Carson City
Redevelopment Authority
Agenda Report

Date Submitted: September 6, 2011 **Agenda Date Requested:** September 15, 2011
Time Requested: 2 hours

To: Redevelopment Authority

From: Lawrence Werner, P.E., P.L.S., City Manager

Subject Title: For Possible Action: To approve and direct staff to proceed with development of the Carson City Center project's proposed lease agreement and other necessary transaction documents for future consideration by the Redevelopment Authority as a restructured and simplified program and plan, which includes the H&K schematic design with the public pieces defined as: The Knowledge and Discovery Center, plaza and parking garage and related infrastructure; considering the use of redevelopment funds ($11,300,000) for a portion of the project funding.

Staff Summary: The Carson City Center Advisory Committee recommended proceeding with the project by a vote of 8 ayes, 1 nay and 1 abstention. The project would be accomplished by using the mechanism of a not-for-profit entity comprised of representatives of the Board of Supervisors, the Library Board of Trustees, and the Mae B. Adams Trust. This entity will hold and contribute approximately 3 acres to the project.

Type of Action Requested: (check one)
(☒) Formal Action/Motion (☐) Other (Specify) Discussion

Does This Action Require A Business Impact Statement: (☐) Yes (☒) No

Recommended Motion: I move to direct staff to proceed with development of the Carson City Center project's proposed lease agreement and other necessary transaction documents for future consideration by the Redevelopment Authority as a restructured and simplified program and plan, which includes the H&K schematic design with the public pieces defined as: The Knowledge and Discovery Center, plaza and parking garage and related infrastructure; considering the use of redevelopment funds ($11,300,000) for a portion of the project funding.

Explanation for Recommended Agency Action: See attached report.

Applicable Statute, Code, Policy, Rule or Regulation: None

Fiscal Impact: Total project cost is estimated at $49,592,300 with the public portion being $23,800,000 to be paid from a proposed 1/8th-cent sales tax and Carson City Redevelopment Funds or other funding as directed by the Board.

Explanation of Impact: See staff summary.

Funding Source: See funding impact.

Alternatives:
Do not proceed with the use of Redevelopment Funds.

Supporting Material:
1. Project Report and funding summary
2. Questions/Answers Summary
3. Questions/Answers Summary from Steve Neighbors, Mae B. Adams Trust Trustee
4. Report to the Nugget Advisory Committee
5. Carson City Center Conceptual Design Booklet

Prepared By: Lawrence A Werner

Reviewed By:

(Department Head) Date: _____

(City Manager) Date: 9/7/11

(District Attorney) Date: 9/7/11

(Finance Director) Date: 9/7/11

Committee Action Taken:

Motion: _____ 1) _____ Aye/Nay

2) _____

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(Vote Recorded By)

Carson City Center Project Report
Board of Supervisors Meeting of September 15, 2011

The purpose of this agenda item is to provide direction to staff on how to proceed with the development of the Carson City Center Project, including action to select the method of funding the project. Following are the project cost estimates provided by the H&K Architects Conceptual Design report, dated July 2011 (attached), and the proposed funding sources.

Costs Related to the Project

Total project costs are estimated at approximately $45,092,300. Following is a breakdown of the estimated costs (refer to the attached Conceptual Design document for further detail):

Construction Cost Summary				
	Description	Area	Cost/SF	Total Construction
1.	New parking structure	156,935 SF	$57.99	$9,101,000
2.	New parking structure (retail component)	11,325 SF	$150.75	$1,707,300
3.	New parking structure – perimeter site work	50,544 SF	$8.72	$440,900
4.	New library	55,750 SF	$278.98	$15,552,900
5.	New library – perimeter site work	85,134 SF	$11.51	$979,900
6.	New auditorium	8,319 SF	$396.86	$3,301,300
7.	New plaza	35,190 SF	$40.11	$1,411,300
8.	Site roads / infrastructure	72,000 SF	$33.03	$2,378,000
9.	AV budget			$250,000
10.	PV panels at library			$132,000
11.	**Sub-Total Construction Cost**			**$35,254,600**
12.	Escalation to MOC		2.89%	$1,019,700
13.	Phasing		1.00%	$353,000
14.	**Total Construction Cost**			**$36,627,300**
15.	Cost options			
	Bid items 1 through 11 above under 1 contract		DDT	($916,000)
	Combine library-auditorium into 1 contract		DDT	($396,000)

Project Cost Summary			
	Description		Total Construction
1.	Total Construction Cost		$36,627,300
2.	Soft Costs		
	AE fees	8.00%	$2,930,000
	Miscellaneous consultants (AV, LEED, acoustical, etc.)	2.00%	$733,000
	Testing / Inspection	1.50%	$549,000
	Planning / Permits	0.50%	$183,000
	Utility connection fees	-	$150,000
	PM fees		Not required
	Legal / Administrative fees	0.20%	$73,000
	Bidding costs	0.10%	$37,000
	FF&E	2.50%	$916,000
	Library shelving	-	$239,000
	Low voltage devices / cable	2.25%	$824,000
	Construction contingency	5.00%	$1,831,000
3.	**Total Project Cost**		**$45,092,300**

Method of Financing the Project

With the total project construction cost estimated at $45,092,300, and land valued at $4,500,000, the total project's estimated value is $49,592,300.

Estimated Revenues and Funding Sources:

Down payment of land (donated by Mae B. Adams Trust)	$4,500,000
One-eighth-cent sales tax (over approximately 30 years) OR alternative funding*	$12,000,000
Redevelopment Agency funds (over approximately 30 years) OR alternative funding*	$11,300,000
Water / Sewer / Stormwater funds (one-time)	$500,000
General Fund	$0
Subtotal:	**$28,300,000**
Other Public Funds	
Federal Economic Development Agency Grant	$3,000,000
Expected Private Funds	
Mae B. Adams Trust + Carson City Library Foundation	$18,292,300
Total:	**$49,592,300**

*** Alternative funding sources:**

The proposed funding sources include Redevelopment Agency funds and enacting a one-eighth-cent sales tax. Staff has also identified the potential use of Carson City landfill revenues to substitute for either the sales tax or Redevelopment Agency funds. The Board of Supervisors may direct staff to pursue the project using funding sources other than the sales tax or Redevelopment funds.

If Redevelopment funds are to be used, staff will schedule a future meeting of the Redevelopment Authority and Board of Supervisors to take the appropriate actions allocating money from the Redevelopment Revolving Fund. Approval of Redevelopment funds for the construction of the project requires a two-thirds majority of the Board of Supervisors (four of five Board members) per NRS.

If a one-eighth-cent sales tax is to be implemented to fund the project, staff will schedule future Board of Supervisors meetings and a Planning Commission meeting to development the sales tax expenditure plan and ordinance as required by NRS. Approval of the implementation of a sales tax for the construction of the project requires a two-thirds majority of the Board of Supervisors (four of five Board members) per NRS.

Plan Structure

A not-for-profit entity comprised of the Carson City Board of Supervisors, Carson City Library Board of Trustees and the Mae B. Adams Trust will equally assume the roles, responsibilities, risks and rewards of developing the public portions of the Carson City Knowledge + Discovery Center project.

Upon project commitment from the City, the Mae B. Adams Trust will immediately deed the three parcels assigned to the project's public pieces to the not-for-profit entity. The entity will seek financing collateralized by the land, a down payment and library/city leases assigned to the Knowledge + Discovery Center, public plaza and parking garage.

The library/city will lease buildings from the not-for-profit entity, with all proceeds going toward the purchase of buildings, improvements and land. Upon payment completion, the not-for-profit entity may deed the land, buildings and improvements to the library/city and dissolve the not-for-profit entity.

The primary mission of the not-for-profit entity includes business and economic development as well as special focus on career paths and workforce training for youth through formal and informal educational opportunities. The secondary mission is to create a central community gathering place. The missions are ensured through the entity's governance which designates voting rights as such: the City with 34%, the Library Board of Trustees 33% and the Mae B. Adams Trust 33%.

A project owners association (POA) comprised of both the public and private entities within the entire project area will ensure common areas are appropriately maintained, safe, insured, programmed and marketed. Project covenants, codes and restrictions (CCR's) will be developed and enforced by the not-for-profit entity, and association dues will be equally assessed.

Public-Private Partnership
Partners are in agreement regarding the key points that define roles, responsibilities, risks, and rewards. The partnership secures a long term, healthier future for the entire community.

Partners:

- Carson City Board of Supervisors - providing leadership for the City
- Carson City Library - catalytic piece of the overall development and includes a 65,000 square foot, state-of-the-art Knowledge + Discovery Center
- Mae B. Adams Trust - committed partner investing millions of dollars toward the positive outcomes of the Carson City Knowledge + Discovery Center project, and partner in the long-term benefit of the entire community.

The past two years of conceptualization gathered stakeholders, gleaned their opinions of the vision and integrated their input into today's revised program. This work follows the community's downtown revitalization plan described within the City's downtown mixed-use, form-based urban code (DT-MU) which was passed in 2007, and demonstrated in 2008 when 300 citizens and 47 downtown businesses aligned as the Carson City Downtown Consortium and delivered seven successful projects, including the Saturday Morning Curry Street Farmer's Market.

The Knowledge and Discovery Center
Nationwide, recently-built libraries are offering spaces and services that are transforming communities. In cities such as Durango, Colorado; Bozeman, Montana; and Cheyenne, Wyoming, public libraries buzz with constant activity, ring cash registers in nearby, areas and host family and community-focused activities and events. In fact, new public libraries are seen by urban planners as true economic catalysts.

The role of new libraries is wedded to the changing economic landscape, both locally and globally. The shift of the last two decades to a global information economy demands different, non-routine, interactive and analytic skills, and lifetime learning, for the 21st century workforce. Libraries offer rich and authentic content, modern libraries add immediate accessibility to the latest knowledge. Staff foster lifelong learning, as well as help people build and keep marketable

skills. To that end, libraries and the people they serve are becoming more purposeful and intentional in addressing the learning needs of the new economy.

Technology and media literacy skills, communications skills, cross-disciplinary thinking skills, health literacy skills, financial and business skills … all … and more, can be acquired in the library setting as part of self-directed lifelong learning. Of course, libraries will never replace institutions of formal learning, but the reality is that people today, youth as well as adults, spend much of their lives learning outside the walls of formal classrooms. In modern libraries, teenagers as well as adults can participate in out-of-school programs that enhance formal education and better prepare them for the workforce.

Input from community-wide surveys, focus groups and suggestions recognize a new library facility in downtown would become even more valuable, and an indispensible part of the fabric of community life. In November 2009, the Mae B. Adams Trust opened the door for turning what was formerly a dream for a new library, into an attainable reality.

The Mae B. Adams Trust's mission guided its proposal to facilitate the construction of a new library. With mission in mind, the Trust determined that a new Knowledge and Discovery Center in the heart of downtown would be pivotal to strengthening the skills of teenagers, and could be the anchor of a project aimed to provide an economic boost to the entire community.

The Carson City Knowledge + Discovery Center project is a result of years of planning that has fostered a cooperative venture to promote economic diversity, learning and sustainability. It combines community investment with private philanthropic resources to create a vibrant economic and civic core in Nevada's State Capital.

Carson City Center Questions and Answers

1. Question: What are the development costs required to get to a point where a lender may be approached and who is proposed to pay those costs?

Answer: Lenders have already expressed an interest in the project. Staff is requesting very preliminary lease sheets and terms from possible interested parties to determine costs. The city could decide to fund design costs up front and prior to financing to move the project forward which would be in the $1.5 million range.

2. Question: I assume there will be a construction loan, how will that be repaid?

Answer: A private corporation (City Center Group) is proposed to be formed to manage the financial aspects of the project. Members include Carson City (34%), Library (33%), and Mae B. Adams Foundation (33%). This corporation will become the "developer" of the project with respect to the funding. The project will include the construction of a knowledge and learning center, a public plaza, and related parking facilities. The project as designed will cost $49 million dollars.

At the start of the project it is anticipated that the CCG will have approximately $25M to be used as a down payment toward the project costs. Of this approximately $18 M will be in cash gained from private foundations and grants, $3 million in work effort, and $4M will be in the value of the land which the project resides on. This leaves $24 million to be financed with a loan structured with CCG.

CCG anticipates needing help with the construction loan which will then be rolled over into a long-term financing system. It is believed that construction will begin in Spring-2012 and be completed in 24 to 30 months. A first deed of trust in the project (land and improvements) will be given as collateral for the needed financing. The term of the loan is to be 30 years with no prepayment penalty after 10 years. The loan repayment stream will come from the tenant which will be Carson City. Carson City holds an AA+ credit rating. Carson City will sign a lease with CCG, which lease rates will be set to cover the loan principle, interest, taxes and insurance. A common area maintenance agreement will also be included in the lease to maintain and manage the project property during the term of the loan. Carson City will gain title to the land and its improvements upon full retirement of the $24 million dollar loan.

3. Question: What are the estimated total costs of the project over time, including:

a. Interest costs.
b. CAM charges.

Answer: Interest costs will likely be in the range of 2% to 6% depending on funding secured. Annual costs based on $24 million at 2% for 30 years would be approximately $1.1M, 3% would

be approximately $1.25M, 4% would be approximately $1.4M, 5% would be approximately $1.6M and 6% would be approximately $1.75M.
CAM (Common Area Maintenance Charges) are estimated to be on the order of $100,000 to $200,000 annually which will be shared by all elements of the project including the Knowledge and Discovery Center, Nugget Casino, Hotel, Commercial Retail, and Office Building.

4. Question: What is the Adams Foundation thought with respect to the Nugget if it is sold—i.e., where do those proceeds go and where do the proceeds of any other non-public leases go. Can they go to debt retirement or are they allocated for some other purpose?

Answer: See Steve Neighbors' Q&A #2, attached.

5. Question: In the past, the Library Foundation was to receive funds over time from the Adams Foundation for library upgrades. Sara says that maintenance of the library can be done under the current budget. Are upgrades to the library over time contemplated and if so, where do they come from and will any part of those proceeds come from the City lease of the property?

Answer: See Steve Neighbors' Q&A #3, attached.

6. Question: Do we have an idea of what the lease costs would be and what would be included in those costs?

Answer: Costs based on $24 million at 2% for 30 years would be approximately $1.1M, 3% would be approximately $1.25M, 4% would be approximately $1.4M, 5% would be approximately $1.6M and 6% would be approximately $1.75M. We assume the lease costs will be all inclusive but the city will be required to maintain the facilities during the term of the lease.

7. Question: If we use the landfill to allocate the lease payments, what is the effect down the road on the general fund?

Answer: Based on the new increased rates which were recently approved there would be no negative effect on the general fund by using landfill revenues. The planned increase in recycling would be delayed until funding can be realized in the future either through increasing the waste stream or increasing rates. The landfill rates are quite low compared to the region.

8. Question: If we delay indefinitely the approval of a contract with Recology and approve another modest increase in landfill fees for out-of-county users, can we replace the equipment we need for landfill operations and fund the $900,000 we need annually to finance the City Center project (the amount previously generated by the sales tax increase)?

Answer: The landfill revenue model with the new rates indicates the revenue should be approximately $3.7 million annually and the current expense budget is $1.6 million annually

leaving $2.1 million, but does not account for equipment. The Recology program has about $4.0 million in revenues because of recycling revenue back to the city and costs of about $3.0 million.

The $2.1 million could be used to maintain the $1.0 million for the General Fund as currently provided for in the budget and would allow $1.1 million for other uses. The landfill equipment which is needed immediately is a new trash compactor tractor which is projected to cost about $550,000. In addition we need to replace the oldest bulldozer which is 10 years old and it costs around $650,000. There are a couple of ways to obtain the equipment from cash purchase, lease purchase, or short term financing and to sustain the equipment at the landfill is about an annual commitment of $200,000 annually.

The additional revenue remaining to support the City Center project is therefore approximately $900,000 annually which is the same revenue projected for the 1/8th cent sales tax. In the short term you could cover the equipment costs with the new revenues and consider using the funds to begin design of the City Center project.

9. Question: Although Mr. Neighbors may not be in a position at the moment to fully disclose the assets that will be available to help fund the City Center project, at some point prior to the City making an irrevocable commitment, he needs to identify specifically the cash assets he intends to pledge to this project and this project alone. I would personally feel more comfortable if he placed these funds in an account to be overseen by the not-for-profit entity so if we fall short of our other fundraising objectives relative to the EDA grant and the Library Foundation's capital campaign, we can avoid scaling down the project to make the design fit a reduced budget. Steve has repeatedly said that he would compensate for any shortfall in fundraising or sales tax generation. We just need to formalize this commitment. As we know from the ULI article on public/private partnerships "First and foremost, the private partner needs to be prepared for a transparent process."

Answer: See Steve Neighbors' Q&A #4, attached.

10. Question: If the City is limiting its financial exposure by simply being a lessee with lease payments due upon occupancy, I assume we will not be expected to commit any resources to financing the project (other than the lease we sign as collateral). If this is the case, who makes the loan payments as draw requests are submitted during the course of construction?

Answer: Its unknown at this juncture how this will all be done until the finance partner is selected and terms and conditions are put together. The construction loan could be serviced by collateralizing the construction costs into the total financial package for the project. It may be prudent for the City to proceed with design of the project itself with current available funding to take get the project to construction sooner than later to take advantage of excellent pricing in the construction market.

11. Question: Prior to committing to raising our pledged revenues, all of the leases and partnership documents need to be drafted and approved by the parties so there are no unexpected surprises along the way. Since the leases for the Knowledge and Discovery Center, plaza and parking garage will help collateralize the construction loan they will have to be drafted prior to loan origination.

Answer: Correct, all of the above will have to be completed.

12. Question: Based on calls I've received as a result of Monday's night's meeting, there's a reoccurring question that relates to the long range plans for the Nugget Casino in terms of external upgrades. I appreciate the fact that plans for the Nugget may still be evolving but at some point in this process we need to know that this aging structure will not detract from the Knowledge and Discovery Center in perpetuity.

Answer: See Steve Neighbors' Q&A #2, attached.

13. Question: Need some information on the terms of the lease, specifically provisions that allow the City to walk away from the Project and what are the costs associated with walking away at various stages.

Answer: It is anticipated that the lease will include a "Non-appropriation Clause" similar to the following:

Termination for Non-appropriation:
The continuation of this Contract beyond June 30, 2012 is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the Carson City Board of Supervisors. CITY may terminate this Contract, and CONTRACTOR waives any and all claim(s) for damages, effective immediately upon receipt of written notice (or any date specified therein) if for any reason the funding is not appropriated or is withdrawn, limited, or impaired.

14. Question: What is a rough timeline for the project?

Answer: It is believed that construction could begin as early as the Spring of 2012 on the parking garage and which can be completed in approximately 6-9 months and the Knowledge and Discovery Center and Plaza construction could begin in the fall of 2012 and be completed in about 18 months, so the entire project could be completed by Spring of 2014. It may be possible to accelerate the process as well.

