3.1 GUIDING PRINCIPLES

Five over-riding Guiding Principles have been identified for all planning, design and construction projects at the University. These include: Safety and Security; Accessibility; Sustainability and Environment; Flexibility and Adaptability; and Manageability. These Guiding Principles are the basis of the Technical and Function and Use guidelines and must be incorporated into all facilities and land development at the University. Further description/definition of these principles are as follows:

Safety and Security
- Ensure public health;
- Ensure personal safety;
- Ensure buildings can be made secure during non-operating hours;
- Ensure buildings meet/exceed fire and life safety requirements;
- Limits or reduces University risk and liability.

Accessibility
- Universal design (provide features to enhance accessibility for all) as outlined in the Alberta Building Code;
- Site planning must accommodate persons with physical disabilities without the need of assistance on primary routes;
- Allow access universally regardless of ability, from the moment of entry to the University campus, into and through its buildings and lands.

Sustainability and Environment
- The University is committed to Constructing Sustainable buildings and various Certifications may be used. Each project team must refer to the project Request for Proposal and associated documentation where the certification level and type is prescribed for the project.
- Site and building development must be sustainable and responsive to the environment including (The intention of the Guidelines is to achieve the equivalent of LEED™ (Leadership in Energy and Environmental Design) Certified as a minimum but preferably ‘Silver’ equivalent rating.):
  - water efficiency;
  - energy use;
  - materials use;
  - indoor environmental quality;
  - cradle to cradle economics.
- Building design should enhance/encourage sustainable practices.
- Renovate, reuse, renew, and recycle materials, systems, products and/or spaces.

Flexibility and Adaptability
- Provide features which permit flexibility and change of spaces
to new/other occupants and/or functions at a minimum cost;
- Provide controls to operate building systems permitting portions of the building to be used efficiently while other portions are unoccupied/closed;
- Provide features to ensure that space will permit intended functions and perform under good conditions;
- Adds to longevity; allowing a fully functioning facility for varied uses and functions over the building’s anticipated lifetime;
- Permit easy retrofit, renewal, enhanced efficiency of use.

Manageability
- Optimize life cycle costs while ensuring long life for building components and elements;
- Provide design features to assist access to systems/equipment for routine maintenance, periodic repairs and replacement;
- Provide a building envelope with a service life consistent with the planned building life;
- Provide durable, easy to maintain material/finishes;
- Ensure building design is compatible with University’s Utilities Infrastructure;
- Ensure building system operates in accordance with design intent;
- Provide controls to allow building system operation is within portions of the building while other are shutdown.

3.2 GENERAL DESIGN CONSIDERATIONS

While it is acknowledged that all projects are unique and therefore require specific and individual attention, there are a number of generic design considerations, which typically apply to all or most projects.

The following is not intended to be a total list but to expand on the Guiding Principles. These should be considered a starting point from which the specific project design evolves:

1. Building design should enhance function, a simple (yet elegant) design is preferred, shape of building should optimize length and height of perimeter walls and number of roof levels.
2. Design should consider flexibility to ensure variety of potential space uses.
3. Design to meet the present needs of the University and to recognize that future need changes should be achievable through adaptive reuse.
4. Design to achieve the program needs within the University’s budget.
5. Design using systems and equipment that can be maintained/modified during the project building/system life. Do not, where possible, use systems and equipment that are not supported by manufacturer/suppliers.

6. Innovations are encouraged but experimentation at the University’s expense must be avoided.

7. Technological change and advancements require consideration in design.

8. All University buildings are to be accessible in accordance with the Alberta Building Code.

9. Design to consider low fire hazard, good resistance to misuse and vandalism, and good security against illegal entry.

10. Design facilities with energy conservation and occupant comfort in mind.

11. Consider using value analysis to undertake decisions considering longer term operation and maintenance implications.

12. All mechanical and electrical components require easy access for cleaning, servicing and replacement, with little or no disruption to users.

13. Use neutral colours for built-in fixtures, fittings and major surfaces. Consider accent colours for small surfaces and furniture such as upholstery. Evaluate colours and finishes based upon, timelessness, longevity, behavioural impact, cost and deterioration factors.

14. Roofing and rooftop equipment should be designed for access by maintenance staff and for future replacement.

15. Exercise a preference for materials that demonstrate a greater degree of responsibility to the environment.

16. Use best practices for energy management. Consider passive systems, heat recovery, high efficiency lighting and harmonic correction.

3.3 PROHIBITED ITEMS

Design elements and construction features may be prohibited within the Guidelines because of concern and experience over longer term durability and/or performance. Prohibited items are identified throughout Section 4.0 “Technical Guidelines” and Section 5.0 “Function and Use”.
3.0 PRINCIPLES & DESIGN CONSIDERATION

In special cases prohibited elements and features may be accepted if a special case can be made for their inclusion. Requests for acceptance of prohibited items would be dealt with as outlined in Section 1.5 Standards and Guideline Exemptions.

3.4 BUILDING LIFE EXPECTANCY

The University is a long term owner/operator of their building infrastructure. The building life expectancy should reflect this long term commitment within the context of the building/facilities program and the Edmonton climate extremes.

All buildings shall be designed for a building life expectancy as follows:

- 100 years for the structure and inaccessible components;
- 50 years for the building envelope, except roofing;
- 25 years for shingle or membrane roofing (metal roofing should provide a 100 year life expectancy);
- 25 years for interior components, and design to allow change;
- 30 years for mechanical systems (without major upgrade or replacement);
- 30 years for electrical systems;
- finishes shall be selected that require minimum maintenance.

Additions will be designed with a life expectancy equal to the expected life of the building receiving the addition.

Major interior renovations will be designed for a life expectancy of 20 years.

3.5 HERITAGE CONSTRAINTS

The University has a number of historically and architecturally significant sites and buildings that are worthy of retention. Each building and its heritage character will be individually reviewed on its own merits. The Consultants should make themselves aware of heritage constraints to prepare alternate solutions for repairs/replacement in older University buildings. Generally the distinctive heritage elements and character should be preserved and enhanced. Refer to Section 5.12.