STANDARDS ORGANIZATION AND ADOPTED STANDARDS

FOR

ENCRYPTION AND QUANTUM COMPUTATION PROJECT

FOR

THE AZERA GROUP

PART ONE: PREAMBLE

The Senior Engineer of the Company is providing the Standards and Specifications for all projects for which **AscenTrust** is providing **Value Added Engineering.** For the **Encryption, Quantum Computing and Synchronization Projects,** the list is substantially smaller, but is included in the list of **Standards Organizations,** listed below.

Energy and construction projects in the State of Texas fall under the influence of a large number of **Standards Organization.** The most important ones are listed below:

1. **ICC** (International Code Council)
2. **CSI** (Construction Specifications Institute)
3. **ACI** (American Concrete Institute)
4. **ANSI** (American National Standards Institute)
5. **American Society for testing and Materials (**ASTM International **)**
6. **ASME** (American Society of Mechanical Engineers)
7. **IEEE** (Institute of Electrical and Electronics Engineers)
8. **LEED** (Leadership in Energy and Environmental Design)
9. **ISO** (International Organization of Standards)
10. **UL** (Underwriters Laboratory)
11. **OSHA** (Occupational Safety and Health Administration)

PART TWO: STANDARDS BODIES

1. INTERNATIONAL CODE COUNCIL

A. Introduction: The International Code Council, a membership association dedicated to building safety and fire prevention, develops the International Codes, model building codes used to construct residential and commercial buildings, including homes and schools. The Code Council also develops standards related to building construction.

Building codes establish minimum requirements necessary to provide safety, guard public health and reduce property losses. Codes provide protection from manmade and natural disasters. They keep construction costs down by establishing uniformity in the construction industry, which allows manufacturers to do business on a larger scale—regionally, nationally or internationally.

The International Codes are the predominant codes used in the United States, Puerto Rico and the U.S. Virgin Islands. Architects, engineers and developers around the world, in such locations as Macau, United Arab Emirates and Qatar, reference International Codes. The Code Council assists a number of countries on building safety projects, including Mexico, Egypt, Pakistan and Jamaica; has members in more than 50 countries; and serves international chapters in Canada, New Zealand and Kenya.

The Code Council offers a number of services: code-related training for all segments of the construction industry; certification examinations to test professional knowledge of code

enforcement and construction; technical support, including plans reviews and technical consulting; and a variety of construction-related products and publications.

ICC-Evaluation Service, a Code Council subsidiary, performs technical evaluations of building products, components, methods and materials, and issues reports on code compliance. Another subsidiary, the International Accreditation Service, accredits testing and calibration laboratories, inspection agencies, building departments, fabricator inspection programs and International Building Code special inspection agencies.

B. Vision: Protecting the health, safety, and welfare of people by creating better buildings and safer communities.

C. Mission: Providing the highest quality codes, standards, products, and services for all concerned with the safety and performance of the built environment.

D. Values:

- Customer value
- Integrity and trust
- Member-focus
- Professionalism
- Public service
- Quality

E. Origin: The International Code Council (ICC) was established in 1994 as a nonprofit organization dedicated to developing a single set of comprehensive and coordinated national model construction codes. The founders of the ICC are Building Officials and Code Administrators International, Inc. (BOCA), International Conference of Building Officials (ICBO), and Southern Building Code Congress International, Inc. (SBCCI). Since the early part of the last century, these nonprofit organizations developed the three separate sets of model codes used throughout the United States. Although regional code development has been effective and responsive to our country's needs, the time came for a single set of codes. The nation's three model code groups responded by creating the International Code Council and by developing codes without regional limitations the International Codes.

F. Purpose of the ICC: There are substantial advantages in combining the efforts of the existing code organizations to produce a single set of codes. Code enforcement officials, architects, engineers, designers and contractors can now work with a consistent set of requirements throughout the United States. Manufacturers can put their efforts into research and development rather than designing to three different sets of standards, and can focus on being more competitive in worldwide markets. Uniform education and certification programs can be used internationally. A single set of codes may encourage states and localities that currently write their own codes or amend the model codes to begin adopting the International Codes without

technical amendments. This uniform adoption would lead to consistent code enforcement and higher quality construction. The code organizations can now direct their collective energies toward wider code adoption, better code enforcement and enhanced membership services. All issues and concerns of a regulatory nature now have a single forum for discussion, consideration and resolution. Whether the concern is disaster mitigation, energy conservation, accessibility, innovative technology or fire protection, the ICC provides a single forum for national and international attention and focus to address these concerns.