Questions Asked of Steve Neighbors on the Proposed City Center Project
September 7, 2011

1) First, for those not aware, please explain the different entities involved, the Nugget as well as the trust entities and their various relationships and purpose.

- The Nugget Is a "For profit entity" serving its customers, employees, suppliers, the Nevada Gaming Commission and other stakeholders. Its owner is the Mae B Adams Trust (MBAT). The Hop & Mae Adams Foundation (HMAF) is a 501(c)(3) charitable organization that is for the benefit of the community and youth of Carson City. As to the details of each:
- The Nugget's main street location has given it a front porch view of the Carson Community. It is keenly aware of the economic struggles it and its neighbors are enduring. All are struggling – businesses, families, charities, government agencies. The Nugget has thus adopted ***Community First*** as its mission, not only because it's the right thing to do for the community but for itself as well. The Nugget believes that its livelihood is tied to the livelihood of the community. As the community goes, so goes the casino. The Nugget wants to lend its hand to an overall solution, not wait passively for someone or something to fix the economy. It believes in the MBAT plan, which includes the Downtown project.
- The MBAT has a focus on the Nugget and its employees. The MBAT is tasked to protect the Nugget and the stakeholders of the Nugget, while serving its overseer the HMAF. I serve as the sole trustee of the MBAT. I thus have a number of parties I answer to: the employees, customers, and other stakeholders of the Nugget, including the Nevada Gaming Commission. I also serve as one of three trustees for the HMAF.
- The HMAF determined its best course of action to fulfill its mission is to interact with the Board of Supervisors (BOS) because the community has elected these people to represent them. HMAF does not take requests for donations from private sources, but internally develops projects that we think address root issues. It then vets those with the BOS or other leadership entities in the community.

2) What about the Nugget itself? Will it be remodeled? (Refers to Question #4 and #12)

- I am a trustee holding the Nugget asset until the BOS makes a final decision. Upon that decision, I will then go forward driven by that decision. I eventually need to have an owner for the Nugget gaming operation that will care for its employees, customers, and the community. The Mae B Adams Trust or the Hop and Mae Adams Foundation will retain ownership of the real property, and it will make sense for us to remodel for a prospective gaming operator and allow all parties to be part of the project, if the project goes forward. There is hotel/convention parties interested if the project goes forward which will create a private project that incorporates a remodel of the Nugget. If the project does not go forward, the Nugget will be sold, along with the land necessary for the casino's parking. Those proceeds from that sale will then be invested in assets the HMAF will manage. The profits from the management of those assets will come back into the community of Carson City as the HMAF trustees deem best.

3) Why is the Carson City Knowledge and Discovery Center Project important to the community? (Refers to Question #5)

- Every city or entity has numerous challenges and issues. We want to address root causes of those issues in Carson instead of just the symptoms. The high dropout rate of the students from the education system, the gang issues, the drug and alcohol issues, can be traced to economic, educational, cultural and spiritual root causes. To attempt to address one root cause without the others is ineffective. To address them all is daunting but possible. The Nugget, MBAT & HMAF cannot do it alone no matter how much money is spent, so they must rally the

community at large to help. The downtown project with its unique **Knowledge and Discovery Center** will give Carson City the tool box to deal with educational, economic issues and cultural issues needed to proactively address our future.

- As to education, for our children and workforce to compete in the 21st century they need to learn 21st century skills. KDC will have the latest technology, computers, software, digital capability, databases, training tools and resources available to all citizens, entities and students at no charge. Even the schools, be they public, private or home school, can utilize the tools in their curriculum. It is more cost effective to maintain one site that has public access and longer hours than attempting to maintain state of the art equipment and software at all the schools. The KDC will house and supply the resources with free access; it then is up to everyone who wants to be a lifelong learner - to use them and participate in the 21st century technology literacy explosion.
- The Hop and Mae Adams Foundation will commit to the Library Foundation proceeds from private leases and assets of the Hop and Mae Adams Foundation as having preference over other community projects and donations. This will ensure the Knowledge and Discovery Center can remain current in the future- this will be in addition to the Library Foundation's plan to have a technology endowment, also designed to keep the Knowledge and Discovery Center current.

4) Do the HMAF, MBAT and Nugget have the resources to pull this off themselves? (Refers to Question #9)

- We understand the City officials need to see we can do what we say we will do. We own the land and the Nugget free and clear. We do have substantial cash and other real property, most of it in Idaho, so we can do our part, but we cannot do it alone. We need the City and the Library Foundation to do their parts. We will make the details of our financial ability available to the appropriate public officials under a confidentiality agreement as needed- and aligning with what any other private philanthropic organization would be required to do.
- As to going forward, we have already spent millions accumulating the land, the studies, plans, etc for this project. We are unwilling to spend more until the other stakeholders step up to the plate. Upon approval to go forward by the City, the land under the public parts of the project- Knowledge and Discovery Center, plaza and parking garage will be gifted to the non-profit entity. We would even be willing to secure the development company in those assets of ours necessary to fulfill our part, that security being subject to the City and Library Foundations performance.

5) What is the Carson City Library Foundation's role? Is it vital?

- Absolutely the Library Foundation's role is vital. They are committed to raising half of the private side to not only ensure the project build, but to build endowment legacies that will ensure sustainability. HMAF & MBAT have given all naming and credit rights to those who contribute to the Library Foundation for the KDC. The Library Foundation's Chair, Mr. Severin Carlson recently communicated great enthusiasm to his board and advised that they "will have the great privilege of supporting as a vital partner the goals of the Knowledge and Discovery Center Project." The Carson City Library Foundation will help define a new era in public private and charitable resources combined to make lasting and catalytic difference.

6) How does the Carson City Knowledge and Discovery Center Project deal with the economic, educational, and cultural root issues?

- We need to have 21st century industries that offer high paying careers to Carson's employee force and youth. At the same time, Carson needs to have that skilled workforce as well as community offerings to attract those industries and retain those employees in our community. And finally, we in America need to begin seeing ourselves as a common community, not a bunch

of individuals or special interest groups. The **Carson City Knowledge and Discovery Center** (**KDC**) is a foundational stone to begin building that infrastructure, addressing industry needs, help with workforce development and assist in community development. It will immediately charge the economy with the construction investment –providing much needed immediate jobs, and the long-term result is we have the tool st the KDC to affect the economic, educational and cultural changes we need to address. The KDC along with the plaza will further a sense of place for downtown Carson City, and will assist with a place and programs for community development.

7) Explain the economic impact of the KDC and how it is an economic toolbox.

- The economic change impacting America, and thus to Carson City, is being driven by a global marketplace, where competition is not down the street but outside USA borders. Technology change is moving from fast to extreme, as India, China and third world countries with their different cultures and their own creativity further fuel the pace of change. Our businesses need to be fast reacting, adapting almost instantly, and working synergistically to compete globally against international cartels and consortiums. We need a common knowledge center to maintain relevance in a changing market. Every business must also continue to address future relevance with research, patents, licenses, business resolution and resources. Instead of having individual research centers at each business, the KDC will be tied into tens of thousands of patents and licenses available for Carson City businesses from the Federal Labs and universities. The KDC will bring grants as well as research funding opportunities to Carson businesses. We will have investment resources and funds available from private, government as well as foreign sources for Carson City business expansions and startups. Also at the KDC will be such simple common resources as virtual meeting and conference rooms, high tech digital communication capabilities not available elsewhere. Carson businesses will have educational seminars and speakers in the auditorium. The Carson City business community and students will all need to work together to see globally, stay current, and operate efficiently and cooperatively in an extremely complex and competitive world. The KDC will be the economic toolbox that holds all these business success tools.

8) So the concept of a new Library is really a misnomer?

- I think the necessary steps to affect economic and educational reform is the toolbox in KDC. I myself do not think of it as a library. I prefer Economic and Educational Toolbox, thus people do not have preconceived ideas of a book warehouse. But if you think about it, we are dealing with massive amounts of data and capability that needs to be filtered down to usability and application. The toolbox needs to have extended hours so all members of the community can use it. It needs to be free to foster the community common effort we need to compete. The KDC needs to operate within the normal budget allocation from the City's budget and continue to expand and maximize its own private funding and enterprise opportunities. Where can we find professionals who can best convert massive amounts of data to information and application? Where is free access to knowledge to be found? Who better to put in charge of the toolbox than librarians? Do I care if they call it a library? I personally think that what many people call a "library" fails to communicate this comprehensive vision but yes it will still have books and yes you can check them out, but that is a fraction of what it will be about.

9) What is the rush?

- I do not understand how anyone can even dream of classifying this project and/or our actions as a rush. I am embarrassed at how slow our process has been. Carson City began the process on its own. EnVision Carson City, developed over years and passed in 2007. This project simply steps forward to build on that vision with a 21st century community goal. I feel the efforts

toward helping the City with their own vision, has been slow, very deliberate and open. We have been very methodical and transparent, working on this for almost 3 years now. In Dec of 2009, I simply asked the BOS if they were interested in a concept being proposed. We maintained from the beginning that we would not put the city at risk. We also reversed the traditional understanding of the public/private partnership, making private support the public instead of the public support the private. If anything, we should be criticized at how slow and deliberate we have been. To all the unemployed and underemployed, to the struggling businesses, to all the students who are not getting 21st century skills, to the citizens having to leave the community, I apologize for our slowness.

10) So what is the risk to the City?

- We have structured the project so that there is no real risk to the City. Though we cannot lock up the financing and other partners in the deal (grants, donations, etc), until the City is committed, the project principles are in place for even conventional financing for the bank. We thus can now obtain the funding necessary for the lease. A development corporation will be the party that takes out the loan. They will put up:
    - Substantial private cash - well over a third of the cost of the whole project will be paid up front in cash.
    - The land necessary will be donated by the Nugget & MBAT to the Development Corporation and will be at risk.
    - The Nugget and other uses of the project development land will enter into a common area maintenance agreement and project owners association to develop CC+R's maintain the garage and plaza, as well as schedule events for the community in the plaza.
    - The city simply signs a lease payment for which its payments, beyond the interest & insurance, all goes toward purchasing the building. If the city does not pay the lease, they simply walk from building ownership. The lender gets it all for half price.
    - The Trust and Foundation have agreed to use their resources for the cities behalf on this issue first, including its receipts on the private portion of the project, as well as other development on land not included in the project.
    - All risk, other than the lease payment, is born by the private parties.
    - The real risk to the city is not to do the project.

11) What is your response to the argument that this is not the time for the city to take on this project?

- I am not sure what those who are making that argument are waiting for. Is it to wait until the economy is booming again? Should we not be proactive making ourselves relevant to the 21st century economy? Do our present kids not deserve a relevant education now? This is not only the perfect, it is the only possible time to do this. We will never get another chance – we will not be able to do it in the future. The project becomes non feasible if we wait.
    - We are at historic low interest rates. A 1% increase in interest on the $24,000,000 lease purchase adds $240,000 a year to the lease/ purchase option payments.
    - Construction industry is in dire straits and the costs will be the lowest we can get. The amount financed will be at its lowest.
    - We need the economic boost now. Even though the construction jobs are temporary (over 3 years), they will assist our economy immediately. The professionals and contractors will be local and those funds will then get circulated between 4 to 10 times in the local area – feeding suppliers, restaurants, house payments, fuel sales, retail sales, clothes, etc.

- The **KDC** is designed to attract and retain other businesses. We have seen how key that is for high tech and digital media industries to move here. We already have commitments from g-learning and digital media industry, one of our targeted industries.
- Now is the time to brand ourselves as the economic and educational reform center. We can be the training site for the rest of the country. Why not have Nevada and its capital Carson City lead the way nationally? The K&D center with its auditorium and educational g-learning methods will be ideal to bring in the education and teacher seminars and training.

12) Do you care if the City uses the 1/8 cent or can they come up with their half of the cost for the lease/purchase payment some other way?

- Ultimately that is for the City Manager and the Board of Supervisors to determine if and how they should pay for their half of the cost of the project. I do believe the redevelopment money being used is exactly slated for this use and cannot be used in ways other than redevelopment. As to the 1/8 cent sales tax increase, I personally believe the construction multiplier, the tourists, and the outside travelers the KDC brings will pay for a substantial portion of the KDC, I understand the political climate and if the city wants to sidestep the 1/8 for some other way, that is their decision as Carson City's elected officials.

13) What are the next steps?

- We can go no further until we have City commitment. We have assembled the land. We have paid for numerous economic and feasibility studies. We have held charettes and advisory committee meetings, utilizing their input. We have funded architectural costs so we can see the big picture and the costs. Once the City communicate they are committed to the project, the experts and lawyers can then put the necessary documents. The bullet points have all been sounded out, we now need the agreements assembled – probably a foot thick pile of agreements. The private parties will do their fundraising. The KDC, the plaza, etc will all then be named as decreed by those donating private funding. The financing organizations will the then lock down the interest rate based on the structure and the perceived risk of the City doing their part and how they will generate those funds. The Nugget and MBAT will then donate the land to the Development Corporation and will embrace a CAM agreement to pay for the maintenance of the plaza, garage, and the free public events in the plaza, etc.

14) What other things are in the HMAF, MBAT and the Nuggets mind? Can they do other things if this does not work?

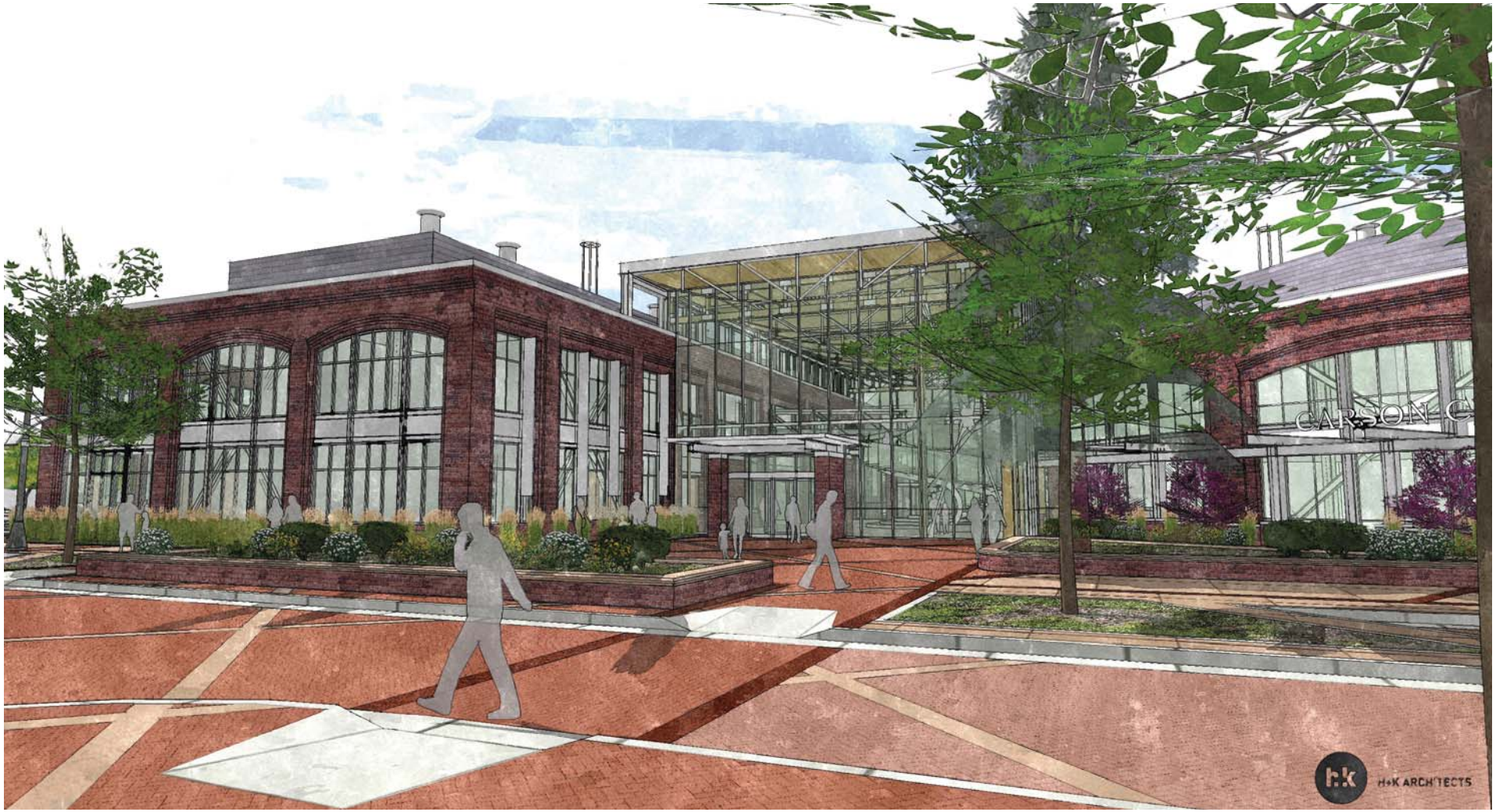
- Our objective is and will continue to be to address root community issues. We really believe in this project as the most optimum impact to Carson City's future. Nevertheless if the City Representatives decide against the project, we will begin looking other community partners – be they private or not - to achieve our goals. We will partner with organizations that share our worldview, not unlike the NNDA partnership we have for the NvEB-5 program.

Carson City Center

Conceptual Design
July 2011

Carson City Center

Conceptual Design



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CARSON CITY PLANNING DIVISION

Lee Plemel, AICP, Planning Director

CARSON CITY LIBRARY FOUNDATION

Severin A. Carlson, Chairman

CARSON CITY LIBRARY BOARD OF TRUSTEES

Sandy Foley, Chair
Drew Simmons, Vice Chair
Bob Kennedy
Maxine Nietz
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CARSON CITY LIBRARY

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SCOPE

In mid April of 2011, H+K Architects were contracted for professional services to conduct a conceptual site and building study to design a 65,000 square foot Knowledge and Discovery Center, a 395 stall Parking Structure, and a Public Plaza in Carson City, Nevada at the site of the land currently owned by the Mae B. Adams Trust (Carson Nugget). Our scope included providing the following deliverables by July 7, 2011:

- Conceptual Site Plan, Floor Plans, Exterior Elevations, Building Sections
- Various Conceptual 3D SketchUp views
- Preliminary Building Code Study
- Preliminary Opinion of Probable Cost
- Structural, Mechanical, Electrical and LEED Strategy System Narratives

A master planning charrette was conducted at the BRIC on April 21st to determine the locations of the project elements within the existing site context. After many scenarios were discussed, it was agreed upon by all involved to locate the Parking Structure directly adjacent and to the east of the Nugget building to provide easy access for its patrons. The Public Plaza was then sited directly south of the Parking Structure. These elements both provided the requested 'buffer' from the Knowledge and Discovery Center which was sited directly south of the Public Plaza.

In addition to the public elements discussed so far, the overall master plan considered sites for a future 125 room hotel of approximately 50,000 gsf as well as a future Business/Learning Center of approximately 20,000 gsf. Both of these elements were sited to the east along Stewart Street with their parking areas providing a barrier to the traffic on Stewart Street.

