspection of work by government representatives.[52]

In addition to non – physical conditions, losses attributable to the forces of nature or acts of God are also excluded from relief under most differing site condition clauses. Accordingly, increased costs incurred as a consequence of unusually severe rainfall, hurricanes, flooding, rough sea conditions, created by wind or tide, frozen ground conditions caused by unusually severe weather, etc., do not provide the basis for relief for differing site conditions.[53]

The rationale for the denial of relief for acts of God or forces of nature is that such conditions arose after award of the contract, and that the clause encompasses only conditions which existed prior to the execution of the contract.[54] Moreover, most modern contracts specifically address such conditions in separate *force majeure* clauses. However, there is some inconsistency in the rulings in this respect, and it can be stated that there are exceptions to the requirement that the condition be one that existed prior to award of the contract. For example, where the interaction of an early thaw and the unusual capillarity of the soil resulted in the destruction of the haul roads at the project site, the contractor was held to have encountered differing site conditions.[55] Where flooding of the work site due to abnormal rain was substantially aggravated by deficiencies in the drainage system designed by the government, it also was held to be recoverable under the clause.[56]

Manmade conditions created after execution of the contract can also constitute differing site conditions. For example, when the government was responsible for diverting the run – off of rainfall into the work site, the added expense resulting to the contractor was recoverable under the clause.[57] Similarly, a cofferdam constructed by another contractor which increased the depth of water and difficulty of the work at an adjacent contract site has been recognized as constituting a differing site condition.[58] A differing site condition has also been held to have been encountered where erosion from one contractor's work site resulted in an increase in the quantity of material to be excavated by another contractor.[59]

IV. Overruns and Underruns of Estimated Quantities

The presence of differing site conditions may often manifest itself in the form of a variation in the quantities of specific elements of contract work to be performed. For example, an increase in the quantity of excavation required to obtain a suitable foundation. However, a mere variation in quantity does not in itself constitute a differing site condition.[60] Such variations from the estimated quantities set forth in the contract have been recognized as providing a basis for relief under differing site condition clauses only in those cases where a substantial or material deviation has been encountered that could not reasonably have been anticipated by the parties. Accordingly, a substantial variation in quantities has been held to constitute a differing site condition where the contractor could not have verified the accuracy of the estimated quantities from the contract documents or an investigation of the site; or the contractor had no meaningful

opportunity to make an investigation of the site; or had the right to rely upon the owner's estimate of quantities; or the parties were "mutually mistaken" as to the validity of the contract estimate of quantities.[61] Similarly, where the owner's estimate of quantities is stated without qualification, it may constitute a positive representation, and, in such circumstances, a variation as small as six percent from the contract quantity may entitle the contractor to relief under the first category of differing site conditions covered by the clause.[62]

In contrast, certain courts have ruled that the risk of the added costs occasioned by increased quantities is to be borne by the contractor.[63] In response to the frequency of overruns or underruns in quantities on construction work, many construction contracts contain a specific clause providing for adjustment of the contract where the actual quantities vary from the estimated quantities by a stated percentage factor. For example, the federal government presently utilizes a clause which provides for such an adjustment upon demand of either party when the actual quantity varies more than 15 percent above or below the estimated quantity stated in the contract.[64]

It is important to note that variation in estimated quantities clauses restricts any price adjustment solely to that portion of the actual quantity work that exceeds or falls short of the estimated quantity by more than the stated percentage,15 percent in the federal clause, and does not permit the negotiation of a new unit price for the entire quantity of the affected item of work.[65] In addition, the federal clause now in use limits any such price adjustment to increases or decreases in cost due solely to the variation in quantity, and, accordingly, requires that there be a demonstrable difference in the contractor's cost of performance caused solely by the overruns or underruns in quantity.[66]

Finally, it should be emphasized that when a variation in quantity is caused by differing site conditions, the provisions of the differing site conditions clause should be applied in determining any contract adjustment, without regard to the percentage variation that may otherwise be provided for in the contract's variation in estimated quantities clause.[67]

V. The Duty to Investigate the Site

As demonstrated above, a compensable differing site condition must be one which was unforeseeable on the basis of the information available to the contractor at the time of bidding. Accordingly, if the condition should have been anticipated, compensation may be denied, even though the drawings and specifications may have been silent, or may have indicated conditions differing from those actually encountered. For example, where groundwater conditions could have been reasonably anticipated for the topography at the work site, its presence in the excavation would not constitute a differing site condition even though such groundwater was not mentioned in the contract documents.[68] Similarly, although the contract may be silent, rock encountered in the performance of excavation does not provide the basis for relief under the clause, where an inspection of the site would have revealed the presence of such rock.[69]

What is the extent of the contractor's obligation to make an investigation of the site before bidding? Generally, the contract documents will contain provisions requiring bidders to make an investigation of the site prior to submitting their bids, and it is, very definitely, the duty to the

bidder to make such investigation.[70] It should be noted, however, that such "Site Investigation" clauses do not nullify the provisions of a differing site conditions clause, or require the contractor to discover, at his peril, conditions at the site that would not be ascertainable by a reasonable pre-bid investigation.[71] The measure of what constitutes a reasonable site inspection will naturally vary in every case, but where the conditions encountered would have been revealed by an adequate examination of the site and all other data available to bidders, the contractor who fails to make such a pre- bid investigation cannot expect to be afforded relief on the grounds that he has encountered differing site conditions.[72]

