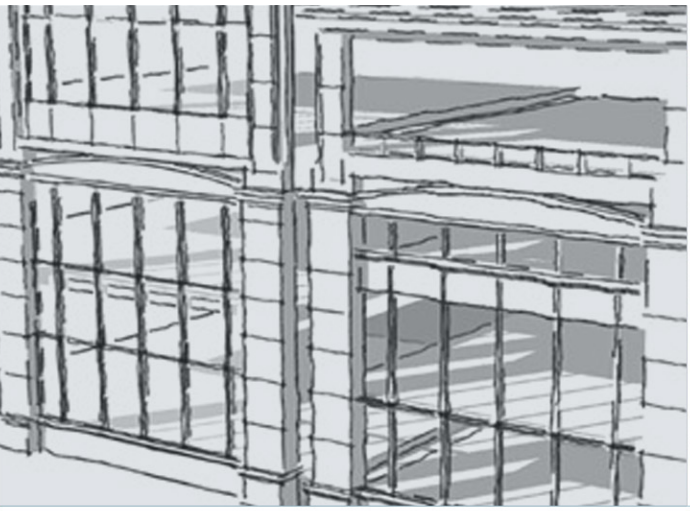

New Wyoming State Office Building
State Capitol Complex

12 December 2008

COOVER-CLARK & ASSOCIATES, INC.
ARCHITECTURE ◢ PLANNING ◢ LANDSCAPES ◢ INTERIORS ◢ ENGINEERING

CONCEPTUAL DESIGN – NEW STATE OFFICE BUILDING

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12 December 2008

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EXECUTIVE SUMMARY
Project Number: 0810

DATE: 12/12/08

Project Overview

The Final Report of *Legislative Space Needs in the Wyoming State Capitol, Phase I* (Carter Goble Lee Companies, April 2007) concluded in order for Wyoming to sustain the operation of a part-time, citizen's legislature "additional space for critical support functions is needed immediately" and that for the concept of a citizen's legislature to be maintained, citizens "must be able to be accommodated safely in the Capitol building" during sessions and non-session times. The Final Report of *Phase II* (Carter Goble Lee Companies, July 2008) identified project year 2025 space demands and recommended general approaches to address a 42,500 square foot shortfall. One of the approaches, the construction of a new state office building at the existing St. Mary's School, was recognized as an opportunity to facilitate the transition during the upgrade of the Capitol infrastructure, especially during the estimated twelve to twenty-four month period that all current Capitol functions will require at least temporary relocation.

Additional office space at the Capitol Complex will allow strategic relocation and consolidation of State agencies that are poorly located for their function and purpose, inefficiently housed due to lease or other operational costs, or growing at a pace that strains current accommodations to provide service. The amount of square footage available after the return of user groups to the State Capitol Building after its renovation will provide flexibility and growth for future needs.

Planning Approach

A series of workshops were held from July 2008 through October 2008 at which potential user groups of the facility, as determined by the Department of Administration and Information Construction Management office and other interested parties, were presented with ideas and options about the New Wyoming State Office Building and Parking Structure. Through a collaborative effort, participants were able to contribute in the beginning stages of the design process. The workshops built upon one another to provide the user groups with a new level of detail and thought at each step. The workshops began with the site analysis and building orientation and concluded with a conceptual building form and internal functional studies. At the conclusion of these workshops two building concepts have been envisioned as viable options for the continuation of design, and are presented within this document for review and consideration.

Project Definition

The New Wyoming State Office Building and Parking Structure will be located at the existing St. Mary's School site adjacent to the State Capitol Building; on the block bounded by 24th and 25th Streets on the North/South and Central and Warren Avenues on the East/West in downtown Cheyenne.

The New Wyoming State Office Building and Parking Structure will support three primary objectives. Initially it will serve as a facility to temporarily house and support the State's governing functions while the Capitol Building undergoes its renovation process. When the renovation is complete the New Wyoming State Office Building will provide space to certain governing functions to relieve the problem of overcrowding currently felt within the Capitol Building. Ultimately the new building will provide a flexible and energy-efficient space, providing the State with opportunities to both consolidate fractured agencies and grow to a projected 2025 need.

Alternative Development Concepts

Of more than a dozen development approaches reviewed at the workshops, two building concepts are proposed for consideration. Each concept supports the primary objectives and has a range of options that the State may consider and are described in further detail within the Concept Development Construction Cost Analysis within this report. The basis of design for each concept and the proposed alternates for each is outlined below.

Concept A:

Basis:	A four-story building encompassing a total of 136,000 Gross Square Feet (GSF) with a five-level parking structure attached.
Alternate 1:	A five-story building encompassing a total of 169,000 GSF with a six-level parking structure attached. (See "Zoning")
Alternate 2:	A five-story building, 140,000 GSF finished and 29,000 GSF unfinished, with a six-level parking structure attached. (See "Zoning")

Concept B:

Basis:	A four-story building encompassing a total of 150,000 GSF with a six-level parking structure attached.
Alternate 1:	A five-story building encompassing a total of 190,000 GSF with a seven-level parking structure attached. (See "Zoning")
Alternate 2:	A five-story building, 154,000 GSF finished and 36,000 GSF unfinished, with a seven-level parking structure attached. (See "Zoning")

Architecturally, the New Wyoming State Office Building and Parking Structure will be designed within the context of the Capitol Complex. It will be a prominent structure that will project an image of open, progressive government, but will remain subordinate to the Capitol Building. Landscaping will respond to both the existing principles of the surrounding areas and sustainable solutions.

Local Land Use Controls

The current zoning of the subject property is MR-1 Medium Density Residential Established. The recommendation of the design team is to submit a request to the City Of Cheyenne to rezone the property to CBD (Central Business District). Further discussion of the zoning approach is featured within the Civil/Permitting Process Narrative.

A zoning variance will need to be sought for the allowance of the five-story building alternate, as the current height restrictions conflict with the overall building height. Precedent exists for such a request. In 1999, two height variances were granted to the adjacent hospital for construction purposes. It is the recommendation of the design team that a similar variance is appropriate for the construction of this facility.

Project Cost

The proposed project has been submitted as follows:

- Concept A Basis (four-story) $53,763,922; with alternates up to $66,755,165
- Concept B Basis (four-story) $59,299,040; with alternates up to $75,153,713

Additional costs, found in the Alternate Summary portion of the Concept Development Construction Cost Analysis, delineate hard and soft costs of $9,874,750 for the State's consideration.

DISCIPLINE NARRATIVE: ARCHITECTURE
Project Number: 0810 DATE: 12/12/08

Design Scope

The New Wyoming State Office Building and Parking Structure will support three primary objectives. Initially it will serve as a facility to temporarily house and support the State's governing functions while the Capitol Building undergoes its renovation process. When the renovation is complete the New Wyoming State Office Building will provide space to certain governing functions to relieve the problem of overcrowding currently felt within the Capitol Building. Ultimately the new building will provide a flexible and energy-efficient space, providing the State with opportunities to both consolidate fractured agencies and grow to a projected 2025 need.

A resultant of the workshop collaborations, the New Wyoming State Office Building and Parking Structure is characterized as "A Gateway to the Capitol". A starting point for citizens, lobbyists and visitors where information can be easily found, governing bodies can be easily met and the Capitol Complex can be easily accessed. As a response to this, the design of these structures must be a safe, flexible, state-of-the-art facility that is welcoming for the variety of users to be served. The New Wyoming State Office Building and Parking Structure must also be sympathetic and respectful to the Capitol Building.

The proposed building concepts respond to these design principles in different ways. Concept A embodies a Neo-Classical architectural form that is organized around a circulation space parallel to Central Street, creating views and connectivity to the Capitol complex. Concept B suggests a larger, somewhat more modern form that embraces both the Central and 25th streetscapes, and organizes a portion of the office building over the lower levels of the parking structure. Drawings have been included within this report that further explain the differences between each of these concepts.

In both concepts, the buildable space within the site boundaries is maximized to provide the State a facility that can support the projected needs of 2025. These structures will be designed in compliance with applicable State of Wyoming criteria & requirements, all applicable building codes, accessibility requirements, sustainability and energy codes, along with input from interview notes, workshop presentations and end-user comments.

Exterior Articulation

The New Wyoming State Office Building and Parking Structure will be designed a whole composition, meaning the two structures will respond to one another in aesthetic, materiality, structure and form. The new structures will be larger than the existing St. Mary's School, making it important to articulate the exterior in a manner respectful to the surrounding area, as well as the human scale.

The exterior façade will be expressed through a series of building and design elements. First the exterior takes form from the site orientation, to take advantage of the positive climate attributes and diminish the negative ones. The form will then take shape based upon the building structure and it's supporting systems. Another level of refinement will then be added based on local architectural vernacular and materiality. Finally subtle nuances will be added to respond to the interior functions celebrating spaces of importance.

In both building concepts, the exterior façade is imagined to include a heavy masonry base of similar material to the adjacent buildings within the Capitol Complex which will then transition to a repetition of curtain wall and masonry veneer panels above.

Interior Organization

The design approach to the interior organization of the New Wyoming State Office Building will need to be secure, flexible, sensible and innovative.

Providing a safe and secure environment for both the public and State employees will be of the utmost concern. The use of technology and straightforward interior organization will provide the basis of successful security monitoring. Unsecured spaces will be organized near building and parking entries, as well as gathering spaces within the building. A security point will then be established to control movements beyond that point for both horizontal and vertical access by occupants. Additional security, as may be required by certain building or parking occupants, can be added within the design. During the workshops it was discussed that a secured connection to the existing Capitol Complex tunnel system may be desired. Both design concepts can support this option, and the interior organization will reflect a thoughtful approach to this design component if it were required.

One of the primary objectives of the New Wyoming State Office Building is that it must provide a flexible office environment. This is best achieved by organizing interior spaces around core elements. In each concept the core elements, which include vertical circulation, mechanical and electrical spaces, restrooms and other common programmatic elements to each floor, will be located in a way to provide the most efficient use of space for office areas. A flexible environment is also derived from identifying areas that share common attributes and can therefore share a given space. For example, a conference room may also serve as a training room and will be designed to support both functions within the same space. Making use of interior modulated systems will also be critical in providing the most flexibility to all the users and State agencies that will occupy this building.

Demonstrating restraint and thoughtfulness of the use of public funds will be vital in the success of the building design. A warm pallet of colors will be used to create an inviting and comfortable interior. Materials will be selected for their durability as well as their suitability to the interior program. Order, repetition and resourceful design will provide a creative office environment, a sense of place and will aid in the economics of materials and finishes.

Innovations in sustainability will be taken advantage of. The introduction of natural light into the center of the building is desirable for both user comfort and spatial organization. Clerestory windows, light shelves and light wells will be incorporated into the design as architectural solutions for natural lighting within the building. The use of these techniques will also significantly save energy costs over the life-cycle of the building.

Building and Structural Systems

The building and structural systems are governed by several considerations including economy, occupancy, fire rating, building envelope, structural span allowances, exterior façade systems and geo-technical conditions.

The structural system must be integrated and coordinated between the building functions and the parking structure for ease of economy. It must also maximize the allowable flexible and efficient use of interior building spaces, and the structural system must acknowledge the importance and context of the building core.

Construction

The design of the New Wyoming State Office Building and Parking Structure will be centered on the need to provide space to the Executive and Legislative branches of government during the renovation of the State Capitol Building; hence the construction of the proposed structures will be closely linked to the renovation process.

It is anticipated that the construction of the New Wyoming State Office Building and Parking Structure will occur in phases. The first phase would include the construction of the office building and the adjacent parking

structure. The parking structure will be designed to provide parking for the total occupant load of the building and the surface lot located at the South East corner of Warren Ave and 24th Street. The State of Wyoming can choose to construct the office building fully furnished, or can opt to finish a portion and provide core and shell space for future tenant finishing as the State may require.

The second phase would occur after the renovation of the Capitol Building was complete. Specific State agencies, as determined by the Department of Administration and Information Construction Management Office and other interested parties, that were temporarily housed in the New Wyoming State Office Building would move back to the Capitol Building. This will then allow the State to move and consolidate fractured State agencies into the New Wyoming State Office Building. A slight reconfiguration of interior spaces and programmatic elements within the office structure is likely to occur within this phase to best support and organize the building occupants.

Additional phases may occur based on the type of build-out that the State chooses to undergo in the initial construction of the office structure, as well as additional reorganizing that may occur of State agencies.

Building Materials Overview

Exterior materials for the New Wyoming State Office Building and Parking Structure must be similar in nature to the surrounding buildings within the State Capitol complex and respectful of the Downtown Cheyenne Design Guidelines. The application of these materials will be innovative and will reflect the building type. Exterior materials will also be used to reflect a human-scale and create a sole composition between the building and parking structures.

Interior materials will be chosen for their durability, sustainability, economy, color, adaptability and suitability to the interior program. The interior finishes will suggest an innovative image and will be easily maintained. Additionally, exterior materials may be brought into the building to further a connection between the image of the building and the experience within it.

Indigenous materials will be specified whenever possible, as they are easier to obtain and will help the building settle into the local context.

Materials

Exterior Systems and Materials

Low-Sloped Roofs:	Ethylene Propylene Diene M-Class Rubber (EPDM) or Sprayed Polyurethane Foam (SPF) roofing systems will be investigated and will meet high reflectance and low emissivity roofing criteria, and will also meet Energy Star rating.
Light Monitors:	Stucco system veneer and polycarbonate glazing w/ potential exposed structure.
Exterior Walls:	Primary heavy rough stone masonry base with masonry veneer panels, 2-inch air space, over insulated steel studs.
Curtain Walls:	Aluminum window-wall system with tinted low “e” 1” insulated glazing and a thermal break.
Windows:	Pre-finished aluminum system with tinted low “e” 1” insulated glazing and a thermal break, pre-engineered aluminum sun-shading fins and eyebrows as necessary on the South and West Elevations.

Doors:	Pre-finished aluminum or stainless steel storefront entrance systems at corridors and main entrances, hollow metal doors and frames at other entrances into building.
Locks:	Per State standards.
Louvers:	Pre-finished aluminum fixed drainable louvers with insect screen.
Landscape:	Landscape site walls and paving will tie into the masonry palette set forth in the building skin.

Interior Systems and Materials

Walls:	Gypsum wallboard over metal studs in the core area, meeting room perimeters and private offices. Concrete/masonry at secure areas and vertical circulation elements. As an alternate, demountable partition systems at perimeter office areas.
Wall Coverings:	All gypsum wallboard walls are to be painted with acrylic latex, vinyl wall coverings at selected meeting areas, as an alternate leather tile wall treatment at public areas. Ceramic tile wainscot at restroom areas. Low Volatile Organic Compound (VOC) content of adhesive, sealants, paints, and coatings.
Floor Systems:	Ground level concrete slab on grade, upper levels a composite floor system with access flooring system as an alternate design item.
Access Flooring:	Metal grid system at open office/tenant areas as an alternate.
Floor Covering:	Recessed entrance floor grilles in vestibules. Porcelain tile in restrooms and break room. Stained concrete will be used in high traffic maintenance areas such as lobby, café area, with embedded articulation and/or scoring, as an alternate terrazzo. Sealed concrete will be used in utility spaces, carpet and or carpet tile will be used in public meeting spaces and office/tenant areas, carpet system specified will exceed Carpet and Rug Institute Green Label.
Ceiling Systems:	A variety of suspended acoustical tile ceiling systems will be used in all public areas, undulating for acoustics except at secure areas. Gypsum ceiling system will be used in restrooms and food service area.
Doors:	Solid-core wood doors at interior, insulated metal doors with painted metal frames at exterior. Office doors with glazing and sidelights or as demountable partition type systems. Shared functions such as meeting rooms or café to be aluminum.
Locks:	Per State standards.
Safety Equipment:	Building to be fully sprinklered. Fire extinguishers and cabinets per National Fire Protection Association (NFPA). Extinguishers to be State furnished and State installed.
Signage:	Room signs per building code and accessibility standards.
Toilets:	Toilets in public/common areas will be Americans with Disabilities Act (ADA/ANSI A-117) accessible. Restroom equipment will consist of pre-finished solid surface partitions, solid surface vanities with self-rimming sinks, toilet/bath accessories.
Casework:	Finished casework will provide needed storage in mail/fax/copy areas, break rooms, and some offices. No-added urea formaldehyde resins will be specified.

Permitting

The contract documents will state that the Contractor is responsible for obtaining all necessary permits required by state and local codes and regulations.

Codes and Standards

- 2006 International Building Code
- Amendments to the 2006 International Building Code per Laramie County
- U.S. Green Building Council LEED 2.2
- Americans with Disability Act Accessibility Guidelines (ADAAG), Updates through 2001

DISCIPLINE NARRATIVE: LANDSCAPE
Project Number: 0810 DATE: 12/12/08

Landscape Design

Landscape concepts for the New Wyoming State Office Building and Parking Structure will follow the design guidelines from the City of Cheyenne Planning and Zoning Landscape Requirements and the naturalized setting that has been established by the surrounding Capitol Complex. The project will incorporate energy and water-saving landscape design to achieve sustainability goals.

Landscape Design concepts are derived from a thorough analysis of natural, cultural and historical site features combined with functional requirements. The completed landscape installation will provide efficient, pleasant outdoor environments that are conducive to the pedestrian scale along streetscapes and entry plazas. The aesthetic appearance of the complex will be enhanced by incorporating living plant materials, appropriate structural landscape materials and other pedestrian site amenities in an attractive streetscape development.

Water Conservation

Plantings and design features will be selected for water conservation, long-term sustainability and ease of maintenance. Climate, topography and soils of the high plains desert provide strong design determinants. Judicious use of limited water and protection from intense summer sun are essential. Streetscapes will utilize organic landscaping to provide added protection from overheating in paved areas and interior spaces as well as mitigation of the wind and sun. Xeriscape principles limit the use of traditional lawns and high-water-use plants to entry areas and high traffic nodes (the most conspicuous areas in the landscape). Water runoff from building roofs can be distributed to plantings via drainage features, maximizing use of available rainfall. The landscape plant palette focuses around native trees, shrubs, grasses and groundcovers that are temperature and drought tolerant.

Hardscape

Entry courts, high traffic nodes and historic monument features will be formal in character, while adjacent areas will be designed to transition into the surrounding streetscapes and informal greenspaces surrounding the Capitol Complex. Major streets are tree lined and will lead visitors to colorful focal plantings at entry plazas. Streetscape trees soften multi-story architecture and lend human scale along pedestrian walkways.

Landscapes will strive to buffer existing residential neighborhoods. Entry plazas will lead users by historic monuments and which will reflect the cultural significance of the Capitol. These outside entry court areas help make the complex an integral part of the adjacent open greenspaces that weave through the campus. A potential inside/outside café court with benches and textured hardscape amenities will be positioned in a comfortable microclimate protected from summer sun and winter winds. Integration of hardscape into formal landscape areas brings strength and character to areas of significance for ease of intuitive orientation by users.

Less attractive utilitarian elements such as loading docks, dumpsters and transformers will be screened or visually mitigated while allowing for views towards the Capitol and surrounding open spaces. Two flagpoles are envisioned: The United States of America Flag and the State of Wyoming Flag. Furnishings will include a bike rack, ash/trash receptacles and benches/tables in key areas. Signage may also be integrated into hardscape seating walls and bermed areas along Central Avenue.

Irrigation

An automated irrigation system with separate zones selected for each plant category will be incorporated for sustainability and ease of maintenance.

Major irrigation adjacent to the facility can be accomplished via rainwater collection systems utilizing roof runoff. Sustainability of landscape and use of natural resources will help the facility to be environmentally friendly. Potable water irrigation will be utilized on extensively landscaped areas as non-potable water is not available on the site.

Visibility / Security

The need for sight visibility from key positions must be respected in the landscape design. Security requirements will dictate some of the physical form of the landscape.

Plant Materials

Plant materials will be selected primarily for climate tolerance and hardiness as well as decorative effect. The mix of chosen plants will provide a variety of forms, colors, textures and sizes. These plantings will also provide a dynamic landscape with seasonal flowering, textural foliage, ornamental fruiting, fall coloration and decorative branching structures for year-round interest. A site-specific plant list will be developed in response to each unique microclimate (specific site orientation to sun and wind, etc.) encountered within the complex. It is our goal to create an impressive landscape environment for visitors and personnel that is reflective of the importance of the building and its surrounding areas.

Potential Plant List

Shade Trees:	Seedless Green Ash	Silver Linden	Hackberry
	Honey Locust	Burr Oak	Catalpa
Ornamental Trees:	Shubert Chokecherry	Crabapple	Hawthorn
	Amur Maple	Golden Raintree	American Plum
Evergreen Trees:	Austrian Pine	Pinion Pine	Bristlecone Pine
	Rocky Mountain Juniper		
Shrubs:	Juniper	Sumac	Lilac
	Mugo Pine	Viburnum	Sage
	Mountain Mahogany	Currant	Serviceberry
	Buffaloberry	Potentilla	Nanking Cherry
	Sandcherry	Cotoneaster	Buckthorn
	Rose	Barberry	
	Chokecherry		
Groundcovers & Perennials:	Creeping Manonia	Polygonum	California Poppy
	Hardy Ice Plant	Daisy	Lavender
	Show in Summer	Rudbeckia	Sweet Woodruff
	Thyme	Kinnickinnick	Iris
	Veronica	Daylily	
Grasses:	Plume Grass	Ribbon Grass	Maiden Grass
	Fountain Grass		

DISCIPLINE NARRATIVE: STRUCTURAL – BUILDING
Project Number: 0810 DATE: 12/12/08

General

The Wyoming State office building is envisioned as a four or five story structure varying between 136,000 and 190,000 square feet. It is envisioned to be constructed in conjunction with a parking structure with between 470 and 600 parking spaces. Two concepts have been developed for the buildings in Conceptual Design. From a structural perspective; Concept A, which keeps the office building and the garage separate is preferable for the following reasons:

- The dimensions of the structures are such that an expansion joint will be required between the structures. This joint is simplified if the buildings are separated by a straight joint full height.
- The fire rating between the garage space and the office space will exceed that between floors of the office space, resulting in increased cost.
- The lateral systems for the two buildings may not work well together. Having the two structures act independently allows the most efficient lateral system for each building to be used.
- The bay layout that is optimum for office use may not be the most efficient for parking.

Structural Systems

Three structural systems were considered for the office building. They are a post-tensioned cast-in-place concrete frame, a precast concrete frame and a structural steel composite frame. They were evaluated based on thirty foot by forty foot bays that are proposed for the building. The structural steel frame described in the sections below was selected as the most appropriate system for this project. The steel frame offers the following advantages:

- It is the lightest of the systems resulting in smaller foundations and lateral loads.
- It requires the least on-site schedule to erect the building frame.
- It is the most flexible system with regard to modifications over the life of the structure. The system can be modified to carry additional load and accommodate openings at almost any location.
- At least three in-state bidders are available to compete for the work. Several additional major fabricators are available from Denver, Billings, and Salt Lake City and beyond.
- The system is very flexible with respect to the placement of lateral load resisting systems.
- It has the smallest columns sizes of the three systems considered.

The occupancy of this building does not require an extremely stiff structure that might be required with high powered microscopes or other laboratory equipment that would tend to direct the team towards a concrete framed building.

There are no precast concrete fabricators in the Cheyenne area, or for that matter in the State of Wyoming. The cost of transporting large pieces for the frame of this building reduces the economy of this system. The precast system also increases foundation loads and reduces the Owner's future flexibility in terms of both load capacity increases and cutting openings. The cast-in-place frame was the most expensive of the options considered. Although it would slightly reduce the structural depth of the structural frame, it reduces future flexibility and increases foundation loads. It is the most difficult of the systems to construct in winter weather.

Gravity Framing System

The gravity framing system for the selected system will be a structural steel composite framing system. The system will be made up of 4 ½" normal weight concrete on 2" deep 18 gauge composite steel deck. The elevated slab will be reinforced with 6x6W2.1xW2.1 welded wire fabric. This system will provide a two hour fire rating for the floor without spray fireproofing applied to the deck, though it is still required for beams and columns. Budgeting should assume (2) #5 continuous bars cast in the concrete slab around the entire perimeter and all openings in the slab.

The metal deck will be anchored to steel beams with shear connectors as required to make the slab and framing work as a unit. Steel for the system will be ASTM A992 Steel, 50ksi yield. Connections will be made with high strength bolting using ASTM A325 bolts.

Steel columns for the building will be wide flange columns in the W14 or W12 series, depending on the final height of the building. Wide flange columns are currently on the order of 25% cheaper for a given load over HSS tube columns.

A significant portion of the cost of a structural steel frame will be in the detail work at the perimeter and openings in the floor plate. The attached sketch indicates an allowance for bent plate and angle frame around the perimeter of the floor plate.

Generally speaking steel is erected in this region throughout the year except for the worst weather days. The lifted pieces are relatively small permitting erection to continue in moderate winds which are common in the area. Casting of thin decks can be difficult in cold weather and if the construction schedule dictates this must be done an allowance for temporary enclosure and heat should be included.

A typical 30'x40' bay plan is included on the attached drawing.

Lateral Load Resisting System

The structure will be designed to resist wind and seismic loads in accordance with IBC 2006. This will result in the need for lateral resisting elements within the floor plate of the building. These are usually arranged around the elevators and stair cores so as to minimize the impact on usable space in the building. Either cast-in-place concrete shearwalls or steel braced frames would be an acceptable system for this project. If lateral resisting elements are spaced in excess of 120 feet apart in plan, an allowance of 2.54 tons per floor should be allowed for diaphragm reinforcing.

The use of concrete walls around stairs and elevators provides the dual purpose of creating a fire-rated enclosure while also providing a resisting element for lateral loads. If this system is used, a core or C shaped walls should be used to allow the contractor the flexibility to cast the wall full height prior to starting steel erection. Isolated planer walls should be avoided as bracing them can be very difficult. At least two cores, and preferably three, distributed over the floor plate should be assumed for the lateral system.

If a braced frame system is selected, isolated planer frames are acceptable. The system is self bracing as the steel is erected floor by floor. Three braced frames in the narrow direction of the building and four braced frames in the longer direction of the building should be assumed. They may be located around cores, or not as required by the design. The configuration of the web diagonals may be adjusted to accommodate openings for doors and services. Diagonals on the lower tier should be assumed to be 12"x12" wide flanges, while heavy double angles may suffice for the upper levels.

Foundations

Based on experience with other buildings in the area, we anticipate the foundation system for this building will be drilled piers with an end bearing capacity of 15,000 pounds per square foot (psf) and side shear for the portion of the pier in bedrock of 1,500 psf. For the loads associated with the proposed structure we would anticipate 48" diameter piers with an overall length of 40 to 50 feet for a four story structure and 54" diameter piers with a similar length for a five story building. Typical perimeter grade beams will be a minimum of 12" wide and four feet deep and may be increased in width to address brick ledges and articulation of the exterior wall surface. Piers should be considered to be cased and will be reinforced with between 1/2% and 1% steel. Foundation between lateral elements will have tie beams on the order of 4 feet square and be reinforced with 1% steel. Piers below these tie beams may be reinforced up to 3% steel.

The ground floor will be constructed as concrete slab-on-ground over a granular base course with a vapor barrier. A heavier slab may be required in areas around the loading dock and any on-grade mechanical equipment areas.

DISCIPLINE NARRATIVE: STRUCTURE – PARKING GARAGE
Project Number: 0810 DATE: 12/12/08

Site Analysis

The proposed parking structure site is located along the west side of Warren Avenue between East 25th Street and East 24th Street. The site is currently occupied by existing buildings and surface parking which are anticipated to be demolished prior to the start of construction of this project.

Site Topography

The site is generally level with gradual slopes for drainage.

Soil Conditions

At this time, existing soil conditions are unknown. As part of the next phase of work, a geotechnical investigation and report will be completed.

Site Access

The State has expressed interest in maintaining two points of access to the structure, namely on the north and south sides. Therefore the proposed site plan provides for two entry/exit locations for the parking structure. One entry/exit is located along East 25th Street and is anticipated to be the main entry/exit for the parking structure. The other entry/exit is located along East 24th Street and is anticipated to be a secured parking access point. Exiting to these roads is not anticipated to overload the existing roadway system.

Truck dock and/or trash service is anticipated to be located within the parking structure at the northwest corner. Access to this area would be along East 25th Street.

Program Space and User Groups

As stated in both the Executive Summary and Civil narratives, the site should be re-zoned CBD. Per this zoning no off-street parking is required within the property. However, the State of Wyoming has requested a proposed parking structure that will provide enough parking for legislators, staff, tenants, and visitors who are housed in 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.

Additionally, the State of Wyoming has requested that the proposed parking structure provide parking for an additional 59 spaces that will be displaced from a small surface lot located across Warren Ave from the project site.

In order to estimate the proposed required parking for the New Wyoming State Office building, Title 17 Zoning requirements were compared to the potential office building size ranging from 136,000 GSF to 190,000 GSF.

The following table summarizes these required parking counts, based on 1 stall provided for every 300 SF of office space. The final parking count will be determined based on actual occupant loads.

Proposed Parking Requirements

Option	Size of Office Building	Required Parking Stalls
Scheme A - Base	136,000 SF	453 stalls + 59 = 512 total stalls
Scheme A - Alternate	169,000 SF	564 stalls + 59 = 623 total stalls
Scheme B - Base	150,000 SF	500 stalls + 59 = 559 total stalls
Scheme B - Alternate	190,000 SF	633 stalls + 59 = 692 total stalls

Number of Tiers of Parking

The City of Cheyenne has set limits on the heights of buildings in and around the Capital complex. The anticipated maximum height above grade for this project is approximately 60 ft, as described further in both Executive Summary and Civil/Permitting Process narratives. With respect to the 60' height restriction, the maximum number of tiers for the parking structure is limited to approximately 6. The floor to floor heights are anticipated to be 11'-6" at the ground tier to accommodate van accessible parking stalls; with the remaining floor to floor heights anticipated to be 10'-6" 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 from the back of curb on the north and east are approximately 17 ft. The setback on the south is approximately 27 ft.

Access/Circulation

As previously noted vehicular access is provided on the north and south sides of the parking structure. Final lane configuration and width of curb cuts required will be determined in the next phases of design along with any requirements for parking control equipment.

The predominant direction of pedestrian travel is anticipated to be to/from the west side of the parking structure where there will be vertical circulation core consisting of stairs and elevators. This core will allow for pedestrian access at all levels of the parking structure, and the building should screening and security operations be required the core could connect only at the ground level. Additional stairs will provide code required egress at the east side of the structure.

Operational Controls

It is not known at the time of this report if parking control equipment such as gate arms or booths will be required as part of the initial construction for all areas of the parking structure. However, the design should allow for future installation of such elements on an as needed basis. It is assumed that some equipment will be required for the secure parking area entrance/exit on the south side. If there will be any reserved parking areas for staff or other user groups, signage and card access/gate arms will be used to designate those areas.

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 if scheme "A" is selected. If scheme "B" is selected, the parking structure will likely be classified as an "enclosed parking structure", occupancy S-2.

In either scheme "A" or "B", there will be a fire separation required between the parking structure and office building.

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

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.

Functional Design Options

Two options for the functional circulation system are presented. Each design utilizes a two bay "single thread" ramping system with 90 degree parking.

A summary of the options and some of the key features is presented on the following table.

Summary of Parking Options

	Scheme A		Scheme B	
	Base Scheme	Alternate Scheme	Base Scheme	Alternate Scheme
# of Tiers	4 supported + 1 grade level = 5 total tiers	5 supported + 1 grade level = 7 total tiers	6 supported + 1 grade level = 7 total tiers	6 supported + 1 grade level = 7 total tiers
Height to top tier from grade	45 ft	55 ft	65 ft	65 ft
# of Stalls	444	544	498	498
Total SF of Parking	SF	234,514 SF	195,254 SF	195,254 SF
Parking Efficiency	367 sf/stall	364 sf/stall	392 sf/stall	392 sf/stall
% of Stalls on "Flat"	64% LOS "B"	63% LOS "B"	60% LOS "B"	60% LOS "B"
# of turns to top	4 turns LOS "B-"	5 turns LOS "C-"	6 turns LOS "C-"	6 turns LOS "C-"
Anticipated Cost per Stall	$16,500/stall	$16,400/stall	$21,500/stall	$27,400/stall
Assumed Construction cost per square foot	$45	$45	$55	$55
Meets Parking Required per Zoning?	Yes	Yes	Partially meets requirements. Meets building parking requirements, but not the surface lot	Does not meet parking requirements for number of stalls per the zoning.

Concept plans and isometrics for design options can be found in the appendix.

Further Recommendations regarding Parking Demand

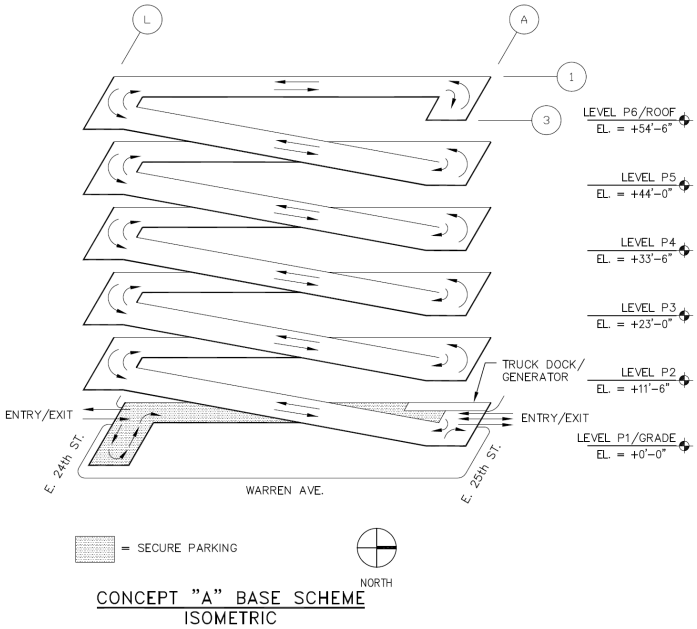
If the overall height of the parking structure or construction budget is of concern, a shared parking analysis and study of the immediate area should be performed to determine if there is an opportunity to construct less than the currently noted parking stalls.

Scheme A - Base

Two bays of parking on 6 total tiers are provided. The footprint is approximately 130 ft E-W by 271 ft N-S and all tiers of the parking structure are the same dimensions. One sloping ramp bay is provided for vehicular circulation between levels which is located on the east side of the structure. There is one flat bay of parking on the west such that more flat parking is provided nearer the ultimate pedestrian destination.