SITE CONTEXT

PROGRAMMING

On April 29th, a Programming meeting was held with Sara Jones and Tammy Westergard regarding our starting point for the Knowledge and Discovery Center. They shared a previous 'Space Needs Assessment' prepared by Page+Moris in September of 2009. This document provided the information we required to start our conceptual design process in earnest. The only exceptions to this document were the request for additional study and conference rooms sprinkled throughout the building and substituting a full 180+ seat sloped-floor fixed-seat auditorium in lieu of the multi-use meeting space. To accommodate these additions to the program, the overall area was increased from 60,000 to 65,000 gsf.

ARCHITECTURAL CHARACTER

While researching imagery and building typologies that are true, consistent, and complimentary to downtown Carson City, we realized that the history of Carson City revolved around the railroad providing lumber to the gold and silver mines in Virginia City. Images of the original V&T Roundhouse led us to other railroad and lumber mill images we were able to study to better understand this 'blue collar' vernacular that we felt was appropriate for the community of Carson City.

The exterior design of the Knowledge and Discovery Center, the Parking Structure and the Public Plaza all incorporate this historical vernacular. The predominant material is brick with precast concrete trim pieces and exposed structural steel elements, a pallet not unlike what was historically used. The materials and rhythm of the facades have been designed to provide buildings that properly address both the surrounding context and street frontages.

SITE DESIGN

The overall site is bound by East Robinson Street to the north, South Stewart Street to the east, East Proctor Street to the south, and South Plaza Street to the West.

Its position is significant as redevelopment improvements proposed for Carson Street including new brick paver sidewalks, diagonal on-street parking and street lamps, are planned to extend to this project effectively expand the charming downtown urban street and pedestrian experience to the new Public Plaza and Knowledge and Discovery Center.

BUILDING DESIGN

The major building entrances face north to East Telegraph Street and south to East Proctor Street and are both aligned with the center of North Fall Street. A secondary entrance facing east toward the proposed parking area has also been provide for convenience. Two additional entrances off of South Plaza Street and East Proctor Street support the programmatic requirement for the Auditorium, Gallery, and Local History Collection to have independence regarding hours of operation. Both of these entrances lead directly into the Gallery which doubles as the pre-function / lobby space for the 180 seat Auditorium.

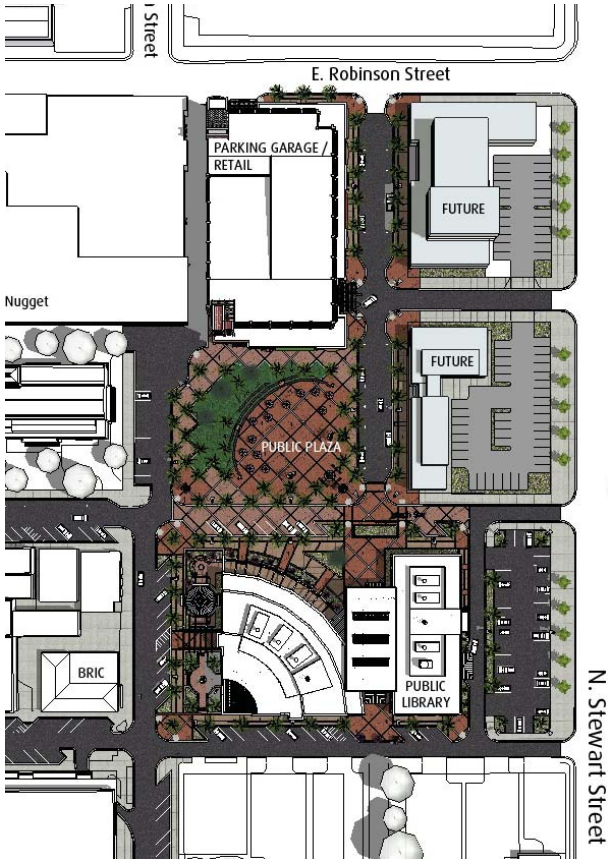
The limited available site area and the goal to not have a building over 2-levels predicated a fairly dense building foot print. The building massing consists of a pie-shaped 2-story brick building which houses both the Youth and Adult Collections as well as the Gallery and Auditorium. A second rectilinear 2-story brick building contains the Teen Center and Business Development areas as wells as all of the formal 'library' adminstrative and operational functions.

A glass skinned Grand Lobby with natural light monitors, circular stairway and an overhead bridge connect the two brick structures. This transparent two-story element also visually connects the two levels of the brick building masses within.

The goal of the building design was to provide a building that is easily understood upon entering, with the different areas and functions readily visible reducing the required way-finding signage. In addition, providing natural daylighting in all occupied spaces for both public and staff use was also a goal of the design. With this in mind, service points on both levels were positioned adjacent to the Grand Lobby allowing staff to view and cover multiple service points when patron occupancy is lower.

The Youth Area is the major public tenant on the ground level providing easier access for parents with children as well as the necessary separation from the General Collection located on the upper floor. It includes its own Service desk as well as a Program Room that can be separated from the rest of the area for story time or other programming. The Youth area includes book stack areas, public computers, and abundant seating for group activities.

The Teen Center in the northeast corner is essentially a 'library within a library' with a computer lab, quiet study areas, program space, group study rooms, and booth seating. Its location provides the required separation from the remainder of the facility as well as immediate views and access to the Public Plaza.

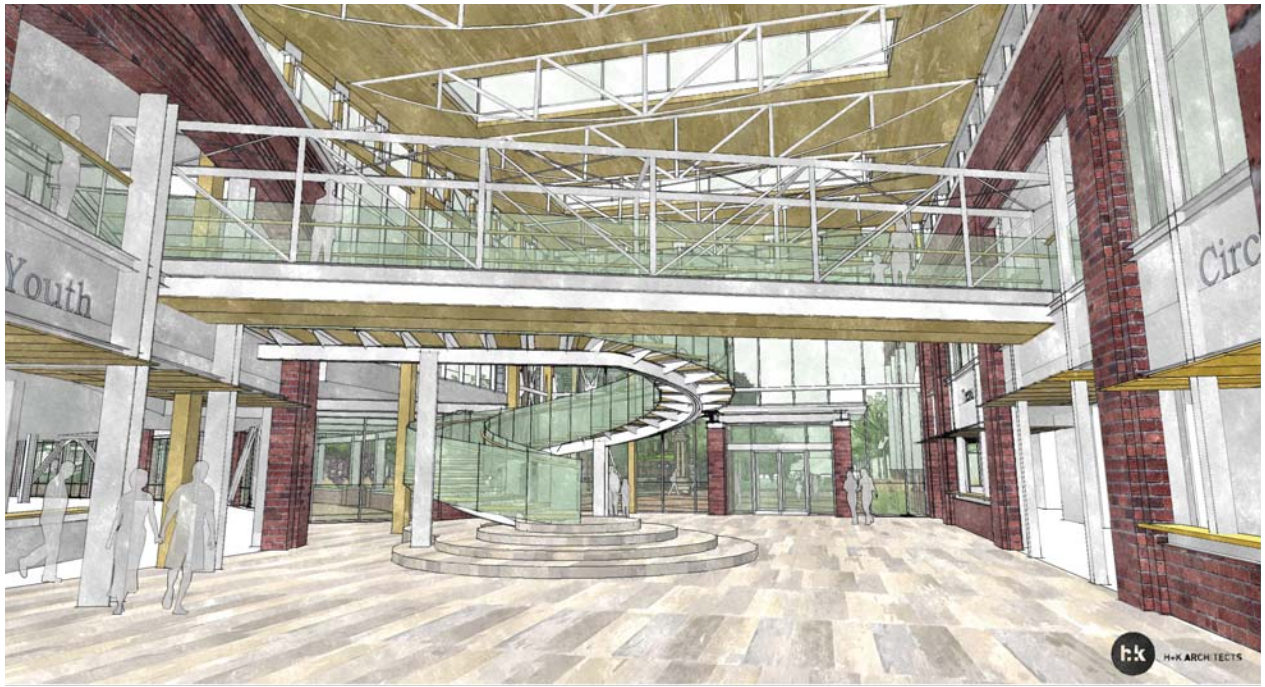


The General Collection is the major tenant of the upper level. The upper level location provides welcome separation from the busier lower level Lobby and the Youth and Teen Areas. Another Service desk is provided at this area to accommodate patrons at this collection. The General Collection area includes book stack areas, public computers, and user seating for both groups and individuals.

Large aisles between book stacks were designed to accommodate the browsing nature of public library collections. Currently, with 24" wide book stacks, the aisles are 42" wide minimum. Placing stacks in the radial layout mimics the architecture and provides almost unlimited flexibility for future stack/furniture layouts.

The Business Development / Reference area in the northeast corner of the upper level and the Library Administration in the southeast corner are served jointly by another service desk located near the 'bridge'. The Business Development / Reference area provides the reference collection, popular computer center and lab, as wells as both quiet and group study areas.

The two-level vaulted Lobby allows most of these areas to be viewed and understood upon entering-giving patrons a comfortable and understandable sense of place. The major circulation is through and around the Lobby space on both floors. This provides patrons with an opportunity to experience and understand the building. Large windows supply natural daylighting to both the Children's Area as well as the General Collection on the north side. Natural daylight will also be borrowed from the naturally lit Lobby space as well.



SUSTAINABILITY
The goal of the Project is to meet formal LEED certification with a building that is environmentally sensitive, utilizing environmentally appropriate materials and strategies. We believe a Silver rating could be achieved. To this end, the design offers the following sustainable elements:

THERMAL MASS
4" thick exterior masonry veneer walls provide thermal mass to absorb and store warmth and coolness until it is needed. Thermal mass acts to prevent large changes of indoor temperature as the outdoor temperatures rise or fall. In winter, thermal mass absorbs heat by direct sunlight. At night the process is reversed as thermal mass gives up heat. In the summer, thermal mass absorbs the warmth from the surrounding air during the day and gives up the heat during the cooler night.

SHADING
Both vertical and horizontal shading devices will be incorporated at the large curtainwall expanses depending on orientation. At west and east exposures, ad vertical fin shading devices will be employed. At the south exposure, horizontal shading devices and light shelves will be utilized to both block direct sunlight and bounce the natural daylight deeper into the building. Fritted glazing and automatic roller shades may also be employed as the project is further developed.

INSULATION
The 6" batt insulation at the exterior masonry veneer walls will provide an effective R Value of 23. 4" thick rigid insulation at roofs will provide an effective R Value of 25.

LIGHTING & CONTROLS
High performance, energy saving electronic T8 lamp/ballast or T5HO lamping will be used whenever possible. Multiple switching, dimming, and occupancy sensors, will be utilized wherever appropriate. Naturally lit public areas will be automatically dimmed or switched in response to input from photocells to maximize efficient daylight harvesting strategies.

PHOTOVOLTAICS
PV laminate modules will be located on the sloping roof monitors over the Lobby providing approximately 16.8W DC. As the project is developed further, the south facing surfaces of the roof top mechanical screens may also be utilized for vertical mounting of more PV panels.

MATERIALS AND RESOURCES
As the project is developed further, materials will be selected with particular attention to recycled content, regional manufacturing, and indoor air qualities.

The U.S. Green Building Council (USGBC) has developed the LEED (Leadership in Energy & Enviromental Design) Green Building Rating System as an accepted process to rate new and existing commercial, institutional, and residential buildings based on accepted energy and environmental principles.

As the project is further developed, there are many other specific design elements and project issues that would directly attribute to obtaining specific LEED points in virtually all of the 7 LEED topics.

The following is an excerpt from the The U.S. Green Building Council (USGBC) LEED 2009 New Construction and Major Renovations Rating System:

LEED 2009 Green Building Rating System for New Construction and Major Renovations is a set of performance standards for certifying the design and construction of commercial or institutional buildings and high-rise residential buildings of all sizes, both public and private. The intent is to promote healthful, durable, affordable, and environmentally sound practices in building design and construction.

Prerequisites and credits in the LEED 2009 for New Construction and Major Renovations addresses 7 topics:

Sustainable Sites (SS)
Water Efficiency (WE)
Energy and Atmosphere (EA)
Materials and Resources (MR)
Indoor Environmental Quality (IEQ)
Innovation in Design (ID)
Regional Priority (RP)

LEED 2009 for New Construction and Major Renovations certifications are awarded according to the following scale:

Certified	***40-49 points***
Silver	***50-59 points***
Gold	***60-79 points***
Platinum	***80 points and above***

GBCI will recognize buildings that achieve one of these rating levels with a formal letter of certification.

LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATIONS
PRELIMINARY PROJECT CHECKLIST

Sustainable Sites	26 Possible Points
X Prerequisite 1 Construction Activity Pollution Prevention	Required
X Credit 1 Site Selection	1
Credit 2 Development Density and Community Connectivity	5
Credit 3 Brownfield Redevelopment	1
Credit 4.1 Alternative Transportation—Public Transportation Access	6
X Credit 4.2 Alternative Transportation—Bicycle Storage and Changing Rooms	1
X Credit 4.3 Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
X Credit 4.4 Alternative Transportation—Parking Capacity	2
X Credit 5.1 Site Development—Protect or Restore Habitat	1
X Credit 5.2 Site Development—Maximize Open Space	1
Credit 6.1 Stormwater Design—Quantity Control	1
Credit 6.2 Stormwater Design—Quality Control	1
Credit 7.1 Heat Island Effect—Nonroof	1
X Credit 7.2 Heat Island Effect—Roof	1
X Credit 8 Light Pollution Reduction	1

Water Efficiency	10 Possible Points
X Prerequisite 1 Water Use Reduction - 20% reduction	Required
X Credit 1 Water Efficient Landscaping	2-4
Credit 2 Innovative Wastewater Technologies	2
X Credit 3 Water Use Reduction - 30% reduction	2-4 (3)

Energy and Atmosphere	35 Possible Points
X Prerequisite 1 Fundamental Commissioning of Building Energy Systems	Required
X Prerequisite 2 Minimum Energy Performance	Required
X Prerequisite 3 Fundamental Refrigerant Management	Required
X Credit 1 Optimize Energy Performance - improve by 20%	1–19 (10)
X Credit 2 On-site Renewable Energy	1–7 (1)
X Credit 3 Enhanced Commissioning	2
X Credit 4 Enhanced Refrigerant Management	2
X Credit 5 Measurement and Verification	3
Credit 6 Green Power	2

Materials and Resources	14 Possible Points
X Prerequisite 1 S torage and Collection of Recyclables	Required
Credit 1.1 Building Reuse—Maintain Existing Walls, Floors and Roof	1-3
Credit 1.2 Building Reuse—Maintain Existing Interior Nonstructural Elements	1
X Credit 2 Construction Waste Management	1-2 (1)
Credit 3 Materials Reuse	1-2
X Credit 4 Recycled Content	1-2 (1)
X Credit 5 Regional Materials	1-2 (1)
Credit 6 Rapidly Renewable Materials	1
X Credit 7 Certified Wood	1

Indoor Environmental Quality	15 Possible Points
X Prerequisite 1 Minimum Indoor Air Quality Performance	Required
X Prerequisite 2 Environmental Tobacco Smoke (ETS) Control	Required
X Credit 1 Outdoor Air Delivery Monitoring	1
X Credit 2 Increased Ventilation	1
X Credit 3.1 Construction Indoor Air Quality Management Plan—During Construction	1
X Credit 3.2 Construction Indoor Air Quality Management Plan—Before Occupancy	1
X Credit 4.1 Low-Emitting Materials—Adhesives and Sealants	1
X Credit 4.2 Low-Emitting Materials—Paints and Coatings	1
X Credit 4.3 Low-Emitting Materials—Flooring Systems	1
X Credit 4.4 Low-Emitting Materials—Composite Wood and Agrifiber Products	1
X Credit 5 Indoor Chemical and Pollutant Source Control	1
X Credit 6.1 Controllability of Systems—Lighting	1
Credit 6.2 Controllability of Systems—Thermal Comfort	1
X Credit 7.1 Thermal Comfort—Design	1
Credit 7.2 Thermal Comfort—Verification	1
X Credit 8.1 Daylight and Views—Daylight	1
X Credit 8.2 Daylight and Views—Views	1

Innovation in Design	6 Possible Points
Credit 1 I nnovation in Design	1-5
X Credit 2 LEED Accredited Professional	1

Regional Priority	4 Possible Points
Credit 1 Regional Priority	1-4

LEED 2009 for New Construction and Major Renovations
100 base points; 6 possible Innovation in Design and 4 Regional Priority points

Certified	40–49 points
Silver	50–59 points
Gold	60–79 points
Platinum	80 points and above

Construction Cost Summary

	Description	Area		Cost / SF	Total Construction
1.	**New Parking Structure**	156,935	SF	$57.99	$9,101,000
2.	**New Parking Structure (Retail Component)**	11,325	SF	$150.75	$1,707,300
3.	**New Parking Structure - Perimeter Sitework**	50,544	SF	$8.72	$440,900
4.	**New Library**	55,750	SF	$278.98	$15,552,900
5.	**New Library - Perimeter Sitework**	85,134	SF	$11.51	$979,900
6.	**New Auditorium**	8,319	SF	$396.86	$3,301,300
7.	**New Plaza**	35,190	SF	$40.11	$1,411,300
8.	**Site Roads / Infrastructure**	72,000	SF	$33.03	$2,378,000
9.	**AV Budget**	-		-	$250,000
10.	**PV Panels at Library**	-		-	$132,000
11.	**Sub-Total Construction Cost (Q2 / 2011)**				**$35,254,600**
12.	**Escalation to MOC (Q2 / 2013)**			**2.89%**	$1,019,700
13.	**Phasing**			**1.00%**	$353,000
14.	**Total Construction Cost (Q2 / 2013)**				**$36,627,300**

15.	**Cost Options**		
	Bid items 1 thru 11 above under 1 contract	DDT	($916,000)
	Combine Library / Auditorium into 1 contract	DDT	($396,000)

Project Cost Summary

	Description		Total
1.	**Total Construction Cost**		$36,627,300
2.	**Soft Costs**		
	AE Fees	8.00%	$2,930,000
	Miscellaneous Consultants (AV, LEED, Acoustical, etc.)	2.00%	$733,000
	Testing / Inspection	1.50%	$549,000
	Planning / Permits	0.50%	$183,000
	Utility Connection Fees	-	$150,000
	PM Fees		not required
	Legal / Admin Fees	0.20%	$73,000
	Bidding Costs	0.10%	$37,000
	FF&E	2.50%	$916,000
	Library Shelving	-	$239,000
	Low Voltage Devices / Cable	2.25%	$824,000
	Construction Contingency	5.00%	$1,831,000
3.	**Total Project Cost**		**$45,092,300**

H+K Architects has no control over the cost or availability of labor, equipment or materials, or over market conditions or the potential Contractor's method of pricing, and as such, the opinion of probable construction costs are made on the basis of our professional judgment and experience. We make no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from this opinion of probable construction cost.