G. ICC Publications: The ICC has developed and made available an impressive inventory of International Codes, including:

- International Building Code®
- International Energy Conservation Code® Provisions ®
- International Existing Building Code®
- International Fire Code®
- International Fuel Gas Code®
- International Mechanical Code®
- ICC Performance Code™
- International Plumbing Code®
- International Private Sewage Disposal Code®
- International Property Maintenance Code®
- International Residential Code®
- International Wildland-Urban Interface Code™
- International Zoning Code®

All of these codes are comprehensive and coordinated with each other to provide the appropriate package for adoption and use in the 21st Century.

H. Services of the ICC

The organizations that comprise the International Code Council offer unmatched technical, educational and informational products and services in support of the International Codes, with more than 250 highly qualified staff members at 16 offices throughout the United States and in Latin America. Some of the products and services readily available to code users include:

- Code application assistance
- Educational programs
- Certification programs
- Technical handbooks and workbooks
- Plan reviews
- Automated products

- Monthly magazines and newsletters
- Publication of proposed code changes
- Training and Informational videos

I. ICC Code Development

Any interested individual or group may submit a code change proposal and participate in the proceedings in which it and all other proposals are considered. This open debate and broad participation before a committee comprised of representatives from across the construction industry, including code regulators and construction industry representatives, ensures a consensus of the construction community in the decision-making process. A major advantage of ICC's consensus-based private-sector code development process is that it allows both the ICC code development committees and eligible voting members at the code change hearings to participate in establishing the results of each proposal. Voting members may either ratify the committee's recommendation or make their own recommendation. The results of all votes are published in the report of the ICC code development hearings.

Eligible voting members review the recommendations of the ICC code development committee and determine the final action. Following consideration of all public comments, each proposal is individually balloted by the eligible voters. The final action on the proposals in based on the aggregate count of all votes cast. This important process ensures that the International Codes will reflect the latest technical advances and address the concerns of those throughout the industry in a fair and equitable manner.

The mission of the International Code Council is to provide the highest quality codes, standards, products, and services for all concerned with the safety and performance of the built environment.

2. CSI (Construction Specifications Institute)

The **Construction Specifications Institute** (CSI) is a United States national association of more than 8,000 construction industry professionals who are experts in building construction and the materials used therein. The Institute is dedicated to improving the communication of construction information through a diversified membership base of allied professionals involved in the creation and management of the built environment, continuous development and transformation of standards and formats, education and certification of professionals to improve project delivery processes, and creation of practice tools to assist users throughout the facility life-cycle. The work of CSI is currently focused in three areas being standards and publications, construction industry professional certifications, and continuing education for construction professionals.

MasterFormat: CSI publishes MasterFormat, which is a standardized classification for construction information, such as detailed construction project cost estimates or construction specifications. Since its debut under another title in 1963, MasterFormat consisted of 16 Divisions representing broad categories of construction, such as *Masonry*, *Concrete*, *Electrical*,

Finishes, or *Mechanical*. In November 2004, a revised edition of MasterFormat was published that expanded the categories to 50 Divisions, reflecting the growing complexity of the construction industry, incorporation of a broader array of construction project types, and addition of facility life cycle and maintenance information into the classification. With this expansion, MasterFormat was positioned to help facilitate Building Information Modeling (BIM) to contain project specifications.

The MasterFormat standard serves as the organizational structure for construction industry publications such as the Sweets catalog with a wide range of building products, and master guide specification products such as MasterSpec and BSD SpecLink. MasterFormat helps architects, engineers, owners, contractors, and manufacturers classify the construction of work results using a variety of construction resources. The MasterFormat sections within the Divisions can also be used to reference performance and safety requirements generated by agencies such as the American Society for Testing and Materials (ASTM) and the Occupational Safety and Health Administration (OSHA), among others.

3. **ACI** (American Concrete Institute)
The **American Concrete Institute** (**ACI**, formerly **National Association of Cement Users** or **NACU**) is a non-profit technical society and standards developing organization. ACI was founded in January 1905 during a convention in Indianapolis. The Institute's headquarters are currently located in Farmington Hills, Michigan, USA. ACI's mission is "ACI develops and disseminates consensus-based knowledge on concrete and its uses.

