

State of Wyoming
New State Office Building

Cheyenne, Wyoming

Level I Reconnaissance &
Level II Feasibility Report

February 7, 2012



Department of Administration & Information - Construction Management
HDR Architecture, Inc. & Plan One Architects

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1.0 Executive Summary

The State of Wyoming is currently leasing over 330,000 square feet of office space in the City of Cheyenne. In the interest of being better stewards of tax dollars in the State, the 2011 Legislature authorized the Department of Administration and Information to conduct a Level I Reconnaissance / Level II Feasibility Study for a New State Office Building project to provide relief to the State's budget assigned to leased space in Cheyenne. Whereas the new building cannot replace all leased space, amortization tables (provided in the appendix of this report) illustrate the payback to the State with this approach. This project is intended to replace leased space with State owned space. This project is not intended to imply growth of State programs or Agencies.

The New State Office Building is envisioned to provide flexible, adaptable office space for State of Wyoming Agencies and Offices in Cheyenne. It is intended that the facility be designed with no user in mind, such that it is useful to the ever-varying office needs of the State of Wyoming. Other temporary uses of the facility can be accommodated by the building, and may be considered by the State, but are not addressed here.

The process for this Study (refer to section 2.0 Project Narrative, page 3) was focused on an inclusive open dialogue with broad representation by State and Cheyenne stakeholders. The process began with an exploration into the nature and aspirations of Wyoming government and Cheyenne architecture. With a fundamental "Vision" in place, multiple planning, organization, and aesthetic options were explored. The recommendation provided herein represents the Steering Committee's

- interest in illustrating the maximum, serviceable project the site can support;
- representation of a design approach that can mediate the proud integrity of a State building and the humble scale desired by being located adjacent to a residential neighborhood; and
- pursuit of a flexible collection of spaces that will be useful to the State over time, not just at first occupancy.

Whereas the premise of the project is to provide office space to relieve the cost of lease space, in the course of studying the project, the Steering Committee found that the current leased office spaces have limited natural light, and poor environmental conditions (electrical-resistance space heaters and electric air purifiers were observed in most workstations). It is clear that office space with access to natural light, heating and cooling control local to the user, and quality resource and meeting rooms will further benefit the State with decreased absenteeism and increased productivity, not to mention the savings to the utility bill. It is also noted that co-locating State Agencies and Offices in one facility will inherently improve coordination between Agencies and reduce transportation costs. Citizens seeking the services of these State Agencies and Offices will also witness improved access to their government.

As presented, with maximum development of the site, the project includes a four-story, 310,000 gross square feet office building (refer to section 3.0 Program Summary, page 13) and an adjoining seven-level, 1,038 stall parking structure (refer to Section 5.12 Parking Structure Systems, page 43). Space assignments will not be provided with this Study. The building and associated parking structure are being developed based upon what is believed the site can hold given planning requirements, and how the building can "fit" in the neighborhood. Whereas plan development is required to provide firm Net Assignable area (NASF), a reasonable 75%

efficiency for the building would realize 220,000 NASF. A projected Leasable Area for the building is 250,000 SF.

Based upon the scope of work presented herein, HDR/Plan One forecasts a Probable Construction Cost of \$96,450,000. Specific, projected Project Costs (including fees, surveys, management, equipment, furnishings, etc.) will be provided by the Department of Administration and Information Construction Management, and are estimated here at \$14,450,000. Thus a prudent, total project budget for the presented project would be \$110,900,000. (Refer to section 6.0 Project Cost Summary, page 49.)

This estimate exceeds prior forecasts for the project. This increase is directly attributable to the Steering Committee's charge of maximizing the site's capabilities. A larger project may be realized than previously anticipated. (Cost per square foot indicators have not changed significantly.) It is important to note, that the Steering Committee recognizes that the project is scalable to adjust the budget and resulting scope while maintaining the project strategies articulated herein. The Project Cost Summary section of this report provides discussion on the presented project, as well as two alternative pricing / scope strategies to illustrate that the project is scalable. It is understood that the budget is considered a "not to exceed" value. It is critical that the project not spend State dollars in excess of meeting the stated needs, and cost savings must revert back to the State.

A preliminary schedule estimate (refer to section 7.0 Estimated Project Schedule, page 51) forecasts an occupancy date of February 2016, based upon a Level III Design funding authorized by the 2012 Legislature and Level III Construction funding authorized by the 2013 Legislature.

The next step for the project will be the Level III Design phase. Whereas ideally the Level I Level II Report would be considered the foundation from which to develop the project further, the design process in the Level III phase shall re-verify all elements and comply with the direction of the State, including any desired revisions to scope, cost, and schedule. It is very important that the beginning of the design process include a traffic study and verification of the site planning approach. Building plans and aesthetic solutions will be revisited at the direction of the State and as influenced by site planning.

Whereas careful conceptual design work has been completed, this work is provided under the overarching intent of understanding what the project can be, and what costs may be expected. The detailed information provided in this Level I Reconnaissance Level II Feasibility Report is intended to provide the State of Wyoming with reliable, considered information to make an informed determination if the project is viable to proceed to the Design phase at this time.

2.0 Project Narrative

2.1 Leadership

This Study is contracted through the State of Wyoming Construction Management Office of the Department of Administration and Information (AICM). This office is at the direction of the elected officials and takes seriously its charge to provide complete, objective information to the State; to support the State's decision making systems; and to do so efficiently. In preparing a Level I/Level II Study, AICM directs a group of selected professional design consultants and appropriate representatives of the State.

A typical State project will have a specific need, such as the Public Health Laboratory. Such projects have a clear advocate, and ultimately a definitive program of spaces. This project is expressly, and significantly different in that there is no clear advocate and no definitive program of spaces to be satisfied. This project is defined around a need for general office space only. This is an important, foundational condition for the project and guides the representation, goals, and product of this Study.

Representation

AICM established a Steering Committee to guide this Level I/II Study. The composition of the Committee was intended to create broad input and guidance, and represent the varied interests of the State and the project.

Elected officials were included directly and indirectly. Representative Peter Illoway and Senator Tony Ross attended all meetings and directly represented the interests of their constituents. The committee included representatives of the offices of the State Auditor, State Treasurer, Secretary of State, Department of Education, and the Governor's office. Whereas full attendance was not always possible by these representatives, AICM extended additional presentations to facilitate an inclusive, informed process. These presentations were very beneficial to further tuning the project's direction to the needs of the State.

Representatives of State Agencies and State Offices, including, but not limited to, the Department of Health, the Department of Workforce Services, Office of the Chief Information Officer, and the Legislative Services Office (LSO), were included to inform the project on how the State does business and how the project can best support their varied needs. It is understood, as noted below, that the represented Agencies and Offices may or may not be located in the building and their representation on this Committee must be altruistic on the behalf of any State Agency or Office.

The Steering Committee also included Stephan Pappas, Principal of the Cheyenne architecture firm Pappas and Pappas Architects, P.C. to be inclusive of the Cheyenne architectural interests.

Charge

Put plainly, the Charge to the Steering Committee is to provide selfless stewardship to the State in the interest of this proposed project. The Committee shall only consider the interests of the State of Wyoming and the City of Cheyenne. In support of the intent of a Level I/II Study, the outcome of this project shall provide a scope, functional approach, aesthetic direction, estimated cost, and schedule for the State's consideration.

This report endeavors to provide the State with substantive, reliable information such that the State may make informed decisions with respect to the project. It is understood that the decisions of the State may consider this report in whole, or in part.

Premise for Success

Vision

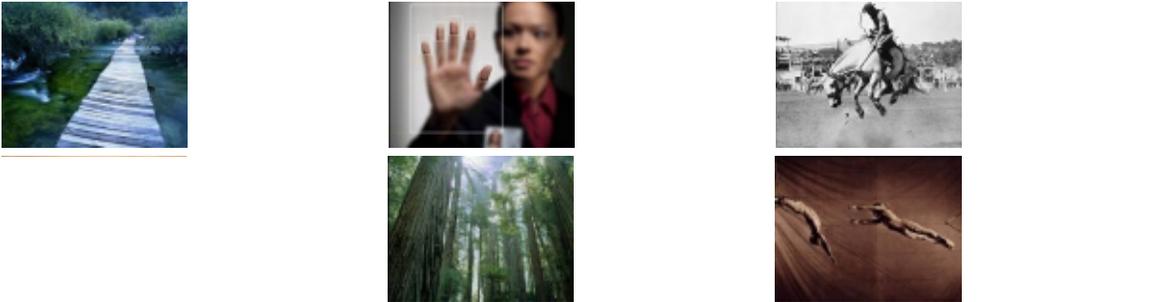
HDR Architecture and Plan One Architects facilitated a vision session workshop with the Steering Committee on September 7, 2011. The intent and anticipated outcome of this discussion was to establish a collective vision for the State of Wyoming’s New State Office Building in Cheyenne, Wyoming. The vision session was used to engage the State of Wyoming leadership team in a forum to discuss goals and values of the collective group. During this meeting, a series of image boards were chosen to convey graphic information, and then encapsulated into written values and ideas as envisioned by the group. The idea of the session was to understand the group’s views regarding efficiency, connectivity, technology, adaptability, functionality, the “Long Term” approach, and finally, balance the aesthetically pleasing with cost effectiveness.

The facilitators presented a multitude of image boards to the Steering Committee asking the group to make a choice of slides that represented their visual ideas and thoughts of the project. During this presentation, comments were made by the members of the groups and notes were taken by HDR and Plan One. Once the first series of slides were selected to represent the spirit of the project, the chosen slides were presented again to the group and reduced in number. Finally, the group was asked to reduce the remaining group of images to three. A consensus was found.

CHOICE



CHALLENGE



CONSENSUS



The remaining three slides were presented to the group once again. The comments from the group were as follows for each of the three slides:

Slide one: This slide contained a wooden path moving away from the viewer between several landscape elements. The response to the slide included the following ideas:

- Appreciate the built/natural environment that co-exists
- Meaningful interconnectivity to the entire Capitol Complex
- Green and Sustainability
- Path to the future
- Wyoming natural feel and environment
- Natural light



Slide two: This slide showed a bucking bronco with a rider. The response to the slide included the following ideas:

- Spirit of Wyoming
- Challenge
- It takes a lot of work to get there
- Teamwork
- Not Old School
- Exterior fits with Capitol building
- Tradition



Slide three: This slide contained a blurred image of a person with an extended hand to a large rectangle and their fingers contained within smaller boxes. The response to the slide included the following ideas:

- Technology
- Future but not futuristic
- Accommodate the old, adaptable to new technology
- Future generations of people
- Information Management



Once the design team completed the image selection session, a conversation was facilitated by HDR and Plan One with the Steering Committee regarding the group's vision of success. The description of success by the group included:

- Easily adaptable and flexibility for the future
- Transitional issues need to be addressed both short term and long term
- Community buy-in. Community likes what building looks like
- Aesthetically pleasing
- Proud of the building

- Balance: cost effective, functional and good looking. Architecture blend with Capitol and campus rather than different styles of architecture; consistent look
- Functional and efficient, both short and long term
- In the long term, develop pedestrian link to relate the new building to the Capitol Complex

Define Success

The New State Office Building will be developed as a project that will provide flexible and adaptable work environments for State Agencies, State Offices, and their employees. Whereas assignments and sequences will not be addressed at this time, some guiding principles set a background for project requirements.

The Committee defines success for this project in three broad themes: to meet the needs of the State; to fit the Cheyenne and Wyoming community; and to embrace value.

Meeting the Needs of the State:

This Project must determine the best collection of spaces and best office environment that will meet the needs of the State.

Office Environment

Office environments have changed over the years and include enclosed offices, open offices, and hybrids; include dedicated spaces, unassigned spaces, flexible spaces, and multipurpose spaces; include varying accommodation of daylight, access to outside air, acoustical control, and control of room temperature. This project must come to terms with a uniform approach to the myriad of possibilities to accommodate the overarching flexibility requirements.

Project Size

The project can support a broad range of office needs for the State in the City of Cheyenne. The project process seeks to understand the State's needs, assess options, and make recommendations to establish the project size. The use of the building will consider a wide variety of agency occupants currently housed in leased government office space in and around Cheyenne, as well as other considerations.

Configuration and Adjacencies

As the building population varies by group or department, the project process must consider how core facilities (e.g. toilets, stairs, elevators, etc.) are located and arranged with respect to the occupied spaces. The occupied spaces must be considered for adjacencies with respect to accommodating future changes of occupants – for either larger or smaller groups.

Amenities

The planned population of occupants and guests will desire amenities within the building, even with the project's adjacency to downtown Cheyenne. The project process seeks to evaluate the needs of the State and determine appropriate employee lounges, meeting rooms, etc.

Fitting the project to Cheyenne and Wyoming:

This Project, in process as well as in its tangible built results, must 'fit' in the social and physical fabric of Cheyenne, Wyoming.

This project will have a tremendous impact on the adjacent residential neighborhoods. The project process seeks to fit this environment. The project process seeks to engage, listen to and respect all interested participants, and consider them as viable contributors. The resultant building must recognize its residential context.

Fit the architectural character of Cheyenne

This project's architectural character must embody the sensibility, the culture and the spirit of Cheyenne and Wyoming. Architectural character is an intensely personal expression and this project cannot be confused with Denver or any other locale.

Fit with Capitol Complex

The Capitol area must be considered in the development of this project, anticipating the current and future goals and aspirations of the State Capitol grounds and facilities. Whereas this project is not considered a "front door" facility for the Capitol area, this project is integral to the Capitol operations and the public realm of the Capitol.

Fit with area vehicular and pedestrian circulation

This project will accommodate a large population of occupants and guests. Circulation to, from, and around the project site is of fundamental concern for the project. This expected, increased volume must fit into the fabric of Cheyenne and the Capitol Complex, and minimize disruption to the surrounding residential areas.

Ensuring Value:

This Project, in process as well as in its tangible built results, must be a value to the State from its inception to years after initial occupancy.

Value with flexible and/or adaptable spaces and systems

Buildings change over time, even during construction. Buildings must be designed for change – change that may be 'known,' and even change that cannot be 'known'. Change is not reserved to rooms, walls and doors – the systems (mechanical, electrical, etc) serving the room and the building are also subject to the winds of change.

Value with first cost

Construction Costs must comply with the budget set by the State, and spent only to meet the needs of the State. Said another way, the budget is considered a "not to exceed" value; it is critical that the project not spend State dollars in excess of meeting the stated needs.

Value with quality and serviceability of materials and systems

A building for the State of Wyoming must be designed with respect for shrinking maintenance budgets. Quality materials and systems are appropriate within the context of the budget. The design of building systems must accommodate housekeeping, maintenance, and eventual replacement.

2.2 Project Process

State Process for CapitU Projects

CapitU projects for the State of Wyoming follow an ordered process designed to provide elected officials with information and control. AICM facilitates the process at the direction of the State by administering a three level process.

Level I Reconnaissance / Level II Feasibility

Project ideas/proposals abound throughout the State system. Perceived needs to support the State or improve the State's operations are expressed in a variety of ways; however, a proposal is not a "project" until the State directs AICM to explore the proposal further. When the State considers that a project idea has merit, AICM undertakes an initial Study, the Level I Reconnaissance / Level II Feasibility Study. Whereas these may be separate studies at the discretion of the State, the two levels of study tend to overlap and AICM realizes efficiencies by combining the efforts. The Level I Reconnaissance / Level II Feasibility Study investigates the proposed project to a sufficient degree of detail to

- articulate the need of the project,
- determine the scope of the project to meet the need, and
- research the reasonable, sufficient cost and schedule to realize the successful project.

This Level I/II Study provides reliable information for a limited investment, without committing to the full costs of a project – it represents the prudent investigation of the possibility of a given project. The overarching intent of the Level I Reconnaissance / Level II Feasibility Study is to sufficiently inform elected officials for their decision making. Direction to AICM from the State can take the form desired by the State including, but not limited to:

- defer, or not fund the project
- fund the project as presented
- fund the project with modifications or limits as determined by the State

The budget bill of the 61st Legislature of the State of Wyoming, 2011 General Session, authorized appropriations for AICM to proceed with the Level I & II for the Safeway site.

Level III Design & Construction

The next level of work for a capital project is for design and construction. Whereas the Level I/II Study has overlap and efficiencies that warrant combination, the design and construction phases are distinct and linear in their delivery.

The design phase includes the Architect/Engineers work to design and document the project based upon the direction provided from the Level I/II Study. Design and documentation is broken into phases of work which include milestones for cost, schedule, and scope confirmation. These milestones serve to control the project to ensure compliance with State expectations.

The first phase of work is called "schematic design" which develops a definitive design for the project. This phase includes extensive coordination with State representatives to develop a responsive design – a design that meets the programmatic, serviceability, aesthetic, cost, and schedule expectations of the State.

The second phase of work is called “design development” wherein the design team develops the design with specific product and detail solutions. This phase continues to interface with State representatives to align the building design with specific needs.

The final design phase is “construction documents” where the architect/engineer develops documents for bidding and construction. Involvement from State representatives for this phase is reduced, with participation focused on project details and overall compliance with the established scope, budget, and schedule.