The duty to investigate includes reviewing all information reasonably available to the contractor even though the information might not be included in the bid documents. At least several contractors' claims have been defeated for failing to review subsurface information that was only available for inspection in offices some miles away from the project site.[73]

It should be further noted that when the owner has made express representations in the contract documents which cannot be readily verified, the contractor is generally entitled to rely upon the same and is not required to make an independent study,or to conduct his or her own tests to determine the accuracy of such representations.[74] In this same regard, the bidder is only charged with the knowledge that a reasonably intelligent and experienced contractor would acquire from such investigation and will not necessarily be expected to reach the same conclusions that a geologist or other specialized expert might formulate from the same data.[75] Nor is the prospective bidder obligated to seek out experts to determine the validity of the contract indications.[76]

Finally, where an investigation would not have alerted the contractor to the conditions actually encountered, the failure to make such an investigation prior to bidding will not necessarily deprive the contractor of his right to relief under the clause.[77] Likewise, relief under the federal clause will not be precluded where it is shown that the contractor was denied the opportunity to make such an investigation.[78]

VI. Notice Requirements

Most of the differing site conditions clauses the authors have encountered require that, when a differing site condition is encountered, the contractor must promptly notify the owner's representative in writing before such conditions are disturbed. For example the federal government contract clause provides that no claim by the contractor will be allowed unless the contractor has given the prescribed written notice to the contracting officer. However, the clause does permit the time within which such notice must be given to be extended by the government.

The City of New York's changed conditions clause requires "immediate" notification to the Commissioner.[79] The American Institute of Architect's (AIA) Document A-201 and the Associated General Contractor's of America (AGC) Document 200, both impose time limitations which prescribe an upper limit of time, measured in days, for giving the required notice. The AIA clause requires notice no later than 21 days after discovery of the differing condition and the AGC

clause requires notice no later than seven days after discovery of the condition.[80]

The purposes of requiring prompt notice from the contractor are readily apparent. First, the owner is thereby provided an opportunity to investigate the conditions before they are disturbed and to make its own determination of their scope and character. In addition, such notice allows the owner to determine the course of action to be followed in coping with the conditions encountered, and thereby, to exercise some control over the cost and effort expended in resolving the construction problems posed by such changed or differing conditions.[81]

It should be pointed out that the written notice of alleged differing site conditions required "before such conditions are disturbed", is merely notice of the conditions encountered, and that the contractor is not obligated to assert a formal claim for additional compensation in this initial notice to the owner's representative.[82] With respect to the submission of claims for adjustment to the contract price, subparagraph (d) of the federal clause merely requires that the same be asserted before final payment is made under the contract. To this extent, the requirements of the federal Differing Site Conditions clause differ markedly from other adjustment clauses of the standard federal government construction contract.[83]

No specific format is required in the written notice of the conditions encountered, and it is not necessary that the conditions be described in specific, accurate detail in order to satisfy the notice requirement.[84] A letter to the owner, which clearly notifies it that the contractor believes that it has encountered differing site conditions within the meaning of the clause, together with a general description of the character and location of the conditions encountered, is sufficient.

Quite often the differing condition encountered by the contractor is of a character which poses recurring or continual problems in the performance of the contract work. In such circumstances, when the required notice has been given to the owner, it is not necessary for the contractor to submit repeated notice of the reoccurrence or subsequent encountering of the same physical conditions that were the subject of its initial notice to the owner.[85]

In addition, the requirement for formal notice may not be enforced when the owner has actual notice of the conditions encountered. For example, where the contractor has given oral notice or the owner has otherwise received actual notice of the conditions encountered the absence of written notice from the contractor will not bar relief on a valid claim.[86] Likewise, the contractor's right to relief will not be denied where the failure to give written notice has not resulted in any actual prejudice to the owner's position; although the failure to have given notice may impose a greater burden of persuasion upon the contractor in the prosecution of his claim.[87] However, where the owner was unaware of the conditions encountered or has otherwise been prejudiced by the contractor's failure to have given timely notice of the alleged differing site conditions, the forfeiture provisions of the clause will be enforced.[88]

Finally, it should be pointed out that in certain circumstances, the actions of the owner, in the absence of notice from the contractor, may be held to constitute a waiver of the notice requirement. Accordingly, where the contractor has failed to give such notice, action by the

owner has been held to effect a waiver by the owner for the notice requirement.[89] Similarly, where notice has been given, and the owner fails to exercise its right to examine the conditions encountered, it will be deemed to have acquiesced in the contractor's choice of the appropriate procedures for coping with the same.[90]

VII. Disclaimer Provisions

Almost without exception, the contract documents issued to bidders will include general disclaimers or other exculpatory language which purport to relieve the owner from responsibility as to physical conditions at the site or for the accuracy of the data furnished to the bidders. Typical of such disclaimer are statements in the contract documents to the effect that:

(1) The owner denies any responsibility for the accuracy of any subsurface data furnished, and expects each bidder to satisfy himself as to the character, quantity and quality of subsurface materials to be encountered;

(2) The estimated quantities set forth in the contract are not guaranteed and are provided solely for purposes of determining approximate amounts or for making estimates;

(3) The subsurface data furnished to bidders does not constitute a part of the contract, and is furnished solely for information; or

(4) The bidders must make their own investigations as to subsurface conditions and no claim for additional compensation will be allowed regardless of the subsurface conditions actually encountered.