ACI 318 Building Code Requirements for Structural Concrete provides minimum requirements necessary to provide public health and safety for the design and construction of structural concrete buildings. It is issued and maintained by the American Concrete Institute. The latest edition of the code is ACI 318-19.

4. **American National Standards Institute**

A. **Introduction:** As the voice of the U.S. standards and conformity assessment system, the American National Standards Institute (ANSI) empowers its members and constituents to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the protection of the environment. The Institute oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector: from acoustical devices to construction equipment, from dairy and livestock production to energy distribution, and many more. ANSI is also actively engaged in accrediting programs that assess conformance to standards – including globally-recognized cross-sector programs such as the ISO 9000 (quality) and ISO 14000 (environmental) management systems.

B. **Mission:** To enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.

C. Origin: The National Standards Institute (ANSI) was founded on October 19, 1918 as a 501(c)3 private, not-for-profit organization. The American National Standards Institute (ANSI) has served in its capacity as administrator and coordinator of the United States private sector voluntary standardization system for more than 90 years. Founded in 1918 by five engineering societies and three government agencies, the Institute remains a private, nonprofit membership organization supported by a diverse constituency of private and public sector organizations. Throughout its history, ANSI has maintained as its primary goal the enhancement of global competitiveness of U.S. business and the American quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and promoting their integrity. The Institute represents the interests of its nearly 1,000 company, organization, government agency, institutional and international members through its office in New York City, and its headquarters in Washington, D.C.

D. National Standardization: ANSI facilitates the development of American National Standards (ANS) by accrediting the procedures of standards developing organizations (SDOs). These groups work cooperatively to develop voluntary national consensus standards. Accreditation by ANSI signifies that the procedures used by the standards body in connection with the development of American National Standards meet the Institute's essential requirements for openness, balance, consensus and due process.

ANSI is often asked about the total number of standards (and standards setting bodies) in the United States. It is estimated that in the U.S. today there are hundreds of "traditional" standards developing organizations - with the 20 largest SDOs producing 90% of the standards - and hundreds more "non-traditional" standards development bodies, such as consortia. This means that the level of U.S. participation is quite expansive as the groups themselves are comprised of individual committees made up of experts addressing the technical requirements of standards within their specific area of expertise.

At year-end 2020, about 200 of these standards developers were accredited by ANSI; there were more than 10,000 American National Standards (ANS).

E. ANSI Essential Requirements: In order to maintain ANSI accreditation, standards developers are required to consistently adhere to a set of requirements or procedures known as the *"ANSI Essential Requirements,"* that govern the consensus development process. Due process is the key to ensuring that ANSs are developed in an environment that is equitable, accessible and responsive to the requirements of various stakeholders. The open and fair ANS process ensures that all interested and affected parties have an opportunity to participate in a standard's development. It also serves and protects the public interest since standards developers accredited by ANSI must meet the Institute's requirements for openness, balance, consensus and other due process safeguards.

That is why American National Standards are usually referred to as "open" standards. In this sense, "open" refers to a process used by a recognized body for developing and approving a standard. The Institute's definition of openness has many elements, but basically refers to a collaborative, balanced and consensus-based approval process. The

content of these standards may relate to products, processes, services, systems or personnel.

In its role as the only accreditor of U.S. voluntary consensus standards developing organizations, ANSI helps to ensure the integrity of the standards developers that use our *ANSI Essential Requirements: Due process requirements for American National Standards*. A separate process, based on the same principles, determines whether standards meet the necessary criteria to be approved as American National Standards. The process for approval of these standards (currently numbering approximately 10,000) is intended to verify that the principles of openness and due process have been followed and that a consensus of all interested stakeholder groups has been reached.

The hallmarks of this process include:

- Consensus must be reached by representatives from materially affected and interested parties
- Standards are required to undergo public reviews when any member of the public may submit comments
- Comments from the consensus body and public review
- commenters must be responded to in good faith
- An appeals process is required

F. ANSI Open Standards: ANSI's use of the terms "open" and "openness" to describe standards is meant to characterize documents that have undergone this kind of consensus-based, transparent process. All ANSI-accredited standards developers follow the *Essential Requirements* which embrace globally-accepted principles of standardization implemented by well-recognized, international standards bodies such as the International Telecommunication Union (ITU), International Organization for Standardization (ISO), and International Electro-technical Commission (IEC).