The construction phase of the project follows directly from the construction document work of the architect/engineer, and represents the bidding and construction of the project by a contractor. This phase represents the majority of the cost of the project and may be separated from the design phase by the Owner to control costs as well as to control the State’s obligations.

Development

Several design strategies were explored over the course of this study. The design process initially focused on site strategies for basic building footprints, building massing, vehicular parking/circulation, pedestrian circulation, deliveries, and future expansion potential. From the knowledge gained at the site level, the study then led to building organization planning ideas represented by five themes, noted as the City Center, Downtown, Courtyard, City Views and Old West schemes. The list below defines many of the design guidelines and drivers that inform the building and parking garage design in each of the themes.

GUIDING DESIGN PRINCIPLES

- Civic Connectivity
- Architectural massing complements civic and downtown
- “Spirit of Wyoming”
- Built and Natural environment co exist
- Respect the surrounding neighborhood
- Capitalize on natural light
- Respect local zoning and setback ordinances
- Balance water drainage on the site
- Balance building, parking and site footprints
- Create flexibility for office through footprint

Presentations were made to the Steering Committee regarding the five themes, to discuss, review, and receive feedback. Multiple building masses allow for the opportunity to place selected agencies that require adjacency into the same pod. Additionally, multiple building nodes allow the State to easily phase the building into the future.

It is important to note that the primary purpose of the concept designs illustrated in this Report is to test the site against the overall building mass and serve as a working diagram for the functional requirements of bringing these various agencies together. Once this project advances to the next level and the variables of the site and program are solidified, then these diagrams will serve as a launching point to further develop a responsive architectural design.

Support

The Level I Reconnaissance and Level II Feasibility Study is intended to be comprehensive and inclusive. To this end, the following groups have participated in the project to instill depth of thought and reliable detail in the Study:

- Steering Committee: Leadership Group met every three to four weeks to provide project direction.
- Office Space Focus Group: Support Group met twice to guide the functionality of Office Space design.
- Conference Space Focus Group: Support Group met twice to guide the functionality of Conference Room, Meeting Room and other Guest support space design.
- Support Space Focus Group: Support Group met twice to guide the functionality of Office Support space, such as copy rooms, mail rooms, work rooms, etc.
- Mechanical & Electrical Systems Stakeholder Group: Support Group met twice to guide the serviceability of building systems.
- Information Technology Stakeholder Group: Support Group met twice to guide the design and specification of building information technology systems.
- Housekeeping & Grounds Stakeholder Group: Support Group met twice to guide the maintainability and housekeeping provisions of building and grounds.
- Art in Public Buildings Program: State Agency charged with managing the Statute for Art in State Buildings. One meeting occurred.
- City of Cheyenne Code Official: The Authority Having Jurisdiction (AHJ) was consulted to assist the team in compliance with local codes and submittal requirements. One meeting occurred.
- City of Cheyenne Planning and Utilities Stakeholders: Authority Having Jurisdiction to assist the team in compliance with local codes and submittal requirements. Two meetings occurred with Planning, and one meeting occurred with Utilities.
- State Leased Space Tours: Informal tours were conducted at Pershing, Qwest, Hathaway, Herschler and Capitol facilities for the design team to appreciate current working environments and develop a shared vocabulary with State workers.
- Community Meetings: Open forum meetings for Community participation.
 - September 7, 2011 introduce project start and intended process; receive comments.
 - November 1, 2011 provide update on project progress and present intended project size; receive comments.
 - January 23, 2012 provide update on project progress and present aesthetic approach; receive comments.

Additional informal meetings and presentations also occurred in support of open communication.

Preliminary Report

A Preliminary Report was provided October 10, 2011, representing the progress of the Study. The Preliminary Report was provided to the State Building Commission, summarized findings to date, and identified elements that require further attention.

2.3 Findings

This report provides a site approach, a plan approach, and an aesthetic approach for the project to establish a basis for scope, costs and schedule. Because the Level III Design phase is intended to define the project direction, and the Level I/II Study is intended to establish only the project basis, each approach (site, plan and aesthetics) is intended to stop short of defining a specific direction or recommendation. Narratives in this report will fully describe the approaches developed by the Steering Committee and the consultant team.

Site Approach

The site approach for the project shall be based on a balance of engaging the project with the Capitol Complex, as well as respecting the adjacent residential community. Each is fundamentally important to the project ‘fitting’ in the Cheyenne community, and each commands careful attention to scale and circulation.

Project scale is addressed in part with the aesthetic approach, and in part with the landscape and hardscape planning for the site. As noted herein, design strategies shall soften edges adjacent to residential areas and emphasize connections to the Capitol Complex. It will also be desirable to acknowledge connections to the south, including the Laramie County Library.

Circulation of pedestrians will respond to the landscape and hardscape planning. Planning shall endeavor to limit vehicular circulation in the surrounding neighborhood. Service drives and parking facility access/egress planning shall be focused to the east side of the site. An important component for addressing the juncture of these two community needs will be to conduct a traffic study with particular attention to the arterial Pioneer Avenue. This Level I/II study defers this work to Level III Design phase work.

Plan Approach

With no specific group or occupant identified for occupancy of the building, a “developer” mindset has been adopted by the Steering Committee and consultant team. This mindset implies that the building needs to achieve high value and be flexible to accommodate a broad range of potential occupants. With the character of potential clients identified herein, and prudent planning, a solid plan approach can be described. The plan approach herein can be described simply as “good bones”. Within the structure of “good bones”, the building can be responsive to a broad range of needs for long term or temporary occupants. A building with “good bones” has clear and understandable systems.

- Circulation systems, horizontal and vertical, are clear and understandable and aid wayfinding for guests. Whereas a long corridor may be interrupted by lightwells, seating areas, etc., the understanding of where you are going and where you are in the building are not diminished.

- Building systems, mechanical and electrical, are organized in a regular, orderly manner. A clear, straightforward distribution system aids in serviceability and adaptability.
- Partition systems are articulated as Permanent Partitions, Fixed Partitions, and Flexible Partitions. This clarity of construction aids in Agencies understanding how the building can be responsive to their unique needs.

Aesthetic Approach

A typical Level I/II Study will leave the aesthetic design of a project to the Level III design phase. Given the sensitive location and environment of this project, a conceptual design approach was requested to be included in the Study.

The Steering Committee and consultant team undertook an ordered study to suggest the aesthetic approach below. The Study was founded in

- research of Cheyenne and Wyoming architecture and community planning,
- massing studies of the proposed site,
- visual listening exercises to transcend verbal limitations and develop a shared visual vocabulary in exploring aesthetic strategies, and
- three-dimensional modeling of multiple potential design responses.

It is not the intent of this Study to propose a design solution for the project. As noted, this is appropriately addressed with the Level III Design work. Through the group’s study, some guiding principles were developed with respect to the character of the entrance and the scale of the facades. These guiding principles, in concert with the massing studies, developed a design theme which the group believes to be successful in guiding the aesthetic approach of the project.

The aesthetic approach, represented by this theme, is presented herein as a range of possible “variations of the theme”. Each theme responds to the site in a different way, and yet each clearly has a central, recognizable theme. By representing the aesthetic approach in this way, it is intended to:

- capture the central theme in articulating a clear, welcoming entrance
- capture the central theme of breaking up the scale of the building horizontally
- capture the central theme of shaping the scale of the building vertically through building setbacks, with respect to adjacent residences and the pedestrian experience
- avoid a restricted perception of the project at this stage
- illustrate a broad range of possibilities that can be realized by a full design process (Level III)

Integral to an aesthetic approach is the materiality of the design. The materials shown here are intended to support the illustration of the gestures to address scale. Actual material selection is appropriate during the Level III Design work. This is important work, and this group recognizes how the materiality will be important in conveying the appropriate character of this project, on this site. Fundamentally,

- it is a State Building and must convey the integrity and value of the State of Wyoming, and yet,
- it is not directly adjacent to the central Capitol Complex grounds and buildings – indeed it is an ‘edge building’ adjacent to residential neighborhoods.

3.0 Program Summary

Currently, we have addressed the programming for the New State Office Building at a “High Altitude.” The specific needs for potential State agencies which would occupy the building have not been discussed. The project definition has been focused, rather, on the overall gross square footage available to the site in relation to zoning and neighborhood context.

Industry standards for office buildings indicate that the State should expect a building efficiency of 70% to 80% when minimal lobby space and connector links are developed within a building. Linkage elements to the parking garage are not included with this metric. The definition for building efficiency equals the Net Assignable Area (NASF) divided by the Gross Area (GSF). It is important to recognize that NASF is not the same as Rentable Area.

Net Assignable Area

Net Assignable area is discretionary, programmable space, usually assigned to a specific use and/or user. Net Assignable Area includes enclosed rooms, footprints of open workstations, and circulation within rooms. Typical areas, or programmable space categories include offices, office support, meeting rooms, and common support.

Leasable Area

Tenants in buildings typically pay for Net Assignable Area plus a share of the buildings core elements. Lease arrangements may vary and should be verified. Leasable Area includes Net Assignable Area and primary circulation. Leasable Area also includes a proportional share of building core elements, including toilets, major circulation, lobbies, stairways, and elevators. Leasable Area does not typically include mechanical spaces, shafts, penthouses, or perimeter wall area.

Gross Area

The Gross Area of the building includes the entire footprint of the building at every floor and includes exterior walls, mechanical spaces, shafts, and all Leasable Area. This area also includes a portion of exterior covered areas.

The Office Space

We would anticipate that the New State Office Building would develop an office layout with single-use offices and open plan workstations with distributed meeting rooms (or areas). The expected ranges for the ratio of open to closed office space can be developed as low as 60% open to 40% closed. Many “forward thinking” offices utilize a 90% open and a 10% closed type of distribution. A percentage relationship of 70% open to 30% closed is anticipated at this time.

The closed office would occupy between 100 to 150 square feet. This area is intended to be sufficient for no more than a desk, return, credenza, and two guest chairs. Each closed office would have full height walls with a door for privacy.

The open office would be based on office spaces between 60 to 80 square feet each. This area is intended to provide an individual (not shared) entrance, and accommodate a desk, return, and guest chair at minimum. The intent for this type of office design is to allow for more flexibility and cross communication between employees. Acoustics will be considered as part of this type of office design to allow for increased privacy regarding sensitive information. Partition heights

are expected to vary to create visual interest, create workgroup areas, and break down the larger open office areas into discernable areas. An electronic noise-masking system shall be provided to reduce unwanted background noise and to support privacy.

A concept to be considered within the open office area is the “Hotel Station.” This is a workstation left open to guests – agencies often have needs for workstations which are not occupied by resident staff. Guests include consultants, visiting internal staff, and temporary staff. Guests in an office area can provide new energy when engaged in a meaningful way.

The Core Elements

Core elements discussed with the Focus Group included the design of small, medium and large conference rooms, training rooms, hearing rooms, lobbies, lounges, and associated kitchenettes/vending. General discussions with this group regarding conference rooms included sizes based upon the number of occupants utilizing the rooms.

- Small Conference Room
 - Accommodate 3 to 4 people; ~80 – 100 sf
 - These rooms would be dedicated to an Agency and would be located within the Agency’s assigned area
 - The number of these rooms would be at the discretion of the Agency

- Medium Conference Room
 - Accommodate 10 to 12 people; ~200 – 300 sf
 - These rooms would be dedicated to an Agency and would be located within the Agency’s assigned area.
 - The number of these rooms would be at the discretion of the Agency

- Large Conference Room
 - Accommodate 25 people or more; ~600 sf+
 - These rooms would be shared, scheduled facilities
 - The rooms would be distributed throughout the building with about four per floor

- Meeting/Hearing Rooms
 - Accommodate 50 to 60 people; ~1,300 – 1,600 sf
 - These rooms would be shared, scheduled facilities
 - The rooms would be distributed throughout the building with about one per floor

Training rooms were discussed as part of the core elements required for the design of the building and would use the rooms listed depending on the size requirements.

Lobbies will be designed into the building as necessary for each space and its needs. The main entry into the State Office Building will receive a level of design and space as part of a primary lobby element. Subsequent lobbies will receive an order of magnitude applied to them as part of their square footage, use and hierarchy. These areas include secondary lobbies at each floor as part of vertical circulation and entry spaces at each agency within the building. A large informal meeting area is anticipated on the south side of the building, at the Thomes Avenue secondary entrance.

The square footage for employee lounges and kitchenettes will be efficient and usable in their design. The request of the Focus Groups and the intent of the design team is to create

combined areas that will be utilized by several agencies. The discussion included vending programs as part of a program requirement for the kitchenette areas.

The Support Elements

The Focus Group for support elements reviewed and responded to a variety of spaces that included copy, storage and mail rooms. It was noted that these rooms are an integral part of each Agency.

Each Agency will require a central copy/storage/mail room due to potential security issues attributable to the nature of the information being dealt with during the day. The overall size for these areas were discussed as being small in size, but distributed evenly throughout the building per floor. Potential requirements for storage rooms include space for archives and files, old computers, desks and chairs, general supplies for the office, and file storage. It was noted that each Agency would determine the needs for specific storage requirements at a later date.

A Useful Collection of Spaces

The intent of programming and planning for this Study is to provide a flexible facility that supports a variety of space types and uses over the life of the building. The approach presented here is to establish a solid framework to the building (previously referred to as “good bones”) and to develop a useful collection of spaces. This collection of spaces is ordered by size and partition type.

The partition types are categorized as permanent, fixed, and temporary.

- Permanent partitions: these partitions are not expected to be moved or modified over the life of the building. This partition type is expected for permanent spaces including shafts, stairs, toilets, mechanical rooms, etc.
- Fixed partitions: these partitions would have the same appearance as permanent partitions but are expected to be changed over time, with some effort (contractors required) as needed to suit the occupant. This partition type is expected for assignable spaces including offices, work rooms, conference rooms, etc.
- Flexible partitions: these partitions are commonly furniture-type systems and are designed to be readily modified by the occupant or furniture specialist. This partition type is expected for assignable spaces such as offices, work stations, meeting areas, work areas, etc.

The sizes of spaces may be developed in Level II Design phase, but are intended here to be modular, such that the building is not a piecemeal of spaces. For example, two 140 sf spaces may be combined to create one 280 sf space. This is a more serviceable approach to the life of the building than attempting to accommodate a variety of space sizes such as 65 sf, 135 sf, 180 sf, etc. We find that most space types can be modified in their use and expectations to fit within this modular approach.

It is premature, with this report, to be definitive with a Listing of Spaces; however, some metrics can be used to get a sense of the building.

Building Area Summary

The Gross Area (GSF) for the building to maximize the prudent use of the site is projected to be 310,000 GSF. This area can be extrapolated to indicate expected Net Assignable Area and Leasable Area using industry standards and some judgment about efficiency of the proposed building plan.

	Net Assignable Area	Leasable Area	Gross Area
1st story	48,670	60,250	71,500
2nd story	57,110	63,250	70,500
3rd story	57,110	63,250	70,500
4th story	57,110	63,250	70,500
Penthouse	0	0	27,000
Total	220,000	250,000	310,000

Assignable Area Projections

Extrapolating this Net Assignable Area to the number of Offices and Conference rooms is more speculative, but can be done to a degree. We must remember that such calculations become more and more approximations based upon general assumptions. The numbers are no better than the assumptions, but nonetheless offer insight into what the building can support.