It has been a long standing principle of law that if the contractor is bound to build according to plans and specifications prepared by the owner, the contractor will not be responsible for the consequences of defects in the plans and specifications with respect to *e.g.,* site conditions.[91] Thus, the insertion of representations prescribing the character, dimensions and location of work may constitute an implied warranty that if the specifications are complied with, the work will be adequate.[92] This responsibility of the owner is not overcome by the usual clauses requiring builders to visit the site, to check the plans, and to inform themselves of the requirements of the work.[93]

Owners, architects and engineers seek to insulate themselves from such implied warranty liability through contract "disclaimer" clauses and other contractual provisions by which they can obviate altogether, or at least minimize, contractors' claims which are premised upon differing site conditions. The most direct avenue by which they seek to avoid liability is through specific warranty disclaimer clauses. Such clauses may provide simply as follows:

> No representation is made by the General Contractor, Owner, Architect or Engineer in any contract regarding the existing

subsurface conditions.

* * *

> The Owner, Architect and Consulting Engineer make no representations regarding the character and extent of the soil data or other surface conditions to be encountered during the work and no guarantee as to their accuracy or interpretation is made or intended.[94]

A number of courts have vigilantly enforced such warranty disclaimer provisions.[95] It must be noted, however, that such disclaimers will be strictly construed against owners and liability may nevertheless be found if "(1) inspection would have been unavailing to reveal the incorrectness of the representations . . . or (2) the representations were made in bad faith . . .".[96] Nor will the owner be insulated where the contractor is led to rely on intentional or innocent misrepresentations.[97] Finally, a contractor's reliance on the owner's representations will be upheld, notwithstanding such waiver clauses where either (1) the contractor's site investigation confirms the owner's representations;[98] (2) the owner intended the contractor to rely on its representations in preparing its bid;[99] or, (3) the circumstances did not allow sufficient time or access for the contractor to conduct an adequate independent investigation.[100]

Other courts have refused to enforce disclaimer provisions, ruling the differing site condition takes precedence over the disclaimer provision.[101] Similarly, other courts have refused to enforce the disclaimer if the contract provides in a typical order of precedence clause that the contract's general conditions (where the differing site conditions clauses are typically found) take precedence over the contract's specifications (where the disclaimers are generally found).[102]

VIII. Costs Recoverable Under Differing Site Conditions Clauses

Differing site conditions clauses generally allow for adjustment in contract price and/or performance time to compensate contractors for the effects the differing site conditions have had upon any part of the work, regardless of whether such work was directly changed as a result of encountering such conditions.

The standard formula to be applied in making equitable adjustments under differing site conditions clauses is that such adjustments are to be based upon the difference between the actual, reasonable costs required to perform the work affected by the differing site condition and the costs that would have reasonably been required to perform such work under the terms of the original specifications, if such conditions had not been encountered.[103]

Costs which would have been experienced by the contractor regardless of the differing site conditions are not recoverable under the clause.[104] In addition, the contractor is obligated to mitigate his damages, and if it is established that the problems created by the differing site

conditions could have been resolved by less expensive means, the contractor's costs may be rejected as being unreasonable and the adjustment will be modified accordingly.[105]

In evaluating the costs incurred as a consequence of the differing site condition, the reasonableness of such costs is to be judged against the particular circumstances in which the specific contractor found himself, and is not to be predicated upon a theoretical or objective standard of what those costs might have been to other contractors in general. Accordingly, the actual, historical costs experienced by the contractor are of primary importance in determining the adjustment due, and unless convincing proof to the contrary is presented, such historical costs will be presumed to be reasonable.[106]

While the specific added costs experienced will vary depending upon the facts in each case, the following typify various increased cost elements for which relief can be obtained:

The direct costs of any added or changed work required as a consequence of the differing site conditions.[107]

Impact or ripple costs caused by the disruptive effect of the differing site condition on the work schedule, which results in the performance of subsequent phases of contract work under winter weather or other less favorable conditions, or results in the imposition of higher wage rates or material costs than those prevailing at the time performance of such work was originally scheduled.[108]

Fees and expenses of technical or other consulting services required in resolving construction problems posed by the differing site conditions.[109]

Added field or home office overhead costs, such as supervisory salaries, travel, insurance, bond premiums, etc., which are the direct or indirect result of the unanticipated conditions encountered.[110]

An allowance for profit on the total increased costs reasonably incurred as a result of the differing site conditions.[111]

IX. Conclusion

The differing site conditions clause reflects an enlightened effort on the part of owners to substantially reduce the risk or gamble that is always present in contracts calling for performance of subsurface work. Close attention by owners and contractors to their rights under the clause can often mean the difference between a financially successful job or a ruinous loss. The authors cannot overemphasize the need to carefully assess the implications such clauses carry when negotiating the construction contract. The negotiation of the contract, like the construction of the project itself, requires care, caution and common sense. Keeping the areas of potential conflict in mind and engaging in capable, aggressive, and frank negotiation at the beginning of the project

will help you avoid unwanted expense, hard feelings, and disappointment at the project's conclusion.

