The purpose of this paper is to give a basic yet comprehensive overview of intellectual property and associated copyrights, all in the realm of construction documents (particularly with regards to plans, and drawings). This information is useful and important to owners, design professionals, contractors, and anyone involved in construction practices. Understanding these fundamentals is critical in protecting the rights of designers, and protecting owners and builders against possible copyright infringements or even legal disputes.

Key Words: Construction Documents, Intellectual Property, Copyrights

Introduction

In the pages of history are found some of man’s greatest inventions—the magnificent structures of the world. The great pyramids of Egypt, the Parthenon of Greece, the Coliseum of Ancient Rome, the Taj Mahal of India and, the Great Wall of China represent a small number of man’s great designs.

Today this endeavor continues—to create strong, functional, and beautiful buildings. Construction is common to everyone; as people go to work everyday, they are likely to pass number of new developments currently being built. Numerous tasks are visible during a construction project, but these visible tasks are preceded by many hours that are unseen in the creation of the project.

During the design phase of a construction project, the drawings, specifications and other contract
document are created. Today’s copyright laws protect the construction documents, granting ownership rights of this intellectual property. Therefore, anyone involved in designing or constructing needs to understand the fundamentals of the following: current copyright law, common problem areas, and proper procedures to gain legal protection. Understanding these laws protects designers, owners, contractors, and others from possible infringement and potential legal disputes.

**Intellectual Property**

Real property (usually called real estate) and personal property are physical, tangible items with mass and specific characteristics. Intellectual property is different; it is a creation of the mind and must be embodied or displayed in some way. This form of property does however, have legal rights and commercial value just like a parcel of real estate. Typically intellectual property is considered by one of the following four legal fields: copyrights, patents, trademarks, and trade secrets. Intellectual property dealing with publicity rights, unfair competition, and moral rights are often their own smaller sector of law (McCarthy, 1991). “Intellectual property rights (IPRs) enable owners to select who may access and use their property and to protect it from unauthorized use” (Oelsner, 1996). In terms of construction documents, it is the legal arena of copyright law that offers protection.

**Debate**

Soon after congress enacted laws that brought the U.S. in conformance to strict international
intellectual property protection standards (early 1990’s), much was written and debated as to whether or not such laws were beneficial to society. There is no contest concerning the worth of this “floating property,” but it has been a tough argument as illustrated by the people who argue them. For example, individuals who share the same devotion to free trade, liberty, and property have found polar ideas in regards to intellectual property, because on one hand it seems to be valuable property and on the other it seems to confine liberty (Mackaay, 1990).

Those who support such rights often “justify the rules either on the moral ground that each of us possesses a natural right to control what we create or on the utilitarian ground that absent regulation, there will be no optimal supply of intellectual creation” (Carter, 1990). The other side protests that exclusive ownership of ideas hinders others, who would otherwise combine them with additional innovative ideas that could make an even larger positive impact. Also, having the knowledge first would allow an individual to make investments that are worth more than the returns of protecting the idea (Meiners, Staaaf, 1990).

More recently it has been said that the real concern is protecting the individual and not the individual’s work. “Courts have recognized the ‘personal expression’ ‘creativity’ ‘genius’ and ‘intellectual labor’ of intellectual property – all intimating that protection of the creator’s personhood interests is at issue” (Hughes, 1998). No matter what is said, the hard facts are—there is dynamic law protecting intellectual property.

Construction Documents

Construction documents (sometimes called bidding documents) are the means of communicating
a project design from architects, engineers and consultants, as approved by owners, to the builders. According to the Construction Specifications Institute (CSI) there are two general categories of documents, the bidding requirements and the contract documents. The bidding requirements include an official bid solicitation, instructions to bidders, information available to bidders, bid forms and supplements, and addenda (CSI, 1995). These bidding documents are sent to everyone interested and/or pre-qualified to bid on a project. Bidding requirements are guidelines and procedures established to ensure all bids are in the same format, and help contractors make certain their bids are complete.