Schedule of Areas		Parking SF	Library SF	Auditorium SF	Sitework SF
1. Enclosed areas (x 100%)					
1st floor		34,529	30,212	4,922	-
2nd floor		27,185	23,338	2,463	-
3rd floor		27,185	2,200	-	-
4th floor		27,185	-	-	-
5th floor		27,185	-		
6th floor		24,391	-	-	-
Subtotal - enclosed areas		**167,660**	**55,750**	**7,385**	**-**
2. Unenclosed areas (x 50%)					
1st floor overhang entries		1,200	994	428	-
2nd floor covered ext deck			296	1,439	
Subtotal - unenclosed areas		**1,200**	**1,290**	**1,867**	
Unenclosed areas @ 50%		**600**	**645**	**934**	
3. Total Gross Floor Area		**168,260**	**56,395**	**8,319**	**-**
Control Quantities		**Qty**	**Qty**	**Qty**	**Qty**
Number of stories	ea	6	2	2	-
Gross area	sf	168,260	56,395	8,319	-
Enclosed area	sf	167,660	55,750	7,385	-
Unenclosed / covered area	sf	-	-	1,867	-
Footprint area	sf	34,529	30,212	4,922	-
Upper floor area	sf	133,131	25,538	2,463	-
Perimeter					
1st floor	lf	860	1,060	300	-
2nd floor	lf	726	920	260	-
3rd floor	lf	726	-	-	-
4th floor	lf	726	-	-	-
5th floor	lf	726	-	-	-
6th floor	lf	715	-	-	-
Floor to floor heights:					
1st floor	lf	varies	14.67	14.67	-
2nd floor	lf	11.50	varies	varies	-
3rd floor	lf	11.50	-	-	-
4th floor	lf	11.50	-	-	-
5th floor	lf	11.50	-	-	-
6th floor	lf	11.50	-	-	-
Gross wall area	sf	54,089	31,746	8,978	-
Finished wall area	sf	47,598	20,635	5,387	-
Windows or glazed area	sf	6,491	11,111	3,591	-
Roof area - flat	sf	#REF!	31,000	6,000	-
Finished Area	sf	156,335	56,395	7,385	-
Shelled Area (Retail)	sf	11,325	-	-	-
Perimeter sitework around bldgs	sf	16,015	50,000	incl w/ Library	-
Site Plaza	sf	-	-	-	35,190
Public Sitework / Infrastructure	sf	-	-	-	72,000

Construction Cost Summary - By System

Building Component	New Parking Structure	Retail	Parking Structure Site	Library	Library Site	Auditorium	Plaza	Site Infrastructure	TOTAL
1 Foundations	$296,400	$189,900		$240,700		$57,000			$784,000
2 Vertical Structure	$648,700	$71,400		$594,700		$86,600			$1,401,400
3 Floor & Roof Structures	$3,325,400	$232,900		$1,260,000		$277,500			$5,095,800
4 Exterior Cladding	$856,600	$627,100		$2,040,800		$609,800			$4,134,300
5 Roofing and Waterproofing	$36,000	$66,900		$255,800		$143,900			$502,600
6 Interior Construction	$128,900	$60,000		$306,800		$93,900			$589,600
7 Interior Finishes	$177,900	$14,200		$708,500		$231,200			$1,131,800
8 Equipment / Specialties	$210,700	$11,500		$365,400		$87,200			$674,800
9 Vertical Transportation	$479,000			$378,700		$24,000			$881,700
10 Plumbing Systems	$52,500	$28,300		$451,000		$77,400			$609,200
11 HVAC	$25,000	$51,000		$3,077,700		$419,700			$3,573,400
12 Electrical	$565,000	$56,600		$2,941,200		$500,500			$4,063,300
13 Fire Protection Systems	$487,100	$22,700		$217,400		$35,400			$762,600
14 Site Preparation			$104,600		$148,400		$69,200	$326,800	$649,000
15 Site Improvements			$118,800		$451,400		$750,700	$391,600	$1,712,500
16 Site Utilities			$129,700		$185,000		$310,400	$1,186,200	$1,811,300
Subtotal	**$7,289,200**	**$1,432,500**	**$353,100**	**$12,838,700**	**$784,800**	**$2,644,100**	**$1,130,300**	**$1,904,600**	**$28,377,300**
General Conditions	$510,200	$100,300	$24,700	$872,000	$54,900	$185,100	$79,100	$133,300	$1,959,600
GC Fee, OH & P	$312,000	$61,300	$15,100	$533,100	$33,600	$113,200	$48,400	$81,500	$1,198,200
Bonds & insurance	$162,200	$31,900	$7,900	$277,200	$17,500	$58,800	$25,200	$42,400	$623,100
Design Contingency	$827,400	$81,300	$40,100	$1,413,900	$89,100	$300,100	$128,300	$216,200	$3,096,400
Escalation	$263,200	$49,400	$12,800	$460,900	$28,300	$95,500	$40,800	$68,800	$1,019,700
Phasing	$91,000	$17,100	$4,400	$159,300	$9,800	$33,000	$14,100	$23,800	$352,500
Total Construction Cost	**$9,455,200**	**$1,773,800**	**$458,100**	**$16,555,100**	**$1,018,000**	**$3,429,800**	**$1,466,200**	**$2,470,600**	**$36,627,300**

COST REDUCING STRATEGIES

- Review of draft budget with Project Team. This 1st step is to ensure our interpretation of the design is correct. Feedback from H+K and / or our consultants may throw out some issues that will help us scale back the numbers. Whilst this may help take the number down, it is probably in the 1 – 2% range (the process will likely identify things that will go up also).
- Proposed VE of current design. We can look at reviewing the current level of design / spec and propose options to scale back where appropriate (on spec, enhancements, finishes, MEP, etc.). From the ideas generated, what would be acceptable to the Owner would probably be in the 2 – 3% range. This would not alter the design significantly.
- Proposed alternate systems. This would involve proposing alternate mech, elec, structural, skin systems. This would likely have a bigger impact on overall cost but would also impact the design concept significantly. Possible savings likely to be in the 3 – 5% range.
- Review of program / approach. This would be the most drastic adjustment and the one we would look at last. This would offer the largest adjustment in cost. Deferring of scope and alternate delivery methods could also be factored in here.

INTRODUCTION

The design and construction of the facility shall conform to the current edition of all applicable building codes, laws, and regulations as adopted by the City of Fallon at the time of permitting. The information in this section reflects the anticipated adopted code, the 2009 edition of the International Building Code. If the 2006 or the 2012 IBC is adopted, only minor differences are anticipated.

Anticipated Carson City Adopted Building Codes:

2009 International Building Code
2009 International Energy Conservation Code
2009 International Fire Code
2009 International Mechanical Code
2009 International Plumbing Code
2009 National Electrical Code

Federal Regulations

The following Federal Regulations are not building codes, but may impact the design, construction, and operation of project:

Federal Occupational Safety and Health Act of 1970 (OSHA)
U.S. Environmental Protection Agency Regulations
Americans with Disabilities Act, Accessibility Guidelines
American National Standard, Accessible and Usable Buildings and Facilities, ICC/ANSI A117.1 – latest edition.

2009 IBC Code Analysis

CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION

Occupancy Type: Section 303.1 Assembly Group A-3:

CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS

503 General Height and Area Limitations: Table 503 - Group A-3 Type III B Construction

Allowable Height: 2 Stories
Allowable Building Area per story: 9,500 square feet

Allowable Stories: A-3 – 2 stories (Table 503)
Maximum Building Height: 55 feet (Table 503)

506 BUILDING AREA MODIFICATIONS: Group A-3 – Type III B

506.1 Allowable Area Increase Calculation: (Equation 5-1)
Aa = At + (At x If) + (At x Is)

Where: Aa = Allowable building area per story (square feet)
At = Tabular building area per story in accordance with Table 503 (sf)
If = Area increase factor due to frontage as calculated in accordance with Section 506.2.
Is = Area increase factor due to sprinkler protection as calculated in accordance with Section 506.3.
Aa = 9,500 + (9,500 x .75) + (9,500 x 2)
= 9,500 + 7,125 + 19,000
= 35,625 square feet

Total Allowable Area per story: 35,625 square feet

First Story Area:	35,134 square feet
Second Story Area:	25,801 square feet
Third Story Area (Mech.)	2,200 square feet
Total Building Area:	63,135 square feet

506.2 Frontage Increase Calculation: (Equation 5-2)
If = [F / P – 0.25] W / 30

Where: If = Area increase due to frontage.
F = Building perimeter that fronts on a public way or open space having 20 feet open minimum width (feet).
P = Perimeter of entire building (feet).
W = Width of public way or open space (feet) in accordance with Section 506.2.1.

If = [1103/ 1103– 0.25] 30 / 30
= [1 –0.25] 1
= .75 x 1
= .75

506.3 Automatic sprinkler system increase: Yes – (Is = 2) for two story building.

506.4 Area determination: 35,134 x 2 stories = 70,268 square feet total allowable area

CHAPTER 6 – TYPES OF CONSTRUCTION

Construction Type: Type III-B: Building elements listed in Table 601 shall be constructed of non-combustible materials. See below for fire resistance rating for these elements.
Fire Resistance Ratings: Type II-B (Table 601)
Structural Frame – Nonrated
Bearing walls:
Exterior walls–Nonrated per footnote 'g.' (see Table 602) at all walls due to distance X ≥ 30';
Interior – Nonrated
Nonbearing walls exterior (See Table 602) – Nonrated due to Fire Separation Distance X ≥ 30'
Nonbearing walls interior – Nonrated
Floor construction – Nonrated
Roof construction – Nonrated

CHAPTER 7 – FIRE RESISTANCE-RATED CONSTRUCTION

704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS

704.10 Exterior structural members. Load-bearing structural members located within the *exterior walls* or on the outside of a building or structure shall be provided with the highest fire-resistance rating as determined in accordance with the following:

1. As required by Table 601 for the type of building element based on the type of construction of the building;
2. As required by Table 601 for exterior bearing walls based on the type of construction; and
3. As required by Table 602 for *exterior walls* based on the *fire separation distance*.

Structural frame is set inside exterior walls = 0 rating required.

705 EXTERIOR WALLS

705.2.2 Type III construction. Projections from walls of Type III onstruction shall be of any *approved* material.

705.8.1 Allowable area of openings. The maximum area of unprotected and protected openings permitted in an exterior wall in any story of a building shall not exceed the percentages specified in Table 705.8.

Exceptions:
2) Buildings whose exterior bearing walls, exterior non bearing walls and exterior primary structural frame are not required to be fire-resistance rated shall be permit tedto have unlimited unprotected openings.

705.8.5 Vertical separation of openings

Exceptions:
1. This section shall not apply to buildings that are three stories or less in height.
2. This section shall not apply to buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

708 SHAFT ENCLOSURES
708.2 Shaft enclosure required. Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this Section.

Exceptions:
16. Where permitted by other sections of this code.
See Section 716 Ducts and Air Transfer Openings 716.6.6.3.2

708.14 Elevator, dumbwaiter and other hoistways. Elevator, dumbwaiter and other hoistway enclosures shall be constructed in accordance with Section 708 and Chapter 30.

708.14.1 Elevator lobby. An enclosed elevator lobby shall be provided at each floor where an elevator shaft enclosure connects more than three stories. Therefore, due to the two-story nature of this project, enclosed elevator lobbies are not required.

CHAPTER 10 – MEANS OF EGRESS
1007 ACCESSIBLE MEANS OF EGRESS
1007.3 Stairways. In order to be considered part of an accessible means of egress, an exit access as permitted by Section 1016.1 or exit stairway shall have a clear width of 48 inches minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exceptions:
1. The a*rea of refuge* is not required at open exit access or exit stairways as permitted by Sections 1016.1 and 1022.1 in buildin gs equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

1014 EXIT ACCESS
1014.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

1. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas are accessory to the area served, are not a high hazard-occupancy and provide a discernible path of egress travel to an exit.
2. An exit access shall not pass through a room that can be locked to prevent egress.
4. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.

1014.3 Common path of egress travel. In occupancies other than Groups H-1, H-2, and H-3, the common path of egress travel shall not exceed 75 feet....(The common path of travel is the distance measured from the most remote point in a space to the point in the exit path where the occupant has access to two required exits in separate directions.)

1015 EXIT AND EXIT ACCESS DOORWAYS
1015.1 Exit or exit access doorways from spaces. Two exits or exit access doorways from any space shall be provided where one of the following conditions exist:
1. The occupant load of the space exceeds one of the values in Table 1015.1.
2. The common path of egress travel exceeds one of the limitations of Section 1014.3.
3. Where required by Sections 1015.3, 1015.4, 1015.5, 1015.6 or 1015.6.1.

1015.1.1 Three or more exits or exit access doorways. Three exits or exit access doorways shall be provided from any space with an occupant load of 501 to 1,000.....

1015.2.1 Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than on-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors or exit access doorways. Interlocking or scissor stairs shall be counted as one exit stairway.

Exceptions:
2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.

1016 EXIT ACCESS TRAVEL DISTANCE
1016.1 Travel Distance limitations. Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story along the natural and unobstructed path of egress travel to an exterior exit door at the level of discharge, ...shall not exceed the distances given in Table 1016.1.

Exceptions:
4. In other than occupancy Groups H and I, exit access travel distance is permitted to be measured from the most remote point within a building to an exit using unenclosed exit access stairways or ramps in the first and second stories above grade plane in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. The first and second storiess above grade plane shall be provided with at least two means of egress. Such interconnected stories shall not be open to other stories.

Where applicable, travel distance on unenclosed exit access stairways or ramps and on connecting stories shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosingss in the center of the stairway.

Table 1016.1: A occupancy with sprinkler system = 250 feet Exit Access Travel Distance

CARSON CITY DOWNTOWN DEVELOPMENT CODE HEIGHT SPECIFICATIONS AND REQUIRED TRANSTIONS:
URBAN MIXED USE DESIGNATION

Telegraph & Proctor Streets: 0 feet from property line - Maximum height allowed along street frontage is 3 stories or 36 feet. Stepback of 25 feet required before maximum height of 8 stories or 95 feet may be achieved.

Plaza Street: 0 feet from property line - Maximum height allowed along street frontage is 3 stories or 36 feet. Stepback of 10 feet required before additional 24 feet may be achieved. Additional stepback of 10 feet required before maximum height of 8 stories or 95 feet may be achieved.

Stewart Street: 0 feet from property line - Maximum height allowed along street frontage is 3 stories or 36 feet. Stepback of 25 feet required before additional 24 feet may be achieved. Additional stepback of 10 feet required before maximum height of 8 stories or 95 feet may be achieved.

INTRODUCTION

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The following Federal Regulations are not building codes, but may impact the design, construction, and operation of project:

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U.S. Environmental Protection Agency Regulations
Americans with Disabilities Act, Accessibility Guidelines
American National Standard, Accessible and Usable Buildings and Facilities, ICC/ANSI A117.1 – latest edition.

2009 IBC Code Analysis

CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION
Occupancy Type: Section 311.3 Low Hazard Storage Group S-2:

CHAPTER 4 – SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY
406 MOTOR VEHICLE-RELATED OCCUPANCIES

406.2 Parking Garages.

406.2.1 Classification. Parking garages shall be classified as either open, as defined in Section 406.3, or enclosed and shall meet the appropriate criteria in Section 406.4. Also see Section 509 for special provisions for parking garages.

Due to Retail Wrap on three sides and proximity of existing Nugget Building, the Parking Garage is considered enclosed for the bottom two levels and open at the top four levels.

406.2.7 Mixed occupancy separation. Parking garages shall be separated from other occupancies in accordance with Section 508.1.

Per Table 508.4 the required separation from the Parking Area S-2 and the Retail Wrap B is 1-Hour when protected with an automatic sprinkler system *(required per Section 903.2.10)*.

406.2.8 Special Hazards. Connection of parking garage with any room in which there is a fuel-fired appliance shall be by means of a vestibule providing a two-doorway separation.

Exception: A single door shall be allowed provided the sources of ignition in the appliance are at least 18 inches above the floor.

This will need to be taken into consideration when relocation the emergency generator that services the Nugget Building into the first floor of the Parking Garage.

406.3 Open Parking Garages
OPEN PARKING GARAGE. A structure or portion of a structure with the openings as described in Section 406.3.3.1 on two or more sides that is used for the parking or storage of private motor vehicles as described in Section 406.3.4.

RAMP-ACCESS OPEN PARKING GARAGES. *Open parking garages* employing a series of continuously rising floors or a series of interconnecting ramps between floors permittng the movement of vehicles under their own power from and to the street level.

406.3.3 Construction. *Open parking garages* shall be of Type I, II or IV construction. Open parking garages shall meet the design requirements of Chapter 16 (Structural Design). For vechicle barrier systems, see Section 406.2.4.

406.3.3.1 Openings. For natural ventilation purposes, the exterior side of the structure shall have uniformly distributed openings on two or more sides. The area of such openings in *exterior walls* on a tier must be at least 20 percent of the total perimeter wall area of each tier. The aggregate length of the openings considered to be providing natural ventilation shall constitute a minimum of 40 percent of the perimeter of the tier. Interior walls shall be at least 20 percent open with uniformly distributed openings.

Exception: Openings are not required to be distributed over 40 percent of the building perimeter where the required openings are uniformly distributed over two opposing sides of the building.

406.3.7 Fire Separation distance. Exterior walls and openings in exterior walls shall comply with Tables 601 and 602. The distance to an adjacent lot line shall be determined in accordance with Table 602 and Section 705.

406.3.8 Means of egress. Where persons other than parking attendants are permitted, *open parking garages* shall meet the *means of egress requirements* of Chapter 10.

406.4 Enclosed parking garages.

406.4.1 Heights and areas. Enclosed vehicle parking garages and portions thereof that do not meet the definition of *open parking garages* shall be limited to the allowable heights and areas specified in Table 503 as modified by Section 504, 506 and 507. Roof parking is permitted.

406.4.2 Ventilation. A mechanical ventilation system shall be provided in accordance with the *International Mechanical Code*.

CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS
503 General Height and Area Limitations: Table 503 - Group S-2 Type I-B Construction
Allowable Building Area per story: 79,000 square feet
Allowable Stories: S-2 – 11 stories (Table 503)
Maximum Building Height: 160 feet (Table 503)

506 BUILDING AREA MODIFICATIONS: Group S-2 – Type I-B
506.1 Allowable Area Increase Calculation: (Equation 5-1)
Aa = At + (At x If) + (At x Is)
Where: Aa = Allowable building area per story (square feet)
At = Tabular building area per story in accordance with Table 503 (sf)
If = Area increase factor due to frontage as calculated in accordance with Section 506.2.
Aa = 79,000 + (79,000 x .43)
= 79,000 + 33,970
= 112,970 square feet

Total Allowable Area per story: 112,970 square feet

First Story Area	34,529 square feet
Second Story Area	27,185 square feet
Third Story Area	27,185 square feet
Fourth Story Area	27,185 square feet
Fifth Story Area	27,185 square feet
Sixth Story Area	24,391 square feet
Total Building Area:	167,660 square feet

506.2 Frontage Increase Calculation: (Equation 5-2)
If = [F / P – 0.25] W / 30
Where: If = Area increase due to frontage.
F = Building perimeter that fronts on a public way or open space having 20 feet open minimum width (feet).
P = Perimeter of entire building (feet).
W = Width of public way or open space (feet) in accordance with Section 506.2.1.