The terms and conditions used in the development of "open standards" should balance the interests of those who will implement the standard with the interests and voluntary cooperation of those who own intellectual property rights that are essential to the standard. Such terms and conditions should readily promote, and not unreasonably burden, accessibility to the standard for the communities of interested implementers. To achieve such balance, the payment of reasonable license fees and/or other reasonable and nondiscriminatory license terms may be required by the intellectual property rights holders. This balance of licensing rights (rather than waiver thereof) is consistent with an open standard. The word "open" does not imply "free" from monetary compensation or other reasonable and nondiscriminatory license terms. Further, an open standard may involve the payment of a fee to obtain a copy of the standard. Such fees are sometimes used to offset the costs associated with managing open standards development process.

The ANSI process serves all standardization efforts in the United States by providing and promoting a process that withstands scrutiny, while protecting the rights and interests of every participant. In essence, ANSI standards quicken the market acceptance of products

while making clear how to improve the safety of those products for the protection of consumers.

G. International Standardization: ANSI promotes the use of U.S. standards internationally, advocates U.S. policy and technical positions in international and regional standards organizations, and encourages the adoption of international standards as national standards where they meet the needs of the user community.

The Institute is the sole U.S. representative and dues-paying member of the two major non-treaty international standards organizations, the International Organization for Standardization (ISO), and, via the U.S. National Committee (USNC), the International Electro-technical Commission (IEC). As a founding member of the ISO, ANSI plays a strong leadership role in its governing body while U.S. participation, via the USNC, is equally strong in the IEC.

Through ANSI, the U.S. has immediate access to the ISO and IEC standards development processes. ANSI participates in almost the entire technical program of both the ISO and the IEC, and administers many key committees and subgroups. Part of its responsibilities as the U.S. member body to the ISO include accrediting U.S. Technical Advisory Groups (U.S. TAGs), whose primary purpose is to develop and transmit, via ANSI, U.S. positions on activities and ballots of the international Technical Committee. U.S. positions for the IEC are endorsed and closely monitored by the USNC Technical Management Committee (TMC).

In many instances, U.S. standards are taken forward to ISO and IEC, through ANSI or the USNC, where they are adopted in whole or in part as international standards. For this reason, ANSI plays an important part in creating international standards that support the worldwide sale of products, which prevent regions from using local standards to favor local industries. Since volunteers from industry and government, not ANSI staff, carry out the work of the international technical committees, the success of these efforts often is dependent upon the willingness of U.S. industry and government to commit the resources required to ensure strong U.S. technical participation in the international standards process.

H. Conformity Assessment: Conformity Assessment, the term used to describe steps taken by both manufacturers and independent third parties to determine fulfillment of standards requirements, also remains a high priority for the Institute. ANSI's program for accrediting third-party product certification have experienced significant growth in recent years, and the Institute continues its efforts to obtain worldwide acceptance of accredited certifications performed in the U.S. One of the best indicators of the strength of the U.S. system is the government's extensive reliance on, and use of, private sector voluntary standards. Pursuant to OMB Circular A119, federal government agencies are required to use voluntary standards for regulatory and procurement purposes when appropriate. State and local governments and

agencies have formally adopted thousands of voluntary standards produced by ANSI, and the process appears to be accelerating.

5. American Society for testing and Materials (ASTM International)

A. Introduction: ASTM International is one of the largest voluntary standards development organizations in the world-a trusted source for technical standards for materials, products, systems, and services. Known for their high technical quality and market relevancy, ASTM International standards have an important role in the information infrastructure that guides design, manufacturing and trade in the global economy.

ASTM International, originally known as the American Society for Testing and Materials (ASTM), was formed over a century ago, when a forward-thinking group of engineers and scientists got together to address frequent rail breaks in the burgeoning railroad industry. Their work led to standardization on the steel used in rail construction, ultimately improving railroad safety for the public. As the century progressed and new industrial, governmental and environmental developments created new standardization requirements, ASTM answered the call with consensus standards that have made products and services safer, better and more cost-effective.

ASTM plays a leadership role in addressing the standardization needs of the global marketplace. Known for its standards development and delivery, ASTM is at the forefront of standards development work, while also increasing the accessibility of ASTM International standards to the world.

ASTM continues to be the standards forum of choice of a diverse range of industries that come together under the ASTM umbrella to solve standardization challenges. In recent years, stakeholders involved in issues ranging from safety in recreational aviation, to fiber optic cable installations in underground utilities, to homeland security, have come together under ASTM to set consensus standards for their industries.