Contract documents are used between the project owner and the selected bidder. These documents describe the intended construction methods, materials, and finished product. They include: contract forms, conditions of the contract, specifications, drawings, addenda, and modifications. Often the written documents are organized and assembled into a “project manual,” while the drawings are bound together forming the “plans”.

Plans and Drawings

In the construction world, it is the plans that most often fall prey to intellectual property disputes. The plans contain various levels of detail. Some are expressly the architectural form and look of a project. Others are specific, like detailing the method of attachment for a roof structure to a wall element. There are exterior elevation views of the building, usually from all sides, and there are multiple sets of floor plans. Each floor plan is reprinted to show specific components of the building. One would be for plumbing fixtures while another would show electrical outlets and light fixtures etc. The number of sheets in a set of plans is determined by the size and
complexity of the project.

A new concern for protecting the intellectual property of a designer’s plans and drawings comes with the advent of computer technology and digital plans. Plans drawn inside a computer and distributed via the internet on websites and email pose a new question. Are these electronic plans easier to take and harder to protect? Not really, if the right precautions are taken. “Companies can support secure websites only accessible with passwords and job names. Then the electronic documents can be posted in a read-only document (Albright, 2003).” The read-only formats would include file formats such as .dwf, .pdf, .cals, etc. Because no set of documents is completely impermeable to infringement attacks, individual morals and ethics would determine to what extent these documents are “borrowed” or outright stolen by others.

Contracts

For larger and more complex projects standardized contract templates are often used. Examples include the American Institute of Architects (AIA), the National Society of Professional Engineers (NSPE), and the Associated General Contractors (AGC) sets of contract documents. They have been written, tested, revised, and temporary copyright licenses of these “blank documents” are sold to owners and contractors for a specific project or a period of time. These, and others contract documents, are registered and also protected under today’s laws.

The Law

Much has been said concerning laws that provide protection to intellectual property, but what are
those laws and where do they come from? In almost every case it is the copyright portion of IPRs that protects construction documents. Copyrights have a long and changing history in the United States. “Copyright protection is awarded to works of authorship that: are original, exhibit minimal creativity, are fixed in a tangible means of expression (Besenjak, 2000).” An understanding of copyright law development will better illustrate their importance and function.

General History and Evolution of Copyright Law

What gives a copyright? Is there a clear bold law titled “American Copyright Law” that floats free and everyone just abides by it? The answers are found by looking back to the early English printing presses in the late fifteenth century. As written (Masciola, 2002) Parliament began creating laws to control the widespread publication of books, and in 1710 the Statute of Anne enacted the first ownership rights to authors for a period of fourteen years. More than 50 years later the Constitution of the United States of America was drafted. In the first article, section eight, it states that “The Congress shall have power...To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries…”

Today the copyright laws that govern are grounded in that short statement of the Constitution. Cases, questions, and acts of legislation have modified and defined the current federal copyright laws, and they are housed in Title 17 of the U.S. Code (the House of Representatives prepares and publishes the U.S. Code through the Office of the Law Revision Counsel). Because our global society is so dynamic, revisions to the copyright law are made each year to redefine and address new technologies. For example in the Copyright Revision Act of 1976, congress revised the current copyright laws to meet the needs of newer technologies, and international policies.
The Berne Convention Implementation Act

The World Intellectual Property Organization (WIPO) administers an agency called the Berne Union. This union is formed by members that adhere to the Berne Convention for the Protection of Literary and Artistic Works (McCarthy, 1991). In 1886 the Berne Convention met and passed an act offering forms of IPR protection. It has been modified several times and includes significant protection internationally. With regards to international law, United States was not in conformance to the Berne Convention, even with the significant changes of the Copyright Revision Act of 1976. In 1988 Congress passed the Berne Convention Implementation Act (BCIA) that brought the 1976 Act into harmony with the strict requirements of the Berne Convention of 1971 and 1979. This move attracted significant arguments as it offered greater protection, particularly to architectural works (Gregory, 1994).