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[1] Federal Acquisition Regulation (FAR) §52.236-2

[2] AGC Document 200 (1997), ¶ 3.15.3

[3] AIA Document A-201 (1997) ¶ 4.3.4

[4] California Public Contract Code § 7104

[5] See generally, *Andrew Catapano Co., Inc. v. City of New York*, 116 Misc. 2d. 163, 455 N.Y.S. 2d. 144 (Sup. Ct. N.Y.Co. 1980)

[6] See generally, *Iacobelli Const., Inc. v. County of Monroe,* 32 F. 3d. 19, 23, (2d Cir. 1994); *Youngdale & Sons Constr. Co. v. U.S.*, 27 Fed. Cl. 516, 527 (1993); *Weeks Dredging & Constr., Inc. v. U.S.*, 13 Cl. Ct. 193 (1987); *Foster Construction C.A. and Williams Brothers Co. v. U.S.*, 193 Ct. Cl. 587, 613-615 (1970); *Kaiser Industries Corp. v. U.S,* 169 Ct. Cl. 310, 322-324 (1965)

[7] See, *e.g.,* FAR § 52.236-2

[8] *Fruin-Colon Corp. v. Niagara Frontier Transp. Auth.*, 180 A.D. 2d. 222, 585 N.Y.S. 2d 248 (4th Dep. 1992); *Weeks Dredging & Contr., Inc. v. U.S.*, 13 Cl. Ct. 193, *aff'd.*, 861 F. 2d 728 (1988)

[9] *Foster Construction C.A., supra,* Note 6, at pp. 603-604

[10] *STG Constructors Co., Inc. v. U.S.*, 157 Ct. Cl. 409, 414-415 (1962); *Ragonese v. U.S.*, 128 Ct. Cl. 156 (1954)

[11] *STG Constructors Co., Inc., supra,* Note 10, at p. 415

[12] *Catapano, supra,* Note 5; *Grow Const. Co. v. State*, 56 A.D. 2d. 95, 391 N.Y.S. 2d. 726 (3rd Dep. 1977); *Jefferson Const. Co. v. U.S.*, 183 Ct. Cl. 720 (1968)*; Fehlhaber Corp. v. U.S.*, 138 Ct. Cl. 571, *cert. den.*, 355 U.S. 877 (1957); *Lockheed Shipbuilding and Const. Co.*, Eng. BCA No. 3141, 74-1 BCA ¶10,512; *Wilner Const. Co.*, ASBCA No. 16552, 72-2 BCA ¶9660; *Brezina Const. Co., Inc.*, Eng. BCA No. 2882, 69-2 BCA ¶7848; *Anthony P. Miller, Inc.*, ASBCA No. 12202, 68-2 BCA ¶7125*; Cosmo Const. Co.*, IBCA No. *468-12-64, 66-2 BCA ¶5736*

[13] *United Contractors v. U.S.*, 177 Ct. Cl. 151 (1966); *Morrison-Knudsen Co, Inc. v. U.S..,* 170 Ct. Cl. 712 (1965)

[14] *Brown Engineers, International*, Eng. BCA Nos. 2313 and 2454, 65-2 BCA ¶4981

[15] *Bregman Const. Corp.*, ASBCA No. 9000, 1964 BCA ¶4426

[16] *Kaiser Industries, supra,* Note 6; *John Arborio, Inc. v. State*, 41 Misc. 2d. 145, 245 N.Y.S. 2d. 274; *Tobin Quarries, Inc. v.* U.S., 114 Ct. Cl. 286 (1949); *Paul Smith Construction, Co.* Eng. BCA Nos. 2720 and 2716, 70-2 BCA ¶8524; *James Hamilton Const. Co.*, IBCA No. 493-5-65, 68-2 BCA ¶7127

[17] *County Asphalt, Inc. v. State*, 40 A.D. 2d. 26, 337 N.Y.S. 2d. 415 (3rd Dept. 1972); *Rusciano Const. Corp. v. State*, 37 A.D. 2d. 745, 323 N.Y.S. 2d. 21 (3rd Dept. 1971); *General Casualty Co. v. U.S.*, 130 Ct. Cl. 520 (1955); *Alps Const.* Corp., ASBCA No. 16966, 73-2 BCA ¶10,309; *Cosmo Const. Co.*, Eng. BCA Nos. 2785-2788, 67-2 BCA ¶6516