Given the dialogue with the Focus Groups and the Steering Committee to date, below are two approaches to develop this sense of the potential Collection of Spaces:

- 60/40: 60% flexible; 40% fixed partition spaces
- 70/30: 70% flexible; 30% fixed partition spaces

	PROJECTED NET ASSIGNABLE AREA				OFFICE COUNT	
	60/40		70/30		60/40	70/30
Fixed (office)	55,000	NASF	33,000	NASF	407	244
Fixed (support)	33,000	NASF	33,000	NASF		
Flexible	132,000	NASF	154,000	NASF	2,063	2,406
Totals	220,000	NASF	220,000	NASF	2,470	2,650

*basis: expect 15% of fixed spaces for support spaces
 expect 140 sf average fixed
 expect 70 sf average flexible*

4.0 Conceptual Design

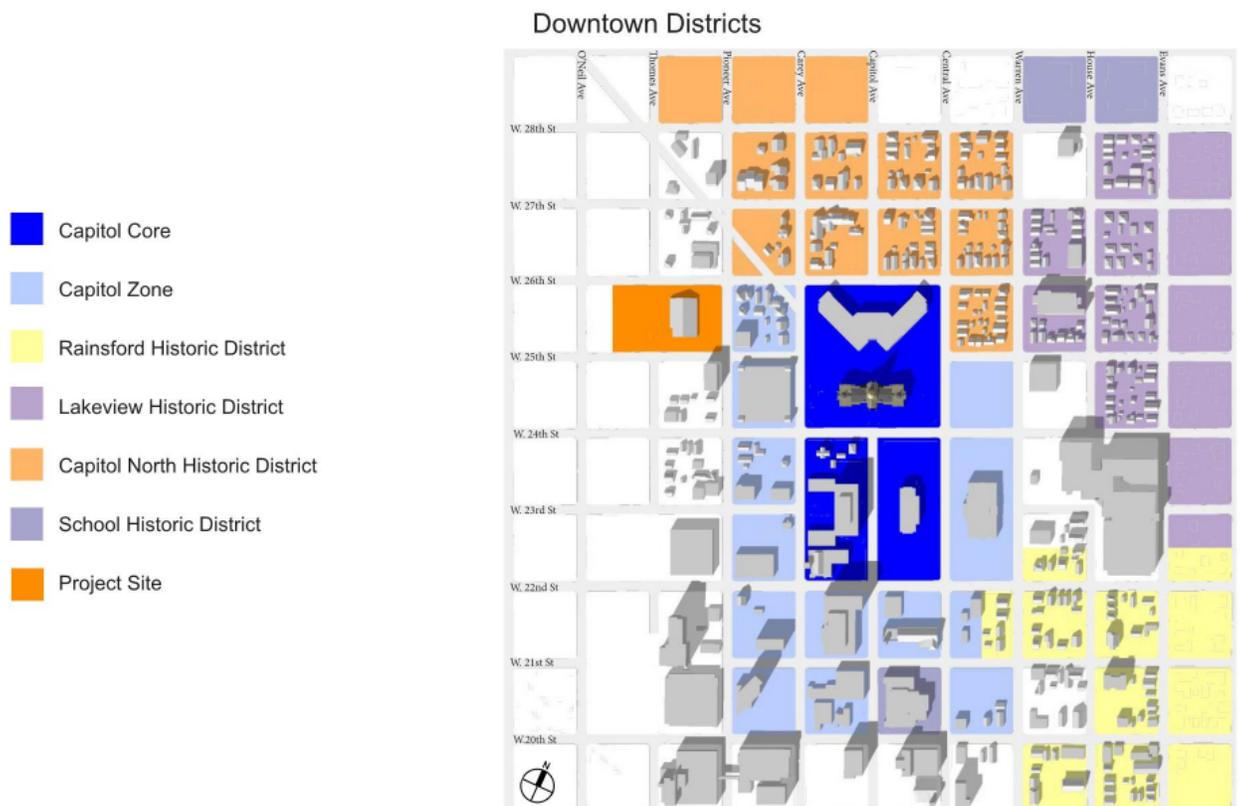
4.1 Site Analysis

The site includes the entire area located between West 25th Street, West 26th Street, O'Neil Avenue, and Pioneer Avenue. The site is owned by the State of Wyoming and has been selected by the State of Wyoming for this Study. The site is currently bisected north to south by Thomes Avenue. Thomes Avenue, between West 25th Street and West 26th Street has been vacated by the previous property owner and the State intends to further vacate the easements for this block.

The grounds are currently being maintained to be clean and mowed. The existing building is being used for unconditioned storage. This existing building will be demolished in its entirety to allow for the New State Office Building to be constructed.

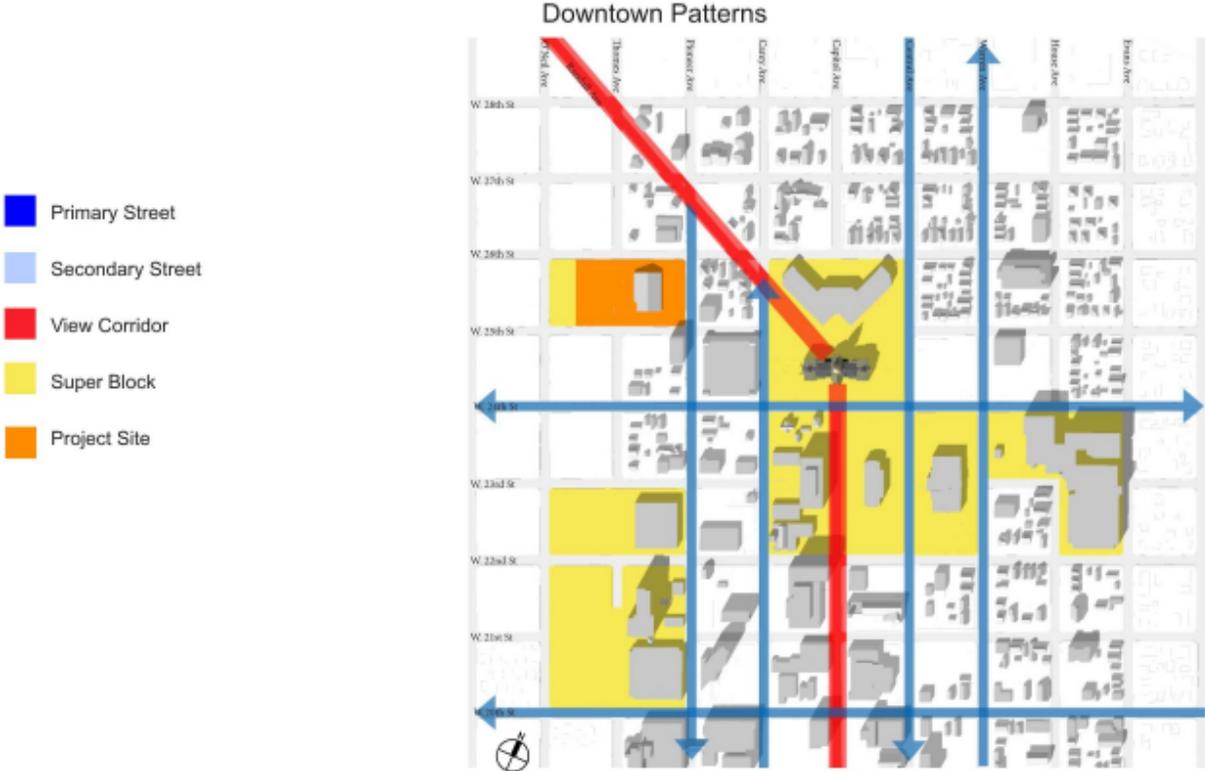
Downtown Districts

The downtown area includes the Capitol Complex District and a number of Historic Neighborhoods as illustrated below. Whereas the project site is not within the established districts, care shall be given in the project design and development to consider these important districts.



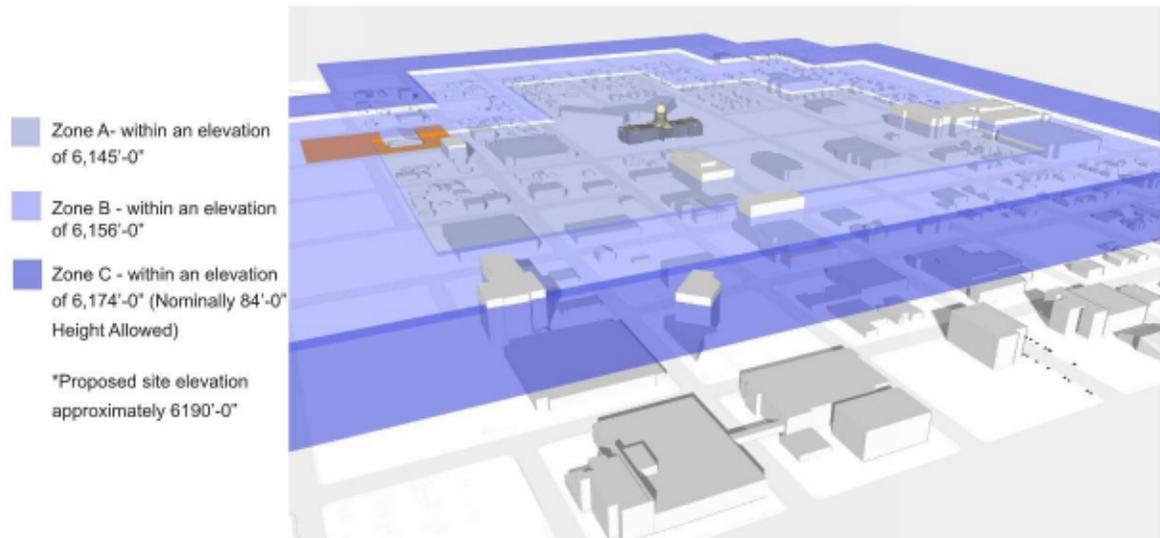
Downtown Patterns

The downtown area has a number of important patterns that influence development. Illustrated below are visual corridors to the Capitol and primary vehicular patterns. Whereas the project site is not adjacent to the view corridors (red lines), it is important for the project to consider views to the Capitol. Vehicular patterns are shown with blue lines. The project is located along Pioneer Avenue, which is an arterial street. A traffic study will be conducted in the Level III Design phase to further understand integrating the project into the City’s vehicular infrastructure.



Height Restrictions

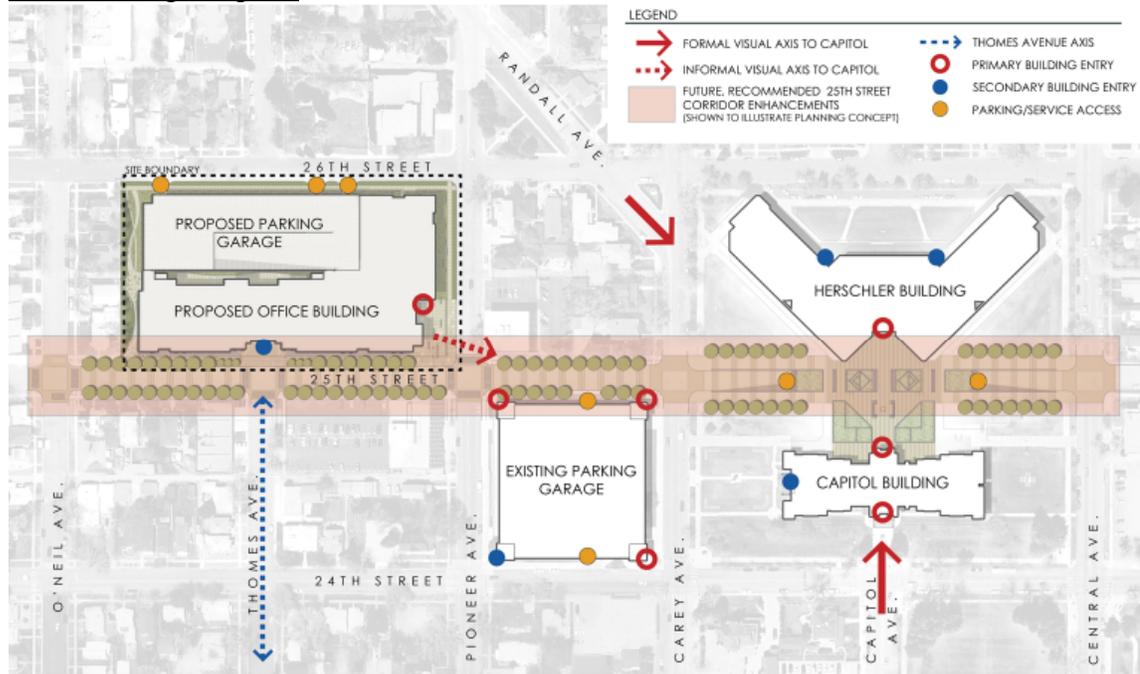
The Capitol Complex imposes height restrictions in the vicinity of the Capitol building in support of maintaining views to this important landmark. The restrictions are based upon elevations, not building height. These limits will be reviewed in detail in the Level III Design phase, but for the purposes of this Study, an 85' height is being used as the limit for this site. Note that this height restriction is more restrictive than Building Codes (assuming a penthouse on the building).



4.2 Conceptual Landscape Design

The conceptual design approach for the Wyoming State Office Building site is grounded in the existing context of the site itself, its proximity and connection to both the Capitol Complex, and the surrounding neighborhoods. The primary expression of this context is the civic nature of the architecture. However, streetscape treatments and building setbacks linking the Capitol Complex and the surrounding neighborhoods help transition and relate this site to the adjacent context.

Site Planning Diagram



The main building entry is located on the corner of 25th Street and Pioneer Avenue. Located close to the Capitol complex, this entry is able to capture views of the Capitol building and will have a generous hardscape plaza that invites people to enter the building. The plaza will be composed of high-quality materials that express this civic character such as stone paving and stone slab seatwalls. Accents such as murals, ingrade plaques or engraved site walls reflecting Wyoming's spirit could also enhance this space.

The secondary entry is on 25th Street and centered on Thomes Avenue. Thomes Avenue is an important circulation axis that connects the project to the Cheyenne Library and Civic Center Complex to the south. This secondary entry will be composed of the same materials as the primary entry, providing a material hierarchy registering significant locations around the site and unifying the site design.

Building Site Diagram



The building perimeter and right-of-way will have an 8' concrete sidewalk, tree, lawn, and building setbacks providing perimeter planting along the base of the building. Design treatments that are consistent with both the Capitol Complex and the surrounding neighborhoods will help situate the site in its context.

The western property edge incorporates a linear 'pocket park' that benefits the site and surrounding community. The park will provide a seating terrace for the public and building employees at the terminus of the building spine, along with passive seating opportunities dispersed throughout the park along a pedestrian path connecting 24th and 25th Street. In addition to benefiting both the public and building employees, the park will also act as a landscaped buffer between the proposed office building and the adjacent residential properties to the west. This park will be planted with deciduous and evergreen species providing year round interest and function.

The central courtyard located between the parking garage and office building will provide a protected environment for outdoor relaxation. Planting beds with green screen walls will be located on the southern parking garage façade to enhance and enliven the space by activating the vertical plane with vegetation. These screens also provide a pleasing visual curtain for the building occupants. Outdoor sculptures are recommended to activate the courtyard, enhancing the level of animation and intimacy for courtyard visitors, while enlivening views from the interior.

In addition to fulfilling critical programmatic needs within the larger complex, the 25th Street Corridor establishes a secondary civic axis to the Capitol Complex and unites the surrounding context as part of a larger civic neighborhood. Street and streetscape enhancements from O’Neil Avenue to the Capitol Plaza should be considered to establish these spatial relationships and ensure that the space remains activated as a public and employee thoroughfare.

4.3 Conceptual Architectural Design

The conceptual design presented here is based on a “site fit” effort and translated into strategies for building and site organization that begin to inform all of the stakeholders about the potential building requirements and opportunities on this specific site.

Plan Approach

A building plan has been developed to explore and illustrate the potential organization of the building. This organization is intended to establish the clear, regular circulation and systems distribution (previously referred to as “good bones”). As described above, no rooms are identified; instead, the plan illustrates the strategy of permanent, fixed, and flexible partitions.

No basement level is planned and the First Story is expected to be above the adjacent grades. The 1st story of the building is recommended to be above the surrounding grade. Storm water management for the watershed north of this site utilizes surface street runoff. As such grades will need to be managed to deflect runoff around the building and parking structure. A high water table in this area also influences the recommendation to elevate the 1st story of the building.

Ground Floor

The first floor plan has important functions to accommodate that are not necessary on typical floors. The building entrances, service entrance, and large multi-function spaces are of particular note.

1st Floor Concept Plan

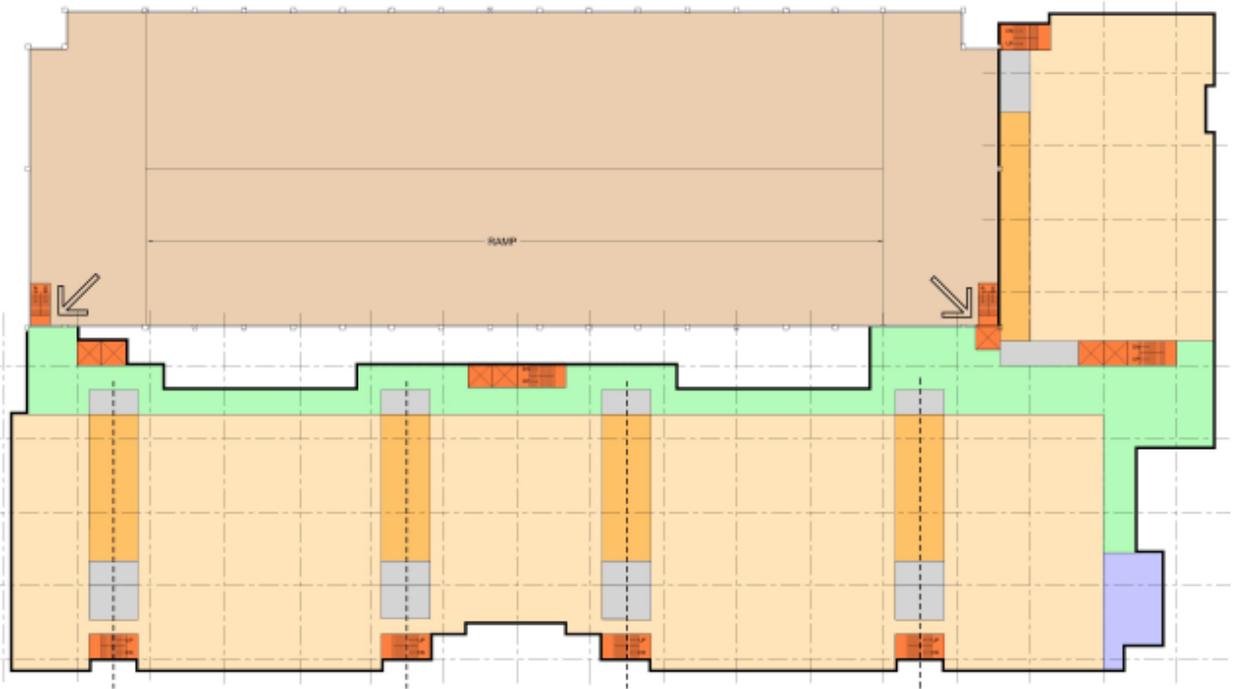


LEGEND



Typical Upper Floor

The typical floor plan mirrors the organizational structure of the 1st story and optimizes the Net Assignable Area (and Leasable Area).