Standards developed at ASTM are the work of over 30,000 ASTM members. These technical experts represent producers, users, consumers, government and academia from over 120 countries. Participation in ASTM International is open to all with a material interest, anywhere in the world.

B. Mission Statement: To be recognized globally as the premier developer and provider of voluntary consensus standards, related technical information, and services that:

- promote public health and safety, support the protection and sustainability of the environment, and the overall quality of life;
- contribute to the reliability of materials, products, systems and services;
- facilitate international, regional, and national commerce.

This statement reflects the language of ASTM's charter and makes clear the Society's commitments to the development and dissemination of high-quality standards and technical

information in increasingly diverse fields, and to strengthening the acceptance and use of ASTM international standards in a global environment of international, regional, and national breadth.

C. **Strategic Objectives:** The following strategic objectives have been adopted by the ASTM International Board of Directors as the basis for developing policies and plans that will implement the ASTM mission worldwide;

- To provide the optimum environment and support for technical committees to develop needed Standards and related information.
- To ensure **ASTM** International products and services are provided in a timely manner and meet current needs.
- To increase the awareness of the **ASTM** International consensus process, the benefits of participation, and the value of **ASTM** Standards and services in the global marketplace.
- To advance the International, Regional and National acceptance and use of **ASTM** International products and services.
- To facilitate the use of **ASTM** International processes, resources, skills, and infrastructure by the marketplace to accommodate it's changing needs.
- To ensure the fair representation and participation of key stakeholders in **ASTM** International activities to help insure the development of technically sound, market relevant Standards.

6. American Society of Mechanical Engineers (ASME)

A. **Introduction:** Founded in 1880 as the American Society of Mechanical Engineers, ASME is a not-for-profit professional organization promoting the art, science and practice of mechanical and multidisciplinary engineering and allied sciences. ASME develops codes and standards that enhance public safety, and provides lifelong learning and technical exchange opportunities benefiting the global engineering and technology community. ASME has more than 127,000 members worldwide.

B. **Mission:** To serve our diverse global communities by advancing, disseminating and applying engineering knowledge for improving the quality of life; and communicating the excitement of engineering.

C. **Vision:** ASME will be the essential resource for mechanical engineers and other technical professionals throughout the world for solutions that benefit humankind.

D. **Core Values:** In performing its mission, ASME adheres to these core values:

- Embrace integrity and ethical conduct
- Embrace diversity and respect the dignity and culture of all people
- Nurture and treasure the environment and our natural and man-made resources

- Facilitate the development, dissemination and application of engineering knowledge
- Promote the benefits of continuing education and of engineering education
- Respect and document engineering history while continually embracing change
- Promote the technical and societal contribution of engineers

E. Codes and Standards: ASME was founded in 1880 to provide a setting for discussion among engineers regarding the key issues and concerns brought by the rise in industrialization and mechanization, particularly in the area of machine safety and reliability. The Society's founders were some of the more prominent machine builders and technical innovators of the late nineteenth century.

One of their chief interests was the development of standard tools and machine parts and uniform work practices ensuring reliability and predictability in machine design and mechanical production. In the first years, the fledgling ASME became a focal point for discussing standards addressing screw threads, pump and valve dimensions, and other mechanical components growing in use on farms and in production factories and machine works. In 1914, the Society achieved a significant organizational milestone, producing the first edition of the ASME Boiler and Pressure Vessel Code, *Rules for the Construction of Stationary Boilers and for Allowable Working Pressures.*

In the years following the publication of the first Boiler Code, ASME developed engineering standards in numerous technical areas and industries, including pipeline production, elevators and escalators, materials handling, gas turbines, and nuclear power.

Today, ASME has more than 500 codes and standards available in print and online, along with conformity assessment programs promoting safety in such areas as hazardous waste facilities and nuclear power plants.

ASME's Standards Technology Institute, LLC, in New York is charged with providing a market-based focus to the Society's ever growing and evolving codes and standards activity, while the Consortium for Standards and Conformity Assessment in Beijing provides an opportunity for ASME to participate in China's growing industrial markets.

The parties involved in the Society's codes and standards development process are mostly engineers. Designers, manufacturers, users, and inspectors and representatives of regulatory agencies also participate on codes and standards committees. These committees, which involve more than 3,000 individuals, continually revise and update codes and standards to reflect changes in technology.