If = [543 / 799 – 0.25] 30 / 30
= [.68 –0.25] 1
= .43x 1
= .43

506.4 Area determination: 112,970 x 11 stories
1,242,670 square feet total allowable area

CHAPTER 6 – TYPES OF CONSTRUCTION
Construction Type: Type I-B: Building elements listed in Table 601 shall be constructed of non-combustible materials. See below for fire resistance rating for these elements.
Fire Resistance Ratings: Type I-B (Table 601)
Structural Frame – 2 hours
Bearing walls:
Exterior walls – 2 hours
Interior – 2 hours
Nonbearing walls exterior (See Table 602)
Nonrated at North/East/South sides due to Fire Separation Distance X ≥ 30'
1 hour rated at West side due to property line 10 < X < 30
Property line proposed at 11' away.
Nonbearing walls interior – Nonrated
Floor construction – 2 hour
Roof construction – 1 hour

CHAPTER 7 – FIRE RESISTANCE-RATED CONSTRUCTION
705 EXTERIOR WALLS
705.2.1 Type I-B construction. Projections from walls of Type I construction shall be of noncombustible materials or combustible materials as allowed by Sections 1406.3 and 1406.4.

705.8.1 Allowable area of openings. The maximum area of unprotected and protected openings permitted in an exterior wall in any story of a building shall not exceed the percentages specified in Table 705.8.

705 EXTERIOR WALLS
705.2.2 Type III construction. Projections from walls of Type III onstruction shall be of any *approved* material.

705.8.1 Allowable area of openings. The maximum area of unprotected and protected openings permitted in an exterior wall in any story of a building shall not exceed the percentages specified in Table 705.8.

North / East / South sides with fire separation of 30' or greater:
Unprotected, Nonsprinklered - No Limit

West side with fire separation of 10' to less than 15':
Unprotected, Sprinklered - 45%

705.8.5 Vertical separation of openings
Exceptions:
2. This section shall not apply to buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
3. Open parking garages

708 SHAFT ENCLOSURES
708.2 Shaft enclosure required. Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this Section.
Exceptions:
8. A shaft enclosure is not required for automobile ramps in open and enclosed parking garages constructed in accordance with Sections 406.3 and 406.4 respectively.
14. A shaft enclosure is not required for elevator hoistways in open or enclosed parking garages that serve only the parking garage.
15. In open or enclosed parking garages a shaft enclosure is not required to enclose mechanical exhaust supply duct systems when such duct system is contained within and serves only the parking garage.
16. Where permitted by other sections of this code. See 1022 Exception 4.

708.14.1 Elevator lobby. An enclosed elevator lobby shall be provided at each floor where an elevator shaft enclosure connects more than three stories.
Exceptions:
2. Elevators not required to be located in a shaft in accordance with Section 708.2 are not required to have enclosed elevator lobbies.
4. Enclosed elevator lobbies are not required where the building is protected by an automatic sprinkler system.....
7. Enclosed elevator lobbies are not required wher the elevator serves only open parking garages in accordance with Section 406.3.1016

CHAPTER 10 – MEANS OF EGRESS
1007 ACCESSIBLE MEANS OF EGRESS
1007.3 Stairways. In order to be considered part of an accessible means of egress, an exit access as permitted by Section 1016.1 or exit stairway shall have a clear width of 48 inches minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.
Exceptions:
3. *Areas of refuge* is not required at exit stairways in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
5. *Areas of refuge* are not required at exit stairsways serving open parking garages.

EXIT ACCESS TRAVEL DISTANCE
1016.1 Travel Distance limitations. Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story along the natural and unobstructed path of egress travel to an exterior exit door at the level of discharge, ...shall not exceed the distances given in Table 1016.1.
Exception:
1. Travel distance in open parking garages is permitted to be measured to the closese riser of open exit stair-ways.

Table 1016.1 Occupancy S-2 w/out sprinkler system = 300 feet
with sprinkler system = 400 feet

CARSON CITY DOWNTOWN DEVELOPMENT CODE
HEIGHT SPECIFICATIONS AND REQUIRED TRANSTIONS
URBAN MIXED USE DESIGNATION

N. Fall Street: 0 feet from property line - Maximum height allowed along street frontage is 3 stories or 36 feet. Stepback of 10 feet required before maximum height of 8 stories or 95 feet may be achieved.

E. Robinson Street: 0 feet from property line - Maximum height allowed along street frontage is 3 stories or 36 feet. Stepback of 25 feet required before maximum height of 8 stories or 95 feet may be achieved.

PARKING

Taking all the available off-street parking into account, the current development plan has a surplus of 104 spaces. These number only represent off-street parking per the development code requirements. There are a total of approximately 75 spaces of additional on-street parking available on the adjacent streets.

Preliminary Parking Overview

	SF	Ratio	Parking Req.	Parking Avail.
Knowledge & Discovery Center	63,135	2/1000	127	36 Surface
BRIC & Learning Center (proposed)	20,000	2/1000	40	40 Surface
Hotel (125 Rooms proposed)	50,000	2/1000	100	24 Surface
Nugget Casino	92,000	2/1000	184	53 Coin Lot 30 RV Lot
Retail Wrap @ Parking Garage	11,650	2/1000	23	395 Garage
Totals			**474**	**578**

CODES AND DESIGN CRITERIA

The 2006 International Building Code (2006 IBC) is the code currently adopted by Carson City where the project is located. A change to the 2009 building codes is anticipated. If the 2006 remains or the 2012 is adopted, we anticipate only minor differences.

Occupancy Category	III (Library w/ Occupant Load > 300)
Type of Construction	III-B
Roof Live Loads	See Snow Loads below
Floor Live Loads	150 psf (LibraryStacks) 100 psf (Typical)

Snow Loads

Ground Snow Load	30 psf
Importance Factor	1.10
Roof Snow Load	25 psf
Frost Depth	24″

Wind Loads

Basic Wind Speed	100 mph (3s Gust)
Exposure	C
Importance Factor	1.15

Seismic Loads

Anticipated lateral force resisting systems include the following: Bearing Wall systems using Special Reinforced Concrete or Masonry Shear Walls, Building Frame systems using Special Steel Concentrically Braced Frames, and Building Frame systems using Special Steel Moment Resisting Frames.

Site Class	D
Design Category	D
Importance Factor	1.25

DESCRIPTION OF STRUCTURE

The proposed facility is a two story building totaling approximately 65,000 square feet. The first floor consists of lobby, stack areas, an auditorium, reading areas, offices and work areas. The second floor will consist of stack areas, computing areas, areas open to below, and some exterior decks. Floor-to-floor heights are expected to be approximately 14′ to 15′. Mechanical systems are currently expected to be large packaged rooftop units located in a combination of penthouses and large screened enclosures above the roof. Schematic drawings are attached to indicate rough locations of critical structural elements such as braced frames / moment frames, and shearwalls.

ROOF SYSTEMS

The structural roof systems will generally consist of steel wide flange beams and girders. In special areas with exposed structure such as the lobby, fabricated steel trusses will be used to provide the desired architectural effect while providing the necessary structural support. Similar fabricated steel trusses will also be used in some locations to transfer diaphragm shear at steps between diaphragm levels. 3″ lightweight concrete fill on 3″x18ga composite metal deck (6″ total thickness) is anticipated for the majority of roof areas as they will need to provide support and damping for rooftop HVAC equipment. Above the lobby area, the roof decking will likely consist of plain 3″x18ga non-composite metal deck spanning across exposed fabricated steel trusses. The roof decking will provide the required roof diaphragm strength and support the required dead and live roof loads. Where the appearance of wood decking is desired at ceilings in areas with exposed structure, a wood ceiling system should be applied to the underside of structural metal decks.

FLOOR SYSTEMS

The first floor system will be a reinforced concrete slab-on-grade. A six inch slab is proposed for most areas. Floor slabs will utilize steel reinforcing bars and embedded synthetic fibers for durability. All concrete slabs will be supported by six inches of compacted granular fill placed over a vapor barrier. The elevated second floor system will consist of steel wide flange beams, girders and fabricated trusses supporting a 4″ lightweight concrete fill over 3″ composite metal floor deck (7″ total thickness). At areas with exposed decks, the floor structure will be recessed to accommodate an exterior paver system. The floor system will support the required dead and live floor loads, provide an effective floor diaphragm, and provide design flexibility for future re-arrangement of stacks and partitioned areas. The floor framing will be supported mainly by steel columns, although concrete or masonry walls may also be used in some areas where possible.

EXTERIOR WALL SYSTEMS

Exterior wall systems are expected to be a combination of glazing and metal stud framed walls with brick veneer or metal panel exterior finishes. 6″ metal studs are anticipated along with additional steel backup framing where necessary to support the architectural items such as the large arches shown on elevations.

FOUNDATION SYSTEMS

A preliminary geotechnical investigation report dated September 1, 2010 has been prepared by GEOCON for this project. This soils report presents a feasibility analysis for shallow v.s. deep foundation systems and ultimately anticipates the need for deep foundation systems due to a high water table and generally weak and liquefiable soils present in the area. We anticipate the systems could include piles, drilled piers,

or other mitigation efforts such as installation of stone columns to allow for the use of conventional shallow foundations.

LATERAL SYSTEMS

Due to the complex configurations and layouts planned for this building, combinations of a number of lateral force resisting systems will need to be utilized. We anticipate concrete and/or masonry shear walls at locations with radius walls wherever possible. At locations with radius walls and exterior glazing, steel moment frames or braced frames will be used. In the majority of other locations, steel braced frames will typically be used. Lateral forces are generally transmitted to the second floor and roof levels. The second floor slab and steel roof slabs will act as horizontal diaphragms and transfer the lateral loads to the shear walls, moment frames and braces which will, in turn, transfer loads into the footings and foundation system where forces are ultimately resisted.

FIRE RESISTIVE REQUIREMENTS

We anticipate the construction type for this structure to be classified as a Type III-B to allow for the use of some combustible materials. The following fire resistive requirements would apply to structural elements.

Structural Frame:	0 Hour
Bearing Walls:	0 Hour (Int.), 2 Hour (Ext.)
Floor Construction:	0 Hour
Roof Construction:	0 Hour

CONCLUSION

The structural systems proposed should be able to accommodate the complex configurations and layouts planned for this building. We will continue to develop and refine our framing systems as we proceed with the design of this project.

GENERAL HVAC

The mechanical systems will consist of various equipment to accommodate the needs of general office areas, computer labs, lobbies, auditorium and collection areas. The main components of the systems will consist of, but not limited to the following:

- Penthouse central plant including water cooled chiller, heating hot water boiler, cooling tower, and gas fired domestic water heater.
- Direct digital control system providing uncompromising system control.
- Custom designed and manufactured Fan Wall technology air handlers to provide superior equipment quality and superior maintainability, while providing comfort and quality air filtration.
- Variable volume air distribution systems throughout the general office areas, computer labs, lobbies, auditorium and collection areas to automatically adjust air flow to match the zone load which reduces energy consumption.

ENERGY EFFICIENCY CONSIDERATIONS

- Central Chiller utilizing magnetic bearing technology which achieveS low kilowatt per ton values.
- Central high efficiency boilers (88%+-)
- Variable flow chilled and heating water pumping systems that will only flow enough water to match the building load.
- Variable Air Volume (VAV) air handling units that only provide as much ventilation air to the occupied spaces to match the load.
- Economizer cycles on the air handling units which will allow for the utilization of outside air to COOL the building when conditions allow.
- Air handling units utilize a multiple fan wall array which achieve a savings of approximately 33% as compared to more traditional single centrifugal fan systems.

DESIGN CONDITIONS

Outdoor design and indoor design conditions and ventilation rates for the building will be based upon the latest ASHRAE standards.

	Summer	Winter
General areas	75°F 50%	72°F 30%

	Outside Air
General areas	10 cfm/person

CENTRAL PLANT

The central plant is the heart of the mechanical systems and will include one (1) magnetic bearing "frictionless" centrifugal chiller at approximately 225 Tons of cooling capacity. The chiller will utilize variable speed drive to greatly reduce the unit's energy usage and starting power inrush. The units will utilize environmentally friendly refrigerant "R-134a". Chiller room will be equipped with a refrigerant monitoring, exhaust system along, unit heaters and cooling fan coil unit.

Cooling water for the chillers will be provided by one (1) induced draft cooling tower mounted on the roof adjacent to the chiller room. The cooling tower will utilize variable speed drives to reduce energy consumption during low operating load periods and will be fitted with a separator filter system and factory sump cleaning system to remove atmospheric dirt from the system and maintain clean chiller condenser tubes which increases system efficiency. The cooling tower will be provided with stainless steel basins to increase unit life and reduce maintenance.

A stainless steel free cooling plate and frame heat exchanger will be provided to reduce energy consumption by allowing the cooling towers to cool the chilled water loop without operating a chiller during periods of reduced ambient temperatures. Typically the free cooling heat exchanger system can provide the required chilled water capacity up to +/-75 degree ambient temperature range. Two position condenser water and chilled water valves will be used to divert water between the free cooling system and the chiller mode automatically. Factory inlet and outlet strainers will be included in the heat exchanger.

The boiler system will consist of two (2) high efficiency hot water boilers each sized at approximately 40 Boiler Horsepower capacity which is approximately 60% of the total load which will provide some redundancy should a boiler fail. The boilers will be fitted with burners utilizing natural gas as the fuel source. Boilers will be sized to include the building heating load and also a snow melt system for the North entrance area. The snow melt system will consist of a separate plate and frame heat exchanger and pumping system with multiple zones. Boiler room will also include an exhaust system, unit heaters and cooling fan coil unit.

Heating hot water (2), snow melt (1), chilled water (1), and condenser water (1) pumps will all utilize premium efficiency motors and will be inverter duty rated for pumps using variable speed drives. Both heating hot water and chilled water systems will utilize primary/secondary pumping systems to allow the use of variable volume pumping to help reduce energy use. The pumps will be of the vertical inline type to reduce floor space requirements and to allow the pump seals and bearings to be replaced without removing the motor.

AIR HANDLING SYSTEMS

Air handlers serving the general office areas, computer labs, lobbies, auditorium and collection areas will include Fan Wall technology variable speed drives to reduce energy usage during low load periods, maintain proper building pressures and will be capable of 100% outside air to reduce energy consumption during cooler ambient temperature (typically 60 degrees and below) by cooling with outside air without utilizing chilled water or chilled water pumping systems. The system energy usage will be further enhanced by utilizing CO2 monitoring to adjust the minimum outside air to the minimum amount required while still maintaining proper indoor air quality.

Unit Number	Areas Served	Air Quantity (CFM)
AH-1	Audit. 2nd Flr. History	16,000
AH-2	1st & 2nd Flr. Collections	24,000
AH-3	1st & 2nd Flr. Wrkrms./etc	10,000
AH-4	1st & 2nd Floor Lobby	9,500
AH-5	1st & 2nd Floor Computer Labs	20,000
AH-6	1st & 2nd Floor General Offices	21,000

The MDF, IDF and any data rooms will be served independently from the air handling systems and will utilize unitary split system cooling only units.

Miscellaneous exhaust systems serving toilet rooms and Cafe will be designed based upon standard engineering practices.

NOISE AND VIBRATION CONTROL

All mechanical equipment with the potential to create noise and/or vibration problems will be studied by the acoustical consultant with appropriate measures taken to mitigate possible problems. All fan wall air handling equipment will have the multiple fans mounted on rubber isolators with silencers specified as needed. Other equipment such as exhaust fans, pumps, chillers etc. will include a combination of isolators, isolation slabs, and inertia bases as needed.

ZONE CONTROL

The general office areas, computer labs, lobbies, auditorium and collection areas will utilize variable volume terminal units with hot water reheat coils. These units vary the zone air flow to match the actual load in the spaces they serve which results in a reduction of airflow that the air handling system must provide. The reheat coil is provided to insure that individual zone minimum ventilation requirements are maintained without over cooling the space.

BUILDING CONTROL SYSTEM

The facility will be provided with a micro-processor based direct digital control building automation/energy management system. This system shall provide energy management controls in all spaces. The system will be of the distributed processing type to provide for speed, stability, and system reliability and the distributed controllers will be networked to share information.

PLUMBING

The plumbing system shall utilize all water conserving type fixtures. Water closets will be wall mounted with automatic electronic flush valves. Where required they will be handicap accessible. Infra-red sensing faucets and valves will be used where applicable on sinks and lavatories. Shut off valves for group isolation of fixtures on each floor will be provided. Water hammer arrestors will be provided throughout the water system. Backflow protection for the building will be outside the building. Domestic hot water will be provided by a central gas fired high efficiency water heater located in the Boiler Room. Hot water will be circulated throughout the building by a continuously flowing hot water loop to ensure that hot water is readily available to fixtures at all times. All hot water supply and hot water return lines will be insulated with 25/50 flame and smoke developed rating.

FIRE PROTECTION SYSTEM

The fire protection system shall consist of a single wet fire sprinkler riser and be distributed to each level of the building via a floor control assembly which will provide a signal to the fire alarm control panel indicating which level has sprinkler(s) flowing.

The system will incorporate a remote fire department connection and post indicator valve. The backflow preventer shall be a double detector check type installed indoors at the fire sprinkler riser.

Any areas subject to freezing conditions will utilize a dry system or propylene glycol protected system with a reduced pressure backflow device.

GENERAL

The electrical design for the Carson City Knowledge & Discovery Center is directed by the following objectives:

- Create comfortable spaces capable of allowing a variety of research, reading, office and community activities.
- Provide an energy efficient electrical system for present day requirements as well a allowing for future changes and functions in the facility.
- Provide lighting that achieves required footcandle levels while meeting energy efficient requirements for lighting design.
- Provide electrical systems that are appropriate for a 21st Century library and community facility.

ELECTRICAL SERVICE AND DISTRIBUTION

Knowledge & Discovery Cetner Power Source:

The existing NV Energy (NVE) power distribution system runs along the West side of the property. A new switch will be installed by NVE. A new NVE padmounted transformer will serve this building.

Service to the building will be 480Y/277 volts. An underground 480Y/277 volt secondary feeder will be routed to the Main Service Entrance Switchboard which will be located in the Main Electrical Room on the Second Floor. The switchboard shall include distribution sections distribution circuit breakers. NVE metering and emergency shunt trip shall be located on the exterior of the building.

The preliminary load calculations for the project yields an NEC demand load (including 25% spare) of 1921 kW. Based on this calculation the Service Entrance Switchboard will be 2000
amp, 480Y/277 volt, 3 phase, 4 wire.

The Service Entrance Switchboard shall feed 480Y/277 panelboards and a dry type 480-208Y/120 volt transformer for distribution to 208/120V panelboards. Panels will be located on the first and second floor.

