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LIABILITY OF THE ENTITY CAPABLE OF DETECTING A DEFECT OF CONSTRUCTION WORKS: A COMPARATIVE STUDY OF THE U.S. AND THE REPUBLIC OF LITHUANIA

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Abstract. The his research looks specifically into the potential legal liability of the entity capable of detecting construction defects: contractor, nonprofessional owner, professional owner, technical supervisor, designer and building inspector. In this study, the responsibility of each entity for construction defects is discussed and the corresponding documentation and statutory and case law are analyzed for the U.S., Lithuania, and some other countries for comparative purposes.

Keywords: quality management, construction law, defects of construction works, construction management, conflict management.

JEL Classification: M11, K12, L15, L74.

Introduction

This paper looks at construction defects from the standpoint of the entity which is capable of detecting the defect: contractor, nonprofessional owner, professional owner, technical supervisor, designer and building inspector. In this study, the responsibility of each entity for construction defects is discussed and the corresponding documentation and statutory and case law are analyzed for the U.S., Lithuania, and to a lesser extent Germany and Russia for comparative purposes. Understanding which entity has liability and the extent of the liability can aid in settling a dispute. This paper also gives an overview of the United States' legal system and the Lithuanian legal system.

Legal evaluation of the quality of construction works and the issues of liability for possible defects continue to be topical problems both from a practical and scientific perspective (Trinkūnienė et al., 2017). In the literature, construction defects are usually looked at from the technical cause of the defect. The aim of the Kraus, Vondráčková, and Nývlt (2016)

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paper was to evaluate serious incidents related to construction in the Czech Republic. The conclusion was fire was a major cause. Sedeka and Serwab (2016) looked at a new system for detecting defects in bridges. Forcada, Macarulla, Gangolells, and Casals (2014) assessed construction defects in residential buildings in Spain. Boboc et al. (2017) looked at human intervention as a cause of defects in road design, construction and maintenance. Schenck and Goss (2016) did look at the potential joint legal liability of the various entities involved in a construction defect case. Cho, Cha, Kim, Hwang, and Shin (2014) looked at countermeasures to prevent lawsuits related to apartment building construction defects in Korea.

1. Comparison of legal systems

In order to understand some of the comparative legal aspects presented in this paper, it is necessary to have a basic understanding of the legal systems under discussion. The primary legal systems considered here are Lithuania, the United States, and to a lesser extent Russia and Germany.

The European Union has its own law and legal order. European law has a direct or indirect effect on the laws of its 28 member states: once in force, its laws become part of the legal system of each member state. The main legal foundations of the EU are the Treaty on European Union, other treaties and international agreements, general principles of Union law, and secondary legislation (regulations, directives, decisions, recommendations and opinions). Directly or indirectly, the construction industry is regulated by six secondary regulations (Regulation (EC) No 765/2008, Directive 2010/31/EU, Regulation (EU) No 305/2011, Directive 2011/92/EU, Directive 2014/24/EU). Most EU countries utilize a civil law legal system based on a comprehensive compendium of statutes. The alternative to a civil law system is a common law system, which may contain a comprehensive statutory framework but also includes the decisions of judges on the interpretation of law as binding precedent. Civil law systems do not, as a rule, recognize the decisions of judges as binding on later cases.

Before March 11, 1990, Lithuania was a part of the USSR. After that date, it became an independent nation and began the creation of its own legal system. The foundation of this legal system is the Constitution of the Republic of Lithuania, adopted in 1992 by referendum. The main source of the country's private law is the Civil Code of the Republic of Lithuania, which went into effect on May 1, 2004. The Code is the main source for private construction law in that it regulates the legal relationship relations between the parties involved in construction contracts.

The main sources of public construction law are the Law on Construction and the Law on State Supervision of Territory Planning and Construction. Public construction law is subject to numerous regulations. Even though construction law, along with the entire legal system of the Lithuanian Republic, is quite young, it was created with reference to the legal systems of developed European civil law countries (mostly Germany, the Netherlands, and France). It therefore primarily reflects the main legal traditions of European civil law countries, despite the presence of some remnants of Soviet law (Bakšiene, 2016).