LEGEND

	CIRCULATION/GATHERING
	ELEVATOR/STAIRS
	PERMANENT PARTITIONS
	HEARING ROOM
	FIXED PARTITIONS
	FLEXIBLE PARTITIONS
	PARKING
	ENTRY
	SERVICE ENTRY

Flexibility Diagram

To illustrate the flexibility within this basic organizational structure, the following plan diagram illustrates a variety of configurations that are possible. Six areas are shown to represent the assignment of potentially six Agencies, or departments within one floor. Such divisions of space may be adjusted to larger or smaller areas within the permanent partition system. Proper exiting will need to be maintained with the variations.

Also shown, are illustrations of varying density of fixed and flexible partitions. This certainly is not an exhaustive study, but is intended to illustrate flexibility. Densities shown vary from 70% flexible; 30% fixed to 100% fixed.



Aesthetic Approach

The aesthetic approach for the Wyoming State Office Building reflects the key characteristics of “Wyoming Architecture”, while directly reflecting influences from the surrounding context.

Primary and secondary entrances for the building help tie the building to major intersections and secondary streets. The primary entrance, located at the corner of 25th Street and Pioneer Avenue, serves as the key architectural statement for the building. This primary corner will give the main entrance high visibility for both vehicular and pedestrian circulation and will connect the building to the “Capitol corridor.” A secondary entrance, which serves as the new terminus for Thomas Avenue, gives the State Office Building a ceremonial space for small functions and gatherings. The entrances will be comprised of durable materials such as stone or pre-cast concrete. In addition, the entrances create great opportunities to celebrate the State through plaza murals, State seals, possibly plaques listing all of the counties in the State, possible sculptures or other creative landmarks for users to enjoy while entering and exiting the building.

Windows serve as an important feature for the office aesthetics. Natural daylight has been proven to increase staff health and attendance, productivity and general being. Windows located throughout the façade of the building will help take advantage of the great Wyoming daylight as well as celebrate the spectacular views throughout Cheyenne.

Large canopies and accent canopies symbolize the “cowboy hat”, while providing adequate shade for the building during the summer months. Larger canopies are located at both entries, helping to protect the public plazas from rain and snow, while giving the building its signature look. Smaller canopies are provided at the roof line of the building, helping to screen the office windows on the upper floors from the direct sunlight. The canopies specifically help reduce cooling loads in the building, while providing a comfortable workplace.

Variations on a Theme

As noted above, the Level III Design phase is intended to develop, articulate, and establish the design of the building. This Study is intended to explore aesthetic strategies to understand how the building may fit in the Cheyenne community. As such, the Steering Committee and design team are not presenting one design for consideration. Instead, three variations on one theme are presented.

In looking at the three variations below, one theme can be seen as consistent with the discussion above. The Steering Committee and design team developed a wide variety of options, and selected the following three options to be representative of the more successful designs. It is fair to state that the group has no preference for any option; indeed the group tended to select, or shop, different pieces from each option. The three variations illustrate that a broad range of solutions are available to the State within the theme. Again, a formal design process needs to be conducted in the Level III Design phase to create a cohesive, responsive design solution for the building.

25th Street Elevation Development
Variation A



Variation B



Variation C



25th Street and Pioneer Avenue Main Entrance Development
Variation A



Variation B



Variation C



Pioneer Avenue Elevation Development
Variation A



Variation B



Variation C



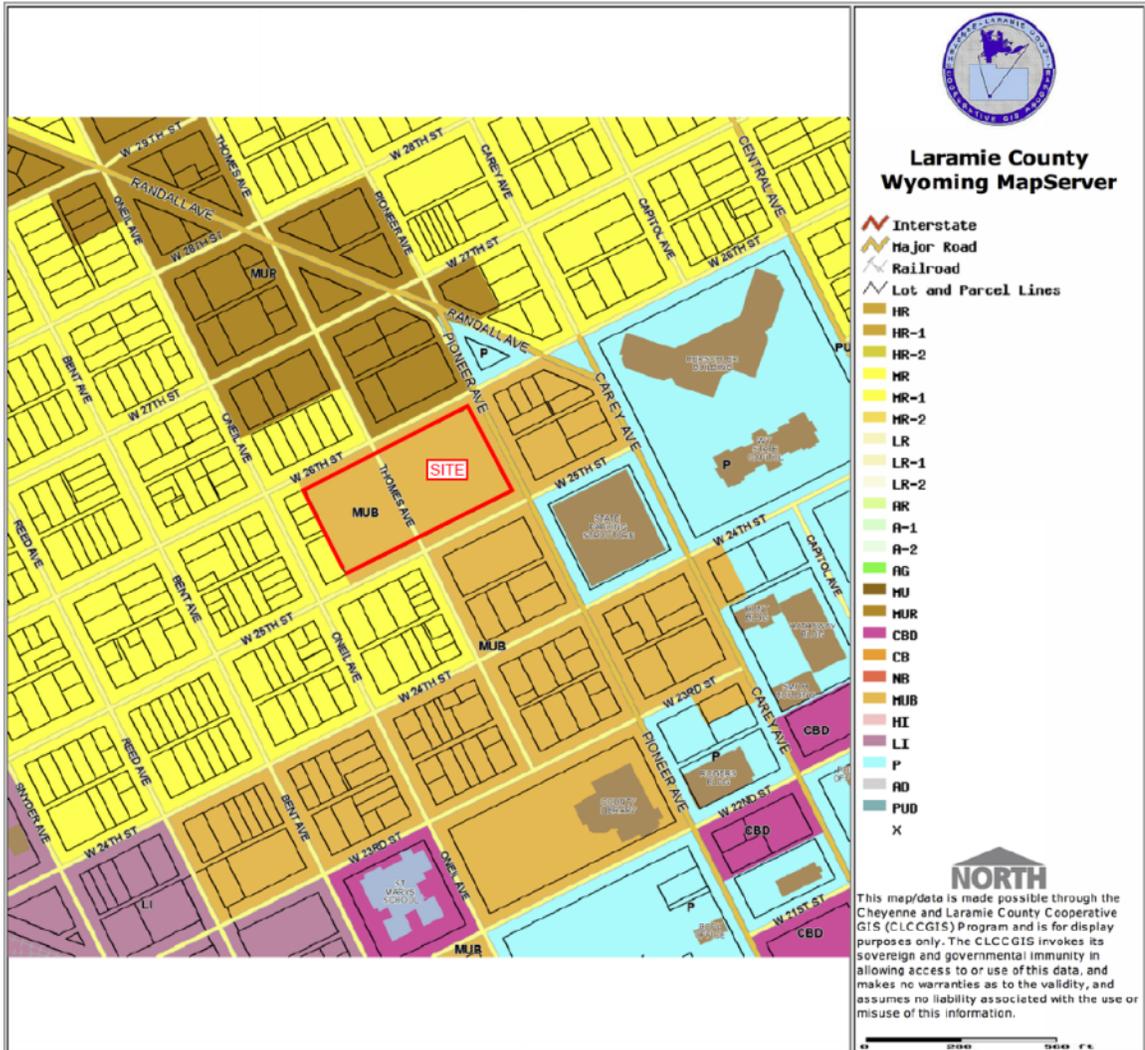
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5.0 System Narratives

5.1 Site Systems

Site Characteristics:

Legal Description: Lot 1 Block 1 Downtown Safeway
 Area: 3.48 Acres
 Zoning: Mixed Use with Business Emphasis (MUB)
 Surrounding Zone Districts shown on below map



Zoning Discussion

City staff are proposing a major revision to city code to be known as the Unified Development Code (UDC). This document is scheduled to go before the Cheyenne City Council at the beginning of 2012. A committee has been working the past year to refine the UDC into a final draft to be presented to the council. The final draft of the UDC is not available for review at the time of this report. The UDC does include broad controls over building and site architecture as well as more conventional zoning items such as setbacks and use restrictions. If the UDC becomes the adopted code in 2012, it will impact site layout and architectural building design on this project.

The primary item noted in the review of an older draft of the UDC and the current zoning ordinance is with the proposed *Parking Structure*. *This type of facility is not addressed in the current MUB Ordinance or the draft UDC in the MUB zoned areas. The current definition in City Code is: "Transportation Facilities" means facilities used by companies offering transportation services to the public, such as airport terminals, bus stations, train stations, taxi stations, parking garages, etc. Transportation facilities are defined as a use-by-right in the Central Business District (CBD) and a use requiring Board Approval (currently Board of Adjustment) in a Community Business (CB) zoned area. The Public (P) zone district does not list Transportation facilities as an allowable use which is what the existing parking structure is at West 24th Street and Carey Avenue. With this issue, a potential zone change may be required unless the Development Director finds that parking garages are similar use than other uses in this district. In the case of that finding, Board Approval through the Board of Adjustment would be required to approve the transportation facility use on the property.*

Maximum Property Coverage

The total building, parking and outside storage areas shall not exceed 80% of the total property area for nonresidential uses. This increases to 85% if a CB zone is requested or is reduced to 50% if a Public (P) zone is requested.

Setbacks

The minimum side yard setback shall be five feet. The building must be set back 25 feet from all property lines adjacent to streets. There is no change in setback between MUR, CB, and P zoning.

Screening and Buffering

Screening or buffering will be required at the interface between zone districts. In this case, the adjoining properties on the west side of the project required a ten-foot landscaped strip.

Building Height

The site is located in the Capitol Height Restriction area. Within blocks 104 and 105 of the original city blocks, building elevations shall not exceed 6,156 feet.

Parking

The project shall provide off-street parking for building occupants and visitors in accordance with City of Cheyenne Zoning requirements. The requirements for this property are: "Off-street parking for general offices require one space per 300 square feet for offices 50,000 square feet and over, and one space per 400 square feet for offices less than 50,000 square feet of gross floor area."

Additional parking for the building may be accommodated with other State properties. This project does not intend to rely upon on-street parking within the surrounding neighborhood.

Landscaping Requirements

The current and potential UDC requires considerable landscaping features and amenities for new development projects. The ordinances include requirements for the number of trees, species, plantings, irrigation, and coverage. A landscape plan will be approved with a Site Plan submittal.

Storm-water Drainage Investigation

The project is located in the Capitol Drainage Basin of the City of Cheyenne.

Upstream Area: *developed urban residential covering approximately 30 acres*

The primary stormwater flow paths are north to south around the site on O'Neil Avenue and Pioneer Avenue.

Downstream Area: *developed urban residential and commercial*

Historically, localized flooding has been observed throughout the basin along the major drainage pathways.

Storm Sewer:

Storm sewer is available in O'Neil Avenue, West 25th Street, and Pioneer Avenue (shown in red in the figure below). The downside is that this system surcharges at a 2-year frequency and is known to reverse flow. Large street flow conveyance south along Pioneer will be the primary storm-water conveyance issue observed adjacent to this project.



Potential design issues include runoff at or exceeding the curb height of Pioneer Avenue for minor and major storms. For protection from the estimated 1% annual chance event frequency storm, it is recommended to elevate the finished floor of proposed buildings at least 12 inches or more above the gutter flow-line of Pioneer Avenue. Groundwater is a known issue throughout the Capitol Basin at depths ranging between 7 to 12 feet below existing grade. The primary issues for projects like this are seen in elevator shafts below garden level or full basement facilities.

Storm-water Detention

From the kick-off meeting with the city, it appears new regulations will be presented to City Council in early 2012 covering storm-water management. For planning purposes, it appears

that new redevelopment projects over 40,000 square feet will be required to control runoff to the level of undeveloped native prairie conditions. The estimated storm-water detention required for this site is 28,600 cf (0.656 AF) assuming no more than 80% impervious coverage on the property. Water quality will be required to be addressed with the site design.

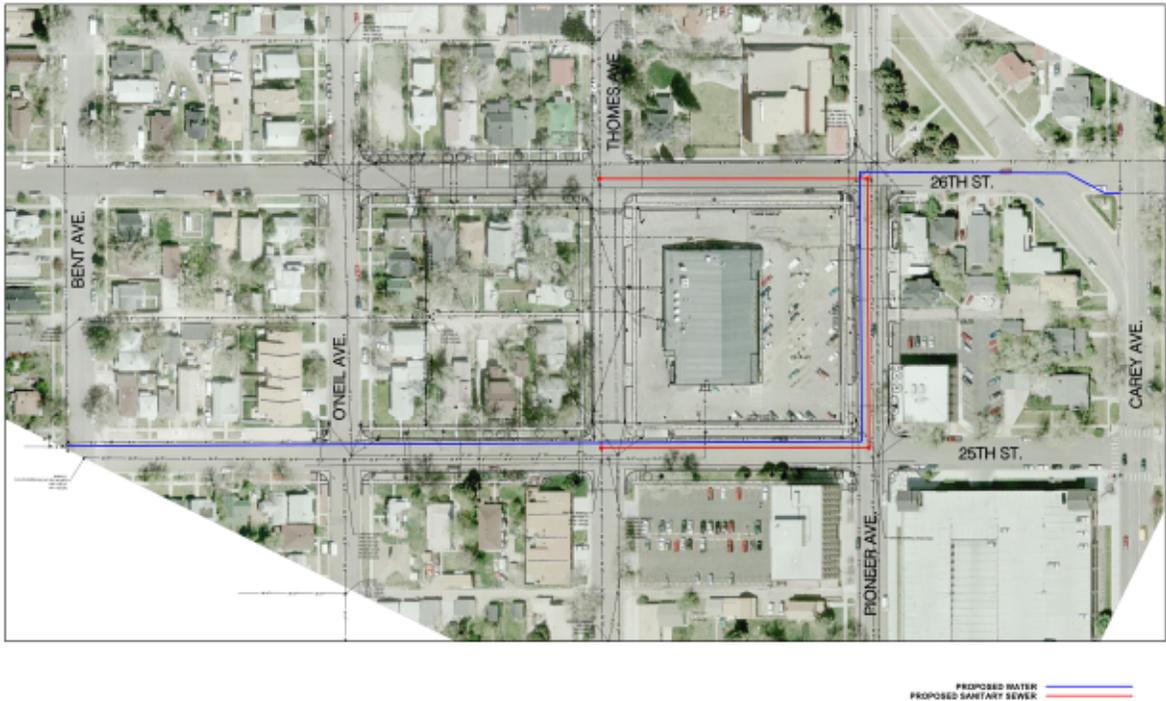
Based on the available topographic survey data, site observations, and the overall Capitol Basin hydrological model, the flood risk for new development is low to moderate. The site is located along a local drainage divide between the western and central Capitol Basin sub-areas. The overall flood risk increases for any proposed structure not set above the flood flow depth along Pioneer Avenue. Upstream flows from Thomes Avenue north of the project are directed to O'Neil Avenue and Pioneer Avenue at West 26th Street and do not impact development on this site.

Site Utilities

The City of Cheyenne, which includes the Cheyenne Board of Public Utilities (BOPU), and the Wyoming Department of Environmental Quality (DEQ) has jurisdiction over the water and sanitary sewer mains.

Potable water mains are available in the adjacent streets. The surrounding water mains are 4-inch in Thomes Avenue, West 24th and 25th Streets, and 6-inch in Pioneer Avenue. Based on fire flow testing data, adequate flows and pressures are not available to provide fire flows which meet current fire code requirements for new facilities. A new water main extension will be required which could come tying into the 14-inch main in Bent Avenue and additional looping in O'Neil Avenue between West 24th and 25th Street. A detailed hydraulic model and analysis will be completed to determine the extent of needed improvements to the water system. Costs associated with the water main extensions include replacement of existing water services along the routes and abandonment of the existing 4-inch mains as practical. No reimbursement policy appears to be in place for the water main and fire flow improvements to the area.

An existing 8-inch main in the vacated alley could be modified to allow for the building as well as provide sanitary sewer service to the building. An existing 12-inch sanitary sewer main is located through the site in the vacated portion of Thomes Avenue. Based on the preliminary survey information provided, it would appear that this 12" sanitary sewer main running through the site could be rerouted around the block to the west. The proposed alignment would be to take it from the intersection of Thomes and 26th Street west to the intersection of O'Neil and 26th Street, then south to the intersection of O'Neil and 25th Street, then back east to the intersection of Thomes and 25th Street for a total distance of approximately 1,050 feet. The existing slope on the sanitary sewer running through the site is 0.92%. The slope of the proposed re-routing would be +/- 0.30%. The minimum slope allowed by BOPU/DEQ for a 12 inch main is 0.22%. An existing easement covers the utilities in Thomes Avenue and would limit building pads encroachment. A skyway may be considered but no pre-approval was granted by BOPU. The City currently only recognizes re-platting the property to remove easements once all utilities have been relocated.