Transient Voltage Sure Suppression (TVSS) devices will be installed at the Main Service Entrance Switchboard and downstream at the 208Y/120 volt distribution board. This will provide a two-tier level of protection. The TVSS is used to minimize damaging internally and externally generated electrical transients that can affect and/or harm electronic equipment.

Normal Power Distribution Voltages:
480V, 3 Phase, 3 Wire – Motors 1/2 HP and larger
480Y/277V, 3 Phase, 4 Wire – Fluorescent lighting, Site Lighting
208Y/120V, 3 Phase, 4 Wire – Receptacles, specialized lights, motors under 1/2 HP and small equipment loads.

Parking Garage Power Source:

The existing NV Energy (NVE) power distribution system runs along the South and East side of the property. A new switch will be installed by NVE. A new NVE padmounted transformer will serve this building. Service to the building will be 208Y/120 volts. An underground 208/120 volt secondary feeder will be routed to the Main Service Entrance Switchboard which will be located in the Main Electrical Room on the First Floor. The switchboard shall include distribution sections, distribution circuit breakers and 200A individual tenant metering for each proposed retail area. An emergency shunt trip shall be located on the exterior of the building.

The preliminary load calculations for the project yields an NEC demand load (including 25% spare) of 411 kW. Based on this calculation the Service Entrance Switchboard will be 1200 amp, 208Y/120 volt, 3 phase, 4 wire.

The Service Entrance Switchboard shall feed a House Panel for garage lighting, exterior lighting and power as required. 2" EC will extend to each tenant space for installation of future panelboards.

PHOTOVOLTAIC SYSTEM

It is anticipated the roof top area above the lobby space will have several clearstory windows to allow natural light to enter the space from the east, west and north sides of the built up spaces. The south side of the clearstory windows will be sloped to the south and will provide significant south facing surfaces that could be utilized for mounting of traditional crystalline panels.

A total of (70) 240 watt crystalline PV modules would be located on the approximate 45 degree south sloped roof structures of the clearstory pop-ups. This will provide approximately 16.8W DC output. Various manufactures including UniRac manufacture a mounting system designed for such an installation. Structural considerations will also have to be taken into consideration. The electrical DC combiner box, which connects all of the strings of modules, and the DC disconnect are to be located on the roof with the DC wiring penetrating the roof at one single location only. The DC supply wiring installed in metal conduit will run to the combiner box and then to the DC/AC inverter, which will be located in an interior electrical room with appropriate ventilation for the expected thermal dissipation from the inverter.

The 480 volt, 3 phase AC output from the inverter will be run to the PV watt hour meter (REC meter) and the PV utility disconnect. The PV watt-hour meter and the PV utility disconnect will be located adjacent to the building main disconnect and utility meter as required by NV Energy.

Taking into consideration the actual output of the PV modules in real life conditions and the efficiency rating of the inverter(s), the approximately total output of the system will be 13.9kW AC, 480 volt, 3 phase. This will connect to the building's electrical system via a 30 amp, 3 pole circuit breaker mounted in the main switchboard on the opposite end of the bus from the main breaker.

MEASUREMENT & VERIFICATION FOR LEED

The Service Entrance Switchboard will be provided with a power, energy and demand meter.. Individual breakers will be submetered for LEED Measurement & Verification requirements, EA Credit 5. Panel loads will be separated into Lighting, Power and Mechanical Systems. The system will have integral display at the Service Switchboard. The entire metering system will be WEB Enabled and connected to the DDC Control System.

GROUNDING SYSTEM

The grounding system will be designed in compliance with NEC 250. The grounding electrode system will consist of a Ufer Ground, structural steel, and cold-water electrodes. All electrodes will be joined together at the building main grounding bar, adjacent to the main electrical service. All feeders and branch circuits will contain insulated, copper, equipment ground conductors.

LIGHTING SYSTEMS

Exterior Lighting: Exterior lighting will be designed to meet requirements for LEED SS Credit 8: Light Pollution Reduction. Lighting levels will be designed in accordance with IESNA recommendations keeping security as a concern.

Parking areas, walkways, landscaped areas and building egress areas adjacent to the facility will be provided with LED fixtures using a combination of pole, ground mounted, and building mounted fixtures. The control for the exterior lighting will generally be photoelectric control-on at dusk and photoelectric control-off at dawn. Any light fixtures not required for security lighting will be turned off by a time clock.

Interior Lighting: Interior lighting will be designed to meet requirements for LEED IEQ Credit 6.1: Controllability and of Systems: Lighting. High performance, energy saving electronic Super T8 lamp/ballast system, or T5HO lamping will be utilized. LED lighting will be considered in special areas where downlighting and accent lighting is required.

IESNA recommended footcandle levels will be used as the baseline design standard. Some of the lighting criteria for the various spaces are as follows.

Stacks: The stacks will be illuminated by using linear direct-indirect pendant fluorescent fixtures. Each row of fixtures will have two integral occupancy sensors in the fixtures. The fixtures will have electronic dimming ballasts that will allow the rows to dim to 20% when the rows are not occupied.
Design Footcandle Levels

- 30 – 40 FC vertical on the stacks at 30" AFF.

Reading Areas: Lighting design will evolve through the design process. It is anticipated that direct-indirect lighting will be used. Fixtures will be more decorative in nature and will be coordinated with the architecture.
Design Footcandle Levels

- 30-50 FC horizontal average at 30" AFF.

Auditorium: To achieve a high level of flexibility dimmable fluorescent lighting will be used in this area. Light fixture selection will be coordinated with the ceiling and room configuration and function. Control of these spaces will be by a local dimming system. Daylighting controls will be integrated as applicable. Perimeter wall washing, controlled separately from the general lighting, will be used to provide additional vertical illumination of whiteboards, etc.
Design Footcandle Levels

- General: 30-40 FC horizontal average.
- Demonstrations: 50 FC horizontal average at front of room.

Conference Rooms: To achieve a level of flexibility and simplicity either dimmable fluorescent lighting or tri-level control will be used in these areas. Light fixtures will be either lay-in volumetric type or linear direct/indirect type. Control in these spaces will generally be via local manual switches or dimmers. Perimeter wall washing, controlled separately from the general lighting, may be used to provide additional vertical illumination of whiteboards, etc. Dimmable downlights may also be provided as required. In those spaces with sufficient daylight, either dimming or switching of fixture rows adjacent to windows will be incorporated to take advantage of energy savings.
Design Footcandle Levels

- Conf. Rooms: 50 FC horizontal maintained.

Offices/Work Room: Recessed fluorescent fixtures with very high efficiency and low power density volumetric type or suspended linear indirect type fixtures will be used for general illumination. Control in these areas will generally be via local occupancy sensors with ability to manually switch for dual level switching.(1 lamp on, 2 lamps on, or 3 lamps on). In those spaces with sufficient daylight, either dimming or switching of fixture rows adjacent to windows will be incorporated to take advantage of energy savings.
Design Footcandle Levels

- Open Offices with intensive computer use: 30 FC horizontal average.
- Open Offices with intermittent computer use: 40 FC horizontal average.
- Private Offices: 40 FC horizontal average.

Lobby/Circulation Spaces: Lighting will accommodate displays, circulation, and casual seating. Lighting in these spaces will reflect a level of higher finish and design. It is anticipated that a combination suspended decorative and linear type fixtures, and up lights (depending on the configuration of the space) will be used in these spaces along with accent lighting to create a comfortable and welcoming environment. These fixtures may be dimmed or switched in response to input from a photocell for daylight harvesting.
Design Footcandle Levels

- Lobby: 10 to 30 FC horizontal average.
- Circulation: 10 to 15 FC horizontal average.

Gallery: Lighting will accommodate displays & art by utilizing track lighting for adjustability and flexibility.

- Ambient lighting will be in the range of 20 FC horizontal average.

Lighting Control System:
A microprocessor based lighting control system shall be provided for automated lighting control. Local controls and manual override functions will be provided by sentry switches, line voltage switches or low voltage switches. Multi-level switching shall be provided for all spaces including small offices. Occupancy sensors shall be utilized in most areas except lobbies and corridors. Daylighting control shall be implemented as the building design allows. It is anticipated that daylighting controls may be utilized in many areas of this building. Photosensors will automatically switch or dim fixtures to reduce energy usage when there is an adequate amount of natural light entering the space.

POWER SYSTEMS
Branch Circuits: Individual circuits will be used for lighting and receptacle loads. Generally, the loading on lighting and receptacle circuits will be limited to 75% or less of the branch breaker rating. A minimum of 10% spare breakers (no less than 6 poles) will be provided in all branch circuit panelboards. Minimum wire size for branch circuits is No.12 AWG copper, except that No. 10 AWG copper will be used on 120 volt circuits longer than 100 feet. An equipment-grounding conductor will be run in each branch circuit. Flexibility will be provided by utilizing flush floor boxes or poke-thru devices in the open areas and stack areas for future use (power and data).

Retail Tenant Spaces: The following will be provided for each proposed retail tenant space:

- Power connection for future exterior sign off house power panel.
- (3) 2" EC from Service Switchboard to each tenant space for future panelboard, future telephone, & future CATV.

PARKING GARAGE LIGHTING SYSTEMS
Exterior Lighting: Exterior lighting will be designed to meet requirements for ASHRAE 90.1/IECC 2006.
Lighting levels will be designed in accordance with IESNA recommendations keeping security as a concern.

Walkways, landscaped areas and building egress areas adjacent to the facility will be provided with LED fixtures using a combination of ground mounted, and building mounted fixtures. The control for the exterior lighting will generally be photoelectric control-on at dusk and photoelectric control-off at dawn. Any light fixtures not required for security lighting will be turned off by a time clock.

Interior Lighting: Interior lighting will be designed to meet requirements for Lighting Power Densities per ASHRAE 90.1/IECC 2006. IESNA recommended footcandle levels will be used as the baseline design standard. Some of the lighting criteria for the various spaces are as follows.

Parking Garage: In the parking garage high performance BetaLED parking garage fixtures will be utilized. Approximately (18) 66 watt fixtures will be required per floor. Each fixture will have an integral occupancy sensor and daylight sensor. If motion is not detected the fixtures will drop to a low level of lighting. When occupancy is detected the fixtures will go back to full output. If daylight levels are sufficient the fixtures will either turn OFF or drop to the low level.
Design Footcandle Levels

- 3 - 4 FC average at floor level.

FIRE ALARM SYSTEM

The new building will have a Class B, supervised, 24-volt DC-powered, addressable fire alarm system. All fire alarm wiring shall be in conduit.

The system will consist of a flush mounted main FAAP (Fire Alarm Annunciator Panel) near the front entrance. It mirrors the functions of the FACP (Fire Alarm Control Panel) located within the building.

The building will have smoke detection in sensitive areas, duct smoke detectors, heat detectors, magnetic door holders, flow and tamper switches on each floor. Audio/visual (Horn/Strobe) notification appliances will be located throughout the building based on Code requirements.

Elevator recall functions are integrated with the fire alarm system.
The HVAC system will be coordinated and shut down based on the sequence of operation provided by the Mechanical Engineer.

The system will have battery backup for 60 hour standby and 15 minute alarm capability complying with NFPA 72. The system will be remote station monitored via a digital communicating device that will provide the dial out by point to Churchill County's monitoring station vendor.

SECURITY SYSTEM

The security system shall consist of two separate systems: a closed circuit television CCTV surveillance system, and an intrusion detection and admittance system. All equipment and wiring shall be provided under this contract.

CCTV System: CCTV cameras shall be located typically at building exterior locations, lobbies, employee entrances and loading docks

Intrusion Detection and Door Access System: Glass breakage sensors shall be utilized for the intrusion alarm system for grade-level only. Audio discriminators shall be utilized for area coverage in spaces such as lobbies, open offices, etc., where appropriate.

Card access shall be provided at main entrances and at any special interior areas requiring controlled access to be determined during detailed design.

TELECOMMUNICATIONS SYSTEM

Codes and Standards:

- ANSI/NFPA-70, 2005 -- National Electrical Code (NEC).Underwriter's Laboratories, Inc. (UL).Federal Communications Commission (FCC).Americans with Disabilities Act (ADA).
- ANSI/TIA-568-C.0 – Generic Telecommunications Cabling for Customer Premises.
- ANSI/TIA-568-C.1 – Commercial Building Telecommunications Cabling Standard.
- ANSI/TIA-568-C.2 – Balanced Twisted-Pair Telecommunication Cabling and Components Standard.
- ANSI/TIA-568-C.3 – Optical Fiber Cabling Components Standard.
- ANSI/TIA-606-A -- The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.
- ANSI-J-STD-607-A -- Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications.
- ANSI/TIA-758-A -- Customer-Owned Outside Plant Telecommunications Infrastructure Standard.
- ANSI/TIA-942 – Telecommunications Infrastructure Standard for Data Centers.

Outside Plant Telecom Infrastructure

- Phone & Internet: Quantity two (2) 4" conduits will be installed from the main telecom room (MDF) to a pullbox located at the property line for connection to AT&T. The location of the pullbox will be coordinated with AT&T.
- Cable TV: One (1) 4" conduit will be installed from the main telecom room (MDF) to a pullbox located at the property line for connection to Charter Communications. The location will be coordinated with Charter.

Premise Telecom Infrastructure

- General: Data, voice and audio/visual services will be distributed throughout the building via an infrastructure consisting of telecommunications rooms and a structured cabling system. The MDF (Main Distribution Frame) will be the central distribution point for telecommunications cabling throughout the building. Conduits will be installed to distribute backbone copper and fiber optic cabling from the MDF to IDF's (Intermediate Distribution Frame) located throughout the building. A structured Category 6 cabling system will be installed from each IDF to the work area outlets.
- Wireless: Cabling infrastructure will be installed to support wireless access points located throughout the facility.

Telecom MDF (Main Distribution Frame)

- General: The MDF will be the demarcation point for the outside plant data and voice cabling. Backbone copper, fiber optic and coaxial cable will be routed from the MDF in a star topology to IDF's located throughout the facility. Network electronics to support voice, data and A/V systems will be rack mounted in the MDF and IDF's. The MDF and IDF's will be centrally located so that horizontal cabling distances do not exceed 295 feet.
- Construction: The MDF and IDF's will be designed to accommodate telecommunication cabling terminations and electronics. The rooms will be sized to provide adequate space for outside plant conduit, backbone cable termination equipment, lightning protection equipment and network equipment racks. The design and layout of the rooms will be flexible to accommodate future expansion and reconfiguration with minimal service disruption. The ceiling height will accommodate 84" racks with ladder rack routed above the racks at 96" AFF.
- Plywood Backboards: 4'-0" x 8'-0" x ¾" AC fire treated plywood backboards will be provided along a minimum of (2) walls in the MDF and IDF's to accommodate termination of backbone cabling and horizontal voice cabling. Plywood sheets will be run from 6" to 8'-6" AFF (above finished floor). Plywood will be painted with 2 coats of white paint. Where plywood will support backbone cabling, plywood will be secured to the wall to support 1,500 pounds of weight.
- Ladder Rack: 12" wide horizontal ladder rack will be installed at 8'-0" AFF around the perimeter of the room and over the top of all equipment racks and cabinets to facilitate cable routing. Ladder rack stringers will be 1.5" in depth with 1.5" wide cross members spaced at 9" OC (on center). Radius dropouts will be provided above all equipment racks to maintain the manufacturers' bend radius of all telecommunications cabling. Ladder rack will be secured to the walls with triangular support brackets spaced at 4'-0" OC.
- Open Equipment Racks: UL listed 4-post equipment racks will be installed to house termination and electronic equipment. Racks will be constructed of lightweight aluminum and will have a black finish. Racks shall be 84" high with 19" rack mounting spaces. Rack bases shall be 15" deep x 20.25" wide base with four (4) ¾" bolt down holes. Side rails shall be 3" deep with double-sided tapped holes. Rack shall be secured to the concrete floor with four (4) 5/8" concrete expansion anchors.

The quantity of racks will accommodate all of the voice, data and A/V cable terminations and future expansion.

- Horizontal and vertical cable management shall be provided with all racks. Cable managers shall be constructed of a steel panel with PVC fingered duct attachments (black) on the front and cable management rings on the rear. Horizontal cable managers shall be 1 or 2 rack units in height. Vertical cable managers shall be 6" wide.
- Electrical: Sizing the service for the telecom rooms shall be based on the quantity of telephone and network electronics and UPS equipment.

  (1) dedicated 30 amp 120V outlets shall be mounted on the side of the overhead ladder rack above each 4-post equipment rack. Additional convenience outlets at 18" AFF shall be spaced around the perimeter of the room at approximate 10'-0" spacing.

  Each rack located in the MDF and the IDF's will include (1) horizontal rack mounted 2,200VA UPS's with 120V outputs.

Telecom Interior Communication Pathways

- Backbone Conduit. Conduit will be installed from MDF to the IDF's to support backbone copper, fiber optic and coaxial cabling. Innerduct will be installed in the conduit for routing of the backbone cabling. Spare conduit will be installed to support future growth.
- Workstation Outlets: Double gang wall boxes with single gang mud rings will be installed at all work area outlets. Four port faceplates with plastic label holders will be installed at each work area outlet. 1" EMT (electrical metallic tubing) will be installed from the workstation outlets to an accessible ceiling space.
- J-Hooks. J-Hooks spaced at 4'-0" OC will be installed from the workstation outlets to the nearest wire basket cable tray.
-
- Wire Basket Tray: Main runs of wire basket cable tray will be installed back to the MDF and IDF's on each floor to accommodate routing of the horizontal voice, data and video cabling. Cable tray will be sized to accommodate 20% spare capacity.
- Conduit & Sleeves. Conduits will be installed to route horizontal telecommunications cabling through non-accessible ceiling and wall spaces. Conduits will be sized so as not to exceed 40% fill rate. Sleeves will be installed to penetrate fire rated or concrete walls and floors.

Telecom Work Area Cabling and Termination

- Type and Number of Communications Outlets: Typical telecommunication outlets will consist of a four-port faceplate with plastic label holders. A minimum of two (2) Category 6 data drops and one (1) Category 6 voice drop will be provided at each outlet. Data jacks will occupy the top 2 positions in each faceplate. Voice jacks will occupy the bottom 2 positions of each faceplate. Voice jacks will be color white and data jacks will be color blue. The number of telecommunication outlets will be dependent on the use of the space.

  Telecom outlets located above ceilings will be spaced throughout the building to support an infrastructure of wireless access points. A 25'-0" cable loop will be provided at each access point to allow the wireless access point to be relocated anywhere in a 25'-0" radius. Cabling to the wireless access points will be terminated on separate Category 6 patch panels in the Telecom Room. Power will be provided to the wireless access points via owner furnished POE switches located in the Telecom rooms.
- Horizontal Data and Voice Cabling: Horizontal data and voice cabling from the IDF's to the telecommunications outlets shall be Category 6. Cables shall have a plenum rated jacket (CMP). Data cabling will be color blue and voice cabling color white.
- Data Patch Panels: Horizontal data and voice cabling shall be terminated on 19" rack mounted 48-port Category 6 patch panels. Data ports will be cross connected to Owner furnished switches with Category 6 patch cords with molded strain relief boots.
- Horizontal CATV Cabling: Plenum rated RG-6 cabling will be routed from the telecom rooms to each TV outlet. Cabling will be terminated on wall mounted 4 or 8-way splitters.
- Cabling Manufacturer and Warranty: The Telecommunications structured cabling system shall carry a minimum 20-year manufacturer warranty.