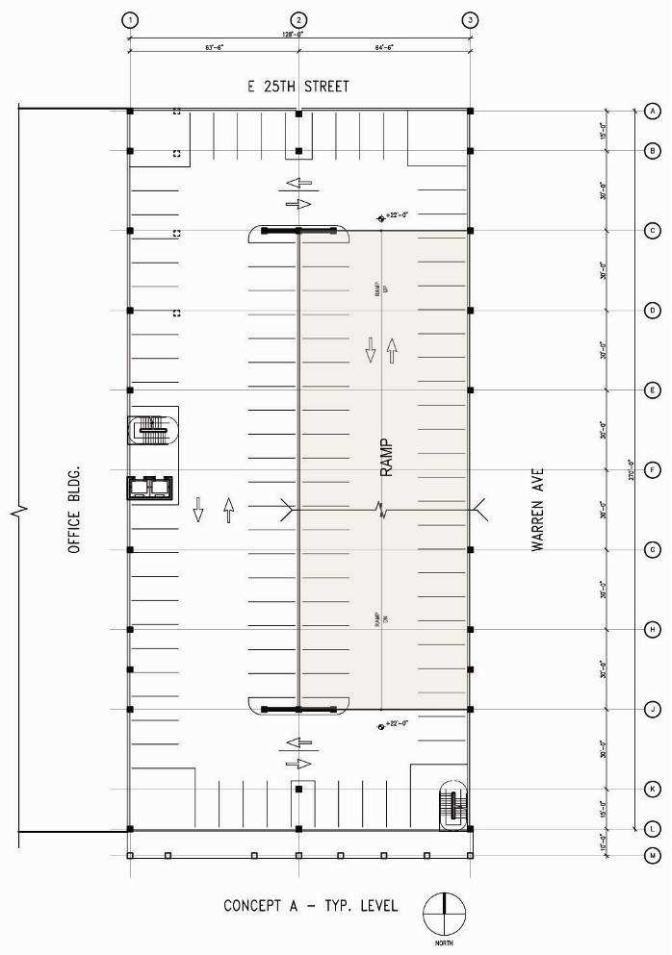
The ground tier plan indicates a truck dock/trash area in the northwest corner. Also on this tier is located approximately 42 secure parking stalls.

The 544 stalls provided meets the requirements for the parking demand for the building and provides parking for the 59 surface spots from across the street.



CONCEPT "A" BASE SCHEME
ISOMETRIC

Concept A – Base Scheme
Ramping Diagram

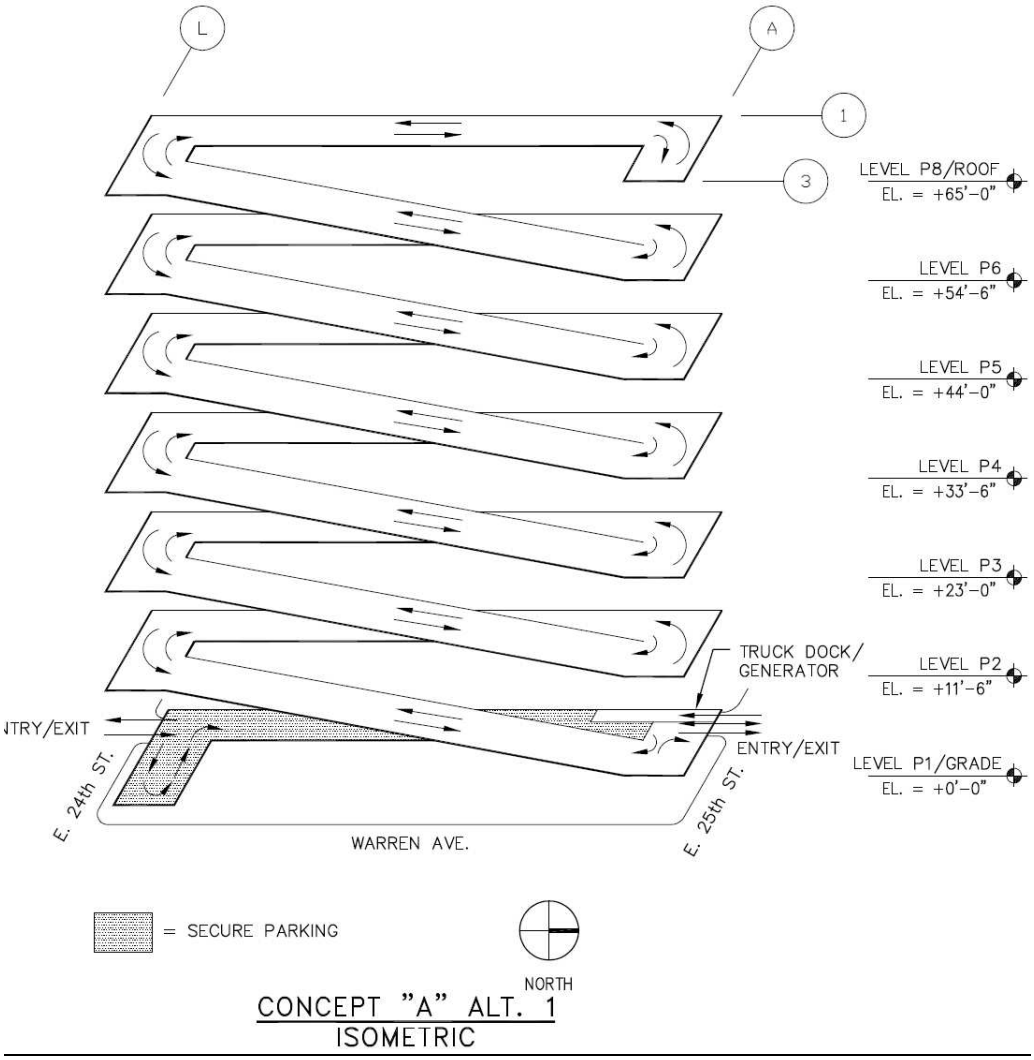


Concept A – Base Scheme
Typical Floor Plate

Scheme A - Alternate

Same as base Scheme except that an additional level of parking has been added to increase the parking count.

The 644 stalls provided meets the requirements for the parking demand for the building and provides parking for the 59 surface spots from across the street.



Concept A – Alternate 1
Ramping Diagram

Scheme B – Base

Two bays of parking on 7 total tiers are provided. The footprint is approximately 130 ft E-W by 271 ft N-S. The grade level, second level and level 3 would be full parking plates and the upper tiers would be reduced down to 196 ft in the N-S direction due to the overhang of the office building footprint. A portion of the sloping ramp bay is provided for vehicular circulation between levels in the east bay and the remainder is in the north half of the west bay. The flat area of the west bay will be where the pedestrian connection to the building will be located.

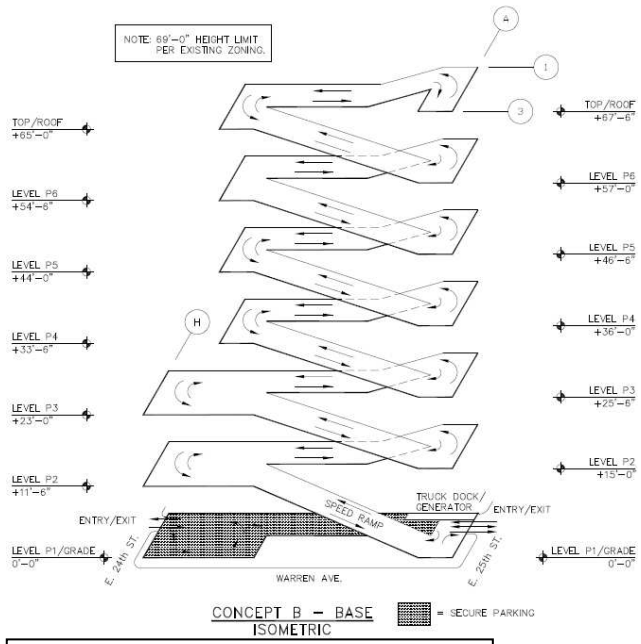
Due to the upper floors being cut back where the office footprint extends onto the parking footprint, the ramps are located slightly different as compared to scheme A. The ground tier plan requires that an express ramp be provided to get vehicles to the 2nd level so that parking can be provided on the grade level near the south end in the east bay. As with scheme A, a truck dock/trash area is located in the northwest corner. Also on this tier are located approximately 52 secure parking stalls.

The 498 stalls provided almost exactly meets the requirements for the parking demand for the building however the parking for the 59 surface spots from across the street cannot be accommodated in this scheme.

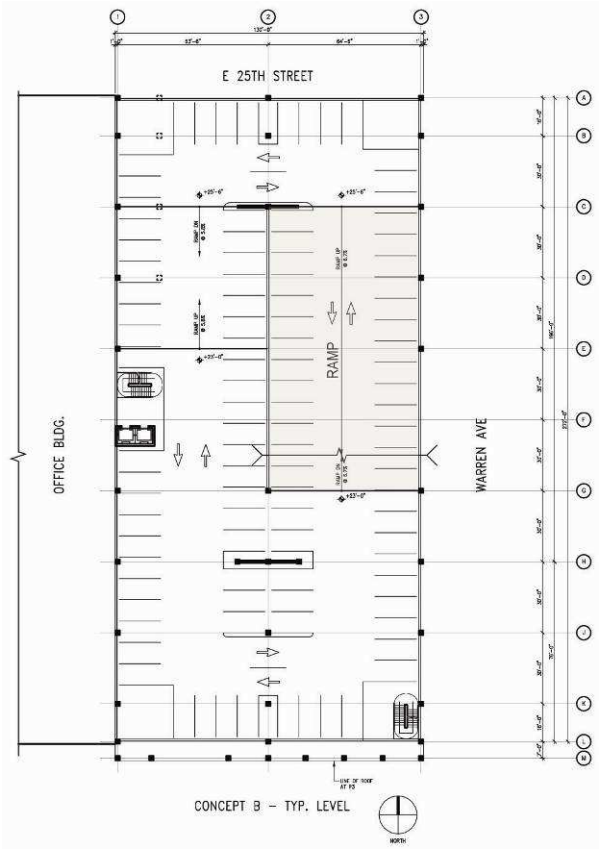
Scheme B – Alternate

The same parking structure is used for this building option. It is not practical to add more parking tiers to the base option due to the height restrictions. Additionally, if more tiers were added, the number of turns it would take to get to the top would exceed what would commonly be recommended as a maximum.

This option does not provide the required number of parking stalls for the size building being constructed. It would need to be explored in future phases if some of the parking plates could be extended to be full plates. This would accomplish two goals which would be to increase the square footage available for parking while at the same time reducing the square footage of the building and reducing the demand for parking stalls.



Concept B – Base Scheme
Ramping Diagram



Concept B – Base Scheme
Typical Floor Plate

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. There are two alternative structural systems to consider for this type of project. Cast-in-place (CIP) post tensioned concrete or precast (PC) prestressed concrete. Both systems can be designed for long service lives, in the range of 40 to 75 years. The advantages for a precast system are typically lower initial cost, and speed of erection. However, precast systems require more annual maintenance than CIP systems. This is mainly due to the larger number of joint sealants required.

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 spacings are 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.

The PC system will utilize precast concrete double tee members spanning across the bays to either precast wall panels at the interior and precast beams at the exterior. The precast members are manufactured at an offsite plant and erected at the project site. A field placed concrete topping would be used over the precast double tees to provide increased durability. Typical column bay spacings are 30 ft. Typical double tee stem spacing is 5 ft and therefore produces a sense that the ceiling is lower as compared to a CIP system. Lateral force resisting system is provided via shear walls or shear frames which can be internally or externally located.

Sealers, sealants and expansion joints should be properly selected, designed and detailed to improve the durability of the structure. Providing these items will reduce the life cycle costs as can be illustrated by the figure below.

Waterproofing membranes should be provided over any occupied spaces to prevent water intrusion from parking areas. There are several options to consider for membranes during design. Issues such as initial cost, annual maintenance, etc should be considered.

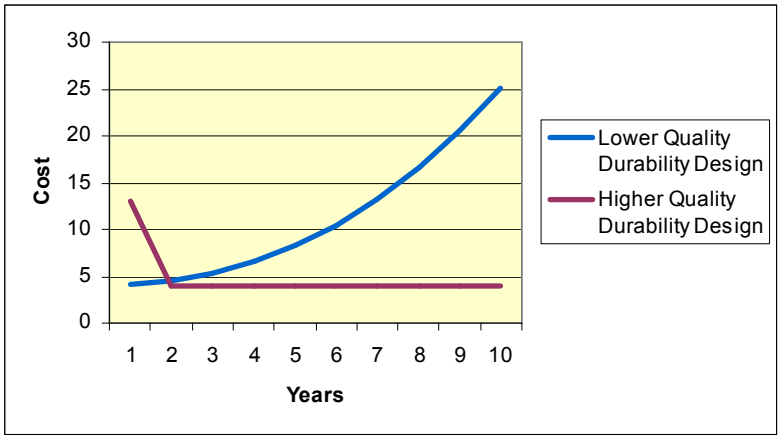
Foundation systems for either the cast in place or precast structures can be either deep foundations or shallow foundations depending on the local soil strength. Most parking structures of this size and height are supported by deep foundation systems consisting of drilled shafts, driven steel piles or auger cast piles. Shallow foundation systems consist of spread and/or continuous footings of reinforced concrete. Final recommendations for foundations will be made upon completion of a geotechnical investigation of the site.

Example CIP Structure

Example Precast Structure

Structural System Recommendations

Scheme A could utilize either the cast in place (CIP) or the precast (PC) structural systems with little difficulty. However, scheme B is complicated by the fact that the office building is located over the south portion of the parking structure. For scheme B, the CIP structural system is recommended.



Example CIP Structure Life Cycle Costs

DISCIPLINE NARRATIVE: MECHANICAL DESIGN CONCEPTS
Project Number: 0810 DATE: 12/12/08

Introduction

This section provides the design criteria for the mechanical systems to be utilized for this part of the project. The systems include HVAC systems, specialized ventilation/exhaust systems, central heating and cooling plant within the building, control systems, plumbing systems, and fire protection systems.

Applicable Codes and Standards

The following codes and standards will be utilized in the design of the systems to be included in this project:

International Building Code 2006
International Mechanical Code 2006
International Plumbing Code 2006
International Fire Code 2006
Applicable National Fire Protection Association (NFPA) codes
ASHRAE Standards

HVAC Design Criteria

Outdoor design conditions:
- Summer: 91 degrees F Db/ 61 degrees F Wb
- Winter: -7 degrees F Db

Altitude:
- 6200 FASL

Outside Ventilation Rates:
- Per ASHRAE Standard 62-99

Inside design conditions:
- Offices/Meeting Rooms, etc.: 72 degrees F heating, 75 degrees F cooling

Building Design Concepts

As described in the Executive Summary, there are two concepts under consideration for the building design. Regardless of the building concept, the same basic building systems will be used as the basis of design for the building and is described below. These building systems provide the necessary control and operations for this type of facility.

Recommendations

The main HVAC systems described below will provide the zoning and flexibility to meet the long-term needs of the state. The VAV/Reheat systems can be modified in the future to meet changes of use of the various spaces. This type of system will provide energy savings exceeding the LEED requirements, and are in line with the sustainable design goals of the project.

Two options were considered to generate the heating and cooling systems required for the HVAC systems. Option One is to connect this new facility to the existing State central heating/cooling plant and make the necessary modifications to this plant. Option Two is to include separate stand-alone boilers and chiller with the building. Our recommendation is to use Option One, connecting to and modifying the existing State central plant. The large central plant will allow for diversity within the entire State building complex. Heating and cooling systems can be optimized and generate only the required heating/cooling capacity to meet the sum of the actual needs of all the buildings rather than have multiple systems operating at part load conditions. There will also be a long-term savings to the State by not requiring additional maintenance removal.

The recommended systems are discussed below. We have also included descriptions of the systems that were considered. Those descriptions follow. The one "alternate system" that is being considered is for a raised floor with an Under Floor Air Distribution (UFAD) system. This alternate is a different means to deliver the conditioned air to the space. It has some benefits, which are described in the paragraph below. While the recommended system is the overhead distribution, the UFAD system has other benefits that should be evaluated.

HVAC Systems

Multiple VAV/Reheat HVAC systems will provide heating, cooling, and ventilation to all office and similar spaces throughout the building. One HVAC VAV/Reheat system will be provided for each floor. Each HVAC system will have supply and return fans, an energy recovery module for pre-conditioning outside air, using building relief/exhaust air, hot water and chilled water coils and MIRV 13 filtration. Hot water baseboard radiation and/or cabinet unit heaters will be used to provide supplemental heat at spaces with significant exterior windows and at building entries. Zoning will be provided by multiple VAV/Reheat boxes based on building exposure and use of the spaces. Exhaust systems will be provided for all restrooms, break rooms, and spaces with special ventilation requirements.

For the base design of the facility, all VAV/Reheat boxes and air distribution systems will be overhead with ceiling distribution. Air distribution systems will be selected to provide high ventilation effectiveness. An alternate system will be considered for an Under Floor Air Distribution (UFAD) system (see separate write up below).

Systems will utilize heating water and chilled water from the State Central Heating/Cooling Plant (see options noted below.) Primary heating and chilled water will be pumped to mechanical rooms in the building and then circulated to the various users with building secondary pumps. Heating water will be circulated to all VAV/Reheat devices.

All controls will be a direct digital control (DDC) type tied into the existing state facility management system. The system will have local control panels and localized controls for all mechanical equipment.

All mechanical air and water systems balancing to be done by a licensed contractor qualified to do the work and commission the system.

Plumbing Systems

All plumbing fixtures will be low flow flush dual action valve type operation for all water closets and urinals and ADA fixtures where required. Fixture counts will be based on the architectural floor plans and use of area. All equipment will be plumbed from a distribution system overhead where applicable. High efficiency sealed combustion water heaters will provide domestic hot water. Domestic water and

waste systems will be connected into the new utility systems provided under the Civil Division of this project. Roof drain systems will tie into utility storm system. Existing City water pressure will be adequate for the domestic water use up to the five floors being considered.

Fire Protection Systems
The entire facility will be fully protected by an automatic fire sprinkler system. The system will in general be a wet system except as required for special areas. Light hazard in all office areas. Water for the wet system will tie into the new water distribution system. An electric driven fire pump will be provided to meet the code requirements for flow and pressure at the highest portions of the facility.

State Central Heating/Cooling Plant
The State central heating plant with steam boilers is located in the Barrett and Herschler Buildings. The central chiller plant is located in the Herschler and Capital buildings. The central tunnel system is buried in the grassy area to the east of the Capital building. The connection of this new building to these systems would be through a new concrete tunnel connected to the existing tunnel, extended under Central Avenue to the new facility. This tunnel would be equivalent to the existing tunnel system and allow steam, chilled water, tele/data systems and control systems to be brought to the building.

Utilizing the existing central plant systems would eliminate square footage required for the separate boiler/chiller systems within the building. Using the central plant would reduce the maintenance effort required to support a totally additional heat/cool plant. A separate boiler/chiller system in the building could require two additional fulltime HVAC maintenance/service personnel to take care of these added systems. This would not be required to upgrade the existing plant. The use of an upgraded central plant also has the benefit of using the diversity of a multiple building system to only operate the amount of heating and cooling equipment to meet the total need of all buildings by operating less total equipment, thus saving energy.

The impact of this new facility on the capacity of the existing central plant equipment is not known at this writing. We have past experience with the State central systems. A recent study and modifications to the chiller plant acknowledged that a new office building was being planned. The size and required cooling load was not known. Further evaluation is required to determine the impact on the central chiller plant. It would require a chiller replacement (planned, but size unknown), pumps and piping replacement (planned). The size of the new chiller would have to be evaluated based on existing loads and proposed new loads. This would also be the opportunity to evaluate energy saving systems ("off peak" generation and storage of cooling) to reduce energy costs and provide a benefit to the entire State complex.

The steam heating plant also needs to be evaluated to determine what changes might be required. The recent modifications being constructed for the plaza between the Herschler and Capitol buildings has added load to the existing plant and there is concern that the Barrett Building plant may be nearing capacity.

To complete the evaluation and potential impact of the new facility on the central systems, we would need to complete a load analysis and system/equipment evaluation. The outcome of this analysis and evaluation would provide the information on the modifications required to the systems.

Parking Building Systems
No heat will be planned for the parking facility.

Dry stand pipe fire protection systems will be provided per code.

Drainage will be provided to collect storm water and dispose of it to the storm sewer.

Concept A does not require any extra mechanical ventilation.

Concept B will require mechanical ventilation on all levels where the office building extends over the parking structure. The partial enclosed areas will require exhaust systems sized to provide 1.5 cfm/sq. ft. Also, the partial enclosed areas will have to have a fire sprinkler system.

Alternate Under Floor Air Distribution System

This alternate air distribution system utilizes the same basic HVAC and heating/cooling systems described above. The significant difference is that the supply air is distributed throughout the facility using the space below a raised floor system. The supply air is discharged through control "discs" that are located in each cubicle or space throughout the facility. Each occupant can vary the amount of supply air they desire in their space. Zone VAV boxes, VAV/Reheat and/or fan-powered VAV/Reheat boxes are located below the raised floor. The main supply air is distributed from the HVAC unit to "ducts" below the floor. These are constructed of dividers/baffles as part of the floor system (saving sheet metal costs). Perimeter heat can be incorporated into the Under Floor system. Return air for the space is drawn out at the ceiling. This helps remove heat and contaminants upward and out of the space.

This type of system (rather new to the industry) should be considered as an alternate air distribution syste, and provides several benefits. They use a warmer supply air (60-65°F) that reduces energy consumption. The basic airflow pattern (floor to ceiling) increases overall air quality in the space. The type of supply air "discs" in each space allows for more individual comfort and flexibility to relocate the "discs" as the spaces are reconfigured to meet future space needs. The raised floor system also has benefits for distribution of electrical power and tele/data to work stations.

Optional Heating and Cooling Systems

The systems noted below were considered and evaluated to provide heating and cooling to the facility. The first option is to provide separate boiler and chiller systems within the building. The second option is to utilize a Geo-thermal Heat Pump system.

Building Heating/Cooling System

These systems will generate heating water and chilled water for the building only. They will require additional space within the facility. Using "stand alone" systems as this will not be able to benefit from the diversity of the central plant systems (discussed above) and will require additional maintenance staff.

Heating

Three high-efficiency condensing type natural gas fired boilers. Each boiler will be sized to provide approximately 65% of the total combined heating load. Two boilers will meet the connected load with the third boiler to provide backup capabilities. Three primary heating water pumps (one standby) will circulate the heating water to the building's system. Each HVAC unit will have coil circulating pumps and a secondary pump will circulate heating water to the reheat coils, baseboard radiators and other heating units.

Cooling

A high-efficiency water cooled electric drive chiller will be provided to generate chilled water for the facility. A roof mounted cooling tower will reject heat to the outside. A primary chilled water pump will circulate the chilled water to the building. A condenser water pump will circulate condenser water to the cooling towers. A standby pump will be provided to serve either the chilled water or condenser water systems. Each HVAC unit will have coil circulating pumps.

Controls

These systems would be controlled through the building DDC central system and connected to the overall State central DDC system.

Geo-Thermal Heat Pump System Alternate

As an alternate, we have prepared a preliminary evaluation to utilize a geo-thermal ground coupled water-to-water heat pump system, in place of the building central heat/cooling. This system would develop both the chilled water and heating water that will be pumped to the various HVAC systems previously discussed. We have based this analysis on a similar system recently designed for a large office building for the Wyoming Military Department. This system utilized multiple heat pumps piped such that the number of units making chilled water or heating water can be "switched" to meet the building load at different times.

For comparison, we utilized Concept A with Alternate No. 1 (5 floors). As stated above, the number and sizes of HVAC systems would not change. The Geo-Thermal Heat Pump system would still need the primary heating pumps and chilled water pumps to circulate water to the HVAC units (no condenser water pump). The ground coupled system would also require pumps. We have based this on vertical holes for the ground loop.

Heat Pumps:	20 units
No. of Holes:	230 vertical holes
Ground Loop Pumps:	2 @ 1400 gpm
Spacing of holes:	30 feet between holes
Surface Area for Hole Field:	900 sq. ft./hole x 230 = 207,000 sq. ft. (approx. 5 acres)

The building size utilizes the entire block. There is no open space to locate ground loop field. The only State owned open area would be the grass areas east of the Capitol building, north of the Barrett Building and possibly north of the Supreme Court. These locations would require considerable piping to each area that would have to cross under multiple streets. Even utilizing all of this area, it does not seem feasible to attempt to drill the number of holes required.

Given the fact that ground water exists at approximately 15 ft. below grade, there might be an opportunity to pump this water through a heat exchanger and re-inject the water back into the aquifer. A complete hydrologic study would need to be completed to know if there is enough water available and if the groundwater "flows" enough to move the BTU's away from the source water location.

Concept System Capacities

Given the basic general mechanical systems as described above, it is important to note that the number and sizes of the mechanical systems vary for each building concept. Below is a listing of the number and basic preliminary sizes of these systems:

Concept A

1. Base (4 floors) – 136,000 sq. ft.
   a. Boilers: 3 - 2,000,000 btu
   b. Chiller: 1 - 300 ton
   c. Heating Pumps: 3 @ 400 gpm
   d. Chiller Pump: 1 @ 720 gpm
   e. Cond. Water Pump: 1 @ 900 gpm
   f. Standby Pump: 1 @ 900 gpm
   g. HVAC Units: 4 @ 42,000 cfm
   h. Estimated Zoning: 30 - VAV/Reheat boxes per floor

2. Alternate (5 floors) – 169,000 sq. ft.
   a. Boilers: 3 - 3,000,000 btu
   b. Chiller: 1 - 380 ton
   c. Heating Pumps: 3 @ 600 gpm
   d. Chiller Pumps: 1 @ 910 gpm
   e. Cond. Water Pump: 1 @ 1,140 gpm
   f. Standby Pump: 1 @ 1,140 gpm
   g. HVAC Units: 5 @ 42,000 cfm
   h. Estimated Zoning: 30 - VAV/Reheat boxes per floor

Concept B

1. Base (4 floors) – 157,000 sq. ft.
   a. Boilers: 3 - 3,000,000 btu
   b. Chiller: 1 - 350 ton
   c. Heating Pumps: 3 @ 600 gpm
   d. Chiller Pump: 1 @ 840 gpm
   e. Cond. Water Pump: 1 @ 1,050 gpm
   f. Standby Pump: 1 @ 1,050 gpm
   g. HVAC Units: 2 @ 44,000 cfm
      2 @ 57,000 cfm
   h. Estimated Zoning: 2 syst @ 35 - VAV/Reheat boxes
      2 syst @ 40 - VAV/Reheat boxes

2. Alternate (5 floors) – 190,000 sq. ft.
   a. Boilers: 3 - 3,000,000 btu
   b. Chiller: 1 - 450 ton
   c. Heating Pumps: 3 @ 600 gpm
   d. Chiller Pumps: 1 @ 1,080 gpm
   e. Cond. Water Pump: 1 @ 1,350 gpm
   f. Standby Pump: 1 @ 1,350 gpm
   g. HVAC Units: 2 @ 44,000 cfm
      2 @ 57,000 cfm
      1 @ 52,000 cfm
   h. Estimated Zoning: 2 syst @ 35 - VAV/Reheat boxes
      2 syst @ 40 - VAV/Reheat boxes
      1 syst @ 38 - VAV/Reheat boxes

DISCIPLINE NARRATIVE: ELECTRICAL DESIGN CONCEPTS
Project Number: 0810 DATE: 12/12/08

Introduction

The systems include high and low voltage electrical distribution, lighting and lighting control, Voice/Data raceway, and Fire protection. Various "Concepts" in terms of building size, height, and layout are presented as part of the overall design narrative. However, the basic electrical design approaches addressed within the electrical narrative will remain similar regardless of Options presented. Only the size of the system should be affected.

Applicable Codes and Standards

The flowing codes and standards will be utilized in the design of the systems to be included in this project.

International Electrical Code 2006
International Fire Code 2006
National Electrical Code 2008

Electrical Design

Primary power to the new facility electrical distribution system will be provided from Cheyenne Light Fuel and Power (CLF&P). Power will originate from their primary power source distribution system and serve the new Utility transformer for the new facility. Internal electrical distribution will distribute the power throughout the building.

Power

The preliminary electrical demand load for the new facility has been estimated as follows:

Building square-feet = 136,000 to 190,000 sf.
Estimated VA/square-foot= 7 to 11
Estimated Demand Load (Kva) = (136,000 s.f.)(x 7VA /s.f.) = 952 Kva
= (136,000 s.f.)(x 11VA /s.f.) = 1496 Kva

= (150,000 s.f.)(x 7VA /s.f.) = 1050 Kva
= (150,000 s.f.)(x 11VA /s.f.) = 1650 Kva

= (190,000 s.f.)(x 7VA /s.f.) = 1393 Kva
= (190,000 s.f.)(x 11VA /s.f.) = 2189 Kva

Therefore, the maximum size of the facility electrical service would be 2000 Kva, the smaller size 1000 Kva. We anticipate the actual usage number to be closer to 7 VA/ s.f. The largest size utility transformer available from the power company is 2000 Kva; however, these have long (36 week) lead times.

Various HVAC options are presented here that each have differing impacts on the electrical system, however, the watts per square foot allotments given above will accommodate these various options with the exception of

a modified central plant design. If this option is chosen (over providing up to a 500 ton chiller at the new facility) the electrical loads for the office building will be reduced by approximately 33%.

A new exterior pad-mounted transformer will be located on the site at an exact location to be determined later. The transformer will provide a secondary voltage of 480Y/277 volts, three-phase, and four-wire to the facility. Considering a 30 percent combined growth and contingency allowance, the estimated design load results in a minimum continuous capacity requirement of 1500 KVA, which equates to a service size of approximately 1800 to 2000 amps.

The interior building electrical system will be comprised of a series of 480Y/277 volt and 208Y/120 volt distribution panel boards as well as various sizes of dry type transformers. Separate neutral conductors will utilized for all branch circuits and all panels which may experience heavy computer usage will have feeders with neutral conducts oversized 173% of the phase conductors throughout the facility to minimize the effects of harmonic currents.

Lighting

The lighting system for the facility will be designed to maximize energy efficiency. A combination of fluorescent lighting, including recessed indirect trotter type fixtures, possible LED lighting in parking areas, high efficiency electronic ballasts and controls by motion sensors will be used throughout the facility. This approach will achieve energy saving. Decorative LED fixtures and/or low voltage accent lighting will be used in specialty areas to emphasize particular architectural features. Exterior fixtures controlled through the use of photocells and time clocks will maintain required light levels with light control cutoff to comply with "dark sky" requirements. All interior and exterior lighting levels will be in accordance with IES. Motion detection sensors will be incorporated where appropriate to enhance security and sustainability.

Voice/Data System

We anticipate that the telecommunications system for this facility will be distributed throughout the building from the switch/network room. If feasible, and depending upon which options are selected, an interior cable-tray system will be installed to distribute the various communications cables throughout the facility. Plenum rated cable will be installed where required, and telecommunications closets will be located in accordance with distance requirements.

Security Systems

All associated security systems wiring and conduit will follow the requirements of the security system consultants. At a minimum this will involve the installation of conduit, pull and junction boxes.

Lightning Protection

The risk assessment worksheet from NFPA 780 was completed, and it was determined that a lightning protection system should be required for this facility based upon geographic location, building construction, and structure type and lightning frequency level.

Fire Protection

The fire protection system will be fully addressable and capable of transmitting to the appropriate first response unit as required by the City of Cheyenne.

DISCIPLINE NARRATIVE: SUSTAINABILITY
Project Number: 0810 DATE: 12/12/08

Leadership in Energy and Environmental Design (LEED™)

The LEED™ Green Building Rating System is rapidly becoming recognized as a standard method of measuring sustainability in new and existing construction. The increasing availability of new technology and products has made the idea of achieving sustainability in construction projects an affordable goal. The LEED™ Rating System utilizes widely accepted energy and environmental principles as a baseline for measurement, and also allows for new and emerging technology to be integrated into the project as well. The decision to use the LEED™ Rating System under the version 2.2 as a guideline allows for a universally accepted method of sustainable design which makes it much easier to define the parameters and baselines needed to standardize future projects.

Goals and criteria for achieving a LEED™ certifiable project will be identified and evaluated early on by all team members so that feasibility can be determined. There are 4 levels of LEED™ Certification and minimum point requirements associated with each level:

Certification Level	**Points**
Certified	26-32
Silver	33-38
Gold	39-51
Platinum	52-69

While certification for the New Wyoming State Office Building is not anticipated, the Design Team is using the criteria set forth for a Silver certification level as a guide towards developing a sustainable building.
LEED™ is organized into 6 main Environmental categories and sub-categories with different points available throughout. There are also prerequisites within the categories that must be met before certification can be considered. The 6 main categories and prerequisites are listed below:

- **Sustainable Sites**
  Prerequisite 1- Erosion & Sedimentation control
- **Water Efficiency**
- **Energy & Atmosphere**
  Prerequisite 1- Fundamental Building Commissioning
  Prerequisite 2-Minimum energy Performance
  Prerequisite 3-CFC Reduction in HVAC & R Equipment
- **Materials & Resources**
  Prerequisite 1-Storage & Collection of Recyclables
- **Indoor Environmental Quality**
  Prerequisite 1-Minimum IAQ Performance
  Prerequisite 2-Environmental Tobacco Smoke Control
- **Innovation & Design Process**

A preliminary review of the available points has been completed and is attached in the LEED™ Project Checklist. Goals have been outlined in each category, and will become more refined as the design progresses and the project moves forward. By determining goals and completing the Project Checklist early on, it inevitably evolves into an integral part of the design process.

LEED™ Project Goals:

- **Sustainable Sites**
  - Site selection
  - Promote development density & community connectivity
  - Provide bicycle storage & changing rooms
  - Provide storm water quantity control
  - Reduce heat island effects with the roofing system
  - Light pollution reduction

- **Water Efficiency**
  - Provide native plants for new landscape to minimize irrigation use
  - Collect rainwater for irrigation use
  - Use low flow plumbing fixtures and reduce water use by a minimum of 20%

- **Energy & Atmosphere**
  - Use building orientation and overhangs to capture natural lighting and shading, as well as optimize energy performance
  - Eliminate HCFC's and Halons
  - Provide a measurement & verification plan for monitoring building systems

- **Materials & Resources**
  - Create a Construction Waste Management with contractor to minimize waste by 50% during construction
  - Specify a minimum recycled content of 5% for items such as carpet & asphalt
  - Use of local materials
  - Use of recycled materials

- **Indoor Environmental Quality**
  - Provide CO2 monitoring
  - Provide air-change effectiveness of 0.9 or better
  - Create an Indoor Air Quality Management Plan to provide maximum air quality to building occupants during and after construction.
  - Specify Low-Emitting Materials that meet or exceed VOC limits for materials such as paint, adhesives, sealants, carpet and composite wood products.
  - Provide operable windows to allow occupant control of ventilation and thermal comfort.
  - Provide humidifiers and monitoring equipment as needed to maximize Indoor Air Quality.
  - Provide occupancy sensors to reduce energy use and associated costs.