The Architectural Works Protection Act

In 1990 the Architectural Works Protection Act (AWCPA) was a move to bring the U.S. into conformance with the amended Berne Convention of 1989. The 1990 Act provided protection for completed or constructed architectural works and has become the target of much negative debate and scrutiny, both before and since (Hixon, 1995). Perhaps even more significant, it also corrected architectural issues in the U.S.

“Before the passage of the AWCPA, the Copyright Protection Act permitted a person to copy the basic features of a building as long as he did not copy the underlying drawings or plans. The AWCPA makes such behavior copyright infringement because the overall shape and design of the building as constructed, both exterior and interior, are now protected” (Hancock, 2002).

The AWCPA also amended other minor details in Title 17 of the U.S.C. concerning definitions, grammar, and clarifications (Patry, 1994).
Many other individual cases and congressional acts have significantly influenced copyright law (appendix A). Copyright law today has been molded to protect aspects of the internet, digital media, computer software, and semiconductor chips. As with all areas of the law, copyrights will continue to change with technology, case law, and new philosophies. In regards to construction documents however, the BCIA and AWCPA are undoubtedly the most important.

**Expression, Rights, and Transfer**

Architectural works are subsequently a category of the law’s described “works of authorship” (appendix B). Authors who express their “ideas, principles…” (etc. as stated in the code) do not own the idea itself, for that idea is a universal and timeless principle available to anyone. Rather, an owner can posses and have rights to the expression of such ideas as they come from an individual and personal perspective. For example an architect prepares plans to build a restaurant in the shape of a giant trout. The idea of using a fish for a building shape can not be the architects, but rather the perspective of how that fish looks can be the architects. Another architect decides to create plans for a supermarket in the shape of a giant herring. Both of these architects share a common idea, a fish shaped structure, but there expressions are different and both are within the bounds of the law and can receive protection from the law.

Once an owner has fixed an expression of some idea to a tangible medium, they then have an exclusive license of rights concerning that expression. An owner’s exclusive license provides four principle rights:

1. the right to reproduce their work,
2. the right to prepare derivative works from their original work,
3. the right to copy and distribute their work,

4. and the right to perform and or display their work (Besen, 1991).

These rights can be transferred to another and often are. This exchange can be a gift or sold. Architects for example, often design floor plans and sell them to prospective home owners. The transaction is not usually a transfer of the exclusive copyright license, but a transfer of a non-exclusive copyright license. In this setting an owner allows an individual “the right to exercise one or more of the rights of the [exclusive] copyright holder. This is not a transfer of copyright ownership” (Besenjak, 2000). To continue the architect and homeowner example, the architect sells the potential home owner a non-exclusive license to copy the plans for use in building a house. This agreement, a contract, typically carries implications that an architect will not sell the same home design to anyone else even though he owns a copyright. This does not bar the architect from creating a derivative work of the original design.

“A derivative work is a work that is based on one or more existing works. A derivative work is copyrightable, however, it must be different enough from the original copyrighted work or must contain a substantial amount of new material—minor changes will not suffice” (Hancock, 1994). The architect above could easily take the same house plan, alter the layout of the rooms, change the exterior “look” of the building, and still have the same building “foot print.” This would likely be considered a new copyrightable design with its own protection and ready for sale.

One final issue with regards to transfer of rights is the “work made for hire.” Section 201 of Title 17 explains that the rightful owner, considered the author as well, is the employer or client for whom the work is created in a work made for hire. An employer therefore can and does take
the works done by the employee and obtain a copyright for themselves or the company. Not
everything an employee does is necessarily a work for hire however. The key in determining if a
work is made for hire lies in the employee’s scope of work, meaning, is the employer
supervising the work of their employee (Alces, 1994). Typically this is the case, and copyright
problems in this area are relatively scarce between an employee and employer. Now works
made for hire have more commonly been the source of litigation. It is critical that a designer and
owner have expressly stated in written contract who will maintain ownership of the plans and
designs. Almost always the architect will affix a copyright notice to the plans he/she creates,
and it is so stated in the contract.