Telecom Grounding System

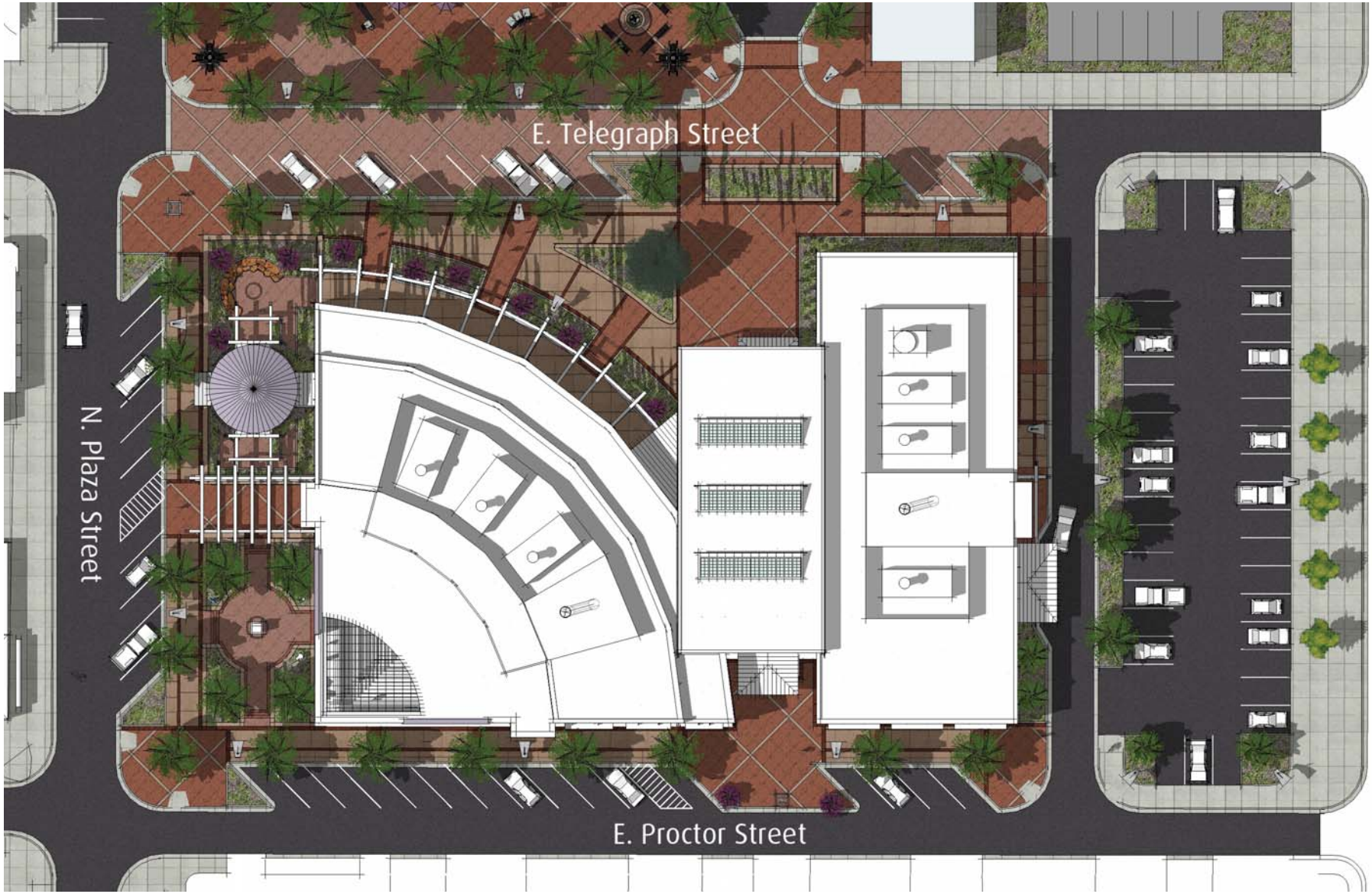
- General: The entire telecommunication system shall be bonded and grounded. A telecommunications ground bar will installed in the MDF and the IDF's. The following equipment will be bonded to ground with a #6 AWG grounding conductor:

  •Equipment racks and cabinets.
  •Ladder rack.
  •Backbone conduit.
  •Building entrance terminals.
  •Outside plant copper cable shields.

- Ground Bars: UL listed copper grounding bars with insulated standoffs and stainless steel mounting brackets will be provided in all telecom rooms. The ground bar in the MDF shall be minimum 20" x 4" x ¼". The ground bars in the IDF's shall be a minimum 12" x 2" x ¼". Ground bars shall have pre-drilled lug mounting holes to accommodate attachment of two hole lugs. Ground bars shall be bonded to ground as follows:

  Ground bars shall be grounded to the building steel in each telecom room with a minimum #4 solid green insulated grounding conductor. Ground bars will also be grounded to the electrical panel ground serving the room. A telecom bonding backbone (TBB) conductor will be routed from the MDF to each ground bar in the IDF's.


E. Robinson Street
N. Carson Street
PARKING GARAGE / RETAIL
FUTURE
Carson Nugget
FUTURE
PUBLIC PLAZA
BRIC
PUBLIC LIBRARY
N. Stewart Street

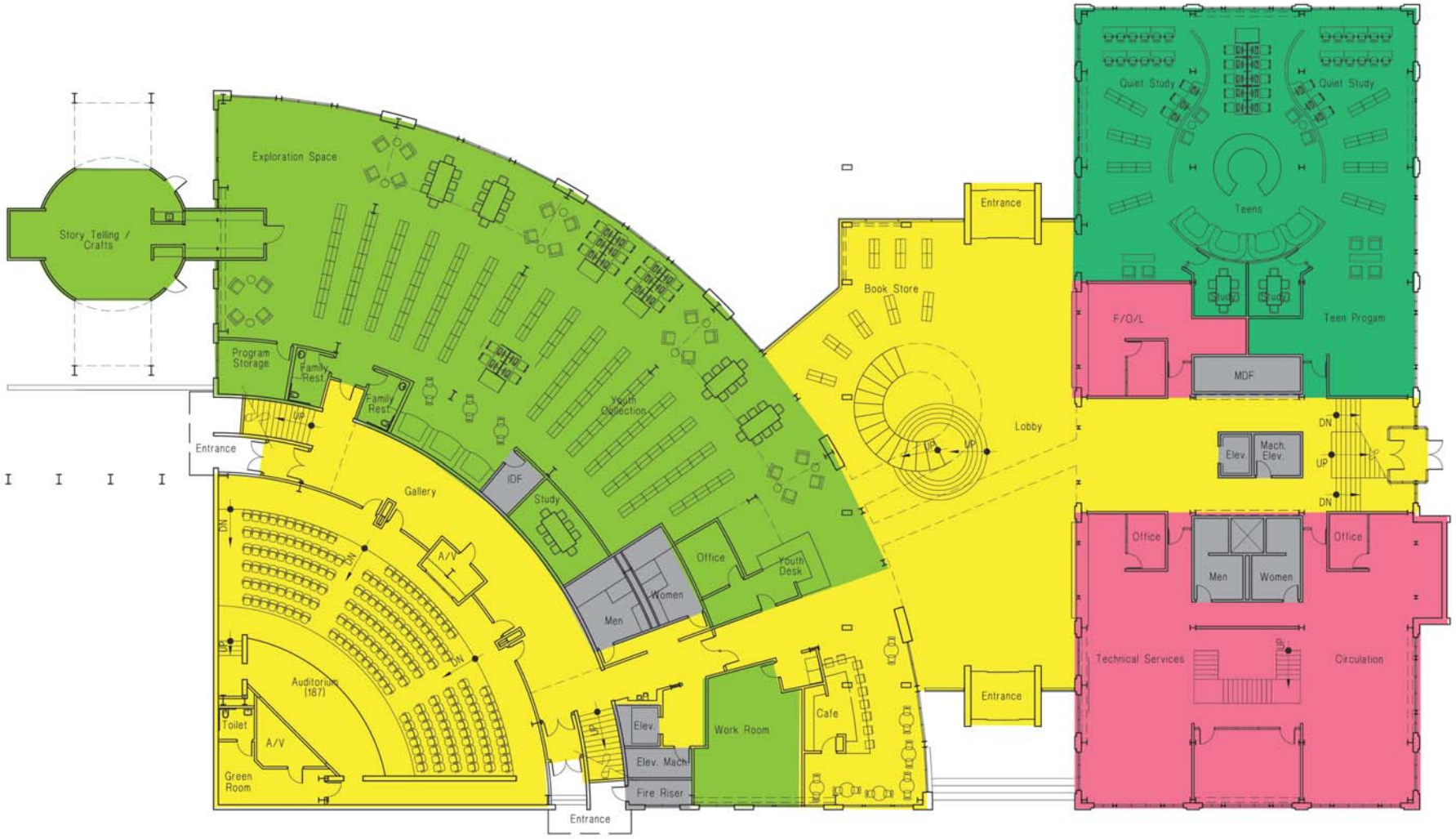


28 Knowledge & Discovery Center Site Plan

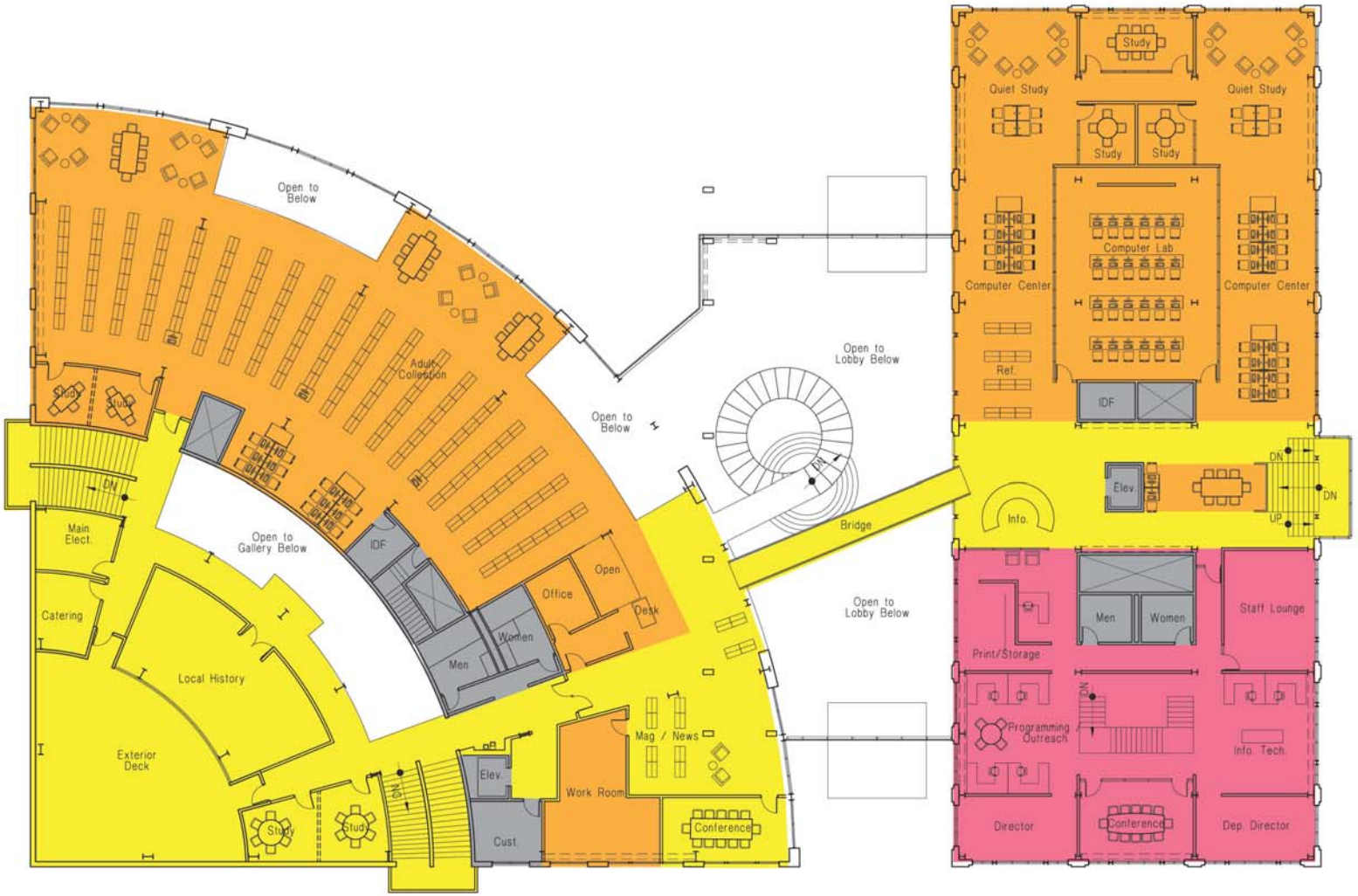

N. Plaza Street
Carson Nugget
E. Robinson Street
Carson Street
BRIC
N. Stewart Street
E. Musser Street
Capitol
City Hall
North

30 SW Birds Eye Closeup


N. Stewart Street
H+K ARCHITECTS



First Floor Plan


Open to Below
Adult Collection
Study
Study
Open to Below
Open to Lobby Below
Open to Below
Open to Gallery Below
IDF
Office
Open
Desk
Women
Men
Main Elect.
Catering
Local History
Exterior Deck
Elev.
Work Room
Mag / News
Cust.
Study
Study
Conference
Bridge
Open to Lobby Below
Study
Quiet Study
Quiet Study
Study
Study
Computer Lab
Computer Center
Computer Center
Ref.
IDF
Elev.
Info.
DN
DN
UP
Men
Women
Staff Lounge
Print/Storage
Programming Outreach
Info. Tech.
Director
Conference
Dep. Director

34 North Entry View


h:k
H+K ARCHITECTS

Building Signage View


H+K ARCHITECTS


H+K ARCHITECTS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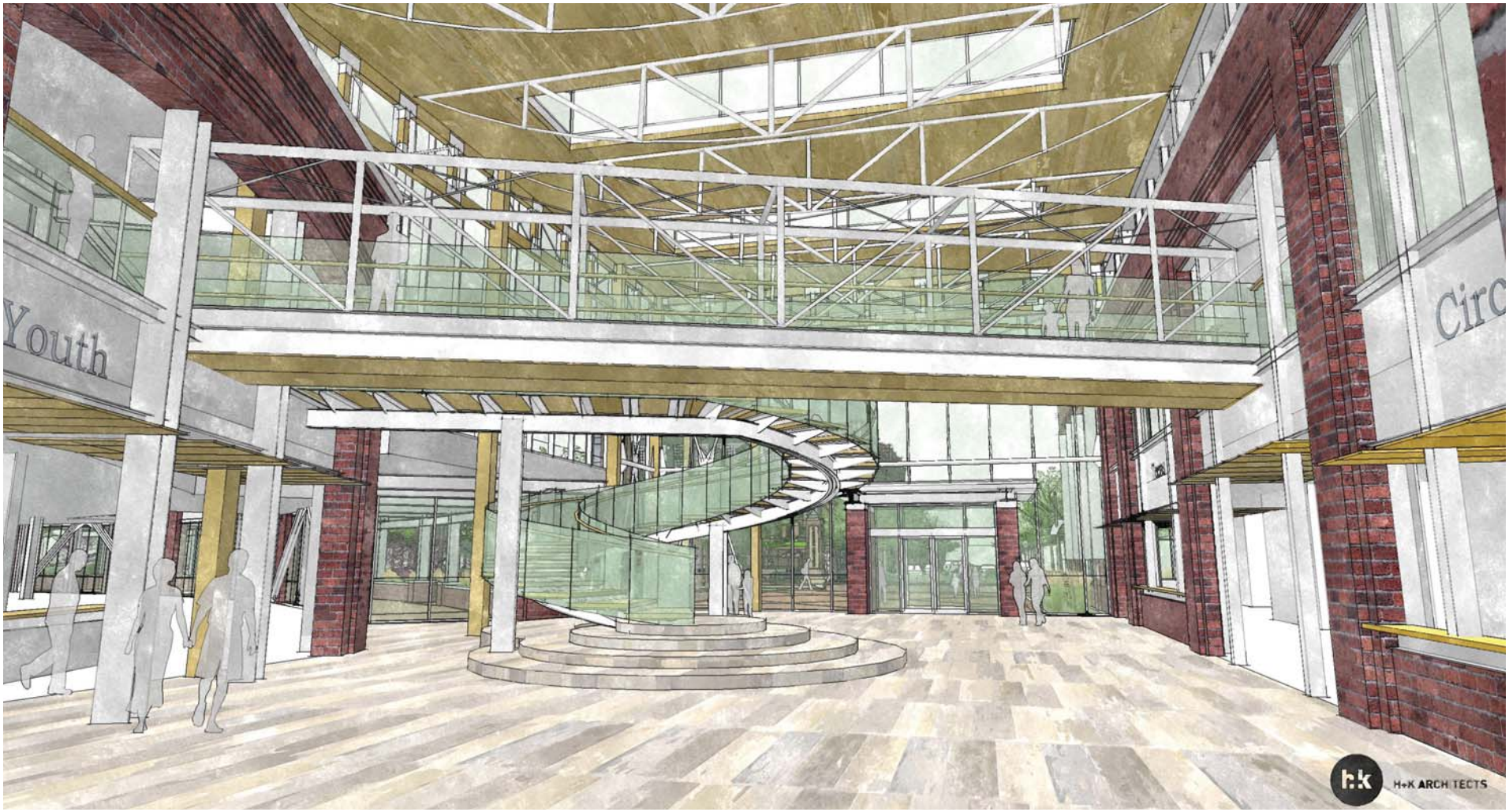
Southeast View


Youth
Circ
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42 Interior Lobby View

North Elevation

44 South Elevation

46 West Elevation

48 Plaza Site Plan Summer


N. Plaza Street
N. Fall Street
E. Telegraph Street
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Southeast Plaza View