The highest legal source in the Federal Republic of Germany is the 1949 Basic Law for the Federal Republic of Germany, which serves as the nation's constitution and operates in accordance with codified and systematically developed statutory laws. German construction law consists of two basic fields: private construction law and public construction law. The main source of private construction law is the German Civil Code BGB. Public construction law concerns all public regulations on construction and is divided into two fields – zoning law and building regulations. The main source of public construction law is the federally legislated German Federal Building Code and public procurement of construction works is regulated under the Contracting Rules for the Procurement of Public Works (Brakalova, 2016).

The foundations of Russia's legal system are laid down in the Constitution of the Russian Federation, which went into effect on December 25, 1993. Statutes are the predominant legal source and the Russian Federation. Codes are the primary source for law relating to the construction process. The Civil Code of the Russian Federation is the main source of private law, which is also strongly influenced by presidential decrees and directives as well as agency regulations. Most scholars have classified the Russian legal system as a civil law system.

Besides the Civil Code, the other main sources of construction law in Russia are the Town Planning Code of the Russian Federation, the Land Code of the Russian Federation, and regulations based on the provisions of the Codes, which establish more detailed regulations for specific areas of construction.

The United States consists of over 300 entities united in a federation. A federation is a societal entity formed by uniting smaller or more localized entities (Merriam-Webster Dictionary, 2017). Each entity in the federation is referred to as a jurisdiction (Merriam-Webster Dictionary, 2017). in U.S. law and has its own laws for that jurisdiction. Although the federal government of the U.S. does have laws applicable to all its member jurisdictions, the law discussed in this paper is not one of those laws.

The laws discussed in this paper are controlled in the United States by individual states such as California or New York, not by the federal government headquartered in Washington D.C. This means that variations from what is discussed here may exist, depending on which state's laws are applicable. However, the law of each member state of the federation known as the United States, is similar enough to allow for the concepts presented in this paper to be generally applicable. The law concerning federal contracts – that is, contracts between the United States government and a given contractor, is highly regulated by the federal government and not covered here (Federal Acquisition Regulation (FAR), 2018) and not covered in this paper.

All of the states in the U.S. federation except for Louisiana are common law jurisdictions. A common law jurisdiction is characterized by the existence of case law. A decision made by a court in the same jurisdiction may act as precedent (i.e., must be followed) for a later case in the same jurisdiction (Common Law and Civil Law Traditions, 2017). The authors have not researched each of the governments in the federation; some tribal and/or territorial governments may be civil law jurisdictions but in general, member states of the U.S. federation are common law jurisdictions.

2. The concept of a "defect"

Merriam-Webster defines defect as "an imperfection that impairs worth or utility" from the Latin *defectus*: "a lack of something necessary for completeness, adequacy, or perfection."

(Merriam-Webster Dictionary, 2017). Other definitions worth bearing in mind are that of *The Oxford Learner's Dictionary* ("a fault in something or in the way it has been made which means that it is not perfect") (Oxford Advanced Learner's Dictionary, *Defect*, 2017) and the *Cambridge Dictionary* ("something that is lacking or that is not exactly right in someone or something") (Cambridge English Dictionary, *Defect*, 2017). Van Den Brink and Han (2015), citing Mills, Love, and Williams (2009), define a defect as the physical manifestation of an error or omission.

Despite the variations among these dictionary definitions, there is general agreement that the word denotes something that is not as good as it should be, or is of a quality that is not what it should be. The problem in the construction industry is that this general definition is insufficient. In fact, the word "defect" has received a great deal of legal attention because the variety of defects that can arise on a construction project is enormous, and it is unlikely that any construction project can ever be entirely free of defects.