[18] *T.J.D. Const. Co., Inc.*, GSBCA No. 3202, 71-1 BCA ¶8673

[19] *Okland Const. Co., Inc.*, ASBCA No. 3097, 72-1 BCA ¶9317; *Warrior Construtors, Inc.*, Eng. BCA No. 2801, 68-2 BCA ¶7129; *Peter Reiss Const. Co., Inc.* ASBCA No. 9801, 66-1 BCA ¶5598; *Cauldwell-Wingate v. State*, 276 N.Y. 365, 12 N.E.2d. 443 (1938)

[20] *Troup Bros., Inc.* Eng. BCA No. 3030, 72-2 BCA ¶9491; *American Dredging Co.*, Eng.BCA Nos. 2920, 2952 and 3168, 72-1 BCA ¶9316; *Jackson v. State*, 210 A.D. 115, 205 N.Y.S. 658 (4th Dept. 1924), *aff'd.* 241 NY 563 (1925)

[21] *Ray D. Bolander v. U.S.*, 186 Ct. Cl. 398 (1968)

[22] *Burl Johnson & Associates*, ASBCA No. 12497, 68-1 BCA¶6941, *Osberg Const.* Co, IBCA No. 139, 59-2 BCA ¶2367; *Allied Contractors, Inc.*,ASBCA No. 2905, 56-2 BCA ¶1089

[23] *Boland and Martin, Inc.* ASBCA No. 8503, 1963 BCA ¶3705

[24] *Jarcho Brothers v. State*, 179 Misc. 795, 39 N.Y.S. 2d. 867 (Ct. Cl. 1943)

[25] *Collins v. State*, 259 W.Y. 200, 181 N.G. 357 (1932)

[26] *Wade Perrow Const., Inc.*, ASBCA No. 50714, 97-2 BCA ¶29,250

[27] *Federico Co. v. New Bedford Redevelopment Auth.*, 723 F 2d. 122 (1st Cir. 1983)

[28] *Yadkin, Inc.*, PSBCA No. 2051, 88-3 BCA ¶21,090

[29] *Skip Kirchdorfer, Inc.*, ASBCA Nos. 22722, 22794, 23404 and 23443, 79-2 BCA ¶14,092

[30] *Foster, supra,* Note 6

[31] *David Boland, Inc.,* VABCA No. 5938 01-2 BCA ¶31,578

[32] *Stock & Grove, Inc. v. U.S.*, 493 F. 2d. 629 (1974)

[33] *Woodcrest Const. Co., Inc. v. U.S.*, 187 Ct. Cl. 249, 252-257 (1969),*cert. den.,* 308 U.S. 958 (1970)

[34] FAR §52.236-2

[35] *Lathan Co., Inc. v. U.S.*, 20 Cl. Ct. 122, 128 (1990); *Perini Corp. v. U.S.*, 180 Ct. Cl. 768, 381 F. 2d. 403 (1967)

[36] *Layne Texas Co.,* IBCA No. 362, 65-1 BCA ¶4658

[37] *Western Well Drilling Co. v. U.S.*, 96 F. Supp. 377 (N.D. Cal. 1951)

[38] *STG Const. Co., Inc., supra,* Note 10; *Leal v. U.S.*, 149 Ct. Cl. 451 (1960)

[39] *Blount Brothers Corp.*, Eng. BCA No. 2803, 70-1 BCA ¶8256

[40] *Vinson Const. Co.*, IBCA No. 364, 65-1 BCA ¶4838

[41] *Costello Industries, Inc.*, ASBCA No. 49,125, 00-2 BCA ¶31,098

[42] *Pritz Associated, Inc.*, VACAB No. 521, 66-1 BCA ¶5402

43 *Premier Electrical Const. Co.,* FAACAP No. 66-1 BCA ¶5080

44 *R. A. Heintz Const. Co.*, Eng. BCA No. 3380, 74-1 BCA ¶10,562

45 *M. Williams & Sons, Inc.,* VACAB No. 546, 66-2 BCA ¶5988

46 *R. N. G. Contracting, Inc.*, AGBCA No. 1999-170-1, 01-2 BCA ¶31,579

47 *Bateson-Stolte, Inc. v. U.S.*, 145 Ct. Cl. 387 (1959); *Wilkinson & Jenkins Const. Co., Inc.*, Eng. BCA No. 2776, 67-1 BCA ¶6169; *Doll Painting Co., Inc.,* ASBCA No. 9305, 1964 BCA ¶4458

48 *Yarno & Associates,* ASBCA No. 10257, 67-1 BCA ¶6312; *Fort Sill Associates,* ASBCA No. 7482, 1963 BCA ¶3869, *aff'd.*183 Ct. Cl. 301 (1968); *George A. Rutherford Co.,* NASA BCA No. 12, 1962 BCA ¶3561

49 *Koppers Co., Inc.-Malan Const. Dept.,* Eng. BCA No. 2699, 67-2 BCA ¶6532

50 *Pullaro Contracting Co.,* AGBCA No. 279, 73-1 BCA ¶9937*; Datatronics Engineers, Inc.,* ASBCA No. 10284, 65-2 BCA ¶5147; *ABCO Builders, Inc*,.PODBCA No. 282, 69-1 BCA ¶7434

51 *Ingalls Shipbuilding Co.,* Eng. C&A Bd. No. 569 (1954).