Other utilities services (gas, electric, communications, etc.) should be coordinated with the respective franchise owner and the design team. Modifications to existing facilities may be required due to the placement of the building.

Depending on the size and number of taps for this project, the BOPU will have sanitary sewer and water tap fees, system development fees, construction plan review fees, as well as a as-constructed plan bond/fee. There are currently several taps, including a large water service to the existing Safeway building that can be used for credit towards the system development fees. BOPU map indicates the Safeway line as a 4" domestic service. Any other live taps could be killed for additional credit.

Traffic

The City of Cheyenne has jurisdiction over the adjacent roadways, storm sewer systems, and traffic issues. The City establishes traffic study requirements on a case by case basis. It was recommended by the City Engineer's office that a traffic study be prepared as early as possible in the process. It was determined that the project shall conduct a traffic study at the beginning of the Level III Design phase. The traffic study may suggest work including revisions to improve traffic flow and intersection controls. Although this work is excluded from this study, allowances should be considered.

Revisions to the project site planning and building organization may also be affected to support traffic safety and flow. Such revisions are appropriately addressed during the design process at the beginning of the Level III Design phase.

Prior to preparing a traffic study, the City Engineering Department shall be consulted for direction on the elements required to be included in the traffic study (i.e., which roadways and intersections shall be analyzed, how far from the site needs to be analyzed, etc.). It is noted that Pioneer Avenue is an arterial roadway. Heavy traffic should be discouraged from traveling

through the residential areas adjacent to the site. Every attempt to route traffic to the south and east should be accomplished with the design.

Hardscape

Materials throughout the site will provide continuity between the existing Capitol grounds and the new construction. They will be both durable and suggestive of the civic nature of the building. The two main building entries will be composed of stone pavers and stone slab seat walls. The raised building arcade along 25th Street and the outdoor seating area situated in the western pocket park will be paved using concrete unit pavers. The path network within the pocket park will be surfaced using a porous crushed granite material. Sidewalks, courtyards and service drives will use concrete paving with the potential for accents such as sandblasting to provide richer detail. If there are budgetary restraints based on the high cost of the stone paving and concrete unit pavers, architectural grade concrete would provide a lower cost alternative.

Planting

Plantings for the site will reflect Cheyenne's weather, climate, soils and geography. Due to severe climate conditions in Cheyenne, consideration of long-term maintenance is very important. Each plant selected will be adaptable, hardy and require low water use as part of an overall xeric plant palette demonstrating sensitivity to the region's resources. The streetscape planting will consist of a turf grass tree lawn and 2" caliper deciduous trees spaced at 25' on center, as directed in the City of Cheyenne, Streetscape Design Standards. Plant types for the site will include deciduous, ornamental, and evergreen trees, shrubs, grasses, and perennials.

Efficient irrigation technologies will also play a role in resource management. The irrigation design for the site and right-of-way will meet or exceed the standards set forth in the current edition of the City of Cheyenne, Parks and Recreation Standards and Specifications.

Furnishings and Site Lighting

Site furnishings will be selected for both design and function, including tables, chairs, benches, trash receptacles, and bicycle racks. These furnishings will be located to accommodate the site users and programmed spaces on the site.

Site lighting, including roadway lights and pedestrian lights will be provided along the perimeter of the site to illuminate pedestrian and vehicular pathways. Accent lighting along the building's perimeter will further enhance specific features and building moments such as main entries. Accent lighting may be comprised of in-grade uplights, wall lights, and lighted bollards, as demanded by programmatic needs. All light fixtures being proposed will be LED sources to contribute to the sustainable design approach.

Sustainability

All exterior site systems will be chosen with sustainability in mind. The project will consciously include responsible "green" practices and materials throughout the site design, with the potential to follow official frameworks such as LEED.

5.2 Architectural Systems

It is expected that the City will adopt the 2012 Edition of the International Building Code, including applicable Appendices, in time for this project, and therefore this project shall comply with this Code, as well as any Local Codes as adopted by the City of Cheyenne.

Exterior Skin:

Galvanized metal studs will be used in tandem with an exterior sheathing as a backup to masonry, precast-concrete, and metal panel systems. The metal studs will also be utilized as part of the roof parapet system. The exterior walls will be insulated with full thick insulation to provide thermal efficiency within the exterior envelope. Gypsum board will be installed over a vapor barrier on the interior surface with a level 5 finish.

The design team will employ high performance glazing in prefinished aluminum, thermally broken window systems. The use of this system will allow for extensive durability with the product and extremely low maintenance of the system. As part of this system, prefinished aluminum exterior doors will be designed into the project as well. Tinting of the glazing will also be explored to reduce glare and heat gain where appropriate.

The level of detail regarding finishes and colors of materials has not been addressed at this time. Additional detail and review at this level will occur as the design progresses through the various phases of the project. As a basis for estimating, the following percentages of materials are suggested: Curtain Wall 35%; Stone 15%; Precast Panels 30%; & Metal Panel 20%

The roof system will be developed utilizing a fully adhered PVC membrane system over several inches of poly-iso rigid insulation board, including a top protection board. Walking mats shall be provided for access to service items on the roof. The roof will be designed to assist storm water detention requirements.

Interior Construction & Equipment:

Interior partition will be gypsum board on metal stud construction, with a level 5 finish at walls greater than 20' in length. Interior partitions will be filled with sound attenuation blankets for sound control where appropriate. Hollow metal frames will be used for interior lites and solid wood doors.

Ceilings will typically use a tegular edge acoustical lay-in tile ceiling system. Some gypsum board soffit construction should be anticipated for large conference rooms and hearing rooms.

It is anticipated that an accessible flooring system will be utilized in the office portions of the building to allow for cable management and ventilation. Floor finishes will be carpet tile for typical assignable areas, resilient tile in service areas, and thin-set terrazzo at lobby and primary circulation areas. Toilet rooms will use tile for floors and walls (to 5'-0" above finished floor) with epoxy grout (grout shall not be white).

Traction Elevators are anticipated for the project. Elevators will be sized and located for the building configuration and expected demand. Cab configurations may be required to accommodate front and rear doors to address floor slab variations between the Office Building and the Parking Structure. We would anticipate banks of elevators, 2 cars each, would be distributed in the building at 3 locations to accommodate occupants. A separate, dedicated service elevator is anticipated.

Construction Costs are expected to cover equipment costs including walk-off mats, built-in casework, venetian blinds, room signage, projection screens, white boards, toilet accessories and dock accessories. Excluded from construction costs, but included in the Project Costs, are furnishings, moveable partition systems, and filing and storage systems.

5.3 Structural Systems

Design Parameters:

Codes:

Building	International Building Code 2012
Loading	ASCE 7-10
Masonry	ASCE 5-11
Concrete	ACI 318-11
Steel	AISC 360-10

Loads:

Dead Load	Actual material weight
Live Load	100 psf
Snow	
Ground Snow Load	30 psf
Risk Category	III
Importance Factor	1.1
Exposure Factor	1.0
Thermal Factor	1.0
Flat Roof Snow Load	23.1 psf
Drifting	ASCE 7-10

Wind

Basic Wind Speed	100 mph
Risk Category	III
Exposure Category	C

Seismic

Risk Category	III
Importance Factor	1.25
Site Class	D
Seismic Design Category	B
Basic Structural System	Ordinary Concrete Shear Walls
Response Modification Factor, R	5
Seismic Analysis Procedure	Equivalent Lateral Force
Seismic Base Shear	552 kips
	Based on 4 story 120,000 sq ft building

Serviceability:

Deflection

Roof dead + live loads	L/180
Roof live load	L/240
Floor dead + live loads	L/240
Floor live loads	L/360

Vibration

Office Areas	AISC Design Guide 11, Walking Excitation Modal Damping 2-3%, Electronic Office
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Framing System:

Three potential structural framing systems were evaluated for the new Wyoming State Office Building at Level I. The systems were post-tensioned cast-in-place concrete, pre-cast concrete, and composite structural steel. 30' bay spacing was considered as typical.

The structural steel option has been selected as the most economical and offers the following advantages:

- Lightest of the studied systems which reduces dead and lateral loads
- Most flexible system when considering future load increases or slab openings
- Column sizes are typically smaller and more economical
- The system has been used successfully on numerous facilities within the State. Local labor forces are familiar with the system and numerous fabricators (both in state and regional) are available to produce a competitive bidding environment
- Reasonable system to erect in winter conditions
- Relatively short erection time

The two concrete systems were found to have disadvantages when compared to steel, which also helped lead to the selection of a steel system. Some of these disadvantages are as follows:

Cast-in-place:

- Generally the most expensive option
- Reduced flexibility for future load increases or slab openings
- Increased foundation dead and lateral loads due to weight of system
- Difficult to construct in winter weather
- Potentially the longest erection time, especially if constructed in winter

Pre-cast:

- No precast fabricators in Wyoming
- Due to distance, cost of transportation negates what can be an otherwise cost effective system
- Least flexible system for future load increases or slab openings
- Increased foundation dead and lateral loads due to weight of system

The preliminary Geotechnical Report (Terracon Project No. 24115039 dated 11/2/11) states that a shallow foundation system will produce potentially unacceptable settlements in the 1" – 2" range and discounts this system. The report recommends deep foundations consisting of drilled piers and spanning grade beams or a proprietary "Geopier" system consisting of shallow foundations used in conjunction with a rammed aggregate system. Whereas this system is potentially less expensive than drilled piers, it is a proprietary system that is installed under a "design-build" type of contract. HDR and Plan One consider this system unproven at this time and cannot endorse the "Geopier" system for this project without significant investigation. The foundation design recommendation, and basis in this report, is for deep foundations consisting of drilled piers and spanning grade beams to support the primary structure.

Specific Structural System:

Foundation

- a. Basis: Preliminary 11/2/2011 Geotechnical Report No. 24115039.
- b. Typical column support will be provided with a 48" diameter drilled pier approximately 50' in length. Piers should be considered cased and de-watering will most likely be necessary on a portion of the piers.
- c. Piers will be reinforced with 0.5% to 1.0% area of steel.
- d. Piers associated with lateral elements will be on the order of 54" diameter and will support and be tied together with a 2' to 3' thick pier cap. Pier cap will be roughly the size of the lateral elements.
- e. Perimeter grade beams will be a minimum 12" thick and extend to 4' below grade.

Level 1

- a. 4" reinforced slab on grade over compacted granular fill or as required by final Geotechnical report.
- b. 6" reinforced slab at mechanical/maintenance areas.

Levels 2 – 4

- a. Composite steel floor framing.
 - i. W18 to W24 wide flange beams with ¾" diameter shear studs
 - ii. 2" metal with 4-1/2" concrete topping (total system thickness = 6-1/2")
- b. Columns
 - i. Typical wide flange steel W14 or W12.

Roof

- a. Wide flange steel supporting K series bar joist with 1-1/2" type "B" metal roof deck.
- b. Mechanical areas will be composite steel similar to floor framing to reducing noise and vibration transmission.

Lateral Force Resisting System

- a. Full height 12" concrete shear walls located around stair/elevator cores.
- b. Single story concentrically "X" braced steel frames will be used for minor components (penthouse, etc.).

5.4 Heating & Cooling Systems

An appropriate system choice would be an under floor air delivery (UFAD) variable air volume system utilizing multiple roof mounted air handling units. The air handling unit shall be located within a mechanical penthouse. These units will be provided with heating water coil, chilled water coil, filtration and outside air economizer control.

Ductwork distribution will consist of medium pressure ductwork serving an under floor air plenum (UFAD) providing appropriate thermal zoning on the perimeter. Thermal zoning will consist of three to four perimeter offices on a single thermostat. Interior space thermal zoning will consist of manually adjustable floor diffusers.

Heating will be provided for perimeter zones via under floor fan boxes with heating water coils ducted to either window sill diffusers or floor diffusers.

HVAC plant system will consist of multiple gas fired boilers arranged to provide partial redundancy. Cooling will be provided via two water cooled chillers arranged to provide partial redundancy. Distribution to the air handling units and terminal units will be via a variable flow pumping system.

5.5 Plumbing Systems

Plumbing systems will in general respond to the Architectural requirements for toilet rooms, employee lounges, and other amenities. The systems include waste, vent, storm drainage, and domestic hot and cold water. Domestic hot water will be generated in the HVAC plant and distributed throughout the building. Local electric water heaters shall not be utilized.

Plumbing services of waste, storm, natural gas and water will be connected to district services.

5.6 Power Systems

The Electrical Service to the Office Building will be fed from a new Cheyenne Light, Fuel and Power Pad Mounted Transformer. The Electrical Service will be 4000A, 480Y/277V, 3PH, 4W Main Switchboard with a 40000A MCB w/GFP Protection, Utility Metering Section and TVSS Protection. A separate Electrical Service will be provided to the Parking Structure. This service will be 400A, 480Y/277V, 3PH 4W fed from a new Cheyenne Light, Fuel and Power Transformer.

The secondary distribution will consist of providing power to each of the (3) individual quadrants or mods. Each individual quadrant will be supplied with (1) 400A, 480Y/277V, 3PH, 4W Riser with a Panel on each of the (4) floors. This will provide power for all the lighting and miscellaneous small mechanical equipment. Each quadrant will be supplied with (2) 112.5kVA Transformers. Each 112.5kVA Transformer will supply (4) 42 circuit, 208Y/120V, 3PH, 4W Panels (2 panels per floor). This will provide all the 120/208V power to the floors for receptacles, 120V equipment, etc. In addition, each quadrant will be provided with a 600A, 480Y/277V, 3PH, 4W Panel for large mechanical equipment.

A small 200kW(250kVA) Emergency Generator will be provided to the facility to provide Life Safety Power for Egress Lighting in the Office Building and the Parking Garage, Temperature Control Systems, Access Systems and other building critical systems. The generator will be located on grade level in the garage near the electrical service entrance. The generator will be equipped with a belly tank, with a minimum fuel storage capacity for an 8 hour run time. Exhaust from the generator will be routed to above the building roof to preclude re-entrainment of diesel exhaust into the building ventilation system.

The following are suggested power requirements for a typical office building:

- Every Office will be provided with (1) 20A quadraplex receptacle and (2) 20A duplex receptacles
- Open Offices will be provided with (1) 20A quadraplex receptacle at each work station. In addition, (1) 20A duplex receptacle will be provided for every 30' of linear wall
- Each Storage Room and Electrical Room will be provided with (1) 20A duplex receptacle
- Each corridor will be provided with (1) 20A duplex receptacle at every 40' on center
- Each Restroom and Janitor Closet will be provided with (1) 20A GFCI duplex receptacle
- Each IT Closet will be provided (3) 20A dedicated quadraplex receptacles

- Each Mechanical Room will be provided with (2) 20A GFCI duplex receptacles
- A typical employee lounge will be provided with a dedicated 20A receptacle for the following equipment: disposal, dishwasher, microwave, refrigerator, vending machines, coffee makers
- Each Copy Room will be provide with at least (2) 20A dedicated receptacles
- Each exterior door location will be provided with (1) 20A GFCI Weatherproof/ Weather Resistant duplex receptacle
- The site will require at least (1) 120V location for irrigation controls
- In general, every room will be provided with at least (1) 20A duplex receptacle

To enhance the safety of the project power systems, an Arc-Flash Hazard Analysis and a Selective Coordination Study shall be provided. All project power work shall be designed and administered to minimize points of incident energy.

The building will be protected by a Master Label Lightning Protection System.

5.7 Lighting Systems

Lighting throughout the office will be primarily energy efficient linear fluorescent lights utilizing Super T8 lamp(s) and Super T8 ballast. Lights utilizing LED Technology and Compact Fluorescents will also be used in limited quantities. The desired Lighting Power Density (LPD) for lighting is less than .95va/per square foot while meeting IES (Illuminating Engineering Society) recommended light levels.

All areas except corridors, electrical rooms, IT rooms, mechanical rooms and public lobbies will be provided with local occupancy sensor control with local manual override.

A lighting control relay panel, controlled via the BAS, with an astronomical time clock and where all relays can be programmed will be provided for the exterior lighting, corridor lighting and public lobbies. Daylight harvesting techniques will be utilized for the perimeter zones with a minimum of dual level switching for interior zones.

Exterior lighting will consist of Pole Mounted LED Luminaires and Building Mounted LED Luminaires. The average lighting level on the site shall be 1fc with a maximum to minimum ratio of 8 to 1.

Lighting throughout the Parking Garage will consist of LED Luminaires specifically designed to light Parking Garages with particular attention to “cut-offs” to adjacent residential areas. Linear Fluorescents will be placed in non-parking areas, such as stairwells and utility-type rooms. The average lighting levels should conform to the latest IES recommendations.

An additional lighting control relay panel with an astronomical time clock and where all relays can be programmed will be provided for the Parking Garage. This control panel can be a slave panel connected to the office building’s master lighting control panel or it can be a standalone master control panel for just the Parking Garage.

5.8 Fire Protection System

The office building will be provided with wet sprinkler protection and standpipes located in the stairwells. A fire pump is not expected. The standpipes will be provided with sufficient pressure from a connection for the Fire Department pumper trucks.

The parking garage does not require a sprinkler system by code.

5.9 Fire Alarm System

The fire alarm system will be a fully addressable system with Horn/Strobe coverage to meet current NFPA requirements.