Aljassmi and Han (2014) have defined a defect as "a failing or shortcoming in the function, performance, statutory or user requirements of a building [that] might manifest itself within the structure, fabric, services or other facilities of the affected building". Aljassmi and Han (2014) have also noted that the term defect not only refers to shortcomings (e.g., cracks) that give rise to catastrophic failure but also includes undesired nonconformance with principles or requirements that may not necessitate rework.

For our purposes, unfinished work belongs in a category separate from defective work. Unfinished work is partially completed. It requires new, additional work to complete the project. Defective work, on the other hand, requires rework of a completed project.

Repairing defects often costs much more than repairing unfinished work. Repairs to unfinished projects usually do not require additional resources beyond those normally needed to finish the project as planned. However, this is not always true: unfinished projects may need to be redone, depending on the type of unfinished work. For example, a given design project may specify the use of suspended concrete for load-bearing structures in specific places only, but if suspended concrete has been used elsewhere, the entire structure may need to be demolished before resuming work on the project. Although rare, defects of this nature can require repair costs that exceed the cost of the initial project (Mitkus, 2017).

Another concept that needs to be distinguished from defects and unfinished work is that of "failure" or "failed" works (The Free Dictionary, *Failure*, 2017). "Failure" can be defined as the condition or fact of not achieving the desired end or ends, or "an unacceptable difference between expected and observed performance; also the termination of the ability of an item or system to perform an intended or required function" (Poles, 2008). A "failure mechanism" is "an identifiable phenomenon that describes the process or defects by which an item or system suffers a particular type of failure" (Poles, 2008) "Failure mode" refers to "a description of the general type of failure experienced by a system" (Poles, 2008). Collapse is the ultimate and most serious result of structural failures, but overstressing, which can lead to collapse, is normally evident at earlier stages of structural failure, when deformation and fractures develop.

This paper focuses on defects in completed projects only. It does not consider defects in unfinished or failed works, which do not fall within the scope of this paper.

Neither the Law on Construction of the Republic of Lithuania (Law on Construction of Republic of Lithuania, 1996 nor the Code of the Republic of Lithuania (Civil Code of the Republic of Lithuania, 2000) defines the term "defect." Instead, the statutes present "quality" requirements for construction works. Construction work that fails to comply with the quality requirements should be considered defective (Law on Construction of Republic of Lithuania, 1996, Article 2(40)).

"Quality" is a not an uncommon word to use in the evaluation of construction projects. Low and Wee (2001), quoting Chung (1999), defined quality in construction as a standard that meets the requirements of the parties involved (i.e., it "[meets the] contractual requirements of the client, legislative and regulatory requirements of the authorities, social requirements of the public and even cost requirements of the contractor"). Molenaar, Songer, and Barash (1999), stressed that there are three criteria for measuring quality in construction: conformity with expectations, conformity with administrative (legal) restrictions and client's/customers' satisfaction. These definitions provide a measurable definition of "quality" that is useful for evaluating construction projects. Quality is one of critical success factors in construction projects.

In order to predict quality of a particular construction work, Trinkūnienė et al., 2017, developed a multi-attribute decision-making (MADM) set of attribues. These attributes were chosen based on their review of disputes related to quality of construction works. This process was used to predict which contracts were more likely to lead to quality construction works. See also Mardani, Jusoh, and Zavadskas, 2015a, 2015b for a discussion of quality. Various issues construction quality also are analized by Aïssani, Chateauneuf, Fontaine, and Audebert (2016), Mitkus (2016), Mitkus and Cibulskienė (2016), Lin, Chang, and Su (2016).

Lithuanian law defines standard construction quality as work that complies with construction norms. Note, however, that the Law on Construction of Republic of Lithuania, Article 2(40) does not even suggest that the quality of a construction project might be dependent on the standards set forth in the construction contract. The reason for this omission is that provisions for compliance with construction contracts are already included in the Civil Code of the Republic of Lithuania. Article 6.663 of the Code stipulates that the quality of a contractor's work must conform to the conditions of the construction contract. Article 6.684(1) reads that the contractor shall be obliged to perform all construction work in accordance with the requirements established in the technical construction regulations and the contract (contractual documentation). Article 6.684(1) further states that quality requirements must be stipulated in the contract. The design of any construction project is a part of the construction contract; therefore, it follows that quality requirements in the contract conform to the quality requirements set in the design of the construction works.