- **Innovation & Design Process**
  - Use of accredited LEED professionals
  - Demonstrating credit baseline procedures have been exceeded

Other potential goals include, but are not limited to:
- HVAC use of access flooring systems
- Incorporating renewable energy sources
- Providing enhanced commissioning of building systems

The design team is committed to using the LEED™ criteria as a guide within every design process in order to obtain the highest level of sustainability for the New Wyoming State Office Building.

LEED for New Construction v 2.2
Registered Project Checklist

Project Name: New Wyoming State Office Building

Project Address: Cheyenne, Wyoming

Yes	?	No		
36	19	14	**Project Totals** (Pre-Certification Estimates)	69 Points
SILVER			**Certified**: 26-32 points **Silver**: 33-38 points **Gold**: 39-51 points **Platinum**: 52-69 points	

Yes	?	No			
6	5	3	**Sustainable Sites**		14 Points
Yes			Prereq 1	**Construction Activity Pollution Prevention**	Required
1			Credit 1	**Site Selection**	1
1			Credit 2	**Development Density & Community Connectivity**	1
		1	Credit 3	**Brownfield Redevelopment**	1
	1		Credit 4.1	**Alternative Transportation**, Public Transportation	1
1			Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
		1	Credit 4.3	**Alternative Transportation**, Low-Emitting & Fuel Efficient Vehicles	1
	1		Credit 4.4	**Alternative Transportation**, Parking Capacity	1
	1		Credit 5.1	**Site Development**, Protect or Restore Habitat	1
		1	Credit 5.2	**Site Development**, Maximize Open Space	1
1			Credit 6.1	**Stormwater Design**, Quantity Control	1
	1		Credit 6.2	**Stormwater Design**, Quality Control	1
	1		Credit 7.1	**Heat Island Effect**, Non-Roof	1
1			Credit 7.2	**Heat Island Effect**, Roof	1
1			Credit 8	**Light Pollution Reduction**	1

Yes	?	No			
3	2		**Water Efficiency**		5 Points
1			Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
1			Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
	1		Credit 2	**Innovative Wastewater Technologies**	1
1			Credit 3.1	**Water Use Reduction**, 20% Reduction	1
	1		Credit 3.2	**Water Use Reduction**, 30% Reduction	1

LEED for New Construction v 2.2
Registered Project Checklist

Yes	?	No			
6	5	6	Energy & Atmosphere		17 Points
Yes			Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required
Yes			Prereq 1	**Minimum Energy Performance**	Required
Yes			Prereq 1	**Fundamental Refrigerant Management**	Required

***Note for EAc1:** All LEED for New Construction projects registered after June 26, 2007 are required to achieve at least two (2) points.

4	3	3	Credit 1	**Optimize Energy Performance**	1 to 10
			Credit 1.1	10.5% New Buildings / 3.5% Existing Building Renovations	1
			Credit 1.2	14% New Buildings / 7% Existing Building Renovations	2
			Credit 1.3	17.5% New Buildings / 10.5% Existing Building Renovations	3
		-->	Credit 1.4	21% New Buildings / 14% Existing Building Renovations	4
			Credit 1.5	24.5% New Buildings / 17.5% Existing Building Renovations	5
			Credit 1.6	28% New Buildings / 21% Existing Building Renovations	6
			Credit 1.7	31.5% New Buildings / 24.5% Existing Building Renovations	7
			Credit 1.8	35% New Buildings / 28% Existing Building Renovations	8
			Credit 1.9	38.5% New Buildings / 31.5% Existing Building Renovations	9
			Credit 1.10	42% New Buildings / 35% Existing Building Renovations	10
	1	2	Credit 2	**On-Site Renewable Energy**	1 to 3
			Credit 2.1	2.5% Renewable Energy	1
			Credit 2.2	7.5% Renewable Energy	2
			Credit 2.3	12.5% Renewable Energy	3
		1	Credit 3	**Enhanced Commissioning**	1
1			Credit 4	**Enhanced Refrigerant Management**	1
1			Credit 5	**Measurement & Verification**	1
	1		Credit 6	**Green Power**	1

LEED for New Construction v 2.2
Registered Project Checklist

Yes	?	No		
5	4	4	Materials & Resources	13 Points

Yes					
		1	Prereq 1	**Storage & Collection of Recyclables**	Required
		1	Credit 1.1	**Building Reuse,** Maintain 75% of Existing Walls, Floors & Roof	1
		1	Credit 1.2	**Building Reuse,** Maintain 95% of Existing Walls, Floors & Roof	1
		1	Credit 1.3	**Building Reuse,** Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1	**Construction Waste Management**, Divert 50% from Disposal	1
1			Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
1			Credit 3.1	**Materials Reuse**, 5%	1
	1		Credit 3.2	**Materials Reuse**, 10%	1
1			Credit 4.1	**Recycled Content**, 10% (post-consumer + 1/2 pre-consumer)	1
	1		Credit 4.2	**Recycled Content**, 20% (post-consumer + 1/2 pre-consumer)	1
1			Credit 5.1	**Regional Materials**, 10% Extracted, Processed & Manufactured	1
	1		Credit 5.2	**Regional Materials**, 20% Extracted, Processed & Manufactured	1
	1		Credit 6	**Rapidly Renewable Materials**	1
		1	Credit 7	**Certified Wood**	1

Yes	?	No		
13	1	1	Indoor Environmental Quality	15 Points

Yes					
Yes			Prereq 1	**Minimum IAQ Performance**	Required
Yes			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
1			Credit 1	**Outdoor Air Delivery Monitoring**	1
1			Credit 2	**Increased Ventilation**	1
1			Credit 3.1	**Construction IAQ Management Plan,** During Construction	1
1			Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
1			Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
1			Credit 4.2	**Low-Emitting Materials**, Paints & Coatings	1
1			Credit 4.3	**Low-Emitting Materials**, Carpet Systems	1
1			Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber Products	1
1			Credit 5	**Indoor Chemical & Pollutant Source Control**	1
1			Credit 6.1	**Controllability of Systems**, Lighting	1
1			Credit 6.2	**Controllability of Systems**, Thermal Comfort	1
1			Credit 7.1	**Thermal Comfort,** Design	1
1			Credit 7.2	**Thermal Comfort,** Verification	1
	1		Credit 8.1	**Daylight & Views,** Daylight 75% of Spaces	1
		1	Credit 8.2	**Daylight & Views,** Views for 90% of Spaces	1

LEED for New Construction v 2.2
Registered Project Checklist

Yes	?	No			
3	2		Innovation & Design Process		5 Points
1			Credit 1.1	**Innovation in Design:** Provide Specific Title	1
1			Credit 1.2	**Innovation in Design:** Provide Specific Title	1
	1		Credit 1.3	**Innovation in Design:** Provide Specific Title	1
	1		Credit 1.4	**Innovation in Design:** Provide Specific Title	1
1			Credit 2	**LEED® Accredited Professional**	1

DISCIPLINE NARRATIVE: SECURITY
Project Number: 0810 DATE: 12/12/08

Security Posture

The desired image and status of the New Wyoming State Office Building and Parking Structure as Wyoming's "Gateway to the Capitol" accentuates the importance of a realistic and inventive security design component. We are living in and facing a dangerous age of unqualified threat dimensions. The expectation of security for citizens, in relation to government buildings, is in the personnel and visitor context and is synonymous with personal safety. In the overall sense, it represents protection for delivery of government services to the people.

Therefore the principal security priorities adopted within the design will:

(a) Establish the consistent safety of the lawful occupants and users of the State Office Building;
(b) Protect the continuity of functions conducted from and assets held within the State Office Building; and
(c) Provide an efficient contingency (emergency response) plan.

Contingency Planning

The contingency planning requirement anticipates the possibility that from time to time, local regional or national occurrences will affect state government safety and security. Flexibility and agility are essential to mitigate the impact of disruptive events while maintaining acceptable safety and security standards. The proposed protection profile will assist with the general management of the site, thereby cultivating a shared responsibility between non-security and dedicated security managers and personnel. For instance, Internet Protocol video systems will facilitate desktop viewing and communications that does not necessarily have a security purpose, e.g. video conferencing with local real time video pictures as an option.

The success of future emergency responses to protect the occupants and structures of this building will depend on a combination of architectural, physical engineering and security program design features that are applied to the surrounding exterior environment and to the inner functionality of the State Office Building.

Electronic Security Systems

State of the art electronic security devices will make up an intelligent networked configuration of protection systems. This design approach will not only protect the building and occupants, it will demonstrably support the daily management of the building and departmental functions. Work and service efficiency, and convenience objectives will be a discernible facet of integrated security through Information Communications Technology [ICT]. Video surveillance, access management and security sensor systems will also facilitate the rapid accurate transmission of safety and security condition status to emergency responders. The routine ability to remotely view and monitor security of the building and parking facility will heighten the effectiveness of the emergency services in a range of variable circumstances. All relevant agencies concerned with inspection, patrol and emergency response duties will benefit from device connections that enable remote evaluation of prevailing conditions.

The coordination for installation of electronic security systems at the earliest stages of design and construction is necessary to achieve cost efficiencies and to engage all of the affected stakeholders in identifying best processes options and outcomes, as opposed to afterthought and retrofits. The location and design of monitoring stations, including provision of redundant power and protection systems, will be subject to joint study with these stakeholders.

Specific types, locations and costs for all security measures will be determined as the design progresses.

Parking

Special attention will be given to the traffic flow/pattern, structure materials and vehicle related blast mitigation risks for parking facilities close to or adjoining the occupied building.

a.v.i., P.C.

DISCIPLINE NARRATIVE: UTILITIES
Project Number: 0810 DATE: 12/12/08

Water

Water mains surrounding the site consist of 12" and 8" mains in Central Avenue, a 6" main in 25th Street, a 4" main in Warren Avenue, and 12" and 4" mains in 24th Street. Existing fire hydrants are located at the northwest corner of 25th Street and Central Avenue (FH023), the southeast corner of Central Avenue and 24th Street (FH056), and the southeast corner of Warren Avenue and 24th Street (FH055). The flow and pressure for these hydrants according to the City of Cheyenne Board of Public Utilities are as follows:

FH023 – 1713 GPM, static pressure 124 psi, residual pressure 106 psi.
FH056 – 1713 GPM, static pressure 115 psi, residual pressure 104 psi.
FH055 – 1628 GPM, static pressure 115 psi, residual pressure 94 psi.

Depending on the final fire flows and domestic flows required for the proposed building and parking structure, the City of Cheyenne Board of Public Utilities may require upgrading the 6" water main in 25th Street and the 4" water main in Warren Avenue to 8" mains.

Sanitary Sewer

Existing sanitary sewer mains consist of an 8" main in Warren Avenue flowing south and a 6" main in 25th Street flowing east. The existing school building has eight service lines that tie into the main in Warren Avenue. The proposed structures will be limited to service connections to the main in Warren Avenue. Depending on the mechanical design of the proposed building, additional sewer mains might be required.

Storm Sewer & Site Drainage

Storm sewer mains surrounding the site consist of a 24" main in Central Avenue flowing south and a 24" main in Warren Avenue flowing south. Curb inlets exist at all four corners of the site. Based upon the site receiving a CBD zoning there will be no required storm water detention, however any landscaped areas should include storm water quality features.

Electric

The site is currently served by Cheyenne Light, Fuel & Power overhead power lines.

Natural Gas

The site is currently served by Cheyenne Light, Fuel & Power with underground gas mains. There is a 2" gas main in 25th Street and a 4" gas main in Warren Avenue.

Communications

The site is currently served by Qwest Communications via overhead service lines. A Qwest fiber optic line exists along the south side of East 24th Street.

a.v.i., P.C.

DISCIPLINE NARRATIVE: TRAFFIC IMPACT
Project Number: 0810 DATE: 12/12/08

Traffic Impact

Based upon the preliminary design concepts and review of the 2007 City of Cheyenne Road, Street and Site Design Standards, WYDOT arterial access policies, 2007 City traffic volumes and signal programs for level of service, comments relative to the vehicular and pedestrian impact of the development are as follows:

1. The existing street system adjacent to the development appears to have sufficient excess capacity to accommodate the additional vehicular and pedestrian traffic which will be generated by the development and operate at an acceptable level of service.

2. The access to the parking garage should be located on 25th Street with a potential secondary access @ 24th.

3. Pedestrian movements to and from the development throughout the Capitol Complex can be accommodated at the signalized intersections of Capitol Ave with 24th and 25th Streets.

4. A final Traffic Impact Study should be conducted after final building design to analyze and verify the traffic impact of the development and to address any specific traffic related concerns of WYDOT or the City of Cheyenne.

a.v.i., P.C.

DISCIPLINE NARRATIVE: PLATTING & ZONING
Project Number: 0810 DATE: 12/12/08

Based on the selected concepts, the following platting and zoning review and approval processes will need to take place through the City of Cheyenne:

Re-Platting. To vacate the alley that bisects the property east/west as well as to vacate the original city lot lines, the property will need to be re-platted. This will create one large lot to facilitate the new building and parking garage on the site. Re-platting will also allow the project design to meet the criteria for upcoming City processes. If appropriate at the time, it is suggested to also re-plat several other State owned lots in the vicinity that have existing public street right-of-ways and alleyways. This would save future time and effort and could preclude future land issue concerns. The platting process goes through the City Planning Commission and the City Council, and takes approximately three months to complete once the application is submitted to the City.

Re-Zoning. The current zoning is MR-1 which does not allow for the future uses that the State is contemplating on the site. The CBD-Central Business District, MUB-Mixed Use Business Emphasis District, and P-Public District are alternative zoning designations which could applied to this site. Re-zoning needs to be completed prior to any construction on the site. The rezoning process goes through the City Planning Commission and the City Council, and takes approximately three months to complete once the application is submitted to the City. The Re-zoning process can occur concurrently with the re-platting process.

Some of the key requirements for each zone are shown in the following table:

	CBD	MUB	P
Maximum Building Coverage	The total building and property coverage may equal one hundred (100) percent of the property area.	The total building, parking and outside storage areas shall not exceed eighty (80) percent of total property area for non residential uses.	The total building, parking and outside storage areas shall not exceed fifty (50) percent of the total property area.
Setbacks	There are no setbacks required in this district.	The building must be set back twenty five (25) feet from all property lines adjacent to streets.	The minimum setback shall be twenty-five (25) feet from all properties along streets.
Parking	Off-Street Parking is not required in this district.	Off-Street Parking will be determined by use space according to ordinance.	Off-Street Parking will be determined by use space according to ordinance.
Landscaping	Landscaping is encouraged for all properties. Streetscape landscaping is desired.	Twenty percent of the area will need to be landscaped with internal and street trees.	Fifty percent of the area will need to be landscaped with internal and street trees.

These zoning designations are the ones most often used for re-zoning in the last five years in the downtown area. The new Laramie County Library is zoned MUB, the new Saint Mary's School received a CBD zoning, and the Hospital and many current State buildings are zoned P. It is the recommendation of the design team that a CBD Zoning be sought for this project as it is most appropriate for the capital complex.

The State Capitol Height Restrictive Overlay District is also a zoning consideration on this site. This Overlay District restricts building heights for this block, not to exceed six thousand one hundred forty-five (6,145) feet above mean sea level (MSL). The elevation of the property (6,085.6' MSL) subtracted from the Overlay District height limit (6,145' MSL) yields an allowable building height of 59.4'.

The Final Plat and Zone Change will be reviewed by the following agencies for compliance with their rules and regulations. At this point they will be looking at the broad picture and making sure their infrastructure is protected with easements and that there are no platting or zoning regulations being violated:

a. Wyoming Department of Transportation
b. Environmental Health
c. City Building Department
d. Cheyenne MPO
e. City Development Department
f. City Engineering Department
g. City Fire Department
h. City Forestry Department
i. City Sanitation Department
j. City Traffic Department
k. City Urban Planning Department
l. City 1% Department
m. Board of Public Utilities (BOPU)
n. Bresnan Communications
o. Cheyenne Light, Fuel and Power (CLFP)
p. Qwest
q. U.S. Post Office
r. A T & T

Variances. The variance process allows the State to ask for a reduction of any City Code requirements for a particular zone or overlay district. Based on preliminary building footprint and site design layouts, the following variances might need to be requested depending on what zoning is requested and received for the parcel:

Maximum Building Coverage Requirements
Setback Requirements
Parking Requirements
Landscaping Requirements
Capital Heights Overlay District Requirements

The variance process goes through the Board of Adjustment which is a seven person board appointed by the Mayor. Each variance request is heard by the Board as a separate request. There is no guarantee of approval for any or all of the requests, however there is some precedence with the hospital project receiving a height restriction variance of 49' on Blocks 173 & 200 and a 60' variance in Block 172. Additionally, the Hospital and several other City and State buildings have higher property coverage percentages than allowed by code, as well as reduced setbacks. The variance process takes two months after submittal of the application to the City.

All variances will be reviewed by the following agencies to make sure that any regulation that is requested to be reduced or enlarged does not encumber on their infrastructure or cause future concerns:

a. Wyoming Department of Transportation
b. Environmental Health
c. City Building Department
d. Cheyenne MPO
e. City Development Department
f. City Engineering Department
g. City Fire Department
h. City Forestry Department
i. City Sanitation Department
j. City Traffic Department
k. City Urban Planning Department
l. City 1% Department
m. Board of Public Utilities
n. Bresnan Communications
o. Cheyenne Light, Fuel and Power
p. Qwest
q. U.S. Post Office
r. A T & T

a.v.i., P.C.

DISCIPLINE NARRATIVE: REGULATORY APPROVALS
Project Number: 0810 DATE: 12/12/08

STATE OF WYOMING

Department of Environmental Quality – reviews locations of new fire hydrants, replacing of sewer and water mains. Site plan review is coordinated through the City process. Review time on construction drawings is approximately 2 months from submittal.

Wyoming Department of Transportation (WYDOT) – reviews traffic studies, landscape permits, utility permits, access permits. Permits are required from WYDOT for all construction activity or traffic control within WYDOT right-of-way, and are reviewed through their office in Laramie.

A Right-Of-Way and Landscape permit will be required for new construction of sidewalks and landscape strips within the right-of-way. If additional work within the right-of-way is required due to BOPU requiring the upsizing of water and sewer mains based on final building demands, these improvements will need to be included in the WYDOT Right-of-Way permit.

An Access Permit will be required to remove the access on Central Avenue and if an access is added to Warren Avenue. It is doubtful if new access on Warren or Central Avenue will be granted.

Site plan review is coordinated through the City process. Review time for landscape, utility and access permits takes approximately 1 month from submittal.

Future reconstruction of Central and Warren avenues is anticipated although no timeline has been set yet.

Wyoming Highway Patrol – building security. The Wyoming Highway Patrol does not generally review City Site Plans.

LARAMIE COUNTY

Environmental Health – reviews all food service and/or pool systems. Site plan review is coordinated through the City process. Plans should be submitted at least 30 days prior to construction.

Emergency Management – reviews emergency vehicle ingress and egress. Site plan review is coordinated through the City process.

CITY OF CHEYENNE

All construction activity within the City right-of-way will require a construction/utility/access permit from the City of Cheyenne. This requires prior approval from the Department of Environmental Quality, BOPU and WYDOT. Review time is approximately 2 months. Construction plans are reviewed by: City Engineering, Board of Public Utilities, City Fire Department, Department of Environmental Quality. Once the construction drawings are approved by all the agencies the City Right-Of-Way permit can be obtained in about 1 week.

A Site Plan approval will need to be applied for with the City once the platting, zoning and variances have completed and the State knows the specific site requirements for the project. It typically takes 10 working days to receive first review comments. The Site Plan needs to show the building footprint, landscape calculations, parking calculations, drainage calculations and the specific locations of anything that will be on the site or adjacent to site such as roadways and utilities. Once the Site Plan is approved a Certificate of Review will be issued so the State can obtain a building permit.

The Site Plan will be reviewed by the following agencies for compliance with their specific rules and regulations:

a. Wyoming Department of Transportation
b. Environmental Health
c. City Building Department
d. Cheyenne MPO
e. City Development Department
f. City Engineering Department
g. City Fire Department
h. City Forestry Department
i. City Sanitation Department
j. City Traffic Department
k. City Urban Planning Department
l. City 1% Department
m. Board of Public Utilities
n. Bresnan Communications
o. Cheyenne Light, Fuel and Power
p. Qwest
q. U.S. Post Office
r. A T & T
s. Airport
t. Emergency Management

Building Office – reviews drawings for compliance with International Building Codes. Currently under IBC 2003, but is anticipated to be governed by the 2006 IBC when building permits for this project are submitted. Permits can be broken into separate phases to help expedite projects, such as foundation permit only or shell permits with tenant finish to follow.

A City of Cheyenne Building Permit is required for all structures located on the site. The review process through the City's Building Department generally takes 21 working days, but can take longer for large projects of if there is a backlog. The building construction plans are reviewed by:

a. City Building Department
b. City Fire Department
c. Board of Public Utilities

If desired, a "foundation only" permit can be applied for prior to getting full building permit approval.

A "plan review only" permit can be applied for prior to completing the steps above, however a full Building Permit will not be issued until the site plan Certificate of Review is received.

Cheyenne MPO – works with traffic department and state to regulate transportation planning issues. Site plan review is coordinated through the City process.

Development Office – platting, zoning and site plan review. Can go straight to final plat to vacate alleyways. Platting process approximately 3 months from submittal. Zoning change from MR-1 to MUB, NB, CBD or P. Zoning should be done concurrently with platting process. Site Plan review is typically a ten day working process from submittal.

Engineering – reviews drainage and right-of-way improvements plus demolition plans. Reviews of site plans and construction drawings are coordinated through the City process. Construction drawing review typically takes 2 months.

Fire – reviews site plan to ensure fire access points and hydrants for fire flows and pressures. Reviews construction and building design documents to meet current codes. Plan review is coordinated through the City process.

Forestry – reviews landscape plans with the site plan review process.

Sanitation – reviews location of dumpsters with site plan review process.

Traffic Department – regulates access control on projects and reviews all right-of-way permits including detours. Reviews during site plan process and reviews construction drawings for any improvements within the right-of-way.

Urban Planning – reviews plans per Plan Cheyenne during the site plan process.

1% Construction – reviews during site plan process, reviews construction drawings within the right-of-way and inspects improvements within City right-of-way.

CHEYENNE REGIONAL AIRPORT (CYS) – will review during the site plan process since proposed building is taller than 50' in height.

CHEYENNE BOARD OF PUBLIC UTILITIES – will review during site plan process for any needed easements and required sewer and water designs during the construction document stage. Their review is coordinated with the Fire Department review.

PRIVATE UTILITIES

Bresnan Communications – provides cable TV and communication service. Plan review is coordinated through the City process.

Cheyenne Light, Fuel & Power – provides electrical service. Plan review is coordinated through the City process.

Qwest – provides telephone service. Plan review is coordinated through the City process.

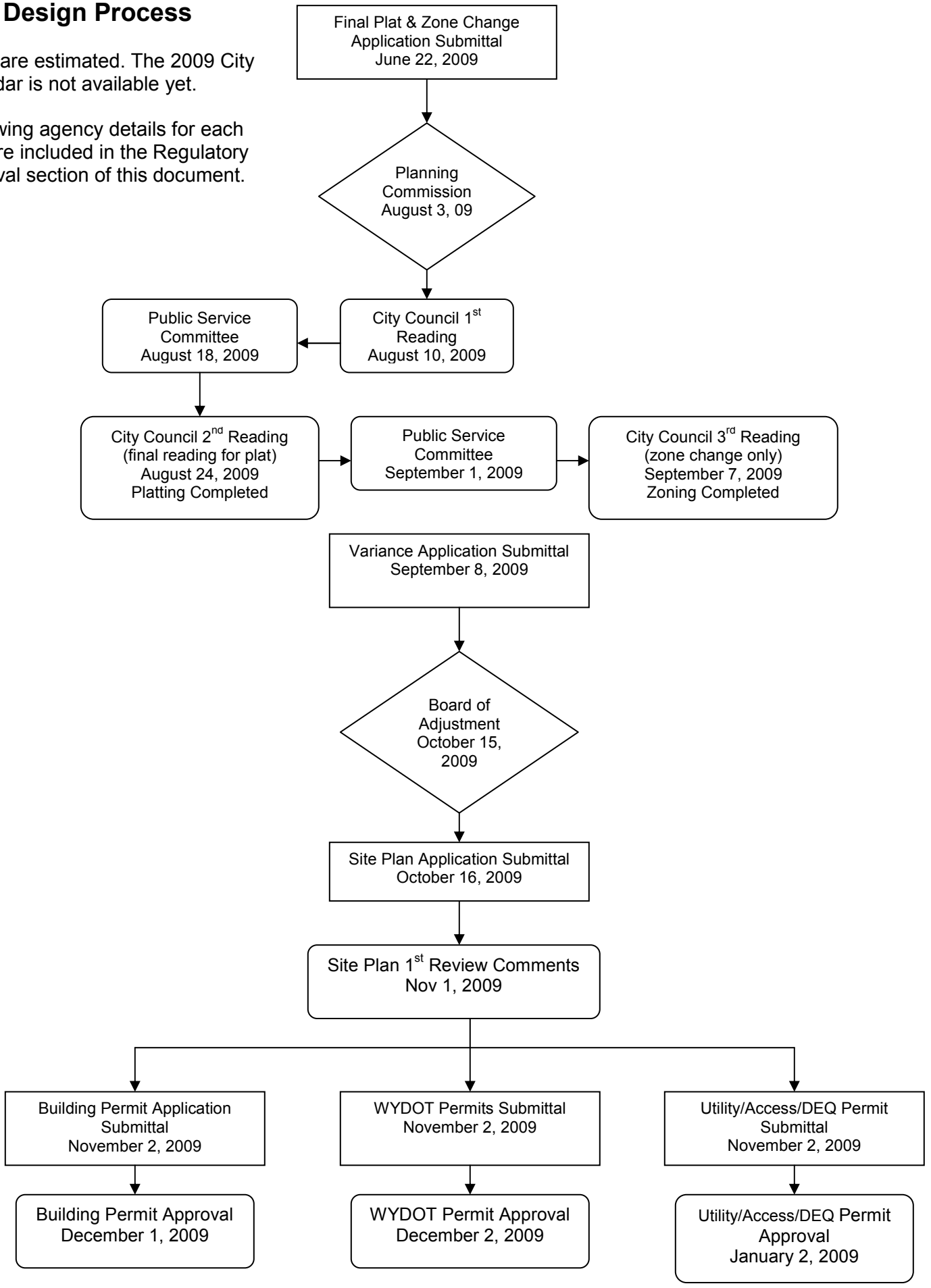
U.S. Postal Service – plan review is coordinated through the City process.

AT&T – AT&T might have fiber optic in the area. Plan review is coordinated through the City process.

Civil Design Process

Dates are estimated. The 2009 City Calendar is not available yet.

Reviewing agency details for each step are included in the Regulatory Approval section of this document.



0810 - Wyoming State Office Building

Preliminary Code Analysis

8 August 2008

Construction Type IIA, WITh AUTOMATED SPRINKLER SYSTEM

I. PROJECT INFORMATION

Project Name:	State of Wyoming New State Office Building	Project #:	810
Location:	Cheyenne, Wyoming		
Authority Having Jurisdicti	Larimie County		
Owner:	State Of Wyoming		
Building Code:	IBC 2006	Year:	2006
	fire-resistive assemblies listed in the Fire Resistance Design Manual		
	by Gypsum Assoication.		
Mechanical Code:	International Mechanical Code	Year:	2003
Plumbing Code:	International Plumbing Code	Year:	2000
Electrical Code:	ICC Electric Code	Year:	2005
Energy Code:	Internation Energy Code	Year:	2003
Local Amendments:		Year:	2005
Fire Code:	International Fire Code	Year:	2003
Gas:	International Fuel Gas Code	Year:	2003
Other:	Addmendments to IBC 2006 Laramie County	Year:	1999
Code Analysis by:	Coover-Clark & Associates	Date:	08/14/08

II. USE AND OCCUPANCY CLASSIFICATION

1. Occupancy Classification

302.1 A. Primary Occupancies: B Occupancy: Bussiness, Civic Admistration

S-2 Occupancy: Storage, Parking Garage (Open)

302.1.1 & Tbl 302.1.1 B. Incidental Use Areas: Retail

302.2 C. Accessory Use Areas (<10%):

302.3.2 2. A. Nonseparated Uses: M

B. Most Restrictive: B

302.3.3 & Tbl 302.3.3 3. Separated Uses:

S-2	to	B	=	1	hours
B	to	A	=	1.0	hours
	to		=		hours

Chapter 4 4. Special Detailed Requirements Based on Use and Occupancy:

None

III. ALLOWABLE AREA & HEIGHT

1. Area of Proposed Building (Gross Floor Area)

First Level Floor Plan	23,000	GSF
Second Level Floor Plan	18,000	GSF
Third Level Floor Plan	18,000	GSF
Fourth Level Floor Plan	18,000	GSF
First Level Parking Garage		
Second Level parking Garage		
Total	77,000	SF

2. Proposed Number of Stories: 4

Table 503 3. Proposed Construction Type: IIA

4. Allowable Height of Building

Table 503 A. In feet: 65.0

Table 503 B. In stories: 5

504.2 C. Increase allowed:

D: Total allowable height/stories: 11.0

5. Allowable Floor Area (Based on Occupancy & Construction Type)

507 A. Unlimited Area Allowed? NO

Table 503 B. Allowable Area per Floor: 37,500

506.2 C. Increase for Frontage:

I_f= 100 [F/P - 0.25] W/30 I_f= #DIV/0! %

where:

I_f = Area increase due to frontage (percentage)

F = Building perimeter which fronts on a public way or open space having 20' open minimum. _____ feet

P = Perimeter of entire building _____ feet

W = Minimum width of public way or open space _____ feet

506.3 D. Increase for Separation:

I_s= Area increase due to sprinkler protection I_s= _____ %

506.1 E. Total Allowable Area per Floor:

$A_a = A_t + (A_t I_f/100) + (A_t I_s/100)$ A_a= 37,500 SF/Floor

where:

A_a = Allowable area per floor (SF)

A_t = Tabular area per floor 37,500 SF

I_f = Area increase due to frontage (percentage) #DIV/0! %

I_s = Area increase due to sprinkler protection 0 %

F. Total Allowable Area per Building:

A_a=	37,500	SF/Floor
X		Floors
Total	37,500	SF

705 6. Fire Walls Req'd to Separate Areas? yes

508 7. Special Provisions? None

IV. TYPE OF CONSTRUCTION/FIRE-RESISTIVE REQUIREMENTS

1. Building Elements:

602 & Tbl 601 A. Structural Frame: 0

602 & Tbl 601 B. Bearing Walls - Exterior: 0 or greater of item 2. below

602 & Tbl 601 C. Bearing Walls - Interior: 0

602 & Tbl 601 D. Non-bearing Walls - Exterior: 1 <30'

602 E. Non-bearing Walls - Interior: 0

602 & Tbl 601 F. Floor Construction: 0

602 & Tbl 601 G. Roof Construction: 0

Table 602 2. Exterior Wall Based on Fire Separation Distance (but cannot be less than B. above):

A. <5' 1

B. 5' - 10' 1

C. 10' - 30 1

D. >30' 0

704.5 3. Exterior Walls with Fire Separation Distance > 5' need only be Rated for Fire Exposure from Inside.
The fire-resistance rating of exterior walls with a fire seperation distance of 5 feet or less shall be rated for exposure to fire from both sides.

4. Construction Classification:

602.2 Type I and II - structural frame, walls, partitions, floors, and roofs shall be of non-combustible material

5. Allowable Area of Openings (Based on Fire Separation Distance):

704.8.2 A. Unlimited in one story building? na

Tbl 704.8 & 704.8.1 B. Based on Table 704.8:

Distance	Protected	Unprotected
0-3'	Not Allowed	Not Allowed
3'-5'	15%	Not Allowed
5'-10'	25%	10%
10'-15'	45%	15%
15'-20'	75%	25%
20'-25'	No Limit	45%
25'-30'	No Limit	70%
>30'	No Limit	No Limit

704.8 C. Allowable area of openings with both protected & unprotected openings:

A/a + Au/au ≤ 1.0 = 12

where:

A = Actual area of openings (or equivalent area)	1200	SF
a = Allowable area of openings	200	SF
Au = Actual area of unprotected openings	1200	SF
au = Allowable area of unprotected openings	200	SF

714.2 6. Exterior Wall Openings Shall be Protected According to Table Below:

Wall Rating	Opening Rating
3 & 2 hour	1-1/2 hour
1 hour	3/4 hour

704.9 7. Vertical Separation Required: NO

Table 705.4 8. Fire Walls:

A. Rating:

Group	Rating
S-2	2

B. See 705 for detailed requirements

714.2 C. Openings shall be protected according to table below:

Wall Rating	Opening Rating
3 & 4 hour	3 hour
2 & 1-1/2 hour	1-1/2 hour

706 9. Fire Barriers:

706.4 A. Shall extend from top of floor below to underside of deck above.

706.6 B. Openings shall be protected according to table below and limited in area.

& 714.2

Wall Rating	Opening Rating
3 & 4 hour	3 hour
2 & 1-1/2 hour	1-1/2 hour
1 hour	3/4 hour

707 10. Shaft and Stair Enclosures:

707.4 A. Rating: 2 and 1 Hour

714.2 B. Opening Protection: 1 1/2-hour in 2-hour shafts, 1-hour in 1-hour shafts

708 11. Fire Partitions:

708.3 A. Rating: 1-hour (except corridors according to 1004.3.2.1 and some dwelling units & guest rooms)

708.4 B. Shall extend from top of floor below to underside of deck or floor/ceiling assembly above (with exceptions)

708.4 C. Fire blocking required in combustible construction where partition does not extend to deck.

714.2 D. Opening Protection: 20-minute at 1-hour corridors, 3/4-hour at other fire partitions

709 12. Smoke Barriers:

709.3 A. Rating: 1-hour (except 0.1" steel at Group I-3)

709.4 B. Shall extend from top of floor below to underside of deck above (with exceptions)

709.5 C. Openings: 20-minute (except opposite swinging doors in Group I-2)

714.2 13. Fire Door Assemblies:

714.2.4 A. Only doors into exit enclosures require temperature end-point rating (exempt in sprinklered buildings)

714.2.4.1 B. If glazing is provided in door into exit enclosure, it must either be tested as a component of the door, or be less than 100 square inches (max. dimen. 10").

714.2.6.1 C. Glazing is prohibited in doors in fire walls, except doors serving as a horizontal exit may have 100 sq. in.