5.10 Security Systems

It is anticipated that the building will be equipped with a building security system that will include limited security cameras at entrances, parking garage, and the building exterior. Access door controls will be utilized on all exterior doors with the exception of the main entrance. This system will only allow authorized access to the building from non-public entrances. We also understand that certain agencies may require additional security within their suites which will need to be accommodated on a case by case basis. Some rough-in pathways and back-boxes can be anticipated as the project develops. Further development of these requirements and systems will need to be completed during the Level III Design phase of the project.

5.11 Information Technology and Audio Visual Systems

Technology for this building will be brought to the site by connecting to Qwest/Century Link - fiber and copper, Bresnan/Optimum – fiber and coax near the intersection of Pioneer and 25th Street. Additionally ducts should be run to the Herschler and Emerson Buildings. External connectivity should follow BCI standards.

Within the new building there needs to be a properly sized Equipment Room for terminations of incoming services, cable termination racks, distribution hardware, servers and storage devices, network equipment, and voice equipment. Equipment in this room should be connected to a UPS system and back-up generator. Additional cooling and ventilation are required for this space.

A Telecommunications Room shall be provided, sized appropriately for the anticipated equipment to be located in this space, and generally includes termination points for pathway cables from the Equipment Room and Work Areas, cable termination racks, distribution hardware, and network equipment. This room will also require special consideration for additional cooling and ventilation.

Within the office portions of the building careful consideration should be given to cable management and raceways. This will also need to be coordinated with furniture layout. The maximum cable run shall not exceed 295 feet.

Audio visual equipment and systems installations will be provided at the Hearing Rooms only. Other meeting rooms will be provided with white-boards, projection screens and wire-way infrastructure – it is expected that the Agency or Office assigned to the space would provide the equipment fit-up (projectors, monitors, smart boards, etc.) beyond the basic installation.

5.12 Parking Structure Systems

The parking system has been studied in conjunction with the office building planning to align with project requirements and goals. The number of stalls provided is in accordance with zoning requirements. The configuration and circulation has been developed to integrate with the office building and to minimize traffic in residential areas. A number of designs have been studied to arrive at the recommended two-bay, seven-level parking structure design presented herein.

Code Analysis and Applicable Codes

It is anticipated that the structure will be classified as an “open parking structure”, occupancy S-2 according to the International Building Code. There will be a review of the fire separation required between the parking structure and office building modules and any pedestrian access corridors.

The IBC and ADAAG will govern the requirements for accessible parking within the parking structure.

List of Anticipated Codes

- International Building Code (IBC)
- International Fire Code (IFC)
- International Plumbing Code (IPC)
- Americans with Disabilities (ADAAG)
- City of Cheyenne Local Codes and Ordinances

Program Space and User Groups

The proposed parking structure is to provide required off-street parking for the New State Office Building. The proposed parking structure will provide parking for state employees and visitors of the new office building. The exact numbers of each group have yet to be determined. Motorcycle parking may be provided at dead spaces in corners or by providing a select number of motorcycle stalls. Bicycle parking will also be provided.

The parking structure, in concert with adjacent building service areas, shall incorporate storage and parking for State maintenance and grounds service vehicles and materials. As the nearby Herschler parking areas are receiving increasing demands for parking space, this new structure is an ideal location to store materials and snow removal equipment to support the Capitol grounds. A minimum of ten parking stalls shall be assigned for maintenance and service vehicles in support of the building and grounds.

The required parking count using the City of Cheyenne Zoning requirements is 1 stall for every 300 gross square foot of building per 17.124.040 of the Zoning Code.

Site Access

The State has expressed interest in maintaining two points of access to the parking structure component of the project. Street access for vehicles will be from 26th Street, with the primary access and egress intended at the east end of the structure.

An adequate number of entry and exit lanes will be provided to minimize queuing of vehicles on the street or within the garage. The State will need to determine the requirements for controlled parking access. A traffic study, to be conducted with the Level III Design phase, will further inform the parking structure design.

The ground level of the parking structure is recommended to be above the surrounding grade. The storm water management for the watershed north of this site utilizes surface street runoff. As such, grades will need to be managed to deflect runoff around the building and parking structure. A high water table in this area also influences the recommendation to elevate the ground level of the structure.

Overall Height and Floor-to-Floor

The City of Cheyenne has limits on the heights of buildings in and around the Capitol Complex. Anticipated maximum height above grade to top tier is approximately 84 ft, but needs to be confirmed in the next phase of design with specific zoning requirements. Therefore, the maximum number of tiers for the parking structure is expected to be limited to seven. Massing and architectural compatibility will play a major role in determining the overall height and massing of the parking garage.

The floor-to-floor heights have yet to be finalized, but we note that with the exception of the first floor, matching the office building floors is not likely. The height of the parking structure has been selected to coordinate with the height of the building and the height restrictions in place.

For now, a 17'-6" floor-to-floor height for Level 1 is used to provide adequate clearance in the truck dock area located at the east end of the parking structure. An 11'-6" floor-to-floor height is used at the 2nd tier to allow for accessible parking. Floor-to-floor heights are anticipated to be 10'-6" at typical upper tiers (3 to top) to accommodate standard accessible parking on any tier and to provide an increased level of natural light and improved visibility within the structure.

Setbacks

Setbacks will need to be studied closely for this project. On the north side along 26th Street, the setback for the garage is anticipated to be set to match that of the proposed office building and those of existing buildings immediately east and west of the project site. The setback on the west side of the project at the location where the residential property abuts the project site will be important. At least 10 feet will be required to maximize openings allowed in the garage to remain classified as an "open" parking structure under the building code.

Access/Circulation

As previously noted, vehicular access is provided along the north side of the two-bay parking structure. Final lane configuration and width of curb cuts required will be determined in the next phases of design. There are options for either 1 or 2 points of street access.

Pedestrian connections from the building to/from the parking structure are anticipated to be located along the south side of the garage at the west and east ends. Pedestrian connections will be studied in more detail during Level III Design, but at this time there appears to be plenty of options and capacity for functional and easily accessible access to/from the parking areas.

Parking Geometrics

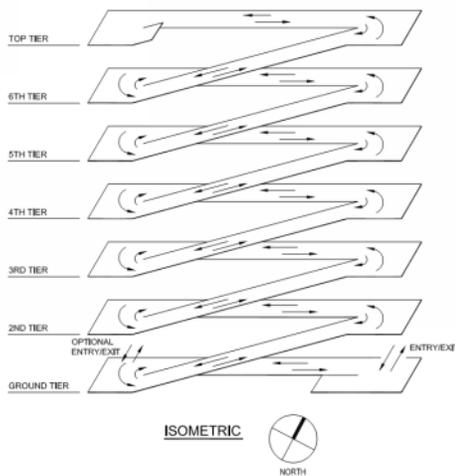
The City of Cheyenne currently requires a 9'-0" wide by 18'-6" deep stall. However, when structured parking is used, a more common 18'-0" deep stall is used to economize the structural system and therefore reduce cost associated with longer span construction and provide a more efficient parking layout. Walker Parking Consultants recommends the use of the 18'-0" stall depth for the proposed structure, however options for each of the 18'-6" stall depths are provided at this time.

The drive aisle specified by the City of Cheyenne is 26'-0" for 90 degree parking and represents a Level Of Service (LOS) "A" design which represents a very comfortable design. It is common to provide lower levels of service for employee parking areas as they are more familiar with the parking structure and the aisle dimension should be reviewed in the next phase of design.

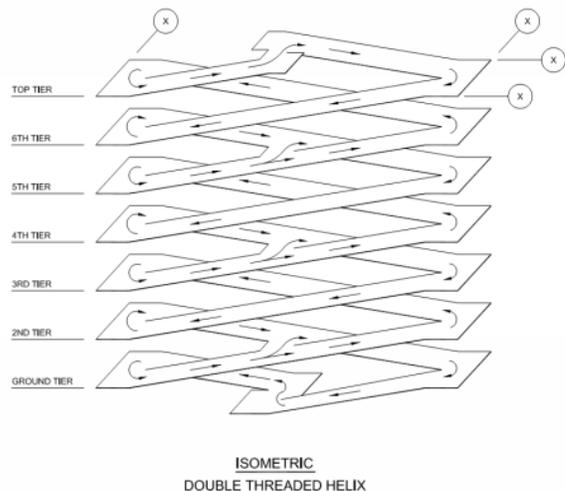
Parking Functional Design

In prior work, conceptual options for the functional circulation system were presented and were dependent on the office building configuration as to which functional system would be used. A two-bay, seven-level parking structure is being recommended to accommodate zoning required parking counts for the proposed building. There are two potential functional schemes for a two bay garage on this particular site:

Single Threaded Helix



Double Threaded Helix



The two-bay Single Threaded Helix, design concept utilizes a "single thread" ramping system with 90 degree parking. This provides a "single" path up and a "single" path down. Each 360 degree turn on the floor plan results in one level of height gain, thus it will take 6.5 turns to get to the top. This design can use a sloping bay on the south and a flat bay on the north, resulting in a "flat" façade along the street. This functional scheme can typically handle up to around 800 parking stalls for office use.

The two-bay Double Threaded Helix design utilizes two independent routes to the top of the structure. This effectively doubles the amount of traffic than can be serviced by this type of garage. Additionally, this functional system is such that each 360 degree turn on the floor plan results in two levels of height gain, thus it will only take 3.5 turns to get to top. In contrast to

the single thread design this design has sloping bays on both sides of the garage, which will require more architectural detailing to disguise the ramp on the north bay along the street. This functional scheme can typically handle up to 1500 parking stalls for office use.

The Double Threaded Helix design is recommended for this project. The design will require 3.5 turns to the top, which represents an LOS “A-/B+”. The number of stalls on nominally flat areas represents an LOS “C”.

Parking Tabulation:

	Stalls	SF	Floor to Floor Height (1)	Total Height
Ground level	113	42,247	0	0
2nd level	153	50,716	17.5	17.5 ft.
3rd level	158	50,716	11.5	29 ft.
4th level	158	50,716	10.5	39.5 ft.
5th level	158	50,716	10.5	50 ft.
6th level	158	50,716	10.5	60.5 ft.
Top level	140	46,089	10.5	71 ft. (2)
Total	1,038	341,916		

- (1) Service drive and dock area at Ground level is not included in the parking structure area calculations
- (2) Height to top of Top level parapet would be approximately 4'-0" taller, for a total structure height of 75'. Stair enclosures would make the height of structure nominally 80'

We note that there are improvements and enhancements in the two bay designs that need to be studied in the Level III Design phase of the project.

Further Recommendations regarding Parking Demand

To explore potential economies with other State parking facilities, it is recommended the State engage a qualified parking consultant to perform a shared parking analysis and study of the immediate area to determine if there is an opportunity to construct less than the required parking stalls per the zoning requirements.

Structural Systems for Parking Structure

Structural design should satisfy requirements for strength, flexibility, durability, ease of maintenance, and repair. Equally important are function, cost, appearance, and user comfort. Long span construction is recommended to be utilized versus short span to maximize the parking efficiency.

Cast-in-place (CIP) post tensioned concrete is recommended. This system can be designed for long service lives, in the range of 40 to 75 years. A CIP system is expected to have a local economic advantage in that more construction dollars will potentially be spent locally in Wyoming. The façade would be designed to be consistent and complimentary to the office building design.

The CIP system is an on-site cast concrete system that utilizes one-way slabs and beams supported by cast in place columns. The slabs and beams are provided with post-tensioning cables to provide the load carrying capacity and control cracking. Beams, slabs and columns are typically monolithically cast. Typical bay spacing is 18 ft to 24 ft between the beams which produces a sense that there is a higher ceiling than precast systems. Typical beam sizes are 34" deep and typical slab thicknesses are approximately 5" to 6" depending on the slab span between beams. Lateral force resisting system can be provided via moment resisting frames, shear walls, shear frames, or any combination of these elements.

Sealers, sealants and expansion joints should be properly selected, designed and detailed to improve the durability of the structure. Waterproofing membranes shall be provided over any occupied spaces to prevent water intrusion from parking areas.

The foundation system for the parking structure shall be consistent with the office building foundation system for overall cost and functionality – see structural discussion above. Final recommendations for foundations will be made upon completion of a comprehensive geotechnical investigation of the site.

Alkali-Silica Reaction (ASR)

Wyoming quarries are known for having potentially reactive aggregates that can cause ASR reaction and prematurely degrade concrete. Appropriate measures will need to be taken, such that the effects are minimized.

Operational Controls

The structure shall be fully secured by rolling fences, with card access, during evenings and weekends. The State may determine exceptions for special events and/or services at local religious institutions. Reserved parking areas for staff or other user groups will rely on signage to designate those areas.

Vertical Transportation

Suggest 2 elevators minimum, based on speed, location, etc. Could be standard traction or Machine Room Less type (MRL). Hydraulic not recommended.

Miscellaneous

A snow melt system shall be provided in the design of the top tier to minimize the snow removal efforts during winter months. In slab hydronic type systems and external radiant heat systems are available to be used and will be further studied in the Level III Design phase.

Space for landscaping and maintenance equipment can be accommodated on the ground tier of the parking garage and will be further studied in Level III Design phase.

Further Design Work not covered by Level I/II

During the Level III Design work, there will be studies of options for floor to floor heights, locations and configurations of pedestrian connections, determination of trash collection or other uses within the parking garage, etc.

6.0 Project Cost Summary

Probable Construction Costs for the project have been studied at a very high, preliminary level for this Report. Estimating at this stage of the project can therefore be highly variable. The cost specifics are less reliable at this stage of the project in that many significant decisions not yet made will affect these costs. Nonetheless, for the scope and quality expressed, we consider the cost estimates appropriate for prudent planning purposes. Whereas additional costs may be determined which increase costs, the HDR / Plan One team are driven to seek efficient, cost effective solutions to meet the needs of the State in terms of space, quality and serviceability.

Probable Construction Costs provided here, include forecasted industry escalation to the expected bidding period (see schedule below).

	Net Assignable Area	Leasable Area	Gross Area
Four Story Building Total	220,000	250,000	310,000
	Area	Levels	Stalls
Parking Structure Total	341,920	7	1,038

Demolition and Site, includes site clearing, utilities, and new paving, and plantings	\$3,200,000
Building - 310,000 gsf	\$77,500,000
<u>Parking Structure - 1,038 stalls</u>	<u>\$15,750,000</u>
Probable Construction Cost	\$96,450,000

These construction costs do not include all project costs. A Project Budget must be assembled to include management costs, contingency funds, professional fees, utility fees, furnishings and equipment, and moving costs. These costs vary significantly among Owners and will be developed further by A&I Construction Management. For preliminary planning purposes, HDR/Plan One would expect Project Costs to be an additional 15%, therefore:

Probable Construction Cost	\$96,450,000
<u>Probable Owner Costs</u>	<u>\$14,450,000</u>
Total Probable Project Cost	\$110,900,000

The above figures have been developed based upon the quality and scope indicated by the State of Wyoming stakeholders, and industry expectations for construction costs. As a basis of comparison, we can look at Industry expectations and other Cheyenne projects and estimate their cost if bid at the same time as this project.

- Industry trends indicate that office buildings of this size, with tenant improvements included, range from \$220 - \$312/sf. This project is estimated at \$250/sf.
- The Herschler Building, includes 388,250 gsf and 225 parking stalls, was bid in 1981 at \$27,290,659. At an average of 3.5% escalation, this project would be approximately \$82,055,000.
- The Parking Structure to the west of the Capitol, includes 600 stalls, was bid in 2002 at \$5,700,833. At an average of 3.5% escalation, this project would be approximately \$8,323,000.

All project work has focused on maximizing the project size for the given site. The quality of the project can be adjusted through further design work to better tune expected construction costs to budgetary needs. The current design is slightly above industry standards for construction of this type due to a variety of factors –a few items are highlighted here:

- Poor soils and high water table require a robust foundation system
- Exterior design with varying forms and materials (to fit in the neighborhood)
- Tight constraints for construction operations
- Cast-in-place concrete for parking structure (higher quality, higher serviceability, and Wyoming Contractor friendly)

Two variations were studied to illustrate that the project can be scaled back. The State is certainly not restricted to these variations.

Pricing Variation 1

	Net Assignable Area	Leasable Area	Gross Area
Four Story Building Total	205,000	229,000	275,000
	Area	Levels	Stalls
Parking Structure Total	341,920	7	1,038

Demolition and Site, includes

site clearing of existing structures, paving, and trees
 water, waste, storm-water, and electrical utilities
 new walks, drives, plantings, and amenities

	\$3,200,000
Building - 275,000 <i>gsf</i>	\$68,750,000
<u>Parking Structure - 1,038 stalls</u>	<u>\$15,750,000</u>
Probable Construction Cost	\$87,700,000

<u>Probable Owner Costs</u>	<u>\$13,200,000</u>
Total Probable Project Cost	\$100,900,000

Pricing Variation 2

	Net Assignable Area	Leasable Area	Gross Area
Four Story Building Total	182,000	204,000	240,000
	Area	Levels	Stalls
Parking Structure Total	291,800	6	880

Demolition and Site, includes

site clearing of existing structures, paving, and trees
 water, waste, storm-water, and electrical utilities
 new walks, drives, plantings, and amenities

	\$3,200,000
Building - 240,000 <i>gsf</i>	\$60,000,000
<u>Parking Structure - 880 stalls</u>	<u>\$13,350,000</u>
Probable Construction Cost	\$76,550,000

<u>Probable Owner Costs</u>	<u>\$11,450,000</u>
Total Probable Project Cost	\$88,000,000

7.0 Estimated Project Schedule

This project is not expressly driven by an occupancy date. The schedule will be driven by an appropriate process and construction sequence. It is not intended that the schedule will be a driver to impose costs; rather the schedule will be developed to efficiently meet the needs of the State. The schedule proposed here is considered conservative for planning purposes. It is agreed however, that prudent, progressive, steady progress is in the State's best interest for a successful project.