Frequently, neither the contract nor the normative documents contain quality requirements for construction operations and processes. In such cases, the provision in Article 6.663(1) of the Civil Code should apply; that is the absence of any specific method for determining quality stated in the contract, the quality of the work must conform to the requirements ordinarily presented for work of the nature of the given project. The quality of the work should also render the project fit for use within a reasonable period of time.

In summary, according Lithuanian statutory law, the following quality requirements for construction works apply:

- construction works must conform to the requirements laid down in the contract;
- construction works must conform to the requirements ordinarily presented for work of the respective nature of the given project; and
- the project must be fit for the designed use within the limits of a reasonable period of time.

Construction projects that match these requirements should be treated as quality projects, and those not meeting these requirements should be treated as examples of defective construction. Lithuanian case law consistently adheres to these provisions.

Under the German Civil Code BGB, defects are divided into "material defects" and "legal defects" (Section 633(3)). Construction work is free of material defects when it complies with agreed-upon standards of quality. In the event that "quality" has not been defined in the contract, then the work is free of defects if the project conforms to the use envisaged in the contract or is suitable for the customary use of work of that type. Construction must comply with this section as well as with the requirements of mandatory regulations.

The Civil Code of the Russian Federation does not define the term "defect" in relation to construction work but does provide remedies for "improper quality of work" (The Civil Code of the Russian Federation, 2011).¹ The code stipulates quality requirements for different kinds of works (The Civil Code of the Russian Federation, Article 721, 2011) and the main criterion for construction works is compliance with requirements of the contract. In the absence of terms and conditions for construction works that outline quality, or in the event that these terms and conditions are incomplete, the work must conform to the usual requirements for work of that kind. Other mandatory regulations also apply to specific types of projects work.

Each jurisdiction in the United States has its own statutory law, which can provide its own definition of a defect. In the case of one such jurisdiction, Nevada (Davis, 2015), a construction defect is defined as "a defect in design, construction, manufacture, repair or landscaping" that occurs when building a new residence or renovating an existing residence. Further, in Nevada, a defect is defined as that:

- 1. which is done in violation of law, including, without limitation, in violation of local codes or ordinances;
- 2. which proximately causes physical damage to the residence;
- 3. which is not completed in a good and workmanlike manner in accordance with the generally accepted standard of care in the industry; or
- 4. which presents an unreasonable risk of injury to a person or property (Nevada Revised Statute 40.61, 2016).

¹ In cases where the work has been performed by the contractor with departures from the work and labour contract which have worsened the result of the work or with other defects which make it unsuitable for the use, envisaged by the contract, or in the absence of the relevant condition of unfitness for the usual use in the contract, the customer shall have the right, unless otherwise stipulated by the law or the contract, to demand from the contractor the following actions at his option: gratuitous removal of defects within the reasonable period; an adequate reduction of the price fixed for the work; reimbursement of his expenses incurred in the elimination of defects, when the customer's right to remove them is provided for by the work and labour contract (Article 397, The Civil Code of the Russian Federation)

3. Liability for defects by the entity capable of detecting the defect

The ability to detect defects depends upon:

- The qualifications or characteristics of the inspector. An architect has a higher qualification than a consumer.
- The scope of the inspection. A construction supervisor usually inspects on a daily basis while government building authorities inspect on occasion or only at certain points in the work.

Construction supervisors and designers are trained in construction techniques and have a greater ability to detect defects than the typical owner. Figure 1 gives an illustration of the comparable level of ability to notice defects depending on the types of subjects. This figure is an illustration only and is not based on any data.

3.1. Contractors' liability for detecting defects

Under both U.S. and Lithuanian law, the contractor is liable for any defects caused by the work of the contractor or its subcontractors, suppliers, agents, or employees. This is true whether or not the contractor was able to detect the defect. Failure to comply with a contract is a breach, irrespective of ability to perform required tasks or detect defects.