714.2.6.1 D. Glazing is limited to 100 sq. in. in doors having rating of 1-1/2 hours in fire barriers.

714.2.4.1 E. If glazing is provided in any other fire door it must either be wire glass complying with limits in table below or comply with NFPA 80.

Door Rating	Wire Glass Limit
20 Minute	No Limit
3/4 Hour	1296 sq. in.
1 & 1-1/2 Hour (Int.)	100 sq. in.
1 & 1-1/2 Hour (Ext.)	None Allowed
3 Hour	None Allowed

714.3 14. Fire-protection-rated Glazing:

A. Glazing in fire barriers & fire partitions shall be wire glass in steel frame limited to 1296 sq. in. (54" max. dimen.) or comply with NFPA 80 & NFPA 257 and be 45-minute rated.

C. Glazing in fire barriers & fire partitions is allowed in walls only up to 1-hour rated and is limited to 25% of the area of the wall.

714.3.8 15. Fire-resistance-rated Glazing: Allowed when tested as part of the wall assembly (rating equals wall rating).

715 16. Fire & Smoke Dampers:

715.5 A. Required locations:

	Location	Damper Type	Exceptions (No Damper Required)
715.5.1	Fire Walls	Fire Only	
715.5.2	Fire Barriers	Fire Only	Rating 1 hour or less, other than Group H & sprinklered
715.5.3	Exit Enclosures	Duct Not Permitted	
715.5.3.1	Shaft Enclosures	Fire & Smoke	Subducts, smoke control ducts, or parking garage shafts
714.5.4	Fire Partitions	Fire Only	Corridors and tenant separations in sprinklered buildings or Where duct < 100 sq. in., .0217" gage, has no opening to corridor, duct above ceiling, and doesn't terminate at wall
715.5.4.1	Corridors	Smoke Only	Buildings equipped with smoke-control systems or Where duct is 0.019" gage and has no opening to corridor
715.5	Smoke Barriers	Smoke Only	Single smoke compartment with steel duct

Table 715.3.1 B. Ratings: 3-hour in 3-hour or greater assemblies, 1-1/2-hour elsewhere

715.4 C. Access is required and shall be labeled by 1/2" letters reading SMOKE DAMPER or FIRE DAMPER.

V. FIRE PROTECTION SYSTEMS

903.2 1. Automatic Sprinkler System Required Based on Occupancy? YES

903.2.12-15 2. Automatic Sprinkler System Required Based on Special Condition? NO

903.3.1.2 3. NFPA 13R System Allowed in Group R-1 & R-2 Buildings up to 4 Stories.

903.3.2 4. Quick-response Sprinklers Shall be Installed at: Group I-2 Sleeping Rooms, Group R- & I-2 Dwelling Units & Sleeping Rooms, and Light-haard Occupancies per NFPA 13.

905.3.1-6 5. Standpipe Class Required: YES

906 6. Portable Fire Extinguishers as Required by the *International Fire Code.*

907 7. Fire Alarm and Detection Systems:

907.2.1-23 A. Automatic alarm required based on occupancy or special condition YES

907.2.1-23 B. Manual alarm required based on occupancy or special condition? YES

907.2.1-23 C. Automatic detection req'd based on occupancy or special conditior YES

VI. EXIT REQUIREMENTS

1. Occupant Load & Exits Required:

Table 1003.2.2.2
Table 1003.2.3
Table 1005.2.1

Floor	S.F.	Use	Occupant Load Factor	Number of Occupants	Total Occupants per Floor	Number of Exits Required*	Total Exit Width Req'd (in.)	Total Stair Width Req'd (in.)
LEVEL 1	74,000	BUSINESS	200	370				
	2,300	CAFÉ	100	23				
	1,000	MECH	300	3				
	3,022	AUDITORIUM		200				
				#DIV/0!	596	3	89.5	119.267
LEVEL 2	35,000	BUSINESS	200	175				
	1,000	MECH	300	3				
	115	STORAGE	300	0				
				#DIV/0!	179	2	26.8	35.7433
Total	116,437				775			

Accessible means of egress

A. Quantity required 1

B. Buildings with 4 or more stories yes

C. Accessible Enclosed stairway yes

D. Accessible means of egress Elevators:

1007 2. 1 emergency operating and signaling devices required

1003.2.13.1.1 2

1003.2.13.2 3

1003.2.13.3 Doors

A. Minimum Size: 3'-0"x6'-8" (exceptions exist for doors in dwelling units and non-egress doors)

B. Swing: in direction of exit travel when serving area with occ. load of 50

C. Floor Elevation same on both sides of door, excepting 1/2" floor finish thickness difference.

1003.3.1 D. Landings: 44" minimum

1003.3.1.1 3. shall not reduce required width by more than 7" when fully open

1003.3.1.2 shall not reduce width in any position to less than 1/2 if serves occ. load > 50

1003.3.1.4		Stairways	
1003.3.1.5		A. Width:	44" minimum (stairs serving occupant load less than 50 may be 36")
		B. Headroom	80" minimum
		C. Riser:	4" minimum, 7" maximum
1003.3.3		D. Tread:	11" minimum
1003.3.3.1	3.	E. Handrails:	required on each side ~~(except stairs less than 44")~~
1003.3.3.2			34"-38" to top
1003.3.3.3			one rail to extend 12" beyond top & bottom riser (ADA**may** require 1T + 12")
1003.3.3.3		E. Stairway to Roof:	one required for buildings 4 or more stories
1003.3.3.11		F. Roof access:	if roof unoccupied, then 16 s.f. roof hatch acceptable, otherwise penthouse required
1003.3.3.11.1			~~required for all stairs in buildings 4 or more stories~~
1003.3.3.11.5		Exit Access	
1003.3.3.12		A. Separation:	>1/3 building diagnol
1003.3.3.12.1		B. Intervening Room	allowed if room is accessory, not high-hazard occupancy, and discernable egress path provided.
		C. Travel Distance:	Business- 300' with sprinkler
1013	4.	Corridors:	
1014.1		A. Width:	44" minimum (corridors serving occupant load less than 50 may be 36")
		B. Construction:	fire resistant rated, except within dwelling unit iteself (exception 2)
		C. Fire resistance rat	1 Hour
		D. Dead end maximu	20'
1016.1	5.	E. Air movement	Corridors shall not serve as supply, return, exhaust, relief, or ventilation air ducts or plenumbs.
1004.3.2.1		F. Corridor continuity	continuous from point of entry to an exit, not interupted by intervening rooms (exceptions exist)
Tbl 1004.3.2.1		Exits	
Table 1004.3.2.1		A. Extent:	enclosure to extend to exit discharge
1004.3.2.4		B. Vertical exit enclos	2 hour rated if 4 or more stories. Also fire barrier per**Section 706**
1004.3.2.5		Fire Barriers	
		A. Continuity	must be maintained (N/A exceptions exist)
1005.1	6.	B. Exterior walls	to match rating otherwise required for exterior wall, not the fire barrier
		C. Openings	120 sf max. per opening (not limited if sprinklered), &
			25% max. width of wall (not limited to either if ASTM tested and fire rating=wall rating)
706	7.		also per **Section 714**
		Opening Protectives	
		A. Ratings	refer to table 714.2

714

Tbl 714.2 8.

Fixtures Required:

VII. ACC Occupancy	Occ. Load	WC/Male	WC/Female	Lav/Male	Lav/Female	Tub/Shwr	DF	Service Sink
B	7/UNIT	1per unit		1 per unit		1 per unit	na	1 kit sink, 1 auto cloth washe

VIII. PLUMBING FIXTURE REQUIREMENTS

Tbl 2902.1 1.

Parapet - Not Required Where:

Wall is not required to be rated based on Table 602

Building has an area less than 1000 SF per floor

IX. MISCELLANE Wall terminates at 2-hour or noncombustible roof

1-Hour wall wall terminates at roof deck and meet certain conditions

704.11 1. Group R-2 & R-3 meet certain conditions

Wall is permitted to have at least 25% unprotected openings by 704.8

Elevator Lobby - Required When Elevator Opens to Rated Corridor Except:

At street floor lobbies in sprinklered ofice buildings

Elevators not required to have shaft protection by 707.2

Where additional doors are provided according to 3002.6

In sprinklered buildings (other than Group I-2 & I-3) 4 stories or less

707.14..1 2. Fireblocking: Required in Combustible Buildings

Draftstops: Required in Combustible Non-sprinklered Buildings

Interior Finishes:

Occupancy Group	V. Exits	Cor/Exit	Rooms
S	C	C	C
R-2	C	C	C

716.2 3.

716.3 & 4 4. Smoke and Heat Vents: Required in Group H and Group F-1 & S-1 over 50,000 SF.

Table 803.4 5. Guardrails: Required Where Grade Differential Exceeds 30"

A. 42" high (Group R-3 & dwelling units within Group R-2 can be 34"-38" high at stairs)

B. 4" sphere up to 34" high, 8" sphere 34"-42" high (21" sphere at some conditions)

C. Required where rooftop equipment is within 10' of roof edge (21" sphere).

910.2 6.

1003.2.12 7.

1003.2.12.1

1003.2.12.2

LANDSCAPE PLAN

State of Wyoming New State Office Building

Department of Administration & Information Construction Management

10.14.2008

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Scale:
1" = 30'

Legend

- County Jurisdiction
- Platted Info - Blocks/Lots/ROWs
- Storm Sewer Mains
- Inlet Pipes
- Structures
- Slotted Drains
- Abandon Sewer
- Inlets
- Manhole
- Combination MH
- Sanitary Sewer Mains
- Sanitary Sewer Manholes
- Water Mains
- Water Valves

Aerial Photo
as of 5/2005

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ST. MARY'S SCHOOL AREA UTILITIES
State of Wyoming New State Office Building
Department of Administration & Information Construction Management

09.18.2008

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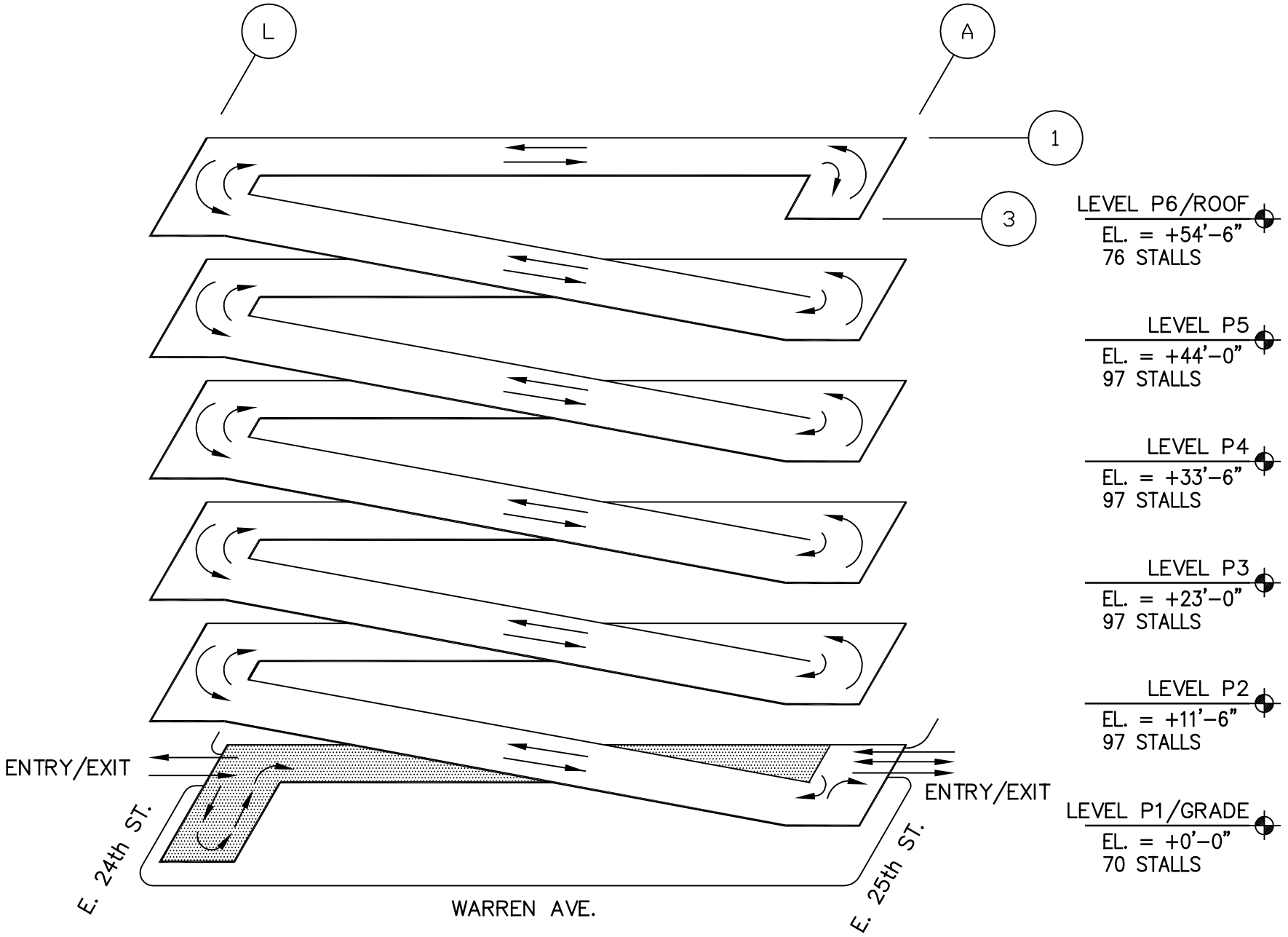
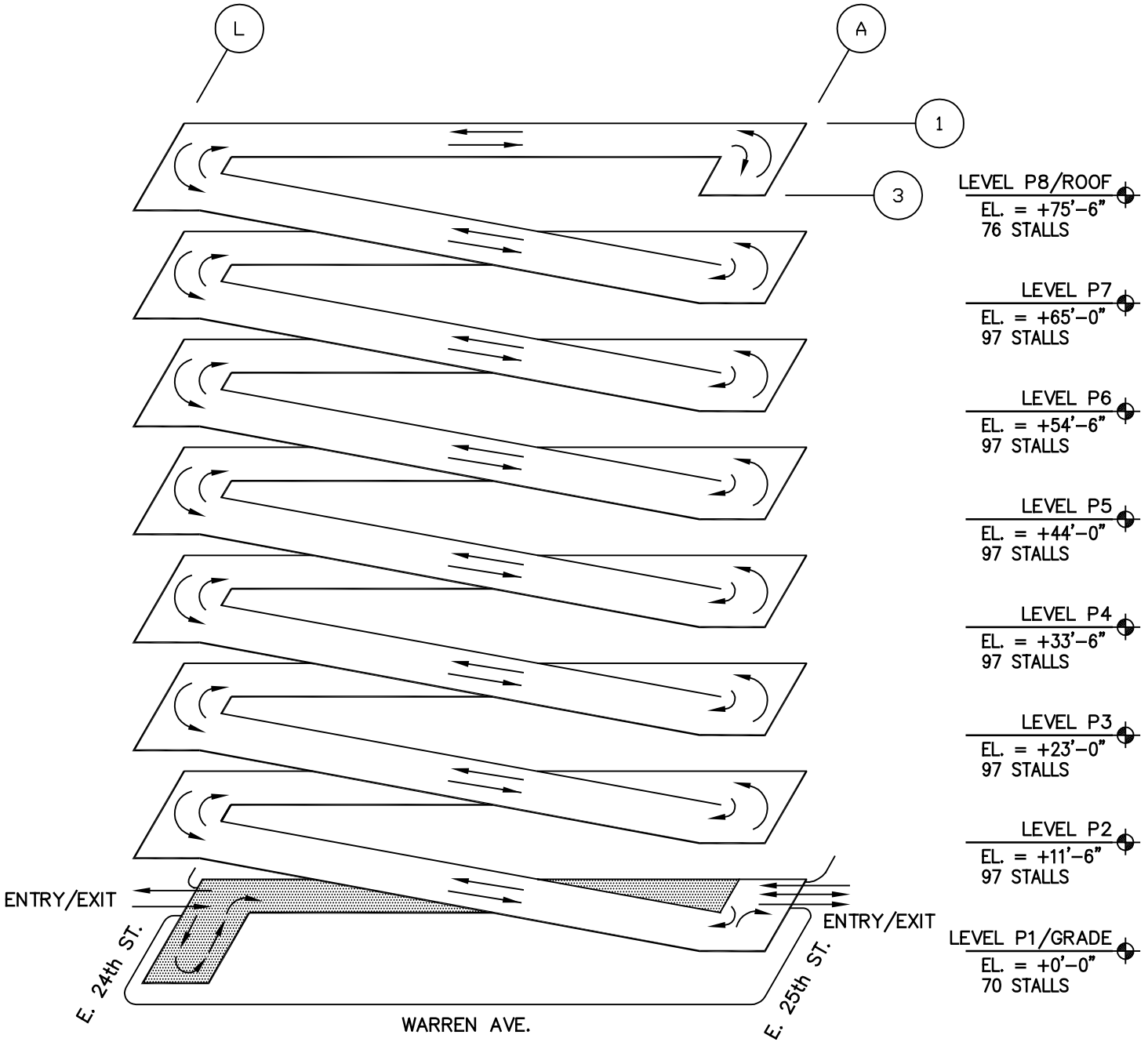


= SECURE PARKING

NORTH

136,000 SF BUILDING
512 STALLS OF PARKING REQUIRED
±534 STALLS OF PARKING PROVIDED WITH 6 LEVELS

OPTION 2A
ISOMETRIC

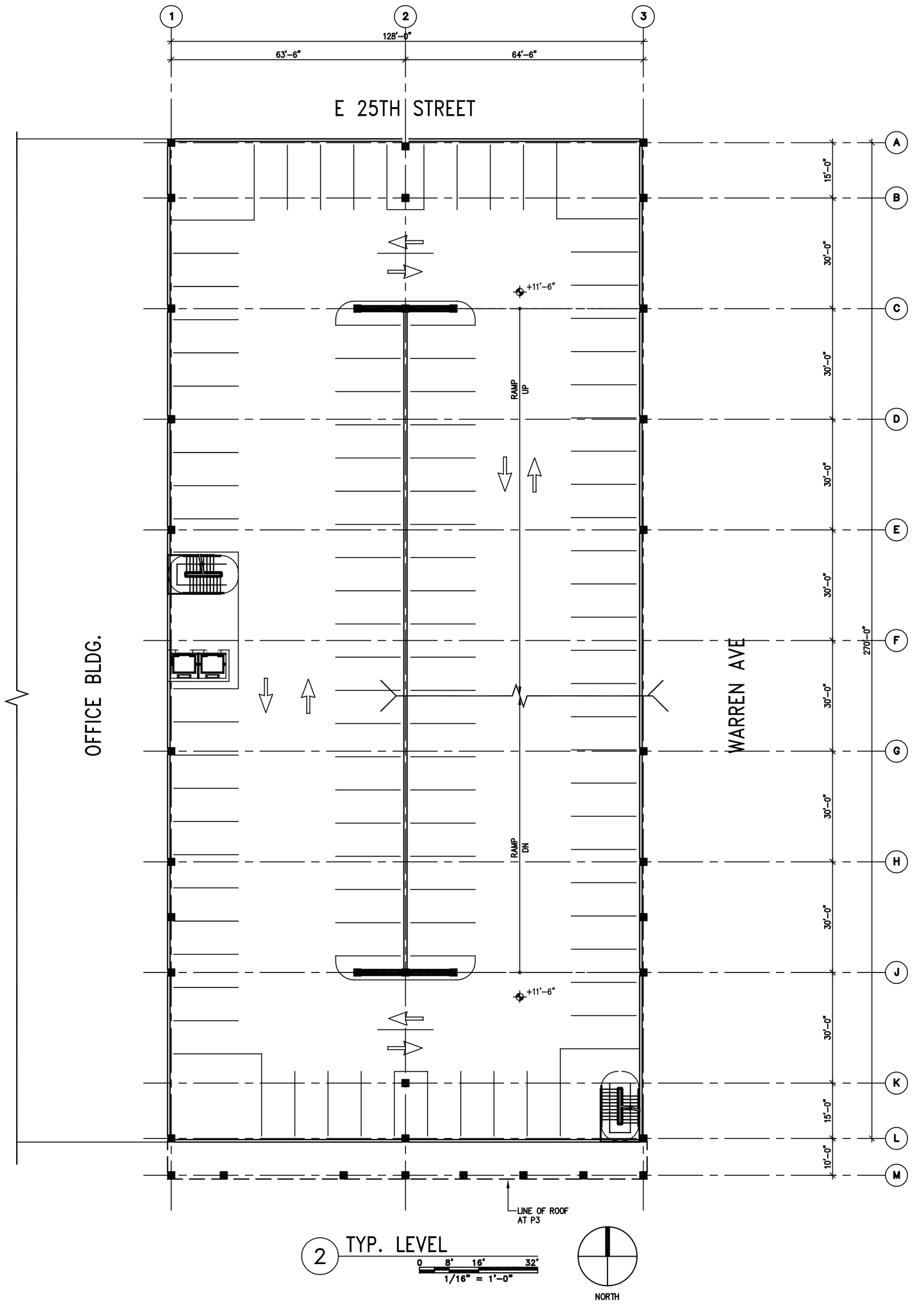


= SECURE PARKING

NORTH

200,000 SF BUILDING
726 STALLS OF PARKING REQUIRED
±728 STALLS OF PARKING PROVIDED WITH 8 LEVELS

OPTION 2B
ISOMETRIC



2 TYP. LEVEL

0 8' 16' 32'

1/16" = 1'-0"

NORTH

LEGEND

- Office
- Vertical Circulation
- Meeting Rooms
- Storage / Mechanical
- Circulation
- Restrooms/ Support Space
- New Garage

TRUE NORTH

0' 20' 40' 80'

BUILDING CONCEPT A - 1ST FLOOR

State of Wyoming New State Office Building

Department of Administration & Information Construction Management

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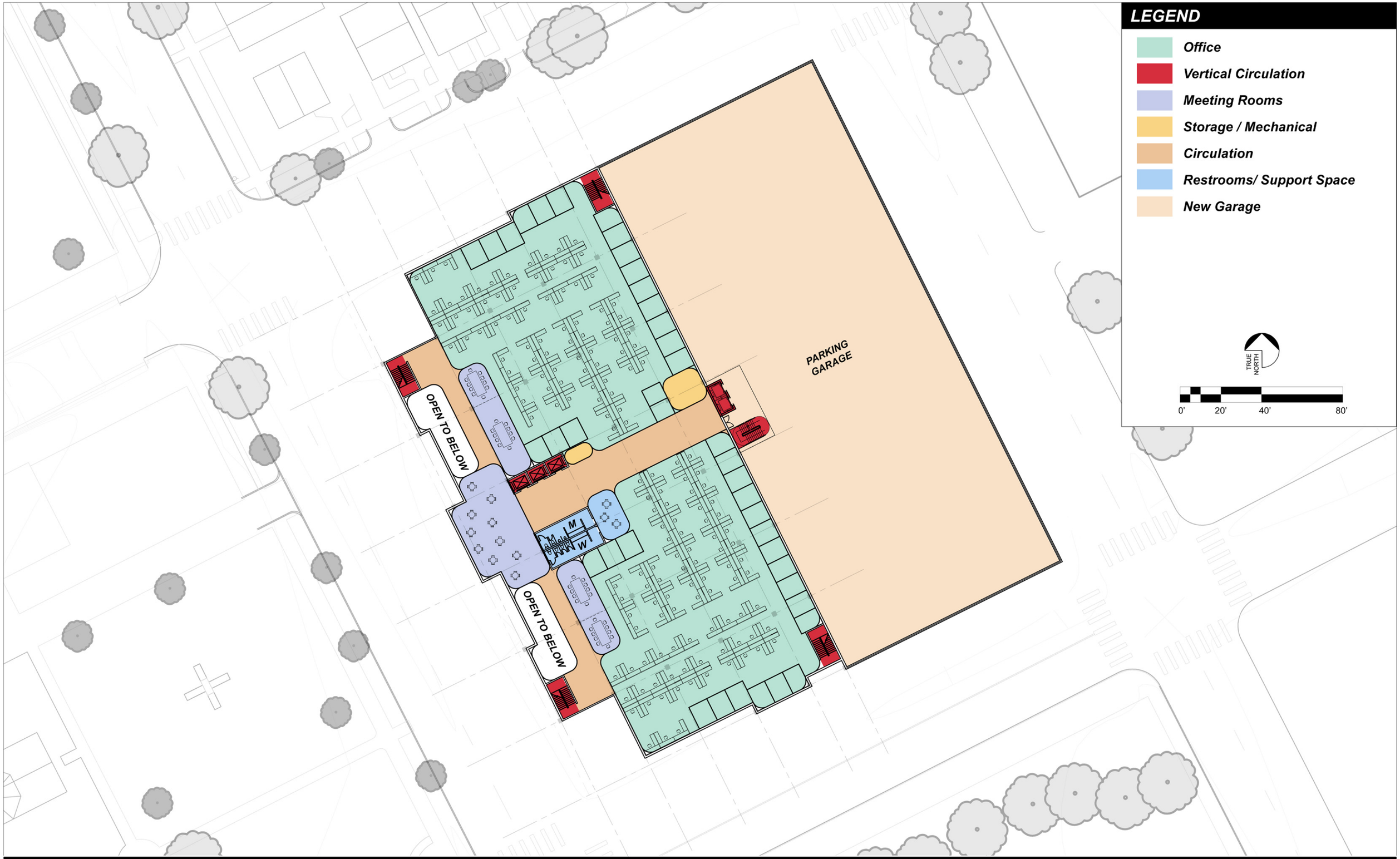

LEGEND

- Office
- Vertical Circulation
- Meeting Rooms
- Storage / Mechanical
- Circulation
- Restrooms/ Support Space
- New Garage

TRUE NORTH

0’ 20’ 40’ 80’

BUILDING CONCEPT A - 2ND FLOOR

State of Wyoming New State Office Building

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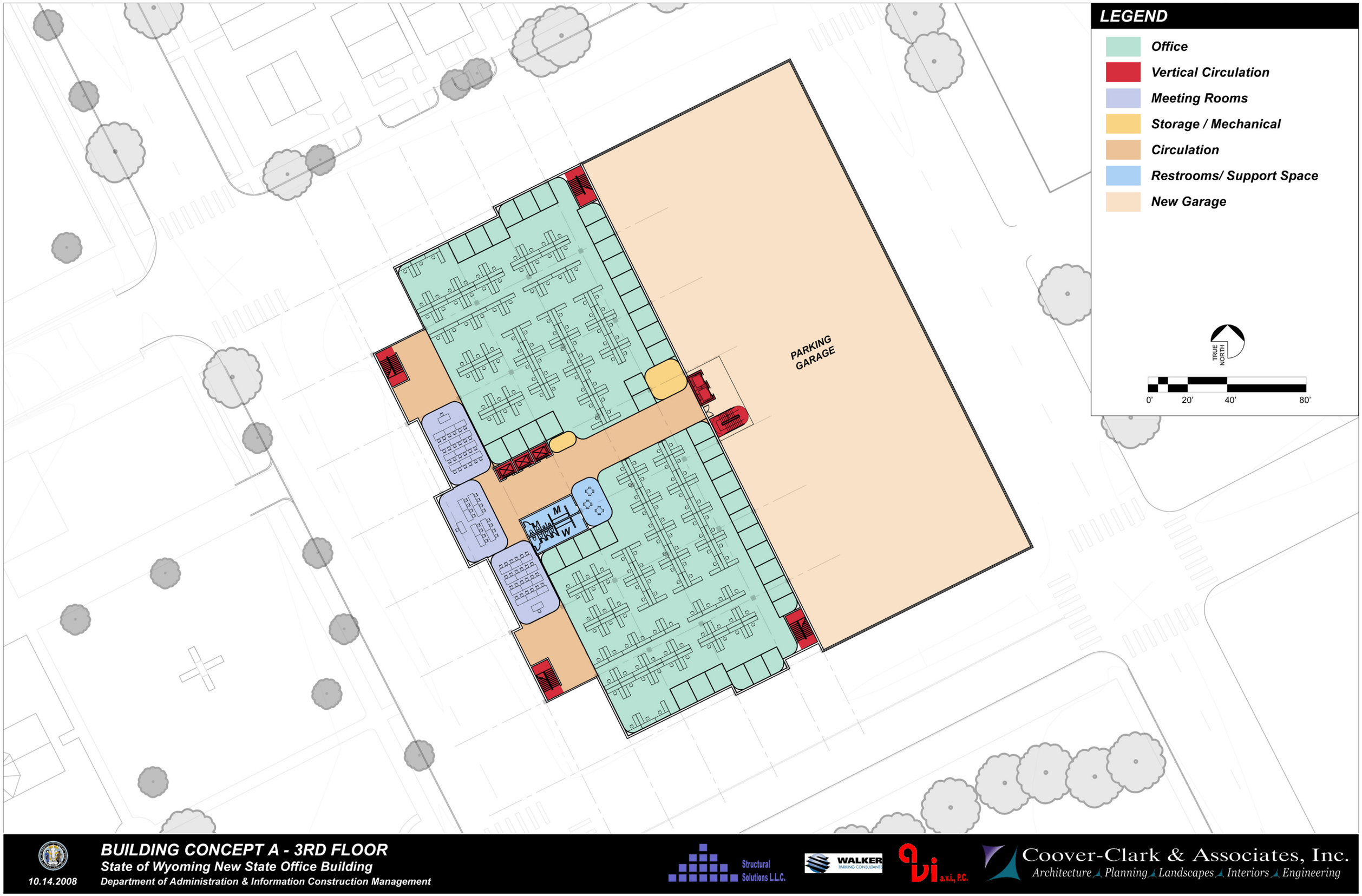

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BUILDING CONCEPT A - 3RD FLOOR

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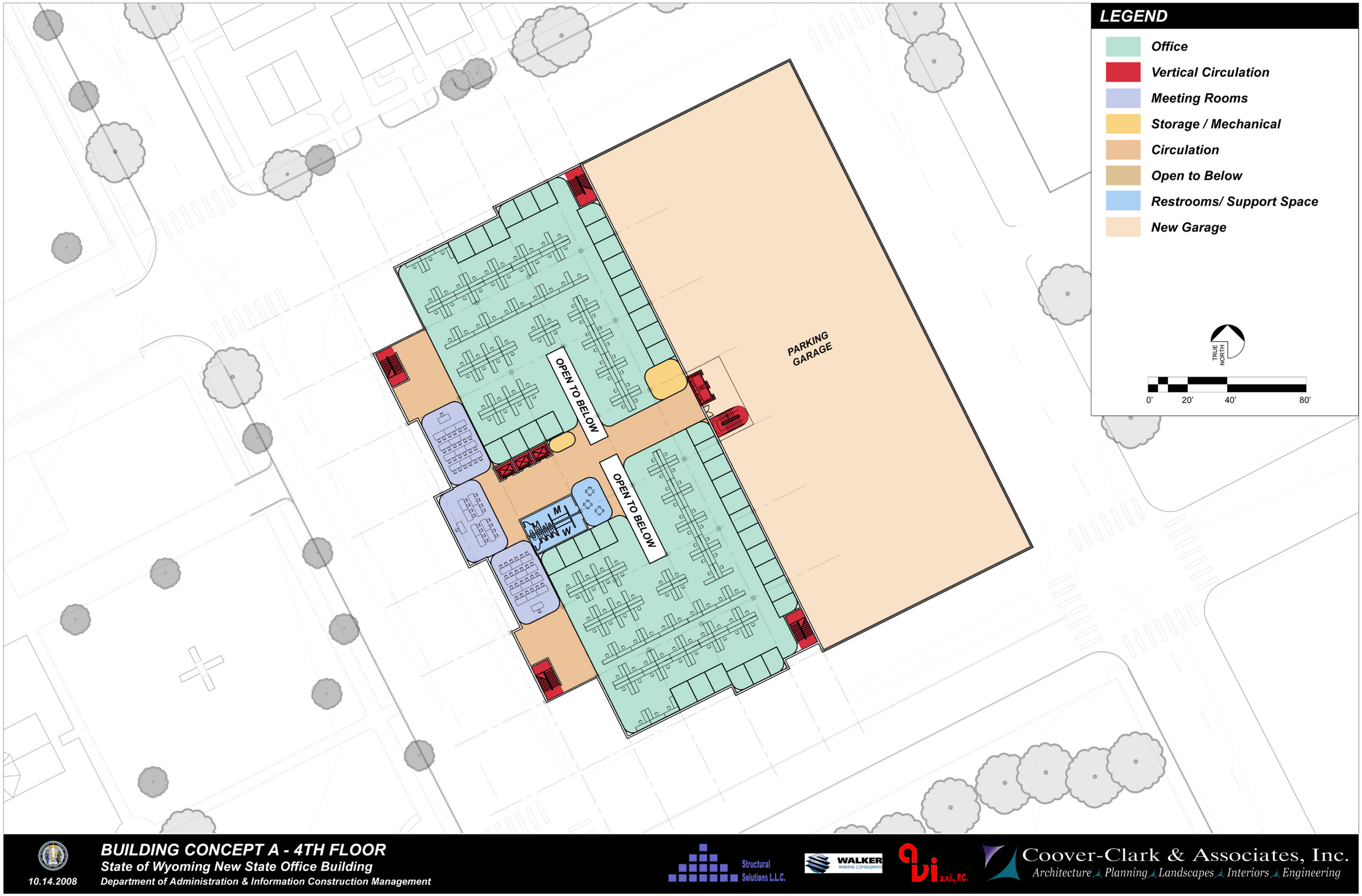

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BUILDING CONCEPT A - 4TH FLOOR