Common Problem Areas

Intellectual property infringement for construction documents almost always hangs on the plans.
Fair use, misuse, and reuse all tend to cross the somewhat interpretable lines of copyright and
intellectual property law. The principle of necessary copying brings up interesting ethical and
economic considerations that heighten the perceptions of infringement. Hundreds of cases have
been brought before the courts to determine who owns exclusive and limited copyright licenses.
Open bidding and design-build construction both make infringement easier and can potentially
muddy the waters of argument. The courts therefore, have developed a two-prong test to
identify ownership and settle some of these disputes.

Fair Use

This is perhaps the most ambiguous element of the law and subsequently the loudest plea for
designers, contractors, and owners to understand copyright law.
“The exclusive rights granted to the copyright owner do not include the right to prevent others from making fair use of the owners work. Such fair use may include use of the work for purposes of criticism, comment, news reporting, teaching or education, and scholarship or research. The nature of the work, the extent of the work copied, and the impact of copying on the work’s commercial value are all considered in determining whether an unauthorized use is a “fair use” (Hefter, 2003).

Recognizing the concern, the government has constructed four contests for the courts to use in determining whether “fair use” is a valid defense against copyright infringement:

1. the purpose and character of the accused use;
2. the nature of the copyrighted work;
3. the importance of the portion used in relation to the copyrighted work as a whole; and
4. the effect of the accused use on the potential market for or value of the copyrighted work (McCarthy, 1991).

Understanding these elements is crucial for a designer to find protection, and just as important for owners and contractors to avoid legal problems.

Misuse

Almost every legal dispute of the past, with regards to the IPRs of construction documents, has happened in either the misuse or reuse of plans and drawings. For example, one architect drafted plans for an old ferry boat to be converted into a nightclub and restaurant. After a few years the boat, only partially completed, was sold and new plans were drafted by another architect to use the boat as an office complex. The problem came when the new architect used the original plans to determine existing conditions of the boat in order to avoid re-measuring (Oakes vs. Suelynn).

Is this considered misuse of plans? Well, obviously the original architect thought so; he sued the second architect and the owner for copyright infringement and converting the original plans.

The court determined that the second architect had not breached the copyright or tried to convert
the plans, rather he was within the bounds of fair use.

In a second case, a home builder drew plans for a house which he showed to a potential client. The client and builder met many times and discussed construction of the home, but never decided to have the home built. Later the client gave the drawings to an architect who drafted final plans and the client hired a different builder to construct the home (Zitz vs. Podlas). What about this case, was this misuse of the original plans? The court decided due to technical considerations of the copyright procedure and the timing of copyright filing, that it was not a case of misused plans. These cases illustrate the different interpretations of what is or isn’t legal. They also show that the courts will forever have to decide how far is too far when it comes down to questions of misuse and fair use.

*Reuse (Who is the Owner?)*

Reuse of plans is a separate account from misuse, but contains equally important consideration. This aspect of copyright infringement can be either on the part of the architect or owner. It depends solely on the prearranged agreement between the two; i.e. does the contract indicate that the drawings are bought (a work made for hire as discussed above) or is the architect strictly granting a limited use of his time and ideas for a fee. To combat reuse of drawings an architect or engineer will typically state something in the contract to the effect that all drawings, plans, and specifications will remain the property of the design firm and are not available for the reuse of the current contracted owner. It is important to recognize that these provisions are based on the assumption, “that in the absence of a written agreement to the contrary, the courts are likely to hold that the documents belong to the client and that the client is free to use them as he
wishes” (Cushman, 1983). Contractors, designers and owners need to be clear in the contract language of who owns the plans. Furthermore, designers wishing to protect themselves need to formally register all plans published to a client for use.