The contractor's subcontractors, suppliers, agents, and employees may also be liable to the contractor for their actions or inactions that result in defects. Notice that these parties are not liable to the owner of the project because there is no contractual relationship between these parties and the owner.

However, a contractor sued by an owner for defects may be able to reduce its share of the liability if it can prove that the owner, designer, or technical supervisor (CM) had the ability to detect the defective work but did not.

3.2. Nonprofessional owners' liability for detecting defects

The owner is usually a nonprofessional with no specific knowledge of the field of construction. However, even a nonprofessional owner has some familiarity with buildings and what they are designed to do.

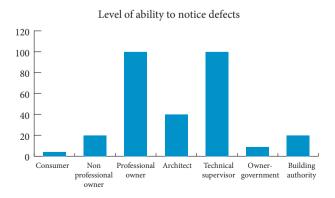


Figure 1. Ability of subjects to notice defective construction works

The Civil Code of the Republic of Lithuania and other legal acts do not directly address what kinds of defects should be recognizable to nonprofessional owners. The owner has no obligation to conduct any special measurements, tests, etc. The owner should, however, ensure that control measurements and tests have been carried out if they are required by law (Article 6.694 [5] of the Civil Code of the Republic of Lithuania).

What kinds of defects in construction works should be treated as latent for nonprofessional owners? Here case law is instructive. In the case *UAB Jaukuriai v. BUAB Forsitia*, 2010, the Supreme Court of Lithuania held:

The law provides for the owner's obligation to pay for construction works performed and the right to express a claim to the contractor for shortcomings of the construction works associated with signing the act of handover. According to the stipulations presented in Articles 6.662 and 6.694 of CCKR, it is the owner's duty to inspect and accept the construction works as carried out. Acceptance of the construction works that have been carried out is formalized by the act of handover. Upon signing the act of handover, the owner confirms that the construction works have been carried out (with or without reservations) and that the contractor confirms the transfer of the works. The owner must act carefully during handover – he must visually inspect the result of the construction works in order to ensure that the result has no obvious shortcomings. The law does not require anything beyond normal inspection of the completed construction works for obvious shortcomings. The owner is under no obligation to apply any special means or techniques.

- As this quote makes clear, the Supreme Court of Lithuania has ruled that the owner is not obligated to apply any special means or techniques during the acceptance and handover of construction works: simple visual inspection is all that is required. The Supreme Court of Lithuania has held this position consistently as in the case of *UAB Laugina v. UAB Agaras*, 2008, where it held:
 - The appellant cites as obvious defects wet walls in the shower stalls, improper floor drainage in the shower room, improper construction of road and parking surfaces, and improper installation of manhole covers. According to the case file, the courts found that the following defects, in accordance with a bonus-pater-familias standard, could not have been detected during handover because the owner could not foresee that the walls would become moist after their intended use as shower facilities and that not all of the water would drain from the shower floor because of improper sloping, that the surface of the road and parking area would crumble, and so on.
- Some of the above-mentioned defects can be discovered only by using laboratory tests. A case in point is the quality of concrete. Some defects can be determined with simple tests. For example, simply pouring water onto a floor can suffice to determine whether the floor drains properly. We can conclude that according Lithuanian case law, the owner has no duty to perform even the simplest tests during the acceptance of construction works (e.g., turning on and off water and electrical appliances; trying out engineering systems through practical use; checking parts of buildings, such as windows, skylights, etc.).

Under U.S. law the nonprofessional owner is not required to detect defects caused by the contractor. However, the nonprofessional owner is liable to users of the construction works for defects caused by its agents and employees, including the contractor and the designer. For example, if the contractor builds in a defective manner and that defect causes injury to a user of the project, the owner is liable. If the designs are defective and that defect later causes injury to a user of the project, the owner is liable.