The State may establish schedule targets, or milestones, to better align this project with other work at any time. Such milestones would be coordinated with this project to ensure prudent work and value to the State.

Occupants, temporary or otherwise, are not determined at this time. It is recognized that the State will evaluate the appropriate assignment, use and sequence of use for this facility independently and at an appropriate time for the State's interests. When these determinations are made, such sequences may influence this project schedule.

No dates are firm beyond the 2012 Legislative Session, with respect to this project; all dates beyond this study are subject to the State's determination and budgeting. Thus the dates assigned below may vary, however the durations for design and construction are relatively reliable. The estimates prepared for this study are based upon this schedule – appropriate cost escalation factors should be considered with adjustments of the schedule.

Begin Level I & II Study	September 7, 2011
Preliminary Report	October 10, 2011
State Building Commission Meeting	October 19, 2011
Issue Level I & II Study Report	February 2, 2012
2012 Legislative Session (Level III Design funding)	2012

Dates to be determined:

<i>Notice to Proceed Level III Work</i>	<i>July 2012</i>
<i>Design and Documentation (16 months)</i>	<i>July 2012 – September 2013</i>
<i>Review Period & Final Documents (2 months)</i>	<i>September – December 2013</i>
<i>2013 Legislative Session (Level III construction funding)</i>	<i>2013</i>
<i>Construction (24 months)</i>	<i>January 2014 – December 2015</i>
<i>Furniture & Set-Ups & Commissioning</i>	<i>January 2016</i>
<i>Occupy</i>	<i>February 2016</i>

The delivery process, with respect to bidding and construction management, is not expected to affect the schedule significantly and has not been determined at this time. The State may determine this approach at any time; however, the benefit of a Construction Manager approach is typically of best value when engaged in the Architect's Design Development phase (*nominaly November 2012*).

>>>END OF REPORT<<<

Appendix A1.0 – Analysis of Leased vs. Building New

The following information has been generated by AICM to analyze the payback for the project based upon State historical cost data. Three presentations follow to illustrate the three project cost approaches described in section 6.0 Project Cost Summary (page 49 of the report).

- Maximum Development of the Site (as presented in the body of the report)
 - 310,000 gsf
 - 1,038 parking stalls

- Pricing Variation 1 (as presented in section 6.0 Project Cost Summary, page 50)
 - totals 275,00 gsf
 - 1,038 parking stalls

- Pricing Variation 2 (as presented in section 6.0 Project Cost Summary, page 50)
 - totals 240,00 gsf
 - 880 parking stalls

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New State Office Building Analysis Detail

Maximum Development of the Site

Assumptions

Net Assignable Area (Sq. Ft.)	220,000 NASF
Leasable Area (Sq. Ft.)	250,000 LSF
Gross Square Feet	310,000 GSF
Parking Stalls	1,038

Estimated Project Cost

Demolition and Site Utilities		\$3,200,000
New Building	310,000 gross sq. ft @ \$250	\$77,500,000
Parking Garage		\$15,750,000
Probable Owner Costs		\$14,450,000
Total Estimated Project Cost		\$110,900,000
	Cost	Years
Yearly Depreciation	\$110,900,000	40
Estimated Gross Square Footage		310,000

Calculation of Yearly cost of New Bldg.

Maintenance/Housekeeping (includes janitorial, utilities, - average 2010 cost)		\$7.61
Building Depreciation (Year amt/sq.ft)	(\$2,772,500/310,000)	\$8.94
Total Sq. ft. cost to allocate		\$16.55

Total yearly cost of bldg.

	Gross Sq. Ft.	\$/Sq. Ft.	Total Yrly. Cost
(Sq. Footage * Cost per sq. ft = Breakdown	310,000	\$16.55	\$5,131,990
Maintenance	310,000	\$7.61	\$2,359,490
Depreciation (Building)	310,000	\$8.94	\$2,772,500
Total			\$5,131,990

Cheyenne Area Lease Space

	Leasable Area	
Ave. \$/Sq. Ft.		\$17.77
Comparable Cost	250,000	\$4,441,719

General Information

	Ave. \$/Sq. Ft	Total Sq. Ft.	Total \$
Total Leasing Budget for One Year Statewide			\$12,255,709
*Office Space Leasing Budget - Statewide	\$14.34	839,560	\$12,042,196
*Cheyenne Leasing for One year as adjusted	\$17.77	330,261	\$5,867,706

The Office Space has been adjusted for warehouse and parking.

Analysis of Lease vs. Building New over 40 years
State of Wyoming - New State Office Building
Maximum Development of the Site

	Cost to Continue Leasing 250,000 sq. ft - 40 years	Cost to Build New State Office Building	Janitorial, Maintenance, Utility costs*	Total Cost of Owning the State Office Building over 40 years	Gross difference between leasing and owning a building	Cumulative difference between leasing/owning
	(1)	(2)	(3)	(4) (2 + 3)	(5) (1 - 4)	(6)
Beg. Bal.						
YR 1	4,441,719	110,900,000	2,359,490	113,259,490	(108,817,771)	(108,817,771)
YR 2	4,663,805	-	2,406,680	2,406,680	2,257,125	(106,560,646)
YR 3	4,896,995	-	2,454,814	2,454,814	2,442,182	(104,118,465)
YR 4	5,141,845	-	2,503,910	2,503,910	2,637,935	(101,480,530)
YR 5	5,398,937	-	2,553,988	2,553,988	2,844,949	(98,635,580)
YR 6	5,533,911	-	2,605,068	2,605,068	2,928,843	(95,706,738)
YR 7	5,672,258	-	2,657,169	2,657,169	3,015,089	(92,691,648)
YR 8	5,814,065	-	2,710,313	2,710,313	3,103,752	(89,587,896)
YR 9	5,959,417	-	2,764,519	2,764,519	3,194,898	(86,392,998)
YR 10	6,108,402	-	2,819,809	2,819,809	3,288,593	(83,104,406)
YR 11	6,261,112	-	2,876,205	2,876,205	3,384,907	(79,719,499)
YR 12	6,417,640	-	2,933,730	2,933,730	3,483,910	(76,235,589)
YR 13	6,578,081	-	2,992,404	2,992,404	3,585,677	(72,649,912)
YR 14	6,742,533	-	3,052,252	3,052,252	3,690,281	(68,959,631)
YR 15	6,911,096	-	3,113,297	3,113,297	3,797,799	(65,161,833)
YR 16	7,083,874	-	3,175,563	3,175,563	3,908,310	(61,253,522)
YR 17	7,260,970	-	3,239,074	3,239,074	4,021,896	(57,231,626)
YR 18	7,442,495	-	3,303,856	3,303,856	4,138,639	(53,092,988)
YR 19	7,628,557	-	3,369,933	3,369,933	4,258,624	(48,834,364)
YR 20	7,819,271	-	3,437,332	3,437,332	4,381,939	(44,452,424)
YR 21	8,014,753	-	3,506,078	3,506,078	4,508,674	(39,943,750)
YR 22	8,215,122	-	3,576,200	3,576,200	4,638,922	(35,304,828)
YR 23	8,420,500	-	3,647,724	3,647,724	4,772,776	(30,532,053)
YR 24	8,631,012	-	3,720,678	3,720,678	4,910,334	(25,621,719)
YR 25	8,846,787	-	3,795,092	3,795,092	5,051,695	(20,570,024)
YR 26	9,067,957	-	3,870,994	3,870,994	5,196,963	(15,373,061)
YR 27	9,294,656	-	3,948,414	3,948,414	5,346,242	(10,026,818)
YR 28	9,527,022	-	4,027,382	4,027,382	5,499,640	(4,527,178)
YR 29	9,765,198	-	4,107,930	4,107,930	5,657,268	1,130,090
YR 30	10,009,328	-	4,190,088	4,190,088	5,819,240	6,949,330
YR 31	10,259,561	-	4,273,890	4,273,890	5,985,671	12,935,001
YR 32	10,516,050	-	4,359,368	4,359,368	6,156,682	19,091,684
YR 33	10,778,951	-	4,446,555	4,446,555	6,332,396	25,424,080
YR 34	11,048,425	-	4,535,486	4,535,486	6,512,939	31,937,019
YR 35	11,324,636	-	4,626,196	4,626,196	6,698,440	38,635,458
YR 36	11,607,752	-	4,718,720	4,718,720	6,889,032	45,524,490
YR 37	11,897,945	-	4,813,094	4,813,094	7,084,851	52,609,341
YR 38	12,195,394	-	4,909,356	4,909,356	7,286,038	59,895,379
YR 39	12,500,279	-	5,007,543	5,007,543	7,492,736	67,388,115
YR 40	12,812,786	-	5,107,694	5,107,694	7,705,092	75,093,207
Total	\$328,511,097	\$110,900,000	\$142,517,891	\$253,417,891	\$75,093,207	\$75,093,207

Lease costs were amortized at a rate of 5% the first 5 years and then 2.5% for the remainder of the term.

*Janitorial/utility costs are amortized assuming a 2% rate of inflation.

Reimbursement from Federal Programs and Other Funds have not been netted against the cost of the new building or the current lease payments.

Currently, the average reimbursement for leased space in Cheyenne is approximately 82% of the cost.

Analysis of Lease vs. Building New over 40 years Summary

State of Wyoming - New State Office Building Maximum Development of the Site

Cost to Continue Leasing 200,000 sq. ft - 40 years	Cost to Build New State Office Building	Janitorial, Maintenance, Utility costs*	Total Cost of Owning the State Office Building over 40 years	Gross difference between leasing and owning a building	Cumulative difference between leasing/owning	
(1)	(2)	(3)	(4) (2 + 3)	(5) (1 - 4)	(6)	
Total	\$328,511,097	\$110,900,000	\$142,517,891	\$253,417,891	\$75,093,207	\$75,093,207

NOTES:

Lease costs were amortized at a rate of 5% the first 5 years and then 2.5% for the remainder of the term.

*Janitorial/utility costs are amortized assuming a 2% rate of inflation.

Reimbursement from Federal Programs and Other Funds have not been netted against the cost of the new building or the current lease payments.

Currently, the average reimbursement for leased space in Cheyenne is approximately 82% of the cost.

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New State Office Building Analysis Detail

Pricing Variation 1

Assumptions

Net Assignable Area (Sq. Ft.)	205,000 NASF
Leasable Area (Sq. Ft.)	229,000 LSF
Gross Square Feet	275,000 GSF
Parking Stalls	1,038

Estimated Project Cost

Demolition and Site Utilities		\$3,200,000
New Building	275,000 gross sq. ft @ \$250	\$68,750,000
Parking Garage		\$15,750,000
Probable Owner Costs		\$13,200,000
Total Estimated Project Cost		\$100,900,000

	Cost	Years	
Yearly Depreciation	\$100,900,000	40	\$2,522,500
Estimated Sq. Footage			275,000

Calculation of Yearly cost of New Bldg.

Maintenance/Housekeeping (includes janitorial, utilities, - average 2010 cost)		7.61
Building Depreciation (Year amt/sq.ft)	(\$2,522,500/275,000)	9.17
Total Sq. ft. cost to allocate		16.78

Total yearly cost of bldg.

	Sq. Ft.	\$/Sq. Ft.	Total Yrly. Cost
(Sq. Footage * Cost per sq. ft = Breakdown	275,000	\$16.78	\$4,615,596
Maintenance	275,000	\$7.61	\$2,093,096
Depreciation (Building)	275,000	\$9.17	\$2,522,500
Total			\$4,615,596

Cheyenne Area Lease Space

	Leasable Area	
Ave. \$/Sq. Ft.		\$17.77
Comparable Cost	229,000	\$4,068,615

General Information

	Ave. \$/Sq. Ft	Total Sq. Ft.	Total \$
Total Leasing Budget for One Year Statewide			\$12,255,709
*Office Space Leasing Budget - Statewide	\$14.34	839,560	\$12,042,196
*Cheyenne Leasing for One year as adjusted	\$17.77	330,261	\$5,867,706

The Office Space has been adjusted for warehouse and parking.

Analysis of Lease vs. Building New over 40 years
 State of Wyoming - New State Office Building
Pricing Variation 1

	Cost to Continue Leasing 229,000 sq. ft - 40 years	Cost to Build New State Office Building	Janitorial, Maintenance, Utility costs*	Total Cost of Owning the State Office Building over 40 years	Gross difference between leasing and owning a building	Cumulative difference between leasing/owning
	(1)	(2)	(3)	(4) (2 + 3)	(5) (1 - 4)	(6)
Beg. Bal.						
YR 1	4,068,615	100,900,000	2,093,096	102,993,096	(98,924,482)	(98,924,482)
YR 2	4,272,045	-	2,134,958	2,134,958	2,137,087	(96,787,394)
YR 3	4,485,648	-	2,177,657	2,177,657	2,307,990	(94,479,404)
YR 4	4,709,930	-	2,221,210	2,221,210	2,488,720	(91,990,684)
YR 5	4,945,427	-	2,265,635	2,265,635	2,679,792	(89,310,892)
YR 6	5,069,062	-	2,310,947	2,310,947	2,758,115	(86,552,777)
YR 7	5,195,789	-	2,357,166	2,357,166	2,838,622	(83,714,155)
YR 8	5,325,683	-	2,404,310	2,404,310	2,921,374	(80,792,781)
YR 9	5,458,826	-	2,452,396	2,452,396	3,006,430	(77,786,351)
YR 10	5,595,296	-	2,501,444	2,501,444	3,093,853	(74,692,499)
YR 11	5,735,179	-	2,551,473	2,551,473	3,183,706	(71,508,793)
YR 12	5,878,558	-	2,602,502	2,602,502	3,276,056	(68,232,737)
YR 13	6,025,522	-	2,654,552	2,654,552	3,370,970	(64,861,767)
YR 14	6,176,160	-	2,707,643	2,707,643	3,468,517	(61,393,250)
YR 15	6,330,564	-	2,761,796	2,761,796	3,568,768	(57,824,482)
YR 16	6,488,828	-	2,817,032	2,817,032	3,671,796	(54,152,685)
YR 17	6,651,049	-	2,873,373	2,873,373	3,777,676	(50,375,009)
YR 18	6,817,325	-	2,930,840	2,930,840	3,886,485	(46,488,524)
YR 19	6,987,758	-	2,989,457	2,989,457	3,998,301	(42,490,222)
YR 20	7,162,452	-	3,049,246	3,049,246	4,113,206	(38,377,016)
YR 21	7,341,514	-	3,110,231	3,110,231	4,231,283	(34,145,733)
YR 22	7,525,051	-	3,172,435	3,172,435	4,352,616	(29,793,117)
YR 23	7,713,178	-	3,235,884	3,235,884	4,477,293	(25,315,824)
YR 24	7,906,007	-	3,300,602	3,300,602	4,605,405	(20,710,419)
YR 25	8,103,657	-	3,366,614	3,366,614	4,737,043	(15,973,375)
YR 26	8,306,249	-	3,433,946	3,433,946	4,872,303	(11,101,073)
YR 27	8,513,905	-	3,502,625	3,502,625	5,011,280	(6,089,793)
YR 28	8,726,753	-	3,572,678	3,572,678	5,154,075	(935,718)
YR 29	8,944,921	-	3,644,131	3,644,131	5,300,790	4,365,072
YR 30	9,168,544	-	3,717,014	3,717,014	5,451,531	9,816,603
YR 31	9,397,758	-	3,791,354	3,791,354	5,606,404	15,423,007
YR 32	9,632,702	-	3,867,181	3,867,181	5,765,521	21,188,528
YR 33	9,873,519	-	3,944,525	3,944,525	5,928,995	27,117,522
YR 34	10,120,357	-	4,023,415	4,023,415	6,096,942	33,214,464
YR 35	10,373,366	-	4,103,884	4,103,884	6,269,483	39,483,947
YR 36	10,632,701	-	4,185,961	4,185,961	6,446,739	45,930,687
YR 37	10,898,518	-	4,269,680	4,269,680	6,628,838	52,559,524
YR 38	11,170,981	-	4,355,074	4,355,074	6,815,907	59,375,431
YR 39	11,450,256	-	4,442,176	4,442,176	7,008,080	66,383,511
YR 40	11,736,512	-	4,531,019	4,531,019	7,205,493	73,589,004
Total	300,916,165	100,900,000	126,427,161	227,327,161	73,589,004	73,589,004

Lease costs were amortized at a rate of 5% the first 5 years and then 2.5% for the remainder of the term.