52 *Warren Painting Co., Inc.,* ASBCA No. 6511, 61-2 BCA ¶3199

53 *Turnkey Enterprises, v. U.S.,* 597 F. 2d. 750 (Ct. Cl. 1979); *Hardeman-Monier-Hutcherson v. U.S.,* 198 Ct. Cl. 472 (1972); *Security National Bank v. U.S.,* 184 Ct. Cl. 741 (1968); *Lenry, Inc. v. U.S.,* 156 Ct. Cl. 46 (1962); *AG Concrete Breakers, Inc. v. State,* 16 Misc. 2d 511, 185 N.Y.S. 2d. 455 (Ct. Cl.), *aff'd.* 194 N.Y.S. 2d. 743 (3rd Dept. 1959); *Carman v. U.S.,* 143 Ct. Cl. 747 (1958); *Arundel Corp. v. U.S.,* 103 Ct. Cl. 688, *cert. den.,* 326 U.S. 752 (1945); *United-Mack,* ASBCA No. 10431, 66-1 BCA ¶5632; *Charles Zubik & Sons, Inc.*, Eng. BCA No. 2563, 65-2 BCA ¶4967; *Overland Electric Co.,* ASBCA No. 9096, 1964 BCA ¶4359; *George A. Fuller Co.,* ASBCA No. 8524, 1962 BCA ¶3619

54 *Arundel Corp. v. U.S.,* 96 Ct. Cl. 77, 116 (1942); *Frank Hannigan,* AGBCA No. 330, 73-1 BCA ¶9954; *Acme Missile & Const. Corp.,* ASBCA No. 10784, 66-1 BCA ¶5418; *Osberg Const. Co,* IBCA No. 139, 59-1 BCA ¶2367

55 *John A. Johnson Contracting Corp. v. U.S.,* 132 Ct. Cl. 645 (1955)

56 *Phillips Const. Co. v. U.S.,* 184 Ct. Cl. 249 (1968)

57 *Harding Equipment Co.,* ASBCA No. 2477, 6 CCF ¶62,853

58 *Lee Hoffman v. U.S.,* 166 Ct. Cl. 39 (1964)

59 *Arkansas Rock & Gravel Co.,* Eng. BCA No. 2895, 69-2 BCA ¶8001

60 *Perini Corporation v. U.S.,* 180 Ct. Cl. 768,780 (1967)

61 *Catapano, supra,* Note 5; *Perini, supra,* Note 60; *Tufano Contr. Corp. v. State,* 25 A. D. 2d. 329, 269 N.Y.S. 2d. 564 (3rd Dept. 1966); *Guy F. Atkinson Co.,* IBCA No. 385, 65-1 BCA ¶4642

62 *Gregg, Gibson & Gregg, Inc.,* Eng. BCA No. 3041, 71-1 BCA ¶8677

63 *Depot Const. Corp. v. State,* 19 N.Y. 2d. 109, 278 N.Y.S. 2d. 363 (1979); *Johnson, Drake and Piper, Inc. v N.Y. St. Thruway Auth..,* 22 A. D. 2d. 321, 255 N.Y.S. 2d. 368 (4th Dept. 1965); *The Foundation Co. v. State,* 233 N.Y. 177 (1922)

64 FAR §52.211-18

65 *Foley Co. v. U.S.,* 11 F. 3d. 1032 (Fed. Cir. 1993); *Piombo Corp.,* Eng. BCA No. 3276, 72-1 BCA ¶9272

66 *Foley, supra,* Note 65; *Piombo, supra,* Note 65; *Cottrell Engineering Corp.,* Eng. BCA No. 3038, 70-2 BCA ¶8462

67 *Morrison-Knudsen Co. v. U.S.,* 184 Ct. Cl. 661, 688-689 (1968); *Dunbar & Sullivan Dredging Co.,* Eng. BCA Nos. 3165-3167, 3191, 73-2 BCA ¶10,285; *Piombo, supra,* Note 65

68 *Ken's Electric Co., Inc.,* ASBCA No. 7750, 1962 BCA ¶3507

69 *Griffin Electric, Inc.*, FAACAP No. 66-20, 65-2 BCA ¶5276

70 *Puget Sound Bridge & Dredging Co. v. U.S.*, 131 Ct. Cl. 490, 497-498 (1955); *Promacs, Inc.,* IBCA No. 317, 1964 BCA ¶4016

71 *Catapano, supra,* Note 5; *Farnsworth & Chambers Co., Inc. v. U.S.,* 171 Ct. Cl. 30, 35 (1965); *Fehlhaber, supra,* Note 12

72 *Hunt and Willett, Inc. v. U.S.,* 168 Ct. Cl. 256,264-265 (1964); *Archie and Allan Spiers, Inc. v. U.S.*, 155 Ct. Cl. 614, 624-626 (1961)

73 *Randa Madison JV, III v. Dahlberg***,** 239 F. 3d. 1264 (Fed. Cir. 2001); *McCormick Const. Co., Inc. v. U.S.,* 18 Cl. Ct. 259 (1989); *Hunt & Willet, supra,* Note 72; *Flippin Materials Co. v. U.S.*, 160 Ct. Cl. 357, 362-367 (1963)