3.3. Professional owners' liability for detecting defects

As stated above, both statutory and case law apply very low standards of carefulness for owners at the time of handover of construction works. The reason for this is that the owner is a nonprofessional subject. But this is not always the case. For example, many construction projects are carried out by subcontractors. In such cases, the customer (i.e., the one accepting the construction works) is a professional entity – the general contractor responsible for the quality of the project as a whole. The question then is: Should the same low standards of carefulness at handover that are applied to nonprofessional owners also be applied to general contractors?

No U.S. case was found that addressed any difference in liability between professional and nonprofessional owners. Since liability to users of a project is usually dependent on a negligence standard of "what a reasonable owner would do" and not upon the specific status or knowledge of the owner, it is unlikely that U.S. law would hold professional owners to a higher standard than nonprofessional owners. The professional owner's liability to the contractor or designer would be based on the contract.

3.4. Technical supervisors' liability for detecting defects

In the case of most construction contracts, the owner is a nonprofessional participant with little or no understanding of the construction process. This professional can be referred to as the "technical supervisor" of the project and may be the engineer, the architect, or a consultant of some sort. In the United States this person often has the title of "CM," which stands for "construction manager who is employed by the owner to oversee the construction of the project."

As an example of a contract requiring a technical supervisor, the EJCDC Standard Form of Agreement between Owner and Engineer for Professional Services, 2008, is a U.S. contract for owners who want to hire an engineer to oversee and inspect quality during the construction phase of a project. According to this contract, the engineer visits the site at appropriate intervals to review the work. Article A 1.05 (7a) of Exhibit A of the above contract reads:

such visits and observations by Engineer, and the Resident Project Representative, if any, are not intended to be exhaustive or to extend to every aspect of Contractor's Work in progress or to involve detailed inspections of Contractor's Work in progress beyond the responsibilities specifically assigned to Engineer in this Agreement and the Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on Engineer's exercise of professional judgment, as assisted by the Resident Project Representative, if any. Based on information obtained during such visits and observations, Engineer will determine in general if the Work is proceeding in accordance with the Contract Documents, and Engineer shall keep Owner informed of the progress of the Work. Paragraph 8 of the article stipulates the right of the engineer to reject defective works.

The American Institute of Architects AIA-201, Contract for Construction, 2007, Article 4, states that the owner shall retain an architect in the jurisdiction where the Project is located. The architect provides administration of the contract and is the owner's representative dur-

ing construction. The architect is obliged to visit the site at intervals appropriate to the stage of construction, or as otherwise agreed upon with the owner, to become generally familiar with the progress and quality of the portion of the work completed, and to determine if the work observed is being performed in a manner indicating that, when fully completed, it will be in accordance with the contract documents. The standard form of the contract also states that the architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures in connection with the construction works.

The architect as administrator and/or supervisor of construction works is foreseen in the law of most European countries (Chao-Duivis et al., 2015, p. 766). The scope of duties of an architect is highly dependent on the state.

In European countries the most popular standard form of the construction contract is that of the FIDIC². According to provisions of the standard FIDIC contracts, the engineer, working alone or with staff, is obliged to carry out an inspection of the construction works for which the engineer is responsible. According to the Law on Construction of the Lithuanian Republic, technical supervising of construction is mandatory, with the exception of simple construction projects and repairs. Otherwise, the owner must appoint a technical supervisor of the construction works as an employee or agent. The rights and duties of a technical supervisor of construction are laid down in detail in the Law on Construction and Technical Regulation of Construction STR 1.06.01:2016. Among their others duties, technical supervisors of construction are obliged to carry out the following functions:

- check that construction is being carried out according to the design;
- check quality of building materials and facilities and prevent their use if they do not meet requirements;
- check the quality of construction works;
- check and accept covered construction works and structures;
- participate in the testing of engineering systems, facilities, structures; and
- the technical supervisor must sign the construction book every day.

Lithuania's civil code makes a distinction between four entities: contractor, designer, technical supervisor of the construction, and contractor of expertise of design. These entities are liable for:

- the collapse of a structure and the resultant damage (Article 6.696[1]);
- the defects discovered within the guarantee period (Article 6.697[3]).