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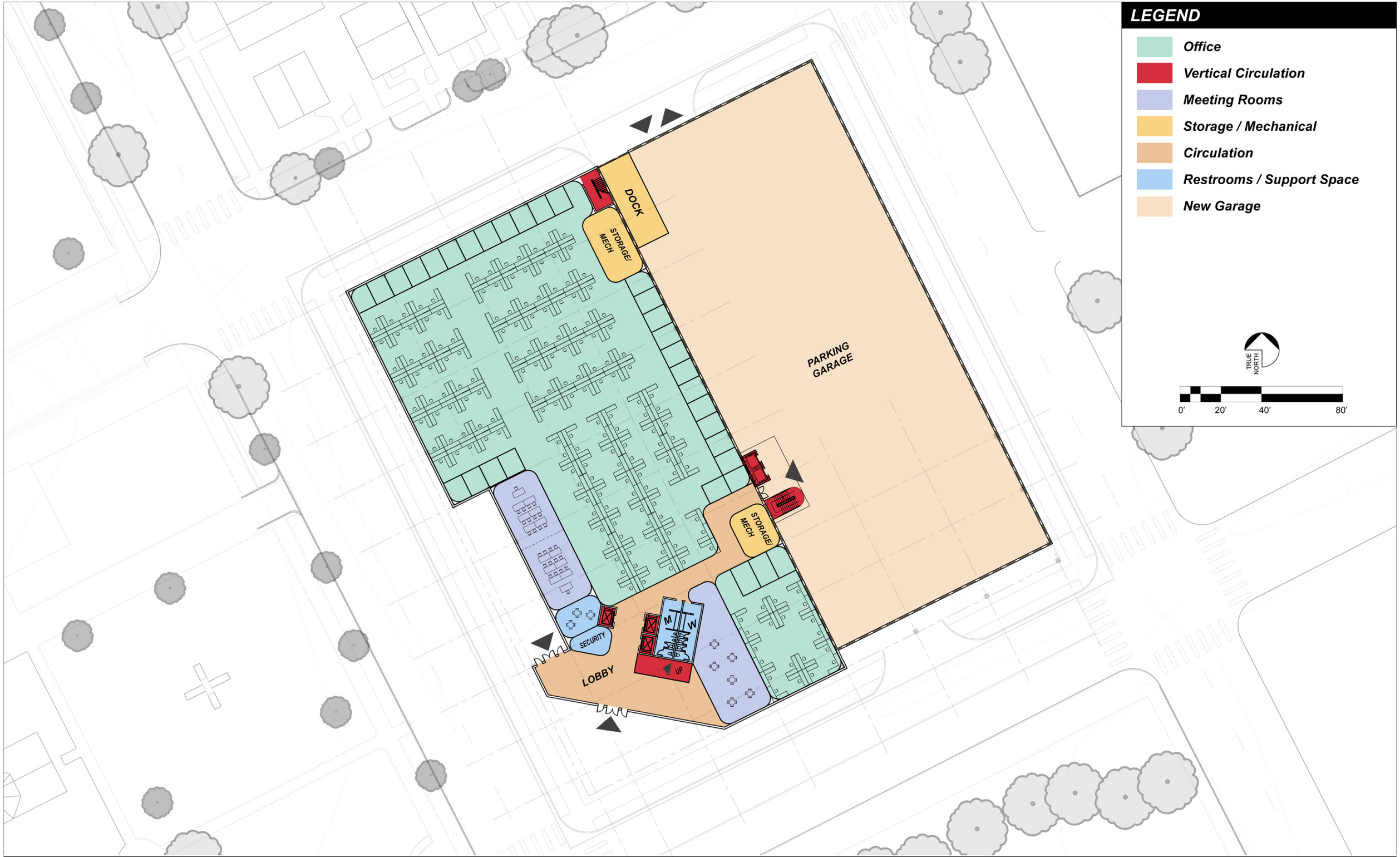

LEGEND

- Office
- Vertical Circulation
- Meeting Rooms
- Storage / Mechanical
- Circulation
- Restrooms / Support Space
- New Garage

TRUE NORTH

0’ 20’ 40’ 80’

BUILDING CONCEPT B - 1ST FLOOR

State of Wyoming New State Office Building

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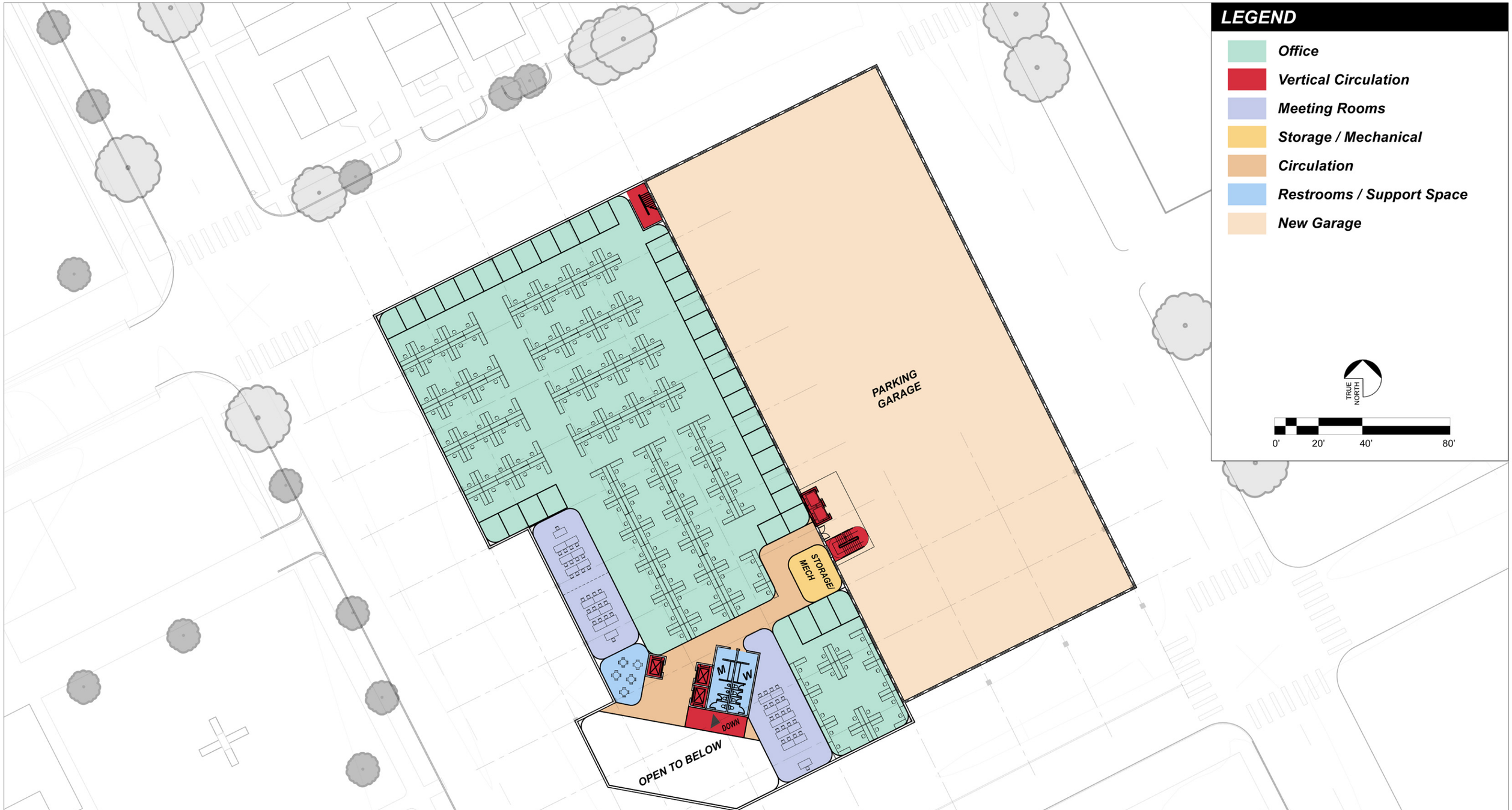

LEGEND

- Office
- Vertical Circulation
- Meeting Rooms
- Storage / Mechanical
- Circulation
- Restrooms / Support Space
- New Garage

TRUE NORTH

0’ 20’ 40’ 80’

BUILDING CONCEPT B - 2ND FLOOR

State of Wyoming New State Office Building

Department of Administration & Information Construction Management

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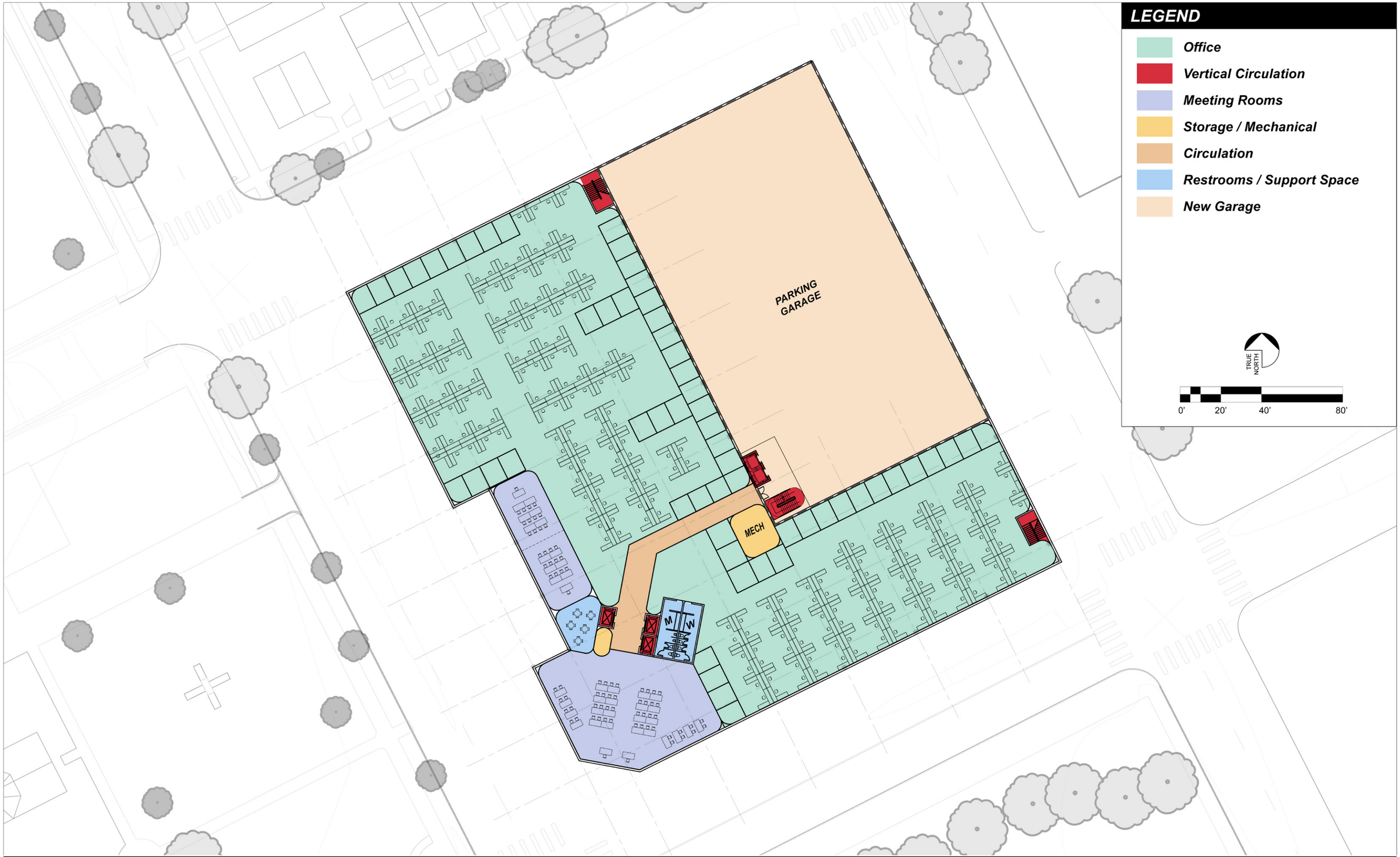

BUILDING CONCEPT B - 3RD FLOOR

State of Wyoming New State Office Building

Department of Administration & Information Construction Management

10.14.2008

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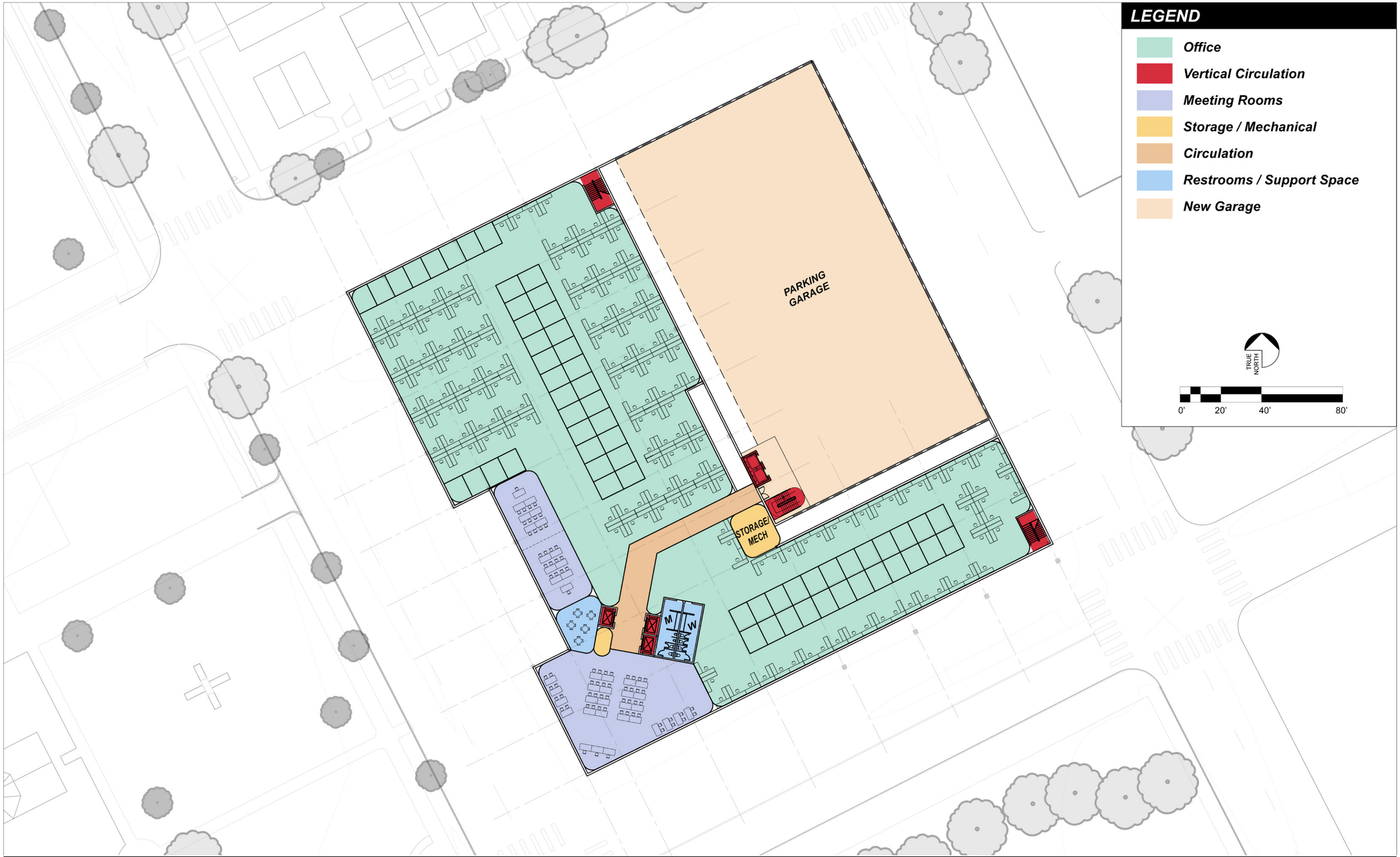

BUILDING CONCEPT B - 4TH FLOOR

State of Wyoming New State Office Building

Department of Administration & Information Construction Management

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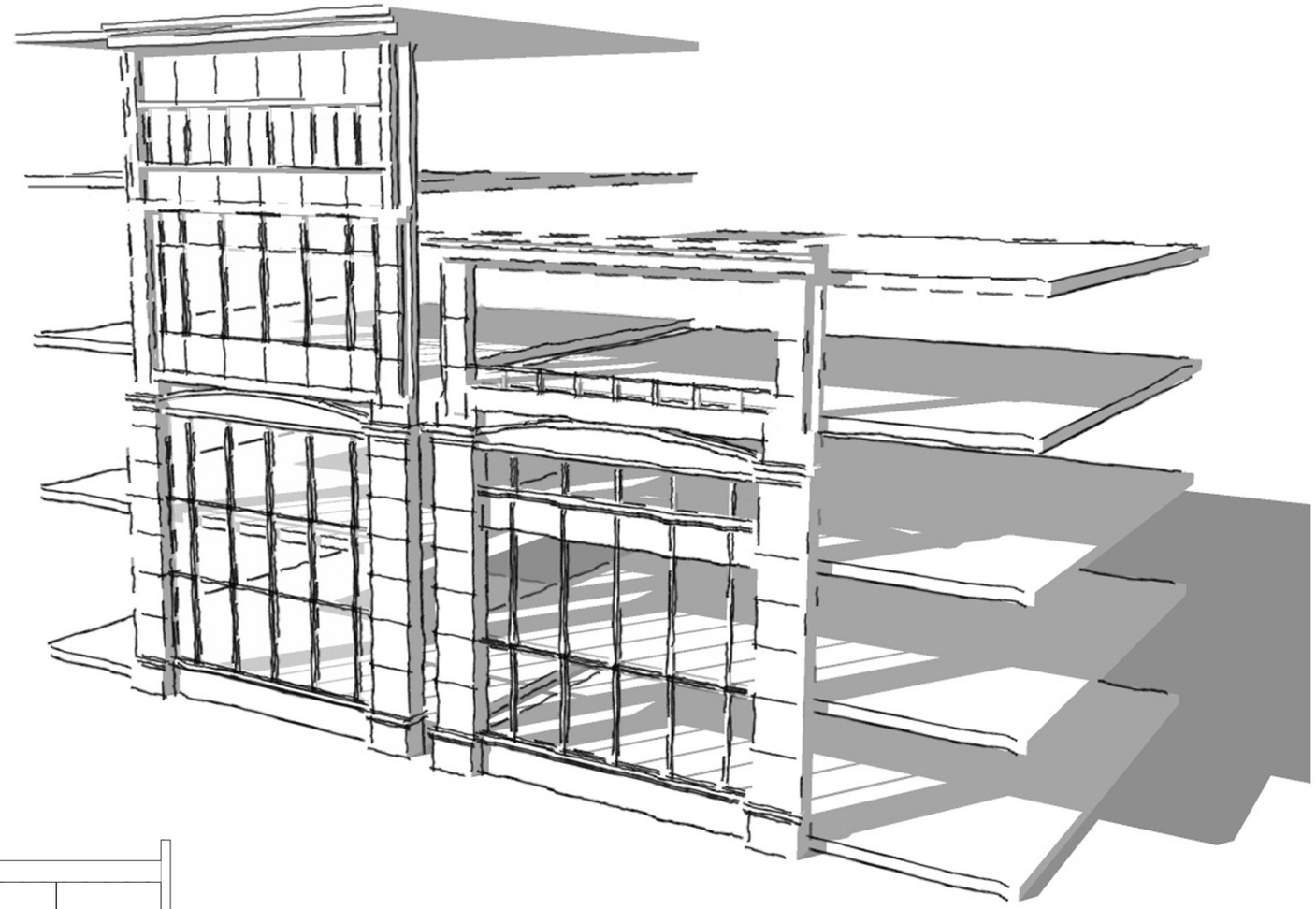

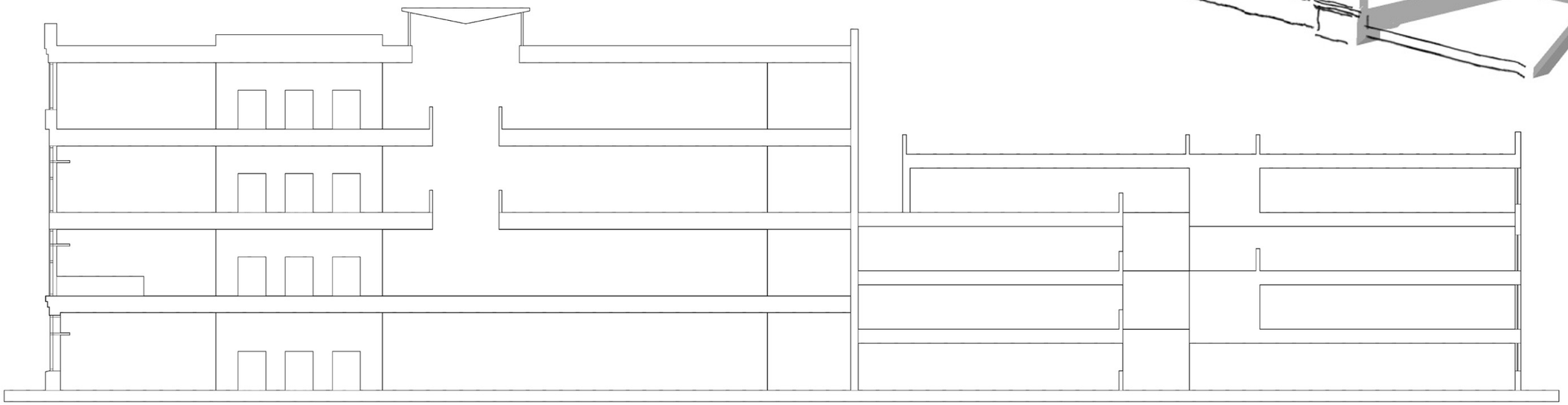

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BUILDING SECTION

State of Wyoming New State Office Building

Department of Administration & Information Construction Management

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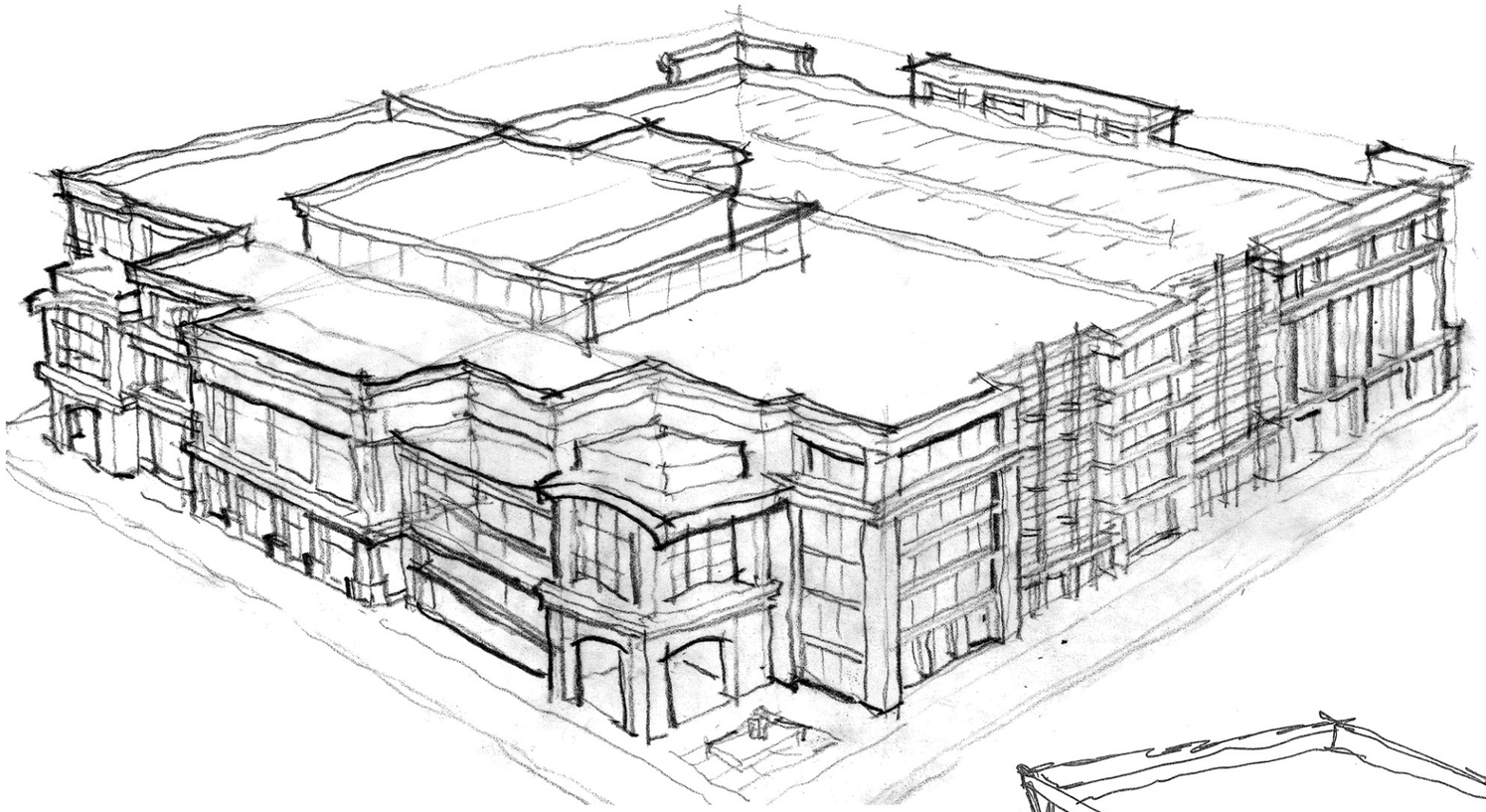
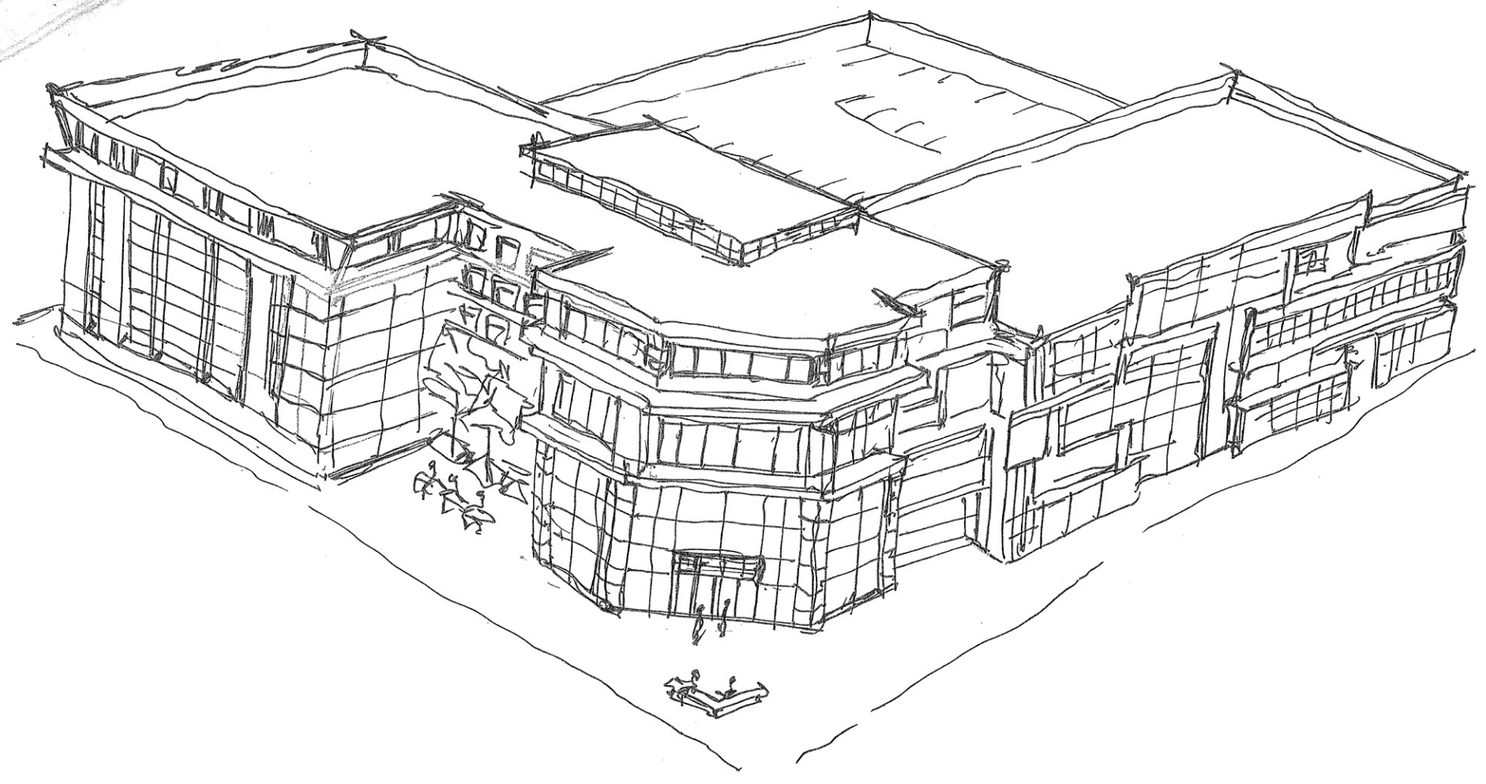
Architecture Planning Landscapes Interiors Engineering





BUILDING CONCEPTS

State of Wyoming New State Office Building

10.14.2008

Department of Administration & Information Construction Management

Structural Solutions L.L.C.

WALKER PARKING CONSULTANTS

a.v.i., P.C.

Coover-Clark & Associates, Inc.

Architecture Planning Landscapes Interiors Engineering

STATE OF WYOMING NEW STATE OFFICE BUILDING

CHEYENNE, WYOMING

CONCEPTUAL COST ESTIMATE

20 NOVEMBER 2008

CLIENT:
Coover-Clark & Associates, Inc.
1936 Market Street
Denver, CO 80202

Job #: 08CCA03

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INTRODUCTORY NOTES

This estimate is based on the following information received and verbal direction from the client:

1. Architectural concept A plans floors one through four.
2. Architectural concept B plans floors one, three and four.
3. Landscape plan.
4. Aerial photo.
5. Isometric ramping plans, 9 sheets.

The following items are excluded from this estimate:

A. Professional fees.
B. Building permits and fees.
C. Inspections and tests.
D. Furniture, fixtures and equipment, except as noted in the estimate.
E. Construction change order contingency.
F. Contractor bonding.
G. Hazardous material abatement/removal.

This estimate is based on a detailed measurement of quantities where possible and reasonable allowances for items not clearly defined on the drawings (marked “ALLOWANCE” in the estimate). This estimate is based on a minimum of four (4) competitive bids at the general contractor level and a stable bidding market. We strongly advise that the client review this estimate in detail and that any estimate interpretations contrary to those intended by the design documents be addressed.

We recommend that this estimate be updated should more definitive information become available or if there is a change in scope.