F. Technical Groups and Divisions of ASME

a. Basic Engineering Technical Group

- Applied Mechanics Division
- Bioengineering Division
- Fluids Engineering Division
- Heat Transfer Division
- Materials Division
- Tribology Division

b. Energy Conversion Group

- Internal Combustion Engines Division
- Nuclear Engineering Division
- Power Division
- Advanced Energy Systems Division
- Solar Energy Division

c. Engineering and Technology Management Group

- Management Division
- Safety Engineering and Risk Analysis
- Division
- Technology and Society Division

d. Environment and Transportation Group

- Aerospace Division
- Environmental Engineering Division
- Noise Control and Acoustics Division
- Rail Transportation Division
- Solid Waste Processing Division

e. Manufacturing Technical Group

- Manufacturing Engineering Division
- Materials Handling Engineering Division
- Plant Engineering and Maintenance Division
- Process Industries Division
- Textile Engineering Division

f. Pressure Technology Group

- Nondestructive Evaluation (NDE)
- Engineering Division
- Pressure Vessels and Piping Division

g. Systems and Design Group

- Computers and Information in Engineering Division
- Design Engineering Division
- Dynamic Systems and Control Division
- Electronic and Photonic Packaging Division
- Fluid Power Systems and Technology Division
- Information Storage and Processing Systems Division
- Micro-electromechanical Systems (MEMS) Division

h. International Petroleum Technology Institute

- Pipeline Systems Division
- Petroleum Division
- Ocean, Offshore and Arctic Engineering Division

7. IEEE (Institute of Electrical and Electronics Engineers)

The IEEE traces its founding to 1884 and the American Institute of Electrical Engineers. In 1912, the rival Institute of Radio Engineers was formed. Although the AIEE was initially larger, the IRE attracted more students and was larger by the mid-1950s. The AIEE and IRE merged in 1963.

The IEEE headquarters is in New York City at 3 Park Ave, but most business is done at the IEEE Operations Center[10] in Piscataway, NJ, first occupied in 1975.

IEEE produces over 30% of the world's literature in the electrical and electronics engineering and computer science fields, publishing approximately 200 peer-reviewed journals and magazines. IEEE publishes more than 1,200 conference proceedings every year.

The published content in these journals as well as the content from several hundred annual conferences sponsored by the IEEE are available in the IEEE Electronic Library (IEL)[22] available through IEEE *Xplore*[23] platform, for subscription-based access and individual publication purchases.[24]

In addition to journals and conference proceedings, the IEEE also publishes tutorials and standards that are produced by its standardization committees. The organization also has its own IEEE format paper. In writing IEEE papers, it is not just a matter of mentioning the author's name or the page number or the date an article was published. The most important aspect is referring to the source by indicating its number in a square bracket and ensure it corresponds with the full citation as mentioned in the reference list.

8. United States Green Building Council- LEED Certification

A. Introduction: The U.S. Green Building Council (USGBC) is a 501 c3 non-profit organization committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings..

With a community comprising 78 local affiliates, more than 20,000 member companies and organizations, and more than 100,000 LEED Accredited Professionals, USGBC is the driving force of an industry that is projected to soar to $60 billion by 2010. The USGBC leads an unlikely diverse constituency of builders and environmentalists, corporations and nonprofit organizations, elected officials and concerned citizens, and teachers and students.

Buildings in the United States are responsible for 39% of **CO_2** emissions, 40% of energy consumption, 13% water consumption and 15% of GDP per year, making green building a source of significant economic and environmental opportunity. Greater building efficiency can meet 85% of future U.S. demand for energy, and a national commitment to green building has the potential to generate 2.5 million American jobs.

B. Mission: To transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life.

C. Vision: Buildings and communities will regenerate and sustain the health and vitality of all life within a generation.

D. LEED Green Building Rating System: The LEED green building certification system is the foremost program for the design, construction and operation of green buildings. The

U.S. Green Building Council's LEED rating system is the preeminent program for the design, construction and operation of green buildings. 35,000 projects are currently participating in the LEED system, comprising over 4.5 billion square feet of construction space in all 50 states and 91 countries.

By using less energy, LEED-certified buildings save money for families, businesses and taxpayers; reduce greenhouse gas emissions; and contribute to a healthier environment for residents, workers and the larger community.