The Civil Code of the Republic of Lithuania does not distinguish what part of the liability lies with each of these entities. That distinction is made in case law. The liability of technical supervisors of construction works has been examined by the Supreme Court of Lithuania in several cases. See *TŪB Vikensta v. UAB Skala*, 2006; *UAB Valviktė v. UAB Laugina*, 2008; *UAB Agaras v. UAB Laugina*, 2008; *UAB Angel Stone v. UAB Ulgis*, 2009; *UAB v. Klaipėdos hidrotechnika v. State Enterprise Klaipeda State Seaport Authority*, 2014; *UAB Seno dvaro sodyba v. UAB Rustonas*, 2015.

² FIDIC: The International Federation of Consulting Engineers. FIDIC acronym for its French name Fédération Internationale Des Ingénieurs-Conseils.

In Lithuanian case law the technical supervisor has been found liable for nonperformance or improper performance of a construction project in about 10 to 15% of the cases. The Supreme Court of Lithuania has noted that if defects are found in a construction project, it is important, in the context of liability of the contractor, designer or technical supervisor of construction, to identify the cause(s) of the defects in each particular case and to link the cause(s) to shortcomings or improper performance by persons liable for the defects. See *TŪB Vikensta v. UAB*, 2006.

If the technical supervisor is to be held liable, then it is essential to determine what kinds of defects are noticeable to the technical supervisor. The technical supervisor is not liable for all defects even if the technical supervisor has performed daily inspections. Liability will depend on the circumstances.

For example, in the civil case UAB "Laugina" v. UAB "Agaras" (2008), the courts found that the plaintiff performed the installation of concrete floors in the building in question, but the plaintiff did not sign the statement of acceptance of the works and filed a claim regarding the quality of the work. Although the construction contract provided for the plaintiff's duty to perform technical supervision, the courts failed to establish that the plaintiff's acts could have had any influence on the quality of construction.

In U.S. law, the CM's liability for defects is not contingent upon whether the defect is patent vs. latent. The CM's liability is based on any specific guarantees or warranties in the contract (which are seldom made) or upon a negligence standard if no specific contract terms apply. In other words, the question is, has the CM operated below the level of other similar professionals in the field? For example, an insurer alleged that the cause of flooding in a certain instance was the failure to install a roll-down security gate properly. This improper installation allowed cold air to travel through the space, which in turn caused a pipe to freeze and then burst. The insurer asserted claims against the construction manager for breaching its duties under its management contract and for negligence in its supervision of the construction. The construction manager claimed it had no such duty, but the court found that substantial issues of fact remained as to its role in the project. The court noted that the negligence claim was not for vicarious liability, but for failure to perform its duty to supervise the subcontractors. Summary judgment was denied because of the need to determine whether the construction manager had been negligent in its duties (Travelers Indem. Co. v. 28 E. 70th St. Constr. Co., 2003).

In summary, under both Lithuanian and U.S. law before liability can be placed on the technical supervisor (architect, engineer, CM, or other consultant) a determination of the scope of the duties of the technical supervisor must be made. The scope of the technical supervisor's duties is defined by examination of the contracts as well as the law.

3.5. Designers' liability for detecting defects

This section outlines the designer's liability for defects apart from any duties the designer has as technical supervisor. If a designer has merely designed a given project, but has no supervisory role in the construction, the designer can only be liable for defects in the plans

and specifications. Defects of this nature are called "design defects," as distinct from defects caused by faulty construction.

Lithuanian statutory law does not stipulate the liability of construction project designers and no case law exists on the issue. Since design (an activity carried out by the architect or engineer) is a paid activity, a design that is defective and causes injury should lead to liability on the part of the designer. Under Lithuanian law it might be essential to define which defects are noticeable to the design supervisor (the architect or engineer). Responsibility for assessment as to whether the defect is noticeable by the design supervisor (the architect) should be defined within the scope of duties of the subject. The scope of duties can be defined by examining the contractual documentation as well as statutory and case law.