PROJECT SUMMARY

CONCEPT A BASE	COST	COST PER SF
CONCEPT A - BASE, 4 STORY BUILD OUT	$39,194,973	$288.20
CONCEPT A GARAGE	$13,469,594	$71.38
SITE WORK	$1,099,355	$11.22
TOTAL PROJECT COST A BASE	**$53,763,922**	

CONCEPT A ALTERNATE	COST	COST PER SF
CONCEPT A - ALT, 5 STORY BUILD OUT	$48,737,170	$288.39
CONCEPT A - ALT GARAGE	$16,918,641	$72.14
SITE WORK	$1,099,355	$11.22
TOTAL PROJECT COST A ALTERNATE	**$66,755,165**	

CONCEPT A ALTERNATE 2	COST	COST PER SF
CONCEPT A - ALT, 5 STORY BUILD OUT 4 FLR	$44,180,311	$261.42
CONCEPT A - ALT GARAGE	$16,918,641	$72.14
SITE WORK	$1,099,355	$11.22
TOTAL PROJECT COST A ALTERNATE 2	**$62,198,306**	

CONCEPT B BASE	COST	COST PER SF
CONCEPT B - BASE, 4 STORY BUILD OUT	$46,609,274	$286.47
CONCEPT B GARAGE	$11,590,412	$74.20
SITE WORK	$1,099,355	$11.22
TOTAL PROJECT COST B BASE	**$59,299,040**	

CONCEPT B ALTERNATE	COST	COST PER SF
CONCEPT B - ALT, 5 STORY BUILD OUT	$59,323,393	$288.47
CONCEPT B - ALT GARAGE	$14,730,966	$75.45
SITE WORK	$1,099,355	$11.22
TOTAL PROJECT COST B ALTERNATE	**$75,153,713**	

CONCEPT B ALTERNATE 2	COST	COST PER SF
CONCEPT B - ALT, 5 STORY BUILD OUT 4 FLR	$52,500,499	$255.29
CONCEPT B - ALT GARAGE	$14,730,966	$75.45
SITE WORK	$1,099,355	$11.22
TOTAL PROJECT COST B ALTERNATE 2	**$68,330,819**	

ALTERNATE SUMMARY

		COST/PROJECT
GARAGE CONTROLS	INCLUDED:	$7,250
GARAGE PER LEVEL - REFER TO GENERAL SUMMARY PAGES		
400 LF OF UG TUNNEL	ADD:	$1,000,000
400 LF OF OVERHEAD BRIDGE	ADD:	$800,000
LEATHER TILE WALL COVER - 10,000 SF	ADD:	$217,500
LOBBY TERRAZZO - REFER TO GENERAL SUMMARY PAGES		
PERMITTING FEE, ALLOWANCE	ADD:	$1,000,000
GEOTHERMAL SYSTEM, ALLOWANCE	ADD:	$2,500,000
ART BUDGET	ADD:	$100,000
FF&E BUDGET	ADD:	$4,000,000
MOVING BUDGET	ADD:	$100,000
SECURITY CONSULTANT BUDGET	ADD:	$250,000

BASE CONCEPT A GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$967,000	$7.11
2. VERTICAL STRUCTURE		$1,224,000	$9.00
3. FLOOR AND ROOF STRUCTURES		$2,292,000	$16.85
4. EXTERIOR CLADDING		$2,366,000	$17.40
5. ROOFING		$272,000	$2.00
6. INTERIOR CONSTRUCTION		$7,342,755	$53.99
7. CONVEYING		$255,000	$1.88
8. MECHANICAL		$5,644,000	$41.50
9. ELECTRICAL		$4,760,000	$35.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT		$1,820,000	$13.38
12. SITEWORK			
NET DIRECT BUILDING COST		$26,942,755	$198.11
GENERAL CONDITIONS, OH&P,	15.0%	$4,041,413	$29.72
SUBTOTAL		$30,984,168	$227.82
CONTINGENCY,	15.0%	$4,647,625	$34.17
SUBTOTAL		$35,631,793	$262.00
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$3,563,179	$26.20
TOTAL BUILDING COST		**$39,194,973**	

GROSS FLOOR AREA: 136,000 SF

COST PER SQUARE FOOT: $288.20

TERRAZZO IN LOBBY - INCLUDED INCLUDED: $172,260

BASE CONCEPT A DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$967,000		$7.11
011 Standard Foundations	967,000		$7.11	
012 Special Foundations				
2. VERTICAL STRUCTURE		$1,224,000		$9.00
021 Vertical Structure	1,224,000		$9.00	
3. SUPERSTRUCTURE		$2,292,000		$16.85
031 Floor Construction	1,700,000		$12.50	
032 Roof Construction	442,000		$3.25	
033 Stair Construction	150,000		$1.10	
4. EXTERIOR CLOSURE		$2,366,000		$17.40
041 Exterior Cladding	2,322,000		$17.07	
042 Exterior Doors/Windows	44,000		$0.32	
5. ROOFING		$272,000		$2.00
050 Roofing	272,000		$2.00	
6. INTERIOR CONSTRUCTION		$7,342,755		$53.99
061 Partitions	2,403,800		$17.68	
062 Interior Finishes	3,713,015		$27.30	
063 Specialties	431,000		$3.17	
064 Interior Doors/Windows	794,940		$5.85	
7. CONVEYING		$255,000		$1.88
070 Elevators	255,000		$1.88	
8. MECHANICAL		$5,644,000		$41.50
081 Plumbing	1,088,000		$8.00	
082 H.V.A.C.	4,080,000		$30.00	
083 Fire Protection	476,000		$3.50	
084 Special Mechanical				
9. ELECTRICAL		$4,760,000		$35.00
091 Standard Electrical	4,760,000		$35.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT		$1,820,000		$13.38
111 Fixed/Movable Equipment	20,000		$0.15	
112 Furnishings	1,800,000		$13.24	
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$26,942,755**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	136,000	SF	7.00	$952,000
Elevator pits	3	EA	5,000.00	$15,000
TOTAL - 011 STANDARD FOUNDATIONS				$967,000
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Steel columns and bracing - 6#/SF	816,000	LB	1.50	$1,224,000
TOTAL - 021 VERTICAL STRUCTURE				$1,224,000
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	34,000	SF	5.00	$170,000
Structural steel upper floors - 6#/SF	612,000	LB	1.50	$918,000
Concrete filled metal deck	102,000	SF	6.00	$612,000
TOTAL - FLOOR CONSTRUCTION				$1,700,000
ELEMENT - SUPERSTRUCTURE				
032 ROOF CONSTRUCTION				
Structural steel - 6#/SF	204,000	LB	1.50	$306,000
Decking	34,000	SF	4.00	$136,000
TOTAL - 032 ROOF CONSTRUCTION				$442,000
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Lobby stairs	6	FLT	15,000.00	$90,000
Exit stairs	6	FLT	10,000.00	$60,000
TOTAL - 033 STAIR CONSTRUCTION				$150,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Framing, insulation, masonry veneer - 50%	25,800	SF	25.00	$645,000
Curtain wall - 50%	25,800	SF	65.00	$1,677,000
TOTAL - EXTERIOR CLADDING				$2,322,000
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Entry doors				
Doubles	1	PR	4,000.00	$4,000
Singles	8	EA	2,000.00	$16,000
Garage exits				
Doubles	4	PR	3,000.00	$12,000

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Singles	8	EA	1,500.00	$12,000
TOTAL - 042 EXTERIOR DOORS/WINDOWS				$44,000
ELEMENT - ROOFING				
050 ROOFING				
Built up roofing, insulation, accessories, sheet metal	34,000	SF	8.00	$272,000
TOTAL -050 ROOFING				$272,000
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Offices, meeting areas	104,380	SF	20.00	$2,087,600
Remainder of building	31,620	SF	10.00	$316,200
TOTAL - 061 PARTITIONS				$2,403,800
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Offices, meeting areas - carpet	102,580	SF	3.00	$307,740
Access flooring, ALLOWANCE	1	LS	2,000,000.00	$2,000,000
Café terrazzo	1,800	SF	15.00	$27,000
Lobby, support and toilet areas - tile, upgraded flooring	28,900	SF	15.00	$433,500
Storage, mechanical areas - sealed concrete	2,720	SF	0.75	$2,040
Ceilings				
Offices, meeting areas - ACT	104,380	SF	3.00	$313,140
Lobby - upgraded ceiling finish	23,800	SF	12.00	$285,600
Support, toilets - painted GWB	5,100	SF	8.00	$40,800
Storage, mechanical areas - painted exposed structure	2,720	SF	1.00	$2,720
Walls				
Offices, meeting areas	104,380	SF	2.50	$260,950
Remainder of building	31,620	SF	1.25	$39,525
TOTAL -062 INTERIOR FINISHES				$3,713,015
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Toilet partitions and accessories	4	FLR	12,000.00	$48,000
Moveable partitions	260	LF	500.00	$130,000
Decorative railing	420	LF	250.00	$105,000
Lobby display case	50	LF	400.00	$20,000
Café cabinetry	100	LF	300.00	$30,000
Break room cabinetry	100	LF	300.00	$30,000
Signage, misc. specialties	136,000	SF	0.50	$68,000
TOTAL - 063 SPECIALTIES				$431,000
ELEMENT - INTERIOR CONSTRUCTION				

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
064 INTERIOR DOORS/WINDOWS				
Interior storefront	1,400	LF	300.00	$420,000
Offices, meeting areas	104,380	SF	3.00	$313,140
Lobby entry doors	6	EA	2,000.00	$12,000
Support, toilet doors	13	EA	1,200.00	$15,600
Stairway doors	16	EA	1,200.00	$19,200
Storage, mechanical doors	10	EA	1,500.00	$15,000
TOTAL - 064 INTERIOR DOORS/WINDOWS				$794,940
ELEMENT - CONVEYING				
070 ELEVATORS				
Four stop hydraulic elevators	3	EA	85,000.00	$255,000
TOTAL - 070 ELEVATORS				$255,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing rough and finish	136,000	SF	8.00	$1,088,000
TOTAL 081 PLUMBING				$1,088,000
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Heating and cooling	136,000	SF	30.00	$4,080,000
TOTAL - 082 H.V.A.C.				$4,080,000
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	136,000	SF	3.50	$476,000
TOTAL - 083 FIRE PROTECTION				$476,000
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security, communications	136,000	SF	35.00	$4,760,000
TOTAL - 091 STANDARD ELECTRICAL				$4,760,000
ELEMENT - EQUIPMENT				
111 FIXED/MOVABLE EQUIPMENT				
Café equipment	1	LS	20,000.00	$20,000
TOTAL - 111 FIXED/MOVABLE EQUIPMENT				$20,000
ELEMENT - EQUIPMENT				
112 FURNISHINGS				
Open office partitions, ALLOWANCE	1	LS	1,800,000.00	$1,800,000
TOTAL - 112 FURNISHINGS				$1,800,000

CONCEPT A ALTERNATE GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,198,000	$7.09
2. VERTICAL STRUCTURE		$1,521,000	$9.00
3. FLOOR AND ROOF STRUCTURES		$2,837,000	$16.79
4. EXTERIOR CLADDING		$2,952,500	$17.47
5. ROOFING		$272,000	$1.61
6. INTERIOR CONSTRUCTION		$9,148,093	$54.13
7. CONVEYING		$375,000	$2.22
8. MECHANICAL		$7,013,500	$41.50
9. ELECTRICAL		$5,915,000	$35.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT		$2,270,000	$13.43
12. SITEWORK			
NET DIRECT BUILDING COST		$33,502,093	$198.24
GENERAL CONDITIONS, OH&P,	15.0%	$5,025,314	$29.74
SUBTOTAL		$38,527,407	$227.97
CONTINGENCY,	15.0%	$5,779,111	$34.20
SUBTOTAL		$44,306,518	$262.17
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$4,430,652	$26.22
TOTAL BUILDING COST		**$48,737,170**	

GROSS FLOOR AREA: 169,000 SF

COST PER SQUARE FOOT: $288.39

CONCEPT A ALTERNATE DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,198,000		$7.09
011 Standard Foundations	1,198,000		$7.09	
012 Special Foundations				
2. VERTICAL STRUCTURE		$1,521,000		$9.00
021 Vertical Structure	1,521,000		$9.00	
3. SUPERSTRUCTURE		$2,837,000		$16.79
031 Floor Construction	2,195,000		$12.99	
032 Roof Construction	442,000		$2.62	
033 Stair Construction	200,000		$1.18	
4. EXTERIOR CLOSURE		$2,952,500		$17.47
041 Exterior Cladding	2,902,500		$17.17	
042 Exterior Doors/Windows	50,000		$0.30	
5. ROOFING		$272,000		$1.61
050 Roofing	272,000		$1.61	
6. INTERIOR CONSTRUCTION		$9,148,093		$54.13
061 Partitions	2,997,800		$17.74	
062 Interior Finishes	4,610,253		$27.28	
063 Specialties	564,500		$3.34	
064 Interior Doors/Windows	975,540		$5.77	
7. CONVEYING		$375,000		$2.22
070 Elevators	375,000		$2.22	
8. MECHANICAL		$7,013,500		$41.50
081 Plumbing	1,352,000		$8.00	
082 H.V.A.C.	5,070,000		$30.00	
083 Fire Protection	591,500		$3.50	
084 Special Mechanical				
9. ELECTRICAL		$5,915,000		$35.00
091 Standard Electrical	5,915,000		$35.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT		$2,270,000		$13.43
111 Fixed/Movable Equipment	20,000		$0.12	
112 Furnishings	2,250,000		$13.31	
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$33,502,093**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	169,000	SF	7.00	$1,183,000
Elevator pits	3	EA	5,000.00	$15,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,198,000
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Steel columns and bracing - 6#/SF	1,014,000	LB	1.50	$1,521,000
TOTAL - 021 VERTICAL STRUCTURE				$1,521,000
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	34,000	SF	5.00	$170,000
Structural steel upper floors - 6#/SF	810,000	LB	1.50	$1,215,000
Concrete filled metal deck	135,000	SF	6.00	$810,000
TOTAL - FLOOR CONSTRUCTION				$2,195,000
ELEMENT - SUPERSTRUCTURE				
032 ROOF CONSTRUCTION				
Structural steel - 6#/SF	204,000	LB	1.50	$306,000
Decking	34,000	SF	4.00	$136,000
TOTAL - 032 ROOF CONSTRUCTION				$442,000
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Lobby stairs	8	FLT	15,000.00	$120,000
Exit stairs	8	FLT	10,000.00	$80,000
TOTAL - 033 STAIR CONSTRUCTION				$200,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Framing, insulation, masonry veneer - 50%	32,250	SF	25.00	$806,250
Curtain wall - 50%	32,250	SF	65.00	$2,096,250
TOTAL - EXTERIOR CLADDING				$2,902,500
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Entry doors				
Doubles	1	PR	4,000.00	$4,000
Singles	8	EA	2,000.00	$16,000
Garage exits				
Doubles	5	PR	3,000.00	$15,000

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Singles	10	EA	1,500.00	$15,000
TOTAL - 042 EXTERIOR DOORS/WINDOWS				$50,000
ELEMENT - ROOFING				
050 ROOFING				
Built up roofing, insulation, accessories, sheet metal	34,000	SF	8.00	$272,000
TOTAL -050 ROOFING				$272,000
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Offices, meeting areas	130,780	SF	20.00	$2,615,600
Remainder of building	38,220	SF	10.00	$382,200
TOTAL - 061 PARTITIONS				$2,997,800
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Offices, meeting areas - carpet	128,980	SF	3.00	$386,940
Access flooring, ALLOWANCE	1	LS	2,500,000.00	$2,500,000
Café terrazzo	1,800	SF	15.00	$27,000
Lobby, support and toilet areas - tile, upgraded flooring	35,170	SF	15.00	$527,550
Storage, mechanical areas - sealed concrete	3,050	SF	0.75	$2,288
Ceilings				
Offices, meeting areas - ACT	130,780	SF	3.00	$392,340
Lobby - upgraded ceiling finish	28,750	SF	12.00	$345,000
Support, toilets - painted GWB	6,420	SF	8.00	$51,360
Storage, mechanical areas - painted exposed structure	3,050	SF	1.00	$3,050
Walls				
Offices, meeting areas	130,780	SF	2.50	$326,950
Remainder of building	38,220	SF	1.25	$47,775
TOTAL -062 INTERIOR FINISHES				$4,610,253
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Toilet partitions and accessories	5	FLR	12,000.00	$60,000
Moveable partitions	325	LF	500.00	$162,500
Decorative railing	680	LF	250.00	$170,000
Lobby display case	50	LF	400.00	$20,000
Café cabinetry	100	LF	300.00	$30,000
Break room cabinetry	125	LF	300.00	$37,500
Signage, misc. specialties	169,000	SF	0.50	$84,500
TOTAL - 063 SPECIALTIES				$564,500
ELEMENT - INTERIOR CONSTRUCTION				
064 INTERIOR DOORS/WINDOWS				

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Interior storefront	1,700	LF	300.00	$510,000
Offices, meeting areas	130,780	SF	3.00	$392,340
Lobby entry doors	6	EA	2,000.00	$12,000
Support, toilet doors	16	EA	1,200.00	$19,200
Stairway doors	20	EA	1,200.00	$24,000
Storage, mechanical doors	12	EA	1,500.00	$18,000
TOTAL - 064 INTERIOR DOORS/WINDOWS				$975,540
ELEMENT - CONVEYING				
070 ELEVATORS				
Five stop traction elevators	3	EA	125,000.00	$375,000
TOTAL - 070 ELEVATORS				$375,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing rough and finish	169,000	SF	8.00	$1,352,000
TOTAL 081 PLUMBING				$1,352,000
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Heating and cooling	169,000	SF	30.00	$5,070,000
TOTAL - 082 H.V.A.C.				$5,070,000
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	169,000	SF	3.50	$591,500
TOTAL - 083 FIRE PROTECTION				$591,500
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security, communications	169,000	SF	35.00	$5,915,000
TOTAL - 091 STANDARD ELECTRICAL				$5,915,000
ELEMENT - EQUIPMENT				
111 FIXED/MOVABLE EQUIPMENT				
Café equipment	1	LS	20,000.00	$20,000
TOTAL - 111 FIXED/MOVABLE EQUIPMENT				$20,000
ELEMENT - EQUIPMENT				
112 FURNISHINGS				
Open office partitions, ALLOWANCE	1	LS	2,250,000.00	$2,250,000
TOTAL - 112 FURNISHINGS				$2,250,000

CONCEPT A ALTERNATE 2 GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,198,000	$7.09
2. VERTICAL STRUCTURE		$1,521,000	$9.00
3. FLOOR AND ROOF STRUCTURES		$2,837,000	$16.79
4. EXTERIOR CLADDING		$2,952,500	$17.47
5. ROOFING		$272,000	$1.61
6. INTERIOR CONSTRUCTION		$7,534,893	$44.59
7. CONVEYING		$375,000	$2.22
8. MECHANICAL		$6,340,300	$37.52
9. ELECTRICAL		$5,519,000	$32.66
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT		$1,820,000	$10.77
12. SITEWORK			
NET DIRECT BUILDING COST		$30,369,693	$179.70
GENERAL CONDITIONS, OH&P,	15.0%	$4,555,454	$26.96
SUBTOTAL		$34,925,147	$206.66
CONTINGENCY,	15.0%	$5,238,772	$31.00
SUBTOTAL		$40,163,919	$237.66
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$4,016,392	$23.77

TOTAL BUILDING COST	**$44,180,311**

GROSS FLOOR AREA: 169,000 SF

COST PER SQUARE FOOT: $261.42

CONCEPT A ALTERNATE 2 DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,198,000		$7.09
011 Standard Foundations	1,198,000		$7.09	
012 Special Foundations				
2. VERTICAL STRUCTURE		$1,521,000		$9.00
021 Vertical Structure	1,521,000		$9.00	
3. SUPERSTRUCTURE		$2,837,000		$16.79
031 Floor Construction	2,195,000		$12.99	
032 Roof Construction	442,000		$2.62	
033 Stair Construction	200,000		$1.18	
4. EXTERIOR CLOSURE		$2,952,500		$17.47
041 Exterior Cladding	2,902,500		$17.17	
042 Exterior Doors/Windows	50,000		$0.30	
5. ROOFING		$272,000		$1.61
050 Roofing	272,000		$1.61	
6. INTERIOR CONSTRUCTION		$7,534,893		$44.59
061 Partitions	2,469,800		$14.61	
062 Interior Finishes	3,864,253		$22.87	
063 Specialties	394,500		$2.33	
064 Interior Doors/Windows	806,340		$4.77	
7. CONVEYING		$375,000		$2.22
070 Elevators	375,000		$2.22	
8. MECHANICAL		$6,340,300		$37.52
081 Plumbing	1,193,600		$7.06	
082 H.V.A.C.	4,594,800		$27.19	
083 Fire Protection	551,900		$3.27	
084 Special Mechanical				
9. ELECTRICAL		$5,519,000		$32.66
091 Standard Electrical	5,519,000		$32.66	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT		$1,820,000		$10.77
111 Fixed/Movable Equipment	20,000		$0.12	
112 Furnishings	1,800,000		$10.65	
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$30,369,693**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	169,000	SF	7.00	$1,183,000
Elevator pits	3	EA	5,000.00	$15,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,198,000
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Steel columns and bracing - 6#/SF	1,014,000	LB	1.50	$1,521,000
TOTAL - 021 VERTICAL STRUCTURE				$1,521,000
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	34,000	SF	5.00	$170,000
Structural steel upper floors - 6#/SF	810,000	LB	1.50	$1,215,000
Concrete filled metal deck	135,000	SF	6.00	$810,000
TOTAL - FLOOR CONSTRUCTION				$2,195,000
ELEMENT - SUPERSTRUCTURE				
032 ROOF CONSTRUCTION				
Structural steel - 6#/SF	204,000	LB	1.50	$306,000
Decking	34,000	SF	4.00	$136,000
TOTAL - 032 ROOF CONSTRUCTION				$442,000
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Lobby stairs	8	FLT	15,000.00	$120,000
Exit stairs	8	FLT	10,000.00	$80,000
TOTAL - 033 STAIR CONSTRUCTION				$200,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Framing, insulation, masonry veneer - 50%	32,250	SF	25.00	$806,250
Curtain wall - 50%	32,250	SF	65.00	$2,096,250
TOTAL - EXTERIOR CLADDING				$2,902,500
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Entry doors				
Doubles	1	PR	4,000.00	$4,000
Singles	8	EA	2,000.00	$16,000
Garage exits				
Doubles	5	PR	3,000.00	$15,000

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Singles	10	EA	1,500.00	$15,000
TOTAL - 042 EXTERIOR DOORS/WINDOWS				$50,000
ELEMENT - ROOFING				
050 ROOFING				
Built up roofing, insulation, accessories, sheet metal	34,000	SF	8.00	$272,000
TOTAL -050 ROOFING				$272,000
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Offices, meeting areas	104,380	SF	20.00	$2,087,600
Remainder of building	38,220	SF	10.00	$382,200
TOTAL - 061 PARTITIONS				$2,469,800
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Offices, meeting areas - carpet	104,380	SF	3.00	$313,140
Access flooring, ALLOWANCE	1	LS	2,000,000.00	$2,000,000
Lobby, support and toilet areas - tile, upgraded flooring	35,170	SF	15.00	$527,550
Storage, mechanical areas - sealed concrete	3,050	SF	0.75	$2,288
Ceilings				
Offices, meeting areas - ACT	104,380	SF	3.00	$313,140
Lobby - upgraded ceiling finish	28,750	SF	12.00	$345,000
Support, toilets - painted GWB	6,420	SF	8.00	$51,360
Storage, mechanical areas - painted exposed structure	3,050	SF	1.00	$3,050
Walls				
Offices, meeting areas	104,380	SF	2.50	$260,950
Remainder of building	38,220	SF	1.25	$47,775
TOTAL -062 INTERIOR FINISHES				$3,864,253
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Toilet partitions and accessories	5	FLR	12,000.00	$60,000
Decorative railing	680	LF	250.00	$170,000
Lobby display case	50	LF	400.00	$20,000
Café cabinetry	100	LF	300.00	$30,000
Break room cabinetry	100	LF	300.00	$30,000
Signage, misc. specialties	169,000	SF	0.50	$84,500
TOTAL - 063 SPECIALTIES				$394,500
ELEMENT - INTERIOR CONSTRUCTION				
064 INTERIOR DOORS/WINDOWS				
Interior storefront	1,400	LF	300.00	$420,000
Offices, meeting areas	104,380	SF	3.00	$313,140

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Lobby entry doors	6	EA	2,000.00	$12,000
Support, toilet doors	16	EA	1,200.00	$19,200
Stairway doors	20	EA	1,200.00	$24,000
Storage, mechanical doors	12	EA	1,500.00	$18,000
TOTAL - 064 INTERIOR DOORS/WINDOWS				$806,340
ELEMENT - CONVEYING				
070 ELEVATORS				
Five stop traction elevators	3	EA	125,000.00	$375,000
TOTAL - 070 ELEVATORS				$375,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing rough and finish	142,600	SF	8.00	$1,140,800
Fifth floor office rough	26,400	SF	2.00	$52,800
TOTAL 081 PLUMBING				$1,193,600
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Heating and cooling	142,600	SF	30.00	$4,278,000
Fifth floor offices equipment only	26,400	SF	12.00	$316,800
TOTAL - 082 H.V.A.C.				$4,594,800
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	142,600	SF	3.50	$499,100
Fifth floor offices temporary sprinklers	26,400	SF	2.00	$52,800
TOTAL - 083 FIRE PROTECTION				$551,900
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security, communications	142,600	SF	35.00	$4,991,000
Fifth floor offices equipment only	26,400	SF	20.00	$528,000
TOTAL - 091 STANDARD ELECTRICAL				$5,519,000
ELEMENT - EQUIPMENT				
111 FIXED/MOVABLE EQUIPMENT				
Café equipment	1	LS	20,000.00	$20,000
TOTAL - 111 FIXED/MOVABLE EQUIPMENT				$20,000
ELEMENT - EQUIPMENT				
112 FURNISHINGS				
Open office partitions, ALLOWANCE	1	LS	1,800,000.00	$1,800,000
TOTAL - 112 FURNISHINGS				$1,800,000

A BASE PARKING STRUCTURE GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,353,400	$7.17
2. VERTICAL STRUCTURE		$679,500	$3.60
3. FLOOR AND ROOF STRUCTURES		$3,329,000	$17.64
4. EXTERIOR CLADDING		$570,710	$3.02
5. ROOFING		$768,500	$4.07
6. INTERIOR CONSTRUCTION		$406,584	$2.15
7. CONVEYING		$170,000	$0.90
8. MECHANICAL		$849,150	$4.50
9. ELECTRICAL		$1,132,200	$6.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT			
12. SITEWORK			
NET DIRECT BUILDING COST		$9,259,044	$49.07
GENERAL CONDITIONS, OH&P,	15.0%	$1,388,857	$7.36
SUBTOTAL		$10,647,901	$56.43
CONTINGENCY,	15.0%	$1,597,185	$8.46
SUBTOTAL		$12,245,086	$64.89
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$1,224,509	$6.49
TOTAL BUILDING COST		**$13,469,594**	

GROSS FLOOR AREA:	188,700 SF
COST PER SQUARE FOOT:	$71.38
COST PER LEVEL	$3,367,399

A BASE PARKING STRUCTURE DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,353,400		$7.17
011 Standard Foundations	1,353,400		$7.17	
012 Special Foundations				
2. VERTICAL STRUCTURE		$679,500		$3.60
021 Vertical Structure	679,500		$3.60	
3. SUPERSTRUCTURE		$3,329,000		$17.64
031 Floor Construction	3,249,000		$17.22	
032 Roof Construction				
033 Stair Construction	80,000		$0.42	
4. EXTERIOR CLOSURE		$570,710		$3.02
041 Exterior Cladding	570,710		$3.02	
042 Exterior Doors/Windows				
5. ROOFING		$768,500		$4.07
050 Roofing	768,500		$4.07	
6. INTERIOR CONSTRUCTION		$406,584		$2.15
061 Partitions	22,320		$0.12	
062 Interior Finishes	207,914		$1.10	
063 Specialties	176,350		$0.93	
064 Interior Doors/Windows				
7. CONVEYING		$170,000		$0.90
070 Elevators	170,000		$0.90	
8. MECHANICAL		$849,150		$4.50
081 Plumbing	377,400		$2.00	
082 H.V.A.C.				
083 Fire Protection	471,750		$2.50	
084 Special Mechanical				
9. ELECTRICAL		$1,132,200		$6.00
091 Standard Electrical	1,132,200		$6.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT				
111 Fixed/Movable Equipment				
112 Furnishings				
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$9,259,044**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	188,700	SF	7.00	$1,320,900
Loading dock wall	150	LF	150.00	$22,500
Elevator pits	2	EA	5,000.00	$10,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,353,400
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Concrete columns	2,268	LF	250.00	$567,000
Shear walls	2,700	SF	25.00	$67,500
Retaining wall	180	LF	250.00	$45,000
TOTAL - 021 VERTICAL STRUCTURE				$679,500
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	35,000	SF	5.00	$175,000
Raised decks	153,700	SF	20.00	$3,074,000
TOTAL - FLOOR CONSTRUCTION				$3,249,000
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Exit stairs	200	RISER	400.00	$80,000
TOTAL - 033 STAIR CONSTRUCTION				$80,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Decorative precast panels or match building - 70%	22,828	SF	25.00	$570,710
TOTAL - EXTERIOR CLADDING				$570,710
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Garage doors, NIC				
TOTAL - 042 EXTERIOR DOORS/WINDOWS				
ELEMENT - ROOFING				
050 ROOFING				
Waterproofing of raised decks	153,700	SF	5.00	$768,500
TOTAL -050 ROOFING				$768,500
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Elevator shaft walls	2,790	SF	8.00	$22,320

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
TOTAL - 061 PARTITIONS				$22,320
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Seal concrete ground floor	35,000	SF	1.00	$35,000
Ceilings				
Paint underside of raised decks	153,700	SF	1.00	$153,700
Walls				
Paint inside of exterior walls and elevator shaft wall	25,618	SF	0.75	$19,214
TOTAL -062 INTERIOR FINISHES				$207,914
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Signage, striping	188,700	SF	0.50	$94,350
Dock equipment	1	LS	5,000.00	$5,000
Parking control equipment	1	LS	5,000.00	$5,000
Ramp cable barrier	1,800	LF	40.00	$72,000
TOTAL - 063 SPECIALTIES				$176,350
ELEMENT - CONVEYING				
070 ELEVATORS				
Four stop hydraulic elevators				
Passenger	1	EA	80,000.00	$80,000
Freight	1	EA	90,000.00	$90,000
TOTAL - 070 ELEVATORS				$170,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing, drainage and hose bibs	188,700	SF	2.00	$377,400
TOTAL 081 PLUMBING				$377,400
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Ventilation NIC				
TOTAL - 082 H.V.A.C.				
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	188,700	SF	2.50	$471,750
TOTAL - 083 FIRE PROTECTION				$471,750
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Lighting, power, security	188,700	SF	6.00	$1,132,200
TOTAL - 091 STANDARD ELECTRICAL				$1,132,200

A ALTERNATE PARKING STRUCTURE GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,674,098	$7.14
2. VERTICAL STRUCTURE		$773,500	$3.30
3. FLOOR AND ROOF STRUCTURES		$4,265,280	$18.19
4. EXTERIOR CLADDING		$713,375	$3.04
5. ROOFING		$997,570	$4.25
6. INTERIOR CONSTRUCTION		$503,710	$2.15
7. CONVEYING		$240,000	$1.02
8. MECHANICAL		$1,055,313	$4.50
9. ELECTRICAL		$1,407,084	$6.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT			
12. SITEWORK			
NET DIRECT BUILDING COST		$11,629,930	$49.59
GENERAL CONDITIONS, OH&P,	15.0%	$1,744,490	$7.44
SUBTOTAL		$13,374,420	$57.03
CONTINGENCY,	15.0%	$2,006,163	$8.55
SUBTOTAL		$15,380,582	$65.58
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$1,538,058	$6.56
TOTAL BUILDING COST		**$16,918,641**	

GROSS FLOOR AREA:	234,514 SF
COST PER SQUARE FOOT:	$72.14
COST PER LEVEL	$3,383,728

A ALTERNATE PARKING STRUCTURE DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,674,098		$7.14
011 Standard Foundations	1,674,098		$7.14	
012 Special Foundations				
2. VERTICAL STRUCTURE		$773,500		$3.30
021 Vertical Structure	773,500		$3.30	
3. SUPERSTRUCTURE		$4,265,280		$18.19
031 Floor Construction	4,165,280		$17.76	
032 Roof Construction				
033 Stair Construction	100,000		$0.43	
4. EXTERIOR CLOSURE		$713,375		$3.04
041 Exterior Cladding	713,375		$3.04	
042 Exterior Doors/Windows				
5. ROOFING		$997,570		$4.25
050 Roofing	997,570		$4.25	
6. INTERIOR CONSTRUCTION		$503,710		$2.15
061 Partitions	27,920		$0.12	
062 Interior Finishes	258,533		$1.10	
063 Specialties	217,257		$0.93	
064 Interior Doors/Windows				
7. CONVEYING		$240,000		$1.02
070 Elevators	240,000		$1.02	
8. MECHANICAL		$1,055,313		$4.50
081 Plumbing	469,028		$2.00	
082 H.V.A.C.				
083 Fire Protection	586,285		$2.50	
084 Special Mechanical				
9. ELECTRICAL		$1,407,084		$6.00
091 Standard Electrical	1,407,084		$6.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT				
111 Fixed/Movable Equipment				
112 Furnishings				
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$11,629,930**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	234,514	SF	7.00	$1,641,598
Loading dock wall	150	LF	150.00	$22,500
Elevator pits	2	EA	5,000.00	$10,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,674,098
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Concrete columns	2,604	LF	250.00	$651,000
Shear walls	3,100	SF	25.00	$77,500
Retaining wall	180	LF	250.00	$45,000
TOTAL - 021 VERTICAL STRUCTURE				$773,500
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	35,000	SF	5.00	$175,000
Raised decks	199,514	SF	20.00	$3,990,280
TOTAL - FLOOR CONSTRUCTION				$4,165,280
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Exit stairs	250	RISER	400.00	$100,000
TOTAL - 033 STAIR CONSTRUCTION				$100,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Decorative precast panels or match building - 70%	28,535	SF	25.00	$713,375
TOTAL - EXTERIOR CLADDING				$713,375
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Garage doors, NIC				
TOTAL - 042 EXTERIOR DOORS/WINDOWS				
ELEMENT - ROOFING				
050 ROOFING				
Waterproofing of raised decks	199,514	SF	5.00	$997,570
TOTAL -050 ROOFING				$997,570
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Elevator shaft walls	3,490	SF	8.00	$27,920

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
TOTAL - 061 PARTITIONS				$27,920
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Seal concrete ground floor	35,000	SF	1.00	$35,000
Ceilings				
Paint underside of raised decks	199,514	SF	1.00	$199,514
Walls				
Paint inside of exterior walls and elevator shaft wall	32,025	SF	0.75	$24,019
TOTAL -062 INTERIOR FINISHES				$258,533
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Signage, striping	234,514	SF	0.50	$117,257
Dock equipment	1	LS	5,000.00	$5,000
Parking control equipment	1	LS	5,000.00	$5,000
Ramp cable barrier	2,250	LF	40.00	$90,000
TOTAL - 063 SPECIALTIES				$217,257
ELEMENT - CONVEYING				
070 ELEVATORS				
Five stop traction elevators				
Passenger	1	EA	110,000.00	$110,000
Freight	1	EA	130,000.00	$130,000
TOTAL - 070 ELEVATORS				$240,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing, drainage and hose bibs	234,514	SF	2.00	$469,028
TOTAL 081 PLUMBING				$469,028
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Ventilation NIC				
TOTAL - 082 H.V.A.C.				
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	234,514	SF	2.50	$586,285
TOTAL - 083 FIRE PROTECTION				$586,285
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Lighting, power, security	234,514	SF	6.00	$1,407,084
TOTAL - 091 STANDARD ELECTRICAL				$1,407,084

BASE CONCEPT B GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,153,900	$7.09
2. VERTICAL STRUCTURE		$1,464,300	$9.00
3. FLOOR AND ROOF STRUCTURES		$2,743,250	$16.86
4. EXTERIOR CLADDING		$2,689,300	$16.53
5. ROOFING		$374,000	$2.30
6. INTERIOR CONSTRUCTION		$8,573,070	$52.69
7. CONVEYING		$255,000	$1.57
8. MECHANICAL		$6,752,050	$41.50
9. ELECTRICAL		$5,694,500	$35.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT		$2,340,000	$14.38
12. SITEWORK			
NET DIRECT BUILDING COST		$32,039,370	$196.92
GENERAL CONDITIONS, OH&P,	15.0%	$4,805,906	$29.54
SUBTOTAL		$36,845,276	$226.46
CONTINGENCY,	15.0%	$5,526,791	$33.97
SUBTOTAL		$42,372,067	$260.43
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$4,237,207	$26.04
TOTAL BUILDING COST		**$46,609,274**	

GROSS FLOOR AREA: 162,700 SF

COST PER SQUARE FOOT: $286.47

TERRAZZO IN LOBBY - INCLUDED INCLUDED: $112,670

BASE CONCEPT B DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,153,900		$7.09
011 Standard Foundations	1,153,900		$7.09	
012 Special Foundations				
2. VERTICAL STRUCTURE		$1,464,300		$9.00
021 Vertical Structure	1,464,300		$9.00	
3. SUPERSTRUCTURE		$2,743,250		$16.86
031 Floor Construction	2,075,500		$12.76	
032 Roof Construction	607,750		$3.74	
033 Stair Construction	60,000		$0.37	
4. EXTERIOR CLOSURE		$2,689,300		$16.53
041 Exterior Cladding	2,655,300		$16.32	
042 Exterior Doors/Windows	34,000		$0.21	
5. ROOFING		$374,000		$2.30
050 Roofing	374,000		$2.30	
6. INTERIOR CONSTRUCTION		$8,573,070		$52.69
061 Partitions	3,037,800		$18.67	
062 Interior Finishes	4,305,380		$26.46	
063 Specialties	426,850		$2.62	
064 Interior Doors/Windows	803,040		$4.94	
7. CONVEYING		$255,000		$1.57
070 Elevators	255,000		$1.57	
8. MECHANICAL		$6,752,050		$41.50
081 Plumbing	1,301,600		$8.00	
082 H.V.A.C.	4,881,000		$30.00	
083 Fire Protection	569,450		$3.50	
084 Special Mechanical				
9. ELECTRICAL		$5,694,500		$35.00
091 Standard Electrical	5,694,500		$35.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT		$2,340,000		$14.38
111 Fixed/Movable Equipment				
112 Furnishings	2,340,000		$14.38	
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$32,039,370**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	162,700	SF	7.00	$1,138,900
Elevator pits	3	EA	5,000.00	$15,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,153,900
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Steel columns and bracing - 6#/SF	976,200	LB	1.50	$1,464,300
TOTAL - 021 VERTICAL STRUCTURE				$1,464,300
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	36,500	SF	5.00	$182,500
Structural steel upper floors - 6#/SF	757,200	LB	1.50	$1,135,800
Concrete filled metal deck	126,200	SF	6.00	$757,200
TOTAL - FLOOR CONSTRUCTION				$2,075,500
ELEMENT - SUPERSTRUCTURE				
032 ROOF CONSTRUCTION				
Structural steel - 6#/SF	280,500	LB	1.50	$420,750
Decking	46,750	SF	4.00	$187,000
TOTAL - 032 ROOF CONSTRUCTION				$607,750
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Lobby stairs	1	FLT	20,000.00	$20,000
Exit stairs	4	FLT	10,000.00	$40,000
TOTAL - 033 STAIR CONSTRUCTION				$60,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Framing, insulation, masonry veneer - 50%	29,250	SF	25.00	$731,250
Curtain wall - 50%	29,250	SF	65.00	$1,901,250
Soffit finish	1,140	SF	20.00	$22,800
TOTAL - EXTERIOR CLADDING				$2,655,300
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Entry doors				
Doubles	2	PR	4,000.00	$8,000
Singles	4	EA	2,000.00	$8,000
Garage exits				