74 *Catapano, supra,* Note 5; *Morrison-Knudsen, supra,* Note 13; *Redman Service, Inc.,* ASBCA No. 8853, 1963 BCA ¶3897*; Anthony P. Miller, Inc.,* ASBCA No. 5704, 61-1 BCA ¶2905

75 *Kaiser Industries, supra,* Note 6, at p. 324

76 *Foster, supra,* Note 6; *Woodcrest, supra,* Note 33

77 *Troup Brothers, supra,* Note 20; *Clement Brothers Co., Inc,* Eng. BCA No. 2969, 70-2 BCA ¶8438

78 *James P. Cress,* Eng. BCA No. 2500, 65-2 BCA ¶4988; *Homer Engineering Co., Inc.,* ASBCA No. 3016, 56-2 BCA ¶1136

79 *Supra,* p. 5; *Catapano, supra,* Note 5

80 *Supra***,** p. 3

81 *Charles T. Parker Const. Co. and Pacific Concrete Co.*, DCAB No. Pr-41, 65-1 BCA ¶4780

82 *Sheperd v. U.S.,* 125 Ct. Cl. 724, 729-730 (1953); *Charles T. Parker, supra,* Note 81

83 See FAR §§52.243-1 and 52.242-14 relating to changes and suspensions of work respectively

84 *Sheperd, supra,* Note 82; *Farnsworth, supra,* Note 71; *Roscoe-Ajax & Knickerbocker,* GSBCA No. 608, 66-2 BCA ¶5918

85 *E. C. Ernst, Inc. v. General Motors Corp.,* 537 F. 2d. 105 (5th Cir. 1976); *Morrison-Knudsen, supra,* Note 67, at p. 702; *Allied Contractors, Inc. v. U.S.*, 149 Ct. Cl. 671 (1960); *Roscoe-Ajax, supra,* Note 84.

86 *Ronald Adams Contractor, Inc. v. Miss. Transp. Comm.,* 777 So. 2d. 649 (2000); *Town of Smithtown v. Jet Paper Stock Corp.,* 179 A.D. 2d. 684, 578 N.Y.S. 2d.244 (2nd Dept. 1992); *Nyack Bd. Of Ed. v. K. Capolino Design and Renovation Ltd.,*114 A.D.2d. 849, 494 N.Y.S. 2d. 758 (2nd Dept. 1985); *General Casualty Co. v. U.S.,* 130 Ct. Cl. 520, 523 (1955); *M. J. Sundt Const. Co.,* ASBCA No. 17475, 74-1 BCA ¶10,627; *McCloskey and Co., Inc. and C. H. Leavell and Co.,* PSBCA No. 497, 74-1 BCA ¶10,479 ; *Piracci Const. Co.,* GSBCA No. 2793, 70-1 BCA ¶8172

87 *Town of Smithtown, supra,* Note 86; *Nyack , supra,* Note 86; *C. H. Leavell & Co.,* ASBCA No. 16099, 72-2 BCA ¶9694, *aff'd* 73-1 BCA ¶9781;*Ets-Hokin Co.,* IBCA No. 842 6-70, 71-1 BCA ¶8733; *Lyburn Const. Co.*, ASBCA No. 9576, 65-1 BCA ¶4645

88 *J. A. Ross & Co. v. U.S.,* 126 Ct. Cl. 323 (1953); *M.S.I. Corp.,*VACAB No. 730, 68-2 BCA¶7177; *Klefstad Engineering Co., Inc. & Blackhawk Heating and Plumbing Co., Inc.,* VACAB No. 522, 66-1 BCA ¶5678; *Barnet & Brezner,* ASBCA No. 9967, 65-2 BCA ¶4902

89 *U.S. ex rel Falco Const. v. Summit General Contr. Corp.,* 760 F. Supp. 1004, 1010 (E.D.N.Y. 1991); *McCay Const. Co. v. Bd. Of Ed.,*33 A.D. 2d. 862, 306 N.Y.S. 2d. 52 (3rd Dept. 1969); *George A. Fuller Co. v. U.S.,*104 Ct. Cl. 176, 218 (1945); *Arundel*, *supra,* Note 54, at p. 110

90 *Industrial Foundations, Inc*., FAACAP No. 67-8, 66-2 BCA ¶5806

91 See *U.S. v. Spearin,* 248 U.S. 132, 39 S. Ct. 59 (1918)

92 *Id*

93 *Id.*

94 *Twin Village Const. Corp. v. State,* 53 N.Y. 2d. 724, 439 N.Y.S. 2d. 335 (1981); *Wrecking Corp. of America v. Memorial Hospital for Cancer & Allied Diseases*, 63 A.D. 2d. 615, 405 N.Y.S. 2d. 83 (1st Dept.), *app. dis.*, 408 N.Y.S. 2d. 509 (1978)