Southwest Plaza View

52 Winter Plaza View


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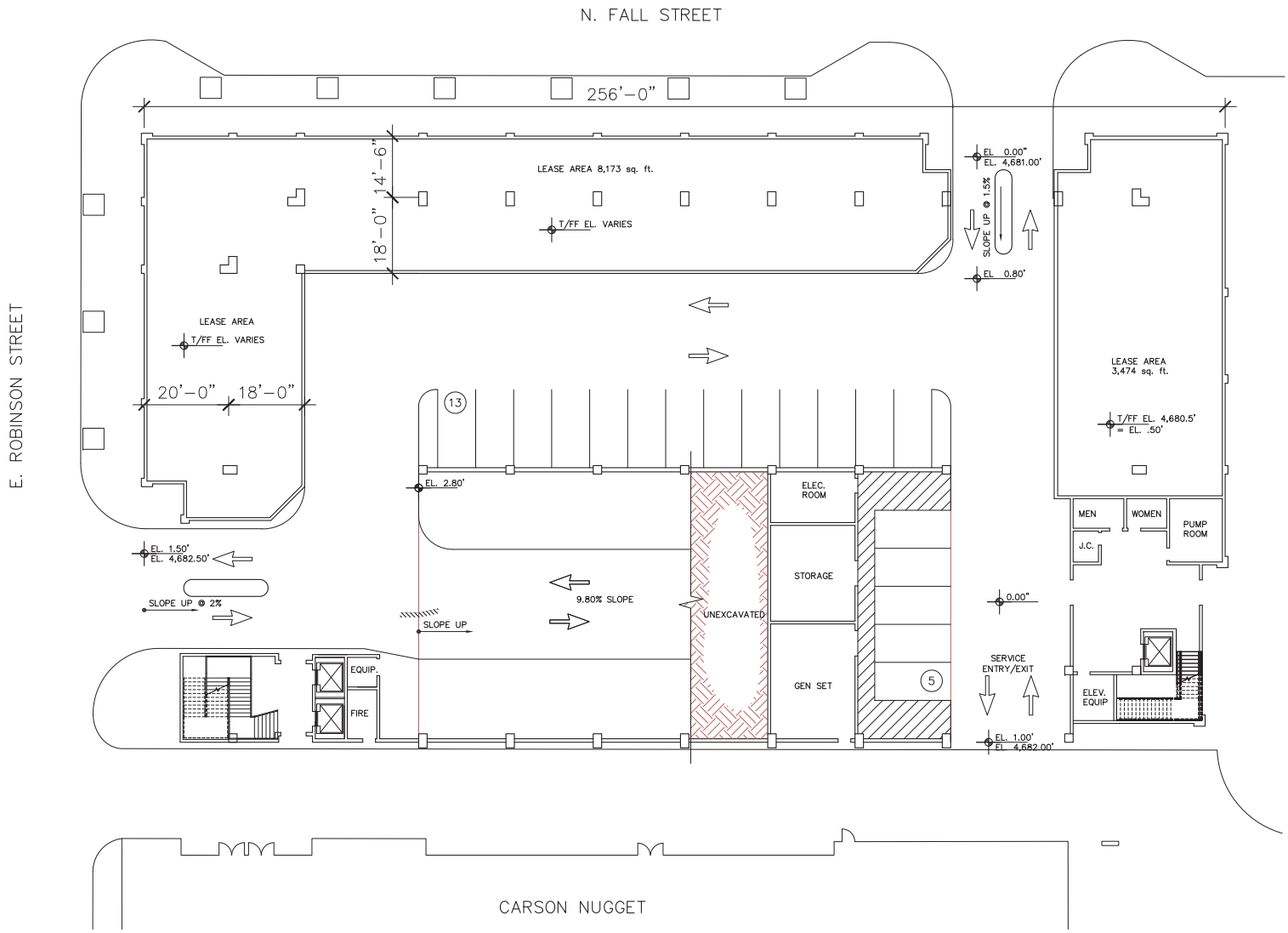
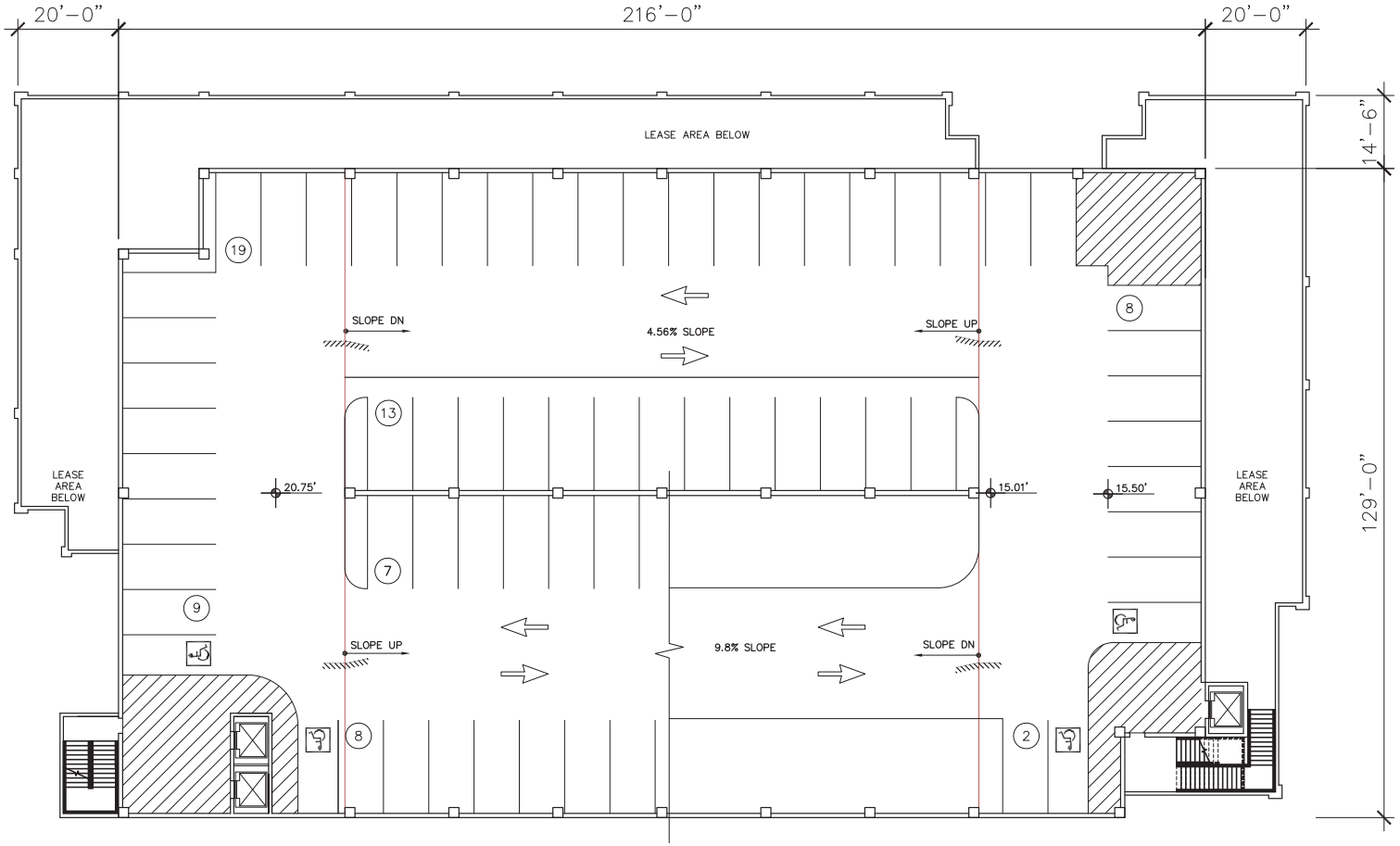
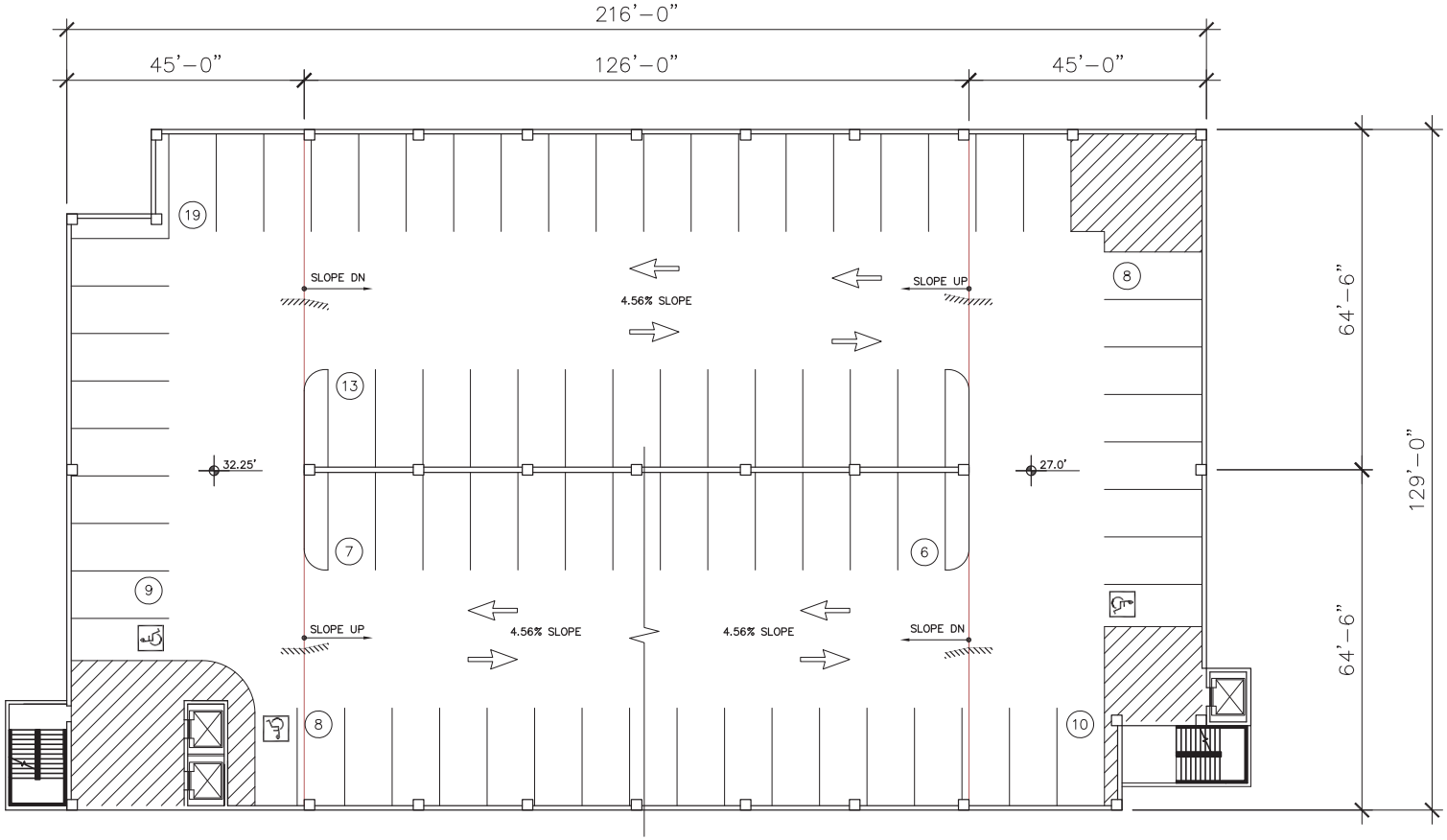
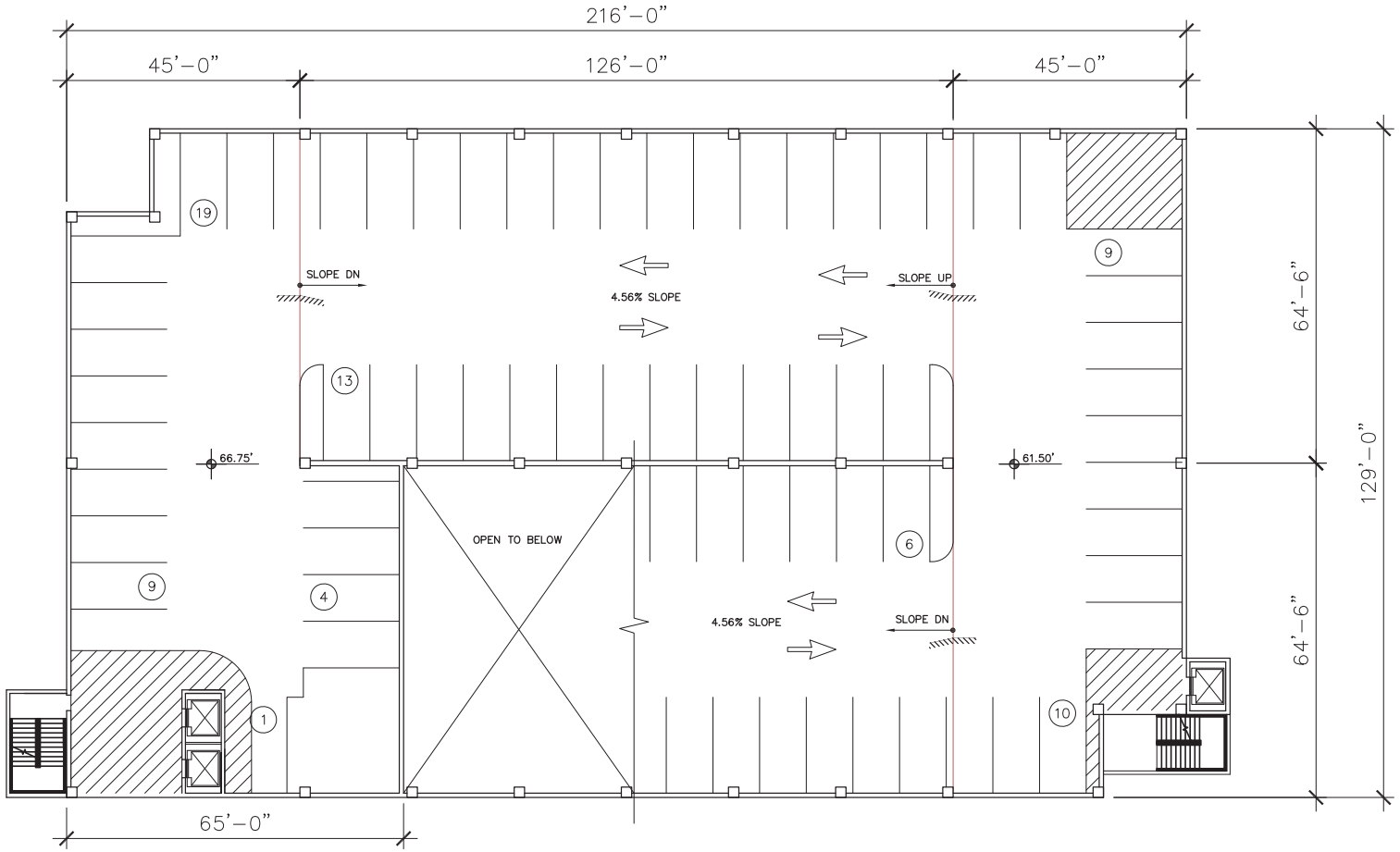
54 Parking Garage Site Plan


N. FALL STREET
E. ROBINSON STREET
256'-0"
18'-0"
14'-6"
LEASE AREA 8,173 sq. ft.
T/FF EL. VARIES
EL. 0.00"
EL. 4,681.00'
SLOPE UP @ 1.5%
EL. 0.80'
LEASE AREA
T/FF EL. VARIES
20'-0"
18'-0"
LEASE AREA
3,474 sq. ft.
T/FF EL. 4,680.5'
= EL. .50'
13
EL. 2.80'
ELEC. ROOM
MEN
WOMEN
PUMP ROOM
J.C.
EL. 1.50'
EL. 4,682.50'
SLOPE UP @ 2%
9.80% SLOPE
SLOPE UP
STORAGE
UNEXCAVATED
0.00"
EQUIP.
FIRE
GEN SET
5
SERVICE ENTRY/EXIT
ELEV. EQUIP.
EL. 1.00'
EL. 4,682.00'
CARSON NUGGET


20'-0"
216'-0"
20'-0"
14'-6"
129'-0"
LEASE AREA BELOW
LEASE AREA BELOW
LEASE AREA BELOW
SLOPE DN
4.56% SLOPE
SLOPE UP
SLOPE UP
9.8% SLOPE
SLOPE DN
20.75'
15.01'
15.50'
19
13
8
7
9
8
2


216'-0"
45'-0"
126'-0"
45'-0"
64'-6"
129'-0"
64'-6"
SLOPE DN
4.56% SLOPE
SLOPE UP
SLOPE UP
4.56% SLOPE
4.56% SLOPE
SLOPE DN
32.25'
27.0'
19
13
8
7
6
9
8
10


216'–0"
45'–0"
126'–0"
45'–0"
19
SLOPE DN
4.56% SLOPE
SLOPE UP
9
13
66.75'
61.50'
OPEN TO BELOW
6
9
4
4.56% SLOPE
SLOPE DN
1
10
64'–6"
129'–0"
64'–6"
65'–0"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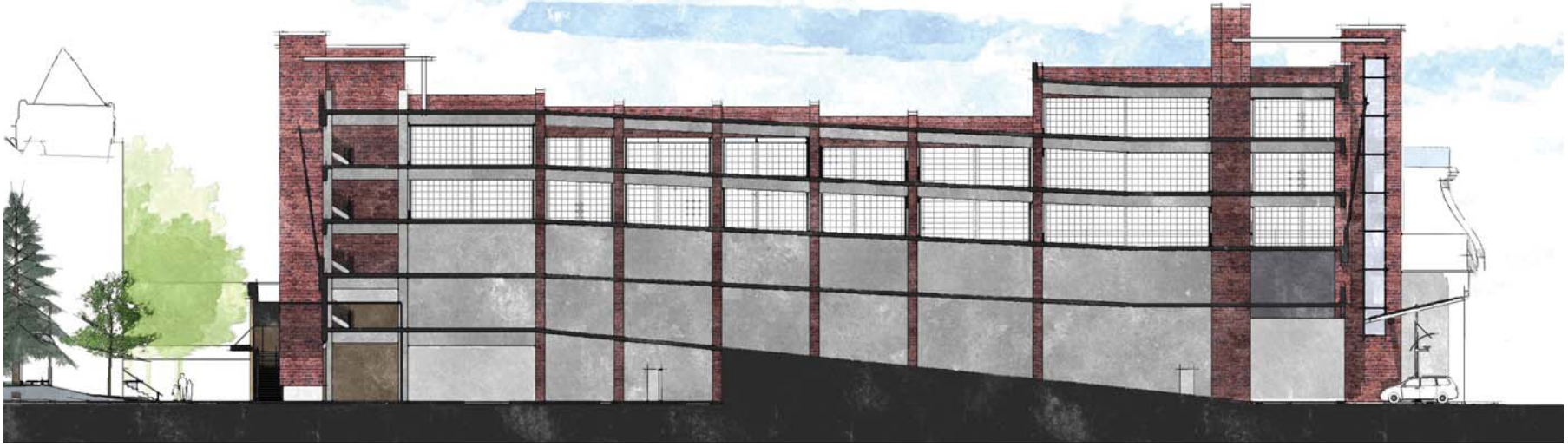
60 Northeast View Parking Garage

62 Parking Garage South Elevation

64 Parking Garage North Elevation



Carson City Center

Conceptual Design

Carson City Center

Conceptual Design

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