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Doubles	4	PR	3,000.00	$12,000
Singles	4	EA	1,500.00	$6,000
TOTAL - 042 EXTERIOR DOORS/WINDOWS				$34,000
ELEMENT - ROOFING				
050 ROOFING				
Built up roofing, insulation, accessories, sheet metal	46,750	SF	8.00	$374,000
TOTAL -050 ROOFING				$374,000
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Offices, meeting areas	141,080	SF	20.00	$2,821,600
Remainder of building	21,620	SF	10.00	$216,200
TOTAL - 061 PARTITIONS				$3,037,800
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Offices, meeting areas - carpet	141,080	SF	3.00	$423,240
Access flooring, ALLOWANCE	1	LS	2,600,000.00	$2,600,000
Lobby, support and toilet areas - tile, upgraded flooring	18,160	SF	15.00	$272,400
Storage, mechanical areas - sealed concrete	3,460	SF	0.75	$2,595
Ceilings				
Offices, meeting areas - ACT	141,080	SF	3.00	$423,240
Lobby - upgraded ceiling finish	13,860	SF	12.00	$166,320
Support, toilets - painted GWB	4,300	SF	8.00	$34,400
Storage, mechanical areas - painted exposed structure	3,460	SF	1.00	$3,460
Walls				
Offices, meeting areas	141,080	SF	2.50	$352,700
Remainder of building	21,620	SF	1.25	$27,025
TOTAL -062 INTERIOR FINISHES				$4,305,380
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Toilet partitions and accessories	4	FLR	12,000.00	$48,000
Moveable partitions	450	LF	500.00	$225,000
Decorative railing	90	LF	250.00	$22,500
Lobby display case	50	LF	400.00	$20,000
Break room cabinetry	100	LF	300.00	$30,000
Signage, misc. specialties	162,700	SF	0.50	$81,350
TOTAL - 063 SPECIALTIES				$426,850
ELEMENT - INTERIOR CONSTRUCTION				
064 INTERIOR DOORS/WINDOWS				
Interior storefront	1,140	LF	300.00	$342,000

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Offices, meeting areas	141,080	SF	3.00	$423,240
Support, toilet doors	13	EA	1,200.00	$15,600
Stairway doors	6	EA	1,200.00	$7,200
Storage, mechanical doors	10	EA	1,500.00	$15,000
TOTAL - 064 INTERIOR DOORS/WINDOWS				$803,040
ELEMENT - CONVEYING				
070 ELEVATORS				
Four stop hydraulic elevators	3	EA	85,000.00	$255,000
TOTAL - 070 ELEVATORS				$255,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing rough and finish	162,700	SF	8.00	$1,301,600
TOTAL 081 PLUMBING				$1,301,600
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Heating and cooling	162,700	SF	30.00	$4,881,000
TOTAL - 082 H.V.A.C.				$4,881,000
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	162,700	SF	3.50	$569,450
TOTAL - 083 FIRE PROTECTION				$569,450
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security, communications	162,700	SF	35.00	$5,694,500
TOTAL - 091 STANDARD ELECTRICAL				$5,694,500
ELEMENT - EQUIPMENT				
112 FURNISHINGS				
Open office partitions, ALLOWANCE	1	LS	2,340,000.00	$2,340,000
TOTAL - 112 FURNISHINGS				$2,340,000

CONCEPT B ALTERNATE GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,454,550	$7.07
2. VERTICAL STRUCTURE		$1,850,850	$9.00
3. FLOOR AND ROOF STRUCTURES		$3,407,500	$16.57
4. EXTERIOR CLADDING		$3,436,300	$16.71
5. ROOFING		$374,000	$1.82
6. INTERIOR CONSTRUCTION		$10,931,173	$53.15
7. CONVEYING		$375,000	$1.82
8. MECHANICAL		$8,691,975	$42.27
9. ELECTRICAL		$7,197,750	$35.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT		$3,060,000	$14.88
12. SITEWORK			
NET DIRECT BUILDING COST		$40,779,098	$198.29
GENERAL CONDITIONS, OH&P,	15.0%	$6,116,865	$29.74
SUBTOTAL		$46,895,963	$228.04
CONTINGENCY,	15.0%	$7,034,394	$34.21
SUBTOTAL		$53,930,357	$262.24
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$5,393,036	$26.22
TOTAL BUILDING COST		**$59,323,393**	

GROSS FLOOR AREA: 205,650 SF

COST PER SQUARE FOOT: $288.47

CONCEPT B ALTERNATE DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,454,550		$7.07
011 Standard Foundations	1,454,550		$7.07	
012 Special Foundations				
2. VERTICAL STRUCTURE		$1,850,850		$9.00
021 Vertical Structure	1,850,850		$9.00	
3. SUPERSTRUCTURE		$3,407,500		$16.57
031 Floor Construction	2,719,750		$13.23	
032 Roof Construction	607,750		$2.96	
033 Stair Construction	80,000		$0.39	
4. EXTERIOR CLOSURE		$3,436,300		$16.71
041 Exterior Cladding	3,397,800		$16.52	
042 Exterior Doors/Windows	38,500		$0.19	
5. ROOFING		$374,000		$1.82
050 Roofing	374,000		$1.82	
6. INTERIOR CONSTRUCTION		$10,931,173		$53.15
061 Partitions	3,863,700		$18.79	
062 Interior Finishes	5,517,688		$26.83	
063 Specialties	537,825		$2.62	
064 Interior Doors/Windows	1,011,960		$4.92	
7. CONVEYING		$375,000		$1.82
070 Elevators	375,000		$1.82	
8. MECHANICAL		$8,691,975		$42.27
081 Plumbing	1,645,200		$8.00	
082 H.V.A.C.	6,169,500		$30.00	
083 Fire Protection	877,275		$4.27	
084 Special Mechanical				
9. ELECTRICAL		$7,197,750		$35.00
091 Standard Electrical	7,197,750		$35.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT		$3,060,000		$14.88
111 Fixed/Movable Equipment				
112 Furnishings	3,060,000		$14.88	
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$40,779,098**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	205,650	SF	7.00	$1,439,550
Elevator pits	3	EA	5,000.00	$15,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,454,550
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Steel columns and bracing - 6#/SF	1,233,900	LB	1.50	$1,850,850
TOTAL - 021 VERTICAL STRUCTURE				$1,850,850
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	36,500	SF	5.00	$182,500
Structural steel upper floors - 6#/SF	1,014,900	LB	1.50	$1,522,350
Concrete filled metal deck	169,150	SF	6.00	$1,014,900
TOTAL - FLOOR CONSTRUCTION				$2,719,750
ELEMENT - SUPERSTRUCTURE				
032 ROOF CONSTRUCTION				
Structural steel - 6#/SF	280,500	LB	1.50	$420,750
Decking	46,750	SF	4.00	$187,000
TOTAL - 032 ROOF CONSTRUCTION				$607,750
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Lobby stairs	1	FLT	20,000.00	$20,000
Exit stairs	6	FLT	10,000.00	$60,000
TOTAL - 033 STAIR CONSTRUCTION				$80,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Framing, insulation, masonry veneer - 50%	37,500	SF	25.00	$937,500
Curtain wall - 50%	37,500	SF	65.00	$2,437,500
Soffit finish	1,140	SF	20.00	$22,800
TOTAL - EXTERIOR CLADDING				$3,397,800
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Entry doors				
Doubles	2	PR	4,000.00	$8,000
Singles	4	EA	2,000.00	$8,000
Garage exits				

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Doubles	5	PR	3,000.00	$15,000
Singles	5	EA	1,500.00	$7,500
TOTAL - 042 EXTERIOR DOORS/WINDOWS				$38,500
ELEMENT - ROOFING				
050 ROOFING				
Built up roofing, insulation, accessories, sheet metal	46,750	SF	8.00	$374,000
TOTAL -050 ROOFING				$374,000
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Offices, meeting areas	180,720	SF	20.00	$3,614,400
Remainder of building	24,930	SF	10.00	$249,300
TOTAL - 061 PARTITIONS				$3,863,700
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Offices, meeting areas - carpet	180,720	SF	3.00	$542,160
Access flooring, ALLOWANCE	1	LS	3,400,000.00	$3,400,000
Lobby, support and toilet areas - tile, upgraded flooring	20,910	SF	15.00	$313,650
Storage, mechanical areas - sealed concrete	4,020	SF	0.75	$3,015
Ceilings				
Offices, meeting areas - ACT	180,720	SF	3.00	$542,160
Lobby - upgraded ceiling finish	15,610	SF	12.00	$187,320
Support, toilets - painted GWB	5,300	SF	8.00	$42,400
Storage, mechanical areas - painted exposed structure	4,020	SF	1.00	$4,020
Walls				
Offices, meeting areas	180,720	SF	2.50	$451,800
Remainder of building	24,930	SF	1.25	$31,163
TOTAL -062 INTERIOR FINISHES				$5,517,688
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Toilet partitions and accessories	5	FLR	12,000.00	$60,000
Moveable partitions	590	LF	500.00	$295,000
Decorative railing	90	LF	250.00	$22,500
Lobby display case	50	LF	400.00	$20,000
Break room cabinetry	125	LF	300.00	$37,500
Signage, misc. specialties	205,650	SF	0.50	$102,825
TOTAL - 063 SPECIALTIES				$537,825
ELEMENT - INTERIOR CONSTRUCTION				
064 INTERIOR DOORS/WINDOWS				
Interior storefront	1,410	LF	300.00	$423,000

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Offices, meeting areas	180,720	SF	3.00	$542,160
Support, toilet doors	16	EA	1,200.00	$19,200
Stairway doors	8	EA	1,200.00	$9,600
Storage, mechanical doors	12	EA	1,500.00	$18,000
TOTAL - 064 INTERIOR DOORS/WINDOWS				$1,011,960
ELEMENT - CONVEYING				
070 ELEVATORS				
Five stop traction elevators	3	EA	125,000.00	$375,000
TOTAL - 070 ELEVATORS				$375,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing rough and finish	205,650	SF	8.00	$1,645,200
TOTAL 081 PLUMBING				$1,645,200
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Heating and cooling	205,650	SF	30.00	$6,169,500
TOTAL - 082 H.V.A.C.				$6,169,500
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	250,650	SF	3.50	$877,275
TOTAL - 083 FIRE PROTECTION				$877,275
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security, communications	205,650	SF	35.00	$7,197,750
TOTAL - 091 STANDARD ELECTRICAL				$7,197,750
ELEMENT - EQUIPMENT				
112 FURNISHINGS				
Open office partitions, ALLOWANCE	1	LS	3,060,000.00	$3,060,000
TOTAL - 112 FURNISHINGS				$3,060,000

CONCEPT B ALTERNATE 2 GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,454,550	$7.07
2. VERTICAL STRUCTURE		$1,850,850	$9.00
3. FLOOR AND ROOF STRUCTURES		$3,407,500	$16.57
4. EXTERIOR CLADDING		$3,436,300	$16.71
5. ROOFING		$374,000	$1.82
6. INTERIOR CONSTRUCTION		$8,724,013	$42.42
7. CONVEYING		$375,000	$1.82
8. MECHANICAL		$7,523,655	$36.58
9. ELECTRICAL		$6,603,150	$32.11
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT		$2,340,000	$11.38
12. SITEWORK			
NET DIRECT BUILDING COST		$36,089,018	$175.49
GENERAL CONDITIONS, OH&P,	15.0%	$5,413,353	$26.32
SUBTOTAL		$41,502,371	$201.81
CONTINGENCY,	15.0%	$6,225,356	$30.27
SUBTOTAL		$47,727,726	$232.08
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$4,772,773	$23.21
TOTAL BUILDING COST		**$52,500,499**	

GROSS FLOOR AREA: 205,650 SF

COST PER SQUARE FOOT: $255.29

CONCEPT B ALTERNATE 2 DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,454,550		$7.07
011 Standard Foundations	1,454,550		$7.07	
012 Special Foundations				
2. VERTICAL STRUCTURE		$1,850,850		$9.00
021 Vertical Structure	1,850,850		$9.00	
3. SUPERSTRUCTURE		$3,407,500		$16.57
031 Floor Construction	2,719,750		$13.23	
032 Roof Construction	607,750		$2.96	
033 Stair Construction	80,000		$0.39	
4. EXTERIOR CLOSURE		$3,436,300		$16.71
041 Exterior Cladding	3,397,800		$16.52	
042 Exterior Doors/Windows	38,500		$0.19	
5. ROOFING		$374,000		$1.82
050 Roofing	374,000		$1.82	
6. INTERIOR CONSTRUCTION		$8,724,013		$42.42
061 Partitions	3,070,900		$14.93	
062 Interior Finishes	4,380,748		$21.30	
063 Specialties	460,325		$2.24	
064 Interior Doors/Windows	812,040		$3.95	
7. CONVEYING		$375,000		$1.82
070 Elevators	375,000		$1.82	
8. MECHANICAL		$7,523,655		$36.58
081 Plumbing	1,407,360		$6.84	
082 H.V.A.C.	5,455,980		$26.53	
083 Fire Protection	660,315		$3.21	
084 Special Mechanical				
9. ELECTRICAL		$6,603,150		$32.11
091 Standard Electrical	6,603,150		$32.11	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT		$2,340,000		$11.38
111 Fixed/Movable Equipment				
112 Furnishings	2,340,000		$11.38	
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$36,089,018**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	205,650	SF	7.00	$1,439,550
Elevator pits	3	EA	5,000.00	$15,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,454,550
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Steel columns and bracing - 6#/SF	1,233,900	LB	1.50	$1,850,850
TOTAL - 021 VERTICAL STRUCTURE				$1,850,850
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	36,500	SF	5.00	$182,500
Structural steel upper floors - 6#/SF	1,014,900	LB	1.50	$1,522,350
Concrete filled metal deck	169,150	SF	6.00	$1,014,900
TOTAL - FLOOR CONSTRUCTION				$2,719,750
ELEMENT - SUPERSTRUCTURE				
032 ROOF CONSTRUCTION				
Structural steel - 6#/SF	280,500	LB	1.50	$420,750
Decking	46,750	SF	4.00	$187,000
TOTAL - 032 ROOF CONSTRUCTION				$607,750
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Lobby stairs	1	FLT	20,000.00	$20,000
Exit stairs	6	FLT	10,000.00	$60,000
TOTAL - 033 STAIR CONSTRUCTION				$80,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Framing, insulation, masonry veneer - 50%	37,500	SF	25.00	$937,500
Curtain wall - 50%	37,500	SF	65.00	$2,437,500
Soffit finish	1,140	SF	20.00	$22,800
TOTAL - EXTERIOR CLADDING				$3,397,800
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Entry doors				
Doubles	2	PR	4,000.00	$8,000
Singles	4	EA	2,000.00	$8,000
Garage exits				

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Doubles	5	PR	3,000.00	$15,000
Singles	5	EA	1,500.00	$7,500
TOTAL - 042 EXTERIOR DOORS/WINDOWS				$38,500
ELEMENT - ROOFING				
050 ROOFING				
Built up roofing, insulation, accessories, sheet metal	46,750	SF	8.00	$374,000
TOTAL -050 ROOFING				$374,000
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Offices, meeting areas	141,080	SF	20.00	$2,821,600
Remainder of building	24,930	SF	10.00	$249,300
TOTAL - 061 PARTITIONS				$3,070,900
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Offices, meeting areas - carpet	141,080	SF	3.00	$423,240
Access flooring, ALLOWANCE	1	LS	2,600,000.00	$2,600,000
Lobby, support and toilet areas - tile, upgraded flooring	20,910	SF	15.00	$313,650
Storage, mechanical areas - sealed concrete	4,020	SF	0.75	$3,015
Ceilings				
Offices, meeting areas - ACT	141,080	SF	3.00	$423,240
Lobby - upgraded ceiling finish	15,610	SF	12.00	$187,320
Support, toilets - painted GWB	5,300	SF	8.00	$42,400
Storage, mechanical areas - painted exposed structure	4,020	SF	1.00	$4,020
Walls				
Offices, meeting areas	141,080	SF	2.50	$352,700
Remainder of building	24,930	SF	1.25	$31,163
TOTAL -062 INTERIOR FINISHES				$4,380,748
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Toilet partitions and accessories	5	FLR	12,000.00	$60,000
Moveable partitions	450	LF	500.00	$225,000
Decorative railing	90	LF	250.00	$22,500
Lobby display case	50	LF	400.00	$20,000
Break room cabinetry	100	LF	300.00	$30,000
Signage, misc. specialties	205,650	SF	0.50	$102,825
TOTAL - 063 SPECIALTIES				$460,325
ELEMENT - INTERIOR CONSTRUCTION				
064 INTERIOR DOORS/WINDOWS				
Interior storefront	1,140	LF	300.00	$342,000

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
Offices, meeting areas	141,080	SF	3.00	$423,240
Support, toilet doors	16	EA	1,200.00	$19,200
Stairway doors	8	EA	1,200.00	$9,600
Storage, mechanical doors	12	EA	1,500.00	$18,000
TOTAL - 064 INTERIOR DOORS/WINDOWS				$812,040
ELEMENT - CONVEYING				
070 ELEVATORS				
Five stop traction elevators	3	EA	125,000.00	$375,000
TOTAL - 070 ELEVATORS				$375,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing rough and finish	166,010	SF	8.00	$1,328,080
Fifth floor office rough	39,640	SF	2.00	$79,280
TOTAL 081 PLUMBING				$1,407,360
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Heating and cooling	166,010	SF	30.00	$4,980,300
Fifth floor offices equipment only	39,640	SF	12.00	$475,680
TOTAL - 082 H.V.A.C.				$5,455,980
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	166,010	SF	3.50	$581,035
Fifth floor offices temporary sprinklers	39,640	SF	2.00	$79,280
TOTAL - 083 FIRE PROTECTION				$660,315
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security, communications	166,010	SF	35.00	$5,810,350
Fifth floor offices equipment only	39,640	SF	20.00	$792,800
TOTAL - 091 STANDARD ELECTRICAL				$6,603,150
ELEMENT - EQUIPMENT				
112 FURNISHINGS				
Open office partitions, ALLOWANCE	1	LS	2,340,000.00	$2,340,000
TOTAL - 112 FURNISHINGS				$2,340,000

B BASE PARKING STRUCTURE GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,125,900	$7.21
2. VERTICAL STRUCTURE		$521,000	$3.34
3. FLOOR AND ROOF STRUCTURES		$2,673,600	$17.12
4. EXTERIOR CLADDING		$562,500	$3.60
5. ROOFING		$604,200	$3.87
6. INTERIOR CONSTRUCTION		$357,588	$2.29
7. CONVEYING		$170,000	$1.09
8. MECHANICAL		$1,015,300	$6.50
9. ELECTRICAL		$937,200	$6.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT			
12. SITEWORK			
NET DIRECT BUILDING COST		$7,967,288	$51.01
GENERAL CONDITIONS, OH&P,	15.0%	$1,195,093	$7.65
SUBTOTAL		$9,162,381	$58.66
CONTINGENCY,	15.0%	$1,374,357	$8.80
SUBTOTAL		$10,536,738	$67.46
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$1,053,674	$6.75
TOTAL BUILDING COST		**$11,590,412**	

GROSS FLOOR AREA:	156,200 SF
COST PER SQUARE FOOT:	$74.20
COST PER LEVEL	$2,897,603

B BASE PARKING STRUCTURE DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,125,900		$7.21
011 Standard Foundations	1,125,900		$7.21	
012 Special Foundations				
2. VERTICAL STRUCTURE		$521,000		$3.34
021 Vertical Structure	521,000		$3.34	
3. SUPERSTRUCTURE		$2,673,600		$17.12
031 Floor Construction	2,593,600		$16.60	
032 Roof Construction				
033 Stair Construction	80,000		$0.51	
4. EXTERIOR CLOSURE		$562,500		$3.60
041 Exterior Cladding	562,500		$3.60	
042 Exterior Doors/Windows				
5. ROOFING		$604,200		$3.87
050 Roofing	604,200		$3.87	
6. INTERIOR CONSTRUCTION		$357,588		$2.29
061 Partitions	22,320		$0.14	
062 Interior Finishes	175,168		$1.12	
063 Specialties	160,100		$1.02	
064 Interior Doors/Windows				
7. CONVEYING		$170,000		$1.09
070 Elevators	170,000		$1.09	
8. MECHANICAL		$1,015,300		$6.50
081 Plumbing	312,400		$2.00	
082 H.V.A.C.	312,400		$2.00	
083 Fire Protection	390,500		$2.50	
084 Special Mechanical				
9. ELECTRICAL		$937,200		$6.00
091 Standard Electrical	937,200		$6.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT				
111 Fixed/Movable Equipment				
112 Furnishings				
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$7,967,288**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	156,200	SF	7.00	$1,093,400
Loading dock wall	150	LF	150.00	$22,500
Elevator pits	2	EA	5,000.00	$10,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,125,900
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Concrete columns	1,814	LF	250.00	$453,500
Shear walls	2,700	SF	25.00	$67,500
TOTAL - 021 VERTICAL STRUCTURE				$521,000
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	35,360	SF	5.00	$176,800
Raised decks	120,840	SF	20.00	$2,416,800
TOTAL - FLOOR CONSTRUCTION				$2,593,600
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Exit stairs	200	RISER	400.00	$80,000
TOTAL - 033 STAIR CONSTRUCTION				$80,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Decorative precast panels or match building - 70%	22,500	SF	25.00	$562,500
TOTAL - EXTERIOR CLADDING				$562,500
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Garage doors, NIC				
TOTAL - 042 EXTERIOR DOORS/WINDOWS				
ELEMENT - ROOFING				
050 ROOFING				
Waterproofing of raised decks	120,840	SF	5.00	$604,200
TOTAL -050 ROOFING				$604,200
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Elevator shaft walls	2,790	SF	8.00	$22,320
TOTAL - 061 PARTITIONS				$22,320

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Seal concrete ground floor	35,360	SF	1.00	$35,360
Ceilings				
Paint underside of raised decks	120,840	SF	1.00	$120,840
Walls				
Paint inside of exterior walls and elevator shaft wall	25,290	SF	0.75	$18,968
TOTAL -062 INTERIOR FINISHES				$175,168
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Signage, striping	156,200	SF	0.50	$78,100
Dock equipment	1	LS	5,000.00	$5,000
Parking control equipment	1	LS	5,000.00	$5,000
Ramp cable barrier	1,800	LF	40.00	$72,000
TOTAL - 063 SPECIALTIES				$160,100
ELEMENT - CONVEYING				
070 ELEVATORS				
Four stop hydraulic elevators				
Passenger	1	EA	80,000.00	$80,000
Freight	1	EA	90,000.00	$90,000
TOTAL - 070 ELEVATORS				$170,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing, drainage and hose bibs	156,200	SF	2.00	$312,400
TOTAL 081 PLUMBING				$312,400
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Ventilation	156,200	SF	2.00	$312,400
TOTAL - 082 H.V.A.C.				$312,400
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	156,200	SF	2.50	$390,500
TOTAL - 083 FIRE PROTECTION				$390,500
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security	156,200	SF	6.00	$937,200
TOTAL - 091 STANDARD ELECTRICAL				$937,200

B ALTERNATE PARKING STRUCTURE GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
1. FOUNDATIONS		$1,399,278	$7.17
2. VERTICAL STRUCTURE		$624,375	$3.20
3. FLOOR AND ROOF STRUCTURES		$3,474,680	$17.80
4. EXTERIOR CLADDING		$703,125	$3.60
5. ROOFING		$799,470	$4.09
6. INTERIOR CONSTRUCTION		$444,512	$2.28
7. CONVEYING		$240,000	$1.23
8. MECHANICAL		$1,269,151	$6.50
9. ELECTRICAL		$1,171,524	$6.00
10. GENERAL CONDITIONS & PROFIT			
11. EQUIPMENT			
12. SITEWORK			
NET DIRECT BUILDING COST		$10,126,115	$51.86
GENERAL CONDITIONS, OH&P,	15.0%	$1,518,917	$7.78
SUBTOTAL		$11,645,032	$59.64
CONTINGENCY,	15.0%	$1,746,755	$8.95
SUBTOTAL		$13,391,787	$68.59
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$1,339,179	$6.86
TOTAL BUILDING COST		**$14,730,966**	

GROSS FLOOR AREA:	195,254 SF
COST PER SQUARE FOOT:	$75.45
COST PER LEVEL	$2,946,193

B ALTERNATE PARKING STRUCTURE DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
1. FOUNDATIONS		$1,399,278		$7.17
011 Standard Foundations	1,399,278		$7.17	
012 Special Foundations				
2. VERTICAL STRUCTURE		$624,375		$3.20
021 Vertical Structure	624,375		$3.20	
3. SUPERSTRUCTURE		$3,474,680		$17.80
031 Floor Construction	3,374,680		$17.28	
032 Roof Construction				
033 Stair Construction	100,000		$0.51	
4. EXTERIOR CLOSURE		$703,125		$3.60
041 Exterior Cladding	703,125		$3.60	
042 Exterior Doors/Windows				
5. ROOFING		$799,470		$4.09
050 Roofing	799,470		$4.09	
6. INTERIOR CONSTRUCTION		$444,512		$2.28
061 Partitions	27,920		$0.14	
062 Interior Finishes	218,965		$1.12	
063 Specialties	197,627		$1.01	
064 Interior Doors/Windows				
7. CONVEYING		$240,000		$1.23
070 Elevators	240,000		$1.23	
8. MECHANICAL		$1,269,151		$6.50
081 Plumbing	390,508		$2.00	
082 H.V.A.C.	390,508		$2.00	
083 Fire Protection	488,135		$2.50	
084 Special Mechanical				
9. ELECTRICAL		$1,171,524		$6.00
091 Standard Electrical	1,171,524		$6.00	
092 Special Electrical				
10. GENERAL CONDITIONS & PROFIT				
General Conditions & Profit		(INCLUDED AT GENERAL SUMMARY PAGE)		
11. EQUIPMENT				
111 Fixed/Movable Equipment				
112 Furnishings				
113 Special Construction				
12. SITEWORK				
121 Site Preparation				
122 Site Improvements				
123 Site Utilities				
124 Off-Site Work				

NET DIRECT BUILDING COST	**$10,126,115**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - FOUNDATIONS				
011 STANDARD FOUNDATIONS				
Spread footings, grade beams	195,254	SF	7.00	$1,366,778
Loading dock wall	150	LF	150.00	$22,500
Elevator pits	2	EA	5,000.00	$10,000
TOTAL - 011 STANDARD FOUNDATIONS				$1,399,278
ELEMENT - VERTICAL STRUCTURE				
021 VERTICAL STRUCTURE				
Concrete columns	2,160	LF	250.00	$540,000
Shear walls	3,375	SF	25.00	$84,375
TOTAL - 021 VERTICAL STRUCTURE				$624,375
ELEMENT - SUPERSTRUCTURE				
031 FLOOR CONSTRUCTION				
Slab on grade, vapor barrier	35,360	SF	5.00	$176,800
Raised decks	159,894	SF	20.00	$3,197,880
TOTAL - FLOOR CONSTRUCTION				$3,374,680
ELEMENT - SUPERSTRUCTURE				
033 STAIR CONSTRUCTION				
Exit stairs	250	RISER	400.00	$100,000
TOTAL - 033 STAIR CONSTRUCTION				$100,000
ELEMENT - EXTERIOR CLOSURE				
041 EXTERIOR CLADDING				
Decorative precast panels or match building - 70%	28,125	SF	25.00	$703,125
TOTAL - EXTERIOR CLADDING				$703,125
ELEMENT - EXTERIOR CLOSURE				
042 EXTERIOR DOORS/WINDOWS				
Garage doors, NIC				
TOTAL - 042 EXTERIOR DOORS/WINDOWS				
ELEMENT - ROOFING				
050 ROOFING				
Waterproofing of raised decks	159,894	SF	5.00	$799,470
TOTAL -050 ROOFING				$799,470
ELEMENT - INTERIOR CONSTRUCTION				
061 PARTITIONS				
Elevator shaft walls	3,490	SF	8.00	$27,920
TOTAL - 061 PARTITIONS				$27,920

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	ESTIMATED COST
ELEMENT - INTERIOR CONSTRUCTION				
062 INTERIOR FINISHES				
Flooring				
Seal concrete ground floor	35,360	SF	1.00	$35,360
Ceilings				
Paint underside of raised decks	159,894	SF	1.00	$159,894
Walls				
Paint inside of exterior walls and elevator shaft wall	31,615	SF	0.75	$23,711
TOTAL -062 INTERIOR FINISHES				$218,965
ELEMENT - INTERIOR CONSTRUCTION				
063 SPECIALTIES				
Signage, striping	195,254	SF	0.50	$97,627
Dock equipment	1	LS	5,000.00	$5,000
Parking control equipment	1	LS	5,000.00	$5,000
Ramp cable barrier	2,250	LF	40.00	$90,000
TOTAL - 063 SPECIALTIES				$197,627
ELEMENT - CONVEYING				
070 ELEVATORS				
Five stop traction elevators				
Passenger	1	EA	110,000.00	$110,000
Freight	1	EA	130,000.00	$130,000
TOTAL - 070 ELEVATORS				$240,000
ELEMENT - MECHANICAL				
081 PLUMBING				
Plumbing, drainage and hose bibs	195,254	SF	2.00	$390,508
TOTAL 081 PLUMBING				$390,508
ELEMENT - MECHANICAL				
082 H.V.A.C.				
Ventilation	195,254	SF	2.00	$390,508
TOTAL - 082 H.V.A.C.				$390,508
ELEMENT - MECHANICAL				
083 FIRE PROTECTION				
Fire sprinklers	195,254	SF	2.50	$488,135
TOTAL - 083 FIRE PROTECTION				$488,135
ELEMENT - ELECTRICAL				
091 STANDARD ELECTRICAL				
Lighting, power, security	195,254	SF	6.00	$1,171,524
TOTAL - 091 STANDARD ELECTRICAL				$1,171,524

SITE WORK GENERAL SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
12. SITEWORK		$755,700	$7.71
NET DIRECT SITE WORK COST		$755,700	$7.71
GENERAL CONDITIONS, OH&P,	15.0%	$113,355	$1.16
SUBTOTAL		$869,055	$8.87
CONTINGENCY,	15.0%	$130,358	$1.33
SUBTOTAL		$999,413	$10.20
ESCALATION TO MIDPOINT OF CONSTRUCTION, 10/10,	10.0%	$99,941	$1.02
TOTAL SITE WORK COST		**$1,099,355**	

GROSS SITE AREA: 98,000 SF

COST PER SQUARE FOOT: $11.22

SITE WORK DETAIL SUMMARY

ELEMENT	AMOUNT	TOTAL COST	RATE/FLOOR	$/SF AREA
12. SITEWORK		$755,700		$7.71
121 Site Preparation	411,600		$4.20	
122 Site Improvements	203,100		$2.07	
123 Site Utilities	141,000		$1.44	
124 Off-Site Work		NO OFFSITE WORK		

NET DIRECT COST	**$755,700**

WYOMING NEW STATE OFFICE BUILDING				SITE
CHEYENNE, WYOMING				CAPSTONE JOB #:08CCA03
CONCEPTUAL COST ESTIMATE				DATE: 20 NOVEMBER 2008
DESCRIPTION	**QUANTITY**	**UNIT**	**UNIT RATE**	**ESTIMATED COST**
ELEMENT - SITEWORK				
121 SITE PREPARATION				
Demolition				
Existing building	30,000	SF	6.00	$180,000
Paving, landscape	68,000	SF	1.00	$68,000
Grading				
Overexcavation and recompaction - 5'	18,000	CY	8.00	$144,000
Rough and fine grading	98,000	SF	0.20	$19,600
TOTAL - 121 SITE PREPARATION				$411,600
ELEMENT - SITEWORK				
122 SITE IMPROVEMENTS				
Perimeter sidewalk	7,200	SF	5.00	$36,000
Entry paving	1,300	SF	6.00	$7,800
Enhanced paving	1,500	SF	10.00	$15,000
Garage entry aprons	2,300	SF	8.00	$18,400
Landscape and irrigation	15,000	SF	4.00	$60,000
Trees	46	EA	400.00	$18,400
Monuments	2	EA	15,000.00	$30,000
Retaining wall	40	LF	200.00	$8,000
Sign	1	LS	5,000.00	$5,000
Benches	9	EA	500.00	$4,500
TOTAL - 122 SITE IMPROVEMENTS				$203,100
ELEMENT - SITEWORK				
123 SITE UTILITIES				
Storm drainage				
Connect to existing	2	LS	2,000.00	$4,000
Perimeter drainage	800	LF	15.00	$12,000
Sanitary sewer				
Connect to existing	1	LS	2,000.00	$2,000
Underground piping	50	LF	50.00	$2,500
Water				
Connect to existing	1	LS	3,000.00	$3,000
Detector check assembly	1	LS	15,000.00	$15,000
Underground piping	50	LF	50.00	$2,500
Gas - by utility company				
Electrical and communications	1	LS	100,000.00	$100,000
TOTAL -123 SITE UTILITIES				$141,000

COOVER-CLARK & ASSOCIATES, INC.
ARCHITECTURE ◢ PLANNING ◢ LANDSCAPES ◢ INTERIORS

AGENDA
KICK-OFF MEETING
STATE OFFICE BUILDING DESIGN PROJECT
STATE OF WYOMING
DEPARTMENT OF ADMINISTRATION AND INFORMATION

Multi-Purpose Room, Barrett Building
July 31, 2008
9:00 a.m.

1. WELCOME/INTRODUCTIONS

2. TODAY'S AGENDA/MEETING OBJECTIVES

3. TENTATIVE SCHEDULE

   - Kick-off: July 31, 2008
   - Site Workshop: August 14, 2008
   - Building Workshop: September 18, 2008
   - Final Workshop: October 14, 2008
   - Draft Report: November 11, 2008
   - Final Report: November 27, 2008

4. PROJECT DISCUSSION ISSUES

   - Confirm Project Site
   - Initial Occupants of Building/Subsequent Occupants of the Building
   - Parking Garage Size/Users: Legislators. Staff, Employees, Public, other?
   - Connectivity with Other Uses at Capitol
   - Expectations Regarding Monuments, Statues, Displays
   - Sustainability
   - Security/Communications
   - Ancillary Functions (Non-office uses)
   - Future Phases on this Site
   - Preliminary Traffic Study
   - Other?