*Janitorial/utility costs are amortized assuming a 2% rate of inflation.

Reimbursement from Federal Programs and Other Funds have not been netted against the cost of the new building or the current lease payments.

Currently, the average reimbursement for leased space in Cheyenne is approximately 82% of the cost.

Analysis of Lease vs. Building New over 40 years Summary

State of Wyoming - New State Office Building

Pricing Variation 1

	Cost to Continue Leasing 200,000 sq. ft - 40 years	Cost to Build New State Office Building	Janitorial, Maintenance, Utility costs*	Total Cost of Owning the State Office Building over 40 years	Gross difference between leasing and owning a building	Cumulative difference between leasing/owning
	(1)	(2)	(3)	(4) (2 + 3)	(5) (1 - 4)	(6)
Total	\$300,916,165	\$100,900,000	\$126,427,161	\$227,327,161	\$73,589,004	\$73,589,004

NOTES:

Lease costs were amortized at a rate of 5% the first 5 years and then 2.5% for the remainder of the term.

*Janitorial/utility costs are amortized assuming a 2% rate of inflation.

Reimbursement from Federal Programs and Other Funds have not been netted against the cost of the new building or the current lease payments.

Currently, the average reimbursement for leased space in Cheyenne is approximately 82% of the cost.

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New State Office Building Analysis Detail

Pricing Variation 2

Assumptions

Net Assignable Area (Sq. Ft.)	182,000 NASF
Leasable Area (Sq. Ft.)	204,000 LSF
Gross Square Feet	240,000 GSF
Parking Stalls	880

Estimated Project Cost

Demolition and Site Utilities		\$3,200,000
New Building	240,000 gross sq. ft @ \$250	\$60,000,000
Parking Garage		\$13,350,000
Probable Owner Costs		\$11,450,000
Total Estimated Project Cost		\$88,000,000

	Cost	Years	
Yearly Depreciation	\$88,000,000	40	\$2,200,000
Estimated Sq. Footage			240,000

Calculation of Yearly cost of New Bldg.

Maintenance/Housekeeping (includes janitorial, utilities, - average 2010 cost)		\$7.61
Building Depreciation (Year amt/sq.ft)	(\$2,200,000/240,000)	\$9.17
Total Sq. ft. cost to allocate		\$16.78

Total yearly cost of bldg.	Gross Sq. Ft.	\$/Sq. Ft.	Total Yrly. Cost
(Sq. Footage * Cost per sq. ft = Breakdown	240,000	\$16.78	\$4,026,702
Maintenance	240,000	\$7.61	\$1,826,702
Depreciation (Building)	240,000	\$9.17	\$2,200,000
Total			\$4,026,702

Cheyenne Area Lease Space	Leasable Area	
Ave. \$/Sq. Ft.		\$17.77
Comparable Cost	204,000	\$3,624,443

General Information

	Ave. \$/Sq. Ft	Total Sq. Ft.	Total \$
Total Leasing Budget for One Year Statewide			\$12,255,709
*Office Space Leasing Budget - Statewide	\$14.34	839,560	\$12,042,196
*Cheyenne Leasing for One year as adjusted	\$17.77	330,261	\$5,867,706

The Office Space has been adjusted for warehouse and parking.

Analysis of Lease vs. Building New over 40 years
State of Wyoming - New State Office Building
Pricing Variation 2

	Cost to Continue Leasing 204,000 sq. ft - 40 years	Cost to Build New State Office Building	Janitorial, Maintenance, Utility costs*	Total Cost of Owning the State Office Building over 40 years	Gross difference between leasing and owning a building	Cumulative difference between leasing/owning
	(1)	(2)	(3)	(4) (2 + 3)	(5) (1 - 4)	(6)
Beg. Bal.						
YR 1	3,624,443	88,000,000	1,826,702	89,826,702	(86,202,259)	(86,202,259)
YR 2	3,805,665	-	1,863,236	1,863,236	1,942,429	(84,259,831)
YR 3	3,995,948	-	1,900,501	1,900,501	2,095,447	(82,164,383)
YR 4	4,195,746	-	1,938,511	1,938,511	2,257,235	(79,907,149)
YR 5	4,405,533	-	1,977,281	1,977,281	2,428,252	(77,478,897)
YR 6	4,515,671	-	2,016,827	2,016,827	2,498,844	(74,980,053)
YR 7	4,628,563	-	2,057,163	2,057,163	2,571,400	(72,408,653)
YR 8	4,744,277	-	2,098,307	2,098,307	2,645,970	(69,762,683)
YR 9	4,862,884	-	2,140,273	2,140,273	2,722,611	(67,040,071)
YR 10	4,984,456	-	2,183,078	2,183,078	2,801,378	(64,238,694)
YR 11	5,109,067	-	2,226,740	2,226,740	2,882,328	(61,356,366)
YR 12	5,236,794	-	2,271,274	2,271,274	2,965,520	(58,390,846)
YR 13	5,367,714	-	2,316,700	2,316,700	3,051,014	(55,339,832)
YR 14	5,501,907	-	2,363,034	2,363,034	3,138,873	(52,200,959)
YR 15	5,639,454	-	2,410,295	2,410,295	3,229,160	(48,971,800)
YR 16	5,780,441	-	2,458,501	2,458,501	3,321,940	(45,649,859)
YR 17	5,924,952	-	2,507,671	2,507,671	3,417,281	(42,232,578)
YR 18	6,073,076	-	2,557,824	2,557,824	3,515,252	(38,717,326)
YR 19	6,224,903	-	2,608,980	2,608,980	3,615,922	(35,101,404)
YR 20	6,380,525	-	2,661,160	2,661,160	3,719,365	(31,382,039)
YR 21	6,540,038	-	2,714,383	2,714,383	3,825,655	(27,556,384)
YR 22	6,703,539	-	2,768,671	2,768,671	3,934,868	(23,621,516)
YR 23	6,871,128	-	2,824,044	2,824,044	4,047,083	(19,574,433)
YR 24	7,042,906	-	2,880,525	2,880,525	4,162,381	(15,412,052)
YR 25	7,218,979	-	2,938,136	2,938,136	4,280,843	(11,131,209)
YR 26	7,399,453	-	2,996,898	2,996,898	4,402,555	(6,728,655)
YR 27	7,584,439	-	3,056,836	3,056,836	4,527,603	(2,201,052)
YR 28	7,774,050	-	3,117,973	3,117,973	4,656,077	2,455,025
YR 29	7,968,402	-	3,180,333	3,180,333	4,788,069	7,243,094
YR 30	8,167,612	-	3,243,939	3,243,939	4,923,672	12,166,766
YR 31	8,371,802	-	3,308,818	3,308,818	5,062,984	17,229,750
YR 32	8,581,097	-	3,374,994	3,374,994	5,206,102	22,435,853
YR 33	8,795,624	-	3,442,494	3,442,494	5,353,130	27,788,983
YR 34	9,015,515	-	3,511,344	3,511,344	5,504,171	33,293,153
YR 35	9,240,903	-	3,581,571	3,581,571	5,659,332	38,952,485
YR 36	9,471,925	-	3,653,203	3,653,203	5,818,723	44,771,208
YR 37	9,708,724	-	3,726,267	3,726,267	5,982,457	50,753,665
YR 38	9,951,442	-	3,800,792	3,800,792	6,150,650	56,904,315
YR 39	10,200,228	-	3,876,808	3,876,808	6,323,420	63,227,735
YR 40	10,455,233	-	3,954,344	3,954,344	6,500,889	69,728,624
Total	\$268,065,056	\$88,000,000	\$110,336,431	\$198,336,431	\$69,728,624	\$69,728,624

Lease costs were amortized at a rate of 5% the first 5 years and then 2.5% for the remainder of the term.

*Janitorial/utility costs are amortized assuming a 2% rate of inflation.

Reimbursement from Federal Programs and Other Funds have not been netted against the cost of the new building or the current lease payments.

Currently, the average reimbursement for leased space in Cheyenne is approximately 82% of the cost.

Analysis of Lease vs. Building New over 40 years Summary

State of Wyoming - New State Office Building

Pricing Variation 2

	Cost to Continue Leasing 200,000 sq. ft - 40 years	Cost to Build New State Office Building	Janitorial, Maintenance, Utility costs*	Total Cost of Owning the State Office Building over 40 years	Gross difference between leasing and owning a building	Cumulative difference between leasing/owning
	(1)	(2)	(3)	(4) (2 + 3)	(5) (1 - 4)	(6)
Total	\$268,065,056	\$88,000,000	\$110,336,431	\$198,336,431	\$69,728,624	\$69,728,624

NOTES:

Lease costs were amortized at a rate of 5% the first 5 years and then 2.5% for the remainder of the term.

*Janitorial/utility costs are amortized assuming a 2% rate of inflation.

Reimbursement from Federal Programs and Other Funds have not been netted against the cost of the new building or the current lease payments.

Currently, the average reimbursement for leased space in Cheyenne is approximately 82% of the cost.

Schedule of Cheyenne Leases
(with funding sources)

As of 1/4/12

Contract #	Agency	Division	Agency Address	Town	Yearly Rent	Sq. Ft.	Cost per/Sq. Ft.	Gen	Fed/Other	Gen	Fed/Other
8-09509	Administration & Information, Dept. of	Professional Licensing Board	1800 Carey Ave., Ste 400	Cheyenne	\$51,474.48	3,550	\$14.50		100%	\$0.00	\$51,474.48
8-09327	Administrative Hearings, Office of		2020 Carey Ave, 5th Flr	Cheyenne	\$98,493.20	5,239	\$18.80		100%	\$0.00	\$98,493.20
8-09496	Certified Public Accountants, Board of		2020 Carey Ave., 7th Flr	Cheyenne	\$15,563.52	772	\$20.16		100%	\$0.00	\$15,563.52
8-09318	Community College Commission		2020 Carey Avenue	Cheyenne	\$117,000.00	6,500	\$18.00	100%		\$117,000.00	\$0.00
8-09570	Corrections, Dept. of	Board of Parole	3120 Old Faithful Rd, 3rd Floor	Cheyenne	\$41,869.18	2,767	\$15.13	100%	0%	\$41,869.18	\$0.00
8-09521A	Cosmetology, Board of		2515 Warren Ave., 3rd Flr	Cheyenne	\$24,033.50	1,354	\$17.75		100%	\$0.00	\$24,033.50
8-09546A	Employment, Dept. of	WSCD	6101 Yellowstone	Cheyenne	\$97,692.30	5,910	\$16.53	0%	100%	\$0.00	\$97,692.30
8-09545A	Employment, Dept. of		1510 E. Pershing Blvd.	Cheyenne	\$828,728.00	43,480	\$19.06		100%	\$0.00	\$828,728.00
8-09389A subcontract	Engineer, State	State Board of Reg. for Professional Engineers	6920 Yellowtail Road	Cheyenne	\$58,438.56	2,532	\$23.08		100%	\$0.00	\$58,438.56
8-09425	Family Services, Dept. of	Training Unit	138 Hobbs Avenue	Cheyenne	\$102,585.02	6,519	\$15.74	40%	60%	\$41,034.01	\$61,551.01
8-09310	Family Services, Dept. of	Child Support Enforcement	2617 East Lincolnway, Suite C	Cheyenne	\$114,660.00	6,832	\$16.78	34%	66%	\$38,984.40	\$75,675.60
8-09545B	Family Services, Dept. of		1510 Pershing Blvd.	Cheyenne	\$494,321.10	25,935	\$19.06	62%	38%	\$306,479.08	\$187,842.02
8-09546G	Health, Dept. of	Info Tech	6101 Yellowstone, Bsmt	Cheyenne	\$187,348.08	11,336	\$16.53	100%		\$187,348.08	\$0.00
8-09546D	Health, Dept. of		6101 Yellowstone, Suite 510	Cheyenne	\$241,255.35	14,595	\$16.53		100%	\$0.00	\$241,255.35
8-09546E	Health, Dept. of		6101 Yellowstone, Suite 420	Cheyenne	\$317,177.00	19,188	\$16.53		100%	\$0.00	\$317,177.00
8-09546	Health, Dept. of	Mental Health & Aging & DDD	6101 Yellowstone	Cheyenne	\$821,293.05	49,685	\$16.53		100%	\$0.00	\$821,293.05
8-09546F	Health, Dept. of	health Care Licensing	6101 Yellowstone, 4th Flr	Cheyenne	\$130,553.05	7,898	\$16.53	100%		\$130,553.05	\$0.00
8-09541	Health, Dept. of	WIC	1307 Crook Avenue	Cheyenne	\$44,000.00	2,000	\$22.00		100%	\$0.00	\$44,000.00
8-09514	Insurance, Dept. of		106 East 6th Ave.	Cheyenne	\$210,000.00	10,000	\$21.00		100%	\$0.00	\$210,000.00
8-09594	Medicine, Board of		320 W 25th St, 2nd floor	Cheyenne	\$79,134.65	5,328	\$14.85		100%	\$0.00	\$79,134.65
8-09546C	Nursing Home Administrators, Board of		6101 Yellowstone, Room 501	Cheyenne	\$5,785.50	350	\$16.53		100%	\$0.00	\$5,785.50
8-09501	Nursing, Board of		1810 Pioneer Ave.	Cheyenne	\$98,054.81	4,065	\$24.12		100%	\$0.00	\$98,054.81
8-09416	Outfitters & Professional Guides, Board of		1950 Bluegrass Circle, Suite 280	Cheyenne	\$21,600.00	1,200	\$18.00		100%	\$0.00	\$21,600.00
8-09567	Pharmacy, Board of		1712 Carey Ave., Ste 200	Cheyenne	\$29,518.05	2,904	\$10.16		100%	\$0.00	\$29,518.05
8-09498	Public Defender		2020 Carey Ave. 1st, 2nd & 3rd flr	Cheyenne	\$225,658.16	11,596	\$19.46	85%	15%	\$191,809.44	\$33,848.72
8-09521	Public Service Commission		2515 Warren Ave., 3rd Flr	Cheyenne	\$277,556.75	15,637	\$17.75		100%	\$0.00	\$277,556.75
8-09497	Real Estate Commission		2020 Carey Ave., 7th Flr	Cheyenne	\$37,645.20	1,845	\$20.40		100%	\$0.00	\$37,645.20
8-09546B	Retirement System		6101 Yellowstone	Cheyenne	\$190,491.72	11,524	\$16.53		100%	\$0.00	\$190,491.72
8-09546R	Retirement System		6101 Yellowstone	Cheyenne	\$22,028.14	1,338	\$16.53		100%	\$0.00	\$22,028.14
8-09581	School Facilities Commission		1103 Old Town Lane	Cheyenne	\$79,182.00	6,776	\$11.69		100%	\$0.00	\$79,182.00
8-09390	Teaching Standards Board, Professional		1920 Thomes Ave, Suite 400, 4th fl.	Cheyenne	\$33,458.56	2,273	\$14.72		100%	\$0.00	\$33,458.56

Schedule of Cheyenne Leases
(with funding sources)

As of 1/4/12

Contract #	Agency	Division	Agency Address	Town	Yearly Rent	Sq. Ft.	Cost per/Sq. Ft.	Gen	Fed/Other	Gen	Fed/Other
8-09301	Treasurer's Office	Unclaimed Prop & Admin	2515 Warren Avenue, Ste 501&502	Cheyenne	\$64,506.36	4,065	\$15.87		100%	\$0.00	\$64,506.36
8-09389	Water Development Commission		6920 Yellowtail Road	Cheyenne	\$380,000.00	16,468	\$23.08		100%	\$0.00	\$380,000.00
8-09294	Work Force Services	Social Security Disability Determination	821 West Pershing	Cheyenne	\$96,202.75	6,712	\$14.33	6%	94%	\$5,752.92	\$90,449.83
8-09545	Work Force Services	Employment Resources, Voc Rehab	1510 E. Pershing Blvd.	Cheyenne	\$230,398.28	12,088	\$19.06	6%	94%	\$13,777.82	\$216,620.46
					5,867,706	330,261	17.77			1,074,608	4,793,098
									18%	82%	

Total space has been adjusted for warehouse, parking and single office space.

Highlighted amounts indicate lease contracts that are up for renewal as of June 30, 2012. The new rate is not known.

Client:	State of Wyoming – Department of Administration & Information – Construction Management		
Project:	New State Office Building (NSOB)		
Owner Project	PS0601	HDR Project	167519
Purpose:	Study Participants	Phase:	Level I Reconnaissance & Level II Feasibility Study
Document Date:	February 7, 2012		
Project Primary Contacts:	Suzanne Norton Tom Whetstone Charlie Van Over	suzanne.norton@wyo.gov thomas.whetstone@hdrinc.com cvanover@planone.com	307.777.7271 303.318.6288 307.352.2954
			A&I CM Project Coordinator HDR Project Director Plan One Project Manager

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	Jaci Walker	jaci.walker@wyo.gov	307.777.7162 A&I CM Space Planner

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	Brent Wilkins	bfwilkins@terracon.com	307.632.9224 Geotechnical Engineer

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Senator Tony Ross
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Tony Ross tross@wyoming.com 307.632.8957 Senator

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Honorable Joe Meyer

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307.777.7475 Deputy State Treasurer

Focus
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