In the last decade design-build construction (a contract and delivery method) has become a convenient way to save time and money on many projects. Here a contractor is selected to help develop and build a solution to an owner’s problems. The owner and contractor design a building or project together with the contractors in-house design team or a design professional acting as a subcontractor. Having the contractor involved from the beginning allows the team to design for speed of construction (thus saving money) and/or design for cost effective materials and building practices; all this while finding a project that suits a owners needs. The question arises again, who owns the plans and copyright? Many people involved and all incorporating their ideas makes this a tough question. Once more, it must be spelled out in the minds of the parties as well as the contract, or there is almost guaranteed to be problems.

*Necessary Copying*

There is an ingredient of copying that is necessary in creating new structures that are aesthetically pleasing and functional. It is based on the principle of “architectural vocabulary” where a designer takes this style of window dormer, that type of portico, and another kind of roof type—thus making out of the pieces a unique building. “More than other forms of artistic expression, architecture relies on copying of existing forms. Architects have long copied individual elements…in a process known as quoting” (Winick, 1992). New styles of architecture are built in the same way. The influence of one era can be seen in another, but each
will have unique characteristics. Designing structures is simply copying pieces of other architects’ work and combining them with individually creative components. Ethical questions can enter here as to how far “quoting” can go. Returning to the original debate of IPRs, many argue that allowing this copying to go unrestricted expedites the development of better designs.

**Bidding**

When a project “goes out to bid” the plans are given to any contractor (in the case of a government project) wishing to invest their time and money into producing a bid. Sometimes the plans and specifications are sent to plan rooms that check them out to potential contract winners. Online plan rooms and websites offer another method of providing contractors with an opportunity to get plans and other bidding information. The bidding process simply makes all this copyrighted information available for almost anyone who wants it. As methods of communication and document transfer have become easier, so has intellectual property theft (across the board, obviously not just construction documents). These implications should immediately heighten awareness for designers and owners of copyrighted plans. The options are either be extremely restrictive, or police your copyrights.

**The Two-Prong Test**

Once a blatant or perceived act of copyright infringement exists, it must follow the traditional legal system. When it gets to the courts it will be held under a two-prong test to evaluate whether: 1) ownership of a valid copyright exists, and 2) unauthorized copying has occurred (Winick, 1992). In the event that the first portion of the test passes, then a second two-part test is administered in determining whether or not unauthorized copying has occurred. Simply the
courts will try to identify whether: 1) if a defendant had access to the plans in question, and then
2) is there substantial similarity between the plaintiffs and defendants plans. In one case a
Florida home designing company filed action against a homeowner who had hired a draftsman to
draw a set of plans. It was contended by the plaintiff that one of his floor plans had been copied
by the draftsman in designing the homeowner’s new floor plan. The courts applied the first test
and found that a valid copyright did exist on designers plan in question. This brought the second
two-prong test to identify whether unauthorized copying had occurred. The courts found that
homeowner had requested promotional materials from the home designer that contained
derivatives of the copyrighted plan. However, in defining substantial similarity the courts
decided that even small dissimilarities are significant in comparison to other types of works.
Therefore, it was held that while there were many similarities, there were enough un-similar
portions to the homeowner’s plans, and there was not enough evidence for copyright
infringement (Moyer, 2001).