In the United States case law does exist to clarify this issue. The designer can be liable to the owner or ultimate users of a given project. This liability to the owner and ultimate users is based on a negligence standard. The designer could warrant the plans and specifications, but this seldom happens, and the designer is not liable to the owner for defects in the plans and specifications unless they rise to the level of professional negligence.

The designer cannot be liable to the contractor as there is no contract between them. If a design contains a design defect and must be redone to fix it, the owner is liable, not the designer. In other words, as between the contractor, the designer, and the owner, the owner is liable for design defects, not the designer. This fundamental principle is called the "Spearin Doctrine," from a U.S. Supreme Court federal construction law case of that name. United States v. Spearin, 248 U.S. 132 (1918).

3.6. Liability of building or inspection authority for detecting defects

In Lithuania, the State Construction Agency plays the main role in government supervision of construction. But approximately 50 other institutions carry out various kinds of inspections involving fire and other safety, hygiene, and environmental protection. These institutions perform random inspections and also inspect the completed construction works.

The main aim of inspections by government institutions is to check whether the quality of the construction works is sufficient to protect a particular public interest, such as fire prevention, environmental quality or safety. If a state institution performs an inspection improperly and fails to detect a construction defect, the question of liability can arise if the defect resulted in harm to the owner or user of the construction project.

The Law on Construction of the Lithuanian Republic (Article 28) stipulates that upon completion of all but simple construction projects, the Act of Completion of Construction shall be drawn up. This procedure upon completion of construction is organized by the Inspection of Territory Planning and Construction. The agency appoints commissions for the inspection of completed construction works. Members of the commission, according to their competence, must visually check whether completed projects comply with the design of the construction. This means that both the scope of the inspection and the inspection techniques are rather limited.

In 2008, a man (whom we will refer to as A.K.) fell from a stair and was fatally injured. Among the defendants in a criminal proceeding related to the death was the Commission

of the Completion of the Construction Works. The court's expert witness determined that the stairs were improperly built and did not comply with the building codes and standard construction practice. The court expert witness also concluded that the Commission should have noticed the noncompliance. This testimony could have supported a finding of criminal liability on the part of the members of the Commission. However, the case was settled before an actual finding of criminal liability could be made (see American Law Reports 5th, 2017).

In the United States, a government building code inspector might be liable for failure to detect patent defects under a negligence standard. However, governments are protected from lawsuits under the doctrine of sovereign immunity, and regulations may restrict the types of damages that can be recovered or require that claims be filed within a limited time period. See New Jersey Stat. § 59:9-2, 2017 and *1-6 Insurance Risk Management* § 6.06, 2016.

Conclusions

In order to successfully file a claim as well as defend a claim in the case of defects, it is important to identify important characteristics of the defect in the construction works. This paper has looked specifically at one characteristic: the entity entity capable of detecting the defect and its liability. Comparisons were made between United States, a common law jurisdiction, and Lithuania law, a civil law jurisdiction.

The ability to detect defects depends upon the qualification or characteristics of the person involved in conducting the inspection. An contractgor has a greater responsibility for detecting defects which occur during construction than the architect. The architect has a greater responsibility for detecting defects related specifically to the plans and specifications.

In addition to the qualification or characteristic of the person involved in the inspection, the required scope of the inspection is relevant. A construction supervisor usually inspects on a daily basis while government building authorities inspect on occasion or only at certain points in the work.

In both legal systems contractors and technical supervisors are most capable of detecting the defect and therefore liability will usually rest there although designers maintain liability for defects caused by their designs. Lituanian law places some responsibility upon nonprofessional owners for detecting defects while U.S. law does not. Under U.S. law however, it is clear that owners, bot professional and nonprofessional, are liable to users of the construction works for injuries caused by defects and this encourages them to inspect. Professional owners may have some liability if they are involved in the construction. Nonprofessional owners and government building inspectors have little, if any liability. In both systems government building inspectors have extremely limited potential liability for detecting defects.

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