5. IDENTIFICATION OF STAKEHOLDERS

6. PROJECT GOALS

7. Information/Data Needs

1936 Market Street ◢ Denver, CO 80202 ◢ Phone: 303.783.0040 ◢ Fax: 303.783.0060

Meeting Minutes

Coover-Clark & Associates, Inc.
1936 Market Street, Denver, CO 80202
303.783.0040 (p) 303.783.0060 (f)
www.coover-clark.com

Date: July 31, 2008

Project: State of Wyoming, New State Office Building

Time: 9:00 am – 11:00 am; 1:00 pm – 3:00 pm

Attendees: Barrett Building, 2301 Central Avenue: Suzanne Norton, Brad Emmons, Scott Conley, Robert Stanley, Jim McBride, Rita Watson, Barb Warburton, Debbie Jourgensen, Joyce Hefenieder, Jack Walker, Tamra Wales, Ed Mcauley, Carolyn A. Teter, James S. Uzzell, Sharon Garland, Lanny Applegate, Philip Oakes, Kelly Ruiz, Jim Anderson, Anthony Sara, Wendy Madsen, Donnis Grenier, Joe Simpson

Coover – Clark & Associates Design Team: Carol Coover – Clark, Dave Clark, Bruce Yoder, David Forbes, Mari Suarez, Brian Clark

Reference: Team Kick-Off Meeting

Meeting Minutes:

No.	Item:	Action:
1)	**Tentative Schedule:** • Kick-Off: July 31, 2008 • Site Workshop: August 14, 2008 • Building Workshop: September 18, 2008 • Final Workshop: October 14, 2008 • Draft Report: November 11, 2008 • Final Report: November 27, 2008	
2)	**Project Discussion Issues** • **Confirm Project Site** - September 15th, additional land will be verified. • **Initial Occupants of Building / Subsequent Occupants of Building** - Are all current occupants of the Capitol to move in to the New State Office Building on interim basis, except	Suzanne to supply project site confirmation in mid September.

	Chambers?	
	- Department of Education, currently in Hathaway 2nd floor, to permanently relocate to the New State Office Building – prefer 1st and 2nd floors.	Contact Rita for Department of Education office visit.
	- Break Ground early 2010, fall occupancy in 2012	
	- Auditor and State Treasury Office to permanently move to New State Office Building?	
	- Legislative Session to be held where else?	
	- Senator Anderson – Session to be held where staff is located.	
	- Legislative Session requires committee meeting rooms for small and larger bodies. Adequate, comfortable.	
	- Suzanne – "Maximize the site." – 3 Floors at least, possibly 4	Suzanne to supply Environmental / Geotechnical information
	- Legislative and Executive Branch to be moved to NEW.	
	- Senator Anderson – focused on logistics and timing.	
	- Senator Anderson – Primary Goal – "Provide for the needs of the Government with the least amount of interference of that function."	
	- Effective Government – Transparency / Accommodation	
	• **Parking Garage Size / Users: Legislators, Staff, Employees, Public, Other?**	
	- Yes to all of the above.	
	- Adequate parking currently? No.	
	- Problem with public participating in committee meetings because of 1 – 2 hour parking restrictions.	
	- Senator Anderson – "Technology is an integral part of the future of the State Capitol complex."	Senator Anderson's Point of Contact: Wendy Madsen
	- Senator Anderson – "Government functions as a transparent entity, accommodating the public."	
	- ½ of Herschler garage for Legislators (30 Senate, 60 House)	
	- Minimal high-priority, reserved parking exists currently	
	- During Legislative Session, 40 lobbyists, 80 public visitors…	
	- Okay to segregate parking garage users and limit their hours of use.	
	• **Connectivity With Other Uses at Capitol**	
	- Connectivity depends on time of year.	
	- Security is a concern from the beginning, contingency planning	
	- Fire Marshall currently resides in Herschler Building – Mostly interacts with public.	
	• **Expectations Regarding Monuments, Statues, Displays**	
	- Wyoming Arts Council - 1% dedicated to art displays in building	
	- Arch Dioceses owns portion of land and right to display monument / plaque recognizing St. Mary's as first Catholic school in Wyoming.	
	• **Sustainability – Making Best Use of Natural Resources**	
	- Staff available to help assess building as EPA Energy Star Rated Building	Contact: 777-7198

	- Senator Anderson – Very important / as publically responsible • **Security / Communications** - Fire Marshall – Radio interference between inside and outside officers - Think of as an opportunity, not constraint - City Fire and Police are first responders - No cell phone service in basement of Herschler • **Ancillary Functions (Non-Office Uses)** - Auditorium, display, cafeteria, convenience store, coffee shop? - Independent kiosks have not survived, due to management issues. • **Future Phases on this Site** • **Preliminary Traffic Study** - Emergency ambulance egress along East 24th Street - Warren and Central are major parade routes - Freight deliveries to Central Mail Center at Capitol • **Hours of Operation?** Flextime • **Image** - Exterior must be consistent with Capitol – Parking garage to West is a good example - No steps - No round walls – concerned about cost - NOT like Hathaway or Herschler - "Your site is on a shoulder of the Capitol." - A certain formality should be present - Example: White House's Old Executive Building - Importance / Significant / Formality • **Project Goals**	Refer to Space Needs in the Wyoming State Capitol Phase I and II Reports Obtain Capitol and Herschler floor plans and elevations.
3)	• **Identify Stakeholders** - Department of Education - Legislative - Arts Council - Master Plan – Independent of future development - St. Mary's - Hospital – Invite to Work Session 1 - Public Works - Emergency Services - Tax Payers – Ultimate Stakeholder • **Master Planning Beyond This Project?**	

	AVI Team Meeting • Floor – to – Floor Height Parking Structure = 11' – 6" • 64' Height, 6 Floors, 600 Stalls • 17' – 6" clearance for bridge • No signal recommended at 25th and Warren • West Lincoln Avenue – Newspaper Offices – Example of Loading dock signage, off peak hours - must be approved by Department of Transportation • 10' – 15' ground water level • Geotechnical study before building placement? • Footing depth at St. Mary's, basement? • Parking structure to ramp up to South for snow melting • 25' building setback on site? • Site bus stop on site along Central • Base map to include area east to Evans • August 14th Site Workshop – Begin by presenting "Maximized Use of Site" Concept • 20% Green Space – 58,000 sf / floor = 80% coverage • Topographic Exhibit • Existing Conditions graphic • Climate Study • Opportunities and Constraints • Capitol Complex Base Map • Surrounding Land Use graphic	Refer to Sheridan, Wyoming for enclosed walkway example. Suzanne to supply Geotechnical study of site.

THESE MINUTES ARE SUBMITTED FOR THE PURPOSE OF SUMMARIZING IMPORTANT DETAILS OF THE MEETING NOTED ABOVE AND TO CONFIRM OUR UNDERSTANDING OF THE ITEMS DISCUSSED. PLEASE READ CAREFULLY AND NOTIFY US PROMPTLY WITHIN 5 DAYS OF RECEIPT REGARDING ANY CHANGES OR CORRECTIONS TO BE MADE, OTHERWISE THEY WILL BE FILED AS RECORD.

COOVER-CLARK & ASSOCIATES, INC.
ARCHITECTURE ◢ PLANNING ◢ LANDSCAPES ◢ INTERIORS

AGENDA
SITE PLANNING WORKSHOP
STATE OFFICE BUILDING DESIGN PROJECT
STATE OF WYOMING
DEPARTMENT OF ADMINISTRATION AND INFORMATION

Multi-Purpose Room, Barrett Building
August 14, 2008
9:00 a.m.

1. TODAY'S AGENDA/MEETING OBJECTIVES

2. TENTATIVE LEVEL I & II SCHEDULE

   - Kick-off: July 31, 2008
   - *Site Workshop:* *August 14, 2008*
   - Building Workshop: September 18, 2008
   - Final Workshop: October 14, 2008
   - Draft Report: November 11, 2008
   - Final Report: November 27, 2008

3. PROJECT SCHEDULE

4. DRAFT PROJECT GOALS

   - Provide a home for efficient government with minimal disruption to legislative and executive operations and to the public.
   - Project an image of prominence and significance.
   - Recognize the context of the capitol complex.
   - Respect the integrity of the historic Capitol Building.
   - Preserve the views of the Capitol Building when possible.
   - Design for sustainability.
   - Maximize the use of the available land.
   - Minimize the impact of cars and traffic on the capitol complex.
   - Formalize connections with other campus buildings.
   - Promote viable pedestrian connections to other parts of the campus.
   - Plan for growth and expansion.
   - Allow convenient public access and incorporate modern security techniques.
   - Plan for future technologies.
   - Communicate with future users during decision-making and design.
   - Adhere to schedule and budget.

5. CONSTRAINTS AND OPPORTUNITIES
   - Site Analysis (Topo/wind/sun/views/surrounding land use, etc.)
   - Utilities/Streets/Traffic
   - Security

1936 Market Street ◢ Denver, CO 80202 ◢ Phone: 303.783.0040 ◢ Fax: 303.783.0060

6. DRAFT PLANNING ASSUMPTIONS

- The Project Site will be limited to the block bounded by Central Avenue/Warren Avenue/East 24th Street/East 25th Street.
- The gross square footage of the office building will be approximately 100,000 square feet.
- The height of the office building will be limited to five stories.
- The capacity of the garage will be a minimum of 400 vehicles.
- The height of the garage will be dependent upon accommodating a minimum of 400 vehicles..
- Vehicular access to the garage will be limited to 24th and/or 25th Avenue.
- Sustainability will be evaluated using LEED criteria; however, certification may not be pursued.
- The State of Wyoming, Capitol Master Plan, Phases I and II will be used for programming individual department space requirements when applicable.
- The Department of Education, including current satellite offices, and the School Facilities Commission will be located in the New Office Building as an original occupant.
- Public art will be integrated with the design.

7. PRESENTATION OF CONCEPTS

8. EVALUATION OF CONCEPTS

Meeting Minutes

Coover-Clark & Associates, Inc.
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Date: 14 August 2008

Project: Wyoming State Office Building- 0810 **Time:** 9am- 12pm

Attendees: See attached list

Reference: Site Workshop

Meeting Minutes:

No.	Item:	Action:
1)	SCHEDULE: a. Capitol renovation is shown integrated into the Wyoming State Office Building schedule for timing coordination. b. It was noted that the days shown within the schedule are working days. c. Funding will not be available till March most years, may need to move the start date out. d. Bids/Start Construction may need to schedule after March so there is less interruption to the "session" of the House & Senate. e. A question was raised if the move in date back to the renovated Capitol could be scheduled to Dec. 2012.	*(c) Wendy is going to send CCA the schedule for the sessions for the next 5-10 years, to help aid in reducing scheduling conflicts.* *(d) CCA schedule will be adjusted for next meeting.*
2)	GOALS were presented as follows: a. Provide a home for efficient government with minimal disruption to legislative and executive operations and to the public. b. Project an image of prominence and significance. c. Recognize the context of the Capitol Complex. d. Respect the integrity of the historic Capitol building. e. Preserve the views of the Capitol Building when possible. f. Design for sustainability. g. Maximize the use of the available land. h. Minimize the impact of cars and traffic on the Capitol	*No exceptions taken*

	Complex. i. Formalize connections with other campus buildings. j. Promote viable pedestrian connections to other parts of the campus. k. Plan for growth and expansion. l. Allow convenient public access and incorporate modern security techniques. m. Plan for future technologies. n. Communicate with future users during decision-making and design. o. Adhere to schedule and budget.	
3)	SITE ANALYSIS: a. Sun, wind and views were presented for scheme consideration.	*No exceptions taken*
4)	UTILITIES: a. AVI made note that the existing 4" and 6" water lines on both Warren & 25th Street may need to be upgraded due to capacity demands and requirements of the new building. A question was raised if the cost of this upgrade would be the responsibility of the client or the city. AVI explained that typically the developer of the site is responsible for this cost. b. Existing Storm sewer appears to have adequate capacity. c. Central & Warren are WYDOT controlled; planned road improvements 2016-2018 indicate repaving and streetscape only. d. Communication fiber lines are located in 24th Street. e. Sanitary located in Warren, appear adequate. f. Utilities in Central could conflict with tunnel connection. g. Water size should be adequate, further evaluation needed after design is more understood on fire suppression requirements.	*No exceptions taken*
5)	TRAFFIC STUDY: a. It was mentioned that keeping the service dock entrance away from Central or Warren would be ideal, but that if the dock were to happen in either of these locations it would just mean that deliveries would need to be scheduled. b. There is the possibility of expansion of both Central and Warren through WYDOT 20 years from now. c. Roadways appear adequate for this project.	*No exceptions taken*
6)	ZONING: a. The block needs to be re-zoned for the development of the new building. The three options for re-zoning are: 1. Central Business District (CBD) - The total building and property coverage may equal one hundred (100) percent of the property area. - There are no setback required in this district. - Off-Street Parking is not required in this district. - Landscaping is encouraged for all properties. - Streetscape landscaping is desired. 2. Mixed Use (MUB)	*No exceptions taken*

	- The total building, parking, and outside storage areas shall not exceed eighty (80) percent of the time for nonresidential uses. - The building must be set back twenty-five (25) feet from all property lines adjacent to streets. - Off-Street Parking will be determined by use space according to ordinance. - Twenty percent of the area will need to be landscaped with internal and street trees. 3. Public Zoning (P) - The total building, parking, and outside storage areas shall not exceed fifty (50) percent of the total property area. - The minimum setbacks shall be twenty-five (25) feet from all properties along streets. - Off-Street Parking will be determined by use space according to ordinance. - Fifty percent of the area will need to be landscaped with internal and street trees. b. It is recommended to re-zone as a CBD – Total property coverage may equal 100% of property area, no setbacks are required, off-street parking is not required, landscaping encouraged. c. Alley would be omitted.	
7)	SCHEME #1 (Formal/Traditional) a. Pros: - Connects to underground tunnel - Enclosed garage connection - Corner offices / meeting areas maximized - Blocks harsh winds - Flow thru parking potential - Potential steam tunnel connection b. Cons: - Sustainable orientation - Smaller footprint, 5th level cost c. Simplicity of layout was noted d. Access/ Link to parking garage was preferred, although tunnel would be credentialed personnel only. e. The dock should not be a thru street.	*Preference was shown toward this scheme with embrace of SW corner.*
8)	SCHEME #2 (Sustainable) a. Pros: - Maximum green space - Maximum sustainability - Maximum building area - Views to and from Capitol Grounds - Provides for expansion - Outdoor dining opportunity - Below grade connection to tunnel - Potential steam tunnel connection - Protected dock below grade b. Cons:	*No exceptions taken*

	- Below grade garage cost - High water table c. It was noted that the entrance would be along the SW façade of the building in this scheme. d. Complexity, Water & Security were all concerns raised about the parking garage being located underground and underneath the building. e. The response to the views and landscape's diagonal siteing, was positive. f. It was suggested that the building get pushed toward the South as a means to allow above ground parking. g. Parking garage most flexible h. Possible Café area	
9)	SCHEME #3 (Combination) a. Pros: - Sustainable orientation - View to and from Capitol Grounds - Maximum buildable area - Provides expansion - Connects overhead to Capitol - Outdoor dining opportunity - Blocks harsh winds b. Cons: - Upper level parking cost - Minimal landscape - Connects at grade to garage - Connects overhead to Capitol (vision) c. The space between the garage and building could be a maintenance issue, and not be pleasant. d. If the dock access could be removed from Warren that would be favorable; the consensus in the room was that if the dock were accessed off 25th Street that would be best. e. It was noted that this parking garage scheme provides the least amount of level parking stalls (66 stalls / tier). f. There was a maintenance / safety concern regarding the overhead enclosed walkway. g. Several people liked this scheme, but wanted more development or modifications made to it.	*Preference was shown toward this scheme with modifications.*
10)	SCHEME #4 (Flexible) a. Pros: - View to Capitol and Capitol Grounds - Maximum flexibility b. Cons: - At grade connection to Capitol - Decentralized core c. The simplicity of this scheme was noted. d. The "blockish" aesthetics of this scheme were less favorable. e. It was noted that there would be ice issues in the entry/exit ramps of this garage layout.	*No exceptions taken*

11)	GENERAL COMMENTS OF SCHEMES: a. Don't limit the program to 100,000 SF, if the site can accommodate more, it is beneficial to the State to build that out now and occupy it later. b. Parking is an overall concern, need to accommodate building occupants and capacity of lot at SW corner of Warren & 24th. c. The need for a pleasant lunchroom or break room was noted, even if views were substituted for an outdoor connection. d. Greater respect for the Southwest corner was noted. e. Preference to have two garage access points rather than one, no parking below grade, and one main building entry. f. Grade access seems to be more appealing than an above grade or tunnel connection. g. Traffic from the Hersheler Parking Garage empties onto 25th Street in order to get Northbound on Warren. h. Dr. Jim McBride (WY-DOE): (1) Exec.Office; (9) Unit Directors/ Leadership Offices; (2) Conf.Rooms a 40 capacity and a 75 capacity; 175 people total. i. Joe Simpson (WY-DOE): Flexible work environment that supports 160-180 staff; WEN video studio & viewing area, (2) break rooms/ lunch areas; copier & storage areas; administrative storage areas; conference rooms; auditorium? j. Exercise & Changing rooms w/ lockers are desired to help promote the State Wellness Program. k. Provide and promote electronic opportunities/ options for alternative commuting.	*KG to send PDFs of (4) concepts to Suzanne* *CCA to refine concepts to combine schemes I, II & III*
12)	POST MEETING COMMENTS: a. When moving towards programming & building design look into "white noise" systems if having open office layouts; add lactation/nursing room; add visitor offices. b. For the next meeting in September it is acceptable to present a building footprint (which has been further developed from the Site Workshop comments) and then space planning blocks showing amount of space occupants are taking and their relationships to one another.	*(a) KG to send PDF of concepts & initial program documents to Suzanne; Suzanne & Rich to provide comments by 8/21/08*

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AGENDA
Building Workshop
STATE OFFICE BUILDING DESIGN PROJECT
STATE OF WYOMING
DEPARTMENT OF ADMINISTRATION AND INFORMATION

State Library
September 18, 2008
9:00 a.m.

1. TODAY'S AGENDA/MEETING OBJECTIVES

2. TENTATIVE LEVEL I & II SCHEDULE

   - Kick-off: July 31, 2008
   - Site Workshop: August 14, 2008
   - ***Building Workshop:*** ***September 18, 2008***
   - Final Workshop: October 14, 2008
   - Draft Report: November 11, 2008
   - Final Report: November 27, 2008

3. PROJECT SCHEDULE

4. REVIEW OF SITE WORKSHOP
   - Site Analysis
   - Scheme I & Scheme III
   - Utilities

5. PRESENTATION OF BUILDING CONCEPTS

6. EVALUATION OF CONCEPTS

1936 Market Street ◢ Denver, CO 80202 ◢ Phone: 303.783.0040 ◢ Fax: 303.783.0060

Meeting Minutes

Coover-Clark & Associates, Inc.
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Date: 18 September 2008

Project: Wyoming State Office Building- 0810 **Time:** 9am- 12pm

Attendees: See attached list

Reference: Building Workshop

Meeting Minutes:

No.	Item:	Action:
1)	TODAY'S AGENDA / MEETING OBJECTIVES: a. Main objective: reach a consensus for moving to final schemes for pricing	*No exceptions taken*
2)	TENTATIVE LEVEL I & II SCHEDULE was presented as follows: a. Kick-off : July 31, 2008 b. Site Workshop: August 14, 2008 **c. Building Workshop: September 18, 2008** d. Final Workshop: October 14, 2008 e. Draft Report: November 11, 2008 f. Final Report: November 27, 2008	*No exceptions taken*
3)	TENTATIVE PROJECT SCHEDULE SHOWED: a. Design start 2009 b. Construction to begin in mid 2010: - Based on financing, tenant procurement, move-in date back to Capitol, renovation and final occupants c. Tenants to return to Capitol by 2013 session	*Add 12/2009 demo of St. Mary's to schedule*
4)	REVIEW OF SITE WORKSHOP: a. Site Analysis - Review site sustainability and natural siting - Street capacity is present b. Scheme I & Scheme III - Review of building access points (below and above	*No exceptions taken*

	grade): - Alley access not ideal, truck dock at 25th - Addressed formal relationship to Capitol - Discussion of corner setback - Sustainable orientation c. Utilities - Water and sewer – capacity should be sufficient - Gas and electric – capacity should be sufficient d. Access to Capitol via a second tunnel or overhead bridge are still a possibility and to be priced as alternates	*Verify water sewer capacity*
5)	PRESENTATION OF BUILDING CONCEPT A: a. 70' height limitation for the Central Business District (CBD); 60' occupied areas + penthouse b. Concept A Base Scheme - 4 story building – 136,000 GSF; (108,000 NSF) - 4 ½ level parking garage c. Concept A Alternate 1 – 5 story building – 169,000 GSF; (135,200 NSF) - 5 ½ level parking garage d. Parking explanation of sloped parking vs. mostly flat parking e. Parking garage: - Capacity for all building users - Including 59 parking stalls in southeast surface lot across street - Top level would be open (uncovered) f. Discussion of dock size - Dock will be used, need at least 2 bays with one freight elevator adjacent - Use at Hathaway building dock which is 20,000sf/floor, with 300 employees – Noted Health Care and Laboratory facilities have different deliveries than normal office building - Smaller delivery truck parking locations, such as UPS / FEDEX designate 15/20 minutes loading zone at parking on street along Warren is possible g. Discussed "Core" elements, "Meeting" spaces, and "Flexible tenant / office spaces h. Potential for secured / unsecured building i. Homeland Security – Use of technology / monitoring for needed security measures and incorporation of all appropriate safety buildings j. Building will need UPS or generator k. Efficient and effective use of space l. Sustainability – Daylighting: Goal to maximize for all offices m. Layout offers good temporary Capitol function n. Allowance of circulation options for user is better o. Like Meeting rooms at perimeter with views p. Integration of art – Interior and exterior; User commented on Colorado State University Transit Center, Kansas City International Airport was discussed	*Gathering of height variances subsequently researched, 5th floor could still be possible* *Provide dock for (2) straight line trucks, garage, and recycle* *Photos of artwork examples will be brought to 10/14 meeting*

6)	PRESENTATION OF BUILDING CONCEPT B: a. Concept B Base Scheme – 4 story building - 150,000 GSF; (120,000 NSF) - 5 ½ level parking garage b. Concept B Alternate 1 – 5 story building – 190,000 GSF, (152,000 NSF) c. More appealing for future use d. Allows for more office space with windows e. Possible to combine dock with garage (refer to dock notes on Concept A) f. More of garage is sloped g. Mechanical ventilation of garage needed h. Meeting space that can hold 175 persons when fully opened and divided for normal use is desired	
7)	NEXT STEP: a. Keep both concepts for October 14, 2008 presentation and cost estimate narratives; These will inform Legislature who will choose the final "option" b. Add next level of detail: - Typical office layout (open area vs. private) - Core functions - Exterior articulation and materiality c. Contracting method could be CMAR (Construction Manager at Risk)	

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AGENDA
Building Workshop
STATE OFFICE BUILDING DESIGN PROJECT
STATE OF WYOMING
DEPARTMENT OF ADMINISTRATION AND INFORMATION

State Library
October 14, 2008
9:00 a.m.

1. TODAY'S AGENDA/MEETING OBJECTIVES

2. TENTATIVE LEVEL I & II SCHEDULE

   - Kick-off: July 31, 2008
   - Site Workshop: August 14, 2008
   - Building Workshop: September 18, 2008
   - ***Final Workshop:*** ***October 14, 2008***
   - Draft Report: November 11, 2008
   - Final Report: November 27, 2008

3. PROJECT SCHEDULE

4. REVIEW OF PREVIOUS WORKSHOP DESIGN POINTS
   - Site Analysis
   - Building Orientation
   - Utilities
   - Traffic
   - Parking Needs
   - Interior Spatial Concepts

5. PRESENTATION OF BUILDING CONCEPTS
   - SITE PLAN
   - CONCEPT A
   - CONCEPT B
   - EXTERIOR MATERIALITY

6. REMAINING PROCESS (Presented by Suzanne or Rich)

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Meeting Minutes

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Date: 14 October 2008

Project: Wyoming State Office Building- 0810

Time: 9:00am- 10:00am

Attendees: See attached list

Reference: Final Workshop

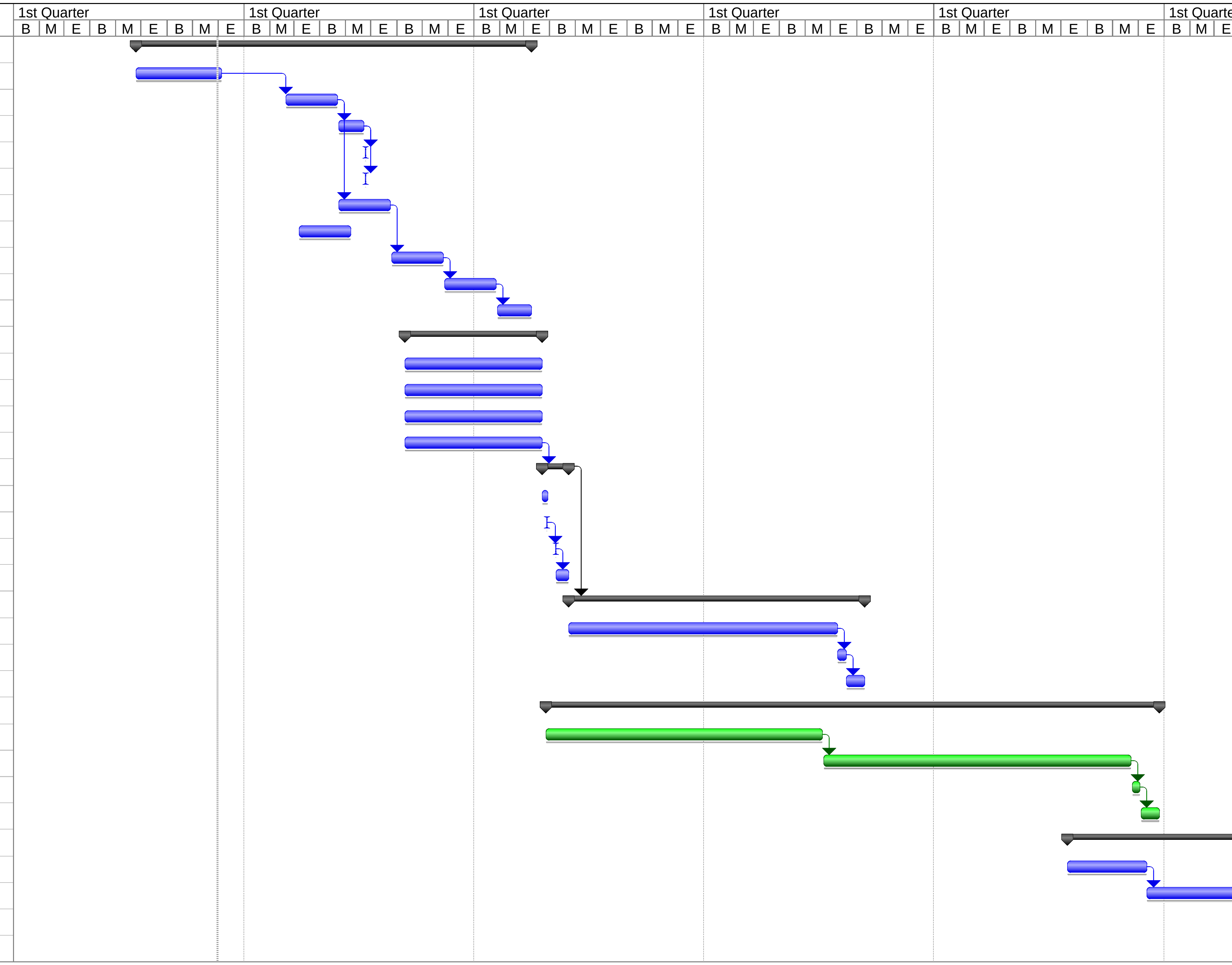
Meeting Minutes:

No.	Item:	Action:
1)	TODAY'S AGENDA / MEETING OBJECTIVES: a. Main objective: reach a consensus for moving to final report for pricing	*No exceptions taken*
2)	TENTATIVE LEVEL I & II SCHEDULE was presented as follows: a. Kick-off : July 31, 2008 b. Site Workshop: August 14, 2008 c. Building Workshop: September 18, 2008 **d. Final Workshop: October 14, 2008** e. Draft Report: November 11, 2008 f. Final Report: November 27, 2008	*No exceptions taken*
3)	TENTATIVE PROJECT SCHEDULE: a. March 7, design funding start. b. Move in June 2011 c. cap complete December 2012	
4)	REVIEW OF PREVIOUS WORKSHOP DESIGN POINTS: a. Site Analysis b. Building Orientation c. Utilities d. Traffic e. Parking Needs f. Interior Spatial Concepts	*No exceptions taken*
5)	PRESENTATION OF SITE PLAN: a. Merged dock into single curb cut with parking garage b. Art opportunities on site	

6)	PRESENTATION CONCEPT A: a. Open office work station shown @ (64 SF/person) count discussed; 150 people per floor average - Actual amount shown: 1st Floor – 128 people - 2nd Floor – 155 people - 3rd Floor – 170 people - 4th Floor – 140 people b. Private / demountable offices (120 SF/person) shown as 20% - 25% of office floor space c. Glass walls in meeting spaces for views of Capitol and natural daylight d. Accessible flooring, systems furniture, and demountable options discussed e. 5 story building, 6 story parking garage alternate	
7)	PRESENTATION OF CONCEPT B: a. Open office workstation (64 SF/person) count discussed; 200 people per floor average - Actual amount shown: 1st Floor – 175 people - 2nd Floor – 175 people - 3rd Floor – 222 people - 4th Floor – 184 people - 5th Floor – 184 people b. Discussed clustered building core and open office flexibility c. Meeting spaces over entrance on 3rd and 4th floors presented as potential assembly space d. 5 story building; 7 story parking garage e. LEED criteria followed, not certified *Tour recommendations: EPA, Denver and Signature Building, Golden, as well as Univ. of Wyoming Genius walls	*Secure storage is desired in the office building; consider a fireproof vault space?* *Lack of entry points on north side of building was a concern*
8)	EXTERIOR MATERIALITY: a) Exterior articulation and materiality sketches presented b) Granite and limestone presented to blend with existing Capitol complex, with stone-lite concept on upper levels	
9)	REMAINING PROCESS (Presented by Suzanne Norton): a) Management Council meeting end of October 2008 b) Commission meeting Level III design money awarded in March 2009 c) Interim Management Council will determine tenants to occupy office building, late October 2008 d) September / October 2009 Level III design costs complete e) Design/Bid/Build or CM at risk anticipated f) Bids complete September / October 2010 g) Potential for other studies based on Management Council meetings and negotiations with the Hospital	

New Office Building
Wyoming State Capitol Complex

ID	Indicators	Task Name	Duration	Start	Finish	Predecessors
1		**Design Process**	**450 days**	**Mon 7/14/08**	**Fri 4/2/10**	
2		Level I & II Study	98 days	Mon 7/14/08	Wed 11/26/08	
3		Schematic Design	60 days	Mon 3/9/09	Fri 5/29/09	2
4		Approval & sign-off	30 days	Mon 6/1/09	Fri 7/10/09	3
5		Survey Complete	1 day	Mon 7/13/09	Mon 7/13/09	4
6		Soils report complete	1 day	Mon 7/13/09	Mon 7/13/09	4
7		Design Development	60 days	Mon 6/1/09	Fri 8/21/09	3
8		Phase I & II environmental analysis	60 days	Mon 3/30/09	Fri 6/19/09	
9		65% Construction Documents	60 days	Mon 8/24/09	Fri 11/13/09	7
10		95% Construction Documents	60 days	Mon 11/16/09	Fri 2/5/10	9
11		Final Construction Documents	40 days	Mon 2/8/10	Fri 4/2/10	10
12		**Approvals**	**156 days**	**Mon 9/14/09**	**Mon 4/19/10**	
13		State Approvals	156 days	Mon 9/14/09	Mon 4/19/10	
14		WYDOT approval	156 days	Mon 9/14/09	Mon 4/19/10	
15		Other approvals (DEQ, DNR, Fire, util)	156 days	Mon 9/14/09	Mon 4/19/10	
16		Cheyenne Approvals & permit	156 days	Mon 9/14/09	Mon 4/19/10	
17		**Bidding/Construction negotiating**	**30 days**	**Tue 4/20/10**	**Mon 5/31/10**	**16**
18		Print/issue Drawings for Bid	7 days	Tue 4/20/10	Wed 4/28/10	
19		Pre-bid conference	1 day	Tue 4/27/10	Tue 4/27/10	
20		Bids due	1 day	Tue 5/11/10	Tue 5/11/10	19
21		Negotiate/ contract for const.	14 days	Wed 5/12/10	Mon 5/31/10	20
22		**PHASE I Construct New Building**	**336 days**	**Tue 6/1/10**	**Tue 9/13/11**	**17**
23		Construction	305 days	Tue 6/1/10	Mon 8/1/11	
24		Punch List	10 days	Tue 8/2/11	Mon 8/15/11	23
25		Move-in/Training	21 days	Tue 8/16/11	Tue 9/13/11	24
26		**PHASE II State Capitol Renovation**	**696 days**	**Mon 4/26/10**	**Mon 12/24/12**	
27		Design / Permit	315 days	Mon 4/26/10	Fri 7/8/11	
28		Bid / Construction	350 days	Mon 7/11/11	Fri 11/9/12	27
29		Punch List	10 days	Mon 11/12/12	Fri 11/23/12	28
30		Move-in/Training	21 days	Mon 11/26/12	Mon 12/24/12	29
31		**PHASE III Relocate lease ten. To WSOB**	**211 days**	**Wed 8/1/12**	**Wed 5/22/13**	
32		Design/ Permit	90 days	Wed 8/1/12	Tue 12/4/12	
33		Bid / Construction	100 days	Wed 12/5/12	Tue 4/23/13	32
34		Punch List	7 days	Wed 4/24/13	Thu 5/2/13	33
35		Move-in/Training	14 days	Fri 5/3/13	Wed 5/22/13	34



Project: C:\job files\MSY\overall sched
Date: Wed 11/19/08

Task · Split · Progress · Milestone · Summary · Project Summary · External Tasks · External Milestone · Deadline