Gaining Protection

An initial copyright is naturally born in the formation of a work. This preliminary copyright is
called a “common law copyright.” Every author or artist has a right under the common law to
prevent copying of his original work even without registration so long as there has been no
general publication of the work” (Workman, 1974). When an architect designs a new building,
then that “expression” of a structure is owned. This is somewhat unenforceable however, until it
is registered, and damages are not given on infringement cases of unregistered works (Medlen,
1996). To illustrate this, refer back to the example of the trout shaped restaurant. Say a local
newspaper received permission and printed the plans of this architect’s revolutionary fish-shaped
building, prior to registration of the work. A restaurant owner from another state saw the fishy plans, loved them and built a restaurant in his hometown immediately. The original architect later learns of this injustice and sues the owner for the costs of producing the plans. Clearly the copyrights were infringed, but what must the owner pay? Nothing, the plans were unregistered and they were unenforceable. The owner might not even receive direction from the courts to discontinue use of the plans because they had been published (depending on how the courts defined published).

Once it is registered with the federal government, a legally enforceable “registered copyright” exists. Registration of any work is relatively uncomplicated. The only requirements are: 1) appropriate forms must be filed, 2) applicable fees paid, and 3) a copy for the work must be submitted. The forms (which are free) can be obtained by contacting the Copyright Office (http://www.loc.gov/copyright) located in the Library of Congress in Washington D.C. There are different forms for the differing categories of copyrightable works. The Copyright Office informs the applicant of the fee amount, as it is often changing. A copy of the work is submitted also, or two copies if the work has been published (meaning it is no longer confidential), and the process is 1-2-3 complete. The submission of the architectural drawings can be on CD’s (Copyright Office, personal communication by email, April 23, 2003).

Today a copyrighted work “subsists from its creation…for a term consisting of the life of the author and 70 years after the author's death” (US Code title 17, chapter 3, section 302a). This is for a “general” copyright, as there are provisions for joint and anonymous authors. Likewise there are provisions for works created before January 1, 1978 (prior to the landmark Copyright
Revision Act of 1976). Copyrights have been enforceable since the conception of the Constitution itself, and will continue to be the legal means of protecting an individual’s intellectual property.

**Conclusion**

In summary—to contractors, design professionals, owners, and anyone involved in aspects of construction, it is imperative that a general understanding of copyright law be gained in order to find protection from potential legal disputes, not to mention the importance of maintaining a network of good professional relationships (which is probably the most important). While there are many more great buildings to be constructed, they will continue to need a team of qualified professionals constructing, and designing to make this happen. The intellectual property of today will be protected in the future, and further the creation of new and better structures.
Appendix A

Some Revisions to US copyright law (Masciola, 2002)
1787: U.S. Constitution
1790: Copyright Act of 1790
1831: Revision of the Copyright Act
1834: 
1841: 
1853: 
1870: Revision of Copyright Act
1886: Berne Convention
1891: International Copyright Treaty
1909: Revision of the U.S. Copyright Act
1913: 
1926: 
1934: 
1973: 
1976: Revision of the U.S. Copyright Act
1976: Classroom Guidelines
1976: CONTU Process
1983: 
1986: 
1991: 
1992: 
1993: 
1994: 
1995: 
1996: 
1998: Sonny Bono Copyright Term Extension Act
1998: Digital Millenium Copyright Act
1999:  
1999: Digital Theft Deterrence and Copyright Damages Improvement Act of 1999
2000: Virginia Passed UCITA
2000: Librarian of Congress Issued Ruling on DMCA
2000: 
2001: 
2001: 
2001: 
2001: 
2002: Consumer Broadband and Digital Television Promotion Act (S. 2048) Introduced in Senate
2002: ABA Issues UCITA Report
2002: U.S. Supreme Court Hears Challenge to 1998 Copyright Term Extension Act
2002: Senate Approves Distance Education Legislation
Appendix B

U.S. Code Title 17, Chapter 1, Section 102 - Subject matter of copyright: In general

(a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include the following categories:

(1) literary works;
(2) musical works, including any accompanying words;
(3) dramatic works, including any accompanying music;
(4) pictorial, graphic, and sculptural works;
(5) motion pictures and other audiovisual works;
(6) sound recordings; and
(7) architectural works.

(b) In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.
Bibliography:


*United States Constitution*, (1787, May, 14).