95 *Dan Nelson Const, Inc. v. Nodland & Dickson,* 608 N.W. 2d. 267 (N.D. 2000); *Millgard Corp. v. McKee/Mays JV,* 49 F. 3d. 1070 (5th cir. 1995)*; McDevitt & Street Co. v. Marriott Corp.*, 713 F. Supp. 906 (E.D. Va. 1989); *J. E. Benneman Co. v. Comm. Dept. of Transp.*,56 Pa. 210, 424 A. 2d. 592 (1981); *Sasso Contr. Co. v. State,* 414 A. 2d. 603 (N.J. App. 1980); *Joseph F. Trionfo & Sons v. Bd. Of Ed.,* 395 A. 2d. 1207 (Md. App. 1979); *Zurn Engineers v. State,* 69 Cal. App. 3d. 798, 138 Cal. Rptr. *cert. den.,* 434 U.S. 485 (1977); *Billotta Const. Corp. v. Village of Mamaroneck,* 199 A.D. 2d. 230, 604 N.Y.S. 2d. 966 (N.Y. App. 1943)

96 *Catapano, supra,* Note 5; *Warren v. N.Y. State Thruway Auth.,* 34 A.D. 2d. 97, 309 N.Y.S. 2d. 450 (3rd Dept. 1970), *aff'd.,* 358 N.Y.S. 2d. 139 (1974)

97 *AS Wikstrom, Inc. v. State,* 52 A.D. 2d. 658, 381 N.Y.S. 2d. 1010, 1012 (3rd Dept. 1976); *Faber v. N.Y.,*222 N.Y. 255, 188 N.E. 609 (1918)

98 *J.F. Shea Co. v. U.S.,* 4 Cl. Ct. 46, 52 (1983); *aff'd.*, 754 F. 2d. 338 (Fed. Cir. 1985)

99 *Eastern Tunneling Corp. v. Southgate Sanitation Dist.*, 487 F. Supp. 109 (D. Colo. 1979)

100 *Clark Brothers Contractors v. State,* 710 P. 2d. 41 (Mont. 1985)*; Raymond Intl., Inc. v. City of Baltimore,* 412 A. 2d. 1296 (Md. App. 1980); *Trionfo, supra,* Note 95.*;Eastern Tunneling, supra,* Note 99; *Robert E. McKee, Inc. v. City of Atlanta,* 414 F. Supp. 957 (N.D. Ga. 1976)

101 *Foster, supra,* Note 6 at p. 616; *Fattore v. Metropolitan Sewerage Comm. Of County of Milwaukee*, 454 F. 2d. 537, 542 (7th Cir. 1971); *aff'd.* 505 F. 2d. 1 (1974), *cert. den.*, 406 U.S. 921

102 *Roy Strom Excavating v. Miller Davis Co.,* 501 N.E. 2d. 717 (Ill App. 1st Div. 1986)

103 *Jackson v. State,* 210 A.D. 115, 205 N.Y.S. 658 (4th Dept. 1924)

104 *Paul Hardeman, Inc. v. U.S.* ,186 Ct. Cl. 743 (1969); *Kaiser Industries, supra,* Note 6; *LI Waldman & Co. v. State,* 41 N.Y.S. 2d. 704 (Ct. Cl. 1943)

105 *Roscoe-Ajax Const. Co. v. U.S.,* 198 Ct. Cl. 133, 142 (1972); *Hoffman v. U.S.,* 166 Ct. Cl. 39, 51 (1964)

106 *Bruce Const.Corp. V. U.S.,* 163 Ct. Cl. 97, 101-102 (1963); McBride, Confusion in the Concept of Equitable Adjustments in Government Contracts: A Reply, 22 Fed. Bar Journal 235, 240

107 *County Asphalt, Inc. v. State,* 40 A.D. 2d. 26, 337 N.Y.S. 2d. 415 (3rd Dept. 1972); *Guy H. Briscoe v. U.S.*, 194 Ct. Cl. (1971); *Fehlhaber, supra*, Note 12

108 *Grow Const. Co. v. State,* 56 A.D. 2d. 95, 391 N.Y.S. 2d. 726 (3rd Dept. 1977); *Paul Hardeman, supra,* Note 104; *Kaiser Industries, supra,* Note 6; *Cauldwell-Wingate Co. v. State,* 276 N.Y. 365, 12 N.E. 2d. 443 (1938); *Carlo Bianchi and Co., Inc.,* Eng. BCA No. 3243, 73-2 BCA ¶10,239; *Kemmons-Wilson, Inc. and South & Patton, Inc.,* ASBCA No. 16167, 72-2 BCA ¶9689

109 *Foster Construction Co., C.A. and Williams Bros., Co.,* DOTCAB No. 71-16, 73-1 BCA ¶9869

110 *Kaiser Industries, supra,* Note 6; *Kemmons-Wilson, supra,* Note 108; *Foster, supra,* Note 109; *Optimum Designs, Inc.,* DOTCAB No. 70-9, 73-1 BCA ¶9939

111 *Bruce Const., supra,* Note 106; *U.S. v. Callahan Walker Const. Co.,* 317 U.S. (1942); *E. V. Lane Corp.,* ASBCA No. 9741, 9920, 9933, 65-2 BCA